Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MSTMP0002452			000131143 JJK

GENERATOR

5. Generator's Name and Mailing Address

Mississippi DEQ
P. O. Box 10385
Jackson, MS 39289

Generator's Phone: 601-961-5654

Generator's Site Address (if different than mailing address)

4280 Rifle Range Rd
Vicksburg, MS 39180 USA

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Clean Harbors El Dorado
309 American Circle
El Dorado, AR 71730

Facility's Phone: 870-863-7173

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1.	1	TT	2000	G	D002	D018	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.

I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: TREY HESS — Signature: Trey Hess — Month: 11 — Day: 9 — Year: 07

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month — Day — Year

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

ALLIED WASTE

Please print or type.

NON-HAZARDOUS WASTE MANIFEST

0263253

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of
MSTMP0002452		1

GENERATOR

3. Generator's Name and Mailing Address	5. Generating Location (if different)
Mississippi DEQ P. O. Box 10385 Jackson, MS 39289 6. Phone ( )	4280 Rifle Range Rd Vicksburg, MS 39180 USA

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone

10. Transporter #2 Company Name	11. US EPA ID Number	12. Transporter #2's Phone

13. Designated T/S/D Facility Name and Site Address	14. US EPA ID Number	15. Facility's Phone

16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a. Non regulated Waste PPE and Debris	1 CM BA	20	Y		
b.					
c.					
d.					

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
TREY HESS	Trey Hess	11	09	07

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

ORIGINAL - RETURN TO GENERATOR

OCM000933

ALLIED WASTE

Please print or type.

NON-HAZARDOUS WASTE MANIFEST

0263255

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of
MSTMP000245		

GENERATOR

3. Generator's Name and Mailing Address

Mississippi DEQ
P. O. Box 10385
Jackson, MS 39289

4. Phone (601-961-5654

5. Generating Location (if different)

4280 Rifle Range Rd
Vicksburg, MS 39180 USA

6. Phone ( )

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
10. Transporter #2 Company Name	**11. US EPA ID Number**	**12. Transporter #2's Phone**
13. Designated T/S/D Facility Name and Site Address	**14. US EPA ID Number**	**15. Facility's Phone**

16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a. Non regulated Waste PPE and Debris	1 CM	20	Y		
b.					
c.					
d.					

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
TREY HESS	Trey Hess	11	09	07

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

ORIGINAL - RETURN TO GENERATOR

COM000033

ALLIED WASTE

NON-HAZARDOUS WASTE MANIFEST

0263251

Please print or type.

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of 1
MSTMP0002452		

GENERATOR

3. Generator's Name and Mailing Address	5. Generating Location (if different)
Mississippi DEQ P. O. Box 10385 Jackson, MS 39289 4. Phone ( ) 601-961-5654	4280 Rifle Range Rd Vicksburg, MS 39180 USA 6. Phone ( )

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
[illegible]		[illegible]
10. Transporter #2 Company Name	**11. US EPA ID Number**	**12. Transporter #2's Phone**
13. Designated T/S/D Facility Name and Site Address	**14. US EPA ID Number**	**15. Facility's Phone**
BFI LITTLE DIXIE LANDFILL [illegible] COUNTY LINE RD. [illegible]		601 982 9488

16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	Type	19. Total Quantity	20. Unit Wt/Vol
a. Non regulated Paraffin Wax	BA 1 CM	20	Y		
b. [illegible]	[illegible]				
c.					
d.					

21. Additional Descriptions for Materials Listed Above

[illegible]

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
TREY HESS	Trey Hess	11	09	07

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

ORIGINAL - RETURN TO GENERATOR

COM000033

ALLIED WASTE

Please print or type.

NON-HAZARDOUS WASTE MANIFEST

0263254

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of
MSTMP 0002458866		

GENERATOR

3. Generator's Name and Mailing Address (170)

Mississippi DEQ
P. O. Box 10385
Jackson, MS 39289

4. Phone ( ) 601-961-5654

5. Generating Location (if different)

4280 Rifle Range Rd
Vicksburg, MS 39180 USA

6. Phone ( )

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
U.S.E.S.		
10. Transporter #2 Company Name	**11. US EPA ID Number**	**12. Transporter #2's Phone**
13. Designated T/S/D Facility Name and Site Address	**14. US EPA ID Number**	**15. Facility's Phone**

16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a. Non regulated Waste PPE and Debris	1 CM	20	Y		
b.					
c.					
d.					

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
TREY HESS	Trey Hess	11	09	07

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

ORIGINAL - RETURN TO GENERATOR

COM000033

ALLIED WASTE

NON-HAZARDOUS WASTE MANIFEST

0263252

Please print or type.

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of
MSTMP000243		

GENERATOR

3. Generator's Name and Mailing Address	5. Generating Location (if different)
Mississippi DEQ P. O. Box 10385 Jackson, MS 39289	4280 Rifle Range Rd Vicksburg, MS 39180 USA
4. Phone ( )601-961-5654	6. Phone ( )

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
10. Transporter #2 Company Name	**11. US EPA ID Number**	**12. Transporter #2's Phone**
13. Designated T/S/D Facility Name and Site Address	**14. US EPA ID Number**	**15. Facility's Phone**

16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a. Non regulated Paraffin Wax	1 CM BA	20	Y		
b.					
c.					
d.					

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
TREY HESS	Trey Hess	11	09	07

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

ORIGINAL - RETURN TO GENERATOR

COM000033

ALLIED WASTE

NON-HAZARDOUS WASTE MANIFEST

0263250

Please print or type.

1. Generator's US EPA ID Number	Manifest Document Number	2. Page 1 of
MSTMP00024 552		

GENERATOR

3. Generator's Name and Mailing Address	5. Generating Location (if different)
Mississippi DEQ P. O. Box 10385 Jackson, MS 39289 4. Phone ( ) 601-961-5654	4280 Rifle Range Rd Vicksburg, MS 39180 USA 6. Phone ( )

7. Transporter #1 Company Name	8. US EPA ID Number	9. Transporter #1's Phone
10. Transporter #2 Company Name	**11. US EPA ID Number**	**12. Transporter #2's Phone**
13. Designated T/S/D Facility Name and Site Address	**14. US EPA ID Number**	**15. Facility's Phone**

16. Waste Shipping Name and Description	17. Allied Waste Approval # and Exp. Date	18. Containers No.	18. Containers Type	19. Total Quantity	20. Unit Wt/Vol
a. Non regulated Paraffin Wax	1 CM	20	Y		
b.					
c.					
d.					

21. Additional Descriptions for Materials Listed Above

22. Special Handling Instructions and Additional Information

23. **GENERATOR'S CERTIFICATION:** I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
TREY HESS	Trey Hess	11	09	07

TRANSPORTER

24. **Transporter #1:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

25. **Transporter #2:** Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

T/S/D FACILITY

26. Discrepancy Indication Space

27. **Facility Owner or Operator:** Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)

Printed/Typed Name	Signature	Month	Day	Year

ORIGINAL - RETURN TO GENERATOR

OOMD00083

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET

Requested Disposal Facility: LITTLE DIXIE L38
an Allied Waste Company

Waste Profile #

I. Generator Information

Date: 11/1/07

Generator Name: Mississippi Dept Of Environmental Quality			
Generator Site Address: 4280 Rifle Range Rd			
City: Vicksburg	County: Warren	State: MS	Zip: 39180
Generator State ID Number:		SIC Code Number:	
Generator Mailing Address (if different): P.O Box 20326			
City: Jackson	County: Hinds	State: MS	Zip: 39289
Generator Contact Name: Trey Hess/ Jerry Banks			
Phone Number: (601) 961-5654/ (601) 961-5221		Fax Number:	

II. Transporter Information

Transporter Name: USES JOB #060 07 0333			
Transporter Address: 1075 MENDELL DAVIS DRIVE			
City: JACKSON	County: HINDS	State: MS	Zip: 39272
Transporter Contact Name: ROBBIE BRISTER			
Phone Number: 601 372 3232		Fax Number: 601 372 3356	
State Transportation Number:			

III. Waste Stream Information

Name of Waste: Waste PPE and Debris	
Process Generating Waste: Waste PPE and Debris from site cleanup	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE or ☒ POLLUTION CONTROL WASTE
Physical State:	☒ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID ☐ OTHER: ____
Method of Shipment:	☒ BULK ☐ DRUM ☐ BAGGED ☐ OTHER: ____
Estimated Annual Volume:	☒ CUBIC YARDS: 30 ☐ TONS: ____ ☐ OTHER: ____
Frequency:	☒ ONE TIME ☐ DAILY ☐ WEEKLY ☐ MONTHLY ☐ OTHER: ____
Special Handling Instructions:	

IV. Representative Sample Certification

☒ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Sample Date:	Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE
Sampler's Employer:	
Sampler's Name (printed):	Signature:

© Allied Waste, August 2000

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET (continued)

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Uncontaminated PPE and Poly sheeting	90%
2. Crushed Drums	7%
3. MisCellaneous Nonhaz Garbage (drained oilfiters and trash)	3

Color:	Odor (describe):	Free Liquids:	% Solids:	pH:	Flash Point:	Phenol
Varies	NONE	☐ YES or ☒ NO Content ____%	100%	N/A	N/A °F	N/Appm

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ YES or ☒ NO
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ YES or ☒ NO
Is this a regulated Toxic Material as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this waste generated at a Federal Superfund Clean Up Site?	☐ YES or ☒ NO

VI. Generator Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste Industries, Inc.

Jerry B. Banks, Chief Groundwate Assessment
AUTHORIZED REPRESENTATIVE NAME AND TITLE (Printed)

MS Dept. of Environmental Quality
COMPANY NAME

AUTHORIZED REPRESENTATIVE SIGNATURE

11/8/07
DATE

VII. Allied Waste Decision

☐ Approved ☐ Rejected Expiration: _____

Conditions:

Name, Title _____ Signature _____ Date _____

© Allied Waste, August 2000

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET

Requested Disposal Facility: LITTLE DIXIE L38
an Allied Waste Company

Waste Profile #

I. Generator Information

Date: 11/1/07

Generator Name: Mississippi Dept Of Environmental Quality			
Generator Site Address: 4280 Rifle Range Rd			
City: Vicksburg	County: Warren	State: MS	Zip: 39180
Generator State ID Number:		SIC Code Number:	
Generator Mailing Address (if different): P.O Box 20326			
City: Jackson	County: Hinds	State: MS	Zip: 39289
Generator Contact Name: Trey Hess/ Jerry Banks			
Phone Number: (601) 961-5654/ (601) 961-5221		Fax Number:	

II. Transporter Information

Transporter Name: USES JOB #060 07 0333			
Transporter Address: 1075 MENDELL DAVIS DRIVE			
City: JACKSON	County: HINDS	State: MS	Zip: 39272
Transporter Contact Name: ROBBIE BRISTER			
Phone Number: 601 372 3232		Fax Number: 601 372 3356	
State Transportation Number:			

III. Waste Stream Information

Name of Waste: Paraffin Wax	
Process Generating Waste: Virgin Product cleaned from Abandoned plant demo	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE or ☒ POLLUTION CONTROL WASTE
Physical State:	☒ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID ☐ OTHER: ____
Method of Shipment:	☒ BULK ☐ DRUM ☐ BAGGED ☐ OTHER: ____
Estimated Annual Volume:	☒ CUBIC YARDS: 30 ☐ TONS: ____ ☐ OTHER: ____
Frequency:	☒ ONE TIME ☐ DAILY ☐ WEEKLY ☐ MONTHLY ☐ OTHER: ____
Special Handling Instructions:	

IV. Representative Sample Certification

☒ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Sample Date:	Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE
Sampler's Employer:	
Sampler's Name (printed):	Signature:

© Allied Waste, August 2000

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET (continued)

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Paraffin Wax	100
2.	
3.	

Color:	Odor (describe):	Free Liquids:	% Solids:	pH:	Flash Point:	Phenol
Varies	NONE	☐ YES or ☒ NO Content ____%	100%	N/A	N/A °F	N/Appm

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ YES or ☒ NO
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ YES or ☒ NO
Is this a regulated Toxic Material as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this waste generated at a Federal Superfund Clean Up Site?	☐ YES or ☒ NO

VI. Generator Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste Industries, Inc.

JERRY B. BANKS, CHIEF GROUNDWATER ASSESSMENT
AUTHORIZED REPRESENTATIVE NAME AND TITLE (Printed)

MS DEPT. OF ENVIRONMENTAL QUALITY
COMPANY NAME

Jerry B. Banks
AUTHORIZED REPRESENTATIVE SIGNATURE

11/8/07
DATE

VII. Allied Waste Decision

☐ Approved ☐ Rejected Expiration: _____

Conditions: _____

_____ _____ _____
Name, Title Signature Date

© Allied Waste, August 2000

FOR INTERNAL USE ONLY:
☐ Normal Profile ☐ X-Profile
☐ One Time Waste ☐ Repeat Waste
Fax X-Profiles only to 617-380-3581

Clean Harbors
ENVIRONMENTAL SERVICES, INC.

WASTE MATERIAL PROFILE SHEET

Profile Number

A. GENERAL INFORMATION

GENERATOR EPA ID # MST MP 000 2462
GENERATOR CODE (Assigned by Clean Harbors) _____
GENERATOR NAME: Mississippi DEQ
ADDRESS 4280 Rifle Range Rd
CITY Vicksburg STATE MS ZIP 39180
GENERATOR TECHNICAL CONTACT: J.T. Newman PHONE: 601-278-2916
CUSTOMER CODE (Assigned by Clean Harbors) _____
CUSTOMER NAME: United States Environmental
ADDRESS 1075 Mendell Davis Dr
CITY Jackson STATE MS ZIP 39272

B. WASTE DESCRIPTION

Common Name of Waste: Waste Sodium hydroxide and water
Process Generating Waste: Cleanout of water treatment tanks

Process Generating Waste:
(check one) If spill, origin of spilled material

- ☐ Unused chemical or product
- ☐ Lab Pack
- ☐ Spent halogenated solvents
- ☐ Spent non-halogenated solvents
- ☐ Wastewater treatment sludge from electroplating or etching operations
- ☐ Spent plating bath solutions or residues of plating, stripping and cleaning baths where cyanides are used in the process
- ☐ Wood preservation
- ☐ Inorganic pigment production
- ☐ Organic chemical production
- ☐ Inorganic chemical production
- ☐ Pesticide production
- ☐ Explosives production
- ☐ Petroleum refining
- ☐ Iron or steel production or finishing
- ☐ Primary copper production
- ☐ Primary lead production
- ☐ Primary zinc production
- ☐ Primary Aluminum production
- ☐ Ferro alloy production
- ☐ Secondary lead smelting
- ☐ Veterinary pharmaceutical production
- ☐ Ink formulation
- ☐ Coking
- ☒ Other Water treatment
- ☐ Unknown

Source of Waste:
(check one)

- ☐ Unused Product or Chemical
- ☐ Waste by-product from process
- ☐ Spill clean up
- ☐ Lab Pack
- ☒ Planned site remediation
- ☐ Other: _____

Other Process Information:
(check all that apply)

- ☐ Still bottoms
- ☐ Process scrap
- ☐ Process development
- ☐ Out of date product
- ☐ Spent solvent waste
- ☐ Treatment residues
- ☐ Filter cake
- ☐ Degreasing
- ☐ Exempt recyclable material
- ☐ Packaged consumer goods
- ☐ Off-spec chemical product
- ☐ Zinc, Al, or tin plating
- ☐ Anodizing
- ☐ Cleaning/stripping
- ☐ Wastewater treatment sludges
- ☐ Washwaters
- ☐ Pot liners

Other Process Information:
(check all that apply)

- ☐ Electroplating
- ☐ Conversion coating
- ☐ Carbon steel plating
- ☐ Printed circuit mfg.
- ☐ Cyanide process
- ☐ Heat treating
- ☐ Separator sludge
- ☐ Oven residue
- ☐ Catalyst waste
- ☐ Centrifuged solids
- ☐ Condensate
- ☐ Air, steam, or vacuum stripping
- ☐ Emission control dust
- ☐ Acid leaching
- ☐ Dipping operations
- ☐ Chemical manufacturing
- ☐ Carbon adsorption
- ☐ Incineration or thermal treatment
- ☐ Refining
- ☐ Drug mfg.
- ☐ Distillation
- ☐ Pesticide mfg.
- ☐ Reclamation
- ☐ Etching of metals
- ☐ Bag house dust

Profile Number CH

C. PHYSICAL PROPERTIES (at 25°C or 77°F)

PHYSICAL STATE
- ☐ SOLID WITHOUT FREE LIQUID
- ☐ POWDER
- ☐ MONOLITHIC SOLID
- ☒ LIQUID WITH NO SOLIDS
- ☐ LIQUID/SOLID MIXTURE
  - % FREE LIQUID _____
  - % SETTLED SOLID _____
  - % TOTAL SUSPENDED SOLID _____
- ☐ GAS/AEROSOL

NUMBER OF PHASES/LAYERS
☒ 1 ☐ 2 ☐ 3
% BY VOLUME (APPROX.)
TOP _____ MIDDLE _____ BOTTOM _____

VISCOSITY (If liquid present)
☒ LOW (e.g. WATER)
☐ MEDIUM (e.g. MOTOR OIL)
☐ HIGH (e.g. MOLASSES)

COLOR
Clear to Brown

ODOR
☒ NONE OR MILD
☐ STRONG

BOILING POINT (If liquid)
☒ ≤ 100°F
☐ > 100°F

MELTING POINT (for solids only)
☐ < 140°F
☐ 140-200°F
☐ > 200°F

FLASH POINT
☐ < 73°F
☐ 73-100°F
☐ 101-140°F
☐ 141-200°F
☒ > 200°F

pH
☐ ≤ 2
☐ 2.1 - 6.9
☐ 7 (neutral)
☐ 7.1 - 12.4
☒ ≥ 12.5

SPECIFIC GRAVITY
☐ < 0.8 (e.g. Gasoline)
☐ 0.8-1.0 (e.g. Ethanol)
☒ 1.0 (e.g. Water)
☐ 1.0-1.2 (e.g. Antifreeze)
☐ > 1.2 (e.g. Methylene Chloride)

TOTAL ORGANIC CARBON (If liquid)
☒ ≤ 1%
☐ 1-9%
☐ ≥ 10%

BTU/LB
☒ < 2,000
☐ 2,000-5,000
☐ 5,000-10,000
☐ > 10,000

VAPOR PRESSURE (for liquids only) _____ mm Hg

Clean Harbors ENVIRONMENTAL SERVICES, INC.

Profile Number CH

D. COMPOSITION (Must add up to at least 100%. Include inert materials and/or debris if applicable. Actual percent or range is acceptable.)

Water	70 – 75 %				–	%
Sodium Hydroxide	25 – 29 %				–	%
2,4 D	1 – 1 %				–	%
	– %				–	%
	– %				–	%
	– %				–	%

☐ Check if MSDS attached.

E. CONSTITUENTS — Attach any available analysis. Enter values or ranges where known. For TCLP values, BRL signifies below regulatory level. None, unknown, and present are also acceptable answers.

Are these values based on ☐ Knowledge or ☒ Testing?

INORGANIC

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL mg/l
D004	ARSENIC	5.0	2.71.1	
D005	BARIUM	100.0	0	
D006	CADMIUM	1.0	0	
D007	CHROMIUM	5.0	0	
D007	CHROMIUM CR+6		0	
D008	LEAD	5.0	0	
D009	MERCURY	0.2	0	
D010	SELENIUM	1.0	0	
D011	SILVER	5.0	0	

OTHER METALS	TOTAL
ALUMINUM	0
ANTIMONY	
BERYLLIUM	
CALCIUM	
COPPER	
MAGNESIUM	
MOLYBDENUM	
NICKEL	
POTASSIUM	
SILICON	
SODIUM	
THALLIUM	
TIN	
VANADIUM	
ZINC	

NON-METALS	WT%
SULFUR	0
BROMINE	
CHLORINE	
FLUORINE	
IODINE	
	PPM
AMMONIA	0
REACTIVE SULFIDE	
CYANIDE-TOTAL	
CYANIDE AMENABLE	
CYANIDE REACTIVE	

ORGANIC

VOLATILE COMPOUNDS		REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL mg/l
D018	BENZENE	0.5	0	
D019	CARBON TETRACHLORIDE	0.5	0	
D021	CHLOROBENZENE	100.0	0	
D022	CHLOROFORM	6.0	0	
D028	1,2-DICHLOROETHANE	0.5	0	
D029	1,1-DICHLOROETHYLENE	0.7	0	
D035	METHYL ETHYL KETONE	200.0	0	
D039	TETRACHLOROETHYLENE	0.7	0	
D040	TRICHLOROETHYLENE	0.5	0	
D043	VINYL CHLORIDE	0.2	0	

SEMI-VOLATILE COMPOUNDS		REGULATORY LEVEL (mg/l)	TCLP	TOTAL
D023	o-CRESOL	200.0	0	
D024	m-CRESOL	200.0		
D025	p-CRESOL	200.0		
D026	CRESOL (TOTAL)	200.0		
D027	1,4-DICHLOROBENZENE	7.5		
D030	2,4-DINITROTOLUENE	0.13		
D032	HEXACHLOROBENZENE	0.13		
D033	HEXACHLOROBUTADIENE	0.5		
D034	HEXACHLOROETHANE	3.0		
D036	NITROBENZENE	2.0		
D037	PENTACHLOROPHENOL	100.0		
D038	PYRIDINE	5.0		
D041	2,4,5-TRICHLOROPHENOL	400.0		
D042	2,4,6-TRICHLOROPHENOL	2.0		

PESTICIDES AND HERBICIDES		REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL mg/l
D012	ENDRIN	0.02	0	
D013	LINDANE	0.4	0	
D014	METHOXYCHLOR	10.0	0	
D015	TOXAPHENE	0.5	0	
D016	2,4-D	10.0	19.4	
D017	2,4,5-TP (SILVEX)	1.0	0	
D020	CHLORDANE	0.03	0	
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008	0	

OTHER

PHENOL 0 PPM

TOTAL PETROLEUM HYDROCARBONS (SOILS ONLY) 0 PPM

PCB'S
☒ NONE
☐ < 50 PPM
☐ ≥ 50 PPM

IF PCB'S ARE PRESENT <50 PPM, IS THE WASTE REGULATED BY TSCA 40 CFR 761?
☐ YES ☐ NO

HOC'S
☐ NONE
☐ < 1000 PPM
☐ ≥ 1000 PPM

OTHER HAZARDS	YES		YES		YES		YES
WATER REACTIVE	☐	PESTICIDE	☐	SHOCK SENSITIVE	☐	DEA REGULATED SUBSTANCE	☐
RADIOACTIVE	☐	HERBICIDE	☐	THERMALLY SENSITIVE	☐	OXIDIZER	☐
DIOXIN	☐	EXPLOSIVE	☐	INFECTIOUS, PATHOGENIC, OR ETIOLOGICAL AGENT	☐	REDUCING AGENT	☐
OSHA REGULATED CARCINOGENS	☐	SPONTANEOUSLY IGNITES WITH AIR	☐	ASBESTOS	☐	NONE OF THE ABOVE	☒

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED? YES ☐ NO ☒ (If yes, explain)

CRT 149

Clean Harbors
ENVIRONMENTAL SERVICES, INC.

Profile Number CH

F. REGULATORY STATUS

Y N

☒ ☐ USEPA HAZARDOUS WASTE? (If Yes List codes.) D002 D018

☐ ☒ DO ANY GENERATOR STATE WASTE CODES APPLY? IF YES, LIST STATE CODES

LIST ANY FEDERAL OR STATE WASTE CODES WHICH MAY VARY FROM SHIPMENT TO SHIPMENT:

WILL THE DECISION TO VARY THESE WASTE CODES BE BASED ON ☐ KNOWLEDGE OR ☒ TESTING (check one).
IF KNOWLEDGE, DESCRIBE BASIS OF KNOWLEDGE:

☒ ☐ IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?
THIS WASTE IS A: ☐ WASTEWATER ☒ NON WASTEWATER PER USEPA DEFINITION IN 40 CFR 268.2.

☐ ☒ IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D011, D012-D017 NON-WASTEWATERS, OR D018-D043 APPLY, ARE THERE ANY UNDERLYING HAZARDOUS CONSTITUENTS (UHC'S) PRESENT ABOVE UNIVERSAL TREATMENT STANDARDS (UTS)?

☐ ☒ DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

☐ ☒ IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?
IF YES, SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 401.

☐ ☒ IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES? (IS THIS WASTE FROM A CHEMICAL MANUFACTURING, COKE BY-PRODUCT RECOVERY, OR PETROLEUM REFINERY PROCESS?)

☐ ☒ DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS ≥ 500 PPM?

☐ ☒ DOES THIS WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE ≥ .3KPA (.044 psia)?

☐ ☒ DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN 77 KPa (11.2psia)?

G. D.O.T. INFORMATION: List all shipping names that may be used. Attach additional page if necessary.

D.O.T. SHIPPING NAME Waste Corrosive Liquid toxic, n.o.s. basic inorganic

DOT HAZARD CLASS:

UN/NA # PACKING GROUP (Circle 1) I II III HAZARD ZONE (Circle 1) A B C D

WILL THIS SHIPPING NAME VARY? ☐ Y ☒ N IF YES, WILL ASSIGNMENT OF PROPER SHIPPING NAME BE BASED ON ☐ KNOWLEDGE OR ☐ TESTING? (check one) IF KNOWLEDGE, DESCRIBE BASIS OF KNOWLEDGE:

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY: ☒ ONE TIME ☐ WEEKLY ☐ SEMI-MONTHLY ☐ MONTHLY ☐ QUARTERLY ☐ OTHER

☒ BULK LIQUID

GALLONS/SHIPMENT: 2500 GAL
X FROM TANKS: TANK SIZE 1000 GAL
____ FROM DRUMS

VEHICLE TYPE:
____ VAC TRUCK
X TANK TRUCK
____ RAILROAD TANK CAR

CHECK COMPATIBLE STORAGE MATERIALS:
____ STEEL X STAINLESS STEEL (316)
____ RUBBER LINED __ FIBERGLASS LINED
____ OTHER

☐ BULK SOLD

____ TON/YD PER SHIPMENT
STORAGE CAPACITY ____ TON/YD
VEHICLE TYPE:
____ DUMP TRAILER
____ ROLL OFF BOX
____ INTERMODAL ROLLOFF BOX
____ CUSCO/VACTOR
____ OTHER

☐ CONTAINERIZED

____ CONTAINERS/SHIPMENT
STORAGE CAPACITY: ____ CONTAINERS
CONTAINER TYPE:
____ CUBIC YARD BOX
____ PALLET
____ TOTE TANK
____ DRUM SIZE:
CONTAINER MATERIAL:
____ STEEL
____ FIBER
____ PLASTIC
____ OTHER

I. SAMPLE STATUS

REPRESENTATIVE SAMPLE HAS BEEN SUPPLIED. ☒ YES ☐ NO SAMPLED BY Wesley Byrd DATE SAMPLED 11/5/07

J. SPECIFIC DISPOSAL RESTRICTIONS OR REQUESTS:

SPECIAL WASTE HANDLING REQUIREMENTS:

OTHER COMMENTS OR REQUESTS:

K. BIENNIAL/ANNUAL REPORTING INFORMATION.

SIC CODE ____ SOURCE CODE ____ FORM CODE ____ ORIGIN CODE ____

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
Jerry B. Banks	JERRY B. BANKS	CHIEF, GROUNDWATER ASSESS	11/8/07

FOR CLEAN HARBORS USE ONLY

CHI REPRESENTATIVE COMPLETING PROFILE:

CHI 102

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) DD1634869 PPW 10/27/2007 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MSTMP0002452	1	(800) 483-3718	001102558 FLE

5. Generator's Name and Mailing Address
Mississippi Department of Environmental Quality
Rifle Range Road
Vicksburg, MS 39180
Generator's Phone: 610-961-8554

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Resource Transportation — U.S. EPA ID Number: MSR000102624

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Clean Harbors Baton Rouge LLC
13351 Scenic Highway
Baton Rouge, LA, 70807
Facility's Phone: (225) 778-1234
U.S. EPA ID Number: LAD010395127

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. HAZARDOUS WASTE, LIQUID, N.O.S., (ARSENIC, CHROMIUM), 9, NA3082, PG III	001	TK	3500	gal	D004	D007	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: 1 CH2731238 ERG#171

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: TREY HESS — Signature: Trey Hess — Month/Day/Year: 10/05/07

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Tim McLemore — Signature — Month/Day/Year: 10/08/07
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
LINE 11. WT RECD: 28220 P
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month/Day/Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H077			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: RANESH KOHLI — Signature: RKohli — Month/Day/Year: 10/08/07

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

Generator's Hazardous Waste Profile Sheet

Service Agreement on file? ☑ Yes ☐ No Profile Number _____

☐ Check here if there are multiple generating locations for this waste. Attach additional locations.

☐ Check here if a Certificate of Destruction or Disposal is required

A. Waste Generator Information

1. Generator Name: Mississippi Dept of Env. Quality
2. Facility Street Address: 4280 Rifle Range Road
3. Facility City: Vicksburg
4. Facility State/Province: Mississippi
5. Facility Zip Code: 39180
6. Facility County: Warren
7. Facility Phone: (601) 961-5654
8. Facility Contact Name/Title: Trey Hess/Jerry Banks
9. Facility Fax #: 601-961-5300
10. Facility Email: _____
11. SIC/NAICS Code: _____
12. Generator USEPA/FED ID #: MSTMP0002452

B. Billing Information

☐ same as above P.O. Number: _____

13. Customer Name: United States Environmental Services
14. Billing Address: 1075 Mendell Davis Drive, Jackson, MS 39272
15. Customer/Technical Contact: J.T. Newman
16. Customer Phone: (601) 278-7816
17. Customer Email: jnewman@usesgroup.com
18. Customer Fax: (601) 372-3356
19. Technical Contact/Mobile #: (601) 278-7816 Office #: (601) 372-3356 Pager #: ( ) _____

C. Waste Stream Information

☑ USEPA Hazardous ☐ State Hazardous ☐ TSCA ☐ Non-Hazardous

1. Description
   a. Name of Waste: Nitric acid <2
   b. Process Generating Waste: Waste nitric acid from fertilizer plant
   c. Color: yellow-brown
   d. Strong Odor (describe): no
   e. Physical State at 70°F: ☐ Solid ☑ Liquid ☐ Gas ☐ Sludge ☐ Other: _____
   f. Layers? ☑ Single layer ☐ Multi- layer
   g. Free Liquid Range (%) 0 to 100 Specify Gravity: _____ Viscosity: _____ BTU/lb: _____
   h. pH Range: .5 to _____
   i. Liquid Flash Point: ☐ < 73°F ☐ 73°-99°F ☐ 100°-139°F ☑ 140°-199°F ☐ > 200°F ☐ N/A
2. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to question f ☑ Yes ☐ No
   a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U)
   D002, D007
   b. If a characteristic hazardous waste, do underlying hazardous constituents(UHCs) apply-(40 CFR 268.48)? ☐ Yes ☑ No
   (if yes, list in Section B.2.j)
   c. Is the waste subject to RCRA Subpart CC Controls-(40 CFR 264.1083 & 265.1084)? ☐ Yes ☐ No ☐ ? Click for Add'l Info
   If no, does the waste meet the organic LDR Exemption? ☐ Yes ☑ No
   If no, does the waste contain <500 ppmw volatile organic (VOC's)? ☐ Yes ☑ No
   Volatile organic concentration _____ ppmw
   d. Is the waste predominately debris subject to the Alternate Debris Standards (40 CFR 268.45)? ☐ Yes ☑ No
   e. Is the waste predominately soil subject to the Alternate Soil Treatment Standards-(40 CFR 268.49)? ☐ Yes ☑ No
   If yes, will Underlying Hazardous Constituents apply? (list in B.2.j) ☐ Yes ☐ No
   f. Does the waste represented by this profile contain asbestos? ☐ Yes ☑ No
   If yes, ☐ Friable ☐ Non-Friable
   g. Does the waste represented by this profile contain benzene? ☐ Yes ☑ No
   Is this subject to Benzene Operations Waste NESHAP (40 CFR Part 61 Subpart FF)? ☐ Yes ☐ No
   If yes, complete Beneze Waste Operations NESHAP (BWON) questionaire

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Generator's Hazardous Waste Profile Sheet

Profile Number _____

C. Waste Stream Information (continued)

h. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No

If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

i. Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.2i) ☐ Yes ☑ No

Were the PCBs imported into the U.S.? ☐ Yes ☐ No

Are PCBs regulated under the "Self-Implementing Remediation Section of (Mega) Rule?" 40CFR 761,61(a) ☐ Yes ☐ No

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis): ☐ (See Attached - for entering additional constituents)

Constituents *(Total Composition Must be > 100%)*	Concentration %	Constituents *(Total Composition Must be > 100%)*	Concentration %
1. Nitric Acid	2	4.	
2. Water	98	5.	
3. Chromium	28.1 ppm	6.	

k. Check any that apply: ☐ Pyrophoric ☐ Water Reactive ☐ OSHA Carcinogen ☐ Shock Sensitive ☐ Oxidizer ☐ Infectious

l. Is the waste subject to controls as a Group 1 wastewater or residual under the Hazardous Organic NESHAP? ☐ Yes ☑ No

If yes, is it a Table 8 _____ or Table 9 _____ compound?

m. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No

Is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No

If NORM, identify isotopes and concentration, _____ pCi/g

n. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? ☐ Yes ☑ No

If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up for activity.

For state mandated clean-up, provide relevant documentation.

o. Is this a State Hazardous Waste? ☑ Yes ☐ No If yes, please list applicable codes D002, D007

If NY waste codes B001-B007 apply, please complete question C.2.c on page 1.

D. DOT Information and Shipping Volume

1. Quantity of Waste

a. Estimated Annual Volume: 25000 Gallons ☐ Tons ☐ Yards ☐ Drums ☐ Other (specify) _____

b. ☑ Event ☐ Base/Ongoing (check one)

2. Shipping Information

a. Packaging:

☐ Roll off/End dump: _____ ☐ Other: _____

☐ Drum Type/Size: _____ ☐ Vacuum Box

☑ Tanker ☐ Super Sack ☐ Tote Bin ☐ Cubic Yard Boxes

b. Shipping Frequency: Units: _____ Per: ☐ Month ☐ Quarter ☐ Year ☑ One Time ☐ Other _____

c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e and f) ☑ Yes ☐ No

d. Reportable Quantity (lbs.; kgs.): _____ e. Primary/Subsidiary Hazard Class(es)/ID#: _____

f. USDOT Shipping Name: _____ PG: _____

I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this wastestream. Any sample submitted is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. I authorize WMI to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile. All relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste will be disclosed to the contractor. All changes which occur in the character of the waste will be identified by the Generator and be disclosed to the Contractor prior to providing the waste to the Contractor.

Certification Signature: _____ Title: ENVIRO. ENGINEER

Name (Type or Print): TREY HESS Company Name: MDEQ Date: 10/15/07

☐ Check if additional information is attached. Indicate the number of attached pages ____

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CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

Land Disposal Restriction Notification Form

Date: 10 / 04 / 2007

MANIFEST INFORMATION

Generator: Mississippi Department of Environmental Quality
Address: Rifle Range Road
Vicksburg, MS 39180
EPA ID#: M S T M P 0 0 0 2 4 5 2

Manifest No
001102558 FLE
Sales Order No: DD1634869
Manifest Document No:

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category:
1	1	CH273123B	NON- WASTEWATER	2 : This is subject to LDR.

EPA Waste Codes	EPA Waste Subcategory
D004	Toxicity Characteristic for Arsenic
D007	Toxicity Characteristic for Chromium

Certification

Applies to Manifest Line Items

Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268. 1

Waste analysis data, where available, is attached

Signature: Trey Hess

Print Name: TREY HESS

Title:

Date: 10/5/07

Land Disposal Restriction Notification Form

Date: 10 / 04 / 2007

EnHarbors ENVIRONMENTAL SERVICES, INC.

MANIFEST INFORMATION

Generator: Mississippi Department of Environmental Quality
Address: Rifle Range Road
Vicksburg, MS 39180
EPA ID#: M S T M P 0 0 0 2 4 5 2

Manifest No
001102559 FLE
Sales Order No: DD1634869
Manifest Document No:

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category:
1	1	CH273123B	NON- WASTEWATER	2 : This is subject to LDR.

EPA Waste Codes	EPA Waste Subcategory
D004	Toxicity Characteristic for Arsenic
D007	Toxicity Characteristic for Chromium

Certification — **Applies to Manifest Line Items**

Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268. 1

Waste analysis data, where available, is attached

Signature: Trey Hess **Print Name:** TREY HESS

Title: **Date:** 10/5/07

HERITAGE EN[illegible]ONMENTAL SERVICES, LLC
WASTESTREAM SURVEY FORM
(877)436-8778
Heritage Form HERWS01

[illegible]ge Use Only

Quote #	Approval Fee
Ws#	P.O.
Sample #	Heritage Contact

Preferred Service Location:
Indianapolis, IN ☒ Charlotte, NC ☐ Kansas City, MO ☐ Lemont, IL ☐ Coolidge, AZ ☐ Williston, VT ☐ Louisville, KY ☐
Heritage Hazardous Landfill (Roachdale, IN) ☐ Heritage Non-Hazardous Landfill (Roachdale, IN) ☐ Toledo, OH ☐

1. GENERATOR INFORMATION

Heritage Generator Number (if known)			
Generator Name	Mississippi DEQ		
Address	Rifle Range Rd		
City, State, Zip	Vicksburg, MS 39180		
Tech. Contact Name	J.T. Newman		
Phone	601-278-7816	Fax	601-372-3232
E-mail Address	jnewman@usesgroup.com		
US EPA ID Number	MSTMP0002452		
State ID Numbers			

Generator Status
LQG ☐ SQG ☒ CESQG ☐ Non-hazardous ☐

2. BILLING INFORMATION

Quote to: Generator ☐ Customer ☒ Other ☐

Customer Name	Chemical Waste Mgt		
Address	36964 AL Hwy 17		
City, State, Zip	Emelle, AL 35459		
Contact Name	Vanessa Lewis		
Phone	205/652-8140	Fax	
E-mail Address			

3. MANIFEST MAIL ADDRESS *Generator* ☐ *Billing* ☒

Contact Name	J.T. NEwman
Company Name	United States Environmental Services
Address	1075 Mendell Davis Dr
City, State, Zip	Jackson, MS 39272

4. SIC Code wastestream was generated under (If code is 2911, 28—,or 3312 complete form HERWS03)

5. Common Name Nitric Acid

6. Process Generating Waste Clean up of Facility

7. DOT Description (*if available*)

8. Chemical Composition: Using specific chemical names, list all constituents present in the wastestream. Attach available analyses or MSDSs. Remember to identify Form R/TRI Toxic Chemicals. **Total composition must equal or exceed 100%.**

Constituent	Range	Units
Nitric Acid	75-90	%
Water	10-25	%
Chromium	0-30	ppm

9. Identify US EPA waste codes D002 D007

10. US EPA Form Code US EPA Source Code

11. Identify state waste codes

12. Color Brown to Clear Appearance Brownish Liquid Odor None

13. %Solids %Liquids 100

14. Physical State at 70 °F Solid ☐ Liquid ☒ Sludge ☐ Semi-solid ☐ Powder ☐ Gas ☐
If solid, are there free liquids? Yes ☐ No ☐ (If no, will waste dump from the drum? Yes ☐ No ☐)
Is the wastestream pumpable? Yes ☒ No ☐
Does the wastestream contain debris? Yes ☐ No ☒ If yes, list type and amount in Chemical Composition (Section 8.)

15. pH or pH range (*If wastestream is solid, give pH of 10% slurry*): 0-1
Flash Point : <100°F ☐ 100-140°F ☐ 141-200°F ☐ >200°F ☒
Boiling Point: <100°F ☐ >100°F ☐
Fuel Value (Btu/lb): <2000 ☒ 2000-6000 ☐ 6000-10,000 ☐ > 10,000 ☐

16. Is the waste generated from, or associated with, metal finishing or other plating activities? Yes ☐ No ☒

Common Name (same as Item #5):

17. If the waste is federally hazardous, is this waste subject to Subpart CC regulation at 40 CFR 265.1080-1091 (i.e. contains greater than 500 ppm VOCs) ? Yes ☐ No ☒ NA ☐

18. Does this material meet the definition of a used oil (40 CFR 279)? Yes ☐ No ☒ If yes, has the waste been mixed with hazardous waste? Yes ☐ No ☐

19. Does the wastestream contain asbestos? Yes ☐ No ☒ If Yes, is the asbestos friable? Yes ☐ No ☐
Does the wastestream contain human sanitary, biological, or infectious waste? Yes ☐ No ☒
Does the wastestream contain dioxins or furans or dioxin-precursors? Yes ☐ No ☒
Does the wastestream contain radioactive wastes? Yes ☐ No ☒
Does the wastestream contain PCBs? Yes ☐ No ☒ If Yes, what concentration? _____ ppm
Is the wastestream air reactive, autoignitable, pyrophoric or spontaneously combustible? Yes ☐ No ☒
Is the wastestream water reactive? Yes ☐ No ☒
Does the wastestream present other compatibility concerns? Yes ☐ No ☒ If yes, specify _____
Is the wastestream dusty? Yes ☐ No ☒
Does wastestream contain chelating agents? Yes ☐ No ☒ Not Known ☐

20. List all Attachments

21 a. Transporter: Heritage Transport ☐ Other ☒
24 Hour Emergency Number _____
If transporter is not Heritage Transport, complete the following:
Transporter Name _____
Address _____
City, State, Zip _____
Contact/Phone _____
US EPA ID No.

21b. Packaging:
Bulk Solid ☐ Bulk Liquid ☒
Container ☐ Cylinder ☐
Container Type _____
Container Size _____
Annual Volume (units) _____

22. **CERTIFICATION** *Sign and date the certification.*
I hereby certify that all information submitted herein and attached contains true, accurate and complete descriptions of this waste. Any sample submitted for analysis is representative of the waste material being offered for approval. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I have reviewed the physical facilities, administrative practices, and operational procedures (or have directed the completion of such a review) and based on this review do willingly make this certification. I authorize Heritage to obtain a sample from any waste shipment for purposes of recertification. I will notify Heritage Environmental Services, LLC if the generator status or any other information on this form changes.

Signature _____ Date 10/3/07 Company MDEQ

23. If wastestream carries F001, F002, F003, F004, and/or F005, identify concentration in mg/l or mg/kg for each constituent, if constituent is present, but concentrations are unknown, check the line.

Acetone		2-Ethoxyethanol		2-Nitropropane	
Benzene		Ethyl Acetate		Pyridine	
n-Butyl Alcohol		Ethyl Benzene		Tetrachloroethylene	
Carbon Disulfide		Ethyl Ether		Toluene	
Carbon Tetrachloride		Isobutanol		1,1,1-Trichloroethane	
Chlorobenzene		Methanol		1,1,2-Trichloroethane	
Cresol (m and p)		Methylene Chloride		Trichloroethylene	
o-Cresol		Methyl Ethyl Ketone		1,1,2-Trichloro-1,2,2-trifluoroethane	
Cyclohexanone		Methyl Isobutyl Ketone		Trichlorofluoroethane	
1,2-Dichlorobenzene		Nitrobenzene		Xylenes (total)	

24. Complete for Williston, VT Coolidge, AZ

System Type	*M141*	Total Alkalinity	TOC	Halogens	Sulfides	Zn
Hex Chrome		Total Acidity	HOC	Cyanides	Ni	

Toxicity Characteristic Constituents *Provide the TCLP results for the following constituents in mg/l:*

D004 Arsenic		D014 Methoxychlor		D024 m-Cresol		D034 Hexachloroethane	
D005 Barium		D015 Toxaphene		D025 p-Cresol		D035 Methyl Ethyl Ketone	
D006 Cadmium		D016 2,4-D		D026 Cresol		D036 Nitrobenzene	
D007 Chromium		D017 2,4,5-TP(Silvex)		D027 1,4-Dichlorobenzene		D037 Pentachlorophenol	
D008 Lead		D018 Benzene		D028 1,2 –Dichloroethane		D038 Pyridine	
D009 Mercury		D019 Carbon Tetrachloride		D029 1,1-Dichloroethylene		D039 Tetrachloroethylene	
D010 Selenium		D020 Chlordane		D030 2,4-Dinitrotoluene		D040 Trichloroethylene	
D011 Silver		D021 Chlorobenzene		D031 Heptachlor		D041 2,4,5-Trichlorophenol	
D012 Endrin		D022 Chloroform		D032 Hexachlorobenzene		D042 2,4,6-Trichlorophenol	
D013 Lindane		D023 o-Cresol		D033Hexachlorobutadiene		D043 Vinyl Chloride	

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH273123B

A. GENERAL INFORMATION

GENERATOR EPA-ID: MSTMP0002452 | GENERATOR PROFILE No. CH273123B

GENERATOR CODE (Assigned by Clean Harbors) MI3809 | GENERATOR NAME: Mississippi Department of Environmental Quality

ADDRESS Rifle Range Road | CITY Vicksburg | STATE MS | ZIP/POSTAL CODE 39180 | PHONE:

CUSTOMER CODE (Assigned by Clean Harb US1457 | CUSTOMER NAME: U S Environmental Services L

ADDRESS 1075 Mendell Davis Drive | CITY Jackson | STATE/PROVINCE MS | ZIP/POSTAL CODE 39272

B. WASTE DESCRIPTION

WASTE DESCRIPTION: Arsenic Contaminated Water

PROCESS GENERATING WASTE (Please provide detailed description of process generating waste):

Lab Wastes Chemicals from Analysis

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- LIQUID WITH NO SOLIDS
- ☑ LIQUID/SOLID MIXTURE
  - % FREE LIQUID 0.00 - 99.00
  - % SETTLED SOLID 0.00 - 1.00
  - % TOTAL SUSPENDED SOLI
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS
☑ 1 2 3
% BY VOLUME (Approx.)
TOP
MIDDLE
BOTTOM

VISCOSITY (If liquid present)
- ☑ 1 - 100 (e.g. WATER)
- 101 - 500 (e.g. MOTOR OIL)
- 501 - 10,000 (e.g. MOLASSES)
- > 10,000

COLOR: Clear/Brown

ODOR
- ☑ NONE
- MILD
- STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON
- ☑ <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- ☑ > 200 (>93)

Actual:

pH
- <= 2
- ☑ 2.1 - 6.9
- 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

Actual:

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline
- 0.8-1.0 (e.g. Ethano
- ☑ 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifree
- > 1.2 (e.g. Methylene Chlorid

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- ☑ Unknown

Actual:

BTU/LB (MJ/kg)
- < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual

VAPOR PRESSURE (for liquids only) : mm Hg

D. COMPOSITION (List the complete composition of the waste, include any inert components and /or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN – MAX	UOM
Arsenic	0.000 – 5.460	PPM
Chromium	0.000 – 12.000	PPM
Water	99.000 – 100.000	%

CHEMICAL	MIN – MAX	UOM

ANY METAL OBJECTs PRESENT? YES ☑ NO

If yes include dimension

E. CONSTITUENTS – Are these values based on testing or knowledge? ☐ Knowledge ☑ Testing

If constituent concentrations are base on analytical testing, analysis must be provided. If based on knowledge, basis of knowledge must be provided below.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D004	ARSENIC	5.0	5.460	
D005	BARIUM	100.0		
D006	CADMIUM	1.0		
D007	CHROMIUM	5.0	12.000	
D008	LEAD	5.0		
D009	MERCURY	0.2		
D010	SELENIUM	1.0		
D011	SILVER	5.0		

RCRA	VOLATILE COMPOUND	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D018	BENZENE	0.5		
D019	CARBON TETRACHLORIDE	0.5		
D021	CHLOROBENZENE	100.0		
D022	CHLOROFORM	6.0		
D028	1,2-DICHLOROETHANE	0.5		
D029	1,1-DICHLOROETHYLENE	0.7		
D035	METHYL ETHYL KETONE	200.0		
D039	TETRACHLOROETHYLENE	0.7		
D040	TRICHLOROETHYLENE	0.5		
D043	VINYL CHLORIDE	0.2		

RCRA	SEMI-VOLATILE COMPOUND	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D023	o-CRESOL	200.0		
D024	m-CRESOL	200.0		
D025	p-CRESOL	200.0		
D026	CRESOL (TOTAL)	200.0		
D027	1,4-DICHLOROBENZENE	7.5		
D030	2,4-DINITROTOLUENE	0.13		
D032	HEXACHLOROBENZENE	0.13		
D033	HEXACHLOROBUTADIENE	0.5		
D034	HEXACHLOROETHANE	3.0		
D036	NITROBENZENE	2.0		
D037	PENTACHLOROPHENOL	100.0		
D038	PYRIDINE	5.0		
D041	2,4,5-TRICHLOROPHENOL	400.0		
D042	2,4,6-TRICHLOROPHENOL	2.0		

RCRA	PESTICIDES AND HERBICIDE	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D012	ENDRIN	0.02		
D013	LINDANE	0.4		
D014	METHOXYCHLOR	10.0		
D015	TOXAPHENE	0.5		
D016	2,4-D	10.0		
D017	2,4,5-TP (SILVEX)	1.0		
D020	CHLORDANE	0.03		
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008		

OTHER METALS	MIN	MAX	UOM
ALUMINUM			
ANTIMONY			
BERYLLIUM			
CALCIUM			
COPPER			
MAGNESIUM			
MOLYBDENUM			
NICKEL			
POTASSIUM			
SILICON			
SODIUM			
THALLIUM			
TIN			
VANADIUM			
ZINC			

NON-METALS	MIN	MAX	UOM
BROMINE			
CHLORINE			
FLUORINE			
IODINE			
SULFUR			

OTHER NON-METALS	MIN	MAX	UOM
AMMONIA			
REACTIVE SULFIDE			
CYANIDE-TOTAL			
CYANIDE AMENABLE			
CYANIDE REACTIVE			

OTHER CHEMICALS	MIN	MAX	UOM
PHENOL			
Total Petroleum Hydrocarbons			

OTHER

HOCs
- ☑ NONE
- < 1000 PPM
- >= 1000 PPM

PCBs
- ☑ NONE
- <50 PPM
- >= 50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

ASBESTOS	INFECTIOUS, PATHOGENIC, OR ETIOLOGICAL AGENT	REDUCING AGENT
DEA REGULATED SUBSTANCES	OXIDIZER	SHOCK SENSITIVE
DIOXIN	OSHA REGULATED CARCINOGENS	SPONTANEOUSLY IGNITES WITH AIR
EXPLOSIVE	PESTICIDE	THERMALLY SENSITIVE
HERBICIDE	POLYMERIZABLE	WATER REACTIVE
FUMING / SMOKING WASTE	RADIOACTIVE	

☑ NONE OF THE ABOVE

Clean Harbors Profile No. CH273123B

F. REGULATORY STATUS

☑ YES ☐ NO USEPA HAZARDOUS WASTE?
D004 D007

☐ YES ☑ NO DO ANY STATE WASTE CODES APPLY?

☑ YES ☐ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?
LDR CATEGORY: This is subject to LDR.
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THIS A WASTEWATER PER 40 CFR PART 268.2?

YES ☑ NO IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D0011, D012-DO17 NON-WASTEWATERS, OR D018- D043 APPLY, ARE ANY UNDERLYING HAZARDOUS (UHCs) PRESENT ABOVE UNIVERSAL TREATMENT

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES ☑ NO IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?
IF YES, SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 4

YES ☑ NO IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES?
IF YES, IS THE GENERATOR'S TOTAL ANNUAL BENZENE >= 10 Megagrams? YES NO

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN 77 KPa (11.2PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THIS WASTE REGULATED UNDER THE OZONE DEPLETING SUBSTANCE ACT FOR ONTARIO?

G. D.O.T INFORMATION: (Include proper shipping name, hazard class and ID number).
US D.O.T. DESCRIPTION: *Hazardous waste, liquid, n.o.s., (Arsenic, Chromium) , 9, NA3082, PG III*

H. TRANSPORTATION REQUIREMENTS
ESTIMATED SHIPMENT FREQUENCY: ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER
IF BULK LIQUID OR BULK SOLID PLEASE INICATE THE EXPECTED NUMBER OF LOADS PER SHIPPING FREQUENCY

CONTAINERIZED	☑ BULK LIQUID	BULK SOLID
CONTAINERS/SHIPMENT	GALLONS/SHIPMENT: GAL.	SHIPMENT UOM: TON YARD
STORAGE CAPACITY:	FROM TANKS: TANK SIZE GAL.	PER SHIPMENT: 0.00 MIN 0.00 MAX
CONTAINER TYPE:	FROM DRUMS	STORAGE CAPACI TON/YD
CUBIC YARD BOX	VEHICLE TYPE:	VEHICLE TYPE:
PALLET	VAC TRUCK	DUMP TRAILER
TOTE TANK	☑ TANK TRUCK	ROLL OFF BOX
OTHER:	RAILROAD TANK CAR	INTERMODAL ROLLOFF BOX
DRUM SIZE:	CHECK COMPATIBLE STORAGE MATERIAL	CUSCO/VACTOR
CONTAINER MATERIAL:	☑ STEEL / STAINLESS STEEL	OTHER
STEEL	RUBBER LINED / FIBERGLASS LINED	
FIBER	DERAKANE	
PLASTIC	OTHER	
OTHER		

I. SPECIAL REQUEST
SPECIFIC DISPOSAL RESTRICTIONS OR REQUESTS:
SPECIAL WASTE HANDLING REQUIREMENTS
OTHER COMMENTS OR REQUESTS: *Sample to be submitted to Baton Rouge for WWT*

J. BIENNIAL / ANNUAL REPORTING INFORMATION
SIC CODE *9511* SOURCE CODE *G19* FORM CODE *W119*

K. SAMPLE STATUS		SAMPLED BY	DATE SAMPLED	WHERE SENT
REPRESENTATIVE SAMPLE HAS BEEN SUPPLIE	☑ YES ☐ NO			

GENERATORS CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I aslo certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
[signature]	TREY HESS	MDEQ-GARD	10/3/07

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

CWMI

Generator's Name, Mailing Address and Phone	Generator's US EPA ID No.	Page 1 of 1	12/04
MISSISSIPPI DEPT ENVIRON QLTY 4280 RIFLE RANGE RD VICKSBURG MS 39180-5502 (601)961-5654	EXEMPT	WM - 25580	

Transporter 1 Company Name	US EPA ID Number	State Transporter's ID Transporter's Phone
Transporter 2 Company Name	US EPA ID Number	State Transporter's ID Transporter's Phone
Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT 7170 JOHN BRANNON RD. SULPHUR LA 70665	US EPA ID Number LAD000777201	State Facility's ID Facility's Phone (337)583-2169

	Waste Description	Containers No.	Type	Total Quantity	Unit Wt/Vol	Waste No.
X 1	ENVIRONMENTALLY HAZARDOUS SUBSTANCES,SOLID, NOS,9,UN3077,III,(CONTAINS MERCURY) (UNIVERSAL WASTE) LA100336					NH
2						
3						
4						

Additional Descriptions, Special Handling Instructions, Contact Information

ERG#-1.171. 1.H141.

DISCREPANCIES CONTACT_____(____)_____-_____.

EMERGENCY CONTACT _____(____)_____-_____.

GENERATOR'S CERTIFICATION:

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Printed/Typed Name	Signature	Month	Day	Year
TREY HESS	Trey Hess	10	03	07

Transporter 1 Acknowledgment of Receipt of Materials		Date		
Printed/Typed Name	Signature	Month	Day	Year

Transporter 2 Acknowledgment of Receipt of Materials		Date		
Printed/Typed Name	Signature	Month	Day	Year

Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of materials covered by this manifest except as noted above.

		Date		
Printed/Typed Name	Signature	Month	Day	Year

White - Original Pink - Disposal Location Yellow - Transporter Green - Generator's first copy

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH273123B

A. GENERAL INFORMATION

GENERATOR EPA-ID: MSTMP0002462 — GENERATOR PROFILE No. **CH273123B**

GENERATOR CODE (Assigned by Clean Harbors) *MI3809* — GENERATOR NAME: *Mississippi Department of Environmental Quality*

ADDRESS *Rifle Range Road* — CITY *Vicksburg* STATE *MS* ZIP/POSTAL CODE *39180* PHONE:

CUSTOMER CODE (Assigned by Clean Harb *US1457* — CUSTOMER NAME: *U S Environmental Services L*

ADDRESS *1075 Mendell Davis Drive* — CITY *Jackson* STATE/PROVINCE *MS* ZIP/POSTAL CODE *39272*

B. WASTE DESCRIPTION

WASTE DESCRIPTION: *Arsenic Contaminated Water*

PROCESS GENERATING WASTE (Please provide detailed description of process generating waste):

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- LIQUID WITH NO SOLIDS
- ✓ LIQUID/SOLID MIXTURE
  - 99 % FREE LIQUID
  - 1 % SETTLED SOLID
  - % TOTAL SUSPENDED SOLI
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS: (1) 2 3

% BY VOLUME (Approx.): TOP / MIDDLE / BOTTOM

VISCOSITY (If liquid present)
- ✓ 1 - 100 (e.g. WATER)
- 101 - 500 (e.g. MOTOR OIL)
- 501 - 10,000 (e.g. MOLASSES)
- > 10,000

COLOR: Clear/Brown

ODOR
- ✓ NONE
- MILD
- STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON
- ✓ <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- ✓ > 200 (>93)

Actual:

pH
- <= 2
- 2-2.1 - 6.9
- 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

Actual:

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline
- 0.8-1.0 (e.g. Ethano
- ✓ 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifree
- > 1.2 (e.g. Methylene Chlorid

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- Unknown
- Actual:

BTU/LB (MJ/kg)
- < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual

VAPOR PRESSURE (for liquids only) mm Hg

D. COMPOSITION (List the complete composition of the waste, include any inert components and /or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN – MAX	UOM	CHEMICAL	MIN – MAX	UOM
Arsenic Water (TW)	100% - 100%				

Arsenic Contaminated Water

ANY METAL OBJECTs PRESENT? YES (NO)

If yes include dimension

Clean Harbors Profile No. CH273123B

E. CONSTITUENTS – Are these values based on testing or knowledge? ☐ Knowledge ☒ Testing

If constituent concentrations are base on analytical testing, analysis must be provided. If based on knowledge, basis of knowledge must be provided below.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D004	ARSENIC	5.0	5.46	
D005	BARIUM	100.0		
D006	CADMIUM	1.0		
D007	CHROMIUM	5.0	3.23	
D008	LEAD	5.0		
D009	MERCURY	0.2		
D010	SELENIUM	1.0		
D011	SILVER	5.0		

RCRA	VOLATILE COMPOUND	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D018	BENZENE	0.5		
D019	CARBON TETRACHLORIDE	0.5		
D021	CHLOROBENZENE	100.0		
D022	CHLOROFORM	6.0		
D028	1,2-DICHLOROETHANE	0.5		
D029	1,1-DICHLOROETHYLENE	0.7		
D035	METHYL ETHYL KETONE	200.0		
D039	TETRACHLOROETHYLENE	0.7		
D040	TRICHLOROETHYLENE	0.5		
D043	VINYL CHLORIDE	0.2		

RCRA	SEMI-VOLATILE COMPOUND	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D023	o-CRESOL	200.0		
D024	m-CRESOL	200.0		
D025	p-CRESOL	200.0		
D026	CRESOL (TOTAL)	200.0		
D027	1,4-DICHLOROBENZENE	7.5		
D030	2,4-DINITROTOLUENE	0.13		
D032	HEXACHLOROBENZENE	0.13		
D033	HEXACHLOROBUTADIENE	0.5		
D034	HEXACHLOROETHANE	3.0		
D036	NITROBENZENE	2.0		
D037	PENTACHLOROPHENOL	100.0		
D038	PYRIDINE	5.0		
D041	2,4,5-TRICHLOROPHENOL	400.0		
D042	2,4,6-TRICHLOROPHENOL	2.0		

RCRA	PESTICIDES AND HERBICIDE	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL ppm
D012	ENDRIN	0.02		
D013	LINDANE	0.4		
D014	METHOXYCHLOR	10.0		
D015	TOXAPHENE	0.5		
D016	2,4-D	10.0		
D017	2,4,5-TP (SILVEX)	1.0		
D020	CHLORDANE	0.03		
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008		

OTHER METALS	MIN	MAX	UOM
ALUMINUM			
ANTIMONY			
BERYLLIUM			
CALCIUM			
COPPER			
MAGNESIUM			
MOLYBDENUM			
NICKEL			
POTASSIUM			
SILICON			
SODIUM			
THALLIUM			
TIN			
VANADIUM			
ZINC			

NON-METALS	MIN	MAX	UOM
BROMINE			
CHLORINE			
FLUORINE			
IODINE			
SULFUR			

OTHER NON-METALS	MIN	MAX	UOM
AMMONIA			
REACTIVE SULFIDE			
CYANIDE TOTAL			
CYANIDE AMENABLE			
CYANIDE REACTIVE			

OTHER CHEMICALS	MIN	MAX	UOM
PHENOL			
Total Petroleum Hydrocarbons			

OTHER

HOCs
- ☒ NONE
- < 1000 PPM
- >= 1000 PPM

PCBs
- ☒ NONE
- <50 PPM
- >= 50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☐ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☒ NO (If yes, explain)

ASBESTOS	INFECTIOUS, PATHOGENIC, OR ETIOLOGICAL AGENT	REDUCING AGENT
DEA REGULATED SUBSTANCES	OXIDIZER	SHOCK SENSITIVE
DIOXIN	OSHA REGULATED CARCINOGENS	SPONTANEOUSLY IGNITES WITH AIR
EXPLOSIVE	PESTICIDE	THERMALLY SENSITIVE
HERBICIDE	POLYMERIZABLE	WATER REACTIVE
FUMING / SMOKING WASTE	RADIOACTIVE	

☐ NONE OF THE ABOVE

CleanHarbors ENVIRONMENTAL SERVICES, INC.

Clean Harbors Profile No. CH273123B

F. REGULATORY STATUS

✓ YES ☐ NO USEPA HAZARDOUS WASTE?
D004

YES ☒ NO DO ANY STATE WASTE CODES APPLY?

✓ YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?
LDR CATEGORY: *This is subject to LDR.*
VARIANCE INFO:

YES ☒ NO IS THIS A UNIVERSAL WASTE?

YES ☒ NO IS THIS A WASTEWATER PER 40 CFR PART 268.2?

YES ☒ NO IF ANY WASTE CODES D001, D002, D003 (OTHER THAN REACTIVE CYANIDE OR REACTIVE SULFIDE), D004-D0011, D012-DO17 NON-WASTEWATERS, OR D018- D043 APPLY, ARE ANY UNDERLYING HAZARDOUS (UHCs) PRESENT ABOVE UNIVERSAL TREATMENT

YES ☒ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES ☒ NO IS THIS WASTE SUBJECT TO CATEGORICAL PRETREATMENT DISCHARGE STANDARDS?

YES ☒ NO IF YES, SPECIFY POINT SOURCE CATEGORY LISTED IN 40 CFR PART 4
IS THIS WASTE REGULATED UNDER THE BENZENE NESHAP RULES?
IF YES, IS THE GENERATOR'S TOTAL ANNUAL BENZENE >= 10 Megagrams? YES NO

YES ☒ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES ☒ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☒ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE GREATER THAN 77 KPa (11.2PSIA)?

YES ☒ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☒ NO IS THIS WASTE REGULATED UNDER THE OZONE DEPLETING SUBSTANCE ACT FOR ONTARIO?

G. D.O.T INFORMATION: (Include proper shipping name, hazard class and ID number).

US D.O.T. DESCRIPTION: Hazardous Waste Liquid n.o.s. (Arsenic) UN 3082

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY: (ONE TIME) WEEKLY MONTHLY QUARTERLY YEARLY OTHER

IF BULK LIQUID OR BULK SOLID PLEASE INICATE THE EXPECTED NUMBER OF LOADS PER SHIPPING FREQUENCY

CONTAINERIZED	BULK LIQUID	BULK SOLID
CONTAINERS/SHIPMENT	GALLONS/SHIPMENT: 10,000 GAL.	SHIPMENT UOM: TON YARD
STORAGE CAPACITY:	FROM TANKS: TANK SIZE GAL.	PER SHIPMENT: MIN MAX
CONTAINER TYPE:	FROM DRUMS	STORAGE CAPACI TON/YD
CUBIC YARD BOX	VEHICLE TYPE:	VEHICLE TYPE:
PALLET	VAC TRUCK	DUMP TRAILER
TOTE TANK	TANK TRUCK X	ROLL OFF BOX
OTHER:	RAILROAD TANK CAR	INTERMODAL ROLLOFF BOX
DRUM SIZE:	CHECK COMPATIBLE STORAGE MATERIAL	CUSCO/VACTOR
CONTAINER MATERIAL:	X STEEL / STAINLESS STEEL	OTHER
STEEL	RUBBER LINED / FIBERGLASS LINED	
FIBER	DERAKANE	
PLASTIC	OTHER	
OTHER		

I. SPECIAL REQUEST

SPECIFIC DISPOSAL RESTRICTIONS OR REQUESTS:

SPECIAL WASTE HANDLING REQUIREMENTS

OTHER COMMENTS OR REQUESTS: ***Sample to be submitted to Baton Rouge for WWT***

J. BIENNIAL / ANNUAL REPORTING INFORMATION

SIC CODE 9511 SOURCE CODE G19 FORM CODE W119

K. SAMPLE STATUS	☐ YES	SAMPLED BY	DATE SAMPLED	WHERE SENT
REPRESENTATIVE SAMPLE HAS BEEN SUPPLIE	NO			

GENERATORS CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
Jerry B. Banks	JERRY B. BANKS	Chief GARD	9-10-07

Pace Analytical
New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: T-617 (030907)
Site: None
Project: MS BLUFFS (VICKSBURG,MS)
Project No.: 2067455
Sample Qu:
Lab ID: 20506603 (TCLP)
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: TCLP
Batch: 83464
Method: 8260 VOAs TCLP
Units: mg/L
Target List: 8260_LL20
Collected: 03/09/07
Received: 03/09/07
Prep Factor: 1
Prepared: 03/15/07
Analyzed: 03/15/07 13:57 RMP (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		0.100	0.500
78-93-3	2-Butanone (MEK)	1	ND	A11	0.200	200.
56-23-5	Carbon tetrachloride	1	ND		0.100	0.500
108-90-7	Chlorobenzene	1	ND		0.100	100.
67-66-3	Chloroform	1	ND		0.100	6.00
107-06-2	1,2-Dichloroethane	1	ND		0.100	0.500
75-35-4	1,1-Dichloroethene	1	ND		0.100	0.700
127-18-4	Tetrachloroethene	1	ND		0.100	0.700
79-01-6	Trichloroethene	1	ND		0.100	0.500
75-01-4	Vinyl chloride	1	ND		0.100	0.200

10 compound(s) reported

3/23/2007 07:44:50

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (5) subcontract or field.

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

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New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: T-617 (030907)
Site: None
Project: MS BLUFFS (VICKSBURG,MS)
Project No.: 2067455
Sample Qu:
Lab ID: 20506603 (TCLP)
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: TCLP
Batch: 83462
Method: 8270 SVOAs TCLP
Units: mg/L
Target List: 8270_LL20
Collected: 03/09/07
Received: 03/09/07
Prep Factor: 1
Prepared: 03/15/07
Analyzed: 03/19/07 20:08 JAM (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
106-46-7	1,4-Dichlorobenzene	1	ND		0.100	7.50
121-14-2	2,4-Dinitrotoluene	1	ND		0.100	0.130
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.100	0.500
118-74-1	Hexachlorobenzene	1	ND		0.100	0.130
67-72-1	Hexachloroethane	1	ND		0.100	3.00
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.100	200.
108-39-4	3-Methylphenol (m-Cresol)	1	ND	A7	0.100	200.
106-44-5	4-Methylphenol (p-Cresol)	1	ND	A7	0.100	200.
98-95-3	Nitrobenzene	1	ND		0.100	2.00
87-86-5	Pentachlorophenol	1	ND		0.250	100.
110-86-1	Pyridine	1	ND		0.100	5.00
95-95-4	2,4,5-Trichlorophenol	1	ND		0.250	400.
88-06-2	2,4,6-Trichlorophenol	1	ND		0.100	2.00

13 compound(s) reported

3/23/2007 07:44:50

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Arkansas Dept. of Environmental Quality - 88-0691
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health_Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Pace Analytical
New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: T-617 (030907)
Site: None
Project: MS BLUFFS (VICKSBURG,MS)
Project No.: 2067455
Sample Qu:
Lab ID: 20506603 (TCLP)
Matrix: Water
% Moisture: n/a
Description: None
Prep Level: TCLP
Batch: 83515
Method: 8081 Pests TCLP
Units: mg/L
Target List: 8081_LL20
Collected: 03/09/07
Received: 03/09/07
Prep Factor: 1
Prepared: 03/16/07
Analyzed: 03/21/07 00:04 SLF (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.400
57-74-9	Chlordane	1	ND		0.00100	0.0300
72-20-8	Endrin	1	ND		0.00100	0.0200
76-44-8	Heptachlor	1	ND		0.000500	0.00800
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.00800
72-43-5	Methoxychlor	1	ND		0.00500	10.0
8001-35-2	Toxaphene	1	ND		0.0200	0.500

7 compound(s) reported

3/23/2007 07:44:54

ND denotes Not Detected at or above the adjusted reporting limit.
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Florida Dept. of Health (NELAC) - E87225
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Pace Analytical*
New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: T-617 (030907) **Site:** None

Project: MS BLUFFS (VICKSBURG,MS) **Project No.:** 2067455 **Sample Qu:**

Lab ID: 20506603 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 83589

Method: 8151 Herbs TCLP **Units:** mg/L **Target List:** 8151_LL20

Collected: 03/09/07 **Received:** 03/09/07

Prep Factor: 1 **Prepared:** 03/20/07 **Analyzed:** 03/22/07 11:47 SRA (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
94-75-7	2,4-D	1	ND		0.0200	10.0
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00500	1.00

2 compound(s) reported

3/23/2007 07:44:54

ND denotes Not Detected at or above the adjusted reporting limit.
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Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
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Kansas Dept. of Health ,Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Pace Analytical
New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: T-617 (030907)
Client: Arcadis Geraghty & Miller
Project: MS BLUFFS (VICKSBURG,MS)
Site: None
Lab ID: 20506603 (TCLP)
Project No.: 2067455
Description: None
Matrix: Water
%Moisture: n/a
Collected: 03/09/07
Received: 03/09/07

ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting Limit	Prep.	Analysis		Reg. Limit
Arsenic	EPA 6010 (T	83448	10	5.46	D2	mg/L	2.00	15-Mar-07	20-Mar-07 20:42	KJR (1)	5.00
Barium	EPA 6010 (T	83448	10	ND	D2	mg/L	20.0	15-Mar-07	20-Mar-07 20:42	KJR (1)	100.
Cadmium	EPA 6010 (T	83448	10	ND	D2	mg/L	1.00	15-Mar-07	20-Mar-07 20:42	KJR (1)	1.00
Chromium	EPA 6010 (T	83448	10	3.23	D2	mg/L	2.00	15-Mar-07	20-Mar-07 20:42	KJR (1)	5.00
Lead	EPA 6010 (T	83448	10	ND	D2	mg/L	2.00	15-Mar-07	20-Mar-07 20:42	KJR (1)	5.00
Mercury	EPA 7470 (T	83449	1	ND		mg/L	0.000200	15-Mar-07	15-Mar-07 17:32	MHB1 (1)	0.200
Selenium	EPA 6010 (T	83448	10	ND	D2	mg/L	2.00	15-Mar-07	20-Mar-07 20:42	KJR (1)	1.00
Silver	EPA 6010 (T	83448	10	ND	D2	mg/L	2.00	15-Mar-07	20-Mar-07 20:42	KJR (1)	5.00

8 parameter(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. FF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitibility.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (9) subcontract or field.

3/23/2007 07:44:58

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Louisiana Dept. of Environmental Quality (LELAP) - 02006
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Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health .Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Pace Analytical
New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: T-617 (030907)
Project: MS BLUFFS (VICKSBURG,MS)
Lab ID: 20506603
Description: None

Client: Arcadis Geraghty & Miller
Site: None
Project No.: 2067455
Matrix: Water **%Moisture:** n/a
Collected: 03/09/07 **Received:** 03/09/07

ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting Limit	Prep.	Analysis		Reg. Limit
Cyanide, Reactive	SW-846 7.3.3.	83360	1	ND		mg/kg	25.0	20-Mar-07	20-Mar-07 16:32	TAE (1)	
Flash Point	EPA 1010	83456	1	>100		deg C		16-Mar-07	16-Mar-07 13:50	SMS2 (1)	
pH	EPA 9040	83298	1	4.89		Std. Units		10-Mar-07	10-Mar-07 18:30	SMS2 (1)	
Sulfide, Reactive	SW-846 7.3.4.	83359	1	ND		mg/kg	49.6	15-Mar-07	15-Mar-07 09:15	SMS2 (1)	

4 parameter(s) reported

3/23/2007 07:45:02

NB denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. PF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitibility.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (5) subcontract or field.

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0651
Louisiana Dept. of Health and Hospitals / Drinking Water - LA050023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
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Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2067455

Page: 1 of 2

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: ARCADIS	Report To: Craig Derouen	Attention: ARCADIS - Accounts Payable
Address: 10352 Plaza Americana Drive	Copy To: Jane Kennedy	Company Name: ARCADIS
Baton Rouge, Louisiana 70816		Address: 10352 Plaza Americana; Baton Rouge, LA 70819
Email To: Craig.Derouen@arcadis-us.com; Jane.Kennedy@arcadis-us.com	Purchase Order No.:	Pace Quote Reference:
Phone: (225) 292-1004 Fax: (225) 218-9677	Project Name: MS Bluffs (Vicksburg, MS)	Pace Project Manager: Cindy Olavesen
Requested Due Date/TAT:	Project Number: LA002656.0001.0019	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER MDEQ TRGs

SITE LOCATION ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ SC ☑ WI ☐ OTHER MS

Section D Required Client Information

SAMPLE ID

One Character per box. (A-Z, 0-9 / ,)

Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Requested: TCLP VOA	TCLP SV	TCLP PEST	TCLP METALS	TCLP HERBS	RCI	Filtered (Y/N)	Pace Project Number / Lab I.D.
1	Carbon TK#6 (030807)	SL	G	3/8/07	0930				3	✓								✓	✓	✓	✓	✓	✓		2050 6599
2	Carbon TK#6 Waste (030807)	WW	C	03/8/07	1000				4	✓								✓	✓	✓	✓	✓	✓		628
3	Carbon TK#2 (030807)	SL	G	03/8/07	1051				3	✓								✓	✓	✓	✓	✓	✓		7
4	Carbon TK#3-4 Well (030807)	WW	G	3/8/07	1300				4	✓								✓	✓	✓	✓	✓	✓		602
5	South MKP TK (030807)	WW	G	3/8/07	1410				4	✓								✓	✓	✓	✓	✓	✓		603
6	South MAP TK (030807)	SL	G	3/8/07	1440				4	✓								✓	✓	✓	✓	✓	✓		600
7	[illegible]	SL	G	3/8/07	1543				4	✓								✓	✓	✓	✓	✓	✓		604
8	[illegible]	WW	G	3/8/07	1630				4	✓								✓	✓	✓	✓	✓	✓		
9	[illegible]	WW	G	3/8/07	0750				4	✓								✓	✓	✓	✓	✓	✓		
10	[illegible]	WW	G	3-9-07	0815				4	✓								✓	✓	✓	✓	✓	✓		
11	[illegible] Zone (030907)	SL	G	3-9-07	0840				3	✓								✓	✓	✓	✓	✓	✓		
12	[illegible]	WW	G	3-9-07	0905				4	✓								✓	✓	✓	✓	✓	✓		

Additional Comments:

MDEQ Tier 1 TRG Detection Limits

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Craig Erout / Arcadis	3/9/07	1510	[illegible]	3-9-07	1510
[illegible]	3-9-07	1635	RB \ Pace	3-9-07	1635

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Craig Erout

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 03/09/07

Generator's Nonhazardous Waste Profile Sheet

Requested Disposal Facility: Emelle (Hazardous Waste Facility) Profile Number: 100669AL

☐ Renewal for Profile Number _____ Waste Approval Expiration Date _____

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: Mississippi Department of Environmental Quality
2. Site Address: Rifle Range Rd
3. City/ZIP: Vicksburg, 39180
4. State: MS
5. County: Warren
6. Contact Name/Title: Trey Hess / Jerry Banks
7. Email Address: _____
8. Phone: (601) 961-5654 / (601) 9. FAX: (601)961-5300
10. NAICS Code: _____
11. Generator USEPA ID #: MSTMP0002452
12. State ID# (if applicable): _____

B. Customer Information ☐ same as above

P. O. Number: _____

1. Customer Name: United States Environmental Services
2. Billing Address: 1075 Mendell Davis Dr
3. City, State and ZIP: Jackson, MS, 39272
4. Contact Name: J.T. Newman
5. Contact Email: jnewman@usesgroup.com
6. Phone: 601-372-3232 FAX: 601-372-3356
7. Transporter Name: United States Environmental Services
8. Transporter ID # (if appl.): LAR000029413
9. Transporter Address: 1075 Mendell Davis Dr
10. City, State and ZIP: Jackson, MS, 39272

C. Waste Stream Information

1. DESCRIPTION
   a. *Common Waste Name:* Resin Beads
      State Waste Code(s): _____
   b. Describe Process Generating Waste or Source of Contamination:
      Cleanout of washwater tanks from Chemical Plant Demo
   c. Typical Color(s): Brown
   d. Strong Odor? ☐ Yes ☑ No Describe: _____
   e. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____
   f. *Layers?* ☑ *Single layer* ☐ Multi- layer ☐ NA
   g. Water Reactive? ☐ Yes ☑ No If Yes, Describe: _____
   h. Free Liquid Range (%): _____ to _____ ☑ NA(solid)
   i. pH Range: ☐ ≤2 ☑ 2.1-12.4 ☐ ≥12.5 ☐ NA(solid) ☐ Actual: _____
   j. Liquid Flash Point: ☐ < 140°F ☐ ≥ 140°F ☑ NA(solid) ☐ Actual: _____
   k. Flammable Solid: ☐ Yes ☑ No
   l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☐ (See Attached)

Constituents *(Total Composition Must be > 100%)*	Lower Range	Unit of Measure	Upper Range	Unit of Measure
1. Resin Beads	100	%	100	%
2.				
3.				
4.				
5.				
6.				

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. ☑ Event ☐ Base/Ongoing (Check One)
   b. Estimated Annual Quantity: 15 ☐ Tons ☑ Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): _____
   c. Shipping Frequency: One Time Units per ☐ Month ☐ Quarter ☐ Year ☑ One Time ☐ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☑ No
   e. USDOT Shipping Description (if applicable): _____
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): _____

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Generator's Nonhazardous Waste Profile Sheet

100669AL

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ☐ Yes ☑ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☑ No
   - ☐ Delisted Hazardous Waste
   - ☐ Excluded Wastes Under 40 CFR 261.4
   - ☐ Treated Hazardous Waste Debris
   - ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☑ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☑ No
   a. If yes, is disposal regulated under TSCA? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ☐ Yes ☑ No
7. Does the waste contain asbestos? ☐ Yes ☑ No If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No
   If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
5. Check all that apply:
   - ☑ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: 20516312 & 2056310 # Pages: 12
   - ☐ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   - ☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
   - ☐ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
   - ☑ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: Jerry B. Banks **Title:** Chief, Groundwater Assessment & Remediation Div.

Company Name: MS Dept. of Environmental Quality **Name (Print):** JERRY B. BANKS

Date: September 6, 2007

FOR WM USE ONLY

Management Method: ☐ Landfill ☐ Bioremediation **Approval Decision:** ☐ Approved ☐ Not Approved

☐ Non-hazardous solidification ☐ Other: _____ Waste Approval Expiration Date: _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval:

_____

_____

- ☐ Shall not contain free liquid
- ☐ Shipment must be scheduled into disposal facility
- ☐ Approval Number must accompany each shipment
- ☐ Waste Manifest must accompany load

WM Authorization Name / Title: _____ **Date:** _____

State Authorization (if Required): _____ **Date:** _____

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ALLIED WASTE

GENERATOR WASTE PROFILE SHEET

Waste Profile #

Requested Disposal Facility: Little Dixie L38
an Allied Waste Company

I. Generator Information

Date: 5/30/07

Generator Name: Mississippi Department of Environmental Quality			
Generator Site Address: Rifle Range Road			
City: Vicksburg	County: Warren	State: Mississippi	Zip: 39180
Generator State ID Number: MSTMP0002452		SIC Code Number:	
Generator Mailing Address (if different): P.O. Box 20326			
City: Jackson	County: Hinds	State: Mississippi	Zip: 39289
Generator Contact Name: Trey Hess/Jerry Banks			
Phone Number: (601) 961-5654/(601) 961-5221		Fax Number: (601) 961-5300	

II. Transporter Information

Transporter Name: USES			
Transporter Address: 1075 Mendell Davis Drive			
City: Jackson	County: Hinds	State: Mississippi	Zip: 39272
Transporter Contact Name: Robbie Brister			
Phone Number: (601) 372-3232		Fax Number: (601) 372-3356	
State Transportation Number:			

III. Waste Stream Information

Name of Waste: Filter Carbon	
Process Generating Waste: Diposal of filter carbon from Plant demolition	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE or ☒ POLLUTION CONTROL WASTE
Physical State:	☒ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID ☐ OTHER: ____
Method of Shipment:	☒ BULK ☐ DRUM ☐ BAGGED ☐ OTHER: ____
Estimated Annual Volume:	☒ CUBIC YARDS: 50 ☐ TONS: ____ ☐ OTHER: ____
Frequency:	☒ ONE TIME ☐ DAILY ☐ WEEKLY ☐ MONTHLY ☐ OTHER: ____
Special Handling Instructions:	

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☒ YES or ☐ NO
Sample Date: 03/08/07	Type of Sample: ☐ COMPOSITE SAMPLE ☒ GRAB SAMPLE
Sampler's Employer: ARCADIS U.S., Inc.	
Sampler's Name (printed): George Cook	Signature: George Cook

© Allied Waste, August 2000

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET (continued)

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Filter Carbon	100%
2.	
3.	

Color:	Odor (describe):	Free Liquids: ☐ YES or ☒ NO	% Solids:	pH:	Flash Point:	Phenol
Black	None	Content ____%	100%	N/A	N/A °F	N/Appm

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ YES or ☒ NO
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ YES or ☒ NO
Is this a regulated Toxic Material as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this waste generated at a Federal Superfund Clean Up Site?	☐ YES or ☒ NO

VI. Generator Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste Industries, Inc.

JERRY B. BANKS CHIEF, GROUNDWATER DIV. — AUTHORIZED REPRESENTATIVE NAME AND TITLE (Printed)

MS. DEPT. of ENVIRONMENTAL QUALITY — COMPANY NAME

Jerry B. Banks — AUTHORIZED REPRESENTATIVE SIGNATURE

June 7, 2007 — DATE

VII. Allied Waste Decision

☐ Approved ☐ Rejected Expiration: _____

Conditions:

_____

_____

_____

_____

_____

Name, Title _____ Signature _____ Date _____

© Allied Waste, August 2000

"Derouen, Craig" <Craig.Derouen@arcadis-us.com>
05/24/2007 01:39 PM

To "Derouen, Craig" <Craig.Derouen@arcadis-us.com>
cc <Trey_Hess@deq.state.ms.us>, "Escude, David" <David.Escude@arcadis-us.com>, "Montgomery, Kipper" <Kipper.Montgomery@arcadis-us.com>
bcc
Subject Vicksburg, MS - Bid Request - Tank Cleaning Site Walk

Attached are the bid documents. The directions included as Exhibits C and D will take you to the front gate of Harcros Chemicals. This is where we will meet in the morning. You will need steel toe boots and hardhats for the site walk.

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<<13 - Tank Cleaning - TOC.pdf>>

Bidding Requirements, Contract Forms, and Conditions of the Contract

<<11 - Tank Cleaning - Invitation to Bid.pdf>>
<<10 - Tank Cleaning - Instructions to Biddders.pdf>>
<<9 - Tank Cleaning - Base Bid Form.pdf>>
<<12 - Tank Cleaning - Performance Bond.pdf>>
<<Commercial Subcontract Signature Page 1-1-07.pdf>> <<Schedule A - General Terms and Conditions 1-1-07.pdf>> <<Schedule B - Work Authorization 1-1-07.pdf>> <<Schedule C - Insurance Requirements 1-1-07.pdf>> <<Schedule F - Spec Prov for Contractors 1-1-07.pdf>>

General Requirements

<<7 - Tank Cleaning - 01035.pdf>>
<<8 - Tank Cleaning - 01150.pdf>>

Exhibits

<<2456-19-01-TankCA.pdf>>
<<2-Tank Inventory(for contractors - rev 052407).pdf>>

<<Tank Cleaning - Exhibit C (Driving Directions from Baton Rouge, LA).pdf>>
<<Tank Cleaning - Exhibit D (Driving Directions from Jackson, MS).pdf>>

I look forward to seeing everyone at the plant.

Thanks,

Craig A. Derouen, PE, MBA
Project Engineer
ARCADIS

ARCADIS U.S., Inc.
10352 Plaza Americana Drive

Baton Rouge, LA 70816
Tel 225.292.1004
Fax 225.218.9677
Email: craig.derouen@arcadis-us.com

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13 - Tank Cleaning - TOC.pdf 11 - Tank Cleaning - Invitation to Bid.pdf 10 - Tank Cleaning - Instructions to Biddders.pdf

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Schedule A - General Terms and Conditions 1-1-07.pdf Schedule B - Work Authorization 1-1-07.pdf

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Tank Cleaning - Exhibit C (Driving Directions from Baton Rouge, LA).pdf

Tank Cleaning - Exhibit D (Driving Directions from Jackson, MS).pdf

TECHNICAL SPECIFICATIONS
FORMER VICKSBURG CHEMICAL COMPANY
TANK CLEANING

TABLE OF CONTENTS

Section No.	Title

Bidding Requirements, Contract Forms, and Conditions of the Contract

Invitation to Bid
Instructions to Bidders
Base Bid Form
Performance Bond
ARCADIS Contracting Documents (Commercial Subcontract, Appendices A, B, C, and F)

General Requirements

01035	Health and Safety Requirements
01150	Measurement and Payment

Exhibits

A	Tank Cleaning Areas Map
B	Tank Inventory
C	Directions to Site From Baton Rouge, Louisiana
D	Directions to Site From Jackson, Mississippi

INVITATION TO BID

General Information

ARCADIS U.S., Inc. (ARCADIS) is requesting separate sealed Bids for the cleaning of storage tanks located at 4280 Rifle Range Road in Vicksburg, Mississippi. Contracted services include, but are not limited to, tank cleaning; content disposal; and implementation of a site health and safety program. These services are generally referred to as "tank cleaning" and "disposal" within the bid documents.

Project Location: Former Vicksburg Chemical Company
Vicksburg, Mississippi

Bids will be received by ARCADIS, on Friday, June 8, 2007, until 5 p.m. Bidders must use the prepared Bid Form which is contained in the Contract Documents. Each individual Bid must be separately enclosed in a sealed envelope, marked and addressed as follows:

ARCADIS
Re: Vicksburg Tank Cleaning Bid
10352 Plaza Americana Drive
Baton Rouge, Louisiana 70819

Attention: Mr. David Escudé

ARCADIS reserves the right to award the Contract to the lowest qualified Bidder. The successful Bidder will be required to execute the Contract and to file insurance certificates within seven (7) calendar days after the award of this Contract.

ARCADIS reserves the right to waive informalities in the bidding process and to reject any and all Bids.

Mandatory Pre-Bid Meeting and Site Tour

ARCADIS will conduct a pre-bid meeting and site tour. Attendance at this meeting is mandatory for Prime Contractors; failure to attend will be cause for Contractor's Bid to be rejected as non-responsive. The date, time, and location of the pre-bid meeting are as follows:

Date: Friday, May 25, 2007

Time: 10 a.m. Central Daylight Time

Location: Former Vicksburg Chemical Company
Vicksburg, Mississippi

It shall be the Bidder's responsibility to be on time and to sign the attendance sheet at the meeting. Bidder's signature on the attendance sheet will be the only acceptable proof of attendance at this mandatory pre-bid meeting.

Bidders shall assemble at the facility entrance located on Rifle Range Road. A location map with driving directions depicting the assembly location is provided in Exhibit "A."

Questions

Questions which arise during the Bidding period should be directed to Mr. Craig Derouen. Only written questions will be accepted. Questions may be sent by email to craig.derouen@arcadis-us.com. All questions and answers will be provided in written form to all potential Bidders.

Deadline for receiving questions will be Friday, June 1, 2007, at 10 a.m.

INSTRUCTIONS TO BIDDERS

AWARD OF CONTRACT

1. ARCADIS U.S., Inc. (ARCADIS), reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time, or changes in the Work, to negotiate contract terms with the successful Bidder, and the right to disregard all nonconforming, nonresponsive, unbalanced, or conditional Bids. Also, ARCADIS reserves the right to reject the Bid of any Bidder if ARCADIS believes that it would not be in the best interest of the project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by ARCADIS. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the written unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

2. In evaluating Bids, ARCADIS will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements and such supplemental items, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

3. ARCADIS may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the General Conditions or Instructions to Bidders.

4. ARCADIS may conduct such investigations as ARCADIS deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to ARCADIS' satisfaction within the prescribed time.

5. If the Contract is to be awarded, it will be awarded to the lowest, responsible Bidder whose evaluation by ARCADIS indicated to ARCADIS that the award will be in the best interests of the Project.

BID FORM

1. The Bid Form is included with the bidding documents; additional copies may be obtained from ARCADIS U.S., Inc., 10352 Plaza Americana Drive, Baton Rouge, Louisiana 70816.

2. All blanks on the Bid Form must be completed in ink or by typewriter.

3. Bids by corporations must be executed in the corporate name by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign) and the

corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.

4. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

5. All names must be typed or printed below the signature.

6. The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be listed on the Bid Form).

7. The address and telephone number for communications regarding the Bid must be shown.

8. Bids must be priced as a Base Bid for the base contract and include a separate unit price for each unit of work indicated on the Supplement to Bid Form.

BIDS TO REMAIN SUBJECT TO ACCEPTANCE

1. All bids will remain subject to acceptance for thirty (30) days after the day of the Bid opening, but ARCADIS may, in its sole discretion, release any Bid and return the Bid security prior to that date.

CONTRACT TIME

1. The numbers of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Time) are set forth in the Bid Form and the Contract.

2. All work shall be completed in accordance with the phasing, time schedules and completion dates specified in the Contract Documents and as directed by ARCADIS. It is currently anticipated that this Work will commence in June 2007 and be completed no later than August 2007. Submission of this proposal is evidence that the Bidder has the required manpower, equipment, and material and is available to prosecute the Work in accordance with the schedule.

COPIES OF BIDDING DOCUMENTS

1. Complete sets of Bidding Documents must be used in preparing Bids; ARCADIS assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2. ARCADIS in making copies of Bidding Documents available on the above terms does so only for the purpose of obtaining Bids on the Work and does not confer a license or grant for any other use.

DEFINED TERMS

1. Terms used in these Instructions to Bidders, which are defined in the General Conditions of the Contract Documents, have the meanings assigned to them in the General Conditions. The term "Bidder" means one that submits a Bid directly to ARCADIS or their authorized agent, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "successful Bidder" means the lowest, qualified, responsible, and responsive Bidder to whom ARCADIS (on the basis of ARCADIS' evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Invitation to Bid, the Instructions to Bidders, the Bid Form, the Bidders Qualification Questionnaire, and the proposed Contract Documents (including all Addenda issued prior to the receipt of Bids).

EXAMINATION OF CONTRACT DOCUMENTS AND SITE

1. It is the responsibility of each Bidder before submitting a Bid, to: (a) examine the Contract Documents thoroughly; (b) visit the site to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work (indicating the collection of any samples); (c) consider federal, state, and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work; (d) study and carefully correlate Bidder's observations with the Contract Documents; and (e) notify ARCADIS of all conflicts, errors, or discrepancies in the Contract Documents.

2. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of Item 1 above, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

3. No plea of ignorance of conditions or difficulties that may be encountered in the execution of the Work as a result of failure to make necessary examinations and investigations will be accepted as an excuse for any omission on the part of the Bidder to fulfill in every detail all the requirements of the Contract Documents or will be accepted as a basis for any claims whatsoever for extra compensation. All prices quoted must represent the entire cost in accordance with the Bidding Documents and no subsequent claim will be recognized for any increase in wage scales, material prices, cost indexes, or any other rates affecting the construction industry and/or this Work.

INTERPRETATIONS AND ADDENDA

1. All questions about the meaning or intent of the Contract Documents are to be directed in writing to ARCADIS. Interpretations or clarifications considered necessary by ARCADIS in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by ARCADIS as having received the Bidding Documents. Questions received less than three (3) calendar days prior to the date for opening of Bids may not be answered. Only questions answered by formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

2. Addenda may also be issued to modify the Bidding Documents as deemed advisable by ARCADIS.

MODIFICATION AND WITHDRAWAL OF BIDS

1. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

2. If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with ARCADIS and promptly thereafter demonstrates to the reasonable satisfaction of ARCADIS that there was a material and substantial mistake in the preparation of its Bid.

OPENING OF BIDS

1. Bids will be opened privately.

SIGNING OF AGREEMENT

1. When ARCADIS gives a Notice of Award to the successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Contract with all other written Contract Documents attached. Within seven (7) calendar days thereafter, successful Bidder shall sign and deliver the required number of counterparts of the Contract and attached documents to ARCADIS with the required Bonds and Insurance Certificates. Within three (3) calendar days thereafter, ARCADIS shall deliver one fully signed counterpart to the successful Bidder.

SUBCONTRACTORS, SUPPLIERS, AND OTHERS

1. If the General Conditions require the identity of Subcontractors, Suppliers, other persons, and organizations (including those who are to furnish the principal item of material and equipment), the Bidder shall submit as part of the Bid Form a list identifying said Subcontractors, Suppliers, and Others.

2. Such a list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, other person, or organization if requested by ARCADIS.

3. If ARCADIS after due investigation has reasonable objection to any proposed Subcontractor, Supplier, other person, or organization, then ARCADIS may recommend or select an acceptable substitute without an increase in Bid price.

4. No Bidder shall be required to employ any Subcontractor, Supplier, other person, or organization against whom the Bidder has reasonable objection.

SUBMISSION OF BIDS

1. Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked as indicated in the Invitation to Bid, and accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation as indicated in the Invitation to Bid on the face of it.

SUBSTITUTE OF "EQUAL" ITEMS

1. The materials and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution. No substitution will be considered unless written request for approval has been submitted by the Bidder and has been received by ARCADIS at least five (5) calendar days prior to the date for receipt of Bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts of performance and test data, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment, or Work that incorporation of the substitute would require shall be included. The burden of proof of the merit of the proposed substitute is upon the Bidder. ARCADIS' decision of approval or disapproval of a proposed substitution shall be final. If ARCADIS approves any proposed substitution, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

UNIT PRICES

1. Bidder has been asked to submit unit prices for various portions of the Work. Unit prices are to include all of the Bidder's overhead and profit to complete the Work described by the unit price and shall include, but is not necessarily limited to, all labor, materials, equipment, plant, and taxes and all subcontractor cost, overhead and profit for the duration of the Work unless otherwise requested.

BASE BID FORM

Former Vicksburg Chemical Company
Tank Cleaning
Vicksburg, Mississippi

Bid of_____
NAME

_____

An individual, a partnership, a corporation registered in the State of Louisiana/Mississippi (delete titles not applicable) for the Contract as described in the Drawings and Specifications listed herein, for ARCADIS U.S., Inc. (ARCADIS).

To: ARCADIS U.S., Inc.
Re: Vicksburg Tank Cleaning Bid
10352 Plaza Americana
Baton Rouge, Louisiana 70816

Attn: Mr. David Escudé

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with ARCADIS in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time of calendar days as indicated in this bid and in accordance with the other terms and conditions of the Contract Documents.

2. BIDDER accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for thirty (30) days after the day of Bid opening. BIDDER will sign and submit the Contract with the Bonds and other documents required by the Bidding Requirements within ten (10) calendar days after the date of the Notice of Award by ARCADIS.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Contract, that:

   (a) BIDDER has examined copies of all the Bidding Documents and all of the following Addenda (receipt of which is hereby acknowledged):

Date	Number

(b) BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance, or furnishing of the work.

(c) BIDDER has given ARCADIS written notice of all conflicts, errors, or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by ARCADIS is acceptable to BIDDER.

(d) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; BIDDER has not directly or indirectly induced or solicited another Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm, or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over ARCADIS.

(e) All volumes presented within the plans and specifications are in-place volumes. All items shall be based on in-place estimates

4. TANK CLEANING AND DISPOSAL OF CONTENTS

BIDDER will complete the Work for the following price(s):

BID TASKS

ITEM 1 Mobilization - Demobilization:

The Lump Sum Price of $_____

_____
(write lump sum price)

ITEM 2 Administration:

The Lump Sum Price of $_____

_____
(write lump sum price)

ITEM 3 Tank Cleaning in the Bleach Plant:

The Lump Sum Price of $_____

_____
(write lump sum price)

ITEM 4 Tank Cleaning at the Foster-Wheeler (F-W) Boiler:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 5 Tank Cleaning at the North Plant Cooling Tower:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 6 Tank Cleaning of the Fuel Tanks:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 7 Tank Cleaning of the Crystallizer UST:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 8 Tank Cleaning at the C-10 Area:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 9 Tank Cleaning at the C-15 Area:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 10 Tank Cleaning in the KCARB Area:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 11 Tank Cleaning at the Nebraska Boiler:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 12 Tank Cleaning in the Nitric Acid Plant:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 13 Tank Cleaning at the B Cooling Tower:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 14 Tank Cleaning in the Mulitcote Tank Farm:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 15 Tank Cleaning at the Carbon Vessels:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 16 Tank Cleaning in the MAP/MKP Plant:

The Lump Sum Price of $_____

_____

(write lump sum price)

ITEM 17 Tank Cleaning of the Freon Tanks:

The Lump Sum Price of $_____

_____

(write lump sum price)

TOTAL - BASE BID ITEMS (Items 1 through 17 inclusive) $_____

_____

(write total)

ALTERNATE COST ITEMS

ITEM 18a On-Site Storage of Solid Non-Hazardous Material:

20 cubic yard roll-off box @ $_____ per day $_____

_____
(write unit price)

ITEM 18b Transportation and Disposal of Solid Non-Hazardous Material:

20 cubic yard roll-off box @ $_____ each $_____

_____
(write unit price)

ITEM 19a On-Site Storage of Solid Hazardous Material:

20 cubic yard roll-off box @ $_____ per day $_____

_____
(write unit price)

ITEM 19b Transportation and Disposal of Solid Hazardous Material:

20 cubic yard roll-off box @ $_____ each $_____

_____
(write unit price)

ITEM 20a On-Site Storage of Liquid Non-Hazardous Material:

20,000 gallon frac tank @ $_____ per day $_____

_____
(write unit price)

ITEM 20b Transportation and Disposal of Liquid Non-Hazardous Material:

20,000 gallon frac tank @ $_____ each $_____

_____
(write unit price)

ITEM 21a On-Site Storage of Liquid Hazardous Material:

20,000 gallon frac tank @ $_____ per day $_____

_____

(write unit price)

ITEM 21b Transportation and Disposal of Liquid Hazardous Material:

20,000 gallon frac tank @ $_____ each $_____

_____

(write unit price)

SUPPLEMENT TO BID FORM

SUPPLEMENTAL BID ITEMS

5. BIDDER agrees that the Work will be completed within 90 calendar days after the date of issuance of the Notice of Award.

6. The following documents are attached to and made a condition of this Bid:

   (a) A tabulation of Subcontractors, Suppliers, and other persons and organizations required to be identified in this Bid.

   (b) Required BIDDER's Qualification Statement with supporting data.

   (c) BIDDER's Certificate of Insurance.

   (d) Proposed methods and materials for conducting tank cleaning activities.

7. Communications concerning this Bid shall be addressed to:

_____

(NAME)

_____

(ADDRESS)

8. The terms used in the Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meaning assigned to them in the General Conditions.

SUBMITTED on _____, 2007.

If BIDDER is:

An Individual

By_____
(INDIVIDUAL'S NAME)

doing business as
business address: _____

_____

Phone No.:_____

A Partnership

By_____
(FIRM NAME)

_____
(GENERAL PARTNER)

Business address: _____

_____

Phone No.:_____

A Corporation

By_____
(CORPORATION NAME)

_____
(STATE OF INCORPORATION)

By_____
(NAME OF PERSON AUTHORIZED TO SIGN)

_____
(TITLE)

(Corporate Seal)
Attest

_____

(SECRETARY)

Business address: _____

_____

Phone No.: _____

A Joint Venture

By_____

(NAME)

_____

(ADDRESS)

By_____

(NAME)

_____

(ADDRESS)

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above).

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that _____

_____,
Name and Address of Contractor

a _____ of the State of _____, the "Principal," and
Corporation, Partnership, or Individual

_____,
Name and Address of Surety

the "Surety," are held and firmly bound unto _____ (the "ENVIRONMENTAL CONSULTANT and OWNER") existing under and by virtue of the laws of the State of _____ in the sum of _____

_____

($_____) in lawful money of the United States, for the payment of which sum in lawful money of the United States well and truly to be made we do hereby bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally.

The condition of this obligation is such that whereas Principal has entered into a certain Contract with the ENVIRONMENTAL CONSULTANT for the benefit of the OWNER, dated as of the _____ day of _____, 2007, which is by reference incorporated in and made a part hereof as fully as if copied here verbatim, for the following work:

> The performance of the Any Business, Anywhere Facility Decommissioning, including obligations incidental thereto such as liquidated damages for unexcused delays resulting in late delivery of completion.

NOW, THEREFORE, if the Principal shall in all respects comply with and perform all the terms and conditions of the Contract (which includes the Drawings, Specifications, and Contract Documents) and such alterations as may be made in said Contract as the documents therein provide for, during the original term thereof and any extensions thereof which may be granted by the ENVIRONMENTAL CONSULTANT and OWNER, with or without notice to Surety, and during the one year warranty period, *and if Principal shall satisfy* all claims and demands and shall indemnify and save harmless the ENVIRONMENTAL CONSULTANT and OWNER against and from all costs, expenses, damages, injury, or conduct, want of care, skill, negligence, or default, including compliance with performance guarantees and patent infringement by the Principal, then this obligation shall be void; otherwise, Principal and

Surety jointly and severally agree to pay to ENVIRONMENTAL CONSULTANT and OWNER any difference between the sum to which the Principal would be entitled on completion of the contract and that which the ENVIRONMENTAL CONSULTANT and OWNER may be obliged to pay for the completion of the work by contract or otherwise, together with any damages, direct or indirect, or consequential, which ENVIRONMENTAL CONSULTANT and OWNER may sustain on account of such work, or on account of the failure of the Principal to keep and execute all provisions of the Contract.

Principal and Surety further bind themselves, their heirs, executors, administrators, and assigns, jointly and severally, that if the Principal shall keep and perform its agreement to repair or replace defective work or equipment during the warranty period of one (1) year as provided, then this paragraph shall be void; but if default shall be made by Principal in the performance of its contract to so repair or replace said work, then this paragraph shall be in effect and ENVIRONMENTAL CONSULTANT and OWNER shall have and recover from Principal and its Surety damages for all defective conditions arising by reason of defective materials, work, or labor performed by or on the account of Principal and it is further understood and agreed that this obligation shall be a continuing one against the Principal and Surety hereon, and that successive recoveries may be had hereon for successive breaches until the full amount shall have been exhausted; and it is further understood that the obligation therein to maintain said work shall continue throughout said maintenance period, and the same shall not be changed, diminished, or in any manner affected from any cause during said time; and to fully save and hold the ENVIRONMENTAL CONSULTANT and OWNER harmless for any damages it may be caused to pay on account of injury to person, loss of life or damage to property.

And the Surety, for value received, hereby stipulates and agrees that the obligations of the Surety and this Bond shall in no way be impaired or affected by any extension of time, modification, omission, addition, or change in or to the contract, the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provision thereof, or by any assignment subletting or other transfer thereof, or of any part thereof, of any work to be performed, or of any moneys due to become due thereunder; and the said Surety does hereby waive notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts, and transfer, and hereby stipulates and agrees that any and all things done and omitted to be done by and in relation to executors, administrators, successors, assignees, subcontractors, and other transferees shall have the same effect as to said Surety as though done or omitted to be done by and in relation to the Principal.

IN WITNESS WHEREOF, the Principal and Surety have executed this Bond by causing their respective names to be hereunto subscribed and their seals to be hereunto affixed by their duly authorized officers, on this the _____ day of _____, 2007.

CONTRACTOR - PRINCIPAL:

_____

By: _____

Name: _____
(Please Print or Type)

Title: _____

ATTEST:

_____

Name: _____
(Please Print or Type)

Title: _____ (SEAL)

Note: Attest for a corporation must be by the corporate secretary; for a partnership by another partner; for an individual by a Notary.

SURETY:

_____

By: _____

Name: _____
(Please Print or Type)

Title: _____

Agency: _____

Address: _____

WITNESS:

_____

Name: _____
(Please Print or Type)

Title: _____ (SEAL)

Note: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

AGREEMENT FOR SUBCONTRACTOR SERVICES
AGREEMENT NO. ARCADIS-____

IF THIS AGREEMENT REPRESENTS A "MASTER AGREEMENT **CHECK HERE ☐ AND REFER TO SCHEDULE A, PARAGRAPH 30.**	**PLEASE INCLUDE SUBCONTRACT AND ARCADIS PROJECT NUMBERS ON ALL INVOICES AND CORRESPONDENCE:** • ARCADIS PROJECT NO: _____

1. GENERAL TYPES OF SERVICES TO BE PERFORMED	**2. BILLING ADDRESS**
• **TYPE OF SERVICE(S) TO BE PERFORMED** [*Check All That Apply*]: ☐ Consulting ☐ Construction (include Schedule F) ☐ Drilling and/or Geoprobe (include Schedule G) ☐ Laboratory (include Schedule H) ☐ Surveying (include Schedule I) ☐ Utility Location/Clearance (include Schedule G) ☐ Other:	• **MAIL INVOICE TO:** _____ _____ _____ ATTN:_____ Telephone No. _____ Facsimile No.: _____ E-mail Address: _____

3. NOTICES REQUIRED BY THIS AGREEMENT SHALL BE ADDRESSED TO:	
• **SUBCONTRACTOR NAME & ADDRESS (PLEASE PRINT):** _____ ("SUBCONTRACTOR") _____ _____ ATTN:_____ Telephone No. _____ Facsimile No.: _____ E-mail Address: _____	• **ARCADIS LEGAL ENTITY** _____ ("ARCADIS") _____ _____ ATTN:_____ Telephone No. _____ Facsimile No.: _____ E-mail Address: _____

ARCADIS and SUBCONTRACTOR desire that SUBCONTRACTOR be available to perform certain services as required by ARCADIS on behalf of ARCADIS Clients. SUBCONTRACTOR represents that it possesses the necessary skills and experience to provide the requested SUBCONTRACTOR Services ("the Work" or "the Services") and agrees to perform the Work or Services as described in this Agreement and Work Authorization(s) ("Work Authorization") issued from time to time by ARCADIS and accepted by SUBCONTRACTOR, in accordance with the terms and conditions of this Agreement. This Agreement shall consist of the following documents if designated and/or otherwise attached hereto:

4. LIST OF SCHEDULES AND EXHIBITS(☑ If Attached)

☑ **AGREEMENT** for Subcontractor Services	☐ **SCHEDULE H:** Special Provisions for Laboratory Services
☑ **SCHEDULE A:** General Provisions	☐ **SCHEDULE I:** Special Provisions for Surveyors
☑ **SCHEDULE B:** Initial ARCADIS Work Authorization(s) to include Statement of Services & Subcontractor Compensation	☐ **EXHIBIT 1:** Work Authorization Form
☑ **SCHEDULE C:** Minimum Insurance Requirements	☐ **EXHIBIT 2:** Release of Lien Form
☑ **SCHEDULE D:** Prime Contract Terms & Conditions (Flowdowns)	☐ **EXHIBIT 3:** Subcontractor's duly authorized and compliant Insurance Certificate
☐ **SCHEDULE E:** Special Provisions-Other (if any)	☐ **EXHIBIT 4:** Other: _____
☐ **SCHEDULE F:** Special Provisions for Contractors	
☐ **SCHEDULE G:** Special Provisions for Utility Locators. Drilling/Geoprobe Excavating and Intrusive Services	

5. EXECUTION

This Agreement for Subcontractor Services ("Agreement") is made this _____ day of _____, _____, (the "Effecitive Date") for good and valuable consideration (the receipt of which is acknowledged). This Agreement may not be modified without the express written consent of both parties and shall be binding upon and inure to the benefit of the respective successors and assigns of ARCADIS and SUBCONTRACTOR. The Initial Term of this Agreement shall be one year from the date set forth above and shall automatically renew for successive one (1) year periods, subject to the provisions for termination as herein provided.

SUBCONTRACTOR	**ARCADIS**
By:	By:
(Signature of duly Authorized Representative)	(Signature of duly Authorized Representative)
Name Printed: _____	Name Printed: _____
Title Printed: _____	Title Printed: _____
Date: _____	Date: _____

AGREEMENT FOR SUBCONTRACTOR SERVICES

SCHEDULE A – GENERAL TERMS AND CONDITIONS (REV 1/1/07)

1. WORK / SERVICES.

1.1 SUBCONTRACTOR shall diligently perform all services, furnish all labor and materials and perform all tasks necessary to produce all of the deliverables required and perform all of the Work reasonably implied or inferred in each duly executed Work Authorization issued under the terms of this Agreement, its Schedules and Exhibits, as well as all other documents attached to or incorporated by reference as forming a part of this Agreement. SUBCONTRACTOR shall comply with all applicable laws and regulations of any governmental agency having jurisdiction (including any requirement to obtain and maintain any permits, licenses, or approvals) in order to complete the Work described in each Work Authorization issued hereunder. SUBCONTRACTOR agrees to commence and complete the Work in accordance with any schedule incorporated into this Agreement, or any duly executed Work Authorization, or any schedule submitted by SUBCONTRACTOR and otherwise accepted in writing by ARCADIS; and with respect to any Changes, out of scope or additional work, SUBCONTRACTOR shall expeditiously perform such work according to any schedule therefor agreed to by the parties.

1.2 SUBCONTRACTOR shall designate a competent representative at each location SUBCONTRACTOR is performing services for ARCADIS ("Site") and shall do no work unless its representative is present. SUBCONTRACTOR's representative shall be in full charge of the Work and all instructions or notices given to him or her shall be binding as if given to SUBCONTRACTOR directly.

2. COMPENSATION.

2.1 SUBCONTRACTOR shall be compensated for Work satisfactorily completed in accordance with the terms and conditions of this Agreement, as agreed between the Parties in each duly executed Work Authorization.

3. PAYMENT.

3.1 SUBCONTRACTOR may invoice ARCADIS after it has completed the Work, or portions thereof, and any required corrections to the satisfaction of ARCADIS, and delivered in accordance with the terms of this Agreement all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance required hereunder, certificates of inspection, marked-up record documents, required itemizations and other documents required for progress payments... ARCADIS agrees to pay SUBCONTRACTOR within fifteen (15) days of ARCADIS' receipt of payment from Client for SUBCONTRACTOR's satisfactory Work which has been accepted by the Client. If Client has not yet paid ARCAIDS for SUBCONTRACTOR's satisfactory Work within 120 days of ARCADIS' receipt of the invoice from SUBCONTRACTOR, ARCADIS agrees to waive this condition precedent to payment and will release payment of the invoice to SUBCONTRACTOR assuming all other requirements have been satisfied. Notwithstanding the foregoing, ARCADIS will use reasonable efforts to pay all invoices less than or equal to $3,000 within 45 days of receipt. Payment of any SUBCONTRACTOR invoice byARCADIS shall not be deemed final acceptance of the Work or a waiver or any right, claim or defense that ARCADIS may have under this Agreement.

3.2 Each invoice submitted by SUBCONTRACTOR to ARCADIS shall be a complete and accurate statement of the work provided; and shall be considered a warranty on the part of SUBCONTRACTOR to ARCADIS that SUBCONTRACTOR is properly entitled to payment. SUBCONTRACTOR shall only charge for labor and materials in the invoice at rates and quantities actually used, and prior to submitting any invoice for reimbursement, shall have paid all persons or entities performing services or furnishing materials or supplies to SUBCONTRACTOR hereunder during the period covered by such invoice, unless SUBCONTRACTOR specifies on any such invoice the name of the person or entity who or which has not fully been paid, and the amount then owing to any such person or corporation. No payment shall be made to SUBCONTRACTOR without a duly executed Agreement or Work Authorization and a valid, current Certificate of Insurance in compliance with this Agreement and the governing Work Authorization.

3.3 If ARCADIS objects to any portion of an invoice, ARCADIS shall notify SUBCONTRACTOR of the objection and the grounds, and the parties immediately shall make every effort to settle the disputed portion of the invoice. ARCADIS, in any event, shall pay every portion of the invoice that is not in dispute within the period for payment.

3.4 The final Applications for Payment shall be accompanied (except as previously delivered) by: (i) all documents called for in the Agreement, including but not limited to the evidence of insurance required by Schedule A, Section 7, Schedule C and Schedule D, (ii) consent of the surety, if any, to final payment, and (iii) complete and legally effective releases or waivers (satisfactory to ARCADIS) of all Liens arising out of or filed in connection with the Work including release from all sub-subcontractors and suppliers. If any sub-subcontractor or supplier fails to furnish such a release or receipt in full, SUBCONTRACTOR may furnish a bond or other collateral satisfactory to ARCADIS to indemnify ARCADIS against any Lien.

3.5 Notwithstanding the foregoing, ARCADIS may withhold from any payment any amounts in dispute because of, but not limited to the following: (i) defective work not remedied; (ii) third-party claims filed or reasonable evidence indicating probable filing of such claims; (iii) failure of the SUBCONTRACTOR to make payment properly to subcontractors or for labor, materials or equipment; (iv) damage to another contractor or other entity; (v) unsatisfactory prosecution of the Work by the SUBCONTRACTOR; or (vi) amounts owed by SUBCONTRACTOR to ARCADIS under this or any other Agreement. SUBCONTRACTOR shall promptly pay all bills incurred by SUBCONTRACTOR in performance of the Work, including, without limitation, bills for labor, services, equipment, and materials.

3.6 Payments made to the SUBCONTRACTOR will include compensation for any and all applicable sales, use, gross receipts or excises taxes. In recognition that ARCADIS' client agreement requires the prompt submission of invoices for payment, the parties agree that all invoices must be submitted by SUBCONTRACTOR to ARCADIS within ninety (90) days of the date costs are incurred or the scheduled completion date whichever occurs first. SUBCONTRACTOR waives its right to receive payment on any and all invoices which are not submitted within that time period.

3.7 ARCADIS may set-off or counterclaim against amounts payable to SUBCONTRACTOR, or asserted to be payable to SUBCONTRACTOR, under this or any other contract, any claim ARCADIS may have against SUBCONTRACTOR.

4. STANDARD OF CARE / MATERIALS AND WORKMANSHIP WARRANTIES.

4.1 SUBCONTRACTOR shall faithfully perform its services and the Work using the highest degree of care, skill, training, diligence and judgment ordinarily exercised under similar circumstances by competent members of the profession which SUBCONTRACTOR practices or industry or business in which SUBCONTRACTOR works. SUBCONTRACTOR agrees to promptly reperform, repair or replace, at ARCADIS' option and at SUBCONTRACTOR's cost and expense, any service or Work which fail to conform to such requirements or in the event such a degree of skill and care is not exercised.

4.2 SUBCONTRACTOR further warrants and guarantees that all goods and materials provided hereunder shall be: (i) be new and fit for the intended purpose, (ii) provided in conformance with types and quantities specified; (iii) installed by qualified, careful and efficient workers; and, (iv) free from defects in materials and workmanship for a period of one (1) year from completion and acceptance by ARCADIS. SUBCONTRACTOR further warrants all Work, including but not limited to all materials and equipment, against failure, leaks, breaks, and other unsatisfactory conditions or defects for a period of one (1) year from completion and acceptance by ARCADIS. SUBCONTRACTOR agrees to promptly repair or replace, at ARCADIS' option and at SUBCONTRACTOR's cost and expense, all defects, as well as faulty materials, equipment, and systems, including but not limited to, manufactured parts and faulty installation.

4.3 SUBCONTRACTOR further agrees to obtain and assign to ARCADIS or its Client, as directed by ARCADIS, all guarantees and warranties offered by or reasonably available from all vendors, subcontractors and suppliers of goods or services who provide machinery, equipment, materials or services for the Work, including but not limited to those required under the Prime Contract.

4.4 If at any time during performance of the Work or during the one (1) year period after completion and acceptance of the Work by ARCADIS (or such longer period of time as may be required by the Prime Contract between ARCADIS and its Client). SUBCONTRACTOR shall receive a written notice of defect or non-conformance from ARCADIS and shall fail to correct such defect or non-conformity within the time limit specified, ARCADIS may cause the same to be corrected by either its own forces or by others and either deduct costs incurred from any amounts due and owing to SUBCONTRACTOR under this or any other Agreement between ARCADIS or its affiliated companies and SUBCONTRACTOR or invoice SUBCONTRACTOR directly for such damages. SUBCONTRACTOR agrees to reimburse ARCADIS within thirty (30) days of receipt of ARCADIS' itemized invoice.

4.5 SUBCONTRACTOR shall at all times enforce, or cause to be enforced, strict discipline and good order among workmen employed to perform the Work. Should any disorderly or incompetent person be employed by SUBCONTRACTOR, or by any lower-tier subcontractor, upon or about any Site, SUBCONTRACTOR shall, upon request of ARCADIS' representative, cause such person to be removed from such Site and not be again employed thereon without written permission of ARCADIS.

5. INDEPENDENT CONTRACTOR; RELATIONSHIP OF PARTIES; SUBCONTRACTING.

5.1 For purposes hereof, SUBCONTRACTOR is an independent contractor and shall not be considered an employee or agent of ARCADIS. SUBCONTRACTOR is responsible for all means, methods, sequences and procedures for carrying out the Work, including safety, and shall maintain complete control of its employees, agents, subcontractors and vendors. SUBCONTRACTOR shall not take any action or allow any omission inconsistent with its status as an independent contractor under this Agreement. This Agreement is subject to the terms and conditions of the Prime Contract entered into between ARCADIS and the owner or client for the specific Project. SUBCONTRACTOR has received a copy of such contract and agrees to perform all obligations of such contract as it applies and with respect to the Work of the SUBCONTRACTOR, including any terms and provisions for indemnity, insurance, warranties, and liquidated damages.

5.2 Nothing herein shall be deemed or construed as creating any agency or granting either party any right or authority to assume or to create any obligation, warranty or responsibility on behalf of the other.

5.3 SUBCONTRACTOR shall not subcontract performance of all or any portion of the Work under this Agreement without the prior written approval of ARCADIS. If requested by ARCADIS, SUBCONTRACTOR shall furnish ARCADIS a copy of the proposed subcontract for ARCADIS' review of the terms and conditions thereof, and shall not execute such subcontract until ARCADIS has given notice of ARCADIS' approval. Failure of SUBCONTRACTOR to comply with this section may be deemed to be a material breach of this Agreement and grounds for ARCADIS to withhold payment therefor. SUBCONTRACTOR guarantees that subcontractors of SUBCONTRACTOR, for performance of the Work, will comply fully with the terms of this Agreement applicable to the portion of the Work performed by them.

6. CHANGES.

6.1 No changes to this Agreement and no extra charges will be allowed unless a duly authorized representative of ARCADIS specifically agrees to them in writing. As a condition precedent to SUBCONTRACTOR's recovery on any claim for an increase in the cost of the Work or for an extension of time to complete the Work (a "Claim"), SUBCONTRACTOR shall, immediately after the occurrence of the event which SUBCONTRACTOR believes may give rise to a Claim, give ARCADIS written notice of the claim, which notice shall contain a verified statement that supports the claim and details the estimated change in the Subcontract cost and the time to complete the Work. SUBCONTRACTOR's failure to provide notice as required by this paragraph shall be a waiver of SUBCONTRACTOR's right to recovery under the terms of the Prime Contract between ARCADIS and on a Claim. In no event shall SUBCONTRACTOR be entitled to compensation for changes which are not reimbursable to ARCADIS its Client. Any determination by ARCADIS or Client with regard to same shall be binding upon SUBCONTRACTOR.

7. INSURANCE.

7.1 From the date of commencement of the Work until its completion, SUBCONTRACTOR shall provide and maintain, at a minimum, at SUBCONTRACTOR's expense, the insurance required by Schedule C. In the event the Client requests additional types or an increase in the amounts of insurance required in Schedule C, as may defined in any Work Authorization or Prime Contract attached hereto or made a part hereof, SUBCONTRACTOR agrees to comply with such request and to notify ARCADIS of any failures to comply prior to accepting the contemplated work. In the event SUBCONTRACTOR fails to provide such notice, ARCADIS shall have the right but not the obligation to procure said insurance for SUBCONTRACTOR. SUBCONTRACTOR shall pay ARCADIS any and all costs and expenses incurred by ARCADIS in procuring said insurance, and ARCADIS may deduct this amount from the Subcontract cost. SUBCONTRACTOR's failure to procure the required types and limits of insurance as set forth herein shall not relieve SUBCONTRACTOR of its indemnification obligations hereunder.

8. TITLE AND RISK OF LOSS

8.1 Title to all materials shall pass to the Client upon delivery to the work site. SUBCONTRACTOR shall bear the risk of loss of such materials until completion of the Work and final acceptance by ARCADIS.

9. INDEMNITY.

9.1 SUBCONTRACTOR agrees to indemnify, defend and hold harmless ARCADIS and the Client served under this Agreement and the directors, officers, employees, shareholders and affiliates of either of them from and against any and all liabilities, losses, damages, costs and expenses (including attorneys' fees and court costs) which Client, ARCADIS and their directors, officers, employees and agents hereafter may suffer as the result any breach by SUBCONTRACTOR of the terms of this Agreement or in connection with any claim, demand, action or right of action (whether at law or in equity) brought or asserted by any third party including, but not limited to any personal injury (including death) or property damage relating to or arising from the performance of the Work by the SUBCONTRACTOR, its directors, officers, employees, affiliates, lower-tier subcontractors, agents or representatives. SUBCONTRACTOR shall not be liable to the extent that any liability, loss, damage, cost, and expense results from the sole negligence or willful misconduct by ARCADIS or its directors, officers, employees or agents. SUBCONTRACTOR agrees to promptly pay ARCADIS all sums ARCADIS may be required to pay in settlement of any Loss on account thereof, including any claim under the provisions of any workers' compensation law or similar law. In the event any Loss is claimed by one party against the other, and the claiming party does not succeed in proving the Loss, the other party shall be entitled to recover, within a reasonable period of time after demand therefor, all reasonable costs incurred.

10. LIENS

10.1 SUBCONTRACTOR shall promptly pay for all services, materials, equipment and labor used or furnished by SUBCONTRACTOR in the performance of the Work, and shall, at SUBCONTRACTOR's expense, keep all property belonging to ARCADIS and Client or either of them free and clear of any and all liens and rights of lien arising out of services, labor, equipment, or materials furnished by SUBCONTRACTOR or its employees, material men or sub-subcontractors in performance of the Work. If SUBCONTRACTOR fails to release and discharge any such claim or lien on the property of ARCADIS and Client or either of them within seven (7) days after receipt of written notice from ARCADIS to remove such claim or lien, ARCADIS may, at its option, discharge or release the lien or claim of lien or take such other action with respect to the lien as ARCADIS may deem appropriate. SUBCONTRACTOR shall pay ARCADIS any and all costs and expenses incurred by ARCADIS in so doing (including reasonable attorney's fees), and ARCADIS may deduct this amount from the

Subcontract cost. SUBCONTRACTOR shall, at its own expense, defend any action based on such claim or lien, and shall pay and satisfy any judgment which may be established by decision of the court.

11. EQUAL EMPLOYMENT.

11.1 SUBCONTRACTOR certifies compliance with all applicable Federal, provincial, state, local and other anti-discrimination laws, the standards and regulations issued thereunder, and the amendments thereto. The SUBCONTRACTOR certifies compliance, to the extent applicable, with all applicable provisions of the standards and regulations issued thereunder. Such rules and regulations are incorporated herein by reference with the same force and effect as if set forth herein verbatim.

12. ASSIGNMENT / SUBCONTRACTS.

12.1 SUBCONTRACTOR shall not assign or subcontract this Agreement or any part hereof without the prior written consent of ARCADIS, nor shall SUBCONTRACTOR assign any moneys due or to become due to it hereunder without the written consent of ARCADIS. Any such assignment or subcontract shall be null and void. SUBCONTRACTOR shall impose on its lower-tier subcontractors the same responsibilities that SUBCONTRACTOR assumes by the terms and conditions of this Agreement. SUBCONTRACTOR will be fully responsible to ARCADIS for the acts and omissions of its lower-tier subcontractors and of persons either directly or indirectly employed by all of SUBCONTRACTOR's lower-tier subcontractors. This Agreement shall not be transferable by SUBCONTRACTOR or by operation of law.

12.2 If requested by ARCADIS, SUBCONTRACTOR shall furnish ARCADIS a copy of any proposed agreement between SUBCONTRACTOR and any of its lower-tier subcontractors for ARCADIS' review of the terms and conditions thereof, and shall not execute such agreement until ARCADIS has given notice of ARCADIS' approval. Failure of SUBCONTRACTOR to comply with this section may be deemed to be a material breach of this Agreement and grounds for ARCADIS to withhold payment therefor. SUBCONTRACTOR guarantees that all lower-tier subcontractors of SUBCONTRACTOR will comply fully with the terms of this Agreement which are applicable to the portion of the Work performed by them.

13. CONFLICTS OF INTEREST.

13.1 SUBCONTRACTOR acknowledges that if, in the sole discretion of ARCADIS, after consultation with the SUBCONTRACTOR, the potential performance of other services could result in a conflict with SUBCONTRACTOR's obligations under this Agreement or any Work Authorization, then SUBCONTRACTOR shall not perform the services. SUBCONTRACTOR represents that it has reasonably evaluated all potential conflicts and has disclosed and will continue to disclose to ARCADIS in writing any prior or existing relationships which present, or could appear to present, a conflict with the Work or services to be performed. SUBCONTRACTOR acknowledges this is a continuing obligation.

14. TERM.

14.1 Time is of the essence in the performance of the obligations created by this Agreement. The initial term of this Agreement shall be as set forth in the signatory page and shall automatically renewal for successive one (1) year periods, subject to the provisions for termination as hereinafter provided. In the event Work has been commenced prior to the execution of this Agreement, this Agreement shall be effective retroactively to the date the Work was commenced.

15. TERMINATION FOR DEFAULT BY SUBCONTRACTOR.

15.1 ARCADIS may terminate the services of SUBCONTRACTOR at any time by giving written notice to SUBCONTRACTOR specifying that termination is being made under the provisions of this Paragraph and specifying the effective date of termination if (i) SUBCONTRACTOR should be or become insolvent within the meaning of the Bankruptcy Act of the United States of America; (ii) SUBCONTRACTOR should make a general assignment for the benefit of creditors; (iii) Any proceeding should be brought by or against SUBCONTRACTOR seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief, under the present or any future federal bankruptcy acts or under any other applicable federal or state law or regulation; (iv) Any proceeding should be brought seeking the appointment of a receiver or similar office of the court with respect to SUBCONTRACTOR's business; (v) SUBCONTRACTOR should refuse or fail to supply enough properly skilled workmen or equipment or materials of the proper quality to properly or timely perform the Work; (vi) SUBCONTRACTOR should fail to make timely payments to SUBCONTRACTOR's labor, subcontractors, materialmen, or suppliers; (vii) SUBCONTRACTOR should disregard the laws, ordinances, governmental rules or regulations, or should repeatedly disregard instructions of ARCADIS' representative which are consistent with this Agreement; or (viii) SUBCONTRACTOR should violate any provision of this Agreement and shall fail to correct such violation promptly following receipt of notice from ARCADIS. In the event of such termination: (i) On the termination date, ARCADIS shall remove SUBCONTRACTOR from the Site(s) and take possession of all materials thereon for which SUBCONTRACTOR is entitled to receive payment under the provisions of this Agreement, and ARCADIS thereafter may complete the Work, or cause the Work to be completed, by whatever means ARCADIS deems expedient; (ii) SUBCONTRACTOR shall promptly thereafter transfer and assign to ARCADIS, in accordance with ARCADIS' instructions, all improvements and materials for which SUBCONTRACTOR is entitled to receive payment under the provisions of this Agreement, and SUBCONTRACTOR shall return to ARCADIS all information furnished by ARCADIS in connection with the Work, together with all data developed by SUBCONTRACTOR under this Agreement; and (iii) SUBCONTRACTOR shall not be entitled to receive any further payment under this Agreement until the Work is wholly finished, and ARCADIS shall have the right to deduct from any balance due SUBCONTRACTOR under this Agreement the amount of damage incurred by ARCADIS through SUBCONTRACTOR's default, including the cost of completing the Work. In the event the amount of damage exceeds the balance due hereunder, SUBCONTRACTOR shall pay to ARCADIS the amount of such excess. The rights and remedies of ARCADIS set forth in this Paragraph shall not be exclusive and are in addition to all other rights and remedies of ARCADIS.

16. TERMINATION FOR CONVENIENCE.

16.1 In the event that ARCADIS terminates or cancels this Agreement, in whole or in part, for convenience or any reason whatsoever, other than default, SUBCONTRACTOR shall have no claim of any kind, sounding either in contract or tort, for recovery of damages, costs or expenses against ARCADIS, including, without restricting the generality of the foregoing, loss of revenue or profits, business interruption, loss of compensation for changes or other damages of any kind, except that ARCADIS shall be liable to SUBCONTRACTOR in accordance with the terms of this Agreement, inclusive of the limitations set forth in the Prime Contract between ARCADIS and its Client, for any outstanding amount owing to SUBCONTRACTOR as a result of satisfactory Work performed through the effective date of termination and for any non-cancelable commitment entered into by SUBCONTRACTOR relating thereto.

16.2 SUBCONTRACTOR may terminate this Agreement upon thirty (30) days prior written notice to ARCADIS, provided however, that SUBCONTRACTOR's notice of termination shall not become effective until SUBCONTRACTOR has completed the Work defined in any and all Work Authorizations accepted by SUBCONTRACTOR under this Agreement prior to SUBCONTRACTOR's tendering of said notice of termination.

16.3 In either event, SUBCONTRACTOR will promptly discontinue all Work, place no additional orders, and preserve and protect materials on hand which are purchased for or committed to this Agreement, any Work-in-progress and/or completed Work, wherever located, and dispose of the same in accordance with ARCADIS instructions.

17. USE OF DOCUMENTS / CONFIDENTIALITY / OWNERSHIP.

17.1 SUBCONTRACTOR shall maintain complete and accurate working files and/or documentation of the Work, including new data, calculations, estimates, assumptions, logs, maps, drawings, plans, specifications, diaries, interpretations, notes and calibrations, and shall provide ARCADIS unrestricted access to such items and dispose of them only as directed by ARCADIS.

17.2 All documents provided by SUBCONTRACTOR pursuant to this Agreement are instruments of service of SUBCONTRACTOR, and

SUBCONTRACTOR shall retain an ownership and property interest therein (including the right of reuse) until ARCADIS has made payment to SUBCONTRACTOR for such documents pursuant to this Agreement. Notwithstanding the foregoing, upon termination of this Agreement or at an earlier time if ARCADIS requests, SUBCONTRACTOR will deliver to ARCADIS any data, materials or information received or generated in the performance of this Agreement.

17.3 SUBCONTRACTOR shall (i) keep all information regarding the Work or any Work Authorization (including the Site thereof) and the Work itself, in strict confidence and (ii) ensure that it and its employees, agents, contractors and subcontractors shall treat as confidential any information, whether verbal or written or of any description whatsoever, developed or obtained in performing the Work or in any way relating to the Work, the Site or this Agreement. Such information shall not be disclosed to anyone other than ARCADIS, except for disclosure as necessary to perform the Work. Under no circumstances shall any documents or other information relating to the Work or any Work Authorizations be submitted or disclosed under any order of or as required by any court or governmental agency, or by any third party, whether pursuant to subpoena or otherwise, without prior written notice to and receipt of approval from ARCADIS. This obligation shall survive termination or completion of this Agreement.

17.4 SUBCONTRACTOR shall execute and shall cause its employees assigned to perform the Work to execute a confidentiality agreement in a form or format acceptable to and as may be required by ARCADIS or it Client.

17.5 SUBCONTRACTOR and its subcontractors will not use or designate for use in connection with the Work any patented or patent-pending article, method or device which involves or requires payment of any license, fee or royalty in addition to the purchase price without ARCADIS' prior written approval. SUBCONTRACTOR agrees to indemnify ARCADIS against any cost or expense incurred in connection with the payment of such license, fee or royalty in the event that ARCADIS' prior approval is not obtained. SUBCONTRACTOR shall defend any suit or proceeding brought against ARCADIS based on a claim that any item or part of an item furnished under this Agreement constitutes an infringement of any patent, trademark, servicemark, or copyright, and shall pay all damages and costs awarded against ARCADIS or required to be paid in settlement of the claim. If the use of an item or part of an item is enjoined, SUBCONTRACTOR shall at its own expense either procure for ARCADIS the right to continue using the item or part or replace it with a non-infringing item or part or modify the item or part so that it becomes non-infringing.

17.6 ARCADIS shall not be responsible for any inaccuracies or incomplete or unfinished materials supplied prior to completion of the Work.

18. RECORDS AND AUDITS.

18.1 SUBCONTRACTOR shall maintain all cost, expense, payroll and related financial records and other records pertaining to the Work performed by SUBCONTRACTOR under this Agreement for a period of ten (10) years after final payment under this Agreement or until final conclusion of any litigation or administrative proceeding arising under or materially concerning this Agreement or the Work. ARCADIS shall have access to and the right to audit, copy and inspect such records at any reasonable time during the course of the Work and for the period during which records are maintained. ARCADIS shall have access to and the right to audit such books, records, and documents during SUBCONTRACTOR's normal business hours. If authorization is provided to dispose of SUBCONTRACTOR's records in less than ten (10) years, SUBCONTRACTOR shall offer the records to ARCADIS prior to disposal. ARCADIS shall be responsible for only the reasonable transportation costs of records requested to be delivered to ARCADIS.

19. FORCE MAJEURE.

19.1 Any delay in or failure of performance of, either party to this Agreement shall not constitute a default nor give rise to any claim for damage, if and to the extent such delay or failure is caused by occurrences beyond the control of the party affected, including but not limited to, acts of God or the public enemy, expropriation or confiscation of facilities or compliance with any order or request of governmental authority, affecting to a degree not presently existing, the supply, availability, or use of personnel or equipment, acts of war, public disorder, insurrection, rebellion, sabotage, flood, riot, or any causes a party is unable, with reasonable diligence, to prevent; provided, however, that a party who is prevented from performing for any reason shall immediately notify the other party in writing of the reason for the non-performance and the anticipated extent of any delay.

20. MEDIATION / ARBITRATION / ALTERNATIVE DISPUTE RESOLUTION.

20.1 If any dispute arises out of or relates to this Agreement, or the breach thereof, and the dispute cannot be settled through direct discussions by the representatives of the Parties, the Parties agree to submit the matter for arbitration or alternative dispute resolution in accordance with the provisions of the Prime Contract between ARCADIS and its Client. Any decision or determination required by the Client to be binding upon ARCADIS shall be binding upon SUBCONTRACTOR. When not specified by the Prime Contract, the matter shall be submitted for mediation under the Construction Industry Mediation Rules of the American Arbitration Association before having recourse to a judicial forum. No written or oral representation made during the course of any settlement negotiations or mediation shall be deemed a party admission.

21. GOVERNING LAW.

21.1 Governing law shall be as set forth in the Prime Contract between ARCADIS and its Client. In the absence of such provision, the laws of the State in which the Site is located shall govern this Agreement and the legal relations of the Parties.

22. SEVERABILITY AND WAIVER.

22.1 No waiver of the terms, conditions, or covenants of this Agreement shall be binding and effective unless the same shall be in writing, signed by both parties. Any such waiver of any breach of the terms, conditions, or covenants of this Agreement shall be for that one time only and shall not apply to any subsequent breach. The failure by either Party to enforce against the other Party any term or provision of this Agreement shall be deemed not to be a waiver of such Party's right to enforce against the other Party the same or any other such term or provision. If any portion of this Agreement is held invalid or inoperative, then so far as is reasonable and possible, the remainder of this Agreement shall be deemed valid and operative, and effect shall be given to the intent manifested by the portion held invalid or inoperative.

23. NOTICES.

23.1 Any such notices shall be either: (i) sent by certified mail, return receipt requested, in which case notice shall be deemed delivered three business days after deposit, postage prepaid in the U.S. Mail; (ii) sent by overnight delivery using a nationally recognized overnight courier, in which case it shall be deemed delivered one business day after deposit with such courier; or (iii) sent by personal delivery. The above addresses may be changed by written notice to the other Party; provided, however, that no notice of a change of address shall be effective until actual receipt of such notice. Copies of notices are for informational purposes only, and a failure to give or receive copies of any notice shall not be deemed a failure to give notice.

24. HEALTH AND SAFETY.

24.1 SUBCONTRACTOR acknowledges that it is responsible for the health and safety of its workers and others relating to SUBCONTRACTOR's Work and Site. SUBCONTRACTOR shall (i) be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with protection of the Work and any other persons who may be affected thereby and (ii) comply with all laws, ordinances, rules, regulations applicable to, and orders of public bodies having jurisdiction over, the safety of persons or property or the protection of them from damage, injury or loss, including, without limitation, the Department of Labor Safety and Health Regulations for construction as promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54).

25. CAPTIONS.

25.1 The captions in this Agreement are for convenience only, and are not a part of this Agreement. The captions do not in any way define, limit, describe or amplify the terms and provisions of this Agreement or the scope or intent thereof.

26. INCORPORATION BY REFERENCE.

26.1 This Agreement is subject to the terms and conditions of the contract or agreement entered into between ARCADIS and the owner or client for the specific Project. SUBCONTRACTOR acknowledges that it has received a copy of such contract and agrees to perform all obligations of such contract as it applies and with respect to the Work of the SUBCONTRACTOR, including any terms and provisions for indemnity, insurance, warranties, and liquidated damages.

27. CONFLICTING TERMS / ORDER OF PRECEDENCE.

27.1 The terms and conditions of this Agreement and its attachments are intended to be inclusive and complementary. In the event of a conflict between the terms of this Agreement and any of the Schedules or Exhibits attached hereto or incorporated by reference, the following Order of Precedence shall apply: Schedule E – Special Provisions-Other (If Any), Schedule D – Prime Contract Terms & Conditions, Schedules F-J Special Provisions (as appropriate), Schedule A – General Provisions, Schedule C – Insurance, and Schedule B - Work Authorization (when executed by both Parties).

28. NO THIRD PARTY BENEFICIARIES.

28.1 The enforcement of the terms and conditions of this Agreement and all rights of action relating to such enforcement, shall be strictly reserved to ARCADIS and SUBCONTRACTOR, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person on such Agreement. It is the express intention of ARCADIS and SUBCONTRACTOR that subcontractors and any other person other than ARCADIS or SUBCONTRACTOR receiving any benefits from this Agreement shall be deemed to be incidental beneficiaries only.

29. ENTIRE AGREEMENT/ AMENDMENTS.

29.1 This Agreement constitutes the entire agreement between the Parties with respect to the Work, and supersedes all prior negotiations, representations or agreements relating thereto, written or oral, except to the extent they are expressly incorporated herein. Unless otherwise provided for herein, no amendments, changes, alterations or modifications of this Agreement shall be effective unless in writing, executed by ARCADIS and SUBCONTRACTOR. No other waiver, alteration, or modification of any provision in this Agreement will be binding on either party. Any course of prior dealings or usage of the trade not expressly incorporated in this Agreement shall not be binding on either party. The parties represent and warrant that each has had the opportunity to review and negotiate the terms of this Agreement, with the benefit of counsel if desired, and agree that any ambiguity shall not be construed against the drafter.

30. MASTER SUBCONTRACT AGREEMENT.

30.1 This Agreement constitutes a Master Agreement if marked as such on the Agreement for Subcontractor Services form (see first gray bar). Future scopes of work may be added to this Master Agreement and be governed by its terms through the use of an ARCADIS Work Authorization form that (a) references this Master Agreement and (b) is countersigned by an authorized representative of each party.

- END OF SCHEDULE A - GENERAL TERMS AND CONDITIONS -

SCHEDULE B: SCOPE OF WORK / BASIS OF COMPENSATION (Rev 1/1/07)

1. GENERAL INFORMATION

		WORK AUTHORIZATION No.	
Date Issued:		ARCADIS Project No	
Issued under Subcontract No.:		Prime Contract No. or Date:	
Subcontractor Name:			

2. PROJECT INFORMATION

Project Name:	
Project Location:	
ARCADIS Project Manager:	ARCADIS PIC/Area Manager:

3. WORK AUTHORIZATION / CHANGE ORDER INFORMATION

Work Authorization / Change Order Initiated By:	☐ ARCADIS	☐ Subcontractor	☐ Other (Identify):

4. TO AUTHORIZE A NEW SCOPE OF WORK

In accordance with the terms and conditions of the Subcontract Agreement referenced above between _____ (hereinafter referred to as "ARCADIS") and SUBCONTRACTOR, SUBCONTRACTOR is authorized to provide the following services:

DESCRIPTION OF WORK:

ADDITIONAL INFORMATION ATTACHED? ☐ No ☐ Yes, identify: _____ or check box(es) below

☐ Prime Agreement Incorporated by Reference
☐ Release/Waiver of Claims and Liens Form

FOR LABORATORY SERVICES: ☐ Work Authorization, Part 2 for Certain Laboratory Services

PROJECT SCHEDULE	Target Start Date:	Required Completion Date:

YOUR COMPENSATION FOR THESE SERVICES SHALL BE:

☐ Time & Materials in accordance with the attached Rate Schedule
☐ Cost plus Fixed Fee of _____ % in accordance with attachedFixed Fee Schedule
☐ Unit Pricing in accordance with the attached Unit Price Fee Schedule

A maximum not to exceed amount of $ _____ ($_____)is authorized to cover these services. SUBCONTRACTOR shall not incur changes in excess of this amount without prior written approval from ARCADIS. - OR -

☐ A Lump Sum Fee of $ _____ ($_____) is authorized to cover these services.

MILESTONE PAYMENT SCHEDULE ☐ Attached
SUBCONTRACTOR SUBMITTALS / ATTACHMENTS ☐ Current, Compliant Insurance Certificate
☐ Other: Identify

5. TO CHANGE A PREVIOUSLY AUTHORIZED SCOPE OF WORK

In accordance with the terms and conditions of the Subcontract Agreement referenced above between between _____ (hereinafter referred to as "ARCADIS") and SUBCONTRACTOR, the previously authorized scope of work and basis of compensation is modified as follows:

Description of Change:		
Reason for Change:		
Additional Information Attached?	☐ No ☐ Yes, identify: _____	
Schedule Impact?	☐ No ☐ Yes, explain: _____ and insert revised start and/or completion dates below, as applicable	
	Original Project Start Date:	New Project Start Date:
	Original Project Completion Date:	New Project Completion Date:
Cost Impact?	☐ No change in subcontract amount required	
	☐ Increase in subcontract amount required	
	☐ Decrease in subcontract amount required	
	☐ No change in subcontract amount presently anticipated; however, final subcontract amount may require increase/decrease to accommodate this change upon project completion.	
Cost Increase / Decrease	The amount of the subcontract will be ☐ increased or ☐ decreased by the sum of $ _____ ($_____). The total revised Contract Price is $ _____ ($_____)	

6. TO EXTEND OR REINSTATE THE TERM OF AN EXPIRING or EXPIRED SUBCONTRACT AGREEMENT

Original Subcontract Expiration Date:	New Subcontract Expiration Date:

7. TO INCORPORATE NEW SUBCONTRACTOR RATE SCHEDULE

Apply New Rates to:	☐ New Work Authorizations Only Effective:	☐ New and Existing Work Authorizations Effective:

8. EXECUTION

The undersigned SUBCONTRACTOR accepts this Work Authorization in all respects noted above. SUBCONTRACTOR agrees to furnish all labor and materials necessary to complete the work of said Work Authorization. This document shall become a supplement to the subcontract and all provisions will apply hereto. It is understood that the Work Authorization shall be effective when signed by the SUBCONTRACTOR's authorized representative. ***(Note: Both Parties Must Initial and Date Attachments)***

ARCADIS	**SUBCONTRACTOR**
By:	By:
(Signature of duly Authorized Representative)	(Signature of duly Authorized Representative)
Name Printed:	Name Printed:
Title Printed:	Title Printed:

ARCADIS
AGREEMENT FOR SUBCONTRACTOR SERVICES

SCHEDULE C – INSURANCE (REV 1/1/07)

SUBCONTRACTOR shall provide and maintain during the term of this Agreement, at SUBCONTRACTOR's expense, the minimum limits of insurance listed below:

1. Workers' Compensation, Disability Benefit, and Employer's Liability Insurance in at least the minimum amounts required by and in compliance with the laws of the State(s) where the Work is to be performed.

2. Commercial General Liability Insurance, including contractual liability, completed operations, hazards and explosion, collapse and underground hazard coverage, with a limit of not less than $1,000,000 per occurrence, $2,000,000 aggregate. All such insurance policies shall provide (unless by specific statute applicable thereto it is otherwise provided) coverage for: (a) damage to above-ground or underground property; (b) collapse of structures; (c) damage resulting from explosion or blasting; (d) damages or losses arising out of liabilities assumed, except infringement, under the indemnity provision of this Agreement; and (e) damage to completed operations.

   If the Work to be performed is within or near a railroad right-of-way and other railroad facilities, SUBCONTRACTOR's insurance shall not include any exclusions of coverage for any claims or liabilities associated with work, occurrences or incidents occurring within 50 feet of railroad right-of-way and other railroad facilities. SUBCONTRACTOR can generally meet this requirement by having the Contractual Liability - Railroads standard form endorsement form ISO CG 24 17 10 01 or equivalent. SUBCONTRACTOR's Certificate of Insurance shall state that the railroad liability exclusion has been removed or otherwise deleted from its Commercial General Liability policy or SUBCONTRACTOR may provide a copy of ISO CG 24 17 10 01 or its equivalent.

3. Automobile Liability Insurance covering owned, non-owned, and hired vehicles used by SUBCONTRACTOR in connection with the Work with a limit of not less than $1,000,000 per accident combined single limit, $2,000,000 aggregate.

4. Following form Excess Umbrella Liability Insurance extending coverage under Subcontractor's comprehensive general, automobile and Employer's Liability insurance policies with a limit of $2,000,000 per occurrence and in the aggregate.

5. If professional services, including but not limited to engineering, architectural, laboratory analysis and/or surveying services, are part of the Work, Professional Liability (Errors and Omissions) Insurance with a limit of not less than $1,000,000 per claim, $1,000,000 aggregate. SUBCONTRACTOR, at its cost, agrees to maintain insurance meeting these requirements for a period of two years the date of this Agreement.

6. If the Work involves the handling or use of chemicals or contaminants or work areas containing pollutants or hazardous materials, Pollution Liability with a limit of not less than $1,000,000 per incident, $1,000,000 aggregate to coverage damage or losses relating to environmental impairment as may have been caused by the SUBCONTRACTOR.

SUBCONTRACTOR shall provide ARCADIS with a certificate of insurance indicating that the minimum types and limits of insurance have been procured by SUBCONTRACTOR prior to final execution of this Agreement and shall cause its insurers to provide ARCADIS and Client with a minimum of thirty (30) days written notice prior to the effective date of any cancellation of, or diminution in the coverage provided by, any and all such policies.

SUBCONTRACTOR agrees to name "ARCADIS U.S., INC., its Client and their affiliates, directors, officers, employees, and agents" as additional insureds as their interests may apply on all policies as required by Schedule C (with the exception of the Workers' Compensation, Employer's Liability, and any Professional Liability Policy). SUBCONTRACTOR shall provide copies of such endorsements upon request.

SUBCONTRACTOR shall cause the underwriters of each of the insurance coverages required above waive all rights of subrogation against "ARCADIS U.S., Inc., its Client and their affiliates, directors, officers, employees, and agents" under each of the foregoing policies.

SUBCONTRACTOR shall provide ARCADIS with certified copies of its insurance policies upon request.

SUBCONTRACTOR agrees to promptly notify ARCADIS of any claims or losses or potential claims or losses resulting from or arising out of SUBCONTRACTOR's performance of the Work and shall, within three (3) days of occurrence, provide ARCADIS with copies of SUBCONTRACTOR's correspondence pertaining to the incident, including any and all SUBCONTRACTOR accident reports.

Notwithstanding the foregoing, in the event that the contract between ARCADIS and the Client specifies greater limits of insurance than those set forth above, the SUBCONTRACTOR shall procure and maintain the limits in the amounts specified in such contract and to notify ARCADIS of any failures to comply prior to accepting the contemplated work. In the event SUBCONTRACTOR fails to provide such notice, ARCADIS shall have the right but not the obligation to procure said insurance for SUBCONTRACTOR. SUBCONTRACTOR shall pay ARCADIS any and all costs and expenses incurred by ARCADIS in procuring said insurance, and ARCADIS may deduct this amount from the Subcontract cost.

SUBCONTRACTOR shall provide proof of insurance coverage as may be required in this Agreement and each Work Authorization prior to commencing the Work. Said proof of coverage shall be in the form of a duly executed and properly endorsed insurance certificate from an insurance carrier licensed to transact insurance business in the state in which the Work is to be performed. Each certificate shall certify that all of the required insurance, as above described, has been effected and that the SUBCONTRACTOR is covered thereby.

SUBCONTRACTOR's failure to procure the required types and limits of insurance as set forth herein, shall not relieve SUBCONTRACTOR of its indemnification obligations hereunder.

Any coverage provided ARCADIS by SUBCONTRACTOR'S insurance under this Agreement is primary insurance and shall not be considered contributory insurance with any insurance policies of ARCADIS, its members, subsidiaries, and affiliated companies.

Whenever an employee of SUBCONTRACTOR suffers an occupational injury or disease as a result of the Work and such injury or disease is required by the Workman's Compensation or Occupational Disease Laws to be reported to the proper authorities, a copy of such report shall be furnished promptly by SUBCONTRACTOR to ARCADIS. SUBCONTRACTOR also shall require all subcontractors to furnish copies of such reports to ARCADIS in connection with occupational injuries or diseases sustained by their employees.

- END OF SCHEDULE C – INSURANCE -

SCHEDULE F - SPECIAL PROVISIONS FOR CONTRACTORS

SP-C1. COMPLIANCE WITH LAW.

Contractor shall comply with all applicable laws, statutes, codes, regulations, ordinances, rules, and orders of federal, state, and local governments and political subdivisions, and of any other constituted governmental authority or agency. SUBCONTRACTOR shall indemnify and hold ARCADIS harmless against any and all claims, demands, losses, injuries, and expenses which may result from failure of SUBCONTRACTOR and its employees, agents, and subcontractors to comply with such laws, statutes, codes, regulations, ordinances, rules and orders.

SP-C2. CHANGES IN THE WORK.

Before undertaking any work or incurring any charge or expense which SUBCONTRACTOR considers is beyond or in addition to the Scope of Work described in Exhibit A or otherwise contemplated by the terms of this Contract, SUBCONTRACTOR shall advise ARCADIS in writing stating the reasons that SUBCONTRACTOR believes the out of scope or additional work should be performed and a reasonable estimate of the cost of such work. SUBCONTRACTOR must make all such claims for changes within five (5) calendar days of the date that SUBCONTRACTOR knew or should have known of the basis for the claim. Out of scope or additional work performed by SUBCONTRACTOR without such written authorization shall be at SUBCONTRACTOR's sole risk and expense, and SUBCONTRACTOR waives any claim for damages or compensation, including claims based on equity therefor. The compensation for properly authorized work above shall be negotiated, but in the event the parties fail to negotiate or are unable to agree as to compensation, then SUBCONTRACTOR shall be compensated for its direct costs and time at the unit rates set forth with respect to the original scope of work.

SP-C3. LIENS, CHARGES; SET-OFFS.

SUBCONTRACTOR promptly shall pay all bills incurred by SUBCONTRACTOR in performance of the Work, including, without limitation, bills for labor, services, equipment, and materials. SUBCONTRACTOR shall not permit any lien or charge to be fixed, filed, or otherwise assessed against ARCADIS, the Client, or the Site.

To the extent permitted by law, SUBCONTRACTOR waives its right to file any lien, including mechanics liens, relating to the Work, shall not enter into any agreement establishing such a right in any other party and shall keep the Site free from all liens by others. Should any claim of lien be recorded by the SUBCONTRACTOR, any SUBCONTRACTOR, or material-man of the SUBCONTRACTOR, SUBCONTRACTOR shall, within two (2) days of the recording of such lien, obtain a transfer bond transferring the lien to the bond at the SUBCONTRACTOR's cost. If the SUBCONTRACTOR fails to do so, the Client or ARCADIS may take such steps as are necessary to transfer such liens to bond or otherwise protect the Site from liens, and the SUBCONTRACTOR shall reimburse the ARCADIS or Client for such expenses, including reasonable attorneys' fees. ARCADIS may withhold and deduct any such amounts from any payment to the SUBCONTRACTOR.

ARCADIS may set-off or counterclaim against amounts payable to SUBCONTRACTOR, or asserted to be payable to SUBCONTRACTOR, under this or any other contract, any claim ARCADIS may have against SUBCONTRACTOR.

SP-C4. BOND.

If requested in writing by ARCADIS, SUBCONTRACTOR shall furnish a bond to secure its performance under this Contract, in a sum to be established by ARCADIS, and a separate bond to insure the prompt payment of all persons furnishing labor or materials to SUBCONTRACTOR in performance of the Work, and to protect ARCADIS and Client against liens or charges for or on account of such labor or materials, in a sum to be established by ARCADIS.

SP-C5. SAFETY.

SUBCONTRACTOR shall be solely responsible for the health, safety and welfare of its employees, agents and others with regard to the Work, and further for establishing and enforcing additional requirements that may be necessary to protect affected property or its employees and any other person entering the site for purposes relating to SUBCONTRACTOR's work.

SUBCONTRACTOR shall strictly comply with applicable laws pertaining work place safety including, without limitation, the Occupational Safety and Health Act of 1970 (84 U.S. Statutes 1590, as amended, and regulations thereunder to the extent applicable and shall abide all health and safety plans, rules or guidance which may be provided by ARCADIS.

To comply with its requirements, SUBCONTRACTOR represents that its Health and Safety Plan for its Work shall include the SUBCONTRACTOR'S compliance (including compliance by SUBCONTRACTOR'S employees, officers, agents, representatives, invitees, and sub-subcontractors) with the ARCADIS Health and Safety Plan, together with any further amendments to such plan particular to the SUBCONTRACTOR'S Work and Site deemed necessary and appropriate by the SUBCONTRACTOR.

SUBCONTRACTOR agrees and understands that ARCADIS claims no responsibility for the use of the HASP and ARCADIS does not represent that the HASP is sufficient to address the Work or Site conditions of the SUBCONTRACTOR. SUBCONTRACTOR shall not hold ARCADIS responsible for any claims arising from the SUBCONTRACTOR'S use of the HASP and agrees to indemnify, defend and hold harmless ARCADIS from any claims for personal injury or property damages arising from or related to the compliance with, utilization or application, or any alleged deficiencies of the HASP. Nothing herein, including the use by SUBCONTRACTOR of the HASP or acknowledgment of the SUBCONTRACTOR'S HASP shall create any duty, obligation, liability, or responsibility of ARCADIS for any act or failure to act in respect to any safety provision of the HASP and SUBCONTRACTOR shall remain solely responsible for the health and safety of SUBCONTRACTOR, its employees or any person entering the SUBCONTRACTOR'S Work Site.

SUBCONTRACTOR shall be responsible for the proper disposal of any hazardous materials or wastes generated by it in the course of the performance of the Work and exacerbation of any pre-existing hazardous materials or wastes.

SP-C6. SITE CONDITIONS.

SUBCONTRACTOR acknowledges that time is of the essence with respect to the performance and completion of its work under this Contract. SUBCONTRACTOR shall adhere to, commence and complete its work in accordance with any schedule incorporated into this Contract, or any schedule submitted by SUBCONTRACTOR or attached hereto; and with respect to any Changes, out of scope or additional work, SUBCONTRACTOR shall expeditiously perform such work according to any Schedule therefor agreed to by the parties. In the event any schedule is incorporated in this Contract or attached to this Contract, SUBCONTRACTOR acknowledges and agrees that such schedule has accounted for all inherent or reasonably anticipated delays, including but not limited to those inherent in obtaining site information, access sufficient labor, supplies, tools, equipment and utilities required for the project work, and SUBCONTRACTOR waives any claim of extra compensation or damages therefor.

Subcontractor represents and warrants that it has had an opportunity to review and/or has carefully examined all necessary drawings, maps, schematics, specifications, governmental restrictions, permits and license requirements,

and all applicable laws, regulations and rules relating to the Work to be done and the Site, it surroundings and local conditions, and has made all investigations based on reasonably available information that are necessary to develop a full understanding of the hazards and difficulties which can be encountered and are likely to impact the cost or schedule to perform the Work. SUBCONTRACTOR is thus familiar with conditions at the Site as are pertinent to or which may affect the Work and has been granted the right to conduct, and has conducted, all investigations it deems appropriate to determine that it can fulfill the requirements of this Contract. Notwithstanding any other provision of this Contract, SUBCONTRACTOR assumes the risk of all conditions, as specified in this Contract, that may affect SUBCONTRACTOR's ability to perform the Work and will, regardless of such conditions, or the expense or difficulty of performing the Work or the negligence, if any, of ARCADIS, with respect to same, fully complete the Work for the stated price without further recourse to ARCADIS. Information on the Site and local conditions at the Site furnished by ARCADIS are not guaranteed by ARCADIS to be accurate, and is furnished only for the convenience of SUBCONTRACTOR.

The discovery of concealed conditions which could not reasonably have been anticipated by the SUBCONTRACTOR from information available to SUBCONTRACTOR may constitute a changed condition, which, to the extent such condition materially affects the cost or schedule to perform the Work, would entitle the SUBCONTRACTOR to a change and an equitable adjustment of the Contract price or time. SUBCONTRACTOR warrants that it shall conduct appropriate investigations to determine, with reasonable certainty, the location of utility and service lines, underground storage systems, and other subsurface structures of any kind before commencement of any drilling, excavation, or other work that has the potential to disturb these structures. SUBCONTRACTOR further warrants that it shall conduct independent field investigations to confirm the location of subsurface structures before commencement of subsurface work and shall not relay exclusively on plot plans or other drawings provided to SUBCONTRACTOR in conducting these investigations.

SP-C7. DELAYS ATTRIBUTABLE TO ARCADIS OR OTHERS.

In the event SUBCONTRACTOR should be delayed in the completion of the Work by reason of any act or omission of ARCADIS or of others, the time within which the Work is to be completed pursuant hereto shall be extended by the period of such delay. Under no circumstances shall SUBCONTRACTOR be entitled to delay damages and SUBCONTRACTOR hereby waives all claims for such damages on all Work.

SP-C8. DAMAGES FOR DELAYS; ADMINISTRATIVE COSTS; ACTUAL DAMAGES.

Time is of the essence of the Contract. In the event the SUBCONTRACTOR fails to achieve Substantial Completion of the Work within the Contract Time or fails to meet any other time requirement or the time limit set forth in the Contract, after due allowance for any extension or extensions of time made in accordance with the provisions herein set forth, the SUBCONTRACTOR shall be liable for damages incurred by ARCADIS as the result of SUBCONTRACTOR's performance failures. ARCADIS shall have the right to deduct said damages from any amount due or that may become due the SUBCONTRACTOR, or to collect such damages from the SUBCONTRACTOR or its surety. "Damages" shall include any sums of money to reimburse ARCADIS for extra costs which ARCADIS may become obligated to pay on other contracts which were delayed or extended because of the SUBCONTRACTOR's failure to complete the Work within the Contract Time. Should ARCADIS incur additional costs because of delays or extensions to other contracts resulting from the SUBCONTRACTOR's failure of timely performance, ARCADIS will assess these extra costs against the SUBCONTRACTOR.

SP-C9. WARRANTIES AND GUARANTEES.

SUBCONTRACTOR guarantees any supplies, equipment, materials or goods furnished as part of or in conjunction with the Work against any and all defects or deficiencies and SUBCONTRACTOR shall promptly remedy all such defects, and/or replace the same. SUBCONTRACTOR shall caused to assigned to ARCADIS all guarantees and warranties from all vendors, subcontractors and suppliers of goods or services who provide machinery, equipment, materials or services for the Work.

Contractor will, without any charge to the ARCADIS, re-perform and/or replace any Work not meeting the forgoing warranties or standards. Any claim to such corrective action or replacement warranty must be in writing and received by SUBCONTRACTOR within twelve months following completion of such Work.

If defect or deficiencies are not corrected in a timely manner, ARCADIS shall be entitled to recover from SUBCONTRACTOR damages for delay in completing corrective action according to time as required or requested by ARCADIS. In addition, ARCADIS may cause the same to be corrected by either its own forces or by others and either deduct costs incurred from any remaining compensation or recover same as actual damages in the amount of the ARCADIS' cost of corrective action (measured by ARCADIS' then existing fee schedule prices and charges).

Contractor shall at all times enforce, or cause to be enforced, strict discipline and good order among workmen employed to perform the Work. Should any disorderly or incompetent person be employed by SUBCONTRACTOR, or by any subcontractor, upon or about any Site, SUBCONTRACTOR shall, upon request of ARCADIS' representative, cause such person to be removed from such Site and not again employed thereon without written permission of ARCADIS.

SP-C10. INSPECTIONS.

ARCADIS reserves the right to inspect, test or evaluate any part of the Work at any time and for any purpose; provided that such inspection or evaluation shall not be deemed acceptance or approval of the Work. Upon inspection, testing or evaluation, if any Work fails, in ARCADIS' judgment to meet the requirements of this Contract, SUBCONTRACTOR shall be obligated at ARCADIS request to undertake action necessary to correct any such deficiency.

SP-C11. REMOVAL OF REFUSE.

SUBCONTRACTOR shall keep every Site free from accumulation of waste materials and rubbish resulting from the Work and at the completion thereof shall clean up after the Work in a manner satisfactory to ARCADIS. SUBCONTRACTOR shall perform disposal of refuse in accordance with all applicable laws and regulations. SUBCONTRACTOR shall clean and remove from every Site all waste which originates from SUBCONTRACTOR'S equipment or other property, and all excess material, equipment, debris and rubbish resulting from the Work. Should SUBCONTRACTOR fail to comply with the provisions of this Paragraph, ARCADIS shall have the right, on two (2) days prior notice to SUBCONTRACTOR, to perform such cleaning or removal of said excess material, equipment, debris, and rubbish, and charge the cost and expense of such removal to SUBCONTRACTOR.

SP-C12. WORKING WITH ASBESTOS CONTAINING MATERIALS AND LEAD-BASED PAINT MATERIALS.

If SUBCONTRACTOR'S Work involves exposure to or handling of asbestos containing materials (ACM) and lead-based paint materials (LBP):

SP-C12.1 General.

SP-C12.1.1 SUBCONTRACTOR is hereby warned of the possible existence of ACM and LBP on the Site in the areas and/or materials in or with which SUBCONTRACTOR must work, and by execution of this Contract acknowledges and confirms that SUBCONTRACTOR has been become familiar with information concerning ACM and LBP.

SP-C12.1.2 SUBCONTRACTOR shall be responsible for taking all steps reasonably necessary and generally accepted in its field to determine the nature and location of the Work on the Project Sites and the general and local conditions that can affect the Work or the cost thereof. Any failure by the SUBCONTRACTOR to do so will not release the SUBCONTRACTOR from the responsibility of having to successfully perform the Work for the Contract Sum without additional expenses to ARCADIS. ARCADIS assumes no responsibility for decisions made by SUBCONTRACTOR based solely on any comments or representations made by any of its officers, agents, or employees

prior to execution of this Agreement unless expressly set forth in this Agreement.

SP-C12.1.3 SUBCONTRACTOR shall ensure that the performance of the Work shall be in conformance with all applicable federal, state, and local laws, regulations, rules, and ordinances in effect or enacted at the time the Work is performed.

SP-C12.1.4 SUBCONTRACTOR will take all reasonably necessary precautions to prevent and mitigate discharges, spills, or releases of hazardous substances or materials into the environment while performing Work under this Agreement at the Project Sites. SUBCONTRACTOR will notify ARCADIS immediately when it knows or suspects a discharge, spill, or release of any hazardous substance or material has occurred or may be imminent.

SP-C12.1.5 SUBCONTRACTOR will promptly and at its expense undertake and complete all corrective and remedial action that may be necessary to remedy any existing or threatened discharges, spills, or releases of hazardous substances caused by SUBCONTRACTOR or any SUBCONTRACTOR employed by SUBCONTRACTOR. Prior to initiating any corrective or remedial action, SUBCONTRACTOR will submit to ARCADIS for review a written plan outlining its proposed actions. If obtaining ARCADIS' review will substantially impede necessary mitigating or emergency measures, SUBCONTRACTOR will initiate these measures immediately and subsequently provide ARCADIS with a written report of all remediation or corrective actions taken. Review by ARCADIS shall not relieve subcontractor of any obligations for proper performance of the work.

SP-C12.1.6 SUBCONTRACTOR will handle all hazardous waste generated at the Project Sites from its activities in accordance with all applicable laws, rules and regulations. Prior to arranging transportation of any hazardous waste from the Project Sites, SUBCONTRACTOR shall provide all required documentation, including completed hazardous waste manifests and any other documents necessary evidence compliance with all applicable laws, rules, and regulations. No hazardous substance or hazardous waste at the Project Sites as the result of SUBCONTRACTOR's or its subcontractors' activities will be left on the Project Sites after completion of the Work, except as specifically provided in this Agreement.

SP-C12.1.7 SUBCONTRACTOR will cause the Project Sites to be free from accumulation of waste materials, rubbish, and other debris resulting from the Work, and at the completion of the Work, will remove all waste materials, rubbish, and debris from and about the Project Sites as well as all tools, construction equipment and machinery, and surplus materials, and will leave the Project Sites in a clean and sightly condition. SUBCONTRACTOR will restore to their original condition those portions of the Project Sites not designated for alteration by this Agreement. All waste materials, rubbish, or any other debris shall be disposed of in waste disposal sites approved for such purposes by pertinent laws, rules, or regulations.

SP-C12.1.8 A complete list of any chemicals to be brought to the Project Sites by SUBCONTRACTOR and copies of the appropriate Material Safety Data Sheets ("MSDS") for those chemicals shall be provided to ARCADIS by SUBCONTRACTOR prior to the introduction of such chemicals at the Project Sites.

SP-C12.1.9 SUBCONTRACTOR assumes all liability and responsibility the proper performance of its work, including for the health and safety of its employees and its subcontractors' employees. In any and all claims against ARCADIS, its directors, officers, or any of its agents, or employees by an employee of SUBCONTRACTOR, its subcontractors, or anyone employed by them, or anyone for whose acts any of them may be liable, the indemnification obligation of this subparagraph shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for SUBCONTRACTOR or its subcontractors under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts. Subcontractor agrees that any client of ARCADIS may enforce the obligations of this section 12.

SP-C12.2 Description.

SP-C12.2.1 SUBCONTRACTOR represents and warrants that all employees and personnel that SUBCONTRACTOR provides to perform any services that involve the identification, disturbance, removal or other direct contact of ACM and LBP are properly trained in the procedures to safely work with, abate, remove and dispose of ACM and LBP and that such employees and personnel are properly certified and licensed to perform all such services relating to the ACM, and LBP.

SP-C12.2.2 SUBCONTRACTOR shall provide all labor, equipment and material required to work with, abate, remove, and dispose of all ACM or LBP in the areas designated in this Agreement to be worked in, abated, and removed.

SP-C12.2c. The specifications and drawings indicate the general layout of the work, and are not intended to show every detail of the work or locations of ACM and LBP. SUBCONTRACTOR shall examine the existing conditions to evaluate the work to be performed. SUBCONTRACTOR is responsible for selecting the means and techniques for accomplishing the work safely and in accordance with all applicable laws and regulations.

SP-C12.3 Quality Assurance.

SP-C12.3.1 SUBCONTRACTOR shall perform all work in compliance, and cause all of its subcontractors to perform all work in compliance, with all applicable laws, ordinances, rules, regulations, and orders of any applicable governmental authority. Without limiting the generality of the foregoing, SUBCONTRACTOR shall comply, and cause all its subcontractors to comply, with the Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) rules and regulations, including General Industry (29 C.F.R. 1910.1001 Appendix A1), Construction Industry (29 C.F.R. 1926.58 Appendix A2) and the National Emissions Standards for Hazardous Air Pollutants (40 C.F.R. Part 61).

SP-C12.3.2 From time to time during progress of the work, ARCADIS may require SUBCONTRACTOR to conduct personal or environmental area monitoring of every work area where ACM or LBP may exist in order to determine the degree of employee exposure to such substances. ARCADIS' right to request such monitoring shall not be construed as relieving the SUBCONTRACTOR of responsibility for maintaining all appropriate surveillance, including monitoring, in order to insure compliance with all applicable laws, ordinances, rules, regulations and order of any applicable governmental authority.

SP-C12.4 Submittals.

SP-C12.4.1 To assure that SUBCONTRACTOR is aware of the potential hazards of ACM and LBP, SUBCONTRACTOR shall submit in writing, before any work is performed, the safety procedures that will be followed in Subcontractor's performance of the work. Notwithstanding any review, subcontractor shall remain responsible for performance of its work in a safe, proper and conforming manner, and any such review is not intended to imply or infer that ARCADIS will be responsible for work performed.

SP-C12.4.2 To the extent required by any applicable rules and regulations, SUBCONTRACTOR shall submit timely and appropriate written notification prior to commencement of the abatement, removal or disturbance of any ACM or LBP, to all applicable governmental agencies, including EPA, OSHA and any appropriate state or local designated agencies. A copy of such notification shall be submitted prior to commencing work.

SP-C12.4.3 SUBCONTRACTOR shall provide copies of all area and personal monitoring data and material tests to determine asbestos content as soon as possible, but not later than 30 days after such data or information has been obtained by SUBCONTRACTOR.

SP-C12.4.4 If this Agreement specifies that SUBCONTRACTOR shall dispose of ACM or LBP, then SUBCONTRACTOR shall provide written documentation, evidencing (1) that all ACM and LBP was delivered to a government approved, licensed and permitted disposal facility, and (2) acceptance by such facility.

SP-C13. SUBCONTRACTOR'S WARRANTIES.

SP-C13.1 SUBCONTRACTOR shall provide all supervision, labor, materials, tools, equipment and subcontracted items necessary for the performance of

services specified in this Agreement and any proposed requisition issued under this Agreement.

SP-C13.2 While performing services under this Agreement, SUBCONTRACTOR shall exercise the degree of care and skill ordinarily exercised under similar circumstances by asbestos abatement or hazardous materials, subcontractors, or members of the environmental engineering, contracting, consulting and testing profession performing the kind of services to be performed hereunder.

SP-C13.3 SUBCONTRACTOR agrees to re-perform and correct at its own expense any work or services performed by it which fails to conform to the standard of care that SUBCONTRACTOR has accepted pursuant to subparagraph (2) above.

SP-C13.4 SUBCONTRACTOR represents and warrants that it holds all permits and licensees necessary to perform the services under this Agreement. SUBCONTRACTOR further represents and warrants that all employees and personnel that SUBCONTRACTOR provides to perform any services that involve the identification, disturbance, removal or other direct contact of ACM or LBP are properly trained in the procedures to safely work with, abate, remove and dispose of ACM and LBP, and that such employees and personnel are properly certified and licensed to perform all such services relating to the ACM and LBP.

SP-C13.5 SUBCONTRACTOR shall provide notice or certificates of all permits, licenses, notifications and insurance required for the work called for in this Agreement. SUBCONTRACTOR shall secure and pay for all such permits, licenses, notifications, and insurance. SUBCONTRACTOR shall conform in all other respects to the provisions and regulations of any general or local building act, ordinance or regulation of any local authority which may be applicable to the work called for under this Agreement and shall indemnify, defend and save ARCADIS harmless against any and all cost, damages, losses, claims or penalties incurred by reason of the failure by SUBCONTRACTOR to perform services in compliance with any such provisions or regulations.

SP-C14. ARCADIS WARRANTIES

SP-C14.1 To the extent ARCADIS has access to information relating to the site where the services are to be performed, ARCADIS shall provide such reasonably available information required for SUBCONTRACTOR to efficiently perform the services. SUBCONTRACTOR shall be responsible for the verification of the information provided by ARCADIS, and ARCADIS shall not be responsible for any errors in such information.

SP-C14.2 ARCADIS will designate a representative who shall be familiar with the services to be provided hereunder to act as a liaison between ARCADIS and SUBCONTRACTOR.

END OF SCHEDULE F - SPECIAL PROVISIONS FOR CONTRACTORS –

SECTION 01035
HEALTH AND SAFETY REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The Work shall be performed in accordance with all applicable federal, state, and local laws, rules, regulations, orders, and standard health and safety requirements described in this Section. If a conflict occurs between the requirements outlined in these Specifications and current federal, state, and local laws, rules, regulations, orders, and standards, the more demanding shall apply.

B. These requirements are in accordance with and incorporate the health and safety guidelines established in the current editions of the Standard Operating Safety Guides, prepared by the USEPA Office of Emergency and Remedial Response, and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, U.S. Department of Health and Human Services.

C. CONTRACTOR shall develop and maintain for the duration of this Contract a safety program that incorporates all applicable provisions of federal, state, and local safety regulations for construction. A component of the Work requires construction in an area that may contain contaminated soils and groundwater. A site-specific CONTRACTOR Health and Safety Plan (CHASP) shall be prepared for the Work. An outline of the minimum requirements for the CHASP is presented in Part 3 of this Section.

D. Submit the CHASP in duplicate to OWNER for approval at least two weeks prior to the start of construction activities.

E. Plan for, and monitor that, all personnel comply with the basic provisions of OSHA Safety and Health Standards (29 CFR 1910) and General Construction Standards (29 CFR 1926). Take all necessary precautions for the safety of and provide the necessary protection to prevent damage, injury, or loss to:

1. All personnel on the Work site;

2. All the Work and all materials and equipment to be incorporated in the Work area, whether on or off the site;

3. Other property at or adjacent to the Work site; and

4. The general public on and off the Work site when hazards are created by CONTRACTOR's operations.

F. Plan for and monitor that all CONTRACTOR (and subcontractor) personnel comply with OSHA Hazardous Waste Operations and Emergency Response, Interim Final Rule (29 CFR 1910.120), as applicable to the specific tasks.

G. CONTRACTOR is solely responsible for the health, safety, and protection of on-site personnel during the performance of the Work.

H. CONTRACTOR's personal protective equipment (PPE) that may be required to perform the Work shall include, but is not limited to, the following:

1. Modified Level D Protection - NOMEX coveralls; chemical-resistant gloves; chemical-resistant safety boots/shoes, or safety boots/shoes with disposable boot covers; safety glasses; and hardhat.

2. Level C Protection - Similar to modified Level D with the addition of a full-face air-purifying respirator.

3. Level B Protection - Supplied Air

Other levels of protection as working conditions warrant.

I. CONTRACTOR shall provide a Health and Safety Officer to implement, monitor, and enforce the CHASP. The Health and Safety Officer shall have a sound working knowledge of federal and state occupational safety and health regulations.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.01 GENERAL

A. The CHASP shall include the following information as a minimum:

1. Introduction of project scope of Work and project personnel with respect to health and safety hazards;

2. Medical surveillance;

3. CONTRACTOR Health and Safety Officer;

4. Employee training;

5. Personal protection requirements and methods;

6. Personnel and equipment decontamination;

7. Emergency provisions;

8. Site security and control;

9. Recordkeeping and reporting;

10. Hazard analysis;

11. Action levels; and

12. Emergency procedures.

3.02 INTRODUCTION OF PROJECT SCOPE OF WORK AND PERSONNEL

A. The introduction to the CHASP shall contain a brief description of the Work site, including a general Site background and the potential health and safety hazards associated with the Work. Any unusual Site features shall also be addressed. In addition, the CHASP shall identify the Project Manager and the Health and Safety Officer assigned to the Work.

3.03 CONTRACTOR HEALTH AND SAFETY OFFICER

A. Provide a Health and Safety Officer, who will direct the development of the CHASP, train employees as required, and provide overall management of CONTRACTOR's health and safety requirements covered in the CHASP.

B. The Health and Safety Officer shall be responsible for ongoing safety and health surveillance during the Work and shall have authority to act on all health and safety measures and to establish new controls as needed. The qualifications and experience of CONTRACTOR's Health and Safety Officer assigned to the Work site shall be included in the CHASP and will be subject to review by OWNER for acceptance.

C. The Health and Safety Officer shall conduct periodic inspections as necessary to determine the overall effectiveness of the CHASP. Any deficiencies shall be submitted to OWNER in writing and the CHASP will be modified accordingly. Should the deficiencies be of a nature to

present an immediate danger, the Health and Safety Officer shall stop all Work in the area and initiate changes as required immediately.

3.04 EMPLOYEE TRAINING

A. CONTRACTOR warrants that all personnel involved with excavation and/or handling of on-site soils or hazardous wastes shall be fully qualified and have successfully completed an occupational hazards training program that exceeds or meets the requirements of OSHA 1910.120 and that each person to be assigned to such Work has successfully completed an approved training program prior to entering the Work Site. The above certifications shall be available upon request prior to excavation activities.

B. The Health and Safety Officer shall be responsible for initially training all personnel entering the Site in order to make them aware of the site-specific hazards and to explain emergency procedures and the use of protective gear required.

C. The Health and Safety Officer shall provide periodic follow-up training to on-site Workers as necessary and prior to each change in operations. This training shall be site- and task-specific and shall include basic training and special training. Basic training shall be conducted if special problems have been observed (improper use of respirators, protective clothing, etc.). Special training shall be conducted if unanticipated problems occur on the Site and when a change of operation occurs. The Health and Safety Officer shall also provide initial training to replacement personnel.

3.05 WORK ZONE AREAS

A. CONTRACTOR shall verify that all personnel have the proper personal protective equipment for the Work.

B. All people performing Work shall wear prescribed levels of protection.

C. A contamination reduction zone shall be established by CONTRACTOR to prevent the transfer of contaminants on people, equipment, or in the air to unregulated areas. This shall be accomplished, as required, through a combination of decontamination, minimum distances from active Work areas, and Work function. The equipment decontamination facility and areas designated for personnel decontamination and emergency equipment shall be located in this zone.

D. CONTRACTOR shall provide contained storage and disposal for used disposable outerwear. CONTRACTOR shall provide temporary containment for the water collected in the decontamination pad sump for subsequent transport and off-site disposal by CONTRACTOR.

E. A support zone is defined as an area outside the zone contamination does or could occur. The support zone shall be clearly delineated at the Site and shall be secured against active or passive contamination from the Work. The function of the area includes:

1. An entry area for personnel, material, and equipment to the area of Work;

2. An exit area for decontaminated personnel, materials, and equipment from the Work area;

3. The housing of site services; and

4. A storage area for clean safety and construction equipment and materials.

F. No equipment or personnel shall be permitted to enter the support zone without passing through the personnel or equipment decontamination station located within the contamination reduction zone.

3.06 PERSONAL PROTECTION REQUIREMENTS AND METHODS

A. A description of on-site levels of protection and the personal protective equipment required for each level shall be included in the CHASP. Methods of monitoring the appropriate level of protection shall also be included.

B. Include in the CHASP an inventory of personal protective equipment that will be supplied on-site and indicate the methods of updating the inventory and resupplying the necessary equipment during construction.

C. Equipment for personal protection is described in publications such as the Interim Standard Operating Safety Guides (USEPA - November 1984) and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH/OSHA/USCG/ USEPA, October 1985).

D. Define the appropriate level of protection to be used for each Work activity at this Site in the CHASP.

E. Certify that all CONTRACTOR, subcontractor, or service personnel entering the construction zone or contamination reduction zone for the purpose of the Work; for health, safety, security, or administrative purposes; for maintenance; or for any other Site-related function have received medical examinations and safety training provided by or for CONTRACTOR.

3.07 PERSONNEL AND EQUIPMENT DECONTAMINATION

A. Define in the CHASP proper methods of personnel and equipment decontamination. This shall include decontamination facilities layout, proper collection of decontamination generated wastes for disposal by CONTRACTOR, and facilities and equipment necessary for decontamination.

B. The personnel decontamination unit shall be positioned at the entrance of the contamination reduction zone with a step-off area just inside the contamination reduction zone. All personnel entering or leaving the contamination reduction zone shall pass through this area to don or doff their protective equipment.

C. Prior to start of the Work, CONTRACTOR shall provide to OWNER for review and approval proposed methods of personal protection and decontamination procedures pursuant to the Work.

D. Provide in the CHASP details explaining daily maintenance of safety equipment, including respirators, in accordance with appropriate OSHA standards (29 CFR 1910.134).

E. All disposable clothing and other discarded materials shall be placed in containers for temporary storage in an area designated by OWNER. Labels identifying the contents of waste containers shall be affixed to containers of scrap, waste, debris, and clothing. Transportation and disposal of nonhazardous garbage generated during construction activities in an approved manner, shall be provided by CONTRACTOR.

3.08 EMERGENCY PROVISIONS

A. Develop as part of the CHASP a response plan for on-site and off-site emergencies which shall comply with 29 CFR 1910.120 and address, as a minimum, the following:

1. Pre-emergency planning;

2. Personnel roles, lines of authority, training, and communications;

3. Emergency recognition and prevention;

4. Site security and control;

5. Evacuation routes and procedures;

6. Emergency decontamination procedures;

7. Emergency medical treatment and first aid;

8. Emergency alerting and response procedures; and

9. Personal protective equipment and emergency equipment.

3.09 SITE SECURITY AND CONTROL

A. The CHASP shall describe methods for maintaining site security and control during the implementation of the required Work. As a minimum, the requirements shall include procedures for controlling and tracking personnel in each specific Work area and provisions for properly posting caution signs at and near the various Work zones defined above.

3.10 RECORDKEEPING AND REPORTING

A. Maintain logs and reports covering implementation of the CHASP and present the format of these logs and reports as part of the CHASP. The format of the reports shall be developed by CONTRACTOR and shall include, but not be limited to, inspection logs and weekly reports.

3.11 PHYSICAL HAZARDS

A. Excavation Work shall conform to OSHA requirements as covered in 29 CFR 1926.650. Before excavation Work begins, underground utilities such as electric, gas, water, and sewer mains shall be located and marked. Oxygen levels shall be monitored within trench excavation and confined spaces. In addition, CONTRACTOR shall protect all adjacent equipment and premises in and around the area.

B. Include in the CHASP the appropriate measures to be taken to limit the release of dust to the ambient air during excavation, transfer, and temporary storage of soils. Control dust levels and thus limit the concentration of airborne particulates. If drums are used, they shall be equipped with locking lids. Truck beds shall be covered and secured with tarps.

C. The CHASP shall address any physical hazard that may expose a Worker to injury. List the hazards anticipated and the program for handling each potential hazard.

3.12 ACTION LEVELS

A. Action levels for personnel protection and emergency action shall be defined and included in the CHASP.

3.13 EMERGENCY PROCEDURES

A. All accidents and unusual events shall be dealt with in a manner so as to minimize continued health risk of site personnel and the general public.

B. Include in the CHASP a list of emergency equipment and the location of the equipment at the site. As a minimum, the following equipment shall be available at the Work site and maintained fully stocked:

1. "Industrial" first aid kit supplies approved by a consulting physician to comply with CFR 1926.50(d)(i);

2. A class ABC type portable fire extinguisher with a 2A:10BC rating;

3. (Portable) emergency eyewash station (three [3] units); and

4. (Portable) emergency shower (a minimum of one [1] unit).

C. The names and phone numbers of all personnel and agencies that could be involved in emergency response shall be established by the Health and Safety Officer and will be posted at several prominent locations at the site. As a minimum, the following contacts shall be included on this list:

1. Fire department;

2. Police;

3. Ambulance; and

4. Hospital.

D. A map showing the location of the hospital and the preferred route shall be included in the CHASP. Prior to the start of construction, the emergency personnel listed above shall be contacted and briefed on the planned Work and the potential hazards that may be encountered. In addition, the route to the hospital shall be checked and traveled at least once by the Health and Safety Officer and OWNER to verify its accuracy.

END OF SECTION

SECTION 01150
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 GENERAL

A. Payment for Work performed under this Contract will be made as set forth herein under the individual Base Bid Items contained within the Base Bid Form.

B. If a Contract is awarded on a combination of Items, other than the total, the Work performed shall be complete and operable with each Item standing alone and in conformance with all provisions of the Contract Documents.

C. There shall be no Work or cost added to an Item which has been included under any other Item.

D. The Work included under each Item shall consist of furnishing and installing the materials and/or equipment, complete, as enumerated below. Progress Payment for each Item will be made at the Lump Sum or Fixed Unit Price in accordance with the provisions of Paragraph 1.02 of this Section.

E. CONTRACTOR shall include in the price Bid for each applicable Bid Item listed in the schedule of prices the cost of coordination, labor, health and safety measures, including equipment and decontamination, materials, tools and equipment, sheeting and shoring in trenches and pits, soil, material and equipment testing, repairs to the roads due to construction damage, dewatering, protection of adjacent work, maintenance of traffic, displacement, replacement and/or repair of damage to any existing utility and/or structure by CONTRACTOR activity, code inspections, quality assurance and quality control and all other cost incurred as necessary to provide, complete in-place, all Work required to complete each Item in the Bid Form.

F. Work Items included with each schedule of prices are described in the following paragraphs.

G. CONTRACTOR shall bid items as provided during the site visit. Any deviations from the Base Bid shall be broken out and attached as a separate item.

1.02 BASE BID

1. Mobilization - Demobilization

   a. Mobilization shall consist of the furnishing of all Work, materials, and operations required for the assembling and setting up for the Project, including, but not limited to, initial movement of personnel to the Project site; coordination with utility companies as necessary to complete the Work if required by the state or local regulations; moving on and off site all construction equipment, hauling units, hoisting equipment, compressors, and tools required to complete the Work; all other Work and operations which must be performed prior to beginning Work on compensable items of Work at the Project site; and the cost of required insurance and any other initial expenses required. Mobilization shall also consist of, but not be limited to, removal of the furnishings of all Work, material, and equipment required for the assembling and setting up for the Project, including cleanup and restoration of Project Site as required.

   Payment will be made at contract unit price under:

Item 1	Mobilization - Demobilization	Per Lump Sum

2. Administration

   a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job.

   b. Preparation of a Contractor Health and Safety Plan (CHASP) and Emergency Response Plan as required by Section 01035. The CHASP shall cover confined space entry and work procedures.

   c. Obtain a performance bond for the amount of the contracted services.

   d. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

   Payment will be made at the contract unit price under:

Item 2	Administration	Per Lump Sum

3. Tank Cleaning in the Bleach Plant

   a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the Bleach Plant presented in Exhibit B.

   b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

   c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

   d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

   e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

   f. A clean tank shall be defined as one that has no solid or liquid residue.

   g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

   Payment will be made at the contract unit price under:

Item 3	Tank Cleaning in the Bleach Plant	Per Lump Sum

4. Tank Cleaning at the Foster-Wheeler (F-W) Boiler

   a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the F-W Boiler presented in Exhibit B.

   b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

   c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 4	Tank Cleaning at the Foster-Wheeler (F-W) Boiler	Per Lump Sum

5. Tank Cleaning at the North Plant Cooling Tower

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks at the North Plant Cooling Tower presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 5	Tank Cleaning at the North Plant Cooling Tower	Per Lump Sum

6. Tank Cleaning of the Fuel Tanks

   a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks of the Fuel Tanks presented in Exhibit B.

   b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

   c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

   d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

   e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

   f. A clean tank shall be defined as one that has no solid or liquid residue.

   g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

   Payment will be made at the contract unit price under:

Item 6	Tank Cleaning of the Fuel Tanks	Per Lump Sum

7. Tank Cleaning of the Crystallizer UST

   a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the Crystallizer UST presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 7	Tank Cleaning of the Crystallizer UST	Per Lump Sum

8. Tank Cleaning in the C-10 Area

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the C-10 Area presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 8	Tank Cleaning in the C-10 Area	Per Lump Sum

9. Tank Cleaning in the C-15 Area

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the C-15 Area presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 9	Tank Cleaning in the C-15 Area	Per Lump Sum

10. Tank Cleaning in the KCARB Plant

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the KCARB Plant presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 10	Tank Cleaning in the KCARB Plant	Per Lump Sum

11. Tank Cleaning at the Nebraska Boiler

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks at the Nebraska Boiler presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 11	Tank Cleaning at the Nebraska Boiler	Per Lump Sum

12. Tank Cleaning in the Nitric Acid Plant

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the Nitric Acid Plant presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 12	Tank Cleaning in the Nitric Acid Plant	Per Lump Sum

13. Tank Cleaning at the B Cooling Tower

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks at the B Cooling Tower presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 13	Tank Cleaning at the B Cooling Tower	Per Lump Sum

14. Tank Cleaning in the Multicote Tank Farm

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the Multicote Tank Farm presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 14	Tank Cleaning in the Multicote Tank Farm	Per Lump Sum

15. Tank Cleaning at the Carbon Vessels

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks at the Carbon Vessels presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 15	Tank Cleaning at the Carbon Vessels	Per Lump Sum

16. Tank Cleaning in the MAP/MKP Plant

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the tanks in the MAP/MKP Plant presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 16	Tank Cleaning in the MAP/MKP Plant	Per Lump Sum

17. Tank Cleaning of the Freon Tanks

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of cleaning the Freon Tanks presented in Exhibit B.

b. Tank cleaning shall be conducted in accordance with the CHASP and applicable state and federal regulations.

c. Solids shall be removed from each tank and containerized in a CONTRACTOR provided roll-off dumpster.

d. Liquids shall be removed from each tank and containerized in a CONTRACTOR provided frac tank.

e. After removal of the tank contents, each tank shall be triple rinsed. The generated wash water shall be collected and disposed of in the CONTRACTOR provided frac tank.

f. A clean tank shall be defined as one that has no solid or liquid residue.

g. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 17	Tank Cleaning of the Freon Tanks	Per Lump Sum

18. a.) On-Site Storage of Solid Non-Hazardous Material and b.) Transportation and Disposal of Solid Non-Hazardous Material

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of the disposal of the contents of the tanks.

b. Provide a roll-off dumpster(s) for the containerization of non-hazardous solidified material removed from on-site tanks. Dumpster to remain on-site until disposal is authorized by ARCADIS.

c. Provide for transportation and disposal of the dumpster contents at a permitted non-hazardous disposal facility.

d. In the event that disposal of any substance is conducted off-site, documentation must be provided to ARCADIS for each shipment accepted by each permitted facility.

e. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 18a	On-Site Storage of Solid Non-Hazardous Material	Per Day
Item 18b	Transportation and Disposal of Solid Non-Hazardous Material	Per Each

19. a.) On-Site Storage of Solid Hazardous Material and b.) Transportation and Disposal of Solid Hazardous Material

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of the disposal of the contents of the tanks.

b. Provide a roll-off dumpster(s) for the containerization of hazardous solidified material removed from on-site tanks. Dumpster to remain on-site until disposal is authorized by ARCADIS.

c. Provide for transportation and disposal of the dumpster contents at a permitted hazardous disposal facility.

d. In the event that disposal of any substance is conducted off-site, documentation must be provided to ARCADIS for each shipment accepted by each permitted facility.

e. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 19a	On-Site Storage of Solid	Per Day

Hazardous Material

Item 19b	Transportation and Disposal of Solid Hazardous Material	Per Each

20. a.) On-Site Storage of Liquid Non-Hazardous Material and b.) Transportation and Disposal of Liquid Non-Hazardous Material

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of the disposal of the contents of the tanks.

b. Provide a frac tank(s) for the containerization of non-hazardous liquid material removed from on-site tanks, including wash water. Frac tank to remain on-site until disposal is authorized by ARCADIS.

c. Provide for transportation and disposal of the frac tank contents at a permitted non-hazardous disposal facility.

d. Disposal of wash water may be conducted by routing the wash water through CONTRACTOR provided activated carbon units prior to discharge to the storm water ponds on site. The pH of any discharges to the on-site treatment pond must be between the State of Mississippi pH storm water criteria limits of 6.0 and 9.0 standard units, and below State of Mississippi Tier I TRG levels. Any adjustments to pH to remove a hazardous characteristic must be conducted in a container(s) that meets federal interim tank standards.

e. In the event that disposal of any substance is conducted off-site, documentation must be provided to ARCADIS for each shipment accepted by each permitted facility.

f. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 20a	On-Site Storage of Liquid Non-Hazardous Material	Per Day
Item 20b	Transportation and Disposal of Liquid Non-Hazardous Material	Per Each

21. a.) On-Site Storage of Liquid Hazardous Material and b.) Transportation and Disposal of Liquid Hazardous Material

a. Work under this item should include, but is not limited to, all necessary supplies, equipment, and overhead materials needed to complete the job of the disposal of the contents of the tanks.

b. Provide a frac tank(s) for the containerization of hazardous liquid material removed from on-site tanks, including wash water. Frac tank to remain on-site until disposal is authorized by ARCADIS.

c. Provide for transportation and disposal of the frac tank contents at a permitted hazardous disposal facility.

d. Disposal of wash water may be conducted by routing the wash water through CONTRACTOR provided activated carbon units prior to discharge to the storm water ponds on site. The pH of any discharges to the on-site treatment pond must be between the State of Mississippi pH storm water criteria limits of 6.0 and 9.0 standard units, and below State of Mississippi Tier I TRG levels. Any adjustments to pH to remove a hazardous characteristic must be conducted in a container(s) that meets federal interim tank standards.

e. In the event that disposal of any substance is conducted off-site, documentation must be provided to ARCADIS for each shipment accepted by each permitted facility.

f. Price and payment shall be considered full compensation for all labor, materials, tools, equipment, services, and other items not mentioned previously to perform all operations specified herein.

Payment will be made at the contract unit price under:

Item 21a	On-Site Storage of Liquid Hazardous Material	Per Day
Item 21b	Transportation and Disposal of Liquid Hazardous Material	Per Each

1.03 PAYMENT PROCEDURE

A. Breakdown of Lump Sum and Fixed Unit Price Items:

1. Within 3 days after the OWNER issues a Notice of Award of Agreement, the CONTRACTOR shall submit to the ENGINEER, in a form approved by the ENGINEER, a complete, detailed breakdown of all lump sum and fixed unit price items awarded. The detailed breakdown shall include quantities with all material and labor costs for individual Work Items required to complete the lump sum and fixed unit price item. Quantities estimated by the CONTRACTOR are for the purpose of providing a basis for realistic progress payments consistent with the actual performance of the Work. The job breakdown will be revised by the CONTRACTOR if the ENGINEER so requests.

2. Payments will be made in accordance with the GENERAL CONDITIONS. Submission for payment shall be made to the ENGINEER. However, all payment requests will be made on the basis of the approved breakdown and accompanied by all supporting documentation required herein.

   a. The CONTRACTOR may request payment for specified items of material and equipment which have been purchased for incorporation into the Project provided these Items have been previously approved for use in accordance with the Contract Documents and provided the ENGINEER agrees to the request of the CONTRACTOR.

   b. Payment requests for materials or equipment purchased may be honored for materials or equipment which are not on site but stored in a manner satisfactory to the ENGINEER. Payments will be made for specific Items of material and equipment provided an invoice and delivery ticket are submitted with the payment request which indicates clearly the materials and equipment to be used for the Project. The following periodic payment request must include a receipted invoice certified by the vendor as to payment received for the specified item which had been previously paid for. Unless the required certified invoice is received with the following request for periodic payment, money previously paid will be deducted from any money due the CONTRACTOR without any penalty of any kind to the OWNER.

3. No payment shall be made for miscellaneous materials or equipment that are provided in a routine manner as Work progresses. Such items are, and are not limited to, fuel, tools, dust preventive materials, personal protective equipment and supplies, protective devices such as tarps, etc., CONTRACTOR's equipment rental, operating, or repair costs, lumber, stone, gravel, sand, or any material that is consumed as Work progresses.

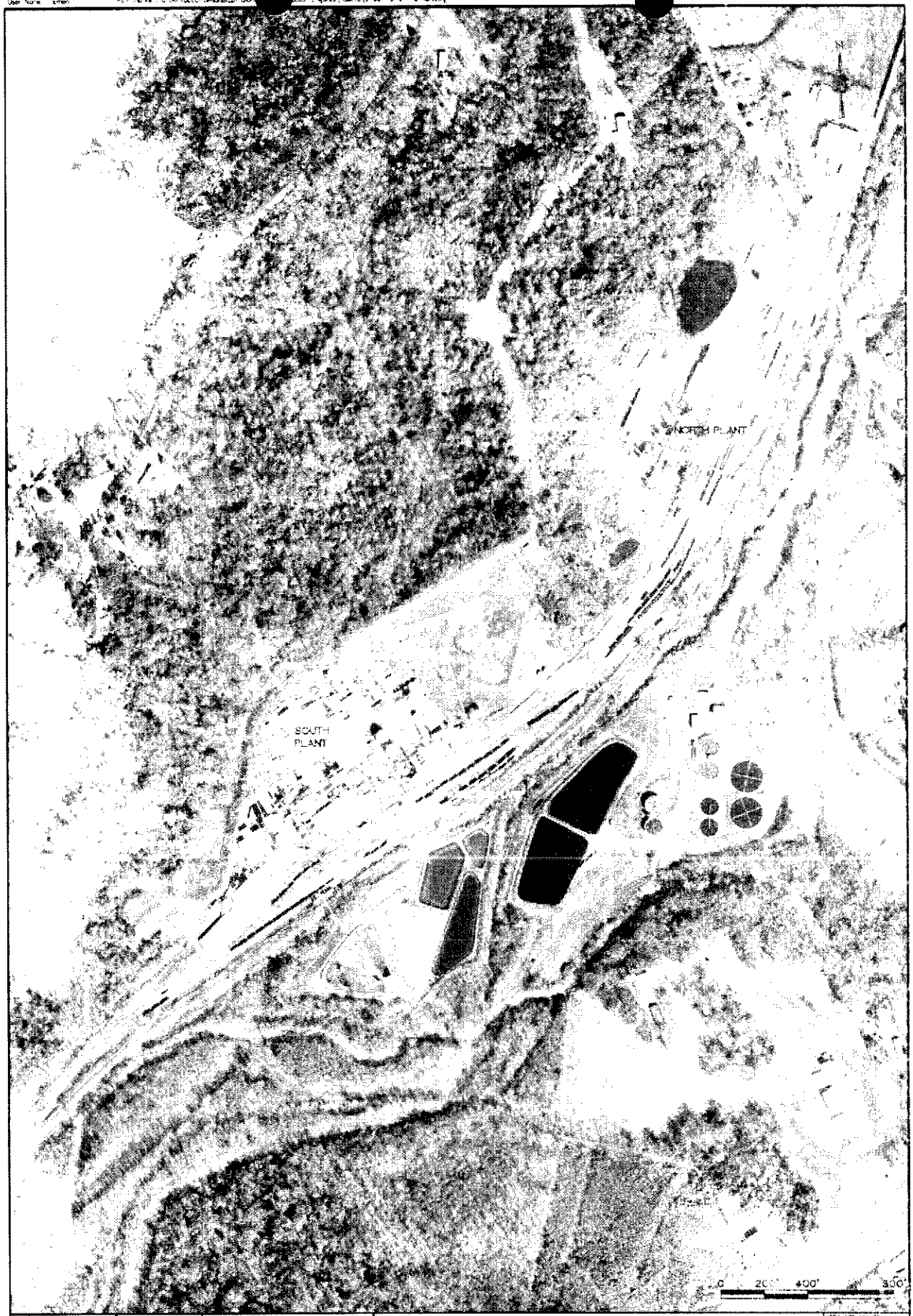
PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION



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	PROJECT MANAGER: DRE	DEPARTMENT MANAGER: DRE	
	DATE: MAY 2007	TASK/PHASE NUMBER: 3019	

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TANK CLEANING AREAS

VICKSBURG CHEMICAL COMPANY SITE

PROJECT NUMBER: [illegible]

DRAWING NUMBER: 1

Exhibit B. Tank Inventory, Baseline Sampling Report, Former Vicksburg Chemical Company, Vicksburg, Mississippi. (Revised 5/24/07)

Plant	Area	Old Tank Name/#	New Tank Name/#	EPA (1) Sample ID#	Mat. of Const.	Contents	Total Capacity	EPA Start Level	Diameter in Feet	Circum. in Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	EPA Comments	Contents Sampled (Y/N)	Hazardous/Non-Hazardous by Waste Characteristic	Representative Sample	Sample Type	pH	Amount of Material Present (estimate)	Estimated Volume (gallons)	ARCADIS Field Comments
BLEACH PLANT																									
[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
North Plant	Bleach	T-29				Bleach or Caustic		Caustic			16'8"	4'6"						Yes	Non-Hazardous	Tank sampled	Grab	11			(Sample T-29 collected 4/23/07)
[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
North Plant	Bleach	T-28				Bleach or Caustic		Caustic	9'	9'6"	4'6"							No	Non-Hazardous	T-28					Empty
South Plant					C.S.	45% Caustic		Residue									Bleach Plant - no number per Bruce	No	Hazardous for pH	T-26					Solid Residual
F-W BOILER																									
North Plant	F-W Blr.				C.S.	Hot Water Boiler Feed	2,000	400				X		N			Refinery - DP84/03	No	Hazardous for pH	North Side Clarifier Effluent					
North Plant	F-W Blr.				PE	Hot Water Boiler Feed	500	350				X		N			Refinery - M-03	No	Hazardous for pH	North Side Clarifier Effluent					
NORTH PLANT COOLING TOWER																									
[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
North Plant	N. Cool Tower				PE	Boil-CT Feed	1,667	480			16'0"		X	N			Refinery - DP84/03	No	Hazardous for pH	North Side Clarifier Effluent					
North Plant	N. Cool Tower				PE	Boil-CT Feed	500	65			12'6"		X	N			Refinery - M-03	No	Hazardous for pH	North Side Clarifier Effluent					
North Plant	N. Cool Tower				PE	Boil-CT Feed	500	350					X	N			Refinery - M-03	No	Hazardous for pH	North Side Clarifier Effluent					
North Plant	N. Cool Tower				PE	Boil-CT Feed	500	350					X	N			Centrisorb ASP 3100	No	Hazardous for pH	4th Sample					
[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FUEL TANKS																									
[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Plant	N. Pit East				C.S.	Diesel or Gasoline	3,000	9'					X		T			No							
CRYSTALLIZER UST																									
North Plant	Crystallizer UST	V-35		37	C.S.	Caustic & Water	20,000	Full					X				Unit #35 - Crystallizer, formerly in use at methanol tank farm	Yes	Hazardous for Corrosivity & pH	Tank sampled	Grab	8.89	?			Strong acid. Stained (A-29 collected 4/24/07)
C-10 AREA																									
North Plant	C-10 Area	T-208			Filter	Treated Cell effluent	10,000	2.5%	12'	37'	12'11	X		N	Approx. #		Brown sludge from C-10 unit	Yes	Hazardous for pH	Tank sampled	Grab	12.7	?		Sampled immediately after T-208 (Sample T-208 collected 4/24/07)
North Plant	C-10 Area	T-209			Filter	Treated Cell effluent	10,000	2.5%	12'	37'	12'11	X		N	Approx. #		Brown sludge from C-10 unit	Yes	Hazardous for pH	Tank sampled	Grab	12.7	?		Sampled immediately after T-209 (Sample T-209 collected 4/24/07)
North (formerly South)	C-10 Area	T-195			C.S. - gasoline	10% NaOH	10,000	8.5	12'	37'0"	12'	X		N	Approx. #		Brown sludge from C-10 unit	No	Hazardous for Reactive Sulfide	T-195				Dark	Other	Tank - Old T-195 is empty. New T-195 is full. Other oil visibly found from line running out of this tank. Open top.
North (formerly South)	C-10 Area	T-196			C.S. - gasoline	10% NaOH	5,000	3.5	10'	31'0"	10'	X		N	Approx. #		Brown sludge from C-10 unit	Yes	Hazardous for Reactive Sulfide	Tank sampled	Grab	12	Dark	Other	Other - Other visible from line running out of this tank. Open top. (Sample T-196 collected 4/24/07)
North (Other)	C-10 Area	T-27			C.S. - gasoline	NaOH	5,000	Residue				X		N			This vessel taken in service	No							Not on grounds per Todd.
C-15 AREA																									
North Plant	C-15 Area	C-15				5% Acid Fish Mix		Residue									Low maximum for Acid Fertilizer Mix	Yes	Hazardous for Corrosivity, Reactive Sulfide, & pH	Tank sampled	Grab	0.69	10'		Other - Other visible from line running out of this tank. Open top. (Sample C-15 collected 4/24/07)
KCARB PLANT																									
North (formerly South)	K-Carb					K-Carb		Residue										No	Non-Hazardous	K-CARB					Tank vacant to North Plant.
North (formerly South)	K-carb					K-Carb		Residue										Yes	Non-Hazardous	Tank sampled		12.4	S.G.		Inorganic liquid. Tank vacant to north plant. (Sample K-Carb collected 4/24/07)
North (formerly South)	K-carb					K-Carb & Water		Residue										No	Non-Hazardous	K-CARB					Tank vacant to North Plant.
North (formerly South)	K-carb (bottom original inventory)				C.S.	Carbon-ate			8'			60.0					Non-haz. single use F_fall synthetic resin	Yes	Non-Hazardous	Tank sampled	solid	8.55			Solid. Sample K-CARB RESIN ZONE collected 4/24/07
South Plant	K-Carb (not on original inventory)				C.S.	Carbon-ate K2CO3			3.0			60.0					Ion exchange resin Fall of operation team	No	Non-Hazardous	KCL, NH4CL, RESIN ZONE					Solid
South Plant	K-carb	T-561			FRP	KHCO3 NH4OH	19,775	Residue	12'		22.8	X		Y			Weak liquor - empty when other	Yes	Non-Hazardous	Tank sampled	Grab	11.3	10"	10	Liquid. Valve element some residue. Liquid 1/8" to 1/4" on bottom. (Sample T-561 collected 4/23/07)
South Plant	East K-carb	T-561			C.S.	NaOH	18,000	42.8	14'			X		N			Effluent Treatment Chemicals	Yes	Non-Hazardous	Tank sampled	Grab	11.3	10"	400	Recovered product, but tank not cleaned. Samples taken from north and of valve. Black liquids. Other oil on bottom. (Sample T-561 collected 4/23/07)
South Plant	East K-carb	T-562	15		C.S.	NaOH	15,000	64"	14'			X		N			Effluent Treatment Chemicals	No	Non-Hazardous	T-561			10"	500	Recovered product, but tank not cleaned

Exhibit B Tank Inventory, Baseline Sampling Report, Former Vicksburg Chemical Company, Vicksburg, Mississippi. (Revised 5/24/07)

Plant	Area	Old Tank Name/#	New Tank Name/#	EPA (1) Sample ID#	Mat. of Const.	Contents	Total Capacity	EPA Start Level	Diameter in Feet	Circum. in Feet	Height / Length in Feet	Gallons	Tons	Spec. Cont.	Volume Remaining	Disposition	EPA Comments	Contents Sampled (Y/N)	Hazardous/Non-Hazardous by Waste Characteristic	Representative Sample	Sample Type	pH	Amount of Material Present (estimate)	Estimated Volume (gallons)	ARCADIS Field Comments
South Plant	K-carb	T-515				Lime & Water		50%	10'								Horizontal Mix Tank	Yes	Non-Hazardous	Tank sampled		5.02			Mixed. No volume comment. (Sample T-515 collected 3/6/07)
South Plant	K-carb	T-540			FRP	NH4Cl	19,863	95%	14'		16.75'	X		Y			Ammonium Chloride & water	Yes	Non Hazardous	Tank sampled		5.25	3.4'	38,8	Sampled liquids. Clear to murky liquids below valves. (Sample T-540 collected 4/23/07)
South Plant	K-carb	T-541			FRP	NH4Cl	5,483	Residue	10'		8.8'	X		Y	Residue		Empty w/residue	Yes	Non Hazardous	Tank sampled			3.4'	196	
South Plant	K-carb	T-512				Displaced Water		Residue	12'									Yes	Hazardous for Reactive Sulfide	Tank sampled	solid	6.50	1'8		18 inch residual solids on bottom. Dry beads, brown (Sample T-512 collected 4/23/07)
South Plant	K-Carb	T-516						Residue		25'5"								Yes	Non-Hazardous	Tank sampled	solid	7.1			Solids half way down cone. Sampled through plugged access holes at base. Dry to damp gray powder material, very fine solids. (Sample T-516 collected 4/23/07)
South Plant	K-carb	T-542				Calcium Carb & Thick		75%	7'								MAP or MKP	Yes	Non-Hazardous	Tank sampled	sludge	5.86			Sampled sludge. (Sample T-542 collected 3/8/07)
South Plant	K-carb	T-543				Wastewater		Residue	5'									Yes	Non Hazardous	Tank sampled	sludge	7.09	Yes	<5 gallons	Sampled sludge. (Sample T-543 collected 4/23/07)
South Plant	K-carb	T-550				Wastewater		Residue	4'								Neutralization tank - pH 10	No	Non-Hazardous	T-543			Over		Not sampled. Manhole lid is closed. Opened a small valve flange - ran liquids. Dusting of white powered
South Plant	K-carb	T-549				Water from Sumo		Residue	12'								Contained treated effluent water	Yes	Non-Hazardous	Tank sampled	solid	10.4	2'	160	Sampled solids. Dry white powder. (Sample T-549 collected 4/23/07)
South Plant	K-carb	T-552				Spent Wash Water		Residue	14'								pH-6	Yes	Hazardous for Reactive Sulfide	Tank sampled	solid	6.3*	10'	956	10" of solids (beads) on bottom. Valves open no liquids. (Sample T-552 collected 4/23/07)
South Plant	East K-carb	T-563			C.S.	H2SO4	15,000	<2.6	10'				X		N		Effluent Treatment Chemicals	No	Treat as needing pH adjustment				Some liquid		Small amount of sludge residue. Not enough to sample
South Plant	K-carb	T-505				Slaked Lime Surge			11.66.6	15'								No							Empty
South Plant	K-carb	T-508				Pulse Water North and South		Residue	6'									No							Empty. No liquids. Valves open and empty. Not sampled
South Plant	K-Carb	T-508N				Pulse Water North		Residue	6'								Neutralization tank - Empty	No							Empty
South Plant	K-Carb	T-508S				Pulse Water South		Residue	6'								Neutralization tank - Empty	No							Empty
South Plant	K-carb	T-507			FRP	NH4CO3	19,775	0.8	12'		22.8	X		Y			Ammonium carb feed - empty not washed	No					1'8"		Empty - Not sampled. Dry white powder dustings on the bottom. Valves open. Nothing observed. Open manhole on southwest side
South Plant	K-carb	T-509				Resin Recovery		Residue	6'									No							Empty - No liquids. Valves open and empty. Not sampled
South Plant	K-Carb	C-516				Amm. Carb Absorber		Residue	2'5/8"								Ammonium Carbonate Absorber Empty	No							Empty. All valves open. No liquid or solids observed. Not sampled. Can't get into the tank
South Plant	K-carb	T-553				Process Water		Residue	12'								Process Water Return (Condensate)	No							Not sampled dry. Wand bottom dry. Valve at bottom of tank open
South Plant	West K-carb	T-566			C.S.	KOH	17,000	Residue		25'2"			X		N			No							Could not find
NEBRASKA BOILER																									
South Plant	Neb. Br.				C.S.	Betz Boiler Treat	560	Residue		46'.0D	72'.1	X		N				Yes	Non Hazardous	Tank sampled		2.44			(Sample SOUTH-BETZ COMP-01 collected 3/9/07)
South Plant	Neb. Br.				PE	Betz Boiler Treat	500	Residue		46'.0D	60'.1	X		N				No	Non Hazardous	SOUTH-BETZ COMP-01		7			
South Plant	Boiler	T-11				Demin. Water		Residue	15'	47'	19'						Empty	No							Empty
South Plant	Boiler	V-147				Demin. Water		Residue									Empty - Drain open	No							Empty
South Plant	Boiler	V-145				Demin. Water		Residue									Empty - Drain open	No							Empty
South Plant	Boiler	V-145W				Demin. Water		Residue									Empty - Drain open	No							Empty
South Plant	Boiler	V-146				Demin. Water		Residue									Empty - Drain open	No							Empty
South Plant	Boiler	V-146W				Demin. Water		Residue									Empty - Drain open	No							Empty
South Plant	Neb. Br.	T-2304			C.S.	H2SO4	1,785			35'.4"			X		N		Empty, not washed	No							Empty
NITRIC ACID PLANT																									
South Plant	South Acid Pl.				PE	Betz Boiler Treat	500	100		46'.0D	60'.1	X					Consumed 5-3-07	No	Non-Hazardous	SOUTH-BETZ COMP-01		7			
South Plant	South Acid Pl.				C.S.	Betz Boiler Treat	500	2%		46'.0D	72'.1	X						No	Non-Hazardous	SOUTH-BETZ COMP-01		7			
South Plant	Acid Plant	T-2014				Demin. Water		83%										Yes	Non Hazardous	Tank sampled	solid	6.8			Dry Residue - opened manhole 2-3/4" gravel pea on tank bottom. Red/yellow beads. (Sample T-2014 collected 4/24/07)

Exhibit B. Tank inventory, Baseline Sampling Report, Former Vicksburg Chemical Company, Vicksburg, Mississippi. (Revised 5/24/07)

Plant	Area	Old Tank Name/#	New Tank Name/#	EPA (1) Sample ID#	Mat. of Const.	Contents	Total Capacity	EPA Start Level	Diameter in Feet	Circum. in Feet	Height / Length in Feet	Gallons	Tons	Spec. Cond.	Volume Remaining	Disposition	EPA Comments	Contents Sampled (Y/N)	Hazardous/Non-Hazardous by Waste Characteristic	Representative Sample	Sample Type	pH	Amount of Material Present (estimate)	Estimated Volume (gallons)	ARCADIS Field Comments
B COOLING TOWER																									
South Plant	B Cool Twr				C.S.	Betz CT Treatment	550	100 gal		12'9"		X		N			Spectrus NX 1100	No	Non Hazardous	SOUTH BETZ COMP 01			?		
South Plant	B Cool Twr				PE	Betz CT Treatment	1,000	100 gal		16'6"		X		N			Betz Dearborn Continuum AEC 3136	No	Non Hazardous	SOUTH BETZ COMP 01			?		
South Plant	B Cool Twr				PE	Betz CT Treatment	560	100 gal		12'9"		X		N			Spectrus BD 1500	No	Non Hazardous	SOUTH BETZ COMP 01			?		
MULTICOTE TANK FARM																									
South Plant	Multicote Tkfm	Blend Tank T-1110			S.S.	Blend		50.30%		24'		X		Y			Blend of Tall Castor & PAPI oils w/Insulated Jacket	Yes	Non-Hazardous	Tank sampled	oil	5	4'	114	(Sample T-1110 collected 4/24/07)
South Plant	Multicote Tkfm	T-1109			S.S.	MDI (PAPI)	12,000	0.06%		38'7"		X		Y			Insulated Jacket	Yes	Hazardous by Reactive Sulfide	Tank sampled	oil	6.87	8"	591	Amber colored oil. Sampled. Open valve. (Sample T-1109 collected 4/24/07)
CARBON VESSELS																									
South Plant	Carbon Vessels		Carbon Tank 1			Carbon											No liquid. Residual carbon in cone	No	Non-Hazardous	CARBON TK#2	solid			2356 lbs	Dry carbon estimated at 30 lbs per cubic foot
South Plant	Carbon Vessels		Carbon Tank 2			Carbon											No liquid	Yes	Non-Hazardous	Tank sampled		6.57		16850 lbs	Dry carbon estimated at 30 lbs per cubic foot (Sample CARBON TK#2 collected 3/8/07)
South Plant	Carbon Vessels		Carbon Tank 3			Carbon and Water											Full of water and 4-5 feet of carbon	Yes	Non-Hazardous	Tank sampled	liquid	7.35(l)		23562 lbs	Wet carbon estimated at 60 lbs per cubic foot (Sample CARBON TK#3-WATER collected 3/8/07)
South Plant	Carbon Vessels		Carbon Tank 4			Carbon and Water											Full of water and 4-5 feet of carbon	No	Non-Hazardous	CARBON TK#6	solid			23562 lbs	Wet carbon estimated at 60 lbs per cubic foot
South Plant	Carbon Vessels		Carbon Tank 5			Carbon and Water											Full of water and 10 feet of carbon	No	Non-Hazardous	CARBON TK#5	solid			47124 lbs	Wet carbon estimated at 60 lbs per cubic foot
South Plant	Carbon Vessels		Carbon Tank 6			Carbon and Water											Full of water and 5 feet of carbon	Yes	Non-Hazardous	Tank sampled	solid & liquid	7.42(s) & 9.90(l)		23562 lbs	Wet carbon estimated at 60 lbs per cubic foot (Samples CARBON TK#6 and CARBON TK-#6-WATER collected 3/8/07)
MAP/MKP UNIT																									
South Plant	MAP-MKP					MKP		Full	48'		16						Insulated tank located outside of containment area south end of plant	Yes	Non-Hazardous	Tank sampled		6.30	Full	216458	Sampled (Sample SOUTH MKP Tk collected 3/8/07)
South Plant	MAP-MKP					MAP		?	40		20'						non-insulated located outside of containment area south end of plant	Yes	Non-Hazardous	Tank sampled	solid	4.47			Sampled (Sample SOUTH MAP Tk collected 3/8/07)
South Plant	MAP-MKP	R-611			S.S.	Wastewater	44,712		14			X		Y			Dirty wastewater from sump - no gauge	Yes	Non-Hazardous	Tank sampled		5.93	Full	44712	Liquid (Sample R-611 collected 3/9/07)
South Plant	MAP-MKP	T-617	XTAL Feed Tank						12'								Crystallizer feed tank	Yes	Hazardous for Arsenic	Tank sampled		4.85	?		Solids. No volume comment. (Sample T-617 collected 3/9/07)
South Plant	MAP-MKP	T-608	MKP Mt. Tank		S.S.	MAP-MKP	24,161	Residue	14'			X		Y			MKP Storage - No Gauge	Yes	Non-Hazardous	Tank sampled		5.35	A lot		Crystallized MKP (Sample T-608 collected 3/9/07)
South Plant	MAP-MKP	T-609	MAP Mt. Tank		S.S.	MAP-MKP	24,161	70%	14'			X		Y	70%		MAP	No	Non-Hazardous	T-608	solid				Crystallized in bottom. Couldn't inspect. Possibly several feet of crystals
South Plant	MAP-MKP	E-619				MAP		Residue	6' 4"								Exchanger	No							Empty - Crystallized material. Not sampled. Opened flange on north end of the tank. Tank is either empty or has a small amount of crystallized MAP
South Plant	MAP/MKP	V-619				MAP/MKP		Empty	11								Empty & water washed	No							Empty. Valve opened between E-619 and V-619. Dirt gaubers rest. Not sampled
FREON TANKS (Also approximately 2 dozen cylinders.)																									
South Plant	K-54	V-140				Freon 134A		29.30"	5'	16'	25							No							Freon
South Plant	K-54	E-61	Vacuum Tank			?		Residue									Exchangers. Empty. Vacuum pulled	No							Freon
South Plant	K-54	E-62	Freon Vacuum			Freon		Residue									Exchangers. Empty. Vacuum pulled	No							Could not sample. Freon
South Plant	K-55	V-170				Freon		Full	3'	9.5'	X						K-55 Freon System behind N. Cooling Tower	No							Could not sample
South Plant	K-55	E-171				Freon		Full									K-55 Freon System behind N. Cooling Tower. Exchangers	No							Could not sample
South Plant	K-55	V-171				Freon		Full	2.5'	7.10"	4						K-55 Freon System behind N. Cooling Tower	No							Could not sample
South Plant	Frick	V-2305				NH3		Residue		9.5'							Heat kills but has been purged w/N2. Frick area.	No							Empty. Not sampled. Has been purged. Opened valves nothing came out
South Plant	Frick	V-2306				NH3		Residue		11'7"							Heat kills but has been purged w/N2. Frick area. Insulated Jacket	No							Empty. Not sampled. Has been purged. Opened valves nothing came out
NOT REQUIRED FOR BID																									
South Plant		T-2						Residue	5.3"		41							No							Empty. Not sampled. Weld indicated
DINITROGEN TETROXIDE TANKS (not required for bid)																									
North Plant	Silicon Anode	V-101			C.S.	Acetic	4,500	Full	8'		32'	X		N			Empty & Cut Down, not gas free	No							Vapors

Exhibit B. Tank Inventory, Baseline Sampling Report, Former Vicksburg Chemical Company, Vicksburg, Mississippi. (Revised 5/24/07)

Plant	Area	Old Tank Name/#	New Tank Name/#	EPA (1) Sample ID#	Mat. of Const.	Contents	Total Capacity	EPA Start Level	Diameter in Feet	Circum. in Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	EPA Comments	Contents Sampled (Y/N)	Hazardous/Non-Hazardous by Waste Characteristic	Representative Sample	Sample Type	pH	Amount of Material Present (estimate)	Estimated Volume (gallons)	ARCADIS Field Comments
North Plant	[illegible]	V-132			C.S.	H2O4	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		N			[illegible]	No							Vapors
North Plant	C12 Landfill	V-133			C.S.	H2O4	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		N			Not air swept or cleaned	No							Vapors
North Plant	C12 Landfill	V-134			C.S.	H2O4	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		N			Not air swept or cleaned	No							Vapors
North Plant	C-12 Landfill	V-135						[illegible]	[illegible]		[illegible]						Mine Oddy Dryer	No							
North Plant	C-12 Landfill	V-136						[illegible]	[illegible]		[illegible]						H2O4 - H2O Reaction pot	No							
North Plant	C-12 Landfill	V-137		24	C.S.	H2O4		[illegible]	[illegible]		[illegible]			N	[illegible]	[illegible]	Loaded out and shipped to Dryers/Dry and in BOC Tanks	No							Under pressure
North Plant	C12 Landfill	V-138			C.S.	H2O4	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		N			Not air swept or cleaned	No							
North Plant	C12 Landfill	V-139			C.S.	H2O4	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		N			Not air swept or cleaned	No							
North Plant	C12 Landfill	V-154						[illegible]	[illegible]		[illegible]						Hard Filter	No							Not assigned. H2O4 [illegible] Liquid
North Plant	C10 Landfill	V-[illegible]			C.S.	H2O4	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		N			Not air swept or cleaned	No							

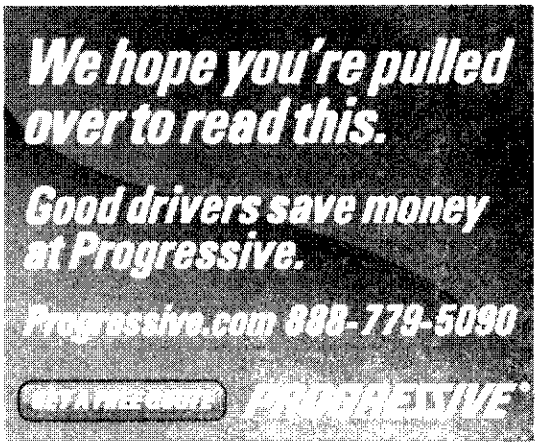
Note: This tank inventory was modified from on a tank inventory provided by the Mississippi Department of Environmental Quality. The original tank inventory was conducted by the now defunct Ferguson Harbor and the United States Coast Guard for the United States Environmental Protection Agency's Region 4 office.

MAPQUEST

Start: **Baton Rouge, LA US**

End: **4280 Rifle Range Rd**
Vicksburg, MS 39180-5502, US

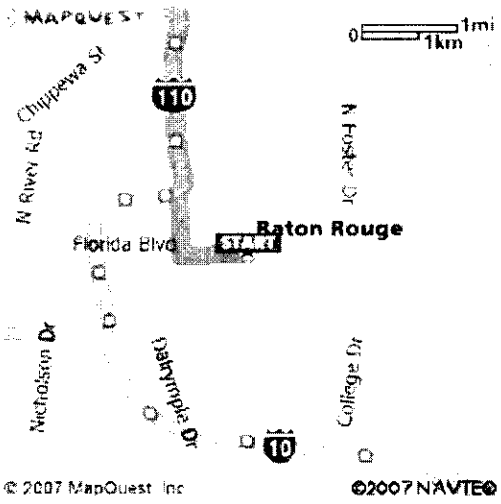
Notes:

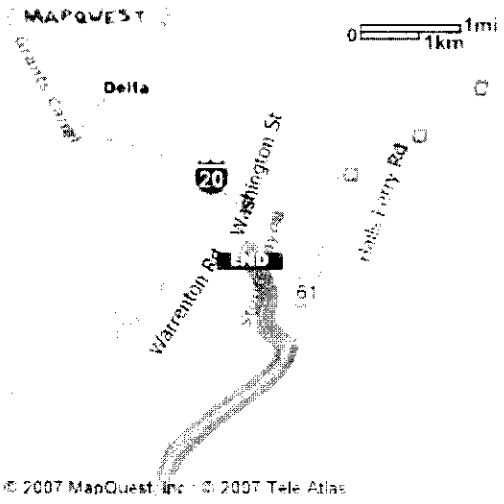


Directions		Distance
Total Est. Time: 2 hours, 55 minutes	**Total Est. Distance:** 156.75 miles	
START	**1:** Start out going WEST on FLORIDA BLVD / FLORIDA ST / US-190 BR / US-61 BR toward N ACADIAN TRWY.	0.6 miles
→	**2:** Turn RIGHT onto N 22ND ST / LA-67.	0.5 miles
NORTH 110	**3:** Merge onto I-110 N.	6.5 miles
61	**4:** Merge onto US-61 N via EXIT 8B toward NATCHEZ (Crossing into MISSISSIPPI).	82.4 miles
↱	**5:** Turn SLIGHT RIGHT.	0.2 miles
61	**6:** Stay STRAIGHT to go onto US-61 N / US-84 E / DEVEREUX DR. Continue to follow US-61 N.	65.2 miles
←	**7:** Turn LEFT onto STOUTS CROSS RD.	<0.1 miles
↑	**8:** STOUTS CROSS RD becomes RIFLE RANGE RD.	1.0 miles
END	**9:** End at **4280 Rifle Range Rd** Vicksburg, MS 39180-5502, US	
Total Est. Time: 2 hours, 55 minutes	**Total Est. Distance:** 156.75 miles	

Start:
Baton Rouge, LA US

End:
4280 Rifle Range Rd
Vicksburg, MS 39180-5502, US





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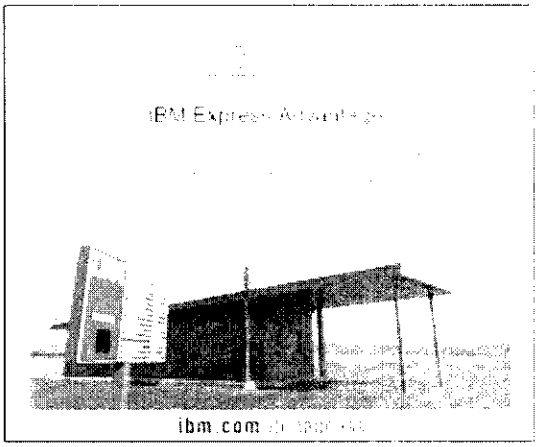
MAPQUEST

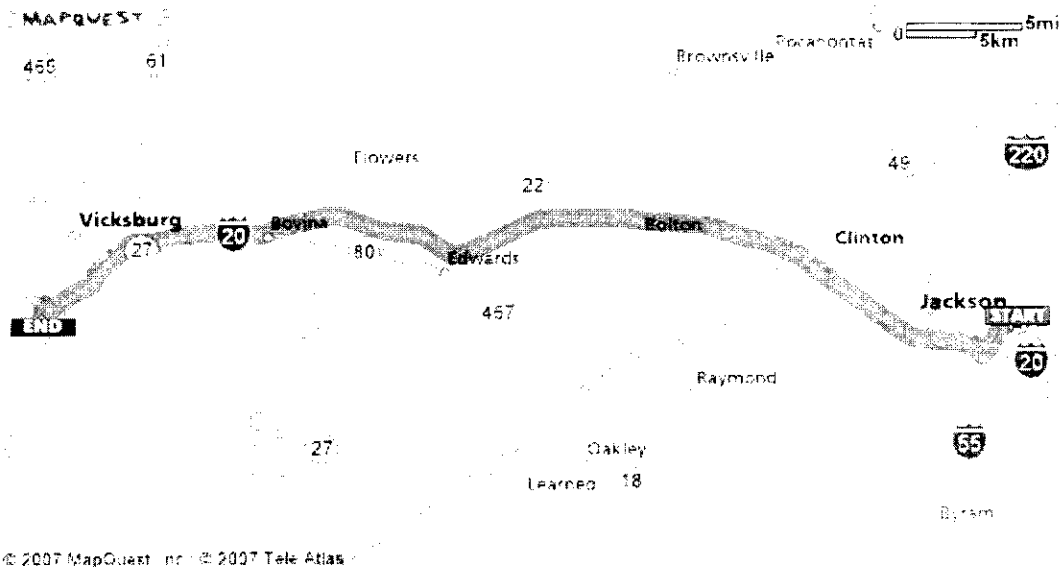
Start: **Jackson, MS US**

End: **4280 Rifle Range Rd**
Vicksburg, MS 39180-5502, US

Notes:



Directions	Distance
Total Est. Time: 48 minutes **Total Est. Distance:** 46.14 miles	
1: Start out going WEST on E PEARL ST toward S LAMAR ST.	0.5 miles
2: Turn SLIGHT LEFT onto TERRY RD S. Pass through 1 roundabout.	1.6 miles
3: Merge onto I-20 W.	43.0 miles
4: Take the WASHINGTON ST exit- EXIT 1A.	0.3 miles
5: Take the ramp toward WARRENTON RD.	<0.1 miles
6: Turn LEFT onto OLD US-61 / WASHINGTON ST.	0.3 miles
7: Stay STRAIGHT to go onto WARRENTON RD.	<0.1 miles
8: Turn LEFT onto RIFLE RANGE RD.	0.1 miles
9: End at **4280 Rifle Range Rd** Vicksburg, MS 39180-5502, US	
Total Est. Time: 48 minutes **Total Est. Distance:** 46.14 miles	



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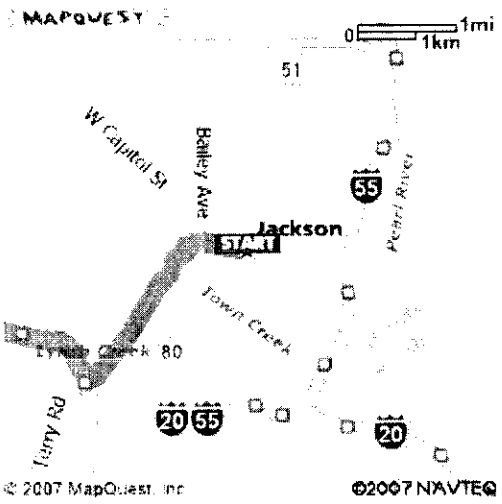
Start:
Jackson, MS US

End:
4280 Rifle Range Rd
Vicksburg, MS 39180-5502, US



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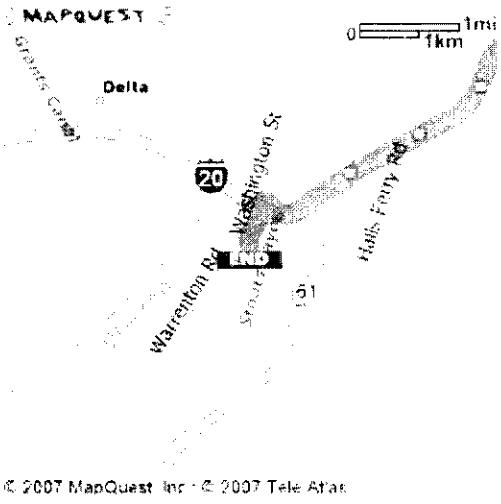

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INTRODUCTION

This file contains the July 1999 **Region 4 Environmental Indicator (EI) Guidance Package** to be used in evaluating facilities for the two (2) RCRA Corrective Action Environmental Indicators (EIs). The Region 4 EI Guidance Package is comprised of the following two (2) components:

1. An **Introductory Memo**, which briefly explains the facility being evaluated, summarizes the conclusions of the evaluation, and outlines any necessary next steps to control exposures and/or groundwater migration, and
2. An **Attachment** to the Introductory Memo, which contains the detailed basis for the conclusions presented in the Introductory Memo. The attachment is actually the **February 5, 1999, Interim Final EI Guidance** developed **by EPA Headquarters** with input from the Regions and States.***

For a **one page flow diagram** which briefly outlines the questions covered by the Interim Final Hqs's EI Guidance, please see the following file: g:\user\shared\ei\Hqs EI Chart.

*** NOTE: The Region 4 Model Memo dated October 6, 1997, which referenced an attachment containing an evaluation guidance developed by Region 4, is now ***REPLACED*** by the attached guidance. EPA Region 4 strongly encourages the States to ***USE*** the July 1999, Region 4 Guidance Package for EI reevaluations or new evaluations performed after February 5, 1999.

QUICK REFERENCE FOR STATUS OF ENVIRONMENTAL INDICATORS					
Name and EPA I.D. Number	Location (City or Town)	Current CA725 Decision	Current CA750 Decision	If Current Decision is Negative, Projected Date for Positive EI	
				CA725	CA750
Vicksburg Chemical Company MSD 990 714 081	Vicksburg, MS	NO	NO	2003	2005

4WD- RCRA ECB

SUBJ: Evaluation of Vicksburg Chemical Company's status under the RCRIS Corrective Action Environmental Indicator Event Codes (CA725 and CA750)
EPA I.D. Number: MSD 990 714 081

FROM: Judy Sophianopoulos

THRU: Jeffrey T. Pallas

TO: Jewell Grubbs

I. PURPOSE OF MEMO

This memo is written to formalize an evaluation of Vicksburg Chemical Company's status in relation to the following corrective action event codes defined in the Resource Conservation and Recovery Act Information System (RCRIS):

1) Current Human Exposures Under Control (CA725),

2) Migration of Contaminated Groundwater Under Control (CA750).

Concurrence by the RCRA Enforcement and Compliance Branch Chief is required prior to entering these event codes into RCRIS. Your concurrence with the interpretations provided in the following paragraphs and the subsequent recommendations is satisfied by dating and signing at the appropriate location within Attachments 1 and 2.

II. HISTORY OF ENVIRONMENTAL INDICATOR EVALUATIONS AT THE FACILITY AND REFERENCE DOCUMENTS

This particular evaluation is the first evaluation for Vicksburg Chemical Company.

III. FACILITY SUMMARY

Vicksburg Chemical Company (VCC) is conducting Corrective Action at the facility subject to Consent Decree, Civil Number W92-0008B (Consent Decree), between EPA and VCC, filed April 17, 1992. EPA's RCRA Facility Assessment (RFA) report, dated August 29, 1986,

identified 34 solid waste management units (SWMUs) and 4 Areas of Concern (AOCs), which resulted from the production of pesticides from 1961 - 1987.

At the present time, VCC 's regulatory status under RCRA is that of a large quantity generator (1000 kg of hazardous waste in a month). VCC manufactures only the inorganic chemicals, nitric acid, potassium nitrate, nitrogen tetroxide, chlorine, sodium hypochlorite, and potassium carbonate. The type of waste generated by VCC is remediation waste from corrective action interim measures.

EPA approved several interim measures at VCC, in accordance with the Consent Decree, including a Temporary Unit (TU) in August 1995, with an extension until August 1997, and a Corrective Action Management Unit (CAMU) in February 1998. VCC conducted treatability studies in the TU that indicated that biotreatment could treat pesticide-contaminated soil successfully. VCC has been and will continue putting treated soil in the CAMU. Treatability study results and analytical results to date indicate that remediation of most of the contaminated soil should be completed in FY2001.

VCC is located on Rifle Range Road in the City of Vicksburg near bayous that discharge into the Mississippi River. There is a middle class residential area west of the site. Land use of the site, itself, will be restricted to industrial use.

IV. CONCLUSION FOR CA725
(Brief Outline of Issues Leading to an EI of YE, NO or IN)

Current human exposures are uncontrolled; therefore the CA725 EI is NO. Evaluation of seven SWMUs created by pesticide production, storage, or loading and unloading indicates that contamination exists above risk-based levels in soil and groundwater.

Based on interim measures treatment and analytical data, the CA725 EI is projected to be YE by 2003, because innovative biotreatment and zero-valent iron treatment have a good chance to be successful. There is also at least one vendor from EPA's VISITT data base who has a successful, cost-effective treatment method for arsenic.

V. CONCLUSION FOR CA750
(Brief Outline of Issues Leading to an EI of YE, NO or IN)

VCC has not completed groundwater assessment of the site. However, VCC did find groundwater contamination above maximum contaminant levels (MCLs). Therefore, although the plume has not been delineated, the CA750 EI is NO.

Based on interim measures analytical data and the availability of innovative technologies, the CA750 EI is projected to be YE by 2005.

VI. SUMMARY OF FOLLOW-UP ACTIONS
(Discussion of What is Needed to Get to Yes, with EI Interim Milestone Schedule)

A. CA725

VCC's interim measures continue to be bio-treatment of contaminated soils and placement of treated soils into the CAMU. VCC's RCRA Facility Investigation (RFI), which will determine the amount and extent of soil contamination, is expected to be completed in Fiscal Year (FY) 2000, and soil remediation is projected to be complete in FY 2001. CA725 is projected to be YE in FY 2003.

VICKSBURG CHEMICAL COMPANY
EI INTERIM MILESTONE SCHEDULE
CA725

Activities	CA RCRIS Event Code	Scheduled Date (QUARTER'S LAST DAY & FISCAL YEAR)	Remarks
Stabilization Measures Implementation	CA600	3/31/00	SWMUs 1, 9, 11, 12, 15, 16, 17: continued excavation and treatment of soils contaminated with dinoseb and toxaphene above industrial risk-based concentrations (RBCs), and with arsenic above background levels; and imposition of institutional controls.
Interim Measures Progress Report Received	CA643	6/30/00	SWMUs 1, 9, 11, 12, 15, 16, 17: Report Received on Institutional Controls
Interim Measures Report Received	CA640	9/30/00	SWMUs 1, 9, 11, 12, 15, 16, 17: Report on completion of soil excavation and treatment
Stabilization Construction Complete	CA650	12/31/01	Review finds that Interim Measures undertaken have been completed at SWMUs 1, 9, 11, 12, 15, 16, 17

Activities	CA RCRIS Event Code	Scheduled Date (QUARTER'S LAST DAY & FISCAL YEAR)	Remarks
Current Human Exposures Under Control Determination	CA725	10/31/03	Revised EI Memo

A. CA750

VCC will complete groundwater assessment, begin installation of any new monitoring wells required to delineate the extent of the groundwater plume, and research innovative, cost-effective groundwater remediation technologies, such as permeable reactive barriers.

It is projected that CA750 will reach YE in FY 2005.

VICKSBURG CHEMICAL COMPANY EI INTERIM MILESTONE SCHEDULE CA750			
Activities	**CA RCRIS Event Code**	**Scheduled Date** (QUARTER'S LAST DAY & FISCAL YEAR)	**Remarks**
Stabilization Measures Implemented	CA600	9/30/01	SWMUs 1, 9, 11, 12, 15, 16, 17: Imposition of zero-valent iron technology to remediate toxaphene in soil and groundwater; treatability studies to find effective treatment technology for dinoseb and arsenic in groundwater
Interim Measures Report Received	CA640	9/30/02	SWMUs 1, 9, 11, 12, 15, 16, 17: Groundwater effectiveness and monitoring report for dinoseb, toxaphene, and arsenic plumes.

Activities	CA RCRIS Event Code	Scheduled Date (QUARTER'S LAST DAY & FISCAL YEAR)	Remarks
Stabilization Construction Complete	CA650	9/30/04	Review of groundwater effectiveness monitoring report shows stabilization objectives have been met.
Migration of Contaminated Groundwater Under Control	CA750	9/30/05	Revised EI Memo

VII. LEVEL OF CONFIDENCE IN REACHING A POSITIVE EI EVALUATION AND MAJOR ISSUES

The level of confidence in the milestone schedules outlined in Section VI is medium, given the fact that the zero-valent iron technology will have to be evaluated for the VCC site, and a treatability study must be conducted to determine an effective treatment for arsenic contamination.

Attachments:
1. CA725: Current Human Exposures Under Control
2. CA750: Migration of Contaminated Groundwater Under Control

ATTACHMENT 1
DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS Code (CA725)
Current Human Exposures Under Control

Facility Name: Vicksburg Chemical Company
Facility Address: P.O. Box 821003, Vicksburg, MS 39182-1003
Facility EPA ID #: MSD 990 714 081

1. *Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?*

   X If yes - check here and continue with #2 below,

   ____ If no - re-evaluate existing data, or

   ____ If data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

Media	Yes	No	?	Rationale/Key Contaminants
Groundwater	X			Concentrations above maximum contaminant levels/dinoseb, toxaphene, arsenic
Air (indoors)[2]			X	Insufficient data
Surface Soil (e.g., <2 ft)	X			Concentrations above risk-based levels/dinoseb, toxaphene, arsenic
Surface Water			X	Insufficient data
Sediment			X	Insufficient data
Subsurface Soil (e.g., >2 ft)				Concentrations above risk-based levels/dinoseb, toxaphene, arsenic
Air (outdoors)			X	Insufficient data

____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

__X__ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s): Risk Assessment Guidance for Superfund EPA/540/1-89/002; Soil

---

1 "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

2 Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

Screening Guidance: Users Guide OSWER Directive 9355.4-23 and Technical Background Document OSWER Directive 9355.4-17A; Region 9 Preliminary Remediation Goals Table: http://www.epa.gov/region09/waste/sfund/prg/s2_01.htm

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table
Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media	**Residents**	**Workers**	**Day-Care**	**Construction**	**Trespassers**	**Recreation**	**Food**[3]
Groundwater	No	No	No	No	N/L	N/L	Yes
Air (indoors)	Insufficient data	Insufficient data	No	N/L	N/L	N/L	N/L
Soil (surface, e.g., <2 ft)	No	Yes	No	Yes	N/L	N/L	No
Surface Water	Yes	Yes	N/L	N/L	N/L	N/L	Yes
Sediment	No	No	N/L	N/L	N/L	N/L	Yes
Soil (subsurface, e.g., >2 ft)	N/L	N/L	N/L	Yes	N/L	N/L	No
Air (outdoors)	No	Yes	No	Yes	Yes	N/L	N/L

Instructions for Summary Exposure Pathway Evaluation Table:

1. For Media which are not "contaminated" as identified in #2, please strike-out specific Media, including Human Receptors' spaces, or enter "N/C" for not contaminated.

2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations, some potential "Contaminated" Media - Human Receptor combinations (Pathways) are not assigned spaces in the above table (i.e, **N/L - not likely**). While these combinations may not be probable in most situations, they may be possible in some settings and **should be added as necessary**.

____ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

____ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s): Expedited RCRA Facility Investigation Report SWMU 16- Former Atrrazine Production Area SWMU 1- Container (Drum) Storage Area SWMU 17 - Returned Product Storage Area, June 1997, Woodward-Clyde Consultants (WCC) File 96B315-003; Corrective Action Observation Confirmatory Sampling and Analysis, March 11, 1999, URS Greiner Woodward Clyde File No. 35092B007.C.00.03004

4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

____ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "*significant.*"

__X__ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s): Risk Assessment Guidance for Superfund EPA/540/1-89/002; Soil Screening Guidance: Users Guide OSWER Directive 9355.4-23 and Technical Background Document OSWER Directive 9355.4-17A; Region 9 Preliminary Remediation Goals Table: http://www.epa.gov/region09/waste/sfund/prg/s2_01.htm; Expedited RCRA Facility Investigation Report SWMU 16- Former Atrrazine Production Area SWMU 1- Container (Drum) Storage Area SWMU 17 - Returned Product Storage Area, June 1997, Woodward-Clyde Consultants (WCC) File 96B315-003; Corrective Action Observation Confirmatory Sampling and Analysis, March 11, 1999, URS Greiner Woodward Clyde File No. 35092B007.C.00.03004

5 Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

__X__ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

---

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

Rationale and Reference(s): Risk Assessment Guidance for Superfund EPA/540/1-89/002; Soil Screening Guidance: Users Guide OSWER Directive 9355.4-23 and Technical Background Document OSWER Directive 9355.4-17A; Region 9 Preliminary Remediation Goals Table: http://www.epa.gov/region09/waste/sfund/prg/s2_01.htm; Expedited RCRA Facility Investigation Report SWMU 16- Former Atrrazine Production Area SWMU 1- Container (Drum) Storage Area SWMU 17 - Returned Product Storage Area, June 1997, Woodward-Clyde Consultants (WCC) File 96B315-003; Corrective Action Observation Confirmatory Sampling and Analysis, March 11, 1999, URS Greiner Woodward Clyde File No. 35092B007.C.00.03004

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

____ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the _____ _____ facility, EPA ID #_____, located at _____ under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

__X__ NO - "Current Human Exposures" are NOT "Under Control."

____ IN - More information is needed to make a determination.

Completed by(signature) _____ Date 11/22/99
(print) Judy Sophianopoulos
(title) Environmental Scientist

Supervisor (signature) _____ Date _____ [5]
(print) Jewell Grubbs
(title) Chief, RCRA Enforcement and Compliance Branch
(EPA Region or State) EPA Region 4

Locations where References may be found:

10th Floor, South Enforcement and Compliance Section

Contact telephone and e-mail numbers

(name) Judy Sophianopoulos
(phone #) (404) 562-8604
(e-mail) sophianopoulos.judy@epamail.epa.gov

[5] **FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**

Version: Interim Final
2/5/99

ATTACHMENT 2
DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS Event Code (CA750)
Migration of Contaminated Groundwater Under Control

Facility Name: Vicksburg Chemical Company
Facility Address: P.O. Box 821003, Vicksburg, MS 39182-1003
Facility EPA ID #: MSD 990 714 081

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   _X_ If yes - check here and continue with #2 below,

   ____ If no - re-evaluate existing data, or

   ____ If data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[6] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

__X__ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): Risk Assessment Guidance for Superfund EPA/540/1-89/002; Soil Screening Guidance: Users Guide OSWER Directive 9355.4-23 and Technical Background Document OSWER Directive 9355.4-17A; Region 9 Preliminary Remediation Goals Table: http://www.epa.gov/region09/waste/sfund/prg/s2_01.htm

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6 "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

3. Has the ***migration*** of contaminated groundwater **stabilized** such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[7] as defined by the monitoring locations designated at the time of this determination?

____ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[7]).

__X__ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[7]) - skip to #8 and enter "NO" status code, after providing an explanation.

____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): Expedited RCRA Facility Investigation Report SWMU 16- Former Atrrazine Production Area SWMU 1- Container (Drum) Storage Area SWMU 17 - Returned Product Storage Area, June 1997, Woodward-Clyde Consultants (WCC) File 96B315-003; Corrective Action Observation Confirmatory Sampling and Analysis, March 11, 1999, URS Greiner Woodward Clyde File No. 35092B007.C.00.03004

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

__X__ If yes - continue after identifying potentially affected surface water bodies.

____ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): Expected to discharge to creek and bayous near south and east property lines, and ultimately the Mississippi River; please see Consent Decree, Civil Number W92-0008B (Consent Decree), between EPA and VCC, filed April 17, 1992; Corrective Action Observation Confirmatory

[7] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

Sampling and Analysis, March 11, 1999, URS Greiner Woodward Clyde File No. 35092B007.C.00.03004.

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be ***"insignificant"*** (i.e., the maximum concentration[8] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature and number of discharging contaminants, or environmental setting) which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[8] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) providing a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[8] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[9] greater than 100 times their appropriate groundwater "levels," providing the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identifying if there is evidence that the amount of discharging contaminants is increasing.

__X__ If unknown - enter "IN" status code in #8.

Rationale and Reference(s): Corrective Action Observation Confirmatory Sampling and Analysis, March 11, 1999, URS Greiner Woodward Clyde File No. 35092B007.C.00.03004.

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[8] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[9])?

___ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,[10] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

___ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

__X__ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):Corrective Action Observation Confirmatory Sampling and Analysis, March 11, 1999, URS Greiner Woodward Clyde File No. 35092B007.C.00.03004.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

__X__ If yes - continue after providing or citing documentation for planned activities or future

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[9] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[10] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

___ If no - enter "NO" status code in #8.

___ If unknown - enter "IN" status code in #8.

Rationale and Reference(s): Groundwater Assessment Plan has not been approved; new wells will be constructed to add to the current groundwater monitoring data; please see RCRA Facility Investigation Workplan, June 1996, WCC File 92B007C-3003; Memorandum from W. N. O'Steen to Judy Sophianopoulos, September 13, 1996; and Record of Conversation from S. T. Boswell to Judy Sophianopoulos, November 6, 1996

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

____ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the _____ _____facility , EPA ID # _____ , located at_____. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

__X__ NO - Unacceptable migration of contaminated groundwater is observed or expected.

____ IN - More information is needed to make a determination.

Completed by(signature)_____ Date 11/22/99
(print) Judy Sophianopoulos
(title) Environmental Scientist

Supervisor (signature)_____ Date_____
(print) Jewell Grubbs
(title) Chief, RCRA Enforcement and Compliance Branch
(EPA Region or State) EPA Region 4

Locations where References may be found:

10th Floor, South Enforcement and Compliance Section

Contact telephone and e-mail numbers

(name) Judy Sophianopoulos
(phone #) (404) 562-8604
(e-mail) sophianopoulos.judy@epamail.epa.gov

Optional Exposure Pathway Evaluation Work Sheet
Referenced in CA725 - Question 3

Explanatory Footnotes:

Exposure Pathway Evaluation Work Sheet is a qualitative evaluation of the "completeness" of major pathways between contamination and exposures by plausible receptors. This screening only evaluates the major pathways (that are common at many/most contaminated site situations) and should not be used to reduce the scope of a site-specific risk assessment (which should include all pathways which may be significant at a given site).

Additional note: The following are special situations in which project managers should be cautious about using benchmark or other generic screening levels that have been derived with specific assumptions. In any of the situations, the risk manager should have a risk assessor provide assistance to review the use of the screening models.

1) The use of screening levels when multiple contaminants are present at a site; most guidances were developed for single contaminant exposures scenarios and are not appropriate to consider compounded or synergistic effects of multiple contaminants.

2) The use of screening levels when multiple routes of exposure are possible for given contaminant; some of the screening guidances consider multiple exposure routes but all of them do not.

3) The use of soil screening levels at sites with oily soils, free phase hydrocarbon on the groundwater, and free phase hydrocarbon below the water table; the guidances were developed assuming water leaching of soils not oil transport of contaminants through soils.

Optional Exposure Pathway Evaluation Work Sheet
Referenced in CA725 - Question 3

(1/5/99 Draft)

Screening Potentially Complete Pathways for Contaminated GROUNDWATER

Off-site GW Cont.	wells impacted? wells not "	Potable use Non-potable uses	Phyl/Inst. controls? (e.g., treatment @ wellhead?) Watering plants? Swimming pools? Showering??	Resident (ingestion) (inhalation) (dermal)
On-site GW Cont.	wells impacted? wells not "	Potable use Non-potable uses	Phyl/Inst. controls? (e.g., gw-use restrictions?) Process-water exposures? Watering landscaping? Showering??	Worker (M) (ingestion) (inhalation) (dermal)
On- or Off-site GW Cont.	const. into gw expected? " " not "		Phyl/Inst. controls? (e.g., PPE/Training req?)	Const. Work. (inhalation) (dermal cont.)
On- or Off-site GW	irrigation of veg./fruit expected? " veg../fruit not "		Phyl/Inst. controls? (e.g, testing/restrictions?)	Food Supply (Ingestion) Cont.

Screening Potentially Complete Pathways for Contaminated SURFACE SOIL

Off-site SS Cont.	contam. expected contam. not "	Private yards, etc. Not heavy use areas	Phyl/Inst. controls? (e.g., vegetation, etc.)	Resident Recreator (ingestion) (dermal cont.) (inhalation)
On-site SS Cont.	contam. expected contam. not "	High use/maint. areas? Not heavy use areas	Phyl/Inst. controls? (e.g., PPE/Fencing?) (Ok for children?)	Worker (M) Trespasser (ingestion) (inhalation) (dermal)
On- or Off-site cont. SS Cont.	construction expected? construct. not "		Phyl/Inst. controls? (e.g., PPE/Training req?)	Const. Work. (ingestion) (inhalation) (dermal cont.)
On- or Off-site SS Cont.	veg./fruit/game expected? veg./fruit/game not "		Phyl/Inst. controls? (e.g., Testing/Restrictions?)	Food Supply (Ingestion)

Screening Potentially Complete Pathways for Contaminated SURFACE WATER/SEDIMENT

Off-site SW/S Cont.	contam. expected? contam. not "	Water supply intakes? " not expected	Phyl/Inst. controls? (e.g., treated prior to)	Resident (ingestion) (inhalation) (dermal cont.)
Off-site SW/S Cont.	contam. expected? contam. not "	Private yards, etc. Not heavy use areas	Phyl/Inst. controls? (e.g., remoteness?) (children?)	Resident Recreator (ingestion) (inhalation) (dermal cont.)
On-site SW/S Cont.	contam. expected contam. not "	High use/maint. areas? Not heavy use areas	Phyl/Inst. controls? (e.g., fences/signs?) (children?)	Worker (M) Tresspassor (ingestion) (inhalation) (dermal cont.)
On- or Off-site SW/S Cont.	construct. expected? construct. not "		Phyl/Inst. controls? (e.g., PPE/training req?)	Const. Work. (ingestion) (inhalation) (dermal cont.)
On- or Off-site SW/S Cont.	fish/shellfish/veg./game expected? fish/shellfish/veg./game not "		Phyl/Inst. controls? (e.g., consumption restrictions?)	Food Supply (Ingestion)

Screening Potentially Complete Pathways for Contaminated SUB-SURFACE SOIL

On- or Off-site SubSoil Cont.	construction expected? construct. not "	Phyl/Inst. controls? (e.g., PPE/training req?)	Const. Work. (ingestion) (inhalation) (dermal cont.)

On- or Off-site SubSoil Cont.	deep rooted veg./fruit expected? " veg./fruit not "	Phyl/Inst. controls? (e.g., planting restrictions?)	Food Supply (ingestion)

Screening Potential Pathways for Contaminated INDOOR AIR

Contamination in groundwater, surface or subsurface soil, surface water, or sediments;

Adjacent to homes? vapors/particulates likely?		Phyl/Inst. controls?	Resident
" not " "	no " "	(e.g., barriers/veg.)	(inhalation-indoors)
Adj. to workplace bldgs?	vapors/particulates likely?	Phyl/Inst. controls?	Worker
" not " "	no " "	(e.g., barriers/veg.)	(inhalation-indoors)

Outdoor Air - Addressed in Earlier Pathways

Examples of Exposure Controls

1. Physical Exposure Controls

Caps
Fences/walls
Security Guards
Vegetative Cover
Natural Inaccessibility
Remoteness/Unattractiveness
Treatment of media (prior to exposure)
Vapor barriers / ventilation systems

2. Institutional Exposure Controls

Posted Signs
Land-use Restrictions (e.g., zoning, deed, Responsible Party statements)
Level of PPE (Personal Protection Equipment)
Safety Training / Newsletters
Activity Permits / Notifications (e.g., construction permits / notifications)
Well Restrictions
Media-use Restrictions
Responsible Party statements of activity / use restrictions
Testing / Montitoring (and restrictions if necessary)
Consumption Restrictions
Restrictions on Frequency of Exposures

Memo

To: Robert Morris, EPA WAM

From: John Belin, Booz Allen Hamilton
Date: September 22, 2004
Subject: Vicksburg Chemical Company Data Gap Assessment Report Figures

Attached are courtesy copies of the figures we referenced in the Vicksburg Chemical Company (VCC) Data Gap Assessment Report submitted on September 22, 2004. Figures 1 identifies the site location and was prepared by Booz Allen Hamilton. Figure 2 is from the VCC *Application for Corrective Action Management Unit* dated June 1997. Figure 3 is Figure 3-5 from the *Draft Groundwater Assessment Report* dated November 2001 and is a cross-sectional diagram showing the depth of Hennessey's Bayou in relation to site-specific hydrogeology; which confirms the potential for interaction between shallow groundwater and surface water. Figure 4 is from the *Corrective Measures Study* dated March 2002. This figure identifies site wide soil contamination with areas of contamination greater than MDEQ Tier 1 TRG Table Values for Restricted Use.

ATTACHMENT 1

Data Gap Assessment
For RCRA Environmental Indicator Codes (CA725 and CA750)

Vicksburg Chemical Company
Vicksburg, Mississippi
EPA I.D. No. MSD990714081

In response to Work Assignment R04808-1, Task 03, under EPA Contract No. 68-W-02-018, Booz Allen Hamilton (Booz Allen) prepared the following Data Gap Assessment (DGA) for the Vicksburg Chemical Company (VCC) facility located in Vicksburg, Mississippi. As part of the data gaps analysis process, Booz Allen reviewed all available documentation compiled during file reviews at EPA Region 4 offices on August 9, 2004, and at the Mississippi Department of Environmental Quality (MDEQ) offices on August 23 and 24, 2004. Based upon Booz Allen's initial review of the file material and discussions with the EPA Work Assignment Manager (WAM) during a meeting on August 10, 2004, it was determined that the currently available information was not sufficient to allow for positive CA725 or CA750 environmental indicator (EI) determinations at this facility. As a result, Booz Allen was directed to prepare a DGA for VCC. The following DGA is based on the available file material and supplemental information obtained during discussions with the EPA Technical Lead, Ms. Lael Butler, on August 18, 2004, and the MDEQ point of contact, Mr. Trey Hess, on August 26, 2004. Attachment 1 includes a memorandum with the figures that are referenced in the DGA.

A. FACILITY DESCRIPTION

The VCC site is located south of Interstate 20 at 4280 Rifle Range Road within the southwest section of the City of Vicksburg, Warren County, Mississippi. The site is approximately 535 acres in size, of which approximately 500 acres are heavily wooded and undeveloped (Ref. 16). Figure 1 illustrates the location of the VCC facility.

The site is currently inactive. During operations, the plant was divided into two different operational areas: the North Plant and South Plant. These former plants are situated in a small valley running north/south and adjacent to the Mississippi River. Stout's Bayou and Hatcher Bayou flow through the valley and join to form Hennessey's Bayou, which flows south for about 10 miles into the Mississippi River. The site is within the 100-year flood plain of the Mississippi River. The Kansas City Southern Railroad also runs through the plants in a north/south direction, with side tracks that were utilized at loading areas and warehouses during facility operations. Current notable site features include: an inactive hazardous waste landfill (solid waste management unit [SWMU] 2), an unlined surface impoundment (SWMU 3), numerous warehouses for past storage, buildings and process areas, and areas of contaminated soil. Surrounding land use is predominately residential. Immediate adjacent land use includes a wastewater treatment facility to the east-southeast, a church to the south-southeast, and heavily wooded areas to the west. Approximately 70 acres of the western portion of the site border the

Mississippi River; however, none of the plant production facilities are located along the river. The facility was formerly utilized to manufacture chemicals. The North Plant, in operation from 1961 to 2002, produced potassium nitrate, liquid chlorine, and liquid nitrogen tetroxide. The South Plant, in operation from 1953 to 2002, formerly manufactured dinitro butyl phenol (dinoseb), monosodium methane arsonate (MSMA), diethyl hexyl phosphoric acid (DEHPA), 1-hydroxy-ethylidene-1-1-diphosphonic acid (UNIHIB), toxaphene, methyl parathion, cyanazine (bladex), and atrazine. Originally, the two plants were completely separate and owned and operated by two different companies. American Metal Climax Corporation (Amax) constructed the North Plant in 1961 to produce chloride-free potassium nitrate for selected crops. The South Plant was originally constructed by Spencer Chemical in 1953 to produce agricultural chemicals. Gulf Chemical then purchased the South Plant facility in 1964 and added a formaldehyde unit in 1966.

VCC was formed in early 1972 and purchased both the Gulf Chemical and Amax chemical facilities (except the formaldehyde plant) on July 12, 1972, with production beginning in October 1972. At that time, VCC operated a nitric acid, potassium nitrate, and nitrate solutions plant for two and one-half years. By September 1974, five more facilities were built for atrazine, methyl parathion, dinoseb, toxaphene, and unsymmetrical dimethyl hydrazine (UDMH) production. The UDMH facility was shut down permanently a short time after construction.

A Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA), conducted during July 1990 (Ref. 2), identified a total of 34 SWMUs. Eight SWMUs were recommended and approved for no further action as a result of the RFA. RCRA Facility Investigations (RFIs) were recommended and required on the remaining 26 SWMUs. RFI investigations and actions took place between August 1994 and August 2001. An EPA internal memorandum discussing proposed sampling at VCC recommended an additional seven SWMUs for NFA (Ref. 15). VCC subsequently prepared a Corrective Measures Study (CMS) in March 2002 that outlined corrective measures alternatives for the following two SWMU groupings: 7, 4, 14, 20; and 11, 12, 15 (Ref. 13). A discussion of the investigation of the following SWMUs, which have not been approved for NFA, is provided in Section C (Refs. 2, 9, 10, 13, 16):

SWMU 2 - Inactive Landfill
SWMU 3 - Surface Water Impoundment
SWMU 4 - Activated Carbon Unit
SWMU 5 - South Plant Drainage System
SWMU 7 - Former Dinoseb Production Area
SWMU 11 - Former MSMA Production Area
SWMU 12 - Former MSMA Salt Unloading Area
SWMU 13 - South Plant Drainage Ditch
SWMU 14 - Former Toxaphene Production Area
SWMU 15 - Former Methyl Parathion Production Area
SWMU 20 - Railroad Area
SWMU 22 - North Plant Neutralization System

SWMU 25 - North Plant Waste Water Pipes
SWMU 26 - C-10 Scrubber
SWMU 29 - North Plant Oil Collection Unit
SWMU 30 - North Plant Waste Oil Accumulation Area
SWMU 31 - North Plant No. 6 Fuel Oil Area
SWMU 33 - North Plant Drainage Ditch
SWMU 34 - Surplus Equipment Storage

Four areas of concern (AOCs) were also identified during a review of the Corrective Action Management Unit (CAMU) Application Report (Ref. 4). Only limited information is available on these AOCs; thus, a brief discussion of the following AOCs is also provided in Section C:

AOC 1 - Fish Pond "North Plant"
AOC 2 - Drum Storage Area
AOC 3 - Booster Pumps "South Plant"
AOC 4 - Chemical Crypt

During the process of preparing the CMS in March 2002, VCC filed for bankruptcy (March 8, 2002); thus, VCC has not performed any cleanup or remediation of impacted areas since early 2002. VCC subsequently filed for abandonment of the property, which released them from any obligation to clean up the site. The courts ordered that the VCC estate title would go to an entity identified by MDEQ. MDEQ assumed responsibility for the site and cleanup subsequent to the bankruptcy filing. MDEQ currently has an Emergency Response Contractor (ERC), Ferguson Harbor, providing 24-hour security. MDEQ's ERC also currently operates the wastewater treatment system to treat storm water runoff that goes into the surface impoundment. On an as-needed basis, the level of surface water is drawn down to allow sufficient freeboard for significant rainfall event. The water is treated via carbon adsorption units and discharged to the Mississippi River in compliance with the National Pollutant Discharge Elimination System (NPDES) permit (Ref. 17).

B. SITE RECONNAISSANCE VISIT SUMMARY

Booz Allen was not directed to conduct a site reconnaissance visit for the VCC site.

C. SUMMARY OF SWMUs AND AOCs

The following section provides a brief summary of each SWMU and AOC identified at the VCC site. See Figure 1 from the CAMU Application Report for the SWMU and AOC locations (Ref. 4). Several additional units have been identified as potential concerns at the site, but have not been classified as SWMUs or AOCs at the site. Additionally, groundwater was historically investigated on a SWMU/AOC basis. However, groundwater investigations have recently begun to focus on identified contaminant plume areas. Thus, the identified groundwater plumes have been discussed separately as their own AOCs, as have the bayous identified at the site.

SWMU 2 - Inactive Landfill: This unit consists of a former landfill and four pits covering approximately 500 feet by 500 feet that were constructed on a hill between the railroad tracks and Hennessey's Bayou. The disposal facility was used from 1972 to 1975. One pit stored dinoseb process wastewater, while the three other pits served as disposal locations for pallets, empty fiber, steel drums, and other solid waste material. VCC attempted to dissolve the drums with an unknown volume of hydrochloric acid. In 1977, many of the drums in the pits were removed and disposed of off site. Landfill cover erosion resulted in the liberation of hydrochloric acid fumes as runoff reacted with remaining cyanuric chloride from buried drums (Ref. 16). In 1979, all of the pits were drained, regraded to flatten the hill, and covered with a soil cap and planted grass. Additional grading and capping of the area was performed in 1983, consistent with an engineered plan approved by the Mississippi Department of Natural Resources (MSDNR). Soil samples collected during a 2000 RFI indicated that dinoseb (8,282,596 micrograms per kilogram [µg/kg]), toxaphene (19,210 µg/kg), carbon tetrachloride (6,659 µg/kg), and arsenic (4,460 µg/kg) were present in subsurface soil above the MDEQ Tier 1 target remediation goals (TRGs) for Restricted Use. In 2000, a diked area was constructed on top of SWMU 2 to settle and dewater the sludge from the wastewater impoundment (Ref. 13). It was determined that the sludge did not demonstrate a hazardous characteristic (Ref. 8). Composite sludge samples were collected in 2001 and did not detect contaminants above applicable MDEQ Tier 1 TRGs for Restricted Use. Subsurface soil sampling was performed at the surface water runoff area known as "the valley" in a Phase II RFI (May 2001), and no constituents were detected above applicable MDEQ Tier 1 TRGs for Restricted Use (Ref. 10). The RFI concluded that the valley should remain a restricted area, and that the natural vegetation that has developed in the area should prevent further erosion (Ref. 10).

SWMU 3 - Surface Water Impoundment: This unit is located in the southeast section of the South Plant, adjacent to SWMU 2, and has a capacity of 3 million gallons and approximate dimensions of 250 feet by 500 feet. The impoundment collects rainwater runoff from the South Plant and has also served as a standby retention basin to collect water diverted from the North Plant when pH guidelines for discharge to the Mississippi River were not met. In 1977, wastewater from the impoundment overflowed the berm and discharged into Stout's Bayou and Hennessey's Bayou, due to heavy rains (Ref. 16). In 1983, the impoundment was breached during a flood and discharged 700,000 gallons of water contaminated with 4,000 micrograms per liter (µg/L) dinoseb. VCC raised the top of the dikes to the 100-year flood evaluation and lined the ponds with a synthetic liner, in response to a 1983 order from MDEQ (Ref. 16). As mentioned above, the wastewater treatment system is currently operated to treat storm water runoff that goes into the surface impoundment (Ref. 17). The level is drawn down on an as-needed basis to allow sufficient freeboard for a significant rainfall event (Ref. 17). The water is drawn down through the Carbon Adsorption Unit (SWMU 4) to the Mississippi River, in compliance with the NPDES permit (Ref. 17).

SWMUs 4, 7, 14, and 20: SWMUs 4, 7, 14, and 20 were merged together for the purposes of the RFI process, as they are located in close proximity and shared a need for further investigation

and/or corrective action.

SWMU 4 - Activated Carbon Unit: This unit, located on the eastern edge of SWMU 20, treats wastewater from the Surface Water Impoundment (SWMU 3) to remove organic materials before the water was pumped to the Mississippi River under the NPDES permit. The unit includes a concrete pad with curbs for secondary containment; however, the concrete containment unit was observed to be cracked and stained during the RFI, with visual evidence of carbon spillage on the east side. In October 2000, surface soil samples were collected from the perimeter of the concrete pad, and only arsenic (8,800 micrograms per kilogram [µg/kg]) was detected above the MDEQ Tier 1 TRGs for Restricted Use.

SWMU 7 - Former Dinoseb Production Area: This unit, located adjacent to the former Toxaphene Production Area (SWMU 14) and surrounded by the Railroad Area (SWMU 20), consisted of sulfonation and nitration reactors, two formulation blending tanks, and a settling tank. Acidic process wastewater was formerly neutralized with sodium hydroxide or ammonia, then discharged to the Surface Impoundment (SWMU 3) through carbon absorption beds. A butane-fired flare controlled emission from the nitrate reactor, and soil in the area surrounding the flare is suspected to be contaminated. The production area and foundation have been demolished and removed, with a portion treated in the CAMU, and some discolored soil has been removed. In October 2000, subsurface soil samples were collected from underneath the former production area, and all constituents were below the MDEQ Tier 1 TRGs for Restricted Use.

SWMU 14 - Former Toxaphene Production Area: This unit was located adjacent to the Dinoseb Production Area (SWMU 7) and was surrounded by the Railroad Area (SWMU 20). The toxaphene manufacturing process included sodium hydroxide, xylene, epichlorohydrin, chlorine, carbon tetrachloride, and camphene. Caustic scrubber water was discharged to a sump adjacent to the Former Dinoseb Production Area (SWMU 7). All processing equipment from this unit has been removed. As of the August 2001 RFI Report, the foundation was serving as a repository for soil excavated from the South Plant during construction activity, prior to planned treatment by a biological degradation composting process (Ref. 10). Subsurface soil samples were collected adjacent to the concrete foundation, and all constituents were below the MDEQ Tier 1 TRGs for Restricted Use.

SWMU 20 - Railroad Area: This unit, located at the eastern boundary of the manufacturing portion of the South Plant, surrounded the Former Dinoseb Production Area (SWMU 7) and the Former Toxaphene Production Area (SWMU 14). This unit included the Railroad Car Loading/Unloading Station, which was the primary area for material loading/unloading for the South Plant operations. The loading/unloading operations resulted in spillage to soil in the surrounding area. Additionally, the flare for the SWMU 7 nitration reactor was located directly across the tracks from the railroad, and the flare area is indistinguishable from the Railroad Area. This unit is a corridor of

several hundred feet that has potentially been impacted by activities related to SWMUs 4, 7, and 14, in addition to activities associated with train traffic. Subsurface soil samples were collected in the RFI, and all constituents were below the MDEQ Tier 1 TRGs for Restricted Use.

Following the completion of the Phase I RFI in these four SWMUs, a special sampling program called Phase I Jr. was implemented to adequately characterize the surface soil and three soil piles that were not included in the original sampling plan. The soil piles contain approximately 3,000 cubic yards of soil and likely resulted from near surface excavations related to demolition of former dinoseb and toxaphene facilities. Composite soil samples were collected from these areas and analyzed for dinoseb and toxaphene. Dinoseb (1,078,058 µg/kg) and toxaphene (110,964 µg/kg) exceeded the MDEQ Tier 1 TRGs for Restricted Use in the composite surface soil samples; toxaphene (76,683 µg/kg) was also detected above the MDEQ Tier 1 TRGs for Restricted Use in the composite soil pile samples. The Phase I Jr. sampling results indicated that immediate surface soil (0 - 6 inches) in these four SWMUs did not require further investigation. Further soil delineation was recommended for the railroad area near the former toxaphene and dinoseb manufacturing areas and the railroad area south of the atrazine warehouse; thus, a Phase II RFI soil sampling program was implemented. Toxaphene (7,617 µg/kg) and chloroform (2,186 µg/kg) were detected above the MDEQ Tier 1 TRGs for Restricted Use in a composite surface soil sample and subsurface soil sample, respectively. Conclusions from the Phase II RFI Report indicate that corrective action is recommended for the waste piles and immediate surface soil underneath the former dinoseb and toxaphene manufacturing areas (Ref. 10).

SWMU 5 - South Plant Drainage System: This unit was designed to transfer storm water and process water to the Surface Impoundment (SWMU 3), for containment prior to treatment. Sumps are present within the former MSMA, dinoseb, and toxaphene production, packaging, and shipping areas of the South Plant; some of these sumps carried water to SWMU 3 at one time. In 1977, an explosion occurred in the atrazine production area, which resulted in water from the fire monitors overflowing the dike area and flowing through the drainage ditch into Hennessey's Bayou. Sumps in the pesticide process and handling areas were blocked due to regulations that became effective in November 1985, thus preventing pesticide spills from entering SWMU 3 through the drainage system. Portions of this SWMU have been investigated concurrent with the following production/manufacturing areas: SWMUs 11, 12, and 15 (MSMA); SWMUs 7 and 20 (dinoseb); SWMUs 14 and 20 (toxaphene). Subsurface soil samples were collected from the remaining portion of the drainage system during the RFI and analyzed for atrazine, cyanazine, dinoseb, toxaphene, and arsenic; only arsenic (174,000 µg/kg) was detected above the MDEQ Tier 1 TRG for Restricted Use, and the source was determined to be the MSMA plant (Ref. 10). No further sampling of this area was recommended, and recommendations for further action in portions of this SWMU can be found under SWMU grouping 4, 7, 14, and 20 and SWMU grouping 11, 12, and 15.

SWMUS 11, 12, and 15: SWMUs 11, 12, and 15 were grouped together during RFI investigations. The SWMU descriptions are excerpted from the Interim Revised Corrective

Measures Implementation Plan (IRCMIP) for SWMUs 11, 12, and 15 (Ref. 7).

SWMU 11 - Former MSMA Production Area: This unit was constructed over the remains of SWMU 15 (Former Methyl Parathion Production Area) in 1983 and consisted of trenches, sumps, and product storage tanks. The MSMA process was subsequently shut down, equipment from the unit was removed, and the concrete foundation of the unit was cleaned with high-pressure water equipment.

SWMU 12 - Former MSMA Salt Unloading Area: This unit consisted of two concrete lined bays covered by a roof, and was an integral part of SWMU 11 (Former MSMA Production Area). MSMA byproduct salts were discharged directly from a centrifuge into sludge dumpsters for off-site disposal.

SWMU 15 - Former Methyl Parathion Production Area: This original process unit was constructed in the early 1970's to produce methyl parathion. The manufacturing facility was destroyed in an explosion and fire in March 1978. This unit is located on the same site as SWMU 11, the Former MSMA Production Area.

Generally, the surface/subsurface soil and concrete areas immediately adjacent and to the west and north of the process area are contaminated with arsenic above the proposed background concentration of 20,000 µg/kg (up to 501,000 µg/kg in surface soil and 241,000 µg/kg in subsurface soil) (Ref. 7). Arsenic (2,870,000 µg/kg) was also detected above the proposed background level and lead (1,700,000 µg/kg) was detected at the MDEQ Tier 1 TRGs for Restricted Use (1,700,000 µg/kg) in samples collected from sump and drainage systems (Refs. 7, 10). The results from the sludge samples were not included in the soil results summary (see Table 1, below) because the sample composition could not be verified (i.e., the RFI Report describes them as sludge/sediment samples, while the IRCMIP describes them as loose solid samples) (Refs. 7, 10). Sump location EE was resampled and analyzed for dioxin; the total PCDD/PCOF toxicity (0.066 µg/kg) exceeded the MDEQ Tier 1 TRG for Restricted Use value (0.0382 µg/kg). The RFI concluded that the SWMU 11, 12, and 15 area has been adequately characterized and that the contents of sump EE must be cleaned out and shipped to a permitted dioxin incinerator (Ref. 10). The IRCMIP proposes the following corrective measures: excavate 3,500 cubic yards of arsenic-contaminated material (e.g., soil, asphalt, concrete) in batches, solidify and stabilize the soil and asphalt on site, and landfill the material off site; remove arsenic-contaminated material from excavated concrete and use the concrete for erosion control within the VCC site; backfill the excavation; clean all drainage systems and sumps; and monitor for airborne arsenic (Ref. 7).

SWMU 13 - South Plant Drainage Ditch: This unit is a major drainage ditch that runs along the western border of the South Plant and empties into Hennessey's Bayou. The Drainage Ditch did not receive contaminated Drainage System (SWMU 5) water or NPDES-permitted discharge; however, some storm water runoff has discharged into the Drainage Ditch from the South Plant, and drainage from a portion of the Surplus Equipment Storage Area (SWMU 34) discharges into the Drainage Ditch. Trace amounts of toxaphene were detected in surface soil along the bottom

of the Drainage Ditch (below the MDEQ Tier 1 TRGs for Restricted and Unrestricted Use), and the concentrations of toxaphene increase as the ditch approaches SWMU 34. Arsenic (8,800 µg/kg) was detected above the MDEQ Tier 1 TRGs for Restricted Use. Further surface soil sampling was conducted in the area surrounding the RFI sample location with the highest toxaphene detection, and only arsenic (4,400 µg/kg) was detected above MDEQ Tier 1 TRGs for Restricted Use (Ref. 10). The RFI recommends that access to a portion of the ditch near the Surplus Equipment Storage area (SWMU 34) continue to be restricted (Ref. 10).

SWMUs 22, 25, 29, and 31: The following four SWMUs (SWMU 22, SWMU 25, SWMU 29, and SWMU 31) were grouped together during RFI investigations. During the RFI, the areas were inspected to determine if sampling was required (Ref. 9).

SWMU 22 - North Plant Neutralization System: This unit was the neutralization sump associated with SWMU 25 that was used for collecting potentially acidic wastewater. During the RFI inspection, the in-ground sump was noted to be in poor repair with visual evidence of subsurface erosion. The remainder of the neutralization system was noted to be in good repair.

SWMU 25 - North Plant Waste Water Pipes: This unit consisted of a system of wastewater pipes that carried potentially acidic waste water from the North Plant manufacturing area to a sump from which it was pumped into the neutralization system. The piping was noted to be in good condition during the RFI inspections, with no evidence of leaks to the surrounding environment.

SWMU 29 - North Plant Oil Collection Unit: This unit originally consisted of a drum that collected oil drips from a potassium nitrate cooling cylinder. The system was subsequently modified (date unknown) so that oil drips were piped directly to the drum. During the RFI inspection, there was no evidence of stained soil surrounding the unit.

SWMU 31 - North Plant No. 6 Fuel Oil Area: This unit originally consisted of a concrete sump that contained pumps to move fuel oil from tanks to boilers. During the RFI inspection, no cracks or other avenues of potential oil release to the surrounding environment were identified.

Based upon the RFI inspections, no further investigations or actions were recommended at SWMUs 25, 29, and 31. In May 2001, two borings with temporary wells were advanced to investigate contamination associated with SWMU 22 and a potential groundwater plume emanating from SWMU 23. Soil sample results indicated that arsenic (9,400 µg/kg) was present at concentrations above the MDEQ Tier 1 TRG Restricted Use criteria; however, it is unknown whether these samples were collected in surface or subsurface soil. The RFI concluded that the area was well characterized and that no further investigative work or corrective measures studies were required (Ref. 10).

SWMU 26 - C-10 Scrubber: This unit consisted of two scrubbing columns approximately 25 feet tall and four feet in diameter. The unit was located in the central portion of the North Plant and was used to scrub chlorine and nitrogen dioxide. This unit was identified in the RFA and recommended for an RFI based upon concern for releases of contaminants to air; however, no subsequent information is available.

SWMU 30 - North Plant Waste Oil Accumulation Area: This unit was an outdoor drum staging area located in the south section of the North Plant, downgradient of the Inactive North Plant Surface Impoundment (SWMU 23). The unit consisted of a concrete pad surrounded by concrete curbing to serve as secondary containment, and was covered by a roof. The unit was used for staging drums of new and waste lubricant oils prior to shipment off site for recycling. Soil samples were collected as part of the RFI (October 2000) for benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH). TPH contamination in surface soil was confirmed in the northwest edge of this area at concentrations up to 15,431,000 µg/kg. During the RFI, the impacted soil was visually stained, thus it was recommended that the discolored soil be excavated and removed as part of future corrective actions and that confirmatory samples be collected (Ref. 10).

SWMU 33 - North Plant Drainage Ditch: This unit is an unlined drainage ditch that was used to convey storm water from the northern non-process areas of the North Plant and the southern non-process areas of the South Plant to Stout's Bayou. This unit was identified in the RFA and an RFI was recommended based upon the fact that there was a possibility that hazardous constituents had migrated to this area through the on-site drainage ditch network; however, no subsequent information is available.

SWMU 34 - Surplus Equipment Storage: Two surplus equipment storage areas were utilized at the facility. The main storage area was located at the western edge of the South Plant at the head of the South Plant Drainage Ditch (SWMU 13), while the second storage area was located at the western edge of the North Plant. The areas were used for temporary storage of old equipment and other scrap metal. The RFI Report indicates that most items had been removed from the areas for recycling (Ref. 9). Soil samples were collected as part of the RFI (October 2000). Results indicated that arsenic (4,700 µg/kg) was present above the MDEQ Tier 1 TRG for Restricted Use; however, it is unknown whether the samples were collected in surface or subsurface soil. The RFI concluded that the area was well characterized and no further investigative work or corrective measures studies were required (Ref. 10).

AOC 1 - Fish Pond: According to the May 2004 Draft Preliminary Assessment (PA), the fish pond was located at the site prior to construction of the North Plant. The pond is located adjacent to the North Plant; thus, MDEQ indicates it was remote from all pesticide operations in the South Plant. No additional information on this AOC was found.

AOC 2 - Drum Storage Area: This AOC consisted of an 80 foot by 80 foot area that was temporarily used for drum storage in 1980. The area was located just to the northeast and

immediately adjacent to the Dinoseb Drumming Area (SWMU 9). No additional information on this AOC was found.

AOC 3 - South Plant Booster Pumps: According to the PA, the South Plant Booster Pumps Head Tanks were located in the south-central portion of the South Plant, adjacent to the railroad tracks. These tanks were incorporated within SWMU 22 during the RFA. No additional information on this AOC was found, and recent descriptions of SWMU 22 do not mention the tanks.

AOC 4 - Chemical Crypt: According to the PA, sewage from the South Plant historically flowed through a septic tank and discharged to the South Impoundment (SWMU 3) via a pea gravel drainfield prior to treatment in the Activated Carbon Treatment Unit. This septic tank was located between the Inactive Landfill (SWMU 2) and the Surface Impoundment (SWMU 3) in the South Plant. No additional information on this AOC was found.

In addition to the identified SWMUs and AOCs in available documentation that are outlined above, two other units/areas are mentioned that have not been investigated but that may have had impact on surrounding environmental media. The Formaldehyde Unit is described below. In addition, the PA mentions that VCC previously pursued an operation to produce aqueous hydrochloric acid from the toxaphene operation byproduct (Ref. 16). No additional information on this operation or the unit/area involved was found.

Formaldehyde Unit - As mentioned previously, Gulf Chemical purchased the South Plant facility in 1964 and added a formaldehyde unit in 1966. The unit was later owned by Perkins Company. Operations at this unit have discontinued. According to the PA, the formaldehyde unit was owned and operated by Borden Chemical. The unit occupied a small portion of the South Plant and was not separated from the rest of the plant. There was no fencing or other barriers to prevent cross-contamination. During an MDEQ site visit in October 2002, it was observed that the unit had been removed. This unit was not investigated as part of the VCC RFI, as it was not owned or operated by VCC.

Groundwater

The uppermost water-bearing zone at VCC is encountered approximately six feet below ground surface (bgs). This shallow aquifer is approximately 40 feet thick and located almost entirely within a layer of Pleistocene loess (silt). Flow in this aquifer is generally south-southeast (SSE) toward Hennessey's Bayou at velocities ranging from 5.8 to 35.9 feet per year. A layer of clayey fill material above the loess acts as a "cap" and inhibits vertical migration of contaminants to groundwater. Byram marl of the Vicksburg Formation is located beneath the loess and serves as the bottom of the shallow water-bearing zone. The marl ranges in thickness from approximately 30 to 50 feet thick. The argillaceous, massive, and medium dense character of the marl inhibits any significant movement of water through this unit, and there is no evidence of secondary permeability (Ref. 11). Thus, the shallow aquifer (and contamination therein) appears to be

hydraulically isolated from deeper aquifers in the vicinity of the site. However, no data were found in the file material to confirm that the deeper aquifers have not been impacted. Unlike the deeper Catahoula and Forrest Hill aquifers, the shallow aquifer at VCC is characterized by low lateral flow and yield characteristics. As a result, despite its classification as a Class II B aquifer (Ref. 1), its usability as a potential domestic water supply is limited.

Groundwater investigations completed to date show that the shallow aquifer at VCC has been impacted by historic manufacturing and construction activities. Five separate plumes of contamination were identified at VCC. A brief description of each plume is presented below (Ref. 11).

- An **arsenic** plume is present in the middle of the South Plant. The downgradient edges of this plume are delineated by wells MW-9, MW-17, and MW-18. This contamination may be associated with former manufacturing of arsenical pesticides at SWMUs 11, 12, and 15. However, high background levels of arsenic in soil and groundwater have also been identified in this area and may be contributing to the observed concentrations.

- **Dinoseb** contamination has been reported in groundwater beneath the southwestern corner of the South Plant. This contamination is believed to be associated with several SWMUs, including the Inactive Landfill (SWMU 2), the Former Dinoseb Production Area (SWMU 7), and the adjacent Railroad Area (SWMU 20). In the landfill area, dinoseb contamination is present at temporary wells LS-2, LS-4, and LS-5. RFI data indicated that dinoseb contamination had not yet reached wells MW-5, MW-6, and MW-7 above applicable standards. Along the railroad tracks, the dinoseb plume is bounded by permanent wells MW-10 and MW-12, and by temporary well 20-19.

- A localized area of **toxaphene** contamination has been reported at well MW-6 in the far southwestern corner of the South Plant. Toxaphene has not been detected in surrounding wells except for a single low level detection (0.05 parts per billion) in well MW-7, which is believed to have been an analytical anomaly. Toxaphene concentrations in well MW-6 appear to be declining and were reported as nondetect in June 2001. Consequently, no toxaphene plumes were present in groundwater at VCC as of June 2001. Nevertheless, the November 2001 Draft Groundwater Assessment Report (GWAR) proposed continued monitoring of wells in the southwestern corner of the site for toxaphene contamination.

- Various volatile organic compounds (**VOCs**) have been detected in groundwater at VCC. Four localized plumes have been identified and are believed to be associated with small historical spills. The VOC plume in the vicinity of the North Plant Equalization and Neutralization Pond (SWMU 23) is situated around nested wells PZ-20 and PZ-22 and bounded by wells PZ-23 and PZ-24. At the Inactive Landfill (SWMU 2), VOC contamination is located in two plume areas around temporary wells LS-2 through LS-5. As of June 2001, the downgradient edge of this contamination had not yet reached wells MW-5, MW-6, and MW-7. In the railroad area, VOC contamination is focused around

wells 20-21, 20-22, and MW-12C. This plume is bounded by MW-10 and MW-12, but has not yet reached well MW-11.

- **Atrazine and cyanazine** have been infrequently detected at trace concentrations in groundwater along the Railroad Area (SWMU 20). Atrazine has also been detected in groundwater beneath the Inactive Landfill (SWMU 2) at concentrations exceeding MDEQ Tier 1 TRG values, but surrounding wells report nondetected results. The GWAR proposed no additional monitoring for these constituents.

Although annual groundwater assessment reports were required by the Consent Decree, VCC proposed semiannual groundwater monitoring in the Draft GWAR from November 2001 (Ref. 11). However, water quality in the shallow aquifer has not been evaluated since VCC filed for bankruptcy in 2002.

Surface Water

Several bayous are located in the vicinity of VCC. Stout's Bayou flows southward along the eastern property boundary from Rifle Range Road, past the North Plant and Inactive Landfill (SWMU 2), to the southeastern corner of the site where it merges with Hatcher Bayou to form Hennessey's Bayou. Hennessey's Bayou flows westward along the southern edge of VCC past the Inactive Landfill (SWMU 2) and then to the southwest along the Illinois Central railroad tracks. Hennessey's Bayou eventually flows into the Mississippi River several miles downstream of the site. These bayous are not used for drinking water or recreational purposes, and there are no drinking water intakes on these waterways within three miles downstream of the facility. The bayous are limited to freshwater fish and wildlife habitat.

The shallow aquifer at VCC is hydraulically connected to Stout's Bayou and Hennessey's Bayou. As stated previously, the general groundwater flow direction beneath VCC is SSE toward Stout's Bayou and Hennessey's Bayou. See Figure 3-5 in the Draft GWAR (Ref. 11) for a cross-sectional diagram showing the depth of Hennessey's Bayou in relation to site-specific hydrogeology; this diagram confirms the potential for interaction between shallow groundwater and surface water. Contaminated groundwater from VCC has the potential to discharge to surface water in both Stout's Bayou and Hennessey's Bayou. Surface water drainage has also been observed flowing untreated into Stout's Bayou (Ref. 15). Surface water and sediment sampling conducted in the bayous in 1987 showed increasing organic contaminant concentrations downstream of VCC (Ref. 1).

D. CORRECTIVE ACTION STATUS

As stated in the Facility Description above, RFA and RFI efforts have been completed for the VCC site under a RCRA Corrective Action Consent Decree dated January 23, 1992 (Ref. 3). Various documents on potential corrective measures were submitted by VCC prior to its bankruptcy declaration in 2002, and it appears that some corrective action activity has occurred at

SWMUs 1, 9, and 17. EPA approved several interim measures at VCC including a Temporary Unit (TU) in August 1995 and a CAMU in February 1998. VCC conducted treatability studies in the TU, which indicated that biotreatment could successfully treat pesticide-contaminated soil. VCC had been placing treated soil in the CAMU prior to declaring bankruptcy and abandoning the site. In addition, at the end of 2001, a sample of arsenic contaminated groundwater was sent off site for testing to determine whether the ladder brake fern or edenfern (known to hyperaccumulate arsenic in its stems and fronds) could be used to remove arsenic from the water. According to subsequent monthly progress reports, this testing was successful in reducing arsenic concentrations in the sample from over 200 mg/kg to 3.6 mg/kg in less than nine months (Ref. 14). No further data or reporting on this testing were available in the file material, and it is assumed that the study was never formally completed due to VCC's insolvency.

In March 2002 , a CMS was submitted by the facility, outlining plans for addressing remaining soil and groundwater contamination on the property (Ref. 13). The CMS recommended corrective action for soil at SWMUs 11, 12, and 15 due to dioxin and furan contamination, and at SWMU 20 due to dinoseb and toxaphene contamination. No corrective actions were proposed for any other soil contamination based on risk assessment considerations (Ref. 13). The CMS also recommended corrective actions for the arsenic, dinoseb, and VOC plumes in shallow groundwater. However, this document was never finalized, and all plans for corrective action were put on hold in 2002 due to bankruptcy.

E. SITE INVESTIGATION SUMMARY/EXPOSURE ASSESSMENT

At various times between 1984 and 2001, groundwater, soil, surface water, and sediment have been investigated at the VCC facility. A brief outline of the impacts on each media is presented below.

Groundwater: As discussed above, several plumes of contamination have been identified in shallow groundwater at VCC. Groundwater investigation efforts were conducted during the RFI (between September 1991 and May 2001) and during a separate site-specific phase of investigation intended to complete groundwater delineation in September 2001. Table 1 below presents the highest contaminant concentrations identified in groundwater at each SWMU during the RFI and supplemental investigation. Only concentrations exceeding MDEQ Tier 1 TRGs were included.

Table 1: Maximum Exceedances in Groundwater at VCC SWMUs
RFI Sampling – 1993 through 2001

SWMUs	Contaminant	Well	Maximum Concentration (µg/L)	MDEQ Tier 1 TRG Value (µg/L)

2	Acetaphenone	LS5-W	18.92	0.0416
	Arsenic	MW-5	70	50
	Atrazine	LS2-W	478	3
	bis(2-ethylhexyl)phthalate	LS3-W	474	6
	Carbon tetrachloride	LS4-W	126	5
	Chloroform	LS2-W	221	0.152
	Dinoseb	LS2-W	8,714	7
	4-Nitrophenol	LS5-W	2,359	292
9	Arsenic	TP-1	378	50
	Trichloroethylene	TP-1	68	5
11/12/15	Arsenic	I-W-G	288,000	50
	Carbon tetrachloride	MW-17A	7.25	5
	Chloroform	MW-17B	1.43	0.152
	Dinoseb	Unnamed Semipermanent Well	1,387	7
	4-Nitrophenol	Unnamed Semipermanent Well	4,777	292
20	Atrazine	20-22-W	146	3
	Benzene	20-21-W	23.7	5
	Bromodichloromethane	20-21-W	296	1.08
	Carbon tetrachloride	20-21-W	357,500	5
	Chloroform	20-21-W	37,380	0.152
	Chloromethane	20-21-W	126	1.49
	1,2-dichloroethane	20-21-W	321	5
	1,1-dichloroethene	20-21-W	54.6	7
	1,2-dichloroethene (total)	20-21-W	1,758	70
	1,2-dichloropropane	20-21-W	42.3	5
	Dinoseb	20-20-W	18,821	7
	Methylene chloride	20-21-W	908	5
	1,1,2-trichloroethane	20-21-W	290	5

	Trichloroethylene	20-21-W	1,346	5
	Vinyl chloride	20-22-W	46.5	2
23	Bromodichloromethane	PZ-22-B	66	1.08
	Bromoform	PZ-22-B	160	2.33
	Chloroform	PZ-20-B	1,700	0.152
	Dibromochloromethane	PZ-22-B	78	0.126

Overall, historical shallow groundwater investigation efforts appear to be adequate in terms of coverage area and analytical scope. The existing monitoring well and piezometer network also appears to be sufficient based on results of the 2001 groundwater sampling event. Although proposed in the Draft GWAR (Ref. 11), semiannual groundwater monitoring has not yet been initiated at VCC. Consequently, current groundwater contaminant concentrations are unknown. In addition, the current areal extent of groundwater contamination is unknown.

The shallow aquifer is classified as a Class II-B aquifer; however, its usability as a potential domestic water supply is limited as described above (Ref. 1). Regardless, contamination in the shallow aquifer at the site discharges directly to the downgradient Stout's and Hennessey's Bayous. These bayous are not used for drinking water or recreational purposes, and there are no drinking water intakes on these waterways within three miles downstream of the facility. Thus, ingestion of contaminated groundwater by off-site residents is considered an incomplete exposure pathway.

Although active remediation is not occurring at the site, ERC workers are currently operating the wastewater treatment system on an as-needed basis. Shallow groundwater is encountered at less than ten feet bgs; thus, direct contact to contaminated groundwater should be considered for the ERC workers (considered to be on-site construction workers for the purpose of this data gap assessment). However, this is considered an incomplete exposure pathway because current on-site activities do not involve intrusive digging to groundwater (Ref. 17). If any intrusive activities were to occur, the potential exposure would be insignificant based upon the fact that the ERCs are assumed to wear appropriate personal protective equipment (PPE) and follow Occupational Safety and Health Administration (OSHA) guidelines.

Air: No indoor or outdoor air sampling data were identified in the available file material.

Outdoor Air

The site property is currently inactive. However, MDEQ's ERC (Ferguson Harbor) is providing 24-hour security and is operating the wastewater treatment system on an as-needed basis.

Regardless of their presence at the site, on-site exposure to outdoor air is not expected to be a concern because employees of Ferguson Harbor are expected to follow OSHA guidelines, including utilizing appropriate PPE and conducting outdoor air monitoring as necessary.

The PA report indicates that numerous complaints were filed by citizens of Vicksburg in the early 1970's due to concerns over vapor or gaseous emissions emanating from the VCC plant. MDEQ confirms that several isolated releases of vapors from individual processing areas have occurred during the plant's operational history. However, given that the site ceased operations in March 2002, releases to outdoor air of vapor or gaseous emissions associated with plant operations are no longer a concern. No recent assessment has been conducted to evaluate the potential for on-site contaminants to impact off-site outdoor air. However, limited migration of contaminants bound to airborne particulate matter is expected at the VCC site because the surface of the plant site is predominantly covered with concrete and asphalt (Ref. 17). Although VOCs are present in shallow groundwater, migration of VOCs from groundwater into outdoor air is not expected to be of concern due to the natural dispersion of contaminants once they reach the surface.

Indoor Air

The site property is currently inactive. However, MDEQ's ERC (Ferguson Harbor) is providing 24-hour security and is operating the wastewater treatment system on an as-needed basis. The actual use of on-site buildings by Ferguson Harbor employees is expected to be limited. Regardless of their presence at the site, on-site exposure to indoor air is not expected to be a concern because employees of Ferguson Harbor are expected to follow OSHA guidelines by utilizing appropriate PPE and/or conducting indoor air monitoring as necessary.

Although volatile contaminants are present in on-site shallow groundwater, migration of these volatile contaminants off site beneath residential and/or commercial structures is unlikely to be a concern. As previously mentioned, shallow groundwater at the site is hydraulically connected to surface water in downgradient Stout's and Hennessey's Bayous, which are located adjacent to the facility on the east/southeast. As of June 2001, groundwater data indicated that the downgradient edge of the volatile contamination in shallow groundwater had not yet reached the wells upgradient of the Bayous (e.g., MW-5, MW-6, MW-7, MW-10 and MW-12), indicating that volatile contamination in shallow groundwater had not migrated off site. Regardless of the lack of data from June 2001 to the present, if shallow groundwater contamination has migrated further downgradient it would discharge to the bayous. The bayous serve as a barrier to off-site migration of shallow impacted groundwater to adjacent properties; thus, migration of volatile constituents into indoor air at off-site locations is not a concern at the VCC site.

Surface/Subsurface Soil:

A discussion of the investigation of on-site soils is presented in Section C. For a map of the contaminated soil areas by SWMU, see Figure 2-1 of the CMS, Site Wide Soil Contamination

with Areas of Contamination Greater Than MDEQ Tier 1 TRG Table Values for Restricted Use Shown (Ref. 13). Table 2 below presents contaminant concentrations exceeding MDEQ Tier 1 TRGs for Restricted Use in surface/subsurface soil at each SWMU during the RFI; the SWMU containing the highest concentration is bolded.

Table 2: Maximum Exceedances in Surface/Subsurface Soil at VCC

	Contaminant	Maximum Concentration (µg/kg)	Tier 1 TRG for Restricted Use (µg/kg)	SWMUs with Exceedances
Surface Soil	Arsenic	501,000	3,820	5; 13; **11,12,15**; 20
	Dinoseb	1,078,058	204,000	**20**
	Total petroleum hydrocarbons (TPH)	15,431,000	300,000 (GRO) 350,000 (DRO)	**30**
	Toxaphene	110,964	5,200	**20**
Subsurface Soil	Arsenic	241,000	3,820	2; 5; **11,12,15**
	Carbon tetrachloride	6,659	569	**2**
	Chloroform	2,186	478	**20**
	Dinoseb	8,282,596	204,000	**2**
	Toxaphene	19,210	5,200	**2**

All soil contamination at the VCC site is maintained within property boundaries. According to MDEQ, a fence surrounds the plant site and surface impoundment with the exception of the area along the Inactive Landfill (SWMU2) that is adjacent to Hennessey's Bayou (Ref. 17). The fencing serves to effectively restrict public access to the property. Currently, only MDEQ employees and ERC personnel (Ferguson Harbor) are allowed on the site to ensure site security and maintain the rainwater collection system.

Based upon the current site status, on-site construction workers may become exposed to contaminated on-site surface soil when at the site ensuring site security and while maintaining the rainwater collection system. Regardless of their presence at the site, these on-site construction workers are not expected to experience significant exposure to on-site soil contamination as they are expected to follow OSHA guidelines and use the appropriate PPE to prevent exposure.

Given the fact that a fence surrounds the majority of the site, off-site receptor exposure to on-site soil contamination is not currently considered a concern. Access to the site via Hennessey's Bayou appears to be very difficult. Thus, exposure by off-site receptors is unlikely; however, this information should be confirmed.

As mentioned above, in addition to the identified SWMUs and AOCs that are outlined in Section C, several other potential units/areas are present on site that have not been investigated but that may have impacted surrounding environmental media. Limited information is available on the four AOCs identified in Section C. AOC 1 does not appear to warrant further investigation, as it was located away from all pesticide operations in the South Plant. AOC 2 was only used temporarily for drum storage and is located immediately adjacent to the Dinoseb Drumming Area (SWMU 9), which has been adequately characterized and recommended for NFA. It should be verified that AOC 2 was investigated with SWMU 9 during the RFI. Available information for AOC 3 indicates that the booster pumps were incorporated with SWMU 22 during the RFA (Ref. 16); it should be verified that the pumps were investigated with SWMU 22 during the RFI, as this is not stated in the RFI Report (Ref. 10). Additional information should be gathered for AOC 4 to identify any potential environmental impacts. This area was located between SWMUs 2 and 3, and was potentially investigated during the RFI along with these SWMUs; however, this information should be verified. Potential contamination from the Borden Formaldehyde Unit should be investigated, as this plant was totally within site boundaries and no information is currently available on possible environmental impacts. Other potential areas of concern, such as the VCC aqueous hydrochloric acid operation that is mentioned in the PA, should be researched and potentially investigated further.

Surface Water/Sediment: In February 1987, surface water and sediment samples were collected from the bayous adjacent to VCC. Eight surface water and eight stream sediment samples were collected, but specific sampling locations are unknown. According to the Endangerment Assessment (Ref. 1), the samples showed an increase in organic concentrations downstream of the facility. These increases in contamination levels may be attributable to contaminated surface water runoff, contaminated groundwater discharge into the bayous, or both. However, attribution to contaminated groundwater discharges seems fairly unlikely given the documented extent of groundwater plumes in 2001 (i.e., not yet reaching the bayous). Maximum concentrations of selected contaminants detected in surface water and sediment during that effort are presented in Tables 3 and 4 below, respectively.

Table 3: Maximum Exceedances in Surface Water at VCC (February 1987)

Contaminant	Sample Location	Maximum Concentration (µg/L)	MDEQ Tier 1 TRG for Groundwater (µg/L)	PRGs for Tap Water (µg/L)
Arsenic	E-1	89	50	0.0045
Atrazine	E-1	26	3	0.3
Bromodichloromethane	B-2	11	1.08	0.18
Carbon tetrachloride	D-1	1.3	5	0.17
Chloroform	A-3	16	0.152	0.53

Table 3: Maximum Exceedances in Surface Water at VCC (February 1987)				
Contaminant	**Sample Location**	**Maximum Concentration (µg/L)**	**MDEQ Tier 1 TRG for Groundwater (µg/L)**	**PRGs for Tap Water (µg/L)**
Cyanazine	E-1	6.8	0.0797	0.08
Dibromochloromethane	A-1	2.7	0.126	0.13
Dinoseb	E-1	4.6	7	36
Trichloroethylene	E-1	11	5	0.028

Table 4: Maximum Exceedances in Stream Sediment at VCC (February 1987)				
Contaminant	**Sample Location**	**Maximum Concentration (mg/kg)**	**MDEQ Tier 1 TRG Unrestricted (mg/kg)**	**MDEQ Tier 1 TRG Restricted (mg/kg)**
Arsenic	E-1s	44	426	3,820
Atrazine	E-1s	970	2,880	25,800
Chloroform	A-3s	8.4	312	478

While several contaminants in surface water exceeded standards for groundwater and tap water, concentrations in sediment did not exceed MDEQ criteria for soil. Nevertheless, it is clear from the historic data that both media have been impacted to some degree. Sufficient information is not available in the file material to determine the exact location of these impacts.

F. DATA GAPS AND BARRIERS TO THE EI DETERMINATION PROCESS

General Data Gap(s)

The most significant general data gaps include the lack of available information on several SWMUs, AOCs, or other potential units or areas of concern, as outlined below:

1. The C-10 Scrubber (SWMU 26) and the North Plant Drainage Ditch (SWMU 23) were identified in the RFA and recommended for an RFI based on concerns for contaminant releases; however, no further information indicates that these SWMUs were ever investigated.

2. The following assumptions must be verified: AOC 2 was investigated with SWMU 9 during the RFI, the AOC 3 booster pump tanks were investigated with SWMU 22, and AOC 4 was investigated during the RFI along with SWMUs 2 and 3. If any of these assumptions are incorrect, additional information should be sought for these AOCs. Likewise, additional information is needed for AOC 4 in order to determine whether any

potential contamination resulting from this area has been adequately characterized.

3. No investigations have been conducted at the Formaldehyde Unit to date, and no information is available on the VCC aqueous hydrochloric acid operation that is mentioned in the PA. Any on-site units or areas that have not been investigated but that may impacted surrounding environmental media should be researched and further investigated based upon the findings.

CA 725 Data Gaps

Table 3 identifies potentially complete exposure pathways for the receptors of concern (i.e., off-site residents, on-site construction workers, trespassers, and recreational users) for the VCC site. On-site workers are not currently a concern for this property as the facility is inactive. MDEQ and Ferguson Harbor workers are being considered on-site construction workers, for the purpose of this DGA, given their potential to conduct intrusive activities during on-site remedial activities. Day-care occupants are not currently of concern for this industrial property, nor are food sources.

Table 5: Current Potentially Complete Exposure Pathways at VCC

"Contaminated" Media	Residents (Off site)	Construction Workers (On site)	Trespasser	Recreational Users
Groundwater	No	No	–	–
Indoor Air	No	No	–	–
Surface/Subsurface Soil	No	No	Unknown	No
Surface Water	Unknown	No	No	Unknown
Sediment	Unknown	No	No	Unknown
Outdoor Air	No	No	No	–

Groundwater

The PA indicates that the wells closest to the site are located approximately three-quarters of a mile to one mile away. In addition, no public water wells are located within a four-mile radius of the site, with the City of Vicksburg water wells located north and upgradient of the site. Thus, it is assumed that the site is served by public supply wells; however, this information should be confirmed.

Surface/Subsurface Soil

Trespasser access to the site via the unfenced portion of the Inactive Landfill (SWMU 2) along Hennessey's Bayou is presumed to be unlikely, due to the presence of site security provided by

Ferguson Harbor and potential vegetation or other physical obstacles. However, this information should be confirmed.

VCC suggested an arsenic clean-up value of 20,000 µg/kg for the site, based on the wide range of values detected near the site in a U.S. Geological Survey (USGS) study and the variation of background sample concentrations found at VCC (Ref. 7). However, it is unknown whether this value has been approved; thus, the MDEQ Tier 1 TRGs for Restricted Use were used to screen the soil data. Many of VCC's cleanup recommendations are based upon the assumption that arsenic-contaminated soil below 20,000 µg/kg will not require corrective action. This issue should be clarified prior to preparation of the CA725 EI determination.

Additionally, it is unknown whether the arsenic contamination at SWMUs 22 and 34 is present in surface or subsurface soil.

Surface Water/Sediment

No current data are available for surface water and sediment in the bayous adjacent to the VCC site. Given that shallow groundwater discharges directly to the bayous, it is likely that shallow surface water impacts could adversely affect surface water quality in the bayous. Groundwater samples collected in June 2001 indicated that impacted groundwater had not reached the bayous; however, groundwater samples have not been collected since June 2001. Thus, the current extent of shallow groundwater impacts are unknown.

Surface water and sediment samples collected from the bayous in 1987 confirmed the presence of several site-related contaminants. The PA indicates that there is a large field used for recreation and/or a church playground downstream and within the flood plain of Hennessey's Bayou and also indicates that Hennessey's Bayou and the Mississippi River are utilized for recreational purposes such as fishing and swimming (Ref. 16). This area is located outside of the facility boundaries and could be accessed by residents, especially children, living in the surrounding area. Thus, the potential for recreational and residential exposure to contaminants within the bayous is being considered a potentially complete exposure pathway. However, information provided from MDEQ indicates that the bayous do not contain enough water to support fishing or boating activities; this discrepancy should be resolved. Regardless, surface water and sediment samples should be collected from the bayous to determine the current level of impact.

CA 750 Data Gaps

Groundwater sampling data from VCC were collected during the RFI and subsequent supplemental investigation, and several plumes of contamination have been identified in the shallow aquifer. No additional characterization of the groundwater has been performed since 2001. As a result, a complete characterization of groundwater quality is needed before a CA 750 environmental indicator determination can be completed for VCC. This characterization should include sampling at all existing monitoring wells for arsenic, atrazine, cyanazine, dinoseb, 4-

nitrophenol, and VOCs. Additional permanent groundwater monitoring wells may need to be installed to determine the downgradient edge of contamination if findings from the initial sampling event show that significant plume migration has occurred. Additional rounds of groundwater sampling (i.e., resumption of a groundwater monitoring program) will also be required to determine if plume migration has stabilized. Atrazine and cyanazine concentrations should continue to be monitored in the vicinity of wells 20-21, 20-22, LS-2, and MW-7 to ensure that concentrations fall below applicable standards.

Groundwater beneath VCC is known to flow toward and discharge into Stout's Bayou and Hennessey's Bayou south and east of the site. Groundwater samples collected in 2001 indicated that impacted groundwater had not reached the bayous. However, groundwater samples have not been collected since 2001, and the current extent of shallow groundwater impacts are unknown. Surface water and sediment samples collected at and adjacent to VCC in 1987 showed site-related impacts. However, specific sampling locations from that event are unknown, and it is possible that these impacts are related solely to contaminated surface runoff. No additional surface water or sediment sampling has been conducted since 1987. Surface water sampling should be conducted so that, in the event that groundwater data indicate that contaminated groundwater is now discharging to the bayous, the impact to surface water quality can be evaluated.

G. RECOMMENDED COURSE OF ACTION

CA 725 Recommendations

Groundwater

1. Confirm that the VCC site is connected to the public water supply.

Surface/Subsurface Soil

1. Confirm that access to the site via the unfenced portion of the site between the Inactive Landfill (SWMU 2) and Hennessey's Bayou would be difficult for off-site receptors. If possible, the boundary should be fenced to eliminate the potential for off-site receptors to enter the property. Also, confirm that the existing fence is sufficient (i.e., in good condition) to prevent off-site receptors from entering the property.

2. Clarify whether the arsenic sampling data should be screened against the MDEQ Tier 1 TRG value for Restricted Use (3,820 µg/kg) or an approved site-specific background concentration.

3. Clarify whether the arsenic contamination in SWMUs 22 and 34 is present in surface or subsurface soil.

Surface Water/Sediment

1. Collect surface water and sediment samples from the bayous surrounding the VCC site. Samples should be collected upgradient of and along the site boundary in Stout's Bayou, along the site boundary and downgradient of the site in Hennessey's Bayou, and at one location in Hatcher Bayou upgradient of the confluence with Stout's Bayou. At a minimum, these samples should be analyzed for arsenic, atrazine, cyanazine, dinoseb, and VOCs. Results of this sampling program should be evaluated to determine the need for additional monitoring.

2. Confirm that Hennessey's Bayou has enough water to support fishing, boating, or other recreational activities that might result in exposure to contaminated surface water/sediment by recreators or off-site residents.

CA 750 Recommendations

Based on this data gap evaluation, the following course of action is recommended to address barriers to a positive CA 750 environmental indicator determination. Pertinent questions from the CA 750 form are identified in brackets at the end of each recommendation.

1. Resume groundwater monitoring on a semiannual or annual basis, with a minimum of two rounds of sampling. Samples should be collected from all existing monitoring well and piezometer locations for laboratory analysis. At a minimum, groundwater samples should be analyzed for arsenic, atrazine, cyanazine, dinoseb, 4-nitrophenol, and VOCs. Results of these two rounds should be evaluated to determine the need for additional monitoring and identify an appropriate analytical suite for future sampling events. If necessary based on new groundwater data, installation of additional monitoring wells may be needed to evaluate the current extent of groundwater contamination at VCC. [Questions 2 through 4]

2. Collect surface water and sediment samples from the bayous surrounding the VCC site. Samples should be collected upgradient of and along the site in Stout's Bayou, along and downgradient of the site in Hennessey's Bayou, and at one location in Hatcher Bayou upgradient of the confluence with Stout's Bayou. At a minimum, these samples should be analyzed for arsenic, atrazine, cyanazine, dinoseb, and VOCs. Results of this sampling program should be evaluated to determine the need for additional monitoring. [Questions 5 and 6]

3. Establish a program for ongoing monitoring of groundwater and surface water quality at VCC, as deemed necessary based on new sampling data, to ensure that any changes in the nature and extent of contamination will be readily identified. [Question 7]

REFERENCES

1. Endangerment Assessment for Cedar Chemical Corporation. October 30, 1989.
2. RCRA Facility Assessment – Interim Final Report. January 17, 1992.
3. Consent Decree Issued to VCC by EPA. January 23, 1992.
4. Application for Corrective Action Management Unit. June 1997.
5. Corrective Action Observation, Confirmatory Sampling and Analysis. March 11, 1999.
6. Internal EPA Memorandum Re: Evaluation of VCC's Status Under the RCRA Corrective Action EI Codes (CA725 and CA750). July 1999.
7. Interim Revised Corrective Measures Implementation Plan: SWMU 12, SWMU 11, SWMU 15. November 2000.
8. Letter from VCC to EPA Region 4 Re: Cedar Chemical Company. November 3, 2000.
9. RCRA Facility Investigation – Interim Final Report and Phase II Workplan. March 16, 2001.
10. RCRA Facility Investigation – Draft Final Report. August 2001.
11. Draft Groundwater Assessment Report. November 2001.
12. Letter from VCC to EPA Region 4 Re: Progress Report Number 117. January 8, 2002.
13. Corrective Measures Study. March 2002.
14. E-mail correspondence from Edenspace Systems Corporation to VCC Re: Vicksburg Chemical Fern Test. July 10, 2002.
15. Internal EPA Memorandum Re: Proposed Sampling at VCC. 2003.
16. Draft Preliminary Assessment Report. May 7, 2004.
17. E-mail correspondence from MDEQ to Booz Allen Hamilton. August 26, 2004.

FIGURE 1

FIGURE 2

FIGURE 3

FIGURE 4

TRUMBO, INC.

P.O. Box 2239
Memphis, TN 38101
(901) 948-7664

1106 Kansas Street
Memphis, TN 38106
FAX (901) 774-1308
NIGHT (901) 948-5716

- Tank Contents — North/South
  - Harcros Ownership
  - Bunge Ownership
  - Recycle
  - Scrap
- Drums — Recycle/Scrap
- Treatment Water
- Purge Water
- Address R/R Issues — USE Border letter
- Coordinate Soil/GW Sampling w/ MDEQ
  - Mass Spec/Training
- MDEQ — Get Ecosystems SWPPP
- Stormwater sampling during GW Sampling Event

CUSTOM FABRICATED PROCESS EQUIPMENT

ASME Pressure Vessels
Columns-Stills
Crystallizers
Hydrogenators
Vapor Bodies
Storage Tanks-Silos
Heat Exchangers
Condensers-Evaporators
U-Tube Bundles
Pressure Piping
Bins-Hoppers-Chutes

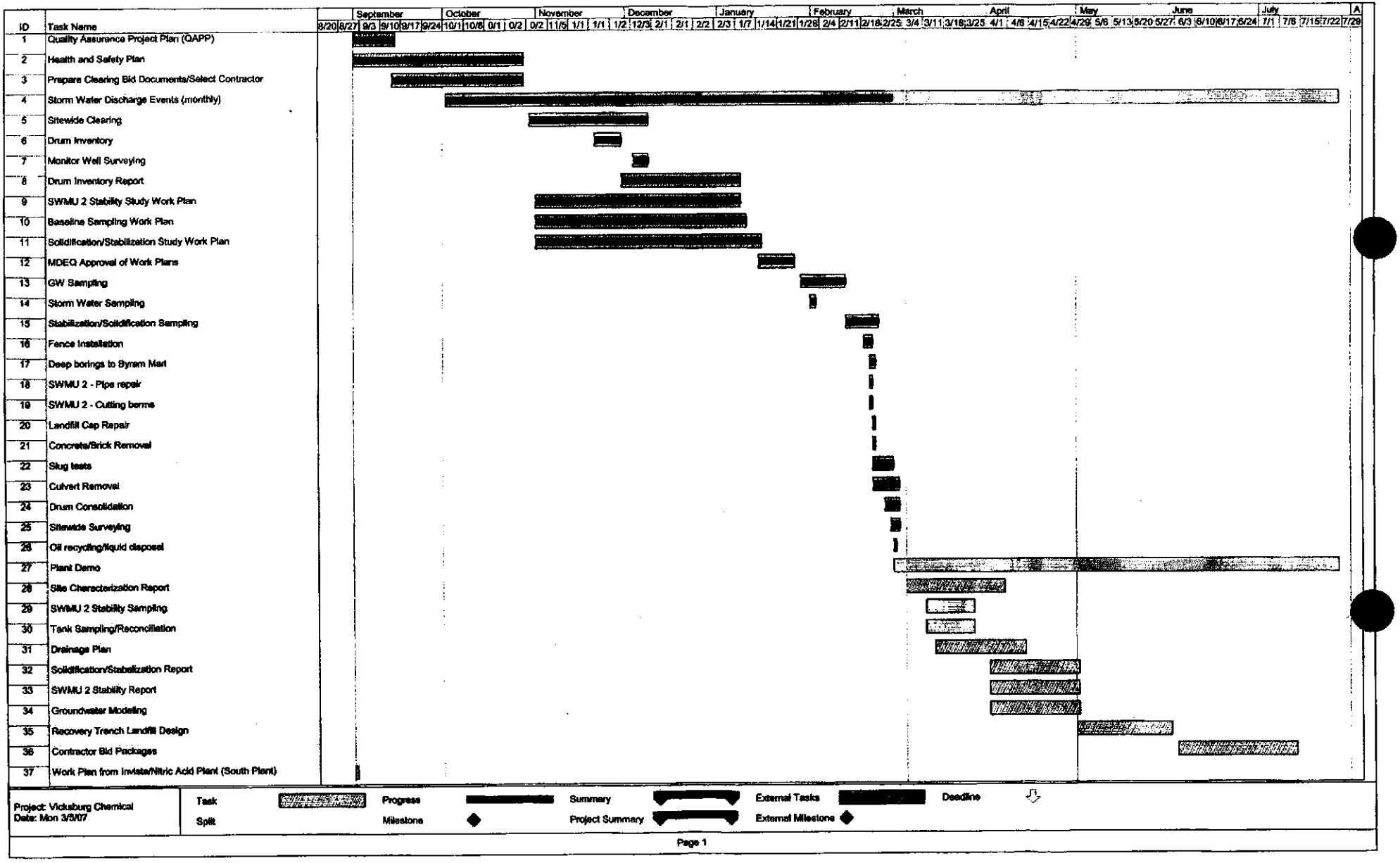
MECHANICAL CONTRACTING
FIELD SERVICES

Crane Work
Gen. Plant Maintainence
Process Piping
Storage Tank Erection
Boiler Repairs

TI-28

NIGHT (901) 948-5716

- Byron Morl — Double Cased
  — Jimmy Crellin/John Ellis
- Revise Proposal/Work Authorization


ID
Task Name
September
October
November
December
January
February
March
April
May
June
July
1 Quality Assurance Project Plan (QAPP)
2 Health and Safety Plan
3 Prepare Clearing Bid Documents/Select Contractor
4 Storm Water Discharge Events (monthly)
5 Sitewide Clearing
6 Drum Inventory
7 Monitor Well Surveying
8 Drum Inventory Report
9 SWMU 2 Stability Study Work Plan
10 Baseline Sampling Work Plan
11 Solidification/Stabilization Study Work Plan
12 MDEQ Approval of Work Plans
13 GW Sampling
14 Storm Water Sampling
15 Stabilization/Solidification Sampling
16 Fence Installation
17 Deep borings to Byram Marl
18 SWMU 2 - Pipe repair
19 SWMU 2 - Cutting berms
20 Landfill Cap Repair
21 Concrete/Brick Removal
22 Slug tests
23 Culvert Removal
24 Drum Consolidation
25 Sitewide Surveying
26 Oil recycling/liquid disposal
27 Plant Demo
28 Site Characterization Report
29 SWMU 2 Stability Sampling
30 Tank Sampling/Reconciliation
31 Drainage Plan
32 Solidification/Stabelization Report
33 SWMU 2 Stability Report
34 Groundwater Modeling
35 Recovery Trench Landfill Design
36 Contractor Bid Packages
37 Work Plan from Invista/Nitric Acid Plant (South Plant)
Project: Vicksburg Chemical
Date: Mon 3/5/07
Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline
Page 1

Trey Hess/HW/OPC/DEQ
06/01/2007 10:43 AM

To Henry Folmar/FS/OPC/DEQ@DEQ, Jackie Key/SW/OPC/DEQ@DEQ
cc Trey_Hess@deq.state.ms.us, Jerry_Banks/HW/OPC/DEQ
bcc
Subject Fish Tissue Chart - MS River

Henry/Jackie:

Take a look at the attached and help me frame some conclusions. Here is my first shot:

1. MDEQ took over responsibility for stormwater collection and untreated discharge in spring 2002 and continues today;
2. There is a declining trend in the Vicksburg area over time with latest data (2005) indicating "ND";
3. There is a declining trend as you move downstream from Vicksburg to Adams County;
4. Given #2 and #3, there appears to be no evidence of impact to aquatic life in the MS River that could be attributed to discharge from Vicksburg Chemical.

Note: Arsenic was "ND" for all stations at all times, this further supports the notion that there appears to be no evidence of impact to aquatic life in the MS River that could be attributed to discharge from Vicksburg Chemical.

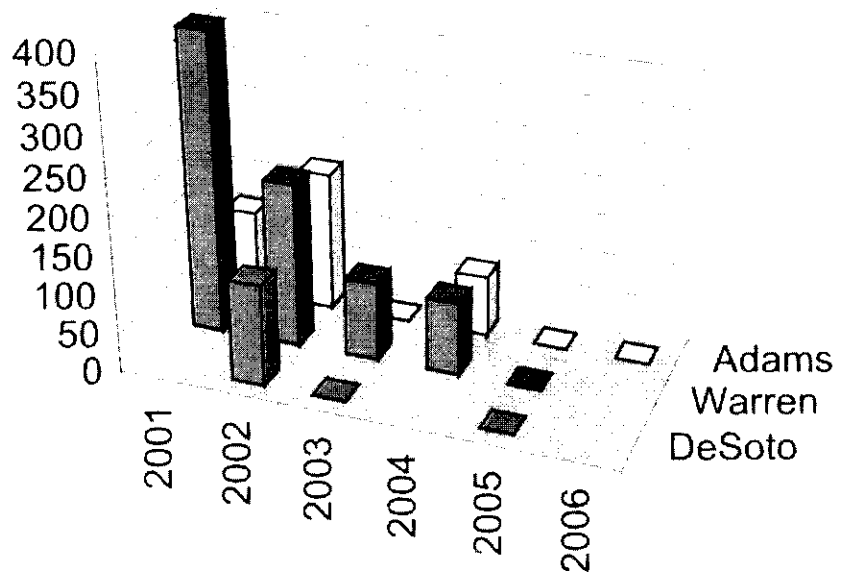
TREY

Fish Tissue Results.pdf

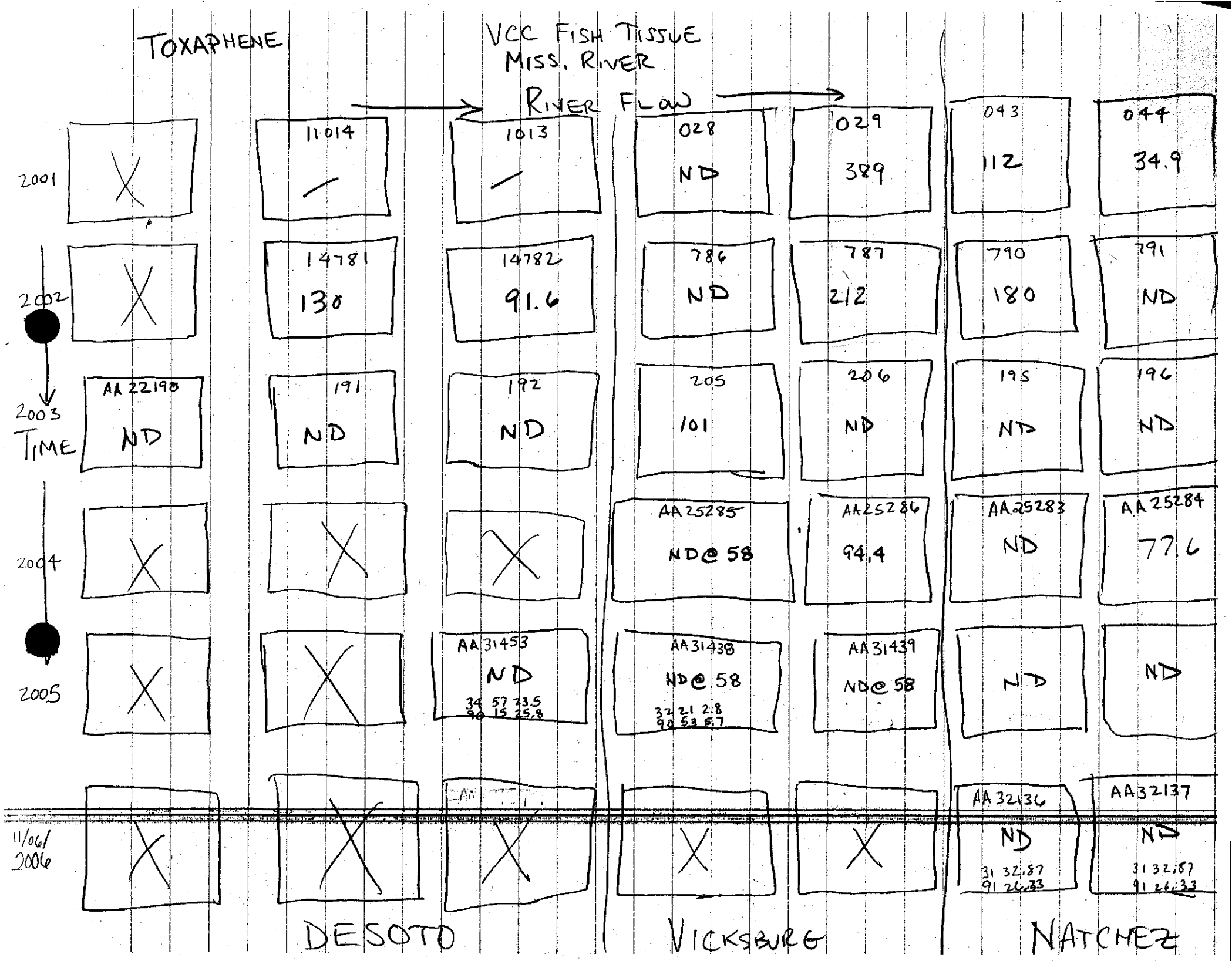
Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Fish Tissue Analysis

Toxaphene



	2001	2002	2003	2004	2005	2006
DeSoto		130	0		0	
Warren	389	212	101	94.4	0	
Adams	112	180	0	77.6	0	0


TOXAPHENE
VCC FISH TISSUE
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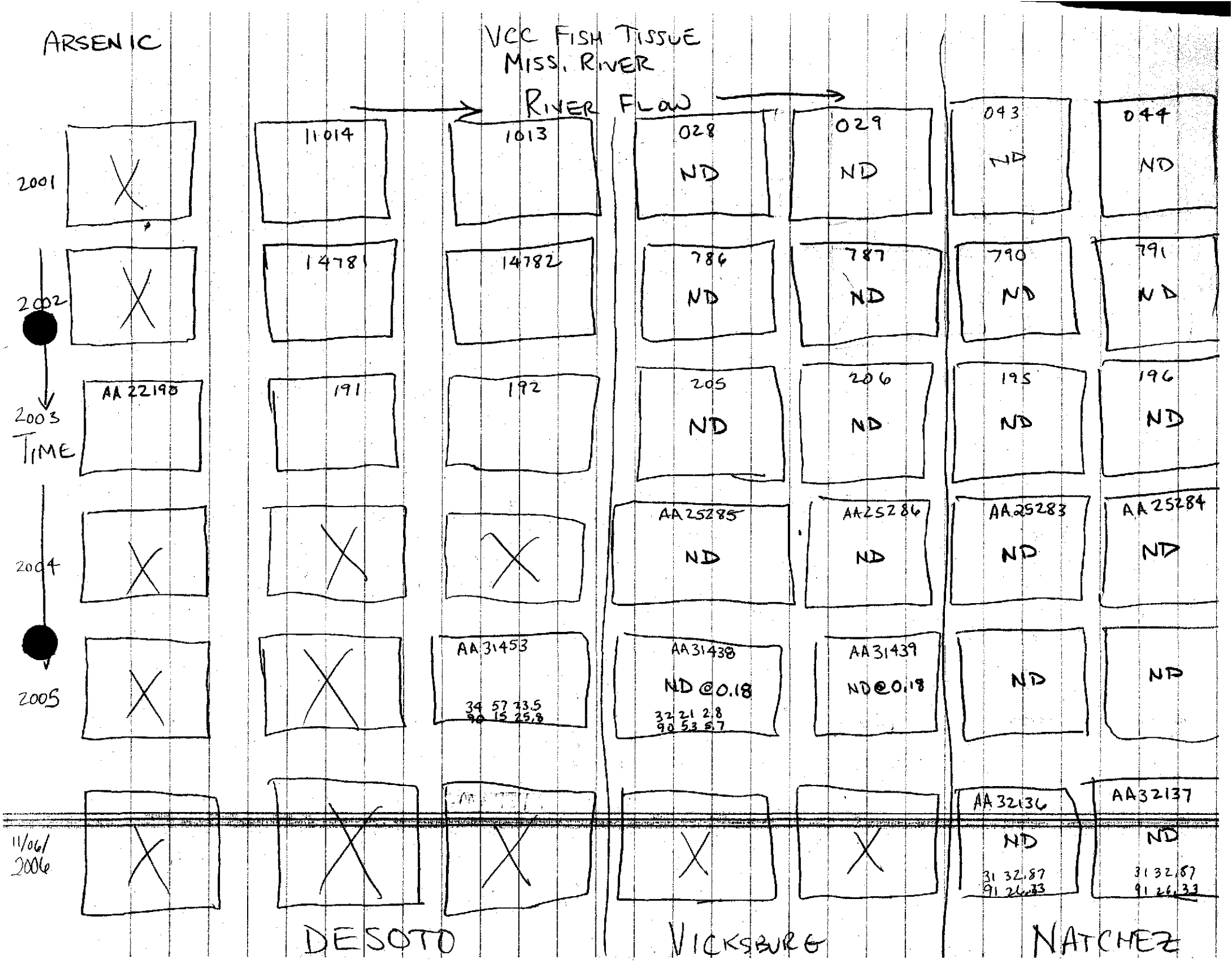
VICKSBURG
NATCHEZ


ARSENIC
VCC FISH TISSUE
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91 26.33
DESOTO
VICKSBURG
NATCHEZ

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 11/06/2006
Sample ID:	AA32136	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT NATCHEZ	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	11/06/2006
Other No:	AF06029	LIMS Login Time:	13:41
Permit No:		COC Date:	11/06/2006
Latitude:	31 32.87	COC Time:	1310
Longitude:	091 26.33	Project:	3315
County:		Study:	
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	Bridge Effects:
+ Ding Whap (ft):	Watershed Observations:
= Tape Down (ft):	Photograph ID: Disk #:
	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
Aluminum, Total in Fish Tissue	200.7	3.15	ug/g	0.78	BBRUCE	01/11/2007	01/11/2007
Arsenic, Total in Fish Tissue	200.7	<MQL	ug/g	0.18	BBRUCE	01/10/2007	01/10/2007
Cadmium, Total in Fish Tissue	200.7	<MQL	ug/g	0.78	BBRUCE	01/10/2007	01/10/2007
Chromium, Total in Fish Tissue	200.7	<MQL	ug/g	0.78	BBRUCE	01/11/2007	01/11/2007
Copper, Total in Fish Tissue	200.7	<MQL	ug/g	0.78	BBRUCE	01/11/2007	01/11/2007
Nickel, Total in Fish	200.7	<MQL	ug/g	0.76	BBRUCE	01/12/2007	01/12/2007
Lead, Total in Fish Tissue	200.7	<MQL	ug/g	0.78	BBRUCE	01/11/2007	01/11/2007
Selenium, Total in Fish	200.7	<MQL	ug/g	0.78	BBRUCE	01/10/2007	01/10/2007
Zinc, Total in Fish Tissue	200.7	<MQL	ug/g	10.0	BBRUCE	01/18/2007	01/18/2007
Mercury, Total Fish Tissue Method 7473	7473	<MQL	ppm	.5	LCOBB	12/08/2006	12/08/2006
4,4'-DDD	8081	<MQL	µg/kg	34	SCARBROUGH	12/13/2006	12/25/2006
4,4'-DDE	8081	<MQL	µg/kg	34	SCARBROUGH	12/13/2006	12/25/2006
4,4'-DDT	8081	<MQL	µg/kg	34	SCARBROUGH	12/13/2006	12/25/2006
Aldrin	8081	<MQL	µg/kg	23	SCARBROUGH	12/13/2006	12/25/2006

alpha-BHC	8081	<MQL	µg/kg	23	SCARBROUGH	12/13/2006	12/25/2006
Alpha-Chlordane	8081	<MQL	µg/kg	5.4	RBROUGH	12/13/2006	12/25/2006
beta-BHC	8081	<MQL	µg/kg	15	SCARBROUGH	12/13/2006	12/25/2006
Chlordane Tech	8081	<MQL	µg/kg	67	SCARBROUGH	12/13/2006	12/25/2006
Chlorpyrifos	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
delta-BHC	8081	<MQL	µg/kg	16	SCARBROUGH	12/13/2006	12/25/2006
Dicofol	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
Dieldrin	8081	<MQL	µg/kg	29	SCARBROUGH	12/13/2006	12/25/2006
Endosulfan I	8081	<MQL	µg/kg	20	SCARBROUGH	12/13/2006	12/25/2006
Endosulfan II	8081	<MQL	µg/kg	27	SCARBROUGH	12/13/2006	12/25/2006
Endosulfan sulfate	8081	<MQL	µg/kg	23	SCARBROUGH	12/13/2006	12/25/2006
Endrin	8081	<MQL	µg/kg	26	SCARBROUGH	12/13/2006	12/25/2006
Endrin aldehyde	8081	<MQL	µg/kg	34	SCARBROUGH	12/13/2006	12/25/2006
Endrine Ketone	8081	<MQL	µg/kg	40	SCARBROUGH	12/13/2006	12/25/2006
Gama-Chlordane	8081	<MQL	µg/kg	25	SCARBROUGH	12/13/2006	12/25/2006
gamma-BHC (Lindane)	8081	<MQL	µg/kg	17	SCARBROUGH	12/13/2006	12/25/2006
Heptachlor	8081	<MQL	µg/kg	27	SCARBROUGH	12/13/2006	12/25/2006
Heptachlor epoxide	8081	<MQL	µg/kg	21	SCARBROUGH	12/13/2006	12/25/2006
Hexachlorobenzene	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
Methoxychlor	8081	<MQL	µg/kg	58	SCARBROUGH	12/13/2006	12/25/2006
Mirex	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
Toxaphene	8081	<MQL	µg/kg	58.0	SCARBROUGH	12/13/2006	12/25/2006
DCB	8081	61	%	31-132	SCARBROUGH	12/13/2006	12/25/2006
LIPIDS	8081	.97	%		SCARBROUGH	12/13/2006	12/25/2006
TCMX	8081	56	%	38-134	SCARBROUGH	12/13/2006	12/25/2006

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 11/06/2006
Sample ID:	AA32137	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT NATCHEZ	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	11/06/2006
Other No:	AF06030	LIMS Login Time:	13:41
Permit No:		COC Date:	11/06/2006
Latitude:	31 32.87	COC Time:	1310
Longitude	091 26.33	Project:	3315
County:		Study:	
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	Bridge Effects:
+ Ding Whap (ft):	Watershed Observations:
= Tape Down (ft):	Photograph ID: Disk #:
	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
Aluminum, Total in Fish Tissue	200.7	3.94	ug/g	0.52	BBRUCE	01/11/2007	01/11/2007
Arsenic, Total in Fish Tissue	200.7	<MQL	ug/g	0.18	BBRUCE	01/10/2007	01/10/2007
Cadmium, Total in Fish Tissue	200.7	<MQL	ug/g	0.52	BBRUCE	01/10/2007	01/10/2007
Chromium, Total in Fish Tissue	200.7	<MQL	ug/g	0.52	BBRUCE	01/11/2007	01/11/2007
Copper, Total in Fish Tissue	200.7	<MQL	ug/g	0.52	BBRUCE	01/11/2007	01/11/2007
Nickel, Total in Fish	200.7	<MQL	ug/g	0.52	BBRUCE	01/12/2007	01/12/2007
Lead, Total in Fish Tissue	200.7	<MQL	ug/g	0.52	BBRUCE	01/11/2007	01/11/2007
Selenium, Total in Fish	200.7	<MQL	ug/g	0.52	BBRUCE	01/10/2007	01/10/2007
Zinc, Total in Fish Tissue	200.7	<MQL	ug/g	5.00	BBRUCE	01/18/2007	01/18/2007
Mercury, Total Fish Tissue Method 7473	7473	<MQL	ppm	.5	LCOBB	12/08/2006	12/08/2006
4,4'-DDD	8081	<MQL	µg/kg	34	ESCARBROUGH	12/13/2006	12/25/2006
4,4'-DDE	8081	<MQL	µg/kg	34	ESCARBROUGH	12/13/2006	12/25/2006
4,4'-DDT	8081	<MQL	µg/kg	34	ESCARBROUGH	12/13/2006	12/25/2006
Aldrin	8081	<MQL	µg/kg	23	ESCARBROUGH	12/13/2006	12/25/2006

alpha-BHC	8081	<MQL	µg/kg	23	SCARBROUGH	12/13/2006	12/25/2006
Alpha-Chlordane	8081	<MQL	µg/kg	5.4	RBROUGH	12/13/2006	12/25/2006
beta-BHC	8081	<MQL	µg/kg	15	SCARBROUGH	12/13/2006	12/25/2006
Chlordane Tech	8081	<MQL	µg/kg	67	SCARBROUGH	12/13/2006	12/25/2006
Chlorpyrifos	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
delta-BHC	8081	<MQL	µg/kg	16	SCARBROUGH	12/13/2006	12/25/2006
Dicofol	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
Dieldrin	8081	<MQL	µg/kg	29	SCARBROUGH	12/13/2006	12/25/2006
Endosulfan I	8081	<MQL	µg/kg	20	SCARBROUGH	12/13/2006	12/25/2006
Endosulfan II	8081	<MQL	µg/kg	27	SCARBROUGH	12/13/2006	12/25/2006
Endosulfan sulfate	8081	<MQL	µg/kg	23	SCARBROUGH	12/13/2006	12/25/2006
Endrin	8081	<MQL	µg/kg	26	SCARBROUGH	12/13/2006	12/25/2006
Endrin aldehyde	8081	<MQL	µg/kg	34	SCARBROUGH	12/13/2006	12/25/2006
Endrine Ketone	8081	<MQL	µg/kg	40	SCARBROUGH	12/13/2006	12/25/2006
Gama-Chlordane	8081	<MQL	µg/kg	25	SCARBROUGH	12/13/2006	12/25/2006
gamma-BHC (Lindane)	8081	<MQL	µg/kg	17	SCARBROUGH	12/13/2006	12/25/2006
Heptachlor	8081	<MQL	µg/kg	27	SCARBROUGH	12/13/2006	12/25/2006
Heptachlor epoxide	8081	<MQL	µg/kg	21	SCARBROUGH	12/13/2006	12/25/2006
Hexachlorobenzene	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
Methoxychlor	8081	<MQL	µg/kg	58	SCARBROUGH	12/13/2006	12/25/2006
Mirex	8081	<MQL	µg/kg	10	SCARBROUGH	12/13/2006	12/25/2006
Toxaphene	8081	<MQL	µg/kg	58.0	SCARBROUGH	12/13/2006	12/25/2006
DCB	8081	59	%	31-132	SCARBROUGH	12/13/2006	12/25/2006
LIPIDS	8081	.92	%		SCARBROUGH	12/13/2006	12/25/2006
TCMX	8081	60	%	38-134	SCARBROUGH	12/13/2006	12/25/2006

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
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ug/g: micrograms/gram
ppm: parts per million
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<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 12/06/2005
Sample ID:	AA31453	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT MS AND TENN LINE	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	07/31/2006
Other No:	AF05049	LIMS Login Time:	14:55
Permit No:		COC Date:	07/31/2006
Latitude:	34 57 23.5	COC Time:	1445
Longitude:	090 15 25.8	Project:	3315
County:	033 DESOTO	Study:	MS AMBIENT FISH TISSUE
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	08/23/2006	09/05/2006
4,4'-DDE		ND		34	JK	08/23/2006	09/05/2006
4,4'-DDT		ND		34	JK	08/23/2006	09/05/2006
Aldrin		ND		23	JK	08/23/2006	09/05/2006
alpha-BHC		ND		23	JK	08/23/2006	09/05/2006
Alpha-Chlordane		ND		5.4	JK	08/23/2006	09/05/2006
Atrazine		ND		200	JK	08/23/2006	09/05/2006
beta-BHC		ND		15	JK	08/23/2006	09/05/2006
Chlordane Tech		ND		67	JK	08/23/2006	09/05/2006
delta-BHC		ND		16	JK	08/23/2006	09/05/2006
Dieldrin		ND		29	JK	08/23/2006	09/05/2006
Endosulfan I		ND		20	JK	08/23/2006	09/05/2006
Endosulfan II		ND		27	JK	08/23/2006	09/05/2006
Endosulfan sulfate		ND		23	JK	08/23/2006	09/05/2006
Endrin		ND		26	JK	08/23/2006	09/05/2006
Endrin aldehyde		ND		34	JK	08/23/2006	09/05/2006

Endrine Ketone		ND		40	JK	08/23/2006	09/05/2006
Gama-Chlordane		ND		25	JK	08/23/2006	09/05/2006
gamma-BHC (Lindane)		ND		17	JK	08/23/2006	09/05/2006
Heptachlor		ND		27	JK	08/23/2006	09/05/2006
Heptachlor epoxide		ND		21	JK	08/23/2006	09/05/2006
Methoxychlor		ND		58	JK	08/23/2006	09/05/2006
Simazine		ND		200	JK	08/23/2006	09/05/2006
Toxaphene		ND		58.0	JK	08/23/2006	09/05/2006
z DCB		80%		31-132	JK	08/23/2006	09/05/2006
z TCMX		72%		38-134	JK	08/23/2006	09/05/2006
Aluminum, Total in Fish Tissue	200.7	<20.0	ug/g	10.2	BBRUCE	10/02/2006	10/02/2006
Arsenic, Total in Fish Tissue	200.7	<0.90	ug/g	0.18	BBRUCE	10/04/2006	10/04/2006
Cadmium, Total in Fish Tissue	200.7	0.32	ug/g	0.05	BBRUCE	10/02/2006	10/02/2006
Chromium, Total in Fish Tissue	200.7	0.64	ug/g	0.05	BBRUCE	09/27/2006	09/27/2006
Copper, Total in Fish Tissue	200.7	<2.10	ug/g	0.42	BBRUCE	10/04/2006	10/04/2006
Manganese, Total in Fish	200.7	0.59	ug/g	0.06	BBRUCE	10/03/2006	10/03/2006
Nickel, Total in Fish	200.7	<0.55	ug/g	0.11	BBRUCE	10/03/2006	10/03/2006
Lead, Total in Fish Tissue	200.7	<1.10	ug/g	0.22	BBRUCE	09/27/2006	09/27/2006
Selenium, Total in Fish	200.7	<2.60	ug/g	0.52	BBRUCE	10/04/2006	10/04/2006
Zinc, Total in Fish Tissue	200.7	<4.35	ug/g	0.87	BBRUCE	10/05/2006	10/05/2006
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.30	ug/g	0.05	LC	08/29/2006	08/29/2006

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
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MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

2.99% Lipids. JK

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	11/15/2005
Sample ID:	AA31438	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT VICKSBURG	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	07/31/2006
Other No:	AF05034	LIMS Login Time:	14:47
Permit No:		COC Date:	07/31/2006
Latitude:	32 21 02.8	COC Time:	1445
Longitude:	090 53 05.7	Project:	3315
County:	149 WARREN	Study:	MS AMBIENT FISH TISSUE
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDE		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDT		ND		34	JK	08/15/2006	08/23/2006
Aldrin		ND		23	JK	08/15/2006	08/23/2006
alpha-BHC		ND		23	JK	08/15/2006	08/23/2006
Alpha-Chlordane		ND		5.4	JK	08/15/2006	08/23/2006
Atrazine		ND		200	JK	08/15/2006	08/23/2006
beta-BHC		ND		15	JK	08/15/2006	08/23/2006
Chlordane Tech		ND		67	JK	08/15/2006	08/23/2006
delta-BHC		ND		16	JK	08/15/2006	08/23/2006
Dieldrin		ND		29	JK	08/15/2006	08/23/2006
Endosulfan I		ND		20	JK	08/15/2006	08/23/2006
Endosulfan II		ND		27	JK	08/15/2006	08/23/2006
Endosulfan sulfate		ND		23	JK	08/15/2006	08/23/2006
Endrin		ND		26	JK	08/15/2006	08/23/2006
Endrin aldehyde		ND		34	JK	08/15/2006	08/23/2006

Endrine Ketone		ND		40	JK	08/15/2006	08/23/2006
Gama-Chlordane		ND		25	JK	08/15/2006	08/23/2006
gamma-BHC (Lindane)		ND		17	JK	08/15/2006	08/23/2006
Heptachlor		ND		27	JK	08/15/2006	08/23/2006
Heptachlor epoxide		ND		21	JK	08/15/2006	08/23/2006
Methoxychlor		ND		58	JK	08/15/2006	08/23/2006
Simazine		ND		200	JK	08/15/2006	08/23/2006
Toxaphene		ND		58.0	JK	08/15/2006	08/23/2006
z DCB		66%		31-132	JK	08/15/2006	08/23/2006
z TCMX		62%		38-134	JK	08/15/2006	08/23/2006
Aluminum, Total in Fish Tissue	200.7	55.4	ug/g	10.2	BB	09/22/2006	09/22/2006
Arsenic, Total in Fish Tissue	200.7	ND	ug/g	0.18	BB	09/12/2006	09/12/2006
Cadmium, Total in Fish Tissue	200.7	1.89	ug/g	0.05	BB	09/21/2006	09/21/2006
Chromium, Total in Fish Tissue	200.7	1.26	ug/g	0.05	BB	09/22/2006	09/22/2006
Copper, Total in Fish Tissue	200.7	5.22	ug/g	0.42	BB	09/22/2006	09/22/2006
Manganese, Total in Fish	200.7	1.86	ug/g	0.06	BB	09/12/2006	09/12/2006
Nickel, Total in Fish	200.7	ND	ug/g	0.11	BB	09/12/2006	09/12/2006
Lead, Total in Fish Tissue	200.7	ND	ug/g	0.22	BB	09/21/2006	09/21/2006
Selenium, Total in Fish	200.7	ND	ug/g	0.52	BB	09/12/2006	09/12/2006
Zinc, Total in Fish Tissue	200.7	11.7	ug/g	0.87	BB	09/20/2006	09/20/2006
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.09	ug/g	0.05	LC	08/25/2006	08/25/2006

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

1.97% Lipids. JK

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	11/15/2005
Sample ID:	AA31439	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT VICKSBURG	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	07/31/2006
Other No:	AF05035	LIMS Login Time:	14:47
Permit No:		COC Date:	07/31/2006
Latitude:	32 21 02.8	COC Time:	1445
Longitude:	090 53 05.7	Project:	3315
County:	149 WARREN	Study:	MS AMBIENT FISH TISSUE
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDE		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDT		ND		34	JK	08/15/2006	08/23/2006
Aldrin		ND		23	JK	08/15/2006	08/23/2006
alpha-BHC		ND		23	JK	08/15/2006	08/23/2006
Alpha-Chlordane		ND		5.4	JK	08/15/2006	08/23/2006
Atrazine		ND		200	JK	08/15/2006	08/23/2006
beta-BHC		ND		15	JK	08/15/2006	08/23/2006
Chlordane Tech		ND		67	JK	08/15/2006	08/23/2006
delta-BHC		ND		16	JK	08/15/2006	08/23/2006
Dieldrin		ND		29	JK	08/15/2006	08/23/2006
Endosulfan I		ND		20	JK	08/15/2006	08/23/2006
Endosulfan II		ND		27	JK	08/15/2006	08/23/2006
Endosulfan sulfate		ND		23	JK	08/15/2006	08/23/2006
Endrin		ND		26	JK	08/15/2006	08/23/2006
Endrin aldehyde		ND		34	JK	08/15/2006	08/23/2006

Endrine Ketone		ND		40	JK	08/15/2006	08/23/2006
Gama-Chlordane		ND		25	JK	08/15/2006	08/23/2006
gamma-BHC (Lindane)		ND		17	JK	08/15/2006	08/23/2006
Heptachlor		ND		27	JK	08/15/2006	08/23/2006
Heptachlor epoxide		ND		21	JK	08/15/2006	08/23/2006
Methoxychlor		ND		58	JK	08/15/2006	08/23/2006
Simazine		ND		200	JK	08/15/2006	08/23/2006
Toxaphene		ND		58.0	JK	08/15/2006	08/23/2006
z DCB		82%		31-132	JK	08/15/2006	08/23/2006
z TCMX		74%		38-134	JK	08/15/2006	08/23/2006
Aluminum, Total in Fish Tissue	200.7	36.1	ug/g	10.2	BB	09/22/2006	09/22/2006
Arsenic, Total in Fish Tissue	200.7	ND	ug/g	0.18	BB	09/12/2006	09/12/2006
Cadmium, Total in Fish Tissue	200.7	0.75	ug/g	0.05	BB	09/21/2006	09/21/2006
Chromium, Total in Fish Tissue	200.7	0.34	ug/g	0.05	BB	09/22/2006	09/22/2006
Copper, Total in Fish Tissue	200.7	<2.10	ug/g	0.42	BB	09/26/2006	09/26/2006
Manganese, Total in Fish	200.7	0.96	ug/g	0.06	BB	09/12/2006	09/12/2006
Nickel, Total in Fish	200.7	ND	ug/g	0.11	BB	09/12/2006	09/12/2006
Lead, Total in Fish Tissue	200.7	ND	ug/g	0.22	BB	09/21/2006	09/21/2006
Selenium, Total in Fish	200.7	ND	ug/g	0.52	BB	09/12/2006	09/12/2006
Zinc, Total in Fish Tissue	200.7	ND	ug/g	0.87	BB	09/20/2006	09/20/2006
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.13	ug/g	0.05	LC	08/29/2006	08/29/2006

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

1.0% Lipids. JK

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 11/09/2005
Sample ID:	AA31436	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT NATCHEZ	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	07/31/2006
Other No:	AF05032	LIMS Login Time:	14:47
Permit No:		COC Date:	07/31/2006
Latitude:	31 32.87	COC Time:	1445
Longitude	091 26.33	Project:	3315
County:	001 ADAMS	Study:	MS AMBIENT FISH TISSUE
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDE		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDT		ND		34	JK	08/15/2006	08/23/2006
Aldrin		ND		23	JK	08/15/2006	08/23/2006
alpha-BHC		ND		23	JK	08/15/2006	08/23/2006
Alpha-Chlordane		ND		5.4	JK	08/15/2006	08/23/2006
Atrazine		ND		200	JK	08/15/2006	08/23/2006
beta-BHC		ND		15	JK	08/15/2006	08/23/2006
Chlordane Tech		ND		67	JK	08/15/2006	08/23/2006
delta-BHC		ND		16	JK	08/15/2006	08/23/2006
Dieldrin		ND		29	JK	08/15/2006	08/23/2006
Endosulfan I		ND		20	JK	08/15/2006	08/23/2006
Endosulfan II		ND		27	JK	08/15/2006	08/23/2006
Endosulfan sulfate		ND		23	JK	08/15/2006	08/23/2006
Endrin		ND		26	JK	08/15/2006	08/23/2006
Endrin aldehyde		ND		34	JK	08/15/2006	08/23/2006

Endrine Ketone		ND		40	JK	08/15/2006	08/23/2006
Gama-Chlordane		ND		25	JK	08/15/2006	08/23/2006
gamma-BHC (Lindane)		ND		17	JK	08/15/2006	08/23/2006
Heptachlor		ND		27	JK	08/15/2006	08/23/2006
Heptachlor epoxide		ND		21	JK	08/15/2006	08/23/2006
Methoxychlor		ND		58	JK	08/15/2006	08/23/2006
Simazine		ND		200	JK	08/15/2006	08/23/2006
Toxaphene		ND		58.0	JK	08/15/2006	08/23/2006
z DCB		78%		31-132	JK	08/15/2006	08/23/2006
z TCMX		70%		38-134	JK	08/15/2006	08/23/2006
Aluminum, Total in Fish Tissue	200.7	50.5	ug/g	10.2	BB	09/22/2006	09/22/2006
Arsenic, Total in Fish Tissue	200.7	ND	ug/g	0.18	BB	09/12/2006	09/12/2006
Cadmium, Total in Fish Tissue	200.7	1.19	ug/g	0.05	BB	09/21/2006	09/21/2006
Chromium, Total in Fish Tissue	200.7	0.74	ug/g	0.05	BB	09/22/2006	09/22/2006
Copper, Total in Fish Tissue	200.7	3.73	ug/g	0.42	BB	09/26/2006	09/26/2006
Manganese, Total in Fish	200.7	2.52	ug/g	0.06	BB	09/12/2006	09/12/2006
Nickel, Total in Fish	200.7	ND	ug/g	0.11	BB	09/12/2006	09/12/2006
Lead, Total in Fish Tissue	200.7	ND	ug/g	0.22	BB	09/21/2006	09/21/2006
Selenium, Total in Fish	200.7	ND	ug/g	0.52	BB	09/12/2006	09/12/2006
Zinc, Total in Fish Tissue	200.7	9.20	ug/g	0.87	BB	09/20/2006	09/20/2006
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.05	ug/g	0.05	BB	08/23/2006	08/23/2006

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<0.97% Lipids. JK

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	11/09/2005
Sample ID:	AA31437	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT NATCHEZ	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	07/31/2006
Other No:	AF05033	LIMS Login Time:	14:47
Permit No:		COC Date:	07/31/2006
Latitude:	31 32.87	COC Time:	1445
Longitude:	091 26.33	Project:	3315
County:	001 ADAMS	Study:	MS AMBIENT FISH TISSUE
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	Bridge Effects:
+ Ding Whap (ft):	Watershed Observations:
= Tape Down (ft):	Photograph ID: Disk #:
	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDE		ND		34	JK	08/15/2006	08/23/2006
4,4'-DDT		ND		34	JK	08/15/2006	08/23/2006
Aldrin		ND		23	JK	08/15/2006	08/23/2006
alpha-BHC		ND		23	JK	08/15/2006	08/23/2006
Alpha-Chlordane		ND		5.4	JK	08/15/2006	08/23/2006
Atrazine		ND		200	JK	08/15/2006	08/23/2006
beta-BHC		ND		15	JK	08/15/2006	08/23/2006
Chlordane Tech		ND		67	JK	08/15/2006	08/23/2006
delta-BHC		ND		16	JK	08/15/2006	08/23/2006
Dieldrin		ND		29	JK	08/15/2006	08/23/2006
Endosulfan I		ND		20	JK	08/15/2006	08/23/2006
Endosulfan II		ND		27	JK	08/15/2006	08/23/2006
Endosulfan sulfate		ND		23	JK	08/15/2006	08/23/2006
Endrin		ND		26	JK	08/15/2006	08/23/2006
Endrin aldehyde		ND		34	JK	08/15/2006	08/23/2006

Endrine Ketone		ND		40	JK	08/15/2006	08/23/2006
Gama-Chlordane		ND		25	JK	08/15/2006	08/23/2006
gamma-BHC (Lindane)		ND		17	JK	08/15/2006	08/23/2006
Heptachlor		ND		27	JK	08/15/2006	08/23/2006
Heptachlor epoxide		ND		21	JK	08/15/2006	08/23/2006
Methoxychlor		ND		58	JK	08/15/2006	08/23/2006
Simazine		ND		200	JK	08/15/2006	08/23/2006
Toxaphene		ND		58.0	JK	08/15/2006	08/23/2006
z DCB		75%		31-132	JK	08/15/2006	08/23/2006
z TCMX		70%		38-134	JK	08/15/2006	08/23/2006
Aluminum, Total in Fish Tissue	200.7	35.0	ug/g	10.2	BB	09/22/2006	09/22/2006
Arsenic, Total in Fish Tissue	200.7	ND	ug/g	0.18	BB	09/12/2006	09/12/2006
Cadmium, Total in Fish Tissue	200.7	1.32	ug/g	0.05	BB	09/21/2006	09/21/2006
Chromium, Total in Fish Tissue	200.7	0.92	ug/g	0.05	BB	09/22/2006	09/22/2006
Copper, Total in Fish Tissue	200.7	4.07	ug/g	0.42	BB	09/26/2006	09/26/2006
Manganese, Total in Fish	200.7	3.23	ug/g	0.06	BB	09/12/2006	09/12/2006
Nickel, Total in Fish	200.7	ND	ug/g	0.11	BB	09/12/2006	09/12/2006
Lead, Total in Fish Tissue	200.7	ND	ug/g	0.22	BB	09/21/2006	09/21/2006
Selenium, Total in Fish	200.7	ND	ug/g	0.52	BB	09/12/2006	09/12/2006
Zinc, Total in Fish Tissue	200.7	9.16	ug/g	0.87	BB	09/20/2006	09/20/2006
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.30	ug/g	0.05	BB	08/23/2006	08/23/2006

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<1.0% Lipids. JK

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	08/24/2004
Sample ID:	AA25285	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT VICKSBURG	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	10/11/2004
Other No:	AF04034	LIMS Login Time:	12:57
Permit No:		COC Date:	10/11/2004
Latitude:	32 21 02.8	COC Time:	1300
Longitude:	090 53.05.7	Project:	3315
County:	149 WARREN	Study:	AMBIENT FISH MS MERCURY PROJECT
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
Ding Whap (ft):	Photograph ID: Disk #:
Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	03/15/2005	03/23/2005
4,4'-DDE		36.7		34	JK	03/15/2005	03/23/2005
4,4'-DDT		ND		34	JK	03/15/2005	03/23/2005
Aldrin		ND		23	JK	03/15/2005	03/23/2005
alpha-BHC		ND		23	JK	03/15/2005	03/23/2005
Alpha-Chlordane		ND		5.4	JK	03/15/2005	03/23/2005
Atrazine		ND		200	JK	03/15/2005	03/23/2005
beta-BHC		ND		15	JK	03/15/2005	03/23/2005
Chlordane Tech		ND		67	JK	03/15/2005	03/23/2005
Chlorpyrifos		ND		23	JK	03/15/2005	03/23/2005
Cis-Permethrin		ND		250	JK	03/15/2005	03/23/2005
delta-BHC		ND		16	JK	03/15/2005	03/23/2005
Dicofol		ND		27	JK	03/15/2005	03/23/2005
Dieldrin		ND		29	JK	03/15/2005	03/23/2005
Endosulfan I		ND		20	JK	03/15/2005	03/23/2005
Endosulfan II		ND		27	JK	03/15/2005	03/23/2005

Endosulfan sulfate		ND		23	JK	03/15/2005	03/23/2005
Endrin		ND		26	JK	03/15/2005	03/23/2005
Endrin aldehyde		ND		34	JK	03/15/2005	03/23/2005
Endrine Ketone		ND		40	JK	03/15/2005	03/23/2005
Gama-Chlordane		ND		25	JK	03/15/2005	03/23/2005
gamma-BHC (Lindane)		ND		17	JK	03/15/2005	03/23/2005
Guthion		ND		272	JK	03/15/2005	03/23/2005
Heptachlor		ND		27	JK	03/15/2005	03/23/2005
Heptachlor epoxide		ND		21	JK	03/15/2005	03/23/2005
Hexachlorobenzene		ND		10	JK	03/15/2005	03/23/2005
Methoxychlor		ND		58	JK	03/15/2005	03/23/2005
Mirex		ND		23	JK	03/15/2005	03/23/2005
Pendimethalin		ND		80	JK	03/15/2005	03/23/2005
Simazine		ND		200	JK	03/15/2005	03/23/2005
Toxaphene		ND		58.0	JK	03/15/2005	03/23/2005
Trans-Permethrin		ND		64	JK	03/15/2005	03/23/2005
Trifluralin		ND		23	JK	03/15/2005	03/23/2005
z DCB		75%		31-132	JK	03/15/2005	03/23/2005
z TCMX		62%		38-134	JK	03/15/2005	03/23/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB	10/14/2004	10/14/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB	10/13/2004	10/13/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.16	ug/g	0.05	BB	10/13/2004	10/13/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	0.80	ug/g	0.42	BB	10/13/2004	10/13/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB	10/13/2004	10/13/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.28	ug/g	0.05	BB	10/12/2004	10/12/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

1.6% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	08/24/2004
Sample ID:	AA25286	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT VICKSBURG	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	10/11/2004
Other No:	AF04035	LIMS Login Time:	12:57
Permit No:		COC Date:	10/11/2004
Latitude:	32 21 02.8	COC Time:	1300
Longitude:	090 53.05.7	Project:	3315
County:	149 WARREN	Study:	AMBIENT FISH MS MERCURY PROJECT
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	Bridge Effects:
Ding Whap (ft):	Watershed Observations:
Tape Down (ft):	Photograph ID: Disk #:
	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	03/15/2005	03/23/2005
4,4'-DDE		ND		34	JK	03/15/2005	03/23/2005
4,4'-DDT		ND		34	JK	03/15/2005	03/23/2005
Aldrin		ND		23	JK	03/15/2005	03/23/2005
alpha-BHC		ND		23	JK	03/15/2005	03/23/2005
Alpha-Chlordane		ND		5.4	JK	03/15/2005	03/23/2005
Atrazine		ND		200	JK	03/15/2005	03/23/2005
beta-BHC		ND		15	JK	03/15/2005	03/23/2005
Chlordane Tech		ND		67	JK	03/15/2005	03/23/2005
Chlorpyrifos		ND		23	JK	03/15/2005	03/23/2005
Cis Permethrin		ND		250	JK	03/15/2005	03/23/2005
delta-BHC		ND		16	JK	03/15/2005	03/23/2005
Dicofol		ND		27	JK	03/15/2005	03/23/2005
Dieldrin		ND		29	JK	03/15/2005	03/23/2005
Endosulfan I		ND		20	JK	03/15/2005	03/23/2005
Endosulfan II		ND		27	JK	03/15/2005	03/23/2005

[illegible]sulfan sulfate		ND		23	JK	03/15/2005	03/23/2005
[illegible]drin		ND		26	JK	03/15/2005	03/23/2005
[illegible]n aldehyde		ND		34	JK	03/15/2005	03/23/2005
[illegible]ne Ketone		ND		40	JK	03/15/2005	03/23/2005
[illegible]-Chlordane		ND		25	JK	03/15/2005	03/23/2005
[illegible]ma-BHC (Lindane)		ND		17	JK	03/15/2005	03/23/2005
[illegible]ion		ND		272	JK	03/15/2005	03/23/2005
[illegible]achlor		ND		27	JK	03/15/2005	03/23/2005
[illegible]achlor epoxide		ND		21	JK	03/15/2005	03/23/2005
[illegible]achlorobenzene		ND		10	JK	03/15/2005	03/23/2005
[illegible]oxychlor		ND		58	JK	03/15/2005	03/23/2005
[illegible]x		ND		23	JK	03/15/2005	03/23/2005
[illegible]fluralin		ND		80	JK	03/15/2005	03/23/2005
[illegible]azine		ND		200	JK	03/15/2005	03/23/2005
[illegible]aphene		94.4		58.0	JK	03/15/2005	03/23/2005
[illegible]s-Permethrin		ND		64	JK	03/15/2005	03/23/2005
[illegible]ralin		ND		23	JK	03/15/2005	03/23/2005
z[illegible]CB		72%		31-132	JK	03/15/2005	03/23/2005
z[illegible]CMX		64%		38-134	JK	03/15/2005	03/23/2005
A[illegible]nic, Total in Fish Tissue (u[illegible]g As)	200.7	ND	ug/g	0.18	BB	10/14/2004	10/14/2004
C[illegible]nium, Total in Fish Tissue (u[illegible]g Cd)	200.7	ND	ug/g	0.05	BB	10/13/2004	10/13/2004
C[illegible]mium, Total in Fish Tissue (ug/g Cr)	200.7	0.23	ug/g	0.05	BB	10/13/2004	10/13/2004
C[illegible]per, Total in Fish Tissue (u[illegible]g Cu)	200.7	ND	ug/g	0.42	BB	10/13/2004	10/13/2004
L[illegible]d, Total in Fish Tissue (u[illegible]g as Pb)	200.7	ND	ug/g	0.22	BB	10/13/2004	10/13/2004
M[illegible]ury, Total in Fish Tissue (u[illegible]g Hg)	245.1	0.13	ug/g	0.05	BB	10/12/2004	10/12/2004

A BREVIATIONS / DEFINITIONS

u L: micrograms/Liter	<: less than	>: greater than
m L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
m kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
u g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
p n: parts per million	USPC: result greater than upper specification	
p : parts per billion		

D SCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

I icate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

S MPLE COMMENTS:

1 ticide: Units = ug/kg

3 % Lipids

Ap roved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	08/23/2004
Sample ID:	AA25283	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT NATCHEZ	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	10/11/2004
Other No:	AF04032	LIMS Login Time:	12:57
Permit No:		COC Date:	10/11/2004
Latitude:	31 32.87	COC Time:	1300
Longitude:	091 26.33	Project:	3315
County:	001 ADAMS	Study:	AMBIENT FISH MS MERCURY PROJECT
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	03/14/2005	03/21/2005
4,4'-DDE		ND		34	JK	03/14/2005	03/21/2005
4,4'-DDT		ND		34	JK	03/14/2005	03/21/2005
Aldrin		ND		23	JK	03/14/2005	03/21/2005
alpha-BHC		ND		23	JK	03/14/2005	03/21/2005
Alpha-Chlordane		ND		5.4	JK	03/14/2005	03/21/2005
Atrazine		ND		200	JK	03/14/2005	03/21/2005
beta-BHC		ND		15	JK	03/14/2005	03/21/2005
Chlordane Tech		ND		67	JK	03/14/2005	03/21/2005
Chlorpyrifos		ND		23	JK	03/14/2005	03/21/2005
Cis-Permethrin		ND		250	JK	03/14/2005	03/21/2005
delta-BHC		ND		16	JK	03/14/2005	03/21/2005
Dicofol		ND		27	JK	03/14/2005	03/21/2005
Dieldrin		ND		29	JK	03/14/2005	03/21/2005
Endosulfan I		ND		20	JK	03/14/2005	03/21/2005
Endosulfan II		ND		27	JK	03/14/2005	03/21/2005

Endosulfan sulfate		ND		23	JK	03/14/2005	03/21/2005
Endrin		ND		26	JK	03/14/2005	03/21/2005
Endrin aldehyde		ND		34	JK	03/14/2005	03/21/2005
Endrine Ketone		ND		40	JK	03/14/2005	03/21/2005
Gama-Chlordane		ND		25	JK	03/14/2005	03/21/2005
gamma-BHC (Lindane)		ND		17	JK	03/14/2005	03/21/2005
Guthion		ND		272	JK	03/14/2005	03/21/2005
Heptachlor		ND		27	JK	03/14/2005	03/21/2005
Heptachlor epoxide		ND		21	JK	03/14/2005	03/21/2005
Hexachlorobenzene		ND		10	JK	03/14/2005	03/21/2005
Methoxychlor		ND		58	JK	03/14/2005	03/21/2005
Mirex		ND		23	JK	03/14/2005	03/21/2005
Pendimethalin		ND		80	JK	03/14/2005	03/21/2005
Simazine		ND		200	JK	03/14/2005	03/21/2005
Toxaphene		ND		58.0	JK	03/14/2005	03/21/2005
Trans-Permethrin		ND		64	JK	03/14/2005	03/21/2005
Trifluralin		ND		23	JK	03/14/2005	03/21/2005
z DCB		114%		31-132	JK	03/14/2005	03/21/2005
z TCMX		90%		38-134	JK	03/14/2005	03/21/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB	10/14/2004	10/14/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB	10/13/2004	10/13/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.15	ug/g	0.05	BB	10/13/2004	10/13/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	BB	10/13/2004	10/13/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB	10/13/2004	10/13/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.20	ug/g	0.05	BB	10/12/2004	10/12/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

0.97% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	08/23/2004
Sample ID:	AA25284	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT NATCHEZ	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	10/11/2004
Other No:	AF04033	LIMS Login Time:	12:57
Permit No:		COC Date:	10/11/2004
Latitude:	31 32.87	COC Time:	1300
Longitude:	091 26.33	Project:	3315
County:	001 ADAMS	Study:	AMBIENT FISH MS MERCURY PROJECT
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	03/15/2005	03/23/2005
4,4'-DDE		ND		34	JK	03/15/2005	03/23/2005
4,4'-DDT		ND		34	JK	03/15/2005	03/23/2005
Aldrin		ND		23	JK	03/15/2005	03/23/2005
alpha-BHC		ND		23	JK	03/15/2005	03/23/2005
Alpha-Chlordane		ND		5.4	JK	03/15/2005	03/23/2005
Atrazine		ND		200	JK	03/15/2005	03/23/2005
beta-BHC		ND		15	JK	03/15/2005	03/23/2005
Chlordane Tech		ND		67	JK	03/15/2005	03/23/2005
Chlorpyrifos		ND		23	JK	03/15/2005	03/23/2005
Cis-Permethrin		ND		250	JK	03/15/2005	03/23/2005
delta-BHC		ND		16	JK	03/15/2005	03/23/2005
Dicofol		ND		27	JK	03/15/2005	03/23/2005
Dieldrin		ND		29	JK	03/15/2005	03/23/2005
Endosulfan I		ND		20	JK	03/15/2005	03/23/2005
Endosulfan II		ND		27	JK	03/15/2005	03/23/2005

Endosulfan sulfate		ND		23	JK	03/15/2005	03/23/2005
Endrin		ND		26	JK	03/15/2005	03/23/2005
Endrin aldehyde		ND		34	JK	03/15/2005	03/23/2005
Endrine Ketone		ND		40	JK	03/15/2005	03/23/2005
Gama-Chlordane		ND		25	JK	03/15/2005	03/23/2005
gamma-BHC (Lindane)		ND		17	JK	03/15/2005	03/23/2005
Guthion		ND		272	JK	03/15/2005	03/23/2005
Heptachlor		ND		27	JK	03/15/2005	03/23/2005
Heptachlor epoxide		ND		21	JK	03/15/2005	03/23/2005
Hexachlorobenzene		ND		10	JK	03/15/2005	03/23/2005
Methoxychlor		ND		58	JK	03/15/2005	03/23/2005
Mirex		ND		23	JK	03/15/2005	03/23/2005
Pendimethalin		ND		80	JK	03/15/2005	03/23/2005
Simazine		ND		200	JK	03/15/2005	03/23/2005
Toxaphene		77.6		58.0	JK	03/15/2005	03/23/2005
Trans-Permethrin		ND		64	JK	03/15/2005	03/23/2005
Trifluralin		ND		23	JK	03/15/2005	03/23/2005
z DCB		82%		31-132	JK	03/15/2005	03/23/2005
z TCMX		79%		38-134	JK	03/15/2005	03/23/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB	10/14/2004	10/14/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB	10/13/2004	10/13/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.21	ug/g	0.05	BB	10/13/2004	10/13/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	BB	10/13/2004	10/13/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB	10/13/2004	10/13/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.11	ug/g	0.05	BB	10/12/2004	10/12/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

1.9% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 07/31/2003
Sample ID:	AA22190	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT TENN LINE	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	04/19/2004
Other No:	AF03030	LIMS Login Time:	13:09
Permit No:		COC Date:	04/19/04
Latitude:	34 57 23.5	COC Time:	0930
Longitude	090 15 25.8	Project:	3700
County:	033 DESOTO	Study:	MS AMBIENT FISH TISSUE
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDE		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDT		ND		34	JK	12/22/2004	01/11/2005
Aldrin		ND		23	JK	12/22/2004	01/11/2005
alpha-BHC		ND		23	JK	12/22/2004	01/11/2005
Alpha-Chlordane		ND		5.4	JK	12/22/2004	01/11/2005
Atrazine		ND		200	JK	12/22/2004	01/11/2005
beta-BHC		ND		15	JK	12/22/2004	01/11/2005
Chlordane Tech		ND		67	JK	12/22/2004	01/11/2005
Chlorpyrifos		ND		23	JK	12/22/2004	01/11/2005
Cis-Permethrin		ND		250	JK	12/22/2004	01/11/2005
delta-BHC		ND		16	JK	12/22/2004	01/11/2005
Dicofol		ND		27	JK	12/22/2004	01/11/2005
Dieldrin		ND		29	JK	12/22/2004	01/11/2005
Endosulfan I		ND		20	JK	12/22/2004	01/11/2005
Endosulfan II		ND		27	JK	12/22/2004	01/11/2005

Endosulfan sulfate		ND		23	JK	12/22/2004	01/11/2005
Endrin		ND		26	JK	12/22/2004	01/11/2005
Endrin aldehyde		ND		34	JK	12/22/2004	01/11/2005
Endrine Ketone		ND		40	JK	12/22/2004	01/11/2005
Gama-Chlordane		ND		25	JK	12/22/2004	01/11/2005
gamma-BHC (Lindane)		ND		17	JK	12/22/2004	01/11/2005
Guthion		ND		272	JK	12/22/2004	01/11/2005
Heptachlor		ND		27	JK	12/22/2004	01/11/2005
Heptachlor epoxide		ND		21	JK	12/22/2004	01/11/2005
Hexachlorobenzene		ND		10	JK	12/22/2004	01/11/2005
Methoxychlor		ND		58	JK	12/22/2004	01/11/2005
Mirex		ND		23	JK	12/22/2004	01/11/2005
Pendimethalin		ND		80	JK	12/22/2004	01/11/2005
Simazine		ND		200	JK	12/22/2004	01/11/2005
Toxaphene		ND		58.0	JK	12/22/2004	01/11/2005
Trans-Permethrin		ND		64	JK	12/22/2004	01/11/2005
Trifluralin		ND		23	JK	12/22/2004	01/11/2005
z DCB		99%		31-132	JK	12/22/2004	01/11/2005
z TCMX		77%		38-134	JK	12/22/2004	01/11/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB/GB	08/03/2004	08/03/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.06	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	BB/GB	08/03/2004	08/03/2004
Manganese, Total in Fish (ug/g as Mn)	200.7	0.07	ug/g	0.06	BB/GB	08/03/2004	08/03/2004
Nickel, Total in Fish (ug/g as Ni)	200.7	ND	ug/g	0.11	BB/GB	08/03/2004	08/03/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB/GB	08/03/2004	08/03/2004
Antimony, Total in Fish (ug/g as Sb)	200.7	ND	ug/g	0.73	BB/GB	08/11/2004	08/11/2004
Selenium, Total in Fish (ug/g as Se)	200.7	2.87	ug/g	0.52	BB/GB	08/11/2004	08/11/2004
Zinc, Total in Fish Tissue (ug/g as Zn)	200.7	3.80	ug/g	0.87	BB/GB	08/03/2004	08/03/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.15	ug/g	0.05	BB	05/06/2004	05/06/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper	
ppb: parts per billion	specification	

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<1% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected: Time Collected: Sample Collector: To Lab: Sample Type: Received By: LIMS Login Date: LIMS Login Time: COC Date: COC Time: Project: Study:	 07/31/2003 00:00 AGIBSON SV FISH TAMMY SAWYER 04/19/2004 13:09 04/19/04 0930 3700 MS AMBIENT FISH TISSUE
Sample ID:	AA22191		
Facility Name:	MISSISSIPPI RIVER AT TENN LINE		
Sampling Loc:			
Location ID:			
Site ID:	FISH		
Discharge No			
Other No:	AF03031		
Permit No:			
Latitude:	34 57 23.5		
Longitude:	090 15 25.8		
County:	033 DESOTO		
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDE		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDT		ND		34	JK	12/22/2004	01/11/2005
Aldrin		ND		23	JK	12/22/2004	01/11/2005
alpha-BHC		ND		23	JK	12/22/2004	01/11/2005
Alpha-Chlordane		ND		5.4	JK	12/22/2004	01/11/2005
Atrazine		ND		200	JK	12/22/2004	01/11/2005
beta-BHC		ND		15	JK	12/22/2004	01/11/2005
Chlordane Tech		ND		67	JK	12/22/2004	01/11/2005
Chlorpyrifos		ND		23	JK	12/22/2004	01/11/2005
Cis-Permethrin		ND		250	JK	12/22/2004	01/11/2005
delta-BHC		ND		16	JK	12/22/2004	01/11/2005
Dicofol		ND		27	JK	12/22/2004	01/11/2005
Dieldrin		ND		29	JK	12/22/2004	01/11/2005
Endosulfan I		ND		20	JK	12/22/2004	01/11/2005
Endosulfan II		ND		27	JK	12/22/2004	01/11/2005

Endosulfan sulfate		ND		23	JK	12/22/2004	01/11/2005
Endrin		ND		26	JK	12/22/2004	01/11/2005
Endrin aldehyde		ND		34	JK	12/22/2004	01/11/2005
Endrine Ketone		ND		40	JK	12/22/2004	01/11/2005
Gama-Chlordane		ND		25	JK	12/22/2004	01/11/2005
gamma-BHC (Lindane)		ND		17	JK	12/22/2004	01/11/2005
Guthion		ND		272	JK	12/22/2004	01/11/2005
Heptachlor		ND		27	JK	12/22/2004	01/11/2005
Heptachlor epoxide		ND		21	JK	12/22/2004	01/11/2005
Hexachlorobenzene		ND		10	JK	12/22/2004	01/11/2005
Methoxychlor		ND		58	JK	12/22/2004	01/11/2005
Mirex		ND		23	JK	12/22/2004	01/11/2005
Pendimethalin		ND		80	JK	12/22/2004	01/11/2005
Simazine		ND		200	JK	12/22/2004	01/11/2005
Toxaphene		ND		58.0	JK	12/22/2004	01/11/2005
Trans-Permethrin		ND		64	JK	12/22/2004	01/11/2005
Trifluralin		ND		23	JK	12/22/2004	01/11/2005
z DCB		104%		31-132	JK	12/22/2004	01/11/2005
z TCMX		76%		38-134	JK	12/22/2004	01/11/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB/GB	08/03/2004	08/03/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.07	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	BB/GB	08/03/2004	08/03/2004
Manganese, Total in Fish (ug/g as Mn)	200.7	0.30	ug/g	0.06	BB/GB	08/03/2004	08/03/2004
Nickel, Total in Fish (ug/g as Ni)	200.7	ND	ug/g	0.11	BB/GB	08/03/2004	08/03/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB/GB	08/03/2004	08/03/2004
Antimony, Total in Fish (ug/g as Sb)	200.7	ND	ug/g	0.73	BB/GB	08/11/2004	08/11/2004
Selenium, Total in Fish (ug/g as Se)	200.7	2.70	ug/g	0.52	BB/GB	08/11/2004	08/11/2004
Zinc, Total in Fish Tissue (ug/g as Zn)	200.7	4.33	ug/g	0.87	BB/GB	08/03/2004	08/03/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.19	ug/g	0.05	BB	05/07/2004	05/07/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<1% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 07/31/2003
Sample ID:	AA22192	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT TENN LINE	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	04/19/2004
Other No:	AF03032	LIMS Login Time:	13:09
Permit No:		COC Date:	04/19/04
Latitude:	34 57 23.5	COC Time:	0930
Longitude:	090 15 25.8	Project:	3700
County:	033 DESOTO	Study:	MS AMBIENT FISH TISSUE
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDE		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDT		ND		34	JK	12/22/2004	01/11/2005
Aldrin		ND		23	JK	12/22/2004	01/11/2005
alpha-BHC		ND		23	JK	12/22/2004	01/11/2005
Alpha-Chlordane		ND		5.4	JK	12/22/2004	01/11/2005
Atrazine		ND		200	JK	12/22/2004	01/11/2005
beta-BHC		ND		15	JK	12/22/2004	01/11/2005
Chlordane Tech		ND		67	JK	12/22/2004	01/11/2005
Chlorpyrifos		ND		23	JK	12/22/2004	01/11/2005
Cis-Permethrin		ND		250	JK	12/22/2004	01/11/2005
delta-BHC		ND		16	JK	12/22/2004	01/11/2005
Dicofol		ND		27	JK	12/22/2004	01/11/2005
Dieldrin		ND		29	JK	12/22/2004	01/11/2005
Endosulfan I		ND		20	JK	12/22/2004	01/11/2005
Endosulfan II		ND		27	JK	12/22/2004	01/11/2005

Endosulfan sulfate		ND		23	JK	12/22/2004	01/11/2005
Endrin		ND		26	JK	12/22/2004	01/11/2005
Endrin aldehyde		ND		34	JK	12/22/2004	01/11/2005
Endrine Ketone		ND		40	JK	12/22/2004	01/11/2005
Gama-Chlordane		ND		25	JK	12/22/2004	01/11/2005
gamma-BHC (Lindane)		ND		17	JK	12/22/2004	01/11/2005
Guthion		ND		272	JK	12/22/2004	01/11/2005
Heptachlor		ND		27	JK	12/22/2004	01/11/2005
Heptachlor epoxide		ND		21	JK	12/22/2004	01/11/2005
Hexachlorobenzene		ND		10	JK	12/22/2004	01/11/2005
Methoxychlor		ND		58	JK	12/22/2004	01/11/2005
Mirex		ND		23	JK	12/22/2004	01/11/2005
Pendimethalin		ND		80	JK	12/22/2004	01/11/2005
Simazine		ND		200	JK	12/22/2004	01/11/2005
Toxaphene		ND		58.0	JK	12/22/2004	01/11/2005
Trans-Permethrin		ND		64	JK	12/22/2004	01/11/2005
Trifluralin		ND		23	JK	12/22/2004	01/11/2005
z DCB		101%		31-132	JK	12/22/2004	01/11/2005
z TCMX		76%		38-134	JK	12/22/2004	01/11/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB/GB	08/03/2004	08/03/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.08	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	BB/GB	08/03/2004	08/03/2004
Manganese, Total in Fish (ug/g as Mn)	200.7	0.13	ug/g	0.06	BB/GB	08/03/2004	08/03/2004
Nickel, Total in Fish (ug/g as Ni)	200.7	ND	ug/g	0.11	BB/GB	08/03/2004	08/03/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB/GB	08/03/2004	08/03/2004
Antimony, Total in Fish (ug/g as Sb)	200.7	ND	ug/g	0.73	BB/GB	08/11/2004	08/11/2004
Selenium, Total in Fish (ug/g as Se)	200.7	ND	ug/g	0.52	BB/GB	08/11/2004	08/11/2004
Zinc, Total in Fish Tissue (ug/g as Zn)	200.7	3.70	ug/g	0.87	BB/GB	08/03/2004	08/03/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.09	ug/g	0.05	BB	05/07/2004	05/07/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion
<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<1% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 10/23/2003
Sample ID:	AA22205	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT VICKSBURG	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	04/19/2004
Other No:	AF03045	LIMS Login Time:	13:16
Permit No:		COC Date:	04/19/04
Latitude:	32 16.4	COC Time:	0930
Longitude:	090 57.6	Project:	3700
County:	149 WARREN	Study:	MS AMBIENT FISH TISSUE
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	01/05/2005	01/14/2005
4,4'-DDE		44.6		34	JK	01/05/2005	01/14/2005
4,4'-DDT		ND		34	JK	01/05/2005	01/14/2005
Aldrin		ND		23	JK	01/05/2005	01/14/2005
alpha-BHC		ND		23	JK	01/05/2005	01/14/2005
Alpha-Chlordane		ND		5.4	JK	01/05/2005	01/14/2005
Atrazine		ND		200	JK	01/05/2005	01/14/2005
beta-BHC		ND		15	JK	01/05/2005	01/14/2005
Chlordane Tech		ND		67	JK	01/05/2005	01/14/2005
Chlorpyrifos		ND		23	JK	01/05/2005	01/14/2005
Cis-Permethrin		ND		250	JK	01/05/2005	01/14/2005
delta-BHC		ND		16	JK	01/05/2005	01/14/2005
Dicofol		ND		27	JK	01/05/2005	01/14/2005
Dieldrin		ND		29	JK	01/05/2005	01/14/2005
Endosulfan I		ND		20	JK	01/05/2005	01/14/2005
Endosulfan II		ND		27	JK	01/05/2005	01/14/2005

Endosulfan sulfate		ND		23	JK	01/05/2005	01/14/2005
Endrin		ND		26	JK	01/05/2005	01/14/2005
Endrin aldehyde		ND		34	JK	01/05/2005	01/14/2005
Endrine Ketone		ND		40	JK	01/05/2005	01/14/2005
Gama-Chlordane		ND		25	JK	01/05/2005	01/14/2005
gamma-BHC (Lindane)		ND		17	JK	01/05/2005	01/14/2005
Guthion		ND		272	JK	01/05/2005	01/14/2005
Heptachlor		ND		27	JK	01/05/2005	01/14/2005
Heptachlor epoxide		ND		21	JK	01/05/2005	01/14/2005
Hexachlorobenzene		ND		10	JK	01/05/2005	01/14/2005
Methoxychlor		ND		58	JK	01/05/2005	01/14/2005
Mirex		ND		23	JK	01/05/2005	01/14/2005
Pendimethalin		ND		80	JK	01/05/2005	01/14/2005
Simazine		ND		200	JK	01/05/2005	01/14/2005
Toxaphene		101		58.0	JK	01/05/2005	01/14/2005
Trans-Permethrin		ND		64	JK	01/05/2005	01/14/2005
Trifluralin		ND		23	JK	01/05/2005	01/14/2005
z DCB		79%		31-132	JK	01/05/2005	01/14/2005
z TCMX		68%		38-134	JK	01/05/2005	01/14/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB/GB	08/03/2004	08/03/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.15	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	1.40	ug/g	0.42	BB/GB	08/03/2004	08/03/2004
Manganese, Total in Fish (ug/g as Mn)	200.7	0.07	ug/g	0.06	BB/GB	08/03/2004	08/03/2004
Nickel, Total in Fish (ug/g as Ni)	200.7	ND	ug/g	0.11	BB/GB	08/03/2004	08/03/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	4.50	ug/g	0.22	BB/GB	08/03/2004	08/03/2004
Antimony, Total in Fish (ug/g as Sb)	200.7	ND	ug/g	0.73	BB/GB	08/11/2004	08/11/2004
Selenium, Total in Fish (ug/g as Se)	200.7	11.8	ug/g	0.52	BB/GB	08/11/2004	08/11/2004
Zinc, Total in Fish Tissue (ug/g as Zn)	200.7	14.0	ug/g	0.87	BB/GB	08/03/2004	08/03/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.26	ug/g	0.05	BB	05/07/2004	05/07/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<1% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level: QA Type: Date Collected:	 10/23/2003
Sample ID:	AA22206	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT VICKSBURG	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		*LIMS Login Date:*	*04/19/2004*
Other No:	AF03046	LIMS Login Time:	13:16
Permit No:		COC Date:	04/19/04
Latitude:	32 16.4	COC Time:	0930
Longitude	090 57.6	Project:	3700
County:	149 WARREN	Study:	MS AMBIENT FISH TISSUE
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	Bridge Effects:
+ Ding Whap (ft):	Watershed Observations:
= Tape Down (ft):	Photograph ID: Disk #:
	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	01/05/2005	01/14/2005
4,4'-DDE		ND		34	JK	01/05/2005	01/14/2005
4,4'-DDT		ND		34	JK	01/05/2005	01/14/2005
Aldrin		ND		23	JK	01/05/2005	01/14/2005
alpha-BHC		ND		23	JK	01/05/2005	01/14/2005
Alpha-Chlordane		ND		5.4	JK	01/05/2005	01/14/2005
Atrazine		ND		200	JK	01/05/2005	01/14/2005
beta-BHC		ND		15	JK	01/05/2005	01/14/2005
Chlordane Tech		ND		67	JK	01/05/2005	01/14/2005
Chlorpyrifos		ND		23	JK	01/05/2005	01/14/2005
Cis-Permethrin		ND		250	JK	01/05/2005	01/14/2005
delta-BHC		ND		16	JK	01/05/2005	01/14/2005
Dicofol		ND		27	JK	01/05/2005	01/14/2005
Dieldrin		ND		29	JK	01/05/2005	01/14/2005
Endosulfan I		ND		20	JK	01/05/2005	01/14/2005
Endosulfan II		ND		27	JK	01/05/2005	01/14/2005

Endosulfan sulfate		ND		23	JK	01/05/2005	01/14/2005
Endrin		ND		26	JK	01/05/2005	01/14/2005
Endrin aldehyde		ND		34	JK	01/05/2005	01/14/2005
Endrine Ketone		ND		40	JK	01/05/2005	01/14/2005
Gama-Chlordane		ND		25	JK	01/05/2005	01/14/2005
gamma-BHC (Lindane)		ND		17	JK	01/05/2005	01/14/2005
Guthion		ND		272	JK	01/05/2005	01/14/2005
Heptachlor		ND		27	JK	01/05/2005	01/14/2005
Heptachlor epoxide		ND		21	JK	01/05/2005	01/14/2005
Hexachlorobenzene		ND		10	JK	01/05/2005	01/14/2005
Methoxychlor		ND		58	JK	01/05/2005	01/14/2005
Mirex		ND		23	JK	01/05/2005	01/14/2005
Pendimethalin		ND		80	JK	01/05/2005	01/14/2005
Simazine		ND		200	JK	01/05/2005	01/14/2005
Toxaphene		ND		58.0	JK	01/05/2005	01/14/2005
Trans-Permethrin		ND		64	JK	01/05/2005	01/14/2005
Trifluralin		ND		23	JK	01/05/2005	01/14/2005
z DCB		75%		31-132	JK	01/05/2005	01/14/2005
z TCMX		68%		38-134	JK	01/05/2005	01/14/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB/GB	08/03/2004	08/03/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	0.70	ug/g	0.42	BB/GB	08/03/2004	08/03/2004
Manganese, Total in Fish (ug/g as Mn)	200.7	ND	ug/g	0.06	BB/GB	08/03/2004	08/03/2004
Nickel, Total in Fish (ug/g as Ni)	200.7	ND	ug/g	0.11	BB/GB	08/03/2004	08/03/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB/GB	08/03/2004	08/03/2004
Antimony, Total in Fish (ug/g as Sb)	200.7	ND	ug/g	0.73	BB/GB	08/11/2004	08/11/2004
Selenium, Total in Fish (ug/g as Se)	200.7	8.40	ug/g	0.52	BB/GB	08/11/2004	08/11/2004
Zinc, Total in Fish Tissue (ug/g as Zn)	200.7	ND	ug/g	0.87	BB/GB	08/03/2004	08/03/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.09	ug/g	0.05	BB	05/07/2004	05/07/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

2.75% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	09/03/2003
Sample ID:	AA22195	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT NATCHEZ	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	04/19/2004
Other No:	AF03035	LIMS Login Time:	13:09
Permit No:		COC Date:	04/19/04
Latitude:	31 32.87	COC Time:	0930
Longitude	091 26.33	Project:	3700
County:	001 ADAMS	Study:	MS AMBIENT FISH TISSUE
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDE		ND		34	JK	12/22/2004	01/11/2005
4,4'-DDT		ND		34	JK	12/22/2004	01/11/2005
Aldrin		ND		23	JK	12/22/2004	01/11/2005
alpha-BHC		ND		23	JK	12/22/2004	01/11/2005
Alpha-Chlordane		ND		5.4	JK	12/22/2004	01/11/2005
Atrazine		ND		200	JK	12/22/2004	01/11/2005
beta-BHC		ND		15	JK	12/22/2004	01/11/2005
Chlordane Tech		ND		67	JK	12/22/2004	01/11/2005
Chlorpyrifos		ND		23	JK	12/22/2004	01/11/2005
Cis-Permethrin		ND		250	JK	12/22/2004	01/11/2005
delta-BHC		ND		16	JK	12/22/2004	01/11/2005
Dicofol		ND		27	JK	12/22/2004	01/11/2005
Dieldrin		ND		29	JK	12/22/2004	01/11/2005
Endosulfan I		ND		20	JK	12/22/2004	01/11/2005
Endosulfan II		ND		27	JK	12/22/2004	01/11/2005

Endosulfan sulfate		ND		23	JK	12/22/2004	01/11/2005
Endrin		ND		26	JK	12/22/2004	01/11/2005
Endrin aldehyde		ND		34	JK	12/22/2004	01/11/2005
Endrine Ketone		ND		40	JK	12/22/2004	01/11/2005
Gama-Chlordane		ND		25	JK	12/22/2004	01/11/2005
gamma-BHC (Lindane)		ND		17	JK	12/22/2004	01/11/2005
Guthion		ND		272	JK	12/22/2004	01/11/2005
Heptachlor		ND		27	JK	12/22/2004	01/11/2005
Heptachlor epoxide		ND		21	JK	12/22/2004	01/11/2005
Hexachlorobenzene		ND		10	JK	12/22/2004	01/11/2005
Methoxychlor		ND		58	JK	12/22/2004	01/11/2005
Mirex		ND		23	JK	12/22/2004	01/11/2005
Pendimethalin		ND		80	JK	12/22/2004	01/11/2005
Simazine		ND		200	JK	12/22/2004	01/11/2005
Toxaphene		ND		58.0	JK	12/22/2004	01/11/2005
Trans-Permethrin		ND		64	JK	12/22/2004	01/11/2005
Trifluralin		ND		23	JK	12/22/2004	01/11/2005
z DCB		96%		31-132	JK	12/22/2004	01/11/2005
z TCMX		70%		38-134	JK	12/22/2004	01/11/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB/GB	08/03/2004	08/03/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.09	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	BB/GB	08/03/2004	08/03/2004
Manganese, Total in Fish (ug/g as Mn)	200.7	0.50	ug/g	0.06	BB/GB	08/03/2004	08/03/2004
Nickel, Total in Fish (ug/g as Ni)	200.7	ND	ug/g	0.11	BB/GB	08/03/2004	08/03/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB/GB	08/03/2004	08/03/2004
Antimony, Total in Fish (ug/g as Sb)	200.7	ND	ug/g	0.73	BB/GB	08/11/2004	08/11/2004
Selenium, Total in Fish (ug/g as Se)	200.7	1.04	ug/g	0.52	BB/GB	08/11/2004	08/11/2004
Zinc, Total in Fish Tissue (ug/g as Zn)	200.7	2.61	ug/g	0.87	BB/GB	08/03/2004	08/03/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.09	ug/g	0.05	BB/GB	09/29/2004	09/29/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<1% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	AL GIBSON DOUG UPTON	Sample Level:	
		QA Type:	
		Date Collected:	09/03/2003
Sample ID:	AA22196	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT NATCHEZ	Sample Collector:	AGIBSON
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	FISH	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	04/19/2004
Other No:	AF03036	LIMS Login Time:	13:09
Permit No:		COC Date:	04/19/04
Latitude:	31 32.87	COC Time:	0930
Longitude	091 26.33	Project:	3700
County:	001 ADAMS	Study:	MS AMBIENT FISH TISSUE
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	01/04/2005	01/14/2005
4,4'-DDE		ND		34	JK	01/04/2005	01/14/2005
4,4'-DDT		ND		34	JK	01/04/2005	01/14/2005
Aldrin		ND		23	JK	01/04/2005	01/14/2005
alpha-BHC		ND		23	JK	01/04/2005	01/14/2005
Alpha-Chlordane		ND		5.4	JK	01/04/2005	01/14/2005
Atrazine		ND		200	JK	01/04/2005	01/14/2005
beta-BHC		ND		15	JK	01/04/2005	01/14/2005
Chlordane Tech		ND		67	JK	01/04/2005	01/14/2005
Chlorpyrifos		ND		23	JK	01/04/2005	01/14/2005
Cis-Permethrin		ND		250	JK	01/04/2005	01/14/2005
delta-BHC		ND		16	JK	01/04/2005	01/14/2005
Dicofol		ND		27	JK	01/04/2005	01/14/2005
Dieldrin		ND		29	JK	01/04/2005	01/14/2005
Endosulfan I		ND		20	JK	01/04/2005	01/14/2005
Endosulfan II		ND		27	JK	01/04/2005	01/14/2005

Endosulfan sulfate		ND		23	JK	01/04/2005	01/14/2005
Endrin		ND		26	JK	01/04/2005	01/14/2005
Endrin aldehyde		ND		34	JK	01/04/2005	01/14/2005
Endrine Ketone		ND		40	JK	01/04/2005	01/14/2005
Gama-Chlordane		ND		25	JK	01/04/2005	01/14/2005
gamma-BHC (Lindane)		ND		17	JK	01/04/2005	01/14/2005
Guthion		ND		272	JK	01/04/2005	01/14/2005
Heptachlor		ND		27	JK	01/04/2005	01/14/2005
Heptachlor epoxide		ND		21	JK	01/04/2005	01/14/2005
Hexachlorobenzene		ND		10	JK	01/04/2005	01/14/2005
Methoxychlor		ND		58	JK	01/04/2005	01/14/2005
Mirex		ND		23	JK	01/04/2005	01/14/2005
Pendimethalin		ND		80	JK	01/04/2005	01/14/2005
Simazine		ND		200	JK	01/04/2005	01/14/2005
Toxaphene		ND		58.0	JK	01/04/2005	01/14/2005
Trans-Permethrin		ND		64	JK	01/04/2005	01/14/2005
Trifluralin		ND		23	JK	01/04/2005	01/14/2005
z DCB		74%		31-132	JK	01/04/2005	01/14/2005
z TCMX		62%		38-134	JK	01/04/2005	01/14/2005
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	BB/GB	08/03/2004	08/03/2004
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	0.07	ug/g	0.05	BB/GB	08/03/2004	08/03/2004
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	BB/GB	08/03/2004	08/03/2004
Manganese, Total in Fish (ug/g as Mn)	200.7	0.17	ug/g	0.06	BB/GB	08/03/2004	08/03/2004
Nickel, Total in Fish (ug/g as Ni)	200.7	ND	ug/g	0.11	BB/GB	08/03/2004	08/03/2004
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	BB/GB	08/03/2004	08/03/2004
Antimony, Total in Fish (ug/g as Sb)	200.7	ND	ug/g	0.73	BB/GB	08/11/2004	08/11/2004
Selenium, Total in Fish (ug/g as Se)	200.7	1.71	ug/g	0.52	BB/GB	08/11/2004	08/11/2004
Zinc, Total in Fish Tissue (ug/g as Zn)	200.7	3.96	ug/g	0.87	BB/GB	08/03/2004	08/03/2004
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	0.08	ug/g	0.05	BB/GB	09/29/2004	09/29/2004

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

<1% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level:	
		QA Type:	
		Date Collected:	07/29/2002
Sample ID:	AA14781	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT TENN LINE	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	AF02032	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	03/14/2003
Other No:	AF02032	LIMS Login Time:	12:55
Permit No:		COC Date:	03/14/2003
Latitude:	34 57 23.5	COC Time:	1255
Longitude:	90 15 25.8	Project:	3315-289
County:	033 DESOTO	Study:	
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	07/14/2004	08/02/2004
4,4'-DDE		ND		34	JK	07/14/2004	08/02/2004
4,4'-DDT		ND		34	JK	07/14/2004	08/02/2004
Aldrin		ND		23	JK	07/14/2004	08/02/2004
alpha-BHC		ND		23	JK	07/14/2004	08/02/2004
Alpha-Chlordane		ND		5.4	JK	07/14/2004	08/02/2004
Atrazine		ND		200	JK	07/14/2004	08/02/2004
beta-BHC		ND		15	JK	07/14/2004	08/02/2004
Chlordane Tech		ND		67	JK	07/14/2004	08/02/2004
Chlorpyrifos		ND		23	JK	07/14/2004	08/02/2004
Cis-Permethrin		ND		250	JK	07/14/2004	08/02/2004
delta-BHC		ND		16	JK	07/14/2004	08/02/2004
Dicofol		ND		27	JK	07/14/2004	08/02/2004
Dieldrin		ND		29	JK	07/14/2004	08/02/2004
Endosulfan I		ND		20	JK	07/14/2004	08/02/2004
Endosulfan II		ND		27	JK	07/14/2004	08/02/2004

Endosulfan sulfate		ND		23	JK	07/14/2004	08/02/2004
Endrin		ND		26	JK	07/14/2004	08/02/2004
Endrin aldehyde		ND		34	JK	07/14/2004	08/02/2004
Endrine Ketone		ND		40	JK	07/14/2004	08/02/2004
Gama-Chlordane		ND		25	JK	07/14/2004	08/02/2004
gamma-BHC (Lindane)		ND		17	JK	07/14/2004	08/02/2004
Guthion		ND		272	JK	07/14/2004	08/02/2004
Heptachlor		ND		27	JK	07/14/2004	08/02/2004
Heptachlor epoxide		ND		21	JK	07/14/2004	08/02/2004
Hexachlorobenzene		ND		10	JK	07/14/2004	08/02/2004
Methoxychlor		ND		58	JK	07/14/2004	08/02/2004
Mirex		ND		23	JK	07/14/2004	08/02/2004
Pendimethalin		ND		80	JK	07/14/2004	08/02/2004
Simazine		ND		200	JK	07/14/2004	08/02/2004
Toxaphene		130		58.0	JK	07/14/2004	08/02/2004
Trans-Permethrin		ND		64	JK	07/14/2004	08/02/2004
Trifluralin		ND		23	JK	07/14/2004	08/02/2004
z DCB		96%		31-132	JK	07/14/2004	08/02/2004
z TCMX		76%		38-134	JK	07/14/2004	08/02/2004
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	GB	04/11/2003	04/11/2003
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	GB	04/11/2003	04/11/2003
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	GB	04/11/2003	04/11/2003
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	ND	ug/g	0.05	GB	04/11/2003	04/11/2003

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected: Time Collected: Sample Collector: To Lab: Sample Type: Received By: *LIMS Login Date:* LIMS Login Time: COC Date: COC Time: Project: Study:	 07/29/2002 00:00 AGIBSON SV FISH TAMMY SAWYER *03/14/2003* 12:55 03/14/2003 1255 3315-289
Sample ID:	AA14782		
Facility Name:	MISSISSIPPI RIVER		
Sampling Loc:	AT TENN LINE		
Location ID:			
Site ID:	AF02033		
Discharge No			
Other No:	AF02033		
Permit No:			
Latitude:	34 57 23.5		
Longitude:	90 15 25.8		
County:	033 DESOTO		
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	07/14/2004	08/02/2004
4,4'-DDE		ND		34	JK	07/14/2004	08/02/2004
4,4'-DDT		ND		34	JK	07/14/2004	08/02/2004
Aldrin		ND		23	JK	07/14/2004	08/02/2004
alpha-BHC		ND		23	JK	07/14/2004	08/02/2004
Alpha-Chlordane		ND		5.4	JK	07/14/2004	08/02/2004
Atrazine		ND		200	JK	07/14/2004	08/02/2004
beta-BHC		ND		15	JK	07/14/2004	08/02/2004
Chlordane Tech		ND		67	JK	07/14/2004	08/02/2004
Chlorpyrifos		ND		23	JK	07/14/2004	08/02/2004
Cis-Permethrin		ND		250	JK	07/14/2004	08/02/2004
delta-BHC		ND		16	JK	07/14/2004	08/02/2004
Dicofol		ND		27	JK	07/14/2004	08/02/2004
Dieldrin		ND		29	JK	07/14/2004	08/02/2004
Endosulfan I		ND		20	JK	07/14/2004	08/02/2004
Endosulfan II		ND		27	JK	07/14/2004	08/02/2004

Endosulfan sulfate		ND		23	JK	07/14/2004	08/02/2004
Endrin		ND		26	JK	07/14/2004	08/02/2004
Endrin aldehyde		ND		34	JK	07/14/2004	08/02/2004
Endrine Ketone		ND		40	JK	07/14/2004	08/02/2004
Gama-Chlordane		ND		25	JK	07/14/2004	08/02/2004
gamma-BHC (Lindane)		ND		17	JK	07/14/2004	08/02/2004
Guthion		ND		272	JK	07/14/2004	08/02/2004
Heptachlor		ND		27	JK	07/14/2004	08/02/2004
Heptachlor epoxide		ND		21	JK	07/14/2004	08/02/2004
Hexachlorobenzene		ND		10	JK	07/14/2004	08/02/2004
Methoxychlor		ND		58	JK	07/14/2004	08/02/2004
Mirex		ND		23	JK	07/14/2004	08/02/2004
Pendimethalin		ND		80	JK	07/14/2004	08/02/2004
Simazine		ND		200	JK	07/14/2004	08/02/2004
Toxaphene		91.6		58.0	JK	07/14/2004	08/02/2004
Trans-Permethrin		ND		64	JK	07/14/2004	08/02/2004
Trifluralin		ND		23	JK	07/14/2004	08/02/2004
z DCB		88%		31-132	JK	07/14/2004	08/02/2004
z TCMX		72%		38-134	JK	07/14/2004	08/02/2004
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	GB	04/11/2003	04/11/2003
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	GB	04/11/2003	04/11/2003
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	GB	04/11/2003	04/11/2003
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	ND	ug/g	0.05	GB	04/11/2003	04/11/2003

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected: Time Collected:	 08/15/2002 00:00
Sample ID:	AA14786	Sample Collector:	AGIBSON
Facility Name:	MISSISSIPPI RIVER	To Lab:	SV
Sampling Loc:	AT VICKSBURG	Sample Type:	FISH
Location ID:		Received By:	TAMMY SAWYER
Site ID:	AF02037	LIMS Login Date:	03/14/2003
Discharge No		LIMS Login Time:	12:55
Other No:	AF02037	COC Date:	03/14/2003
Permit No:		COC Time:	1255
Latitude:	32 16.4	Project:	3315-289
Longitude:	90 57.6	Study:	
County:	149 WARREN		
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	07/22/2004	08/18/2004
4,4'-DDE		ND		34	JK	07/22/2004	08/18/2004
4,4'-DDT		ND		34	JK	07/22/2004	08/18/2004
Aldrin		ND		23	JK	07/22/2004	08/18/2004
alpha-BHC		ND		23	JK	07/22/2004	08/18/2004
Alpha-Chlordane		ND		5.4	JK	07/22/2004	08/18/2004
Atrazine		ND		200	JK	07/22/2004	08/18/2004
beta-BHC		ND		15	JK	07/22/2004	08/18/2004
Chlordane Tech		ND		67	JK	07/22/2004	08/18/2004
Chlorpyrifos		ND		23	JK	07/22/2004	08/18/2004
Cis-Permethrin		ND		250	JK	07/22/2004	08/18/2004
delta-BHC		ND		16	JK	07/22/2004	08/18/2004
Dicofol		ND		27	JK	07/22/2004	08/18/2004
Dieldrin		ND		29	JK	07/22/2004	08/18/2004
Endosulfan I		ND		20	JK	07/22/2004	08/18/2004
Endosulfan II		ND		27	JK	07/22/2004	08/18/2004

Endosulfan sulfate		ND		23	JK	07/22/2004	08/18/2004
Endrin		ND		26	JK	07/22/2004	08/18/2004
Endrin aldehyde		ND		34	JK	07/22/2004	08/18/2004
Endrine Ketone		ND		40	JK	07/22/2004	08/18/2004
Gama-Chlordane		ND		25	JK	07/22/2004	08/18/2004
gamma-BHC (Lindane)		ND		17	JK	07/22/2004	08/18/2004
Guthion		ND		272	JK	07/22/2004	08/18/2004
Heptachlor		ND		27	JK	07/22/2004	08/18/2004
Heptachlor epoxide		ND		21	JK	07/22/2004	08/18/2004
Hexachlorobenzene		ND		10	JK	07/22/2004	08/18/2004
Methoxychlor		ND		58	JK	07/22/2004	08/18/2004
Mirex		ND		23	JK	07/22/2004	08/18/2004
Pendimethalin		ND		80	JK	07/22/2004	08/18/2004
Simazine		ND		200	JK	07/22/2004	08/18/2004
Toxaphene		ND		58.0	JK	07/22/2004	08/18/2004
Trans-Permethrin		ND		64	JK	07/22/2004	08/18/2004
Trifluralin		ND		23	JK	07/22/2004	08/18/2004
z DCB		114%		31-132	JK	07/22/2004	08/18/2004
z TCMX		100%		38-134	JK	07/22/2004	08/18/2004
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	GB	04/11/2003	04/11/2003
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	GB	04/11/2003	04/11/2003
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	GB	04/11/2003	04/11/2003
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	ND	ug/g	0.05	GB	04/11/2003	04/11/2003

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper specification	
ppb: parts per billion		

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level:	
		QA Type:	
		Date Collected:	08/15/2002
Sample ID:	AA14787	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT VICKSBURG	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	AF02038	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	03/14/2003
Other No:	AF02038	LIMS Login Time:	12:55
Permit No:		COC Date:	03/14/2003
Latitude:	32 16.4	COC Time:	1255
Longitude:	90 57.6	Project:	3315-289
County:	149 WARREN	Study:	
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	07/22/2004	08/18/2004
4,4'-DDE		41.6		34	JK	07/22/2004	08/18/2004
4,4'-DDT		ND		34	JK	07/22/2004	08/18/2004
Aldrin		ND		23	JK	07/22/2004	08/18/2004
alpha-BHC		ND		23	JK	07/22/2004	08/18/2004
Alpha-Chlordane		ND		5.4	JK	07/22/2004	08/18/2004
Atrazine		ND		200	JK	07/22/2004	08/18/2004
beta-BHC		ND		15	JK	07/22/2004	08/18/2004
Chlordane Tech		ND		67	JK	07/22/2004	08/18/2004
Chlorpyrifos		ND		23	JK	07/22/2004	08/18/2004
Cis-Permethrin		ND		250	JK	07/22/2004	08/18/2004
delta-BHC		ND		16	JK	07/22/2004	08/18/2004
Dicofol		ND		27	JK	07/22/2004	08/18/2004
Dieldrin		ND		29	JK	07/22/2004	08/18/2004
Endosulfan I		ND		20	JK	07/22/2004	08/18/2004
Endosulfan II		ND		27	JK	07/22/2004	08/18/2004

Endosulfan sulfate		ND		23	JK	07/22/2004	08/18/2004
Endrin		ND		26	JK	07/22/2004	08/18/2004
Endrin aldehyde		ND		34	JK	07/22/2004	08/18/2004
Endrine Ketone		ND		40	JK	07/22/2004	08/18/2004
Gama-Chlordane		ND		25	JK	07/22/2004	08/18/2004
gamma-BHC (Lindane)		ND		17	JK	07/22/2004	08/18/2004
Guthion		ND		272	JK	07/22/2004	08/18/2004
Heptachlor		ND		27	JK	07/22/2004	08/18/2004
Heptachlor epoxide		ND		21	JK	07/22/2004	08/18/2004
Hexachlorobenzene		ND		10	JK	07/22/2004	08/18/2004
Methoxychlor		ND		58	JK	07/22/2004	08/18/2004
Mirex		ND		23	JK	07/22/2004	08/18/2004
Pendimethalin		ND		80	JK	07/22/2004	08/18/2004
Simazine		ND		200	JK	07/22/2004	08/18/2004
Toxaphene		212		58.0	JK	07/22/2004	08/18/2004
Trans-Permethrin		ND		64	JK	07/22/2004	08/18/2004
Trifluralin		ND		23	JK	07/22/2004	08/18/2004
z DCB		50%		31-132	JK	07/22/2004	08/18/2004
z TCMX		44%		38-134	JK	07/22/2004	08/18/2004
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	GB	04/11/2003	04/11/2003
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	GB	04/11/2003	04/11/2003
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	GB	04/11/2003	04/11/2003
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	ND	ug/g	0.05	GB	04/11/2003	04/11/2003

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	*MCL: Maximum Contaminant Level*	*z: surrogate*
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	*USPC: result greater than upper*	
ppb: parts per billion	specification	

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected:	 08/14/2002
Sample ID:	AA14790	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER	Sample Collector:	AGIBSON
Sampling Loc:	AT NATCHEZ	To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	AF02041	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	03/14/2003
Other No:	AF02041	LIMS Login Time:	12:55
Permit No:		COC Date:	03/14/2003
Latitude:	31 32.87	COC Time:	1255
Longitude:	91 26.33	Project:	3315-289
County:	001 ADAMS	*Study:*	
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	07/22/2004	08/18/2004
4,4'-DDE		TRACE ND		34	JK	07/22/2004	08/18/2004
4,4'-DDT		ND		34	JK	07/22/2004	08/18/2004
Aldrin		ND		23	JK	07/22/2004	08/18/2004
alpha-BHC		ND		23	JK	07/22/2004	08/18/2004
Alpha-Chlordane		ND		5.4	JK	07/22/2004	08/18/2004
Atrazine		ND		200	JK	07/22/2004	08/18/2004
beta-BHC		ND		15	JK	07/22/2004	08/18/2004
Chlordane Tech		ND		67	JK	07/22/2004	08/18/2004
Chlorpyrifos		ND		23	JK	07/22/2004	08/18/2004
Cis-Permethrin		ND		250	JK	07/22/2004	08/18/2004
delta-BHC		ND		16	JK	07/22/2004	08/18/2004
Dicofol		ND		27	JK	07/22/2004	08/18/2004
Dieldrin		ND		29	JK	07/22/2004	08/18/2004
Endosulfan I		ND		20	JK	07/22/2004	08/18/2004
Endosulfan II		ND		27	JK	07/22/2004	08/18/2004

Endosulfan sulfate		ND		23	JK	07/22/2004	08/18/2004
Endrin		ND		26	JK	07/22/2004	08/18/2004
Endrin aldehyde		ND		34	JK	07/22/2004	08/18/2004
Endrine Ketone		ND		40	JK	07/22/2004	08/18/2004
Gama-Chlordane		ND		25	JK	07/22/2004	08/18/2004
gamma-BHC (Lindane)		ND		17	JK	07/22/2004	08/18/2004
Guthion		ND		272	JK	07/22/2004	08/18/2004
Heptachlor		ND		27	JK	07/22/2004	08/18/2004
Heptachlor epoxide		ND		21	JK	07/22/2004	08/18/2004
Hexachlorobenzene		ND		10	JK	07/22/2004	08/18/2004
Methoxychlor		ND		58	JK	07/22/2004	08/18/2004
Mirex		ND		23	JK	07/22/2004	08/18/2004
Pendimethalin		ND		80	JK	07/22/2004	08/18/2004
Simazine		ND		200	JK	07/22/2004	08/18/2004
Toxaphene		180		58.0	JK	07/22/2004	08/18/2004
Trans-Permethrin		ND		64	JK	07/22/2004	08/18/2004
Trifluralin		ND		23	JK	07/22/2004	08/18/2004
z DCB		111%		31-132	JK	07/22/2004	08/18/2004
z TCMX		100%		38-134	JK	07/22/2004	08/18/2004
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	GB	04/11/2003	04/11/2003
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	GB	04/11/2003	04/11/2003
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	GB	04/11/2003	04/11/2003
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	ND	ug/g	0.05	GB	04/11/2003	04/11/2003

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper	
ppb: parts per billion	specification	

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected: Time Collected: Sample Collector: To Lab: Sample Type: Received By: LIMS Login Date: LIMS Login Time: COC Date: COC Time: Project: Study:	 08/14/2002 00:00 AGIBSON SV FISH TAMMY SAWYER 03/14/2003 12:55 03/14/2003 1255 3315-289
Sample ID: Facility Name: Sampling Loc: Location ID: Site ID: Discharge No Other No: Permit No: Latitude: Longitude: County:	AA14791 MISSISSIPPI RIVER AT NATCHEZ AF02042 AF02042 31 32.87 091 26.33 001 ADAMS		
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	07/22/2004	08/18/2004
4,4'-DDE		ND		34	JK	07/22/2004	08/18/2004
4,4'-DDT		ND		34	JK	07/22/2004	08/18/2004
Aldrin		ND		23	JK	07/22/2004	08/18/2004
alpha-BHC		ND		23	JK	07/22/2004	08/18/2004
Alpha-Chlordane		ND		5.4	JK	07/22/2004	08/18/2004
Atrazine		ND		200	JK	07/22/2004	08/18/2004
beta-BHC		ND		15	JK	07/22/2004	08/18/2004
Chlordane Tech		ND		67	JK	07/22/2004	08/18/2004
Chlorpyrifos		ND		23	JK	07/22/2004	08/18/2004
Cis-Permethrin		ND		250	JK	07/22/2004	08/18/2004
delta-BHC		ND		16	JK	07/22/2004	08/18/2004
Dicofol		ND		27	JK	07/22/2004	08/18/2004
Dieldrin		ND		29	JK	07/22/2004	08/18/2004
Endosulfan I		ND		20	JK	07/22/2004	08/18/2004
Endosulfan II		ND		27	JK	07/22/2004	08/18/2004

Endosulfan sulfate		ND		23	JK	07/22/2004	08/18/2004
Endrin		ND		26	JK	07/22/2004	08/18/2004
Endrin aldehyde		ND		34	JK	07/22/2004	08/18/2004
Endrine Ketone		ND		40	JK	07/22/2004	08/18/2004
Gama-Chlordane		ND		25	JK	07/22/2004	08/18/2004
gamma-BHC (Lindane)		ND		17	JK	07/22/2004	08/18/2004
Guthion		ND		272	JK	07/22/2004	08/18/2004
Heptachlor		ND		27	JK	07/22/2004	08/18/2004
Heptachlor epoxide		ND		21	JK	07/22/2004	08/18/2004
Hexachlorobenzene		ND		10	JK	07/22/2004	08/18/2004
Methoxychlor		ND		58	JK	07/22/2004	08/18/2004
Mirex		ND		23	JK	07/22/2004	08/18/2004
Pendimethalin		ND		80	JK	07/22/2004	08/18/2004
Simazine		ND		200	JK	07/22/2004	08/18/2004
Toxaphene		ND		58.0	JK	07/22/2004	08/18/2004
Trans-Permethrin		ND		64	JK	07/22/2004	08/18/2004
Trifluralin		ND		23	JK	07/22/2004	08/18/2004
z DCB		118%		31-132	JK	07/22/2004	08/18/2004
z TCMX		100%		38-134	JK	07/22/2004	08/18/2004
Arsenic, Total in Fish Tissue (ug/g As)	200.7	ND	ug/g	0.18	GB	04/11/2003	04/11/2003
Cadmium, Total in Fish Tissue (ug/g Cd)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Chromium, Total in Fish Tissue (ug/g Cr)	200.7	ND	ug/g	0.05	GB	04/11/2003	04/11/2003
Copper, Total in Fish Tissue (ug/g Cu)	200.7	ND	ug/g	0.42	GB	04/11/2003	04/11/2003
Lead, Total in Fish Tissue (ug/g as Pb)	200.7	ND	ug/g	0.22	GB	04/11/2003	04/11/2003
Mercury, Total in Fish Tissue (ug/g Hg)	245.1	ND	ug/g	0.05	GB	04/11/2003	04/11/2003

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter	<: less than	>: greater than
mg/L: milligrams/Liter	MCL: Maximum Contaminant Level	z: surrogate
mg/kg: milligrams/kilogram	MDL: Method Detection Limit	COC Date: Date Chain of Custody Signed
ug/g: micrograms/gram	LSPC: result less than lower specification	COC TIME: Time Chain of Custody
ppm: parts per million	USPC: result greater than upper	
ppb: parts per billion	specification	

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected: Time Collected:	 04/25/2001 00:00
Sample ID:	AA11014	Sample Collector:	AG.KW
Facility Name:	MISSISSIPPI RIVER AT TN LINE	To Lab:	SV
Sampling Loc:		Sample Type:	FISH
Location ID:		Received By:	TAMMY SAWYER
Site ID:	A0330004	LIMS Login Date:	01/03/2002
Discharge No		LIMS Login Time:	09:07
Other No:	AF01007	COC Date:	01/03/02
Permit No:		COC Time:	0830
Latitude:		Project:	3315
Longitude:		Study:	AMBIENT FISH
County:	033 DESOTO		
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	*Bridge Effects:*
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	01/06/2004	02/02/2004
4,4'-DDE		43.4		34	JK	01/06/2004	02/02/2004
4,4'-DDT		ND		34	JK	01/06/2004	02/02/2004
Aldrin		ND		23	JK	01/06/2004	02/02/2004
alpha-BHC		ND		23	JK	01/06/2004	02/02/2004
Alpha-Chlordane		ND		5.4	JK	01/06/2004	02/02/2004
Atrazine		ND		200	JK	01/06/2004	02/02/2004
beta-BHC		ND		15	JK	01/06/2004	02/02/2004
Chlordane Tech		ND		67	JK	01/06/2004	02/02/2004
Chlorpyrifos		ND		23	JK	01/06/2004	02/02/2004
Cis-Permethrine		ND		250	JK	01/06/2004	02/02/2004
delta-BHC		ND		16	JK	01/06/2004	02/02/2004
Dicofol		ND		27	JK	01/06/2004	02/02/2004
Dieldrin		ND		29	JK	01/06/2004	02/02/2004
Endosulfan I		ND		20	JK	01/06/2004	02/02/2004
Endosulfan II		ND		27	JK	01/06/2004	02/02/2004

Endosulfan sulfate		ND		23	JK	01/06/2004	02/02/2004
Endrin		ND		26	JK	01/06/2004	02/02/2004
Endrin aldehyde		ND		34	JK	01/06/2004	02/02/2004
Endrine Ketone		ND		40	JK	01/06/2004	02/02/2004
Gama-Chlordane		ND		25	JK	01/06/2004	02/02/2004
gamma-BHC (Lindane)		ND		17	JK	01/06/2004	02/02/2004
Guthion		ND		272	JK	01/06/2004	02/02/2004
Heptachlor		ND		27	JK	01/06/2004	02/02/2004
Heptachlor epoxide		ND		21	JK	01/06/2004	02/02/2004
Hexachlorobenzene		ND		10	JK	01/06/2004	02/02/2004
Methoxychlor		ND		58	JK	01/06/2004	02/02/2004
Mirex		ND		23	JK	01/06/2004	02/02/2004
Pendimethalin		ND		80	JK	01/06/2004	02/02/2004
Simazine		ND		200	JK	01/06/2004	02/02/2004
Trans-Permethrine		ND		64	JK	01/06/2004	02/02/2004
Trifluralin		ND		23	JK	01/06/2004	02/02/2004
z DCB		76 %		31-132	JK	01/06/2004	02/02/2004
z TCMX		57 %		38-134	JK	01/06/2004	02/02/2004
Arsenic in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Cadmium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Chromium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Copper in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Lead in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Mercury in Fish	245.1	0.14	ug/g	0.05	JC	01/07/2002	01/08/2002

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Toxaphene 64.7 ug/L

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected:	 04/25/2001
Sample ID:	AA11013	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT TN LINE	Sample Collector:	AG.KW
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	A0330004	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	01/03/2002
Other No:	AF01006	LIMS Login Time:	09:06
Permit No:		COC Date:	01/03/02
Latitude:		COC Time:	0830
Longitude:		Project:	3315
County:	033 DESOTO	Study:	AMBIENT FISH
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	JK	01/06/2004	02/02/2004
4,4'-DDE		ND		34	JK	01/06/2004	02/02/2004
4,4'-DDT		ND		34	JK	01/06/2004	02/02/2004
Aldrin		ND		23	JK	01/06/2004	02/02/2004
alpha-BHC		ND		23	JK	01/06/2004	02/02/2004
Alpha-Chlordane		ND		5.4	JK	01/06/2004	02/02/2004
Atrazine		ND		200	JK	01/06/2004	02/02/2004
beta-BHC		ND		15	JK	01/06/2004	02/02/2004
Chlordane Tech		ND		67	JK	01/06/2004	02/02/2004
Chlorpyrifos		ND		23	JK	01/06/2004	02/02/2004
Cis-Permethrine		ND		250	JK	01/06/2004	02/02/2004
delta-BHC		ND		16	JK	01/06/2004	02/02/2004
Dicofol		ND		27	JK	01/06/2004	02/02/2004
Dieldrin		ND		29	JK	01/06/2004	02/02/2004
Endosulfan I		ND		20	JK	01/06/2004	02/02/2004
Endosulfan II		ND		27	JK	01/06/2004	02/02/2004

Endosulfan sulfate		ND		23	JK	01/06/2004	02/02/2004
Endrin		ND		26	JK	01/06/2004	02/02/2004
Endrin aldehyde		ND		34	JK	01/06/2004	02/02/2004
Endrine Ketone		ND		40	JK	01/06/2004	02/02/2004
Gama-Chlordane		ND		25	JK	01/06/2004	02/02/2004
gamma-BHC (Lindane)		ND		17	JK	01/06/2004	02/02/2004
Guthion		ND		272	JK	01/06/2004	02/02/2004
Heptachlor		ND		27	JK	01/06/2004	02/02/2004
Heptachlor epoxide		ND		21	JK	01/06/2004	02/02/2004
Hexachlorobenzene		ND		10	JK	01/06/2004	02/02/2004
Methoxychlor		ND		58	JK	01/06/2004	02/02/2004
Mirex		ND		23	JK	01/06/2004	02/02/2004
Pendimethalin		ND		80	JK	01/06/2004	02/02/2004
Simazine		ND		200	JK	01/06/2004	02/02/2004
Trans-Permethrine		ND		64	JK	01/06/2004	02/02/2004
Trifluralin		ND		23	JK	01/06/2004	02/02/2004
z DCB		57 %		31-132	JK	01/06/2004	02/02/2004
z TCMX		53 %		38-134	JK	01/06/2004	02/02/2004
Arsenic in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Cadmium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Chromium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Copper in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Lead in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Mercury in Fish	245.1	0.41	ug/g	0.05	JC	01/07/2002	01/08/2002

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected: Time Collected: Sample Collector: To Lab: Sample Type: Received By: LIMS Login Date: LIMS Login Time: COC Date: COC Time: Project: Study:	 06/19/2001 00:00 AG.AB SV FISH TAMMY SAWYER 01/03/2002 09:24 1/03/02 0830 3315 *AMBIENT FISH*
Sample ID: Facility Name: Sampling Loc: Location ID: Site ID: Discharge No Other No: Permit No: Latitude: Longitude: County:	AA11028 MISSISSIPPI RIVER AT VICKSBURG Middle of channel nw of Warrenton A1490002 AF01021 N32 16.07 W90 57.62 149		
Percent Clouds: Air Temp.: Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		TRACE 26.2		34	DS	03/19/2003	04/24/2003
4,4'-DDE		152		68	DS	03/19/2003	04/24/2003
4,4'-DDT		ND		34	DS	03/19/2003	04/24/2003
Aldrin		ND		23	DS	03/19/2003	04/24/2003
alpha-BHC		ND		23	DS	03/19/2003	04/24/2003
Alpha-Chlordane		ND		5.4	DS	03/19/2003	04/24/2003
Atrazine		ND		200	DS	03/19/2003	04/24/2003
beta-BHC		ND		15	DS	03/19/2003	04/24/2003
Chlordane Tech		ND		67	DS	03/19/2003	04/24/2003
Chlorpyrifos		ND		23	DS	03/19/2003	04/24/2003
Cis-Permethrin		ND		250	DS	03/19/2003	04/24/2003
delta-BHC		ND		16	DS	03/19/2003	04/24/2003
Dicofol		ND		27	DS	03/19/2003	04/24/2003
Dieldrin		ND		29	DS	03/19/2003	04/24/2003
Endosulfan I		ND		20	DS	03/19/2003	04/24/2003
Endosulfan II		ND		27	DS	03/19/2003	04/24/2003

Endosulfan sulfate		ND		23	DS	03/19/2003	04/24/2003
Endrin		ND		26	DS	03/19/2003	04/24/2003
Endrin aldehyde		ND		34	DS	03/19/2003	04/24/2003
Endrine Ketone		ND		40	DS	03/19/2003	04/24/2003
Gama-Chlordane		ND		25	DS	03/19/2003	04/24/2003
gamma-BHC (Lindane)		ND		17	DS	03/19/2003	04/24/2003
Guthion		ND		272	DS	03/19/2003	04/24/2003
Heptachlor		ND		27	DS	03/19/2003	04/24/2003
Heptachlor epoxide		ND		21	DS	03/19/2003	04/24/2003
Hexachlorobenzene		ND		10	DS	03/19/2003	04/24/2003
Methoxychlor		ND		58	DS	03/19/2003	04/24/2003
Mirex		ND		23	DS	03/19/2003	04/24/2003
Pendimethalin		ND		80	DS	03/19/2003	04/24/2003
Simazine		ND		200	DS	03/19/2003	04/24/2003
Toxaphene		ND		58.0	DS	03/19/2003	04/24/2003
Trans-Permethrin		ND		64	DS	03/19/2003	04/24/2003
Trifluralin		TRACE 2.07		23	DS	03/19/2003	04/24/2003
z DCB		74%		31-132	DS	03/19/2003	04/24/2003
z TCMX		67%		38-134	DS	03/19/2003	04/24/2003
Arsenic in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Cadmium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Chromium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Copper in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Lead in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Mercury in Fish	245.1	0.22	ug/g	0.05	JC	01/07/2002	01/08/2002

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

2.22% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected: Time Collected: Sample Collector: To Lab: Sample Type: Received By: LIMS Login Date: LIMS Login Time: COC Date: COC Time: Project: Study:	 06/19/2001 00:00 AG.AB SV FISH TAMMY SAWYER 01/03/2002 09:24 1/03/02 0830 3315 AMBIENT FISH
Sample ID:	AA11029		
Facility Name:	MISSISSIPPI RIVER AT VICKSBURG		
Sampling Loc:	Middle of channel nw of Warrenton		
Location ID:			
Site ID:	A1490002		
Discharge No			
Other No:	AF01022		
Permit No:			
Latitude:	N32 16.07		
Longitude	W90 57.62		
County:	149		
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	Bridge Effects:
Tape Reading (ft):	Watershed Observations:
+ Ding Whap (ft):	Photograph ID: Disk #:
= Tape Down (ft):	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		36.8		34	DS	04/04/2003	05/06/2003
4,4'-DDE		150		34	DS	04/04/2003	05/06/2003
4,4'-DDT		TRACE 24.8		34	DS	04/04/2003	05/06/2003
Aldrin		ND		23	DS	04/04/2003	05/06/2003
alpha-BHC		ND		23	DS	04/04/2003	05/06/2003
Alpha-Chlordane		ND		5.4	DS	04/04/2003	05/06/2003
Atrazine		ND		200	DS	04/04/2003	05/06/2003
beta-BHC		ND		15	DS	04/04/2003	05/06/2003
Chlordane Tech		ND		67	DS	04/04/2003	05/06/2003
Chlorpyrifos		ND		23	DS	04/04/2003	05/06/2003
Cis-Permethrin		ND		250	DS	04/04/2003	05/06/2003
delta-BHC		ND		16	DS	04/04/2003	05/06/2003
Dicofol		ND		27	DS	04/04/2003	05/06/2003
Dieldrin		ND		29	DS	04/04/2003	05/06/2003
Endosulfan I		ND		20	DS	04/04/2003	05/06/2003
Endosulfan II		ND		27	DS	04/04/2003	05/06/2003

Endosulfan sulfate		ND		23	DS	04/04/2003	05/06/2003
Endrin		ND		26	DS	04/04/2003	05/06/2003
Endrin aldehyde		ND		34	DS	04/04/2003	05/06/2003
Endrine Ketone		ND		40	DS	04/04/2003	05/06/2003
Gama-Chlordane		ND		25	DS	04/04/2003	05/06/2003
gamma-BHC (Lindane)		ND		17	DS	04/04/2003	05/06/2003
Guthion		ND		272	DS	04/04/2003	05/06/2003
Heptachlor		ND		27	DS	04/04/2003	05/06/2003
Heptachlor epoxide		ND		21	DS	04/04/2003	05/06/2003
Hexachlorobenzene		ND		10	DS	04/04/2003	05/06/2003
Methoxychlor		ND		58	DS	04/04/2003	05/06/2003
Mirex		ND		23	DS	04/04/2003	05/06/2003
Pendimethalin		TRACE 19.4		80	DS	04/04/2003	05/06/2003
Simazine		ND		200	DS	04/04/2003	05/06/2003
Toxaphene		389		58.0	DS	04/04/2003	05/06/2003
Trans-Permethrin		ND		64	DS	04/04/2003	05/06/2003
Trifluralin		ND		23	DS	04/04/2003	05/06/2003
z DCB		89%		31-132	DS	04/04/2003	05/06/2003
z TCMX		81%		38-134	DS	04/04/2003	05/06/2003
Arsenic in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Cadmium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Chromium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Copper in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Lead in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Mercury in Fish	245.1	0.14	ug/g	0.05	JC	01/07/2002	01/08/2002

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
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ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

3.75% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level:	
		QA Type:	
		Date Collected:	08/06/2001
Sample ID:	AA11043	Time Collected:	00:00
Facility Name:	MISSISSIPPI RIVER AT NATCHEZ	Sample Collector:	AG.JU
Sampling Loc:		To Lab:	SV
Location ID:		Sample Type:	FISH
Site ID:	A0010002	Received By:	TAMMY SAWYER
Discharge No		LIMS Login Date:	01/03/2002
Other No:	AF01036	LIMS Login Time:	10:12
Permit No:		COC Date:	1/03/02
Latitude:		COC Time:	0830
Longitude:		Project:	3315
County:	001 ADAMS	Study:	AMBIENT FISH
Percent Clouds:			
Air Temp.:			
Recent Rain:		Reporting Date:	05/08/2007

Hydrological Data	
Tape Reading (ft):	
+ Ding Whap (ft):	
= Tape Down (ft):	

Bridge Effects:
Watershed Observations:
Photograph ID: Disk #:
Photograph ID: Picture #:
Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		TRACE 4.99		34	DS	06/17/2003	07/23/2003
4,4'-DDE		TRACE 20.6		34	DS	06/17/2003	07/23/2003
4,4'-DDT		ND		34	DS	06/17/2003	07/23/2003
Aldrin		ND		23	DS	06/17/2003	07/23/2003
alpha-BHC		ND		23	DS	06/17/2003	07/23/2003
Alpha-Chlordane		ND		5.4	DS	06/17/2003	07/23/2003
Atrazine		ND		200	DS	06/17/2003	07/23/2003
beta-BHC		ND		15	DS	06/17/2003	07/23/2003
Chlordane Tech		ND		67	DS	06/17/2003	07/23/2003
Chlorpyrifos		ND		23	DS	06/17/2003	07/23/2003
Cis-Permethrin		ND		250	DS	06/17/2003	07/23/2003
delta-BHC		ND		16	DS	06/17/2003	07/23/2003
Dicofol		ND		27	DS	06/17/2003	07/23/2003
Dieldrin		ND		29	DS	06/17/2003	07/23/2003
Endosulfan I		ND		20	DS	06/17/2003	07/23/2003
Endosulfan II		ND		27	DS	06/17/2003	07/23/2003

Endosulfan sulfate		ND		23	DS	06/17/2003	07/23/2003
Endrin		ND		26	DS	06/17/2003	07/23/2003
Endrin aldehyde		ND		34	DS	06/17/2003	07/23/2003
Endrine Ketone		ND		40	DS	06/17/2003	07/23/2003
Gama-Chlordane		ND		25	DS	06/17/2003	07/23/2003
gamma-BHC (Lindane)		ND		17	DS	06/17/2003	07/23/2003
Guthion		ND		272	DS	06/17/2003	07/23/2003
Heptachlor		ND		27	DS	06/17/2003	07/23/2003
Heptachlor epoxide		ND		21	DS	06/17/2003	07/23/2003
Hexachlorobenzene		ND		10	DS	06/17/2003	07/23/2003
Methoxychlor		ND		58	DS	06/17/2003	07/23/2003
Mirex		ND		23	DS	06/17/2003	07/23/2003
Pendimethalin		ND		80	DS	06/17/2003	07/23/2003
Simazine		ND		200	DS	06/17/2003	07/23/2003
Toxaphene		112		58.0	DS	06/17/2003	07/23/2003
Trans-Permethrin		ND		64	DS	06/17/2003	07/23/2003
Trifluralin		ND		23	DS	06/17/2003	07/23/2003
z DCB		78%		31-132	DS	06/17/2003	07/23/2003
z TCMX		65%		38-134	DS	06/17/2003	07/23/2003
Arsenic in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Cadmium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Chromium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Copper in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Lead in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Mercury in Fish	245.1	0.12	ug/g	0.05	JC	01/14/2002	01/15/2002

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

1.78% Lipids

Approved By: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To:	DAVID LOCH AL GIBSON	Sample Level: QA Type: Date Collected: Time Collected: Sample Collector: To Lab: Sample Type: Received By: LIMS Login Date: LIMS Login Time: COC Date: COC Time: Project: Study:	 08/06/2001 00:00 AG.JU SV FISH TAMMY SAWYER 01/03/2002 10:13 1/03/02 0830 3315 AMBIENT FISH
Sample ID:	AA11044		
Facility Name:	MISSISSIPPI RIVER AT NATCHEZ		
Sampling Loc:			
Location ID:			
Site ID:	A0010002		
Discharge No			
Other No:	AF01037		
Permit No:			
Latitude:			
Longitude			
County:	001 ADAMS		
Percent Clouds:		Reporting Date:	05/08/2007
Air Temp.:			
Recent Rain:			

Hydrological Data	
Tape Reading (ft):	Bridge Effects:
+ Ding Whap (ft):	Watershed Observations:
= Tape Down (ft):	Photograph ID: Disk #:
	Photograph ID: Picture #:
	Photograph Description:

ANALYTE	METHOD	RESULT	UNITS	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD		ND		34	DS	06/17/2003	07/23/2003
4,4'-DDE		TRACE 4.39		34	DS	06/17/2003	07/23/2003
4,4'-DDT		ND		34	DS	06/17/2003	07/23/2003
Aldrin		ND		23	DS	06/17/2003	07/23/2003
alpha-BHC		ND		23	DS	06/17/2003	07/23/2003
Alpha-Chlordane		ND		5.4	DS	06/17/2003	07/23/2003
Atrazine		ND		200	DS	06/17/2003	07/23/2003
beta-BHC		ND		15	DS	06/17/2003	07/23/2003
Chlordane Tech		ND		67	DS	06/17/2003	07/23/2003
Chlorpyrifos		ND		23	DS	06/17/2003	07/23/2003
Cis-Permethrin		ND		250	DS	06/17/2003	07/23/2003
delta-BHC		ND		16	DS	06/17/2003	07/23/2003
Dicofol		ND		27	DS	06/17/2003	07/23/2003
Dieldrin		ND		29	DS	06/17/2003	07/23/2003
Endosulfan I		ND		20	DS	06/17/2003	07/23/2003
Endosulfan II		ND		27	DS	06/17/2003	07/23/2003

Endosulfan sulfate		ND		23	DS	06/17/2003	07/23/2003
Endrin		ND		26	DS	06/17/2003	07/23/2003
Endrin aldehyde		ND		34	DS	06/17/2003	07/23/2003
Endrine Ketone		ND		40	DS	06/17/2003	07/23/2003
Gama-Chlordane		ND		25	DS	06/17/2003	07/23/2003
gamma-BHC (Lindane)		ND		17	DS	06/17/2003	07/23/2003
Guthion		ND		272	DS	06/17/2003	07/23/2003
Heptachlor		ND		27	DS	06/17/2003	07/23/2003
Heptachlor epoxide		ND		21	DS	06/17/2003	07/23/2003
Hexachlorobenzene		ND		10	DS	06/17/2003	07/23/2003
Methoxychlor		ND		58	DS	06/17/2003	07/23/2003
Mirex		ND		23	DS	06/17/2003	07/23/2003
Pendimethalin		ND		80	DS	06/17/2003	07/23/2003
Simazine		ND		200	DS	06/17/2003	07/23/2003
Toxaphene		TRACE 34.9		58.0	DS	06/17/2003	07/23/2003
Trans-Permethrin		ND		64	DS	06/17/2003	07/23/2003
Trifluralin		ND		23	DS	06/17/2003	07/23/2003
z DCB		78%		31-132	DS	06/17/2003	07/23/2003
z TCMX		65%		38-134	DS	06/17/2003	07/23/2003
Arsenic in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Cadmium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Chromium in Fish	200.7	ND	ug/g	0.1	GB	01/22/2002	01/22/2002
Copper in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Lead in Fish	200.7	ND	ug/g	0.5	GB	01/22/2002	01/22/2002
Mercury in Fish	245.1	0.21	ug/g	0.05	JC	01/14/2002	01/15/2002

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification

>: greater than
z: surrogate
COC Date: Date Chain of Custody Signed
COC TIME: Time Chain of Custody

DESCRIPTION OF VISUAL AQUATIC FLORA RESULTS:

Indicate estimated abundance: 0 = Absent / Not Observed; 1 = Rare (<5%); 2 = Common (5-30%); 3 = Abundant (30-70%); 4 = Domina

SAMPLE COMMENTS:

Pesticide: Units = ug/kg

1.53% Lipids

Approved By: _____

Trey Hess/HW/OPC/DEQ
10/16/2007 12:56 PM

To "JT Newman" <jnewman@usesgroup.com>@INETDEQ
cc Jerry_Banks/HW/OPC/DEQ
bcc
Subject Re: Fw: Nitric Acid

OK

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"JT Newman" <jnewman@usesgroup.com>

"JT Newman" <jnewman@usesgroup.com>
10/16/2007 12:14 PM

To <Trey_Hess@deq.state.ms.us>
cc
Subject Fw: Nitric Acid

Trey they need to make the changes below to the profile you signed yesterday If this is ok with just respond so and we will get it done

Thanks JT

Sent from my BlackBerry Wireless Device

----- Original Message -----
From: Lewis, Vanessa <VLewis2@wm.com>
To: JT Newman
Cc: Scrivner, Peggy <pscrivne@wm.com>; Friedman, Monica <mfriedma@wm.com>
Sent: Tue Oct 16 12:06:55 2007
Subject: Nitric Acid

J <<Nitric Acid Waste Profile.pdf>> T,
We have a few issues that we ne<<_1015155319_001.pdf>> ed to clear up on the profile you submitted. Monica may have already sent them to you, but here is what we need from you
We need to correct the free liquid range to 99-100%. Do you know if there are any solids in this waste? This will determine whether the material is a wastewater or non-wastewater. Also, lead is a UHC and we need to mark that on the profile. I think you had checked no to UHCs.
Also since there are no any organics present, can you mark the subpart cc as no? We also need a date by the generator's signature.

Let me know if you have any questions
Thanks.

-----Original Message-----
From: JT Newman [mailto:jnewman@usesgroup.com]
Sent: Monday, October 15, 2007 3:56 PM
To: Friedman, Monica
Subject: : Profile for signature

Monica,
Here is the signed profile for the Nitric Acid. Please rush this as fast as we can and let me know when it is approved
Thanks
JT

J. T Newman
Chemist
United States Environmental Services
1075 Mendell Davis Dr
Jackson, MS 39272
Office (601) 372-3232
Cell (601) 278-7816
Fax (601) 372-3356
Email: Jnewman@usesgroup.com
www.usesgroup.com

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Monday, October 15, 2007 3:53 PM
To: JT Newman
Subject: Re: Profile for signature

JT.

After the signature & scan, I realized I didn't date it. Please do so.

(See attached file: Nitric Acid Waste Profile.pdf)

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"JT Newman"

<jnewman@usesgrou

p.com>

To

<Trey_Hess@deq.state.ms.us>

10/15/2007 03:30

cc

PM

Subject

Profile for signature

Here ya go trey this is for the acid in the UST we found a lot cheaper
and
closer outlet when I finally got the percentage

Thanks JT

J. T Newman
Chemist
United States Environmental Services
1075 Mendell Davis Dr
Jackson, MS 39272
Office (601) 372-3232
Cell (601) 278-7816
Fax (601) 372-3356
Email: Jnewman@usesgroup.com
www.usesgroup.com

[attachment "_1015152413_001.pdf" deleted by Trey Hess/HW/OPC/DEQ] Nitric Acid Waste Profile.pdf

_1015155319_001.pdf

Trey Hess
<jerehess@hotmail.com>
10/03/2007 03:21 PM

To "Hess, Trey" <trey_hess@deq.state.ms.us>
cc
bcc
Subject FW: Tank Cleaning Events/Coordination

From: David.Escude@arcadis-us.com
To: George.Cook@arcadis-us.com
CC: Craig.Derouen@arcadis-us.com; jerehess@hotmail.com; pbunge@silvertipprojects.com
Date: Wed, 3 Oct 2007 13:04:33 -0600
Subject: Tank Cleaning Events/Coordination

George

Spoke with John Miles regarding access to the UST in the North Plant. He is going to get with Gerald to have the demo contractors clear the area so that the vac truck can have direct access to the UST. In addition he was OK with us using the rail spur to bring in a rail car to transport the tank contents off. Just coordinate with Gerald on the timing. In addition, I told him we would let him know Robert Corley's schedule for the Cooling tower demolition so they can work around us.

David R. Escude', P.E .
Associate Vice President/SER Business Practice Manager
ARCADIS
10352 Plaza Americana Drive
Baton Rouge, Louisiana 70816
Office 225.292.1004
Direct 225.218.9672 Ext. 245
Fax 225.218.9677
e-mail David.Escude@arcadis-us.com

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Boo! Scare away worms, viruses and so much more! Try Windows Live OneCare! Try now!

"Derouen, Craig"
<Craig.Derouen@arcadis-us.com>
09/21/2007 11:15 AM

To "Paul Bunge" <pbunge@silvertipprojects.com>, <jmiles@harcroschem.com>
cc <Trey_Hess@deq.state.ms.us>, "John Mark Franklin" <jmfranklin@usesgroup.com>, "Escude, David" <David.Escude@arcadis-us.com>, "Lawton, Dana"
bcc

Subject Vicksburg - September 12, 2007 Meeting Recap

All,
This email is a recap of some of the decisions made at the Wednesday, September 12, 2007 meeting at the site in Vicksburg.

1. ARCADIS/USES will consult with and receive approval from Harcros before cutting tanks with crystallized material. Upon removal of the crystallized material, the scrap metal from the tank will be washed and returned to Harcros.

2. ARCADIS/USES will assist Harcros with the removal of railroad tracks buried in the soil between the storm water pond gate and the carbon vessels. Harcros will provide equipment and an operator for mechanical removal of the rails. ARCADIS/USES will provide 40-hr HAZWOPER trained personnel to wash the rails. The goal of this effort is to minimize worker exposure to, and migration of, soil contamination present in this area. The railroad cross-ties will remain in place. After removal of the rail, the soil will be compacted in place. No contaminated soil will be transported out of this area.

3. ARCADIS/USES will reroute the storm water discharge pipe. The pipe will be rerouted on the ground surface. This effort will utilize some of the existing HDPE pipe onsite. Upon completion, Harcros will be able to demo the remaining pipe and pipe rack.

4. ARCADIS will continue cleaning the contaminated tanks, to include the sulfuric acid, sodium hydroxide, and demin resin bead tanks in the Nitric Acid and K-Carb plants not on the previous list of tanks. As per our conversation when MDEQ was onsite, Harcros will take care of the poly tank located outside of the building in the Nitric Acid plant. As per Paul Bunge, Harcros will be responsible for the removal of all oil used to run plant equipment (e.g. compressors, pumps, etc.).

5. Harcros will allow the use of its cherry picker to lift electrical transformers onto the transformer remanufacturer's flatbed trailer. ARCADIS will pay for the operator's time to load.

Feel free to contact me if you have any questions about this email.

Craig A. Derouen, PE, MBA
Project Engineer
ARCADIS

ARCADIS U.S., Inc.
10352 Plaza Americana Drive
Baton Rouge, LA 70816
Tel 225.292.1004
Fax 225.218.9677
Email: craig.derouen@arcadis-us.com

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Trey Hess/HW/OPC/DEQ
09/19/2007 09:00 AM

To "Derouen, Craig" <Craig.Derouen@arcadis-us.com>@INETDEQ
cc
bcc
Subject Re: FW: Vicksburg - Electronics Profile and Meeting Recap

Craig,

After discussing this internally, MDEQ agrees with the recommended actions related to reactive sulfide and the modifications to #1 and #4.

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Derouen, Craig" <Craig.Derouen@arcadis-us.com>

"Derouen, Craig" <Craig.Derouen@arcadis-us.com>
09/18/2007 05:05 PM

To <Trey_Hess@deq.state.ms.us>
cc "Escude, David" <David.Escude@arcadis-us.com>, "Cook, George" <George.Cook@arcadis-us.com>
Subject FW: Vicksburg - Electronics Profile and Meeting Recap

Trey,

I checked on the reactive sulfide units. The TCLP results and EPA guidance both refer to milligrams per kilogram (mg/kg) as the unit for reactive sulfide. We want to remove the oil material discussed in section 2. of the previous email as non-hazardous because it has a reactive sulfide concentration of 60 mg/kg, which is less than the previous 500 mg/kg standard. Also, the disposal facility (Siemens, formerly U.S. Filter) has agreed in principle to non-hazardous disposal if the generator agrees. This oil will be

1. ARCADIS/USES will consult with and receive approval from Harcros before cutting tanks with crystallized material. Upon removal of the crystallized material, the scrap metal from the tank will be washed and returned to Harcros.

4. ARCADIS will continue cleaning the contaminated tanks, to include the sulfuric acid, sodium hydroxide, and demin resin bead tanks in the Nitric Acid and K-Carb plants not on the previous list of tanks. As per our conversation when MDEQ was onsite. Harcros will take care of the poly tank located outside of the building in the Nitric Acid plant. As per Paul Bunge, Harcros will be responsible for the

removal of all oil used to run plant equipment (e.g. compressors, pumps, etc.).

From: Derouen, Craig
Sent: Friday, September 14, 2007 1:28 PM
To: 'Trey_Hess@deq.state.ms.us'
Cc: Escude, David; Cook, George
Subject: Vicksburg - Electronics Profile and Meeting Recap

Trey,

1. Attached is a profile for the disposal of electronic devices. Please review, sign, and return at your earliest convenience.

<<Gen Profile Sheet - Vicksburg Chem E-Waste.pdf>>

2. Please advise on hazardous/non-hazardous status for 60 mg/kg reactive sulfide containing oil.

3. Below is a draft of an email I want to send out regarding decisions made at the site Wednesday. Please review and send me any comments you'd like for me to incorporate before I send it out to everyone.

All,

This email is a recap of some of the decisions made at the Wednesday, September 19, 2007 meeting at the site in Vicksburg..

1. ARCADIS/USES will consult with and receive approval from Harcros before cutting tanks with crystallized material. Upon removal of the crystallized material, each tank will be washed and returned to Harcros.

2. ARCADIS/USES will assist Harcros with the removal of railroad tracks buried in the soil between the storm water pond gate and the carbon vessels. Harcros will provide equipment and an operator for mechanical removal of the rails. ARCADIS/USES will provide 40-hr HAZWOPER trained personnel to wash the rails. The goal of this effort is to minimize worker exposure to, and migration of, soil contamination present in this area. The railroad cross-ties will remain in place. After removal of the rail, the soil will be compacted in place. No contaminated soil will be transported out of this area.

3. ARCADIS/USES will reroute the storm water discharge pipe. The pipe will be rerouted on the ground surface. This effort will utilize some of the existing HDPE pipe onsite. Upon completion, Harcros will be able to demo the remaining pipe and pipe rack.

4. ARCADIS will continue cleaning the contaminated tanks, to include the sulfuric acid, sodium hydroxide, and demin resin bead tanks in the Nitric Acid and K-Carb plants not on the previous list of tanks. As per our conversation when MDEQ was onsite, Harcros will take care of the poly tank located outside of the building in the Nitric Acid plant. As per Paul Bunge, Harcros will be responsible for the removal of oil used to run plant equipment (i.e. compressors, pumps, etc.).

5. Harcros will allow the use of its cherry picker to lift electrical transformers onto the transformer remanufacturer's flatbed trailer. ARCADIS will pay for the operator's time to load.

Feel free to contact me if you have any questions about this email.

Thanks,

Craig A. Derouen, PE, MBA
Project Engineer
ARCADIS

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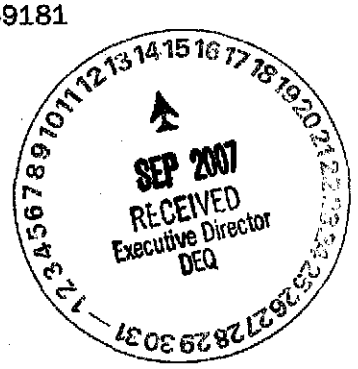
FOAM PACKAGING, INC.
P. O. BOX 1075 -:- HIGHWAY 61 SOUTH
VICKSBURG, MISSISSIPPI 39181
PHONE (601) 638-4871



September 11, 2007

Honorable Vernon A. Williams
Secretary
Surface Transportation Board
395 E. Street, S.W.
Washington, DC 20423-0001

Re: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*; Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS; Docket No. AB-1016X

Dear Secretary Williams:

Foam Packaging has recently received a copy of the Abandonment Petition and Discontinuance of Service Petition referenced above. At this time, we feel that we must write to inform the Board of certain misrepresentations made by the Petitioners and by Lakes Gaming in its August 30, 2007, correspondence sent in support of the petitions. We wish to protest the abandonment of the line outlined in the referenced dockets. We request that no exemption from the rules and requirements relating to offers of financial assistance and public use conditions be afforded The Kansas City Southern Railway Company and/or Vicksburg Southern Railroad, Inc.

Foam Packaging, Inc. is a family owned Mississippi manufacturer since 1971. The company produces polystyrene egg cartons, serving trays, take-out trays, meat trays, and attic vents. Foam Packaging employees approximately 120 associates. When selecting the company location – rail was an important criterion. Foam Packaging's original property had an established rail right of way. After an expansion purchase (former Batesville Casket building and land) The Kansas City Southern Railway Company rail line borders Foam Packaging property on the west side.

As you are aware, Foam Packaging is the sole shipper utilizing the line at issue. For the past 26 years Foam Packaging has been permitted to utilize a rail spur at which the railcars are unloaded onto Foam Packaging's only bulk truck. From there, the company's necessary raw materials are then driven less than ½ mile to the main Foam Packaging plant. Foam Packaging has maintained the spur and the road beside the siding.

In their petitions, the railroad companies aver that Foam Packaging's shipments "can easily be handled at other facilities in Vicksburg or elsewhere" and that Foam Packaging "could relocate its current transfer operations at relatively minor cost." *See* Petition, pp. 4, 6. However, at no time has anyone from either railroad company, the City of Vicksburg, or Lakes Gaming contacted Foam Packaging to inquire about the additional costs. Such costs will necessarily include the purchase or lease of a facility for use in transferring the materials from railcars to trucks, a right of way over property for the trucks, increased fuel expenses, increased labor for longer distance and/or additional truck drivers, increased liability insurance costs for protection on others' property, and the cost for an additional bulk truck and tanker.

Furthermore, the railroads, The City of Vicksburg, and Lakes Gaming have misrepresented to this Board that they have taken efforts to offer Foam Packaging other arrangements. Specifically, the railroads claim that they have evaluated various locations within Vicksburg "that would be quite suitable for Foam's truck transfer purposes, and from which KCSR would be willing to provide service for Foam." *See* Petition, p. 9, n. 2. Similarly, Lakes Gaming stated that it understood that the railroads had "proposed alternative sites in the area from which this shipper could transfer its inbound products to trucks, so that the impact of the proposed abandonment would have no adverse impact upon any interested party." *See* Correspondence from Lakes Gaming, dated August 30, 2007.

Yet, as previously noted, at no time has ***anyone*** from the railroad, The City of Vicksburg, or Lakes Gaming ever contacted Foam Packaging to discuss alternative methods of shipment, or even to give Foam Packaging written notice that the railroad spur utilized by its facility may be closed. Indeed, the first notice that Foam Packaging received from any of these entities was the copy of the current petitions.[1] Instead, Foam Packaging has been hastily trying to identify any alternative shipment methods, all of which seem to be cost prohibitive. Mr. J. B. Davenport, Treasurer of Foam Packaging, Inc., visited in person and conversed by phone with Mr. Mike Haverty on several occasions in the past. Mr. Haverty is the Chairman and CEO of Kansas City Southern Railway Company. Mr. Haverty assured Mr. Davenport that the line serving the spur utilized by Foam Packaging would not be abandoned by Kansas City Southern Railway Company.

In essence, not one of the interested parties has informed Foam Packaging that this railroad line will be closed and they have ***certainly*** not proposed any alternative sites for Foam Packaging's use in the event the line is shut down. Instead, there has been only silence, followed by these disingenuous assertions to the Board.

Foam Packaging, Inc. would prefer to maintain its current process for unloading key raw material. Indeed, if the parties are willing to "work with Foam to relocate its truck transfer operations to another, suitable railhead in the Vicksburg area" as they claim in their petitions,

---

[1] Foam Packaging had learned of the proposal through the local Vicksburg media and immediately began trying to find any alternative methods of shipment or location for its railcars to be unloaded. The railroads' assertion that Foam Packaging has ever used any location in Jackson, Mississippi, for delivery of its raw materials is simply incorrect. *See* Petition, p. 10, n. 3.

then why have they not contacted Foam Packaging to discuss those options - and how such costs associated with the move could be shared equally among the parties pushing to close Foam Packaging's most economical avenue of receiving raw materials.

We would ask that you please take these matters into consideration when evaluating the railroads' requests to abandon and discontinue service to our facility.

If you have any questions, please do not hesitate to call.

FOAM PACKAGING, INC.

Ray B. English

Ray B. English (President)

J.B. Davenport (Treasurer)

Debra Isaac

Debra Isaac (Plant Manager/COO)

Enclosure

Cc: All Parties of Record
Lakes Entertainment, Inc.
Mandie B. Robinson, Esq.
Forman Perry Watkins Krutz & Tardy LLP

LAKES Entertainment, Inc.

[illegible] Lane, #101

Minnetonka, MN 55305

phone: (952) 449-9092

fax: (952) 449-9353

Legal Department
Reply to: Damon E. Schramm
dschramm@lakesentertainment.com
952.449.7069

August 30, 2007

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423-0001

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*
Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS
Docket No. AB-1016X

Dear Secretary Williams:

Lakes Gaming - Mississippi, LLC ("Lakes") wishes to state its full support for the above-captioned petitions filed by The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR"), whereby KCSR seeks to abandon, and VSOR seeks to discontinue operating over, an approximately 4.25-mile line of railroad (the "Line") located primarily in the southwestern section of the City of Vicksburg, MS ("City"). For the reasons set forth below, Lakes fully supports the abandonment of this track and also supports the request of KCSR and VSOR to be exempted from the rules and requirements relating to offers of financial assistance and public use conditions.

The jointly-filed KCSR/VSOR petitions have been filed to facilitate the City's local land use and recreational plans. In particular, the petitions will facilitate Lakes's development of land adjacent to, and bisected by, the Line's right-of-way for the purposes of developing a casino resort and other ancillary facilities in Vicksburg. We understand that, in accordance with those plans, the City may file, at the appropriate time, a notice of interim trail use ("NITU") under the National Trails System Act, 16 U.S.C. 1247(d), *et seq.*, and, pursuant to the applicable Board regulations, attempt to acquire the Line's right-of-way. It is Lakes's understanding that the City's objectives and plans for the rail property in that regard are complementary of, and do not interfere with, Lakes's development plans, and, thus, Lakes supports such objectives and plans.

As noted, the City has for some time embraced the concept of redevelopment of the Line's right-of-way and adjacent parcels in connection with the promotion and construction of a riverside casino, related entertainment facilities and various other possible developments. We believe that such a project would add many new jobs to the area and help to strengthen the local economy.

It is our understanding that there is located along the Line a single shipper known as Foam Packaging, Inc. who receives inbound plastics at a truck transfer facility, and then transports such plastics by truck from that point to its plant nearby. We further understand that KCSR has proposed alternative sites in the area from which this shipper could transfer its inbound products to trucks, so that the impact of the proposed abandonment would have no adverse impact upon any interested party.

We believe that denial of the respective KCSR and VSOR petitions would not be in the public interest because it would frustrate the City's planning objectives, potentially have an adverse effect on Lakes's development plans and deprive the community of a valuable recreational feature, future revenue source, and prospective employer.

Finally, in the interest of expediting the progression of these proceedings and to avoid the complexities of intervening filings that may be impediments to the City's plans, Lakes supports the requests of KCSR and VSOR for waiver of the offer of financial assistance and public use provisions.

In sum, Lakes fully supports the jointly-filed petitions of KCSR and VSOR, respectively, to abandon and to discontinue service over the Line in order to allow the City to move forward with its plans for conversion of the Line's right-of-way to a recreational trail consistent with the City's and Lakes's plans for the area. We also support the requests to waive the application of the offer of financial assistance and public use provisions, and we urge the Board to act favorably and expeditiously in granting the above-captioned petitions.

Very truly yours,

LAKES GAMING - MISSISSIPPI, LLC

Damon E. Schramm
General Counsel

pc: Bridgforth Rutledge (Outside Counsel for Lakes) *(via U.S. Mail)*
Phelps Dunbar, LLP
111 E. Capitol Street, Suite 600
Jackson, MS 39201

Warren K. Erdman, Senior Vice President – Corporate Affairs *(via U.S. Mail)*
The Kansas City Southern Railway Company
P. O. Box 219335
Kansas City, MO 64121-9335

Brian P. Banks, Associate General Counsel & Corporate Secretary *(via U.S. Mail)*
The Kansas City Southern Railway Company
P. O. Box 219335
Kansas City, MO 64121-9335

David C. Reeves, Associate General Counsel *(via U.S. Mail)*
The Kansas City Southern Railway Company
P.O. Box 219335
Kansas City, MO 64121-9335

William A. Mullins (Outside Counsel for KCSR) *(via U.S. Mail)*
Baker & Miller PLLC
2401 Pennsylvania Avenue N.W., Suite 300
Washington, D.C. 20037

Nancy Thomas, City Attorney *(via U.S. Mail)*
City of Vicksburg, Mississippi
1401 Walnut Street
Vicksburg, MS 39180

Ray English, President *(via U.S. Mail)*
Foam Packaging, Inc.
35 Stennis Drive
Vicksburg, MS 39180

Debra Isaac, Plant Manager and COO *(via U.S. Mail)*
Foam Packaging, Inc.
35 Stennis Drive
Vicksburg, MS 39180

Generator's Hazardous Waste Profile Sheet

WASTE MANAGEMENT

Service Agreement on file? ☑ Yes ☐ No Profile Number _____

☐ Check here if there are multiple generating locations for this waste. Attach additional locations.

☐ Check here if a Certificate of Destruction or Disposal is required

A. Waste Generator Information

1. Generator Name: Mississippi Dept of Env Quality
2. Facility Street Address: Rifle Range Road
3. Facility City: Vicksburg, MS 39180
4. Facility State/Province: Mississippi
5. Facility Zip Code: 39180
6. Facility County: Warren
7. Facility Phone: (601) 961-5654
8. Facility Contact Name/Title: _____
9. Facility Fax #: 601-961-5300
10. Facility Email: _____
11. SIC/NAICS Code: _____
12. Generator USEPA/FED ID #: MSTMP0002452

B. Billing Information

☐ same as above P.O. Number: _____

13. Customer Name: United States Environmental Services
14. Billing Address: 1075 Mendell Davis Drive, Jackson, MS 39272
15. Customer/Technical Contact: J.T. Newman
16. Customer Phone: (601) 278-7816
17. Customer Email: jnewman@usesgroup.com
18. Customer Fax: (601) 372-3356
19. Technical Contact/Mobile #: (601) 278-7816 Office #: ( ) _____ Pager #: ( ) _____

C. Waste Stream Information

☑ USEPA Hazardous ☐ State Hazardous ☐ TSCA ☐ Non-Hazardous

1. Description
   a. Name of Waste: Computer monitors and equipment
   b. Process Generating Waste: Clean-up from facility
   c. Color: various
   d. Strong Odor (describe): None
   e. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Gas ☐ Sludge ☐ Other: _____
   f. Layers? ☑ Single layer ☐ Multi- layer
   g. Free Liquid Range (%) 0 to 0 Specify Gravity: _____ Viscosity: _____ BTU/lb: _____
   h. pH Range: _____ to _____
   i. Liquid Flash Point: ☐ < 73°F ☐ 73°-99°F ☐ 100°-139°F ☐ 140°-199°F ☐ > 200°F ☑ N/A
2. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to question f ☐ Yes ☑ No
   a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U)

   _____

   b. If a characteristic hazardous waste, do underlying hazardous constituents(UHCs) apply-(40 CFR 268.48)? ☐ Yes ☑ No (if yes, list in Section B.2.j)
   c. Is the waste subject to RCRA Subpart CC Controls-(40 CFR 264.1083 & 265.1084)? ☐ Yes ☑ No ☐ ? Click for Add'l Info
      If no, does the waste meet the organic LDR Exemption? ☑ Yes ☐ No
      If no, does the waste contain <500 ppmw volatile organic (VOC's)? ☑ Yes ☐ No
      Volatile organic concentration _____ ppmw
   d. Is the waste predominately debris subject to the Alternate Debris Standards (40 CFR 268.45)? ☐ Yes ☑ No
   e. Is the waste predominately soil subject to the Alternate Soil Treatment Standards-(40 CFR 268.49)? ☐ Yes ☑ No
      If yes, will Underlying Hazardous Constituents apply? (list in B.2.j) ☐ Yes ☐ No
   f. Does the waste represented by this profile contain asbestos? ☐ Yes ☑ No
      If yes, ☐ Friable ☐ Non-Friable
   g. Does the waste represented by this profile contain benzene? ☐ Yes ☑ No
      Is this subject to Benzene Operations Waste NESHAP (40 CFR Part 61 Subpart FF)? ☐ Yes ☐ No
      If yes, complete Beneze Waste Operations NESHAP (BWON) questionaire

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Generator's Hazardous Waste Profile Sheet

Profile Number _____

C. Waste Stream Information (continued)

h. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No

If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

i. Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.2i) ☐ Yes ☑ No

Were the PCBs imported into the U.S.? ☐ Yes ☐ No

Are PCBs regulated under the "Self-Implementing Remediation Section of (Mega) Rule?" 40CFR 761,61(a) ☐ Yes ☐ No

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis): ☐ (See Attached - for entering additional constituents)

Constituents *(Total Composition Must be > 100%)*	Concentration %	Constituents *(Total Composition Must be > 100%)*	Concentration %
1. Computer monitors and equipmen	100%	4.	
2.		5.	
3.		6.	

k. Check any that apply: ☐ Pyrophoric ☐ Water Reactive ☐ OSHA Carcinogen ☐ Shock Sensitive ☐ Oxidizer ☐ Infectious

l. Is the waste subject to controls as a Group 1 wastewater or residual under the Hazardous Organic NESHAP? ☐ Yes ☑ No

If yes, is it a Table 8 _____ or Table 9 _____ compound?

m. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No

Is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No

If NORM, identify isotopes and concentration, _____ pCi/g

n. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? ☐ Yes ☑ No

If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up for activity.

For state mandated clean-up, provide relevant documentation.

o. Is this a State Hazardous Waste? ☐ Yes ☑ No If yes, please list applicable codes _____

If NY waste codes B001-B007 apply, please complete question C.2.c on page 1.

D. DOT Information and Shipping Volume

1. Quantity of Waste

a. Estimated Annual Volume: 16 pallets ☐ Tons ☐ Yards ☐ Drums ☑ Other (specify) _____

b. ☑ Event ☐ Base/Ongoing (check one)

2. Shipping Information

a. Packaging:

☐ Roll off/End dump: _____ ☐ Other: _____

☐ Drum Type/Size: _____ ☐ Vacuum Box

☐ Tanker ☐ Super Sack ☐ Tote Bin ☐ Cubic Yard Boxes

b. Shipping Frequency: Units: _____ Per: ☐ Month ☐ Quarter ☐ Year ☑ One Time ☐ Other _____

c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e and f) ☐ Yes ☐ No

d. Reportable Quantity (lbs.; kgs.): _____ e. Primary/Subsidiary Hazard Class(es)/ID#: _____

f. USDOT Shipping Name: _____ PG: _____

I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this wastestream. Any sample submitted is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. I authorize WMI to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile. All relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste will be disclosed to the contractor. All changes which occur in the character of the waste will be identified by the Generator and be disclosed to the Contractor prior to providing the waste to the Contractor.

Certification Signature: Jerry B. Banks Title: Chief, GARD

Name (Type or Print): JERRY B. BANKS Company Name: MS DEPT. of ENV. QUALITY Date: 9/18/2007

☐ Check if additional information is attached. Indicate the number of attached pages ____

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RWimbish@bakerandmiller.com
08/22/2007 02:07 PM

To Trey_Hess@deq.state.ms.us
cc
bcc
Subject Re: Vicksburg - KCS Abandonment & former Vicksburg Chemical Cleanup

History: This message has been replied to.

Trey -

Thanks for your note.

I have forwarded your email to the appropriate officials at KCS and have added some constructive comments of my own related to our conversation.

I have learned that your inquiry has since been circulated to yet others at KCS for evaluation.

I have no further information to supply you at this time. It may be that you will hear directly from someone at KCS, or you may hear from me. If I do receive feedback to share with you, I will contact you as soon as I can.

- Rob

Robert A. ("Rob") Wimbish
Attorney at Law
Baker & Miller PLLC
Suite 300
2401 Pennsylvania Ave., NW
Washington, D.C. 20037
202.663.7824 (direct) / 202.663.7849 (fax)
The above message may be privileged, confidential and protected from disclosure by attorney-client, work product, or other privileges. If you believe that you have received this message in error, please do not read it, inform the sender that you have received it in error, and promptly discard the message. Thank you.

Mississippi Bluffs – Former Vicksburg Chemical Company
Vicksburg, Mississippi
Project Progress Report

Reporting Period: April 2007 through July 2007

Date: 7 August 2007

Site-Wide Activities

Summary of Work Completed From April 2007 through July 2007

- Reports Submitted to MDEQ
  - No reports were submitted to MDEQ during this time period.
- Reports Worked On
  - Baseline Sampling Report
    1. Incorporated Additional Data
    2. Mapping
    3. Cross Sections
    4. Slug Tests
  - Drainage Plan
  - Solidification/Stabilization Report
  - SWMU 2 Stability Report
- Field Work Completed
  - Data Collection - Field Investigations/ Lab Analyses/Surveys
    1. Groundwater
       - Temporary well installation (April 19-20, 2007 and April 23, 2007) and analytical sampling (May 1-2, 2007 and May 30, 2007)
    2. Soil Sampling
       - Delineation sampling (April 18, 2007)
    3. SWMU 2 Stability Sampling [Analytical (March 29, 2007, April 2, 2007, and April 10, 2007) and Geotechnical (March 27, 2007 to April 10, 2007]
    4. Additional TCLP Tank Sampling (2nd Event: April 23-24, 2007)

- Housekeeping
    1. 2nd Oily Water Recovery Event (April 16-17, 2007)
    2. Debris Removal from Buildings (May 3-16 , 2007)
    3. Hazardous Categorization (Hazcat Lab Pack) of Remaining Laboratory Material (June 18-22, 2007 and June 27-28, 2007)
    4. Carbon Disposal (June 11-15, 2007) (Note: MDEQ signed as generator)
    5. Drum Crushing and Disposal (June 25-26, 2007 and June 29, 2007) (Note: MDEQ signed as generator)
- Storm Water Discharge Events (monthly)
- Grounds Maintenance (April 30, 2007 to May 4, 2007, June 11-152007, July 23-26, 2007)
- Mapping
    1. Concentration Maps
        - GW, soil, and storm water concentrations
        - Concentrations above MDEQ Tier 1 TRGs
    2. Storm Water Maps

Work to be Performed Next Period

- Reporting
    - Geology Review
    - Groundwater Modeling
    - Mapping
        1. Potentiometric
        2. Cross sections
        3. Wetlands mapping
    - Sludge Volume Calculations
    - Risk Evaluation (possibly)
    - Remedial Design
- Housekeeping
    - Storm Water Discharge Events (monthly)
    - Grounds Maintenance (monthly)

Unresolved Issues/Points of Interest

- Asbestos Removal and Cooling Tower Demolition

Medium-Term Goals (>6 months)

- Tank Cleaning
- Site Characterization Report
- Remediation Work Plans
- Landfill Design
- Barrier Wall Design
- Insitu Remediation Design
- Pretreatment Permit for Discharge of Recovered Groundwater to POTW

MDEQ Regulatory Due Dates

- None

BAKER & MILLER PLLC

ATTORNEYS and COUNSELLORS

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SUITE 300
WASHINGTON, DC 20037

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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Trudy Fisher, Executive Director
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Ms. Fisher:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

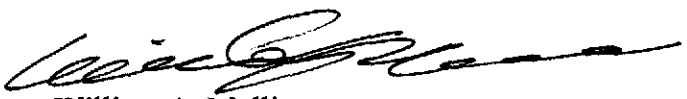
We are providing this report so that you may review the information that will form the basis for the STB's independent environmental analysis of these proceeding. If any of the information is misleading or incorrect, if you believe that pertinent information is missing, or if you have any questions about the STB's environmental review process, please contact the Section of Environmental Analysis ("SEA"), Surface Transportation Board, 395 E Street, SW,

Washington, DC 20423-0001; TEL: (202) 245-0295 and refer to STB Docket No. AB-103 (Sub-No. 21X).

Because the applicable statutes and regulations impose stringent deadlines for processing this action, your written comments to the SEA (at the address provided above) along with a copy to KCSR's representative (at the address provided below) would be appreciated within three weeks. Your comments will be considered by the STB in evaluating the environmental and/or historic preservation impacts of the contemplated action.

If there are any questions concerning this proposal, please contact either William A. Mullins, Esq. or Robert A. Wimbish, Esq. at the law firm of Baker & Miller, PLLC, 2401 Pennsylvania Avenue, NW, Suite 300, Washington, DC 20037; by facsimile at (202) 663-7849; by e-mail at wmullins@bakerandmiller.com or rwimbish@bakerandmiller.com, or by telephone at (202) 663-7820.

Sincerely,



William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC

STB DOCKET NO. AB-103
(SUB-NO. 21X)

THE KANSAS CITY SOUTHERN RAILWAY COMPANY -- ABANDONMENT PETITION FOR EXEMPTION -- LINE IN WARREN COUNTY, MS

ENVIRONMENTAL AND HISTORIC REPORT

W. James Wochner
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Attorneys for The Kansas City Southern Railway Company

July 27, 2007

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC

STB DOCKET NO. AB-103
(SUB-NO. 21X)

THE KANSAS CITY SOUTHERN RAILWAY COMPANY
-- ABANDONMENT PETITION FOR EXEMPTION --
LINE IN WARREN COUNTY, MS

STB DOCKET NO. AB-1016X

VICKSBURG SOUTHERN RAILROAD, INC.
-- DISCONTINUANCE OF SERVICE PETITION FOR EXEMPTION --
LINE IN WARREN COUNTY, MS

ENVIRONMENTAL AND HISTORIC REPORT

Pursuant to the above-captioned proceedings, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") intend, respectively, to abandon and to discontinue service over approximately 4.25 miles of rail line located in Vicksburg and Warren County, Mississippi. In accordance with the requirement of 49 CFR 1121.3(b) and the procedures set forth in 49 CFR 1105.7 and 1105.8, KCSR is required to submit the following Environmental and Historic Report.

ENVIRONMENTAL REPORT

(1) PROPOSED ACTION AND ALTERNATIVES

Describe the proposed action, including commodities transported, the planned disposition (if any) of any rail line and other structures that may be involved, and any possible changes in current operations or maintenance practices. Also describe any reasonable alternatives to the proposed action. Include a readable, detailed map and drawings clearly delineating the project.

The Kansas City Southern Railway Company ("KCSR") seeks to abandon, and VSOR seeks to discontinue, common carrier operations over approximately 4.25 miles of rail line located in the City of Vicksburg and in Warren County, Mississippi, extending from Milepost 225.6 (south of the Line's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"). A map delineating the proposed project is attached as Exhibit 1.

The Line serves only one customer – Foam Packaging, Inc. ("Foam") – which receives inbound rail traffic at a spur located at about Milepost 227.5. At this point, Foam reloads the inbound rail traffic onto trucks and transports it roughly one mile to Foam's plant site, which is not directly rail-served. Inbound loads to Foam, which account for all recent traffic on the line, consist of plastic pellets (specifically, polystyrene, which is a non-hazardous commodity). Foam uses this material to manufacture foam sheets and container products.

The Line is leased by KCSR to VSOR, a Class III short line carrier which has operated the Line since January of 2006. KCSR and VSOR records indicate that Foam receives about 60 carloads per year. Because Foam transloads inbound polystyrene from a point near the end of the Line and transports it by truck to final destination at Foam's plant in Vicksburg, the abandonment and discontinuance should have little effect on Foam as Foam can receive its materials on other portions of the KCSR or VSOR lines that are not being abandoned and truck from that location to its plant in Vicksburg. After abandonment, KCSR anticipates conveying its interest in the right-of-way for use as a trail and understands that the City of Vicksburg, MS ("City") is interested in the right-of-way for possible trail or other recreational use. The only reasonable alternative to abandonment would be to allow the Line to remain in place while handling a small amount of traffic that can quite practicably be handled at another rail location close by. The Line is a stub-ended branch that is a remnant of a former main line route.

(2) TRANSPORTATION SYSTEM

Describe the effects of the proposed action on regional or local transportation systems and patterns. Estimate the amount of traffic (passenger or freight) that will be diverted to other transportation systems or modes as a result of the proposed action.

LEE PEAK

There is no passenger traffic on the Line. Furthermore, because the proposed abandonment should result in the relocation of Foam's truck transfer operations to another rail facility in the vicinity, the proposed abandonment will not affect regional or local transportation rail systems or patterns and there will be no diversion of traffic from rail to other modes. Elimination of at-grade crossings, which would result from the abandonment, should improve local roadway traffic conditions.

(3) **LAND USE**

(i) **Based on consultation with local and/or regional planning agencies and/or a review of the official planning documents prepared by such agencies, state whether the proposed action is consistent with existing land use plans. Describe any inconsistencies.**

The proposed abandonment is consistent with, and would promote, existing land use plans. In fact, KCSR's proposed abandonment of the Line (and VSOR's proposed discontinuance of operations) was precipitated by, and is undertaken in the furtherance of, plans by the City to convert the Line's right-of-way to recreational or other purposes. A copy of this Environmental Report has been mailed to the appropriate local and state agencies for their information and further comment.

(ii) **Based on consultation with the U.S. Soil Conservation Service, state the effect of the proposed action on any prime agricultural land.**

KCSR does not believe that the proposed abandonment will have any adverse impact on prime agricultural land. The Line passes through an area of very mixed uses south of downtown Vicksburg. Some of the adjacent land may be used for agricultural purposes, but KCSR and VSOR do not anticipate that the proposed abandonment/discontinuance would have any adverse impact on prime agricultural lands. KCSR has notified the United States Department of Agriculture ("USDA") Natural Resources Conservation Service in Jackson, MS, by letter dated July 27, 2007, and has requested assistance in identifying any potential effects on prime agricultural land. A copy of this report was attached to that letter. *See* Exhibit 2

(iii) **If the action affects land or water uses within a designated coastal zone, include the coastal zone information required by Sec. 1105.9.**

Based upon initial consultation with the online resources of the Mississippi Department of Marine Resources, KCSR does not believe that the Line traverses a designated coastal zone, and, thus, KCSR understands that its proposed abandonment would not be subject to review in the applicable coastal zone management plan. A copy of this report has been sent to the Department of Marine Resources to confirm that conclusion. *See* Exhibit 2.

(iv) If the proposed action is an abandonment, state whether or not the right-of-way is suitable for alternative public use under 49 U.S.C. 10906 and explain why.

KCSR has very good reason to believe that the subject right-of-way is suitable for other public purposes, for the reasons set forth in response to Part 3(i), above. KCSR anticipates conveying the land in and its interest in the right-of-way for dedication to public use.

(4) ENERGY

(i) Describe the effect of the proposed action on transportation of energy resources.

In recent years, the only commodity transported over the Line has been polystyrene, which is used in the manufacturing of plastic products (such as foam wrap) and is not an energy resource. Accordingly, the proposed abandonment is not expected to have any effect on the transportation of energy resources.

(ii) Describe the effect of the proposed action on recyclable commodities.

Because KCSR and VSOR anticipate that no shipper will lose rail service as a result of its proposed action here (Foam is able to relocate its truck transfer operation to another rail facility in the area), the proposed abandonment/ discontinuance should have no effect on the movement and/or recovery of recyclable commodities. Furthermore, the proposed abandonment probably will result in the reclamation of steel rail and wood ties, both of which can be recycled either by being redeployed on rail lines elsewhere, by being used for non-transportation purposes, or, in the case of steel rail, by being scrapped and re-formed.

(iii) State whether the proposed action will result in an increase or decrease in overall energy efficiency and explain why.

Inasmuch as the relocation of the rail delivery point for Foam's railcars could, in theory, mean slightly longer truck hauls to move the polystyrene from that point to Foam's Vicksburg manufacturing plant, there may be a slight increase in the energy used for trucking operations. However, such longer truck hauls would be offset in part by the proportionally shorter rail hauls occasioned by VSOR's discontinuance of service over the Line. Likewise, removal of the road crossings should help improve traffic flow and slightly reduce traffic transit times. As such, the effect on overall energy usage should either be neutral or even a possible decrease in overall energy usage.

(iv) **If the proposed action will cause diversions from rail to motor carriage of more than:**

(A) 1,000 rail carloads a year; or

(B) An average of 50 rail carloads per mile per year for any part of the affected line, quantify the resulting net change in energy consumption and show the data and methodology used to arrive at the figure given. To minimize the production of repetitive data, the information on overall energy efficiency in Sec. 1105.7(e)(4)(iii) need not be supplied if the more detailed information in Sec. 1105.7(e)(4)(iv) is required.

Because the only customer on this line receives on average about 60 carloads per year, there will be no diversion of rail traffic to motor carriage that would exceed the thresholds stated above.

(5) **AIR**

(i) **If the proposed action will result in either:**

(A) An increase in rail traffic of at least 100 percent (measured in gross ton miles annually) or an increase of at least eight trains a day on any segment of rail line affected by the proposal, or

(B) An increase in rail yard activity of at least 100 percent (measured by carload activity), or

(C) An average increase in truck traffic of more than 10 percent of the average daily traffic or 50 vehicles a day on any affected road segment, quantify the anticipated effect on air emissions. For a proposal under 49 U.S.C. 10901 (or 10505) to construct a new line or reinstitute service over a previously abandoned line, only the eight train a day provision in subsection (5)(i)(A) will apply.

The above thresholds will not be exceeded.

(ii) **If the proposed action affects a class I or nonattainment area under the Clean Air Act, and will result in either:**

(A) An increase in rail traffic of at least 50 percent (measured in gross ton miles annually) or an increase of at least three trains a day on any segment of rail line,

(B) An increase in rail yard activity of at least 20 percent (measured by carload activity), or

(C) An average increase in truck traffic of more than 10 percent of the average daily traffic or 50 vehicles a day on a given road segment, then state whether any expected increased emissions are within the parameters established by the State Implementation Plan. However, for a rail construction under 49 U.S.C. 10901 (or 49 U.S.C. 10505), or a case involving the reinstitution of service over a previously abandoned line, only the three train a day threshold in this item shall apply.

Based upon 40 CFR 81.325 (2006), KCSR believes that Warren County is not a non-attainment area and that the above-stated thresholds are therefore inapplicable. Nevertheless, the above thresholds will not be exceeded.

(iii) If transportation of ozone depleting materials (such as nitrogen oxide and freon) is contemplated, identify: the materials and quantity; the frequency of service; safety practices (including any speed restrictions); the applicant's safety record (to the extent available) on derailments, accidents and spills; contingency plans to deal with accidental spills; and the likelihood of an accidental release of ozone depleting materials in the event of a collision or derailment.

Not applicable.

(6) NOISE

If any of the thresholds identified in item (5)(i) of this section are surpassed, state whether the proposed action will cause:

(i) An incremental increase in noise levels of three decibels Ldn or more; or

(ii) An increase to a noise level of 65 decibels Ldn or greater. If so, identify sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) in the project area, and quantify the noise increase for these receptors if the thresholds are surpassed.

None of the thresholds of item (5)(i) of this section will be exceeded.

(7) SAFETY

(i) Describe any effects of the proposed action on public health and safety (including vehicle delay time at railroad grade crossings).

VSOR delivers only about 60 carloads a year to Foam so the proposed abandonment will not cause any significant changes in public health. However, if the abandonment is granted and the line salvaged, two public and three private

rail-highway at-grade crossings on the Line will be eliminated, thereby improving local traffic flow and eliminating the possibility of train-automobile collisions.

(ii) **If hazardous materials are expected to be transported, identify: the materials and quantity; the frequency of service; whether chemicals are being transported that, if mixed, could react to form more hazardous compounds; safety practices (including any speed restrictions); the applicant's safety record (to the extent available) on derailments, accidents and hazardous spills; the contingency plans to deal with accidental spills; and the likelihood of an accidental release of hazardous materials.**

Hazardous materials are not expected to be transported. Polystyrene, the only commodity handled of late over the Line, is not a hazardous cargo.

(iii) **If there are any known hazardous waste sites or sites where there have been known hazardous materials spills on the right-of-way, identify the location of those sites and the types of hazardous materials involved.**

Neither KCSR nor VSOR is aware of any hazardous waste sites or sites on the Line where there have been hazardous material spills.

(8) <u>BIOLOGICAL RESOURCES</u>

(i) **Based on consultation with the U.S. Fish and Wildlife Service, state whether the proposed action is likely to adversely affect endangered or threatened species or areas designated as a critical habitat, and if so, describe the effects.**

The land through which the Line passes is used for a variety of purposes, including, at different points, commercial, industrial, residential, forest, and farm land. In light of this highly mixed land use, KCSR and VSOR do not believe the abandonment and discontinuance will have an adverse impact on endangered or threatened species or areas designated as a critical habitat. KCSR has notified the U.S. Fish and Wildlife Service by letter dated July 27, 2007 and requested assistance in determining whether the proposed abandonment would adversely affect endangered or threatened species or areas designated as a critical habitat. A copy of this report was attached to the letter. *See* Exhibit 2.

(ii) **State whether wildlife sanctuaries or refuges, National or State parks or forests will be affected, and describe any effects.**

Following investigation, KCSR is not aware of any wildlife sanctuary or refuge, or any National or State park or forest adjacent to the Line. KCSR has notified the National Park Service of the proposed abandonment by letter dated July 27, 2007 and requested assistance in identifying any potential effects on wildlife sanctuaries or refuges, or National or state parks or forests. A copy of this report was attached to the letter. *See* Exhibit 2.

(9) **WATER**

(i) **Based on consultation with State water quality officials, state whether the proposed action is consistent with applicable Federal, State or local water quality standards. Describe any inconsistencies.**

KCSR is confident that the proposed abandonment will be consistent with applicable water quality standards. The line crosses the following named streams: Hennessey's Bayou and Pace Bayou. KCSR has contacted the Mississippi Department of Environmental Quality and the U.S. Environmental Protection Agency by letters dated July 27, 2007. A copy of this report was attached to the letter. *See* Exhibit 2.

(ii) **Based on consultation with the U.S. Army Corps of Engineers, state whether permits under section 404 of the Clean Water Act (33 U.S.C. 1344) are required for the proposed action and whether any designated wetlands or 100-year flood plains will be affected. Describe the effects.**

KCSR believes that no permits under section 404 of the Clean Water Act will be required because no salvage activities are anticipated to occur in or adjacent to any waterways, and that 100-year flood plains will not be adversely impacted by the proposed abandonment. KCSR contacted the U.S. Army Corps of Engineers Vicksburg District by letter dated July 27, 2007. A copy of this report was attached to the letter. *See* Exhibit 2.

(iii) **State whether permits under section 402 of the Clean Water Act (33 U.S.C. 1342) are required for the proposed action. (Applicants should contact the U.S. Environmental Protection Agency or the state environmental protection or equivalent agency if they are unsure whether such permits are required.)**

Upon receiving abandonment authority, any removal of track material will be accomplished by use of the right-of-way for access, along with existing public and private crossings, and no new access roads are contemplated. KCSR does not intend to perform any activities that would cause sedimentation or erosion of the soil, and does not anticipate any dredging or use of fill in removal of track material. No debris will be discarded along the right of way nor placed or left in streams or wetlands, or along the banks of such waterways. Any work along the right-of-way will be subject to appropriate measures to prevent or control spills from fuels, lubricants or any other pollutant materials. Accordingly, KCSR does not believe that a permit under Section 402 of the Clean Water Act will be required.

By letters dated July 27, 2007, KCSR has contacted the U.S. Environmental Protection Agency and the Mississippi Department of Environmental Quality concerning this matter and has requested assistance in identifying any potential

impacts on applicable water quality standards and determining whether the proposed abandonment is consistent with applicable Federal, State, or local water quality standards. A copy of this report was attached to the letter. *See* Exhibit 2.

(10) PROPOSED MITIGATION

Describe any actions that are proposed to mitigate adverse environmental impacts, indicating why the proposed mitigation is appropriate.

There will be no adverse environmental impacts in the project area as a result of this abandonment; therefore, mitigating action will not be necessary.

(11) ADDITIONAL INFORMATION FOR RAIL CONSTRUCTIONS

Not applicable.

HISTORIC REPORT

49 CFR §1105.8(d):

(1) A U.S.G.S. topographic map (or an alternate map drawn to scale and sufficiently detailed to show buildings and other structures in the vicinity of the proposed action) showing the location of the proposed action, and the locations and approximate dimensions of railroad structures that are 50 years old or older and are part of the proposed action;

A map generally depicting the location and scope of the Line is attached hereto as Exhibit 1. A U.S.G.S. topographic map is attached as Exhibit 3. Both maps are being supplied to the Mississippi Department of Archives and History as a copy of this report has been sent to them. There are three known railroad structures on the line that are 50 years old or older, all of which are railroad bridges. These bridges and their dimensions are depicted on Exhibit 3 and Appendix A to that Exhibit.

(2) A written description of the right-of-way (including approximate widths, to the extent known), and the topography and urban and/or rural characteristics of the surrounding area;

The involved right-of-way consists of an approximately 100-foot-wide strip of land 4.25 miles long located in Vicksburg and Warren County, Mississippi, running from milepost 225.6 to milepost 229.85. The Line runs adjacent to lands of varying uses, ranging from commercial, industrial, residential, forest, and farm land. The majority of the Line is located in the City of Vicksburg, and, at various points, the land has been zoned as heavy industrial, general commercial, mixed use residential, single family residential, commercial planned unit development (resort area zoned for gaming and ancillary uses), and agricultural/industrial. The topography is generally flat.

(3) Good quality photographs (actual photographic prints, not photocopies) of railroad structures on the property that are 50 years old or older and of the immediately surrounding area;

Color Photographs are attached as Exhibit 4.

(4) The date(s) of construction of the structure(s), and the date(s) and extent of any major alterations, to the extent such information is known;

The structures in question – bridges at Mileposts 228.6, 228.9, and 229.8 – were originally constructed by railroads historically unaffiliated with KCSR. KCSR acquired the structures in connection with its acquisition of MidSouth Rail Corporation ("MidSouth") in 1993. See response to 49 CFR 1105.8(d)(5), below.

What limited information KCSR has in connection with these bridges is contained in bridge records that KCSR acquired from MidSouth in 1993.

In particular, the bridge at Milepost 228.6 was constructed in 1952 (KCSR knows of no subsequent major alterations since then); the bridge at Milepost 228.9 was built in 1948 (KCSR knows of no subsequent major alterations since that time); and the main span of the bridge at Milepost 229.8 was constructed in 1923 (the north and south approaches to this span – which is a crossing of Glass Road – were rebuilt in 1966). In light of the significant modification to the Milepost 229.8 bridge, it is not clear to KCSR that this bridge would qualify for consideration as an historic structure under the Board's rules.

(5) A brief narrative history of carrier operations in the area, and an explanation of what, if any, changes are contemplated as a result of the proposed action;

Research indicates that the Line was originally constructed by the Louisville, New Orleans & Texas Railway ("LNO&T") as part of a through route between Memphis and New Orleans via Vicksburg, MS, and Baton Rouge, LA, which route was completed in or about 1884. The Yazoo & Mississippi Valley Railroad ("Y&MV"), a subsidiary of the Illinois Central Railroad ("IC"), merged with the LNO&T, with Y&MV becoming the surviving carrier. Y&MV was itself later merged into IC. In 1972, IC became the Illinois Central Gulf Railroad ("ICG") following IC's merger with the Gulf, Mobile & Ohio Railroad ("GM&O"). Over time, portions of the former LNO&T Memphis-New Orleans route were abandoned, resulting in an approximately 19-mile branch line from Redwood, MS (north to Vicksburg), near Cedars, MS (on the south side of Vicksburg), the southernmost 4.5 miles of which is now the Line that is the subject of this abandonment proceeding.

In 1986, MidSouth acquired the Line, along with other lines, from ICG. KCSR acquired control of MidSouth in 1993, subsequently merging with MidSouth, with KCSR as the surviving entity. KCSR leased the Line to VSOR in early 2006. In light of VSOR's current lease and operation of the Line, the proposed abandonment will not effect any change in KCSR's operations.

(6) A brief summary of documents in the carrier's possession, such as engineering drawings, that might be useful in documenting a structure that is found to be historic;

See above discussion and Appendix A to Exhibit 3.

(7) An opinion (based on readily available information in the railroad's possession) as to whether the site and/or structures meet the criteria for listing on the National Register of Historic Places (36 CFR 60.4), and whether there is a likelihood of archeological resources or any other previously unknown historic properties in the

project area, and the basis for these opinions (including any consultations with the State Historic Preservation Office, local historical societies or universities);

As indicated above, KCSR's records indicate that there are three structures (bridges) on the Line that are 50 years old or older. KCSR is not of an opinion that these bridges would meet the criteria for listing on the National Register of Historic Places. Regardless, KCSR understands that the bridges in question may be preserved in connection with the City of Vicksburg's plans to use the Line's right-of-way for recreational purposes. KCSR is also unaware of any archeological resources or any other previously unknown historic properties on the Line's right-of-way.

(8) **A description (based on readily available information in the railroad's possession) of any known prior subsurface ground disturbance or fill, environmental conditions (naturally occurring or manmade) that might affect the archeological recovery of resources (such as swampy conditions or the presence of toxic wastes), and the surrounding terrain.**

Various track work and/or construction occurred over the many years that the track was in operation. Such work may have disturbed the potential for recovery of archeological resources.

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC

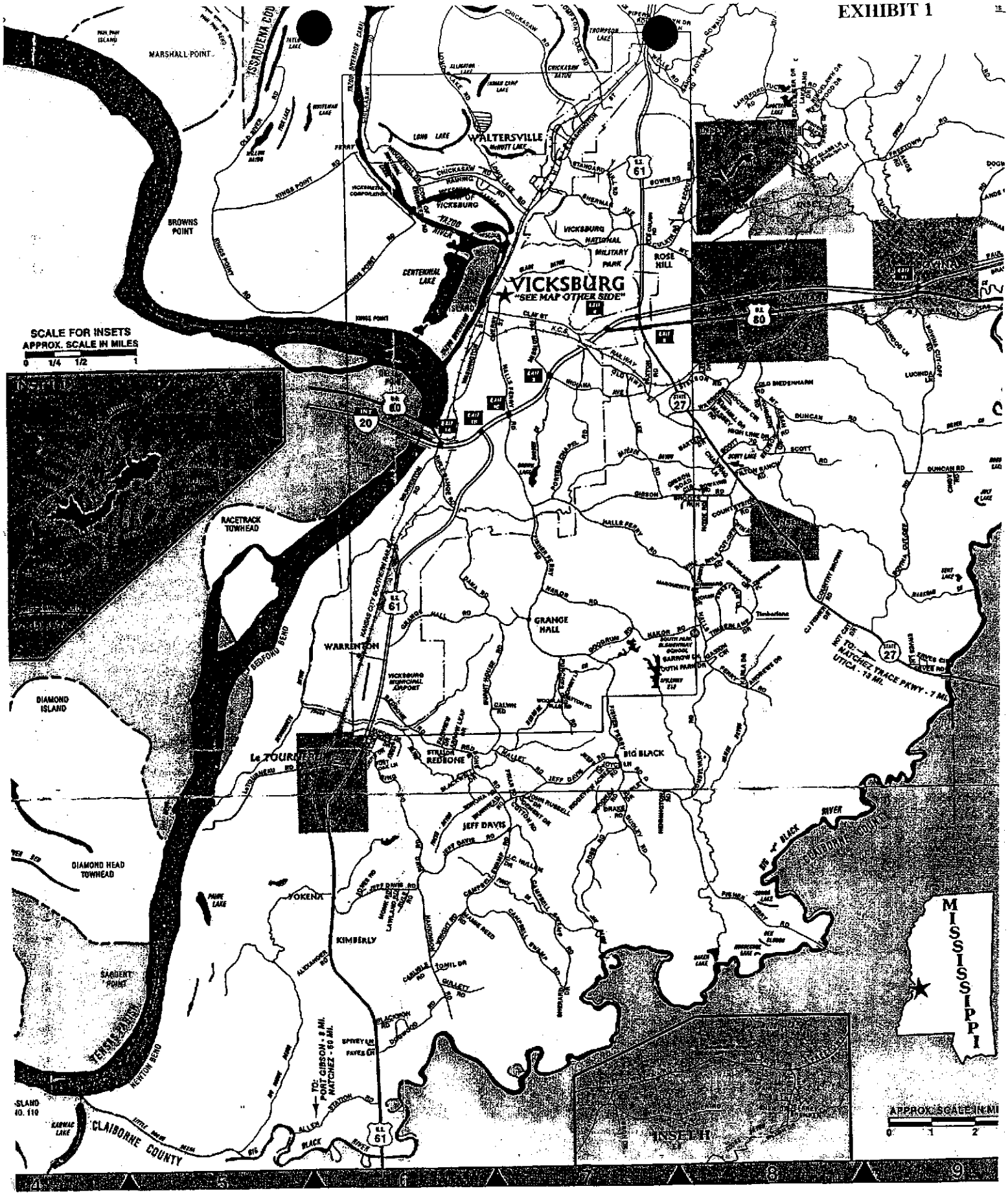
STB DOCKET NO. AB-103
(SUB-NO. 20X)

THE KANSAS CITY SOUTHERN RAILWAY COMPANY -- ABANDONMENT EXEMPTION -- LINE IN JEFFERSON PARISH, LA

ENVIRONMENTAL AND HISTORIC REPORT

EXHIBIT 1 – LOCATION MAP

EXHIBIT 1


VICKSBURG
"SEE MAP OTHER SIDE"
WALTERSVILLE
MARSHALL POINT
BROWNS POINT
RACETRACK TOWHEAD
DIAMOND ISLAND
DIAMOND HEAD TOWHEAD
SARGENT POINT
WARRENTON
GRANGE HALL
BIG BLACK
JEFF DAVIS
YOKENA
KIMBERLY
ROSE HILL
VICKSBURG NATIONAL MILITARY PARK
CENTENNIAL LAKE
SCALE FOR INSETS
APPROX. SCALE IN MILES
0 1/4 1/2 1
INSET H
INSET I
APPROX. SCALE IN KM
0 1 2
MISSISSIPPI
CLAIBORNE COUNTY
TO: PORT GIBSON - 8 MI.
NATCHEZ - 50 MI.
TO: NATCHEZ TRACE PKWY - 7 MI.
UTICA - 15 MI.
4 5 6 7 8 9

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC

STB DOCKET NO. AB-103
(SUB-NO. 20X)

THE KANSAS CITY SOUTHERN RAILWAY COMPANY
– ABANDONMENT EXEMPTION --
LINE IN JEFFERSON PARISH, LA

ENVIRONMENTAL AND HISTORIC REPORT

EXHIBIT 2 – CONSULTATION LETTERS

BAKER & MILLER PLLC

ATTORNEYS and COUNSELLORS

2401 PENNSYLVANIA AVENUE, NW
SUITE 300
WASHINGTON, DC 20037

TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Richard George, President
Warren County Board of Supervisors
913 Jackson Street
Vicksburg, MS 39183-2519

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Mr. George:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

We are providing this report so that you may review the information that will form the basis for the STB's independent environmental analysis of these proceeding. If any of the information is misleading or incorrect, if you believe that pertinent information is missing, or if you have any questions about the STB's environmental review process, please contact the Section of Environmental Analysis ("SEA"), Surface Transportation Board, 395 E Street, SW,

Washington, DC 20423-0001; TEL: (202) 245-0295 and refer to STB Docket No. AB-103 (Sub-No. 21X).

Because the applicable statutes and regulations impose stringent deadlines for processing this action, your written comments to the SEA (at the address provided above) along with a copy to KCSR's representative (at the address provided below) would be appreciated within three weeks. Your comments will be considered by the STB in evaluating the environmental and/or historic preservation impacts of the contemplated action.

If there are any questions concerning this proposal, please contact either William A. Mullins, Esq. or Robert A. Wimbish, Esq. at the law firm of Baker & Miller, PLLC, 2401 Pennsylvania Avenue, NW, Suite 300, Washington, DC 20037; by facsimile at (202) 663-7849; by e-mail at wmullins@bakerandmiller.com or rwimbish@bakerandmiller.com, or by telephone at (202) 663-7820.

Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

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TELEPHONE: (202) 663-7820
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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Mississippi Department of Marine Resources
1141 Bayview Avenue, Suite 101
Biloxi, MS 39530

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Sir or Madame:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

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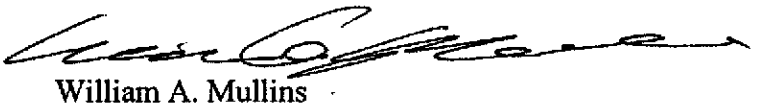
Sincerely,



William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BAKER & MILLER PLLC

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2401 PENNSYLVANIA AVENUE, NW
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TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Laurence E. Leyens
Mayor City of Vicksburg, MS
P.O. Box 150
Vicksburg, MS 39181

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Mayor Leyens:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

We are providing this report so that you may review the information that will form the basis for the STB's independent environmental analysis of these proceeding. If any of the information is misleading or incorrect, if you believe that pertinent information is missing, or if you have any questions about the STB's environmental review process, please contact the Section of Environmental Analysis ("SEA"), Surface Transportation Board, 395 E Street, SW,

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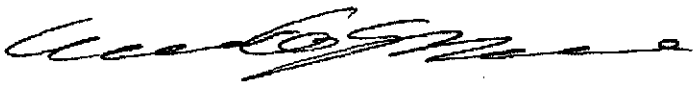
Because the applicable statutes and regulations impose stringent deadlines for processing this action, your written comments to the SEA (at the address provided above) along with a copy to KCSR's representative (at the address provided below) would be appreciated within three weeks. Your comments will be considered by the STB in evaluating the environmental and/or historic preservation impacts of the contemplated action.

If there are any questions concerning this proposal, please contact either William A. Mullins, Esq. or Robert A. Wimbish, Esq. at the law firm of Baker & Miller, PLLC, 2401 Pennsylvania Avenue, NW, Suite 300, Washington, DC 20037; by facsimile at (202) 663-7849; by e-mail at wmullins@bakerandmiller.com or rwimbish@bakerandmiller.com, or by telephone at (202) 663-7820.

Sincerely,



William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BAKER & MILLER PLLC

ATTORNEYS and COUNSELLORS

2401 PENNSYLVANIA AVENUE, NW
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WASHINGTON, DC 20037

TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS (202) 663-7823 (Direct Dial)

July 27, 2007

Sam Hamilton, Regional Director
U.S. Fish & Wildlife Service
Region 4 (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, PR/Virgin Islands)
Century Center
1875 Century Boulevard, Suite 400
Atlanta, GA 30345

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Mr. Hamilton:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

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you have any questions about the STB's environmental review process, please contact the Section of Environmental Analysis ("SEA"), Surface Transportation Board, 395 E Street, SW, Washington, DC 20423-0001; TEL: (202) 245-0295 and refer to STB Docket No. AB-103 (Sub-No. 21X).

Because the applicable statutes and regulations impose stringent deadlines for processing this action, your written comments to the SEA (at the address provided above) along with a copy to KCSR's representative (at the address provided below) would be appreciated within three weeks. Your comments will be considered by the STB in evaluating the environmental and/or historic preservation impacts of the contemplated action.

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Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Abigail Kimbell, Chief of the Forest Service
U.S. Department of Agriculture
201 14th Street, S.W., Suite 4NW
Washington, D.C. 20024

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Ms. Kimbell:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

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Washington, DC 20423-0001; TEL: (202) 245-0295 and refer to STB Docket No. AB-103 (Sub-No. 21X).

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If there are any questions concerning this proposal, please contact either William A. Mullins, Esq. or Robert A. Wimbish, Esq. at the law firm of Baker & Miller, PLLC, 2401 Pennsylvania Avenue, NW, Suite 300, Washington, DC 20037; by facsimile at (202) 663-7849; by e-mail at wmullins@bakerandmiller.com or rwimbish@bakerandmiller.com, or by telephone at (202) 663-7820.

Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BAKER & MILLER PLLC

ATTORNEYS and COUNSELLORS

2401 PENNSYLVANIA AVENUE, NW
SUITE 300
WASHINGTON, DC 20037

TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Civil Works Office
U.S. Army Engineer District, Vicksburg
4155 Clay St.
Vicksburg, MS 39183-3435

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Sir or Madame:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

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Washington, DC 20423-0001; TEL: (202) 245-0295 and refer to STB Docket No. AB-103 (Sub-No. 21X).

Because the applicable statutes and regulations impose stringent deadlines for processing this action, your written comments to the SEA (at the address provided above) along with a copy to KCSR's representative (at the address provided below) would be appreciated within three weeks. Your comments will be considered by the STB in evaluating the environmental and/or historic preservation impacts of the contemplated action.

If there are any questions concerning this proposal, please contact either William A. Mullins, Esq. or Robert A. Wimbish, Esq. at the law firm of Baker & Miller, PLLC, 2401 Pennsylvania Avenue, NW, Suite 300, Washington, DC 20037; by facsimile at (202) 663-7849; by e-mail at wmullins@bakerandmiller.com or rwimbish@bakerandmiller.com, or by telephone at (202) 663-7820.

Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BAKER & MILLER PLLC

ATTORNEYS and COUNSELLORS

2401 PENNSYLVANIA AVENUE, NW
SUITE 300
WASHINGTON, DC 20037

TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Trudy Fisher, Executive Director
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Ms. Fisher:

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Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

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Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

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WASHINGTON, DC 20037

TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

U.S. Environmental Protection Agency
Region 4 (AL, MS, GA, FL, SC, NC, TN, KY)
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

Dear Sir or Madame:

On or about August 16, The Kansas City Southern Railway Company ("KCSR") and Vicksburg Southern Railroad, Inc. ("VSOR") expect jointly to file with the Surface Transportation Board ("STB") a Petition for Exemption pursuant to 49 CFR 1152.60, Subpart G, for KCSR to abandon 4.25 miles of railroad track located in Vicksburg and Warren County, Mississippi, running from Milepost 225.6 (south of the track's crossing of Warrenton Road and at that highway's intersection with Kemp Bottom Road) to Milepost 229.85 (approximately 0.05 miles south of the Line's crossing of Glass Road, just beyond the Vicksburg city limits) (the "Line"), and for VSOR to discontinue rail service over the Line. The Line traverses United States Postal Zip Code 39180. Enclosed is an Environmental and Historic Report describing the proposed discontinuance and abandonment and any expected environmental and historic effects, as well as a map of the affected area.

We are providing this report so that you may review the information that will form the basis for the STB's independent environmental analysis of these proceeding. If any of the information is misleading or incorrect, if you believe that pertinent information is missing, or if you have any questions about the STB's environmental review process, please contact the Section of Environmental Analysis ("SEA"), Surface Transportation Board, 395 E Street, SW,

Washington, DC 20423-0001; TEL: (202) 245-0295 and refer to STB Docket No. AB-103 (Sub-No. 21X).

Because the applicable statutes and regulations impose stringent deadlines for processing this action, your written comments to the SEA (at the address provided above) along with a copy to KCSR's representative (at the address provided below) would be appreciated within three weeks. Your comments will be considered by the STB in evaluating the environmental and/or historic preservation impacts of the contemplated action.

If there are any questions concerning this proposal, please contact either William A. Mullins, Esq. or Robert A. Wimbish, Esq. at the law firm of Baker & Miller, PLLC, 2401 Pennsylvania Avenue, NW, Suite 300, Washington, DC 20037; by facsimile at (202) 663-7849; by e-mail at wmullins@bakerandmiller.com or rwimbish@bakerandmiller.com, or by telephone at (202) 663-7820.

Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BAKER & MILLER PLLC

ATTORNEYS and COUNSELLORS

2401 PENNSYLVANIA AVENUE, NW
SUITE 300
WASHINGTON, DC 20037

TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Nielsen Cochran
Mississippi Public Service Commission
Woolfolk Building
501 North West Street
Jackson, MS 39201

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

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Enclosures

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Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

The National Center for Recreation and Conservation
c/o The National Park Service
C (Org. Code 2220)
1849 C Street, N.W.
Washington, D.C. 20240

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

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William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

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Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

NGS Information Services, NOAA, N/NGS12
National Geodetic Survey SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

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Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Patricia Hooks
U.S. NATIONAL PARK SERVICE
Southeast Region (KY, TN, NC, SC, GA, FL, AL, MS, LA, PR/Virgin Islands)
100 Alabama St., SW
1924 Building
Atlanta, GA 30303

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

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William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

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Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BAKER & MILLER PLLC

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2401 PENNSYLVANIA AVENUE, NW
SUITE 300
WASHINGTON, DC 20037

TELEPHONE: (202) 663-7820
FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Homer L. Wilkes, State Conservationist
Natural Resources Conservation Service/ USDA
Jackson State Office
100 West Capitol Street, Suite 1321, Federal Building
Jackson, MS 39269

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

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Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

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Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

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WASHINGTON, DC 20037

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FACSIMILE: (202) 663-7849

WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

SDDC TEA
Attn: MTT-SA
Bob Korpanty
720 Thimble Shoals Blvd. Suite 130
Newport News, VA 23606

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

Vicksburg Southern Railroad, Inc. – Discontinuance of Service Petition for Exemption – Line in Warren County, MS, STB Docket No. AB-1016X

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Enclosures

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395 E Street, SW
Washington, DC 20423-0001

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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Mississippi Department of Finance and Administration
Clearinghouse Officer
Office of Policy Development
1301 Woolfolk Building, Suite E
501 North West Street
Jackson, MS 39201

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

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395 E Street, SW
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WILLIAM A. MULLINS

(202) 663-7823 (Direct Dial)

July 27, 2007

Mississippi Department of Archives and History
P.O. Box 571
Jackson, MS 39205-0571

RE: *The Kansas City Southern Railway Company – Abandonment Petition for Exemption – Line in Warren County, MS*, STB Docket No. AB-103 (Sub-No. 21X)

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Sincerely,

William A. Mullins

Counsel for the Kansas City Southern Railway Company

Enclosures

cc: Section of Environmental Analysis (SEA)
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC

STB DOCKET NO. AB-103
(SUB-NO. 20X)

THE KANSAS CITY SOUTHERN RAILWAY COMPANY
-- ABANDONMENT EXEMPTION --
LINE IN JEFFERSON PARISH, LA

ENVIRONMENTAL AND HISTORIC REPORT

EXHIBIT 3 – U.S.G.S. TOPOGRAPHIC MAP

EXHIBIT 3

USGS 15 km S of Vicksburg, Mississippi, United States 01 Jul 1961

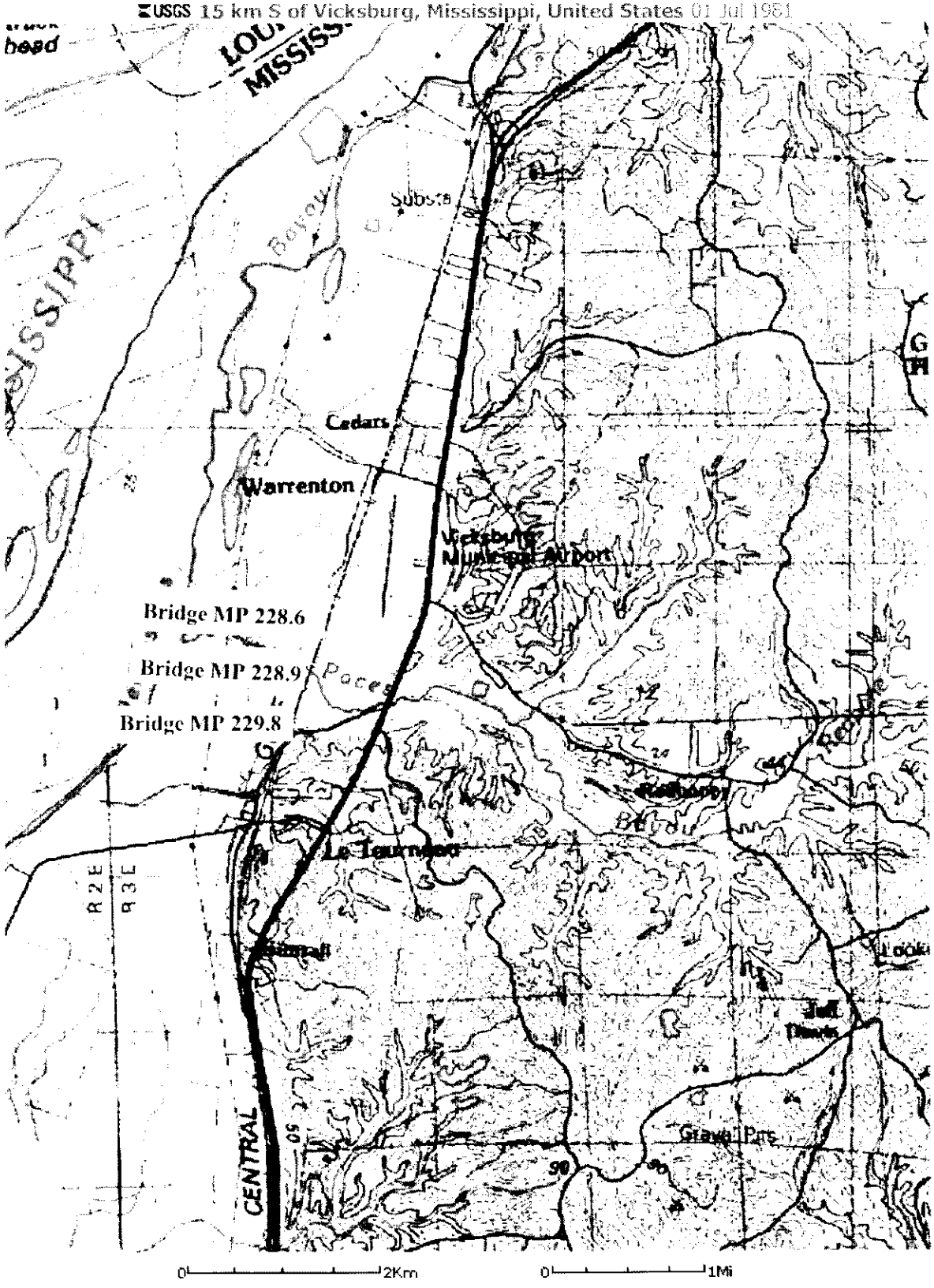

Image courtesy of the U.S. Geological Survey
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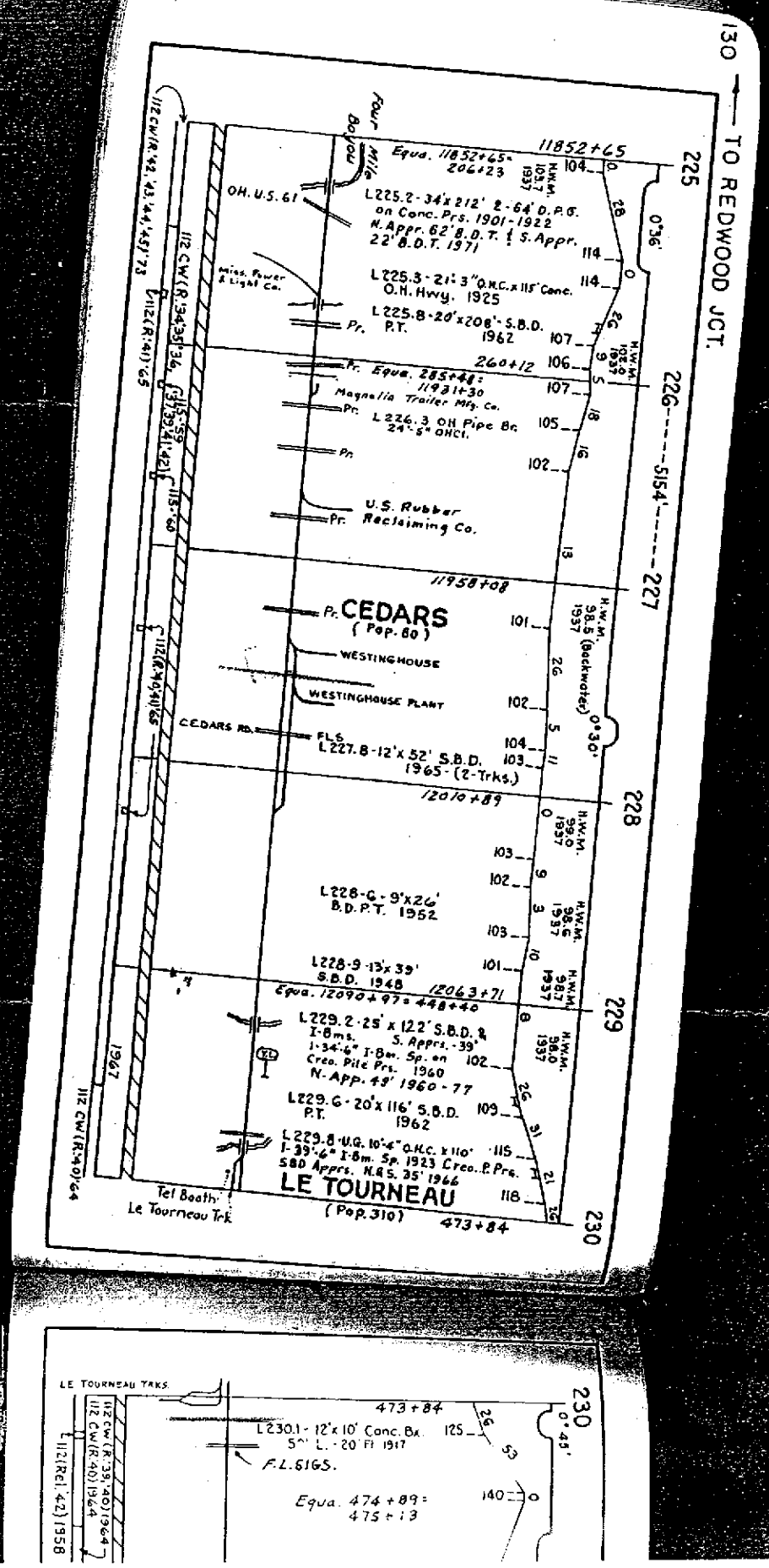
APPENDIX A

TO EXHIBIT 3



BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, DC

STB DOCKET NO. AB-103
(SUB-NO. 20X)

THE KANSAS CITY SOUTHERN RAILWAY COMPANY
-- ABANDONMENT EXEMPTION --
LINE IN JEFFERSON PARISH, LA

ENVIRONMENTAL AND HISTORIC REPORT

EXHIBIT 4 – COLOR PHOTOGRAPHS

Photograph No. 1 – M.P. 227.75 West Side – middle

Photograph No. 2 – M.P. 227.75 West side of bridge, North end

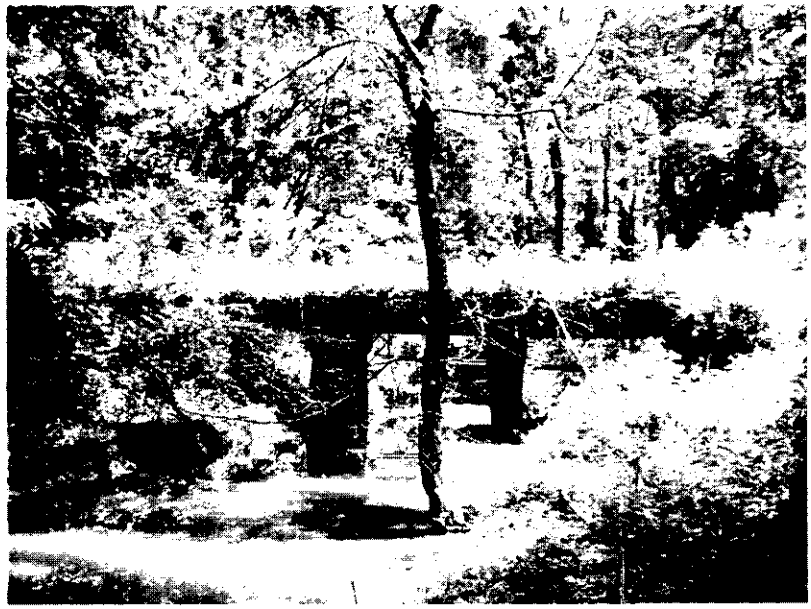
Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	

Photograph No. 3 – M.P. 227.75 West side of bridge, South end

Photograph No. 4 – M.P. 228.58 – Southeast side, facing Northwest

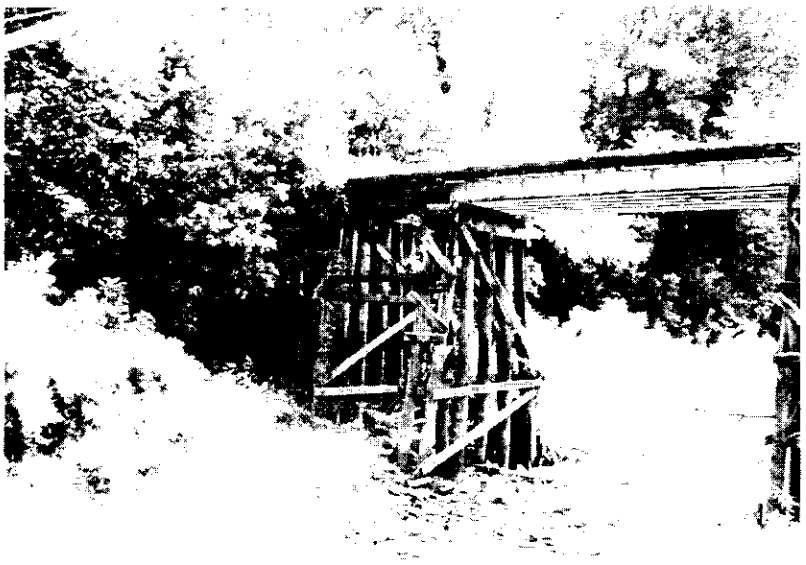
Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	

Photograph No. 5 – M.P. 228.58 Southwest side facing Northeast



Photograph No. 6 – M.P. 228.58 West Side

Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	



Photograph No. 7 – M.P. 229.25 North end of West Side

Photograph No. 8 – M.P. 229.25 South end of West Side

Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	

Photograph No. 9 *– M.P. 229.53 North end of East side*

Photograph No. 10 *– M.P. 229.53 South end of West Side*

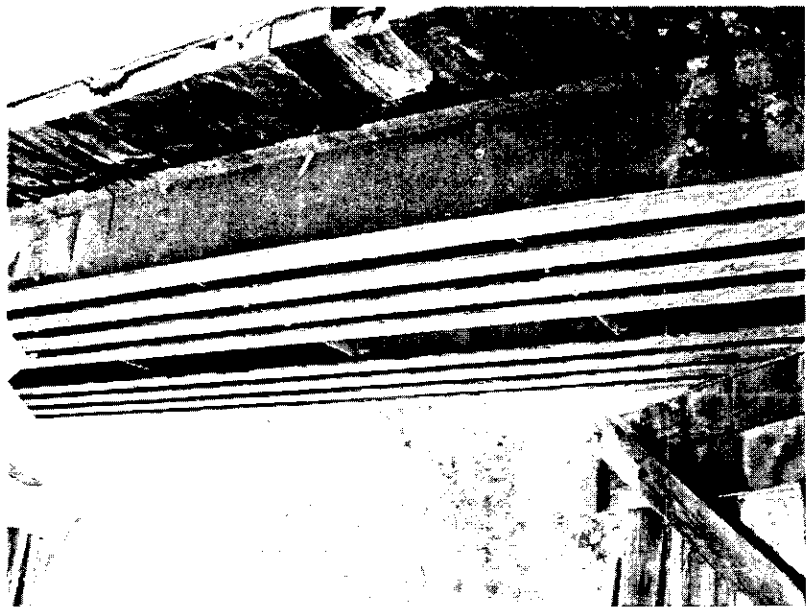
Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	

Photograph No. 11 – M.P. 229.53 Northeast side facing Southwest

Photograph No. 12 – M.P. 229.53 South end of East side

Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	

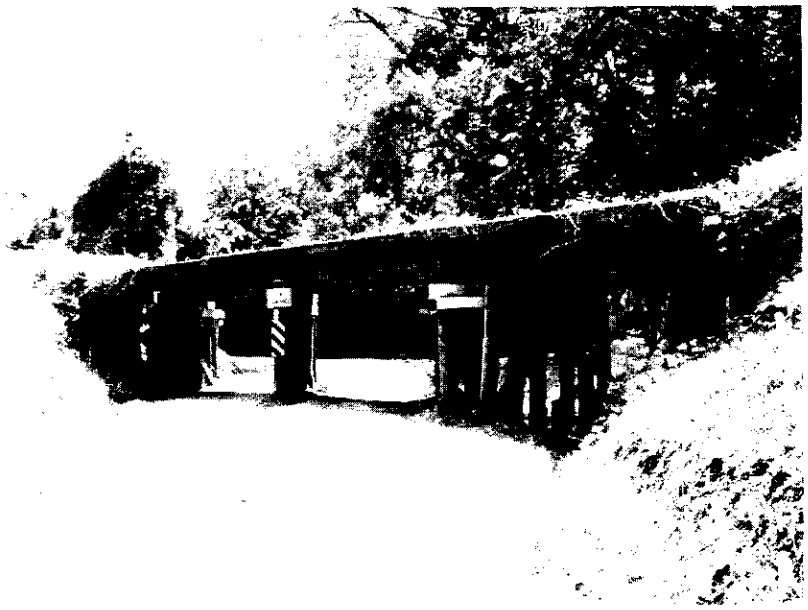
Photograph No. 13 – M.P. 229.53 South end of West side



Photograph No. 14 – M.P. 229.80 over Glass Road, steel I-Beams

Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	

Photograph No. 15 – M.P. 229.80 Southeast side facing Northwest



Photograph No. 16 – M.P. 229.80 Southwest side facing Northeast

Photographer: Bill Meador Photo Date: 7-19-07	Kansas City Southern Railway Co. Redwood Branch M.P. 225.6 to 229.85	

DRAFT 7/18/2007

AGREEMENT FOR

PURCHASE AND SALE OF EQUIPMENT AND IMPROVEMENTS

between

MISSISSIPPI BLUFFS INDUSTRIAL PARK, LLC

and

HARCROS CHEMICALS, INC.

DRAFT7/18/2007

AGREEMENT FOR PURCHASE AND SALE OF EQUIPMENT AND IMPROVEMENTS

THIS AGREEMENT FOR PURCHASE AND SALE OF EQUIPMENT AND IMPROVEMENTS ("Agreement") is executed as of the _____day of _____, 2005, by and between MISSISSIPPI BLUFFS INDUSTRIAL PARK, LLC, a Mississippi limited liability company ("MBIP"), and HARCROS CHEMICALS, INC., a [insert entity] ("HARCROS") (HARCROS and MBIP are each a "Party" and collectively the "Parties").

RECITALS

This Agreement is made with respect to the following facts:

A. MBIP holds title to approximately 60 acres of the former Vicksburg Chemical Company site located in Vicksburg, Mississippi (the "Site") together with certain buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property ("Equipment and Improvements") that are located on the Site. The Equipment and Improvements have considerable value for reuse, resale or salvage.

B. MBIP holds title to the Site subject to an Agreed Order with the Mississippi Department of Environmental Quality requiring the remediation of soil and groundwater on the Site that has been contaminated from years of chemical plant operations. MBIP has entered into a Guaranteed Remediation Program Agreement with ARCADIS G&M for the performance of the environmental remediation on the Site.

C. Harcros is one of the largest chemical distributors operating in North America and a manufacturer of a broad range of specialty chemicals.

D. Harcros desires to purchase the Equipment and Improvements and to lease a portion of the Site for purposes of operating a chemical processing and distribution facility in exchange for payment of one million eight hundred thousand dollars to MBIP, and assumption of responsibility for demolishing and removing the equipment and improvements from the Site and restoring the Site to a condition acceptable for redevelopment activities to begin.

E. The Parties contemplate that environmental remediation of the Site will be performed during the same period of time as the demolition and removal of the Equipment and Improvements.

NOW, THEREFORE, in consideration of the mutual promises contained herein, and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the Parties agree hereby as follows:

DRAFT7/18/2007

AGREEMENT

SECTION 1
DEFINITIONS

1.2 **AGENT.** "Agent" shall mean any agent, employee, director, member, manager, officer, designee or any other authorized representative.

1.3 **AGREED ORDER.** "Agreed Order" shall mean that certain Agreed Order issued by the Mississippi Commission on Environmental Quality and agreed to by HARCROS, Mississippi Silvertip Development, LLC, and ARCADIS G&M, Inc., and dated as of _____, 2005.

1.4 **APPLICABLE LAW.** "Applicable Law" shall mean federal, state, local or municipal laws, statutes, ordinances, rules, regulations, permits, licenses, authorizations, directives, orders, judicial decisions and rulings or codes and other requirements of Governmental Authorities, that now or hereafter may be applicable, to the Parties, the Site, or the activities performed under this Agreement, including Environmental Laws.

1.5 **EFFECTIVE DATE.** "Effective Date" shall mean _____, 2005.

1.6 **ENVIRONMENTAL LAWS.** "Environmental Laws" shall mean any and all federal, state, local or municipal laws, statutes, ordinances, rules, regulations, permits, licenses, authorizations, directives, judicial or administrative guidance, orders, decisions, and rulings, or codes and other requirements of Governmental Authorities regulating or imposing standards of liability or exposure or standards of conduct or management requirements (including common law) concerning air, water, solid waste, Hazardous Materials, worker and community right to know, hazard communication, noise, radioactive material, storage tanks, resource protection, health protection and similar environmental, health, safety, and local government concerns, all as amended and effective during the term of this Lease. Such laws include, but are not limited to, the federal Resource Conservation and Recovery Act; the Superfund Amendments and Reauthorization Act; the Occupational Safety and Health Act; the Comprehensive Environmental Response, Compensation, and Liability Act; the Solid Waste Disposal Act; the Hazardous Materials Transportation Act; the Toxic Substances Control Act; the Federal Insecticide, Fungicide, and Rodenticide Act; the Emergency Planning and Community Right to Know Act; the Clean Air Act; the Clean Water Act; the Endangered Species Act; and the Safe Drinking Water Act; and their implementing regulations and guidance; and the Mississippi Air and Water Pollution Control Law; the Mississippi Solid Waste Disposal Law of 1974; the Mississippi Underground Storage Act of 1988; the Asbestos Abatement Radiation and Certification Act; the Mississippi Brownfields Voluntary Cleaning and Development Act; the Mississippi Water Resources Act; the Mississippi Safe Water Drinking Act of 1997; and implementing Mississippi state and local statutes, regulations, ordinances, and guidance; and all similar federal, state and local environmental statutes, ordinances and the regulations, orders, guidance and decrees now or hereafter promulgated thereunder; and the Agreed Order.

1.7 **ENVIRONMENTAL REMEDIATION.** "Environmental Remediation" shall mean the remediation of environmental conditions on the Site required under the Agreed Order.

1.8 **EQUIPMENT AND IMPROVEMENTS.** "Equipment and Improvements" shall mean all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property owned by MBIP located on the Site, except those items described as "excluded" in Exhibit B attached hereto and incorporated herein by reference. **[The Stipulation and Order excludes items that are leased or otherwise owned by others. Confirm whether there remain items on the Site that MBIP does not own and whether it is possible to identify those items. If not possible, consider placing the risk of determining ownership on HARCROS and convey only MBIP's right and title. It is also intended that the attached exhibit will identify utilities and infrastructure that should not be subject to this Agreement.]**

1.9 **EXISTING CONTAMINATION.** "Existing Contamination" shall mean Hazardous Materials existing on the Site as a result of the actions or omissions of any party except HARCROS.

1.10 **GOVERNMENTAL AUTHORITIES.** "Governmental Authorities" shall mean all federal, state or local governmental bodies, instrumentalities or agencies, including all political subdivisions of the State of Mississippi (including the Mississippi Department of Environmental Quality, the City of Vicksburg, the County of Warren, any taxing, fire and water districts and other governmental units) having jurisdiction over the Site, the Parties, any Existing Contamination or Hazardous Materials on, in, under or migrating from the Site, or the activities performed under this Agreement.

1.11 **HAZARDOUS MATERIALS.** "Hazardous Materials" shall mean any petroleum, petroleum products, waste oils, fuel oils, fuel additives, pesticides, herbicides, PCBs, asbestos containing materials, explosives, reactive materials, ignitable materials, corrosive materials, hazardous chemicals, hazardous wastes, hazardous substances, extremely hazardous substances, toxic substances, toxic chemicals, radioactive materials, infectious materials, pollutants, contaminants and any other element, compound, mixture, solution or substance which poses a present or potential risk to human health or the environment, or is regulated by, or for which standards of liability or exposure or standards of conduct or management requirements are imposed under, any Environmental Laws.

1.12 **LEASE.** "Lease" shall mean that certain Lease dated as of _____, 2005, between MBIP, as Landlord, and HARCROS, as Tenant, for a portion of the Site.

1.13 **SITE.** The "Site" shall mean the site of the former Vicksburg Chemical Company chemical plant facility in Vicksburg, Warren County, Mississippi, as identified as "Tract R" in Exhibit A.

SECTION 2
TERM

2.1 **TERM.** This Agreement shall commence on the Effective Date and shall terminate **[insert months]** thereafter ("Completion Date"), unless earlier terminated pursuant to Section 8.

SECTION 3
AGREEMENT FOR PURCHASE AND SALE

3.1 SALE OF EQUIPMENT AND IMPROVEMENTS. MBIP shall sell and convey the Equipment and Improvements to HARCROS in exchange for consideration including a total payment of One Million Eight Hundred Thousand Dollars ($1,800,000.00), the removal and demolition of such Equipment and Improvements from the Site on or before the Completion Date, and restoration of the Site, at no cost or expense to MBIP, subject to the covenants, terms and conditions set forth in this Agreement. It is expressly acknowledged by the Parties that their respective rights and obligations under the Lease shall be additional consideration for their rights and obligations herein.

3.2 TITLE. Title to the Equipment and Improvements and risk of loss shall pass to HARCROS as of 12:01 am on the Effective Date.

3.3 PAYMENT. HARCROS shall pay MBIP all sums received for the sale of the Equipment and Improvements to any third party up to an aggregate total of one million eighthundred thousand dollars ($1,800,000.00). HARCROS shall make such payments within ten (10) business days of receipt of funds from any third parties. On or before the first anniversary of the Effective Date, HARCROS shall pay MBIP one million eight hundred thousand dollars ($1,800,000.00) less the total amount of any sums HARCROS has paid to MBIP pursuant to the first sentence of this Section 3.3. Such payments shall be made by certified check, cash, or other form of payment acceptable to MBIP.

3.4 WARRANTIES. HARCROS shall take title to the Equipment and Improvements "as is and where is." MBIP warrants that it holds title to and has the right to sell the Equipment and Improvements to HARCROS. **[Confirm that MBIP can make this warranty. If not, is it possible simply to have HARCROS take MBIP's right and title subject to any security interests or other claims in the property?]** MBIP makes no other warranties or representations with respect to the Equipment and Improvements. Without limitation, MBIP *does not* represent or warrant that (i) Exhibit B is a complete or accurate list of the Equipment and Improvements; (ii) that the Equipment and Improvements listed in Exhibit B are present on the Site; (iii) the Equipment and Improvements are suitable for resale or for any uses intended by HARCROS; or (iv) a market exists for the resale of the Equipment or Improvements.

3.5 SECURITY INTEREST. As security for HARCROS's performance under this Agreement, MBIP shall retain a security interest in all Equipment and Improvements. Such security interest shall be released with respect to individual pieces of Equipment and Improvements as such individual pieces are sold or otherwise disposed of as contemplated under this Agreement; provided that, as a condition of releasing such security interest, HARCROS shall provide documentation of the sale or disposal of such material in the form of sales receipts, bills of lading, shipping manifests, or other appropriate documentation. HARCROS shall execute such documents as MBIP shall reasonably request to evidence MBIP's security interest in such Equipment and Improvements including the financing statement attached hereto as Exhibit D. If HARCROS is in Default under this Agreement, Equipment and Improvements subject to MBIP's security interest shall not be removed from the Site without the prior written approval of MBIP. In the event that HARCROS is in Default, MBIP, in addition to all its other rights under this Agreement, or at law or in equity, may avail itself of all its rights as secured party under Mississippi law with respect to the Equipment and Improvements to the extent necessary to satisfy the obligations of HARCROS to MBIP under this Agreement. If such Equipment and

Improvements are offered at a public sale, MBIP may become the purchaser of such Equipment and Improvements.

3.6 BOOKS OF ACCOUNT AND AUDITING.

A. HARCROS shall furnish to MBIP on a biannual basis during the term of this Agreement accurate statements of all sales, revenue, expenses and business transactions related to the Equipment and Improvements and HARCROS's activities under the Agreement, which statement shall be certified true and correct by the chief financial officer of HARCROS. HARCROS shall also keep true and complete books and records of all accounts and revenues, including daily bank deposits, related to its activities under this Agreement and shall give MBIP's authorized representatives access during business hours to such books and records. HARCROS agrees that it will keep and preserve for at least three years following the termination of this Agreement all sales slips, general ledgers, cash register tapes, sales books and journals, credit card invoices, bank books or duplicate deposit slips, schedules and workpapers supporting revenue and other evidence of gross and net revenues and business transacted for such period, to the extent such documents related, directly or indirectly, to its operations under this Agreement.

B. MBIP or any of its duly authorized representatives shall, until the expiration of three years after completion of operations under this Agreement, have access to and the right to examine any directly pertinent books, documents, papers and records of HARCROS involving this Agreement and HARCROS, upon request; shall make all such matters available for local examination.

SECTION 4
DEMOLITION AND REMOVAL OF EQUIPMENT AND IMPROVEMENTS AND SITE RESTORATION

4.1 SITE INVESTIGATION. By executing this Agreement, HARCROS represents and warrants that:

A. HARCROS has visited the Site and familiarized itself with the conditions under which the demolition, removal and/or transportation of the Equipment and Improvements and restoration of the Site are to be performed.

B. HARCROS has had sufficient time and opportunity to examine the Site independently, including, without limitation, the character and nature of the Site layout and materials, the character and nature of Site restrictions and limitations on ingress, egress, and staging and performance; geotechnical characterizations of the Site; the extent and nature of any actual or potential Existing Contamination on the Site, including review of the Phase I and Phase II Environmental Site Assessments for the Site provided by MBIP, and the local conditions under which the demolition, removal and/or transportation of the Equipment and Improvements and restoration of the Site are to be performed, including weather conditions and any other factors which may impact the work.

C. HARCROS has thoroughly reviewed and is familiar with the Applicable Law, governmental and regulatory processes, and other requirements and constraints under this Agreement or otherwise applicable to the demolition, removal and/or transportation of the

Equipment and Improvements and restoration of the Site to be performed hereunder, including the Agreed Order and HARCROS is capable and willing to fulfill all such requirements and observe such constraints. Except as expressly provided herein, neither MBIP, nor any person or party on behalf of MBIP has made any representation, warranty or covenant (express or implied) of any nature on which HARCROS has relied in entering into this Agreement.

4.2 **REMOVAL OF EQUIPMENT AND IMPROVEMENTS.** HARCROS shall conduct all demolition and removal of Equipment and Improvements from the Site in accordance with the following terms and conditions and all other applicable terms and conditions of this Agreement:

A. HARCROS shall perform, and shall provide at its sole cost and assume all liability for all labor, materials, equipment, tools, water, utilities, transportation and other facilities and services necessary for the proper and complete demolition and removal of the Equipment and Improvements from the Site. Such demolition and removal of the Equipment and Improvements from the Site shall be completed during the term of the Agreement and according to the specifications set forth in Exhibit C hereto. **[This Exhibit will need to include detail on treatment of foundations and other aspects of the demolition that affect the environmental remediation.]** However, HARCROS shall not be obligated to demolish or remove Equipment and Improvements located or relocated onto the portion of the Site subject to the Lease ("Leased Premises") so long as the Lease is in effect and so long as HARCROS otherwise complies with all terms and conditions of the Lease, including requirements related to improvements on the Leased Premises.

B. HARCROS shall conduct all aspects of the demolition and removal of the Equipment and Improvements in accordance with all Applicable Laws, including all Environmental Laws and the Agreed Order including all use restrictions specified therein, as further specified in Sections 5.5 and 5.6.

C. HARCROS acknowledges that MBIP and its consultants and contractors may be working concurrently at the Site. HARCROS agrees to cooperate with MBIP and its authorized contractors and representatives to minimize interruption and interference to HARCROS, MBIP, and other contractors and subcontactors and to avoid damage to the Environmental Remediation. HARCROS and MBIP shall each designate representatives to meet monthly, and at such other times requested by either Party from time to time as necessary, to coordinate HARCROS's activities with the activities of other consultants or contractors on or near the Site.

D. HARCROS agrees to assume all liability for and legal title to all Equipment and Improvements, including Existing Contamination contained in the Equipment and Improvements, if any. HARCROS shall limit the amount of waste materials generated to the maximum extent practical, and shall properly, handle, containerize, manage and dispose of all such wastes. HARCROS shall not assume liability for any Existing Contamination at the Site, except for Existing Contamination contained in the Equipment and Improvements and except insofar as HARCROS loads for removal or takes up environmental media containing Existing Contamination for any purpose.

E. HARCROS shall be responsible for the daily upkeep of its working areas and shall carry out a program of regular maintenance and clean up of its working areas to keep them reasonably free of litter and debris.

F. HARCROS shall determine the location, including the depth, of any underground utilities located on the Site, and will make all required notifications to the owner or operator of such utilities prior to commencing demolition, removal or restoration work on the surface above such utilities. HARCROS shall take all necessary precautions to avoid damaging or disturbing any aboveground or underground utility systems or facilities.

G. All costs and expenses of the activities conducted by HARCROS, its Agents or contractors, and of all related work conducted by, through or on behalf or HARCROS pursuant to this Agreement, shall be solely the costs and expenses of HARCROS. HARCROS shall be solely responsible for all materials and equipment placed on the Site in the course of any activities conducted hereunder by HARCROS or its Agents or contractors.

4.3 ENVIRONMENTAL CONTAMINATION AND TESTING

A. HARCROS agrees to perform at its own cost all necessary and appropriate sampling and analyses of demolition debris and other materials and waste removed by HARCROS for recycling, resale, or disposal to determine if such material may contain Hazardous Materials. HARCROS shall be responsible for testing, handling, transporting, and disposing of all such demolition debris and other materials and waste in full compliance with all Applicable Laws for marketing, resale, or disposal.

B. The soils which are adjacent and subjacent to the Equipment and Improvements may also contain Existing Contamination. HARCROS agrees to notify MBIP immediately if during the course of the work it encounters any visible, odorous, or otherwise recognizable Existing Contamination in the Site or any adjacent or subjacent soils or groundwater. MBIP will, upon notification, perform at its cost all reasonable and appropriate sampling and analyses of adjacent or subjacent soils still in place where any Existing Contamination was encountered. HARCROS shall proceed with the work of removing Equipment and Improvements if HARCROS determines that its removal operations do not cause any disturbance of the Existing Contamination in question. If any such disturbance occurs, HARCROS shall proceed with the work at another location until MBIP or its representatives have completed testing and remediation, if any, of the area in question. HARCROS or its Agents, consultants or contractors shall not exacerbate environmental conditions (including the quantity, quality, or distribution of any Existing Contamination) in, on, under or migrating from the Site.

C. HARCROS shall furnish to MBIP copies of all preliminary and final test data, reports, results, drawings, permits, and sample collection chain of custody documents and correspondence relating to HARCROS's testing and activities at the Site, upon generation or receipt of same by HARCROS.

4.4 RESTORATION AND COMPLETION. After removal of the Equipment and Improvements, HARCROS covenants and agrees to restore the general surface of the Site, as nearly as may reasonably be done, to a rough grade condition similar to the immediately surrounding area. Elevations need not be similar provided storm water collection systems and drainage ways are preserved and protected, with silt fencing and hay bales as necessary to protect storm water inlets, and appropriate fill as necessary to reestablish proper storm water drainage. HARCROS shall not be required to seed or mulch the Site. HARCROS may relocate or take up soil on the Site for fill material only from locations and in amounts approved in advance by MBIP.

HARCROS shall not remove or relocate soil on the Site, except incidentally, for any other reason and shall not disturb the Environmental Remediation. After demolition and removal of the Equipment and Improvements, HARCROS agrees that it or its contractor will promptly remove all debris, waste materials, excess materials, tools, and equipment from the work area. If the demolition or removal activities disturb the condition of any other areas of the Site adjacent to the Equipment and Improvements being removed, HARCROS shall, upon completion of each identified subsection of the removal, restore such other areas of the Site to the condition which existed prior to the commencement of HARCROS's activities, provided that HARCROS shall not affect, disturb, repair or restore the Environmental Remediation without the prior written approval of Landlord. HARCROS shall be responsible for the preservation and protection of storm water collection systems, drainage ways, fugitive dust control, and erosion control which may be affected by activities performed pursuant to this Agreement, during the full Term. All restored areas shall be subject to approval and acceptance in writing by MBIP, which approval shall not be unreasonably withheld.

4.5 COMPLIANCE WITH APPLICABLE LAWS. HARCROS agrees not to use or permit the Site to be used for any purposes prohibited by the Applicable Laws or for any purposes not authorized hereunder, and HARCROS further agrees that it will use the Site in accordance with all Applicable Laws. HARCROS further agrees to submit any report or reports or information which MBIP is required by law or regulation to obtain from HARCROS, or which MBIP may request, relating to HARCROS's operations. In addition and without limitation to the generality of the foregoing or the generality of Section 4.6 below, HARCROS shall be responsible for obtaining and assuming liability for all necessary permits and approvals for, and conducting all aspects of its business and its activities under the Lease in compliance with all Applicable Laws, including but not limited to requirements of the United States Environmental Protection Agency and the Mississippi Department of Environmental Quality, federal and state air quality standards, the City's building code and the City's zoning requirements. All required permits and approvals shall be issued in HARCROS's name, and all operations shall be deemed to be performed only on HARCROS's behalf and not as agent for or on behalf of MBIP, or their respective successors, assigns, or grantees. MBIP shall cooperate with HARCROS in obtaining the required permits to the extent required by Governmental Authorities. MBIP makes no representation or warranty that the activities contemplated under this Agreement are permissible under applicable zoning codes or other Applicable Laws.

4.6 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

Without limiting Section 4.5, HARCROS, in conducting any activity on the Site, shall comply and require its Agents, consultants, contractors and invitees to comply with all Environmental Laws, including the Agreed Order. In addition, and without limiting the foregoing:

A. HARCROS shall obtain or cause its Agents, consultants and contractors to obtain all necessary federal, state and local environmental permits and comply with all applicable federal, state and local environmental permit requirements relating to HARCROS's or its Agents', consultants' or contractors' activities on the Site.

B. HARCROS shall not cause and shall prohibit any discharge or disposal of any Hazardous Materials to storm or sanitary sewer systems, surface water, ground water, air or soils of the Site.

C. In the case of a discharge, release, spill or leak of Hazardous Materials as a result of HARCROS's activities or that of any of its contractors or Agents, HARCROS shall make all required notifications and immediately control and remediate all contaminated media in accordance with Environmental Laws. Without limiting the generality of Section 7.7, HARCROS shall indemnify and reimburse MBIP for any penalties and all costs and expense, including without limitation reasonable attorney's fees, incurred by MBIP as a result of the release or disposal by HARCROS or its Agents or contractors of any Hazardous Materials on the Site. HARCROS shall also immediately notify MBIP in writing of the release, spill or leak, the control and remediation response actions taken by HARCROS, and any responses, notifications or actions taken by any federal, state or local agency with regard to such release, spill or leak.

D. HARCROS shall provide MBIP copies of all notices, reports, documents and materials prepared pursuant to any requirement of this Section when submitted to a Governmental Authority.

E. HARCROS shall conduct testing and monitoring at the request of MBIP to determine whether any Hazardous Materials have entered the air, soil, groundwater, or surface water at, on or under the Site as a result of HARCROS's or its Agents' or contractors' activities. HARCROS shall provide copies of all results of such testing and monitoring to MBIP.

4.7 SAFETY. HARCROS shall develop and implement an appropriate health and safety plan and shall conduct all aspects of the work performed on the Site in accordance with all OSHA and other safety requirements, utilizing OSHA trained and certified contractors, site workers and site managers where appropriate.

4.8 LIENS. HARCROS shall not permit or suffer, and shall cause to be removed and released, any mechanic's or materialman's or other lien on the Site arising in relation to any work performed under this Agreement.

SECTION 5
SITE ACCESS

5.1 GENERAL CONDITIONS OF ACCESS. MBIP hereby grants to HARCROS and its contractors a non-exclusive license to enter onto the Site for the purpose of demolishing and removing Equipment and Improvements and of conducting any other activities necessary to the performance of HARCROS's obligations under this Agreement, provided:

A. HARCROS shall provide prior reasonable notice to MBIP of its access requirements and MBIP shall be responsible for designating temporary access roads, layout, traffic control, scheduling and other measures necessary to coordinate HARCROS's access with that of any other persons on the Site. **[Confirm responsibility should be MBIP's.]** HARCROS and its Agents shall have a non-exclusive right of ingress to and egress from the Site. Such access shall be in common with MBIP and such other persons as the MBIP may authorize or permit and shall be limited to use of the plant road currently originating from the location identified as the "North Plant" on Exhibit A.

B. HARCROS shall limit its traffic into and out of the Site to such reasonable hours and frequency as to minimize disturbance of redevelopment and other activities at or near the Site.

Nothing in this Section 5.1 shall be construed to grant an easement or any other interest in real property to HARCROS.

5.2 RESERVATION OF RIGHTS AND NON-INTERFERENCE. MBIP reserves the right to the undisturbed use, occupancy, and transfer of the Site and HARCROS agrees to such reservation. HARCROS further agrees that its rights hereunder are solely contractual, with no possessory interest in any particular location or portion of the Site. HARCROS shall coordinate with MBIP and take reasonable precautions to avoid interference with MBIP's activities, including the Environmental Remediation and any redevelopment activities. HARCROS agrees that no liability shall attach to MBIP or its Agents or invitees by way of such activities by MBIP and others, or by way of the sale of any of the Site and HARCROS waives any right to claim damages or other consideration therefrom, provided MBIP has reasonably coordinated with HARCROS's work and has taken reasonable precautions to avoid disturbance or interference with HARCROS's approved operations.

SECTION 6
UTILITIES

6.1 UTILITY SERVICE AND CHARGES. HARCROS covenants and agrees to arrange with the applicable utility providers for the furnishing of and payment for water, sewage disposal, gas, electricity, light, heat, power, telephone or other utility services as may be required by HARCROS in its operations on the Site. HARCROS shall directly pay such utility providers for such services and the inability of HARCROS to obtain or continue to receive such services for any reason whatsoever shall not relieve HARCROS of any obligations under this Agreement. If HARCROS's activities cannot be separately metered for water and sewage disposal or other necessary utilities, HARCROS shall be required to pay its prorata share for such services. Any bill by MBIP for such costs shall be due within 30 days and shall accrue interest at the lesser of (a) 18% per annum or (b) the highest rate permissible by law, if not paid when due. HARCROS shall be responsible for the payment of all water fees, including without limitation tap fees, if any.

6.2 OPERATING EXPENSES. HARCROS covenants and agrees to pay all costs and expenses relating to its operations, including without limitation costs and expenses for utilities, trash and garbage disposal, cleaning services, security services, and removal of snow and ice from access roadways serving its operations.

6.3 COMMON USE SERVICES. MBIP may establish common use services at the Site, including but not limited to trash and refuse removal, roadway maintenance, industrial waste handling, recycling, and security guards. MBIP reserves the right to establish charges for common use services based upon documented actual costs. HARCROS agrees to pay its prorata share of the charges for common use services utilized by or benefiting HARCROS.

SECTION 7
INSURANCE, INDEMNIFICATION AND BONDING

7.1 GENERAL PROVISIONS. Unless otherwise expressly provided in the Agreement, HARCROS at its sole expense, shall take out and maintain in effect at all times during the performance of this Agreement, insurance coverage with limits not less than those set forth in the following table:

Coverage (see additional details below)	*Amount*
Worker's Compensation Insurance	Statutory limits
Commercial General Liability Insurance	$1,000,000
Comprehensive Automobile Liability Insurance	$1,000,000
Professional Liability Insurance	$1,000,000
Contractor's Pollution Liability Insurance	$5,000,000

HARCROS shall deliver to MBIP within 15 days after the Effective Date, certificates of insurance identified on their face as to contract name and number, as evidence that policies providing the required coverages and limits are in full force and effect. Within 15 days following written request by MBIP, HARCROS also shall provide a true and complete copy of any policy required under this Section 7.

Each such certificate and policy shall provide that the policy shall not be canceled or coverage reduced without 45 days advance written notice, 10 days for nonpayment of premium, to MBIP. Also, when it is required that MBIP be named as an "additional insured", the certificate and policy must provide that such coverage afforded MBIP shall apply as primary insurance for the policyholder's operations and any other insurance issued to MBIP shall apply as excess and non-contributing insurance.

7.2 WORKER'S COMPENSATION INSURANCE. HARCROS shall comply with the requirements of the Worker's Compensation Law of Mississippi and shall provide Worker's Compensation Insurance to protect HARCROS from and against any and all Worker's Compensation claims arising from performance of work under the Agreement. The requirements of this provision shall apply to HARCROS and all levels of subconsultants or subcontractors.

7.3 COMMERCIAL GENERAL LIABILITY INSURANCE. HARCROS shall procure and maintain at its own expense Commercial General Liability Insurance covering all operations to be performed under the Agreement, in amounts as set forth in Section 7.1 above. Coverage must be on an "occurrence" basis as opposed to a "claims made" basis. This insurance must pay on behalf of HARCROS all sums which HARCROS shall become legally obligated to pay as damages because of bodily injury or property damage caused by an occurrence up to the specified limits of liability for each occurrence. MBIP and its Agents shall be named as additional insureds. Policy limits shall be dedicated to activities on the Site.

7.4 COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE. HARCROS shall procure and maintain at its own expense, until final payment by MBIP for all work covered by the Agreement, Comprehensive Automobile Liability Insurance, in amounts as set forth in Section 7.1 above, which must cover HARCROS for all sums which HARCROS shall become legally obligated to pay as damages because of bodily injury or property damage caused by an occurrence up to the specified limits of liability for each occurrence. Such coverage must include all

automotive equipment used in the performance of the Agreement, both on and off the Site, and must include non-ownership and hired cars coverage.

7.5 PROFESSIONAL LIABILITY INSURANCE. HARCROS shall ensure that professional liability insurance is maintained for all engineers, environmental consultants or other similar professionals whether employed by HARCROS or acting as consultants or Agents, in amounts as set forth in Section 7.1 above.

7.6 ENVIRONMENTAL INSURANCE. HARCROS shall procure and maintain contractor's pollution liability coverage in amounts as set forth in Section 7.1, above and including coverage for contractual liability under this Agreement. MBIP and its Agents shall be named as additional insureds. Policy limits shall be dedicated to activities performed on the Site.

7.7 INDEMNIFICATION. HARCROS shall defend, release, indemnify, and hold harmless MBIP and its Agents from all loss of or damage to property or injuries to or death of any person or persons and further agrees to defend, indemnify and hold harmless MBIP and its Agents from all liability, claims, costs, damages, demands, suits, actions, or proceedings of any kind or nature whatsoever in any way arising out of, directly or indirectly, or in any way related to the operations of HARCROS under this Agreement or otherwise, including acts or omissions of HARCROS, its Agents, contractors, consultants or purchasers; and including the cost of abatement or environmental remediation and the payment of any fines or penalties with respect to the violation of any Environmental Laws by HARCROS (including Environmental Laws that impose liability on an "owner"), or with respect to any breach of this Agreement by HARCROS. This indemnification is not limited to third party claims. However, HARCROS need not defend, release, indemnify, or hold harmless MBIP and its Agents from damages or liability resulting solely from the gross negligence or willful misconduct of MBIP and its Agents, and HARCROS's obligation to defend, release, indemnify and hold harmless MBIP and its Agents under this paragraph shall not apply to liability or damages resulting from Existing Contamination provided that (i) HARCROS promptly notified MBIP in accordance with Section 4.3.B of this Agreement; (ii) HARCROS's work in connection with the Existing Contamination was not performed in a negligent or wrongful manner or in violation of Environmental Laws; and (iii) HARCROS did not exacerbate any Existing Contamination. **[Consider whether to provide this protection.]**

Insurance coverage requirements specified elsewhere in this Agreement shall not limit the liability of HARCROS under the terms of the Agreement, including but not limited to this indemnification obligation, which shall survive termination of the Agreement.

7.8 CONTRACTOR'S INSURANCE AND INDEMNFICATION. Unless waived in writing by MBIP, HARCROS shall require all contractors conducting operations pursuant to this Agreement to satisfy the insurance requirements set forth in this Section 7. HARCROS agrees to obtain from its contractors an agreement to defend, release, indemnify and hold harmless MBIP to the extent provided in Section 7.7, from any and all claims or causes of action arising out of the operations of the contractor.

7.9 COVENANT NOT TO SUE. HARCROS, for itself and its Agents, covenants not to sue or take any other civil or administrative action against MBIP, its successors, assigns and grantees, or against the Site itself, for any and all liability for injunctive relief, cost recovery, testing costs,

disposal or other response costs, contribution, damages or other relief pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601 et seq.; or pursuant to the Solid Waste Disposal Act, 42 U.S.C. §§ 6901 et seq.; or based upon any cause of action for damages arising out of the inability of HARCROS to sell or use the Equipment and Improvements for the purpose intended or any other purpose. **[NOTE: Discuss scope of this covenant. Consider starting with a broader position.]**

7.10 **PERFORMANCE BOND.** HARCROS shall provide or require that its contractor(s) provide performance and payment bonds on or before the Effective Date in the forms attached hereto as Exhibits E and F ("Performance Bonds") **[AIA or other form contemplated by client]** and issued by a surety acceptable to MBIP. If the Performance Bonds are provided by HARCROS, each shall be in an amount equal to **[insert amount]** and shall name MBIP as obligee. If such bonds are provided by HARCROS's contractor(s), such bonds shall be in an amount of at least the applicable contract amount and shall name HARCROS as obligee and MBIP as a dual obligee by rider. The Performance Bonds shall guarantee to MBIP full and faithful performance of all of the terms and provisions of this Agreement by HARCROS, as this Agreement may be amended, supplemented or extended. All bonds shall be issued by a surety company licensed to transact business in the State of Mississippi. If a bond is executed by an attorney-in-fact of the surety, a power of attorney must be attached to the bond.

SECTION 8
DEFAULT AND REMEDIES

8.1 **DEFAULT.** HARCROS shall be in "Default" under this Agreement if HARCROS:

A. Fails to timely pay when due to MBIP any payment required hereunder and such failure continues for a period of more than 30 days after delivery by MBIP of a written notice of such failure ("Default Notice"); or

B. Becomes insolvent, or voluntarily or involuntarily takes the benefit of any present or future insolvency or bankruptcy statute, or makes a general assignment for the benefit of creditors, or consents to the appointment of a receiver, trustee or liquidator of any or substantially all of its property; or

C. Transfers or attempts to transfer its interest under this Agreement, without the prior written approval of MBIP, by operation of law, assignment, or otherwise, to any other person, entity or corporation; or

D. Abandons the Site or ceases to conduct its operations; or

E. Suffers any lien or attachment to be filed against the Site because of any act or omission of HARCROS, and such lien or attachment is not discharged or contested by HARCROS in good faith by proper legal proceedings within 20 days after receipt of notice thereof by HARCROS; or

F. Fails to keep, perform or observe any other terms, covenants or agreements set forth in this Agreement and such failure continues for a period of more than 30 days after delivery

by MBIP of a Default Notice, except where a shorter period is specified herein, or where fulfillment of its obligation requires activity over a period of time and HARCROS within 30 days of notice commences in good faith to perform whatever may be required to correct its failure to perform and continues such performance without interruption except for causes beyond its control; or

G. Uses or authorizes the use of any portion of the Site in violation of the Agreement or any Applicable Law; or

H. Is in "Default" as that term is defined under the Lease.

8.2 REMEDIES. In the event of a Default by HARCROS, in addition to any and all other remedies to which it may be entitled at law or in equity, MBIP may exercise any one or more of the following remedies:

A. MBIP may elect to allow this Agreement to continue in full force and effect and to enforce all of MBIP's rights and remedies hereunder, including without limitation the right to receive payment as it becomes due together with interest; or

B. MBIP may cancel and terminate this Agreement and require HARCROS to complete all operations in process, remove all detached Equipment and Improvements and complete restoration of all completed areas, at the end of which time all the rights hereunder of HARCROS shall terminate.

C. MBIP may cancel and terminate this Agreement and take possession of all Equipment and Improvements left or abandoned on the Site, at which time all the rights hereunder of HARCROS in such Equipment and Improvements shall terminate.

D. MBIP may remove and expel HARCROS from the Site; or any person claiming under HARCROS, terminate all access rights, and remove all effects as may be necessary. Such removal shall be without prejudice to any remedies for damages or breach and shall not be construed as termination of this Agreement unless a written notice specifically so states; however, MBIP reserves the right to terminate the Agreement at any time after removal. MBIP may recontract for the operations, or any portion thereof, on such terms and conditions as MBIP may choose, and may make such repairs or improvements as it deems appropriate to accomplish the recontracting. MBIP shall not be responsible for any failure to recontract or any failure to collect compensation due for such recontracting. Notwithstanding recontracting by MBIP, HARCROS shall continue to be liable for all amounts due as payment under this Agreement less amounts received by MBIP in recontracting, in such amounts and at such times as would be payable if default had not occurred.

E. If MBIP elects to terminate this Agreement and/or elects to take over completion of the Project (or cause a third party to take over completion of the Project) without terminating this Agreement, in addition to other remedies provided hereunder: (i) HARCROS shall be liable to MBIP for all amounts owing at the time of termination or takeover, including but not limited to payments due plus interest, together with any other amount to fully compensate MBIP for all damages and costs, including attorney's fees, caused by HARCROS's failure to perform its obligations hereunder, or which in the ordinary course would likely result therefrom; (ii) MBIP

shall have the right to present a demand for performance under the Performance Bonds and to avail itself of its rights as a secured party with respect to the Equipment and Improvements; (iii) upon written request of MBIP, HARCROS shall immediately and diligently take all necessary steps to assign all of its contracts and agreements for the demolition, removal and/or transportation of the Equipment and Improvements and restoration of the Site to MBIP; and (iv) HARCROS shall pay to MBIP, immediately upon written demand, an amount equal to the reasonable, actual and unreimbursed costs incurred by MBIP in completing the demolition, removal and/or transportion of the Equipment and Improvements and restoration of the Site contemplated in this Agreement.

8.3 MULTIPLE DEFAULT NOTICES. Notwithstanding anything herein to the contrary, HARCROS shall be deemed in immediate Default without right to any cure period upon delivery by MBIP of a third Default Notice for any reason whatsoever.

8.4 REMEDIES CUMULATIVE. The remedies provided in this Agreement shall be cumulative and shall in no way affect any other remedy available to MBIP or HARCROS under law or equity.

8.5 CROSS DEFAULT. HARCROS agrees that any default by HARCROS under any of the terms and conditions of the Lease shall be deemed to be a material Default hereunder and that any Default under any of the terms and conditions of this Agreement by HARCROS shall be deemed to be a material default under the Lease. MBIP's election of remedies hereunder shall not be inconsistent with its election of remedies under the Lease.

8.6 WAIVERS. No failure of MBIP to insist upon the strict performance of a term, covenant or agreement contained in this Lease, no failure by MBIP to exercise any right or remedy under this Agreement, and no acceptance of full or partial payment during the continuance of any Default by HARCROS shall constitute a waiver of any such term, covenant or agreement or a waiver of any such right or remedy or a waiver of any Default by HARCROS.

SECTION 9
MISCELLANEOUS PROVISIONS

9.1 APPLICABLE LAW. This Agreement shall be construed according to the laws of the State of Mississippi and the laws of the United States of America, as applicable.

9.2 ASSIGNMENT. HARCROS agrees not to assign, pledge or transfer its rights in this Agreement, in whole or in part, without first obtaining the written consent of MBIP, which consent shall not be unreasonably withheld. Any attempt by HARCROS to assign or in any way transfer this Agreement, in whole or in part, without such prior written consent shall constitute a Default under Section 8.1.C herein. Any transfer of 50% or more of the outstanding voting stock of HARCROS or of 50% or more of the equity interest in HARCROS, including transfer by merger, consolidation or liquidation or other change in ownership of HARCROS, shall constitute a transfer by HARCROS under this Section; provided, however, MBIP shall not unreasonably withhold its consent to such transfer.

9.3 RELATIONSHIP OF THE PARTIES. HARCROS shall at all times have the status of an independent contractor. It is expressly understood and agreed that MBIP shall not be construed or held to be a partner, associate or joint venturer of HARCROS in the conduct of its operations hereunder. Except as otherwise expressly set forth in this Agreement, no Party shall have any express or implied right or authority to assume or create any obligation or responsibility on behalf of or in the name of any other Party or to bind any other Party in any manner. The obligations of the Parties hereunder shall be several and not joint.

9.4 NOTICES. All required notices concerning this Agreement shall be made as follows:

to MBIP [insert]

to HARCROS [insert]

Said notices shall be in writing and delivered personally during normal business hours to the address above, or by facsimile, overnight delivery, or by electronic mail, all of which shall provide proof of receipt. Notices shall be deemed effective upon the documented date of receipt. The Parties may from time to time designate substitute addresses or persons where and to whom such notices are to be mailed or delivered, but such substitutions shall not be effective until actual receipt of written notification.

9.5 SURVIVAL. This Agreement and its covenants and provisions shall survive the sale to and removal of Equipment and Improvements by HARCROS, and shall survive the termination of the access granted.

9.6 EXECUTION. The Parties each represent and warrant that they have full power and authority and legal right to execute, deliver, and perform this Agreement and the execution, delivery, and performance by Parties of this Agreement have been duly authorized by all necessary corporate action on the part of each Party and do not require the approval of any other person or entity, and this Agreement constitutes a legal, valid and binding obligation of the Parties, enforceable against the Parties in accordance with its terms.

9.7 ENTIRE AGREEMENT. This Agreement represents the final embodiment of the Parties' intentions and understandings with respect to the subject matter hereof. It supersedes any prior understandings, whether written or oral, or of any description whatsoever.

9.8 MODIFICATION. No modification of this Agreement shall be binding upon any Party except by a written instrument executed by the Parties.

9.9 SUCCESSORS AND ASSIGNS. This Agreement shall be binding upon and inure to the benefit of Parties and each of their respective successors and assigns. Notwithstanding anything to the contrary contained herein, no Party may assign its rights or obligations under this Agreement except in accordance with Section 9.2 herein.

9.10 ATTORNEYS' FEES. In the event of any dispute between the Parties hereto, the Prevailing Party in such dispute shall be entitled to recover from the other reasonable attorneys

fees, disbursements and costs incurred directly in connection with such dispute and the resolution thereof. The "Prevailing Party," for purposes of this Agreement, shall be deemed to be the Party that obtains substantially all of the result sought, whether by dismissal, award or judgment. In no event shall a Party bringing any demand, arbitration, civil action or other action or suit for monetary damages be entitled to recover attorneys' fees where any final award or judgment does not monetarily exceed an offer of settlement or judgment made by the other Party. As used in the previous sentence, an "offer of settlement or judgment" shall mean a written and binding offer for payment or acceptance of money in exchange for dismissal of said demand, arbitration, civil action, or other action or suit and may be revocable at any time prior to acceptance thereof.

9.11 NO THIRD PARTY BENEFICIARIES. Enforcement of the terms of this Agreement shall be reserved to the Parties and nothing contained in this Agreement shall provide any claim or right of action for enforcement to any other party.

9.12 CAPTIONS AND HEADINGS; LISTS. The captions and headings throughout this Agreement are for convenience and reference only, and the words contained therein shall in no way be held or deemed to define, limit, describe, modify, or add to the interpretation, construction, or meaning of any provision of or scope or intent of this Agreement. Unless otherwise indicated, lists of items or examples that use terms such as "including", "such as", or similar language are intended to provide examples, not to be exclusive.

9.13 DATES. For purposes of calculating dates under this Agreement, unless otherwise specified, "days" shall mean calendar days. In the event that a date calculated falls on a weekend day or a holiday, the date for performance shall be considered the next business day after the actual calendar date calculated.

9.14 SEVERABILITY. If any provision of this Agreement, or application thereof to any person or circumstance, shall to any extent be determined to be invalid, then such provision shall be modified, if possible, to fulfill the intent of the Parties as reflected in the original provision. The remainder of this Agreement, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby, and each provision of this Agreement shall be valid and enforced to the fullest extent permitted by law.

9.15 COUNTERPARTS. This Agreement may be executed in any number of counterparts, all of which together shall constitute one original Agreement.

9.16 NO CONSTRUCTION AGAINST THE INTERESTS OF THE MAKER. The Parties hereto acknowledge that they each enter into this Agreement after having had an opportunity for thorough review by, and on advice of, their respective legal counsel. The judicial rule of construction requiring or allowing an instrument to be construed to the detriment of or against the interests of the maker thereof shall not apply to this Agreement.

9.17 TIME OF ESSENCE. With regard to all dates and time periods set forth or referred to in this Agreement, time is of the essence.

9.18 JURISDICTION; SERVICE OF PROCESS. Any proceeding arising out of or relating to this Agreement or any contemplated transaction may be brought in the United States District Court for the Southern District of Mississippi, if such court has or can acquire jurisdiction,

otherwise in the courts of the State of Mississippi, County of Warren, and each of the parties irrevocably submits to the exclusive jurisdiction of each such court in any such proceeding, waives any objection it may now or hereafter have to venue or to the convenience of forum, agrees that all claims in respect to the proceeding shall be heard and determined only in such court and agrees not to bring any proceeding arising out of or relating to this Agreement or any contemplated transaction in any other court. The parties further agree that either or both of them may file a copy of this paragraph with any court as written evidence of the knowing, voluntary and bargain Agreement between the parties irrevocably to waive objections to venue or to convenience of the forum. Process in any proceeding referred to in the first sentence of this section may be served on any party anywhere in the world.

9.19 **WAIVER OF JURY TRIAL.** The parties hereby waive any right to trial by jury in any proceeding arising out of or relating to this Agreement or any of the transactions contemplated therein, whether now existing or hereafter arising, and whether sounding in contract, tort or otherwise. The parties agree that any of them may file a copy of this paragraph with any court as written evidence of the knowing voluntary and bargained for agreement among the parties irrevocably to waive trial by jury and that any proceeding whatsoever between them relating to this Agreement or any of the transactions contemplated therein shall instead be tried in a court of competent jurisdiction by a judge sitting without a jury.

[INSERT SIGNATURE BLOCKS]

DRAFT7/18/2007

LIST OF EXHIBITS

Exhibit A	**Site Plan**
Exhibit B	**Inventory and excluded items**
Exhibit C	**Specifications for Demolition and Removal Work**
Exhibit D	**Form of Financing Statement**
Exhibit E	**Form of Performance Bond**
Exhibit F	**Form of Payment Bond**

"Escude, David"
<David.Escude@arcadis-us.com>
07/20/2007 07:58 AM

To <Trey_Hess@deq.state.ms.us>
cc "Cook, George" <George.Cook@arcadis-us.com>, "Derouen, Craig" <Craig.Derouen@arcadis-us.com>
bcc
Subject Vicksburg Chemical Solids Materials In Tanks

Trey

Per our discussion yesterday, solids materials encountered during tank cleaning operations will be placed in the landfill area, which is referred to as SWMU 2 in previous documents provided the materials:

1.) Have been tested during previous investigations and have been deemed non hazardous; and

2.) Are of a consistency (strength) such that they can be compacted to ultimately support a cap/cover over SWMU 2.

These materials will be uniformly spread in the landfill in such a manner to not hinder surface drainage.

David R. Escude', P.E .
Associate Vice President/SER Business Practice Manager
ARCADIS
10352 Plaza Americana Drive
Baton Rouge, Louisiana 70816
Office 225.292.1004
Direct 225.218.9672 Ext. 245
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Trey Hess/HW/OPC/DEQ
07/31/2007 04:43 PM

To "Gary Rikard" <grikard@brunini.com>@INETDEQ, BlackwoK@phelps.com
cc Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry_Banks/HW/OPC/DEQ
bcc Trey Hess/HW/OPC/DEQ
Subject REQUEST: Vicksburg Chemical Co. Site

Gary/Kelly,

I had suggested earlier this week that we may want to meet to discuss progress. After talking with ARCADIS, I think it wise to hold off on meeting until I get some cost estimates for the removal of some tank contents. We may not need to meet depending on what we get from ARCADIS. In the meantime, please know that MDEQ's priorities are to address those items that pose the greatest risk to public health and the environment first. Obviously, getting the South Plant prepped (i.e., having everything removed down to the slabs/foundations) would help tremendously in beginning work to remediate soil/groundwater contamination. That is why ARCADIS is focusing on tank content removal in the South Plant first. In the interest of time, I think it would also be wise for any other subcontractors to turn their focus towards the South Plant.

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Gary Rikard" <grikard@brunini.com>

"Gary Rikard" <grikard@brunini.com>
07/30/2007 10:38 AM

To <Trey_Hess@deq.state.ms.us>
cc
Subject Harcros

Trey, below are two definition for your review that I believe will help clarify what Harcros owns at the Vicksburg site. Harcros purchased certain equipment and improvements from MBIP. You can see from the definitions that many items are excluded from the definition of "Equipment and Improvements" --- those excluded items remain the property of MBIP. In addition, Harcros retained the ability to review certain materials to determine if it wanted to purchase said materials.

"Equipment and Improvements" means all buildings, structures, improvements, facilities,

equipment, fixtures, and other tangible chattels and articles of tangible personal property located on the MBIP Tract, title to which has been acquired by MBIP from the Vicksburg Chemical Company non-bankruptcy estate pursuant to the Agreed Order. Notwithstanding the foregoing, the term "Equipment and Improvements" does not include any of the following items located on the MBIP Tract at the Effective Time (i) drums (empty or otherwise), transformers, or Reviewable Materials (except as provided in Section 2.1); (ii) cooling towers; (iii) trash, refuse, garbage, or unconfined Hazardous Materials (except to the extent included in the definition of Reviewable Materials) located at, on, or below ground surface; (iv) other substances, items, articles, and other materials of any nature located below ground surface, including any Hazardous Materials (except to the extent included in the definition of Reviewable Materials); (v) underground storage tanks; (vi) coverings permanently affixed to ground surface floors; (vii) pads, foundations, footings, or other similar anchoring structures (including the portions of such pads, foundations, footings, and similar anchoring structures extending above ground surface), or other portions of structures that are at or below actual ground surface of the MBIP Tract; or (viii) structures located entirely below actual ground surface level of the MBIP Tract. For avoidance of doubt, (x) the portion of a building that is otherwise within the description of Equipment and Improvements and that is above actual ground surface (other than above-ground surface portions of pads, foundations, footings, or other similar anchoring structures) will be part of the Equipment and Improvements; (y) items of equipment and other items that are located in basements or similar man-made areas below ground surface shall be deemed part of the Equipment and Improvements unless otherwise excluded from such definition under clauses (i), (ii), (iii), or (iv) of this Section 1.9; and (z) "ground surface" means, in the case of undeveloped portions of the MBIP Tract, the actual surface of the ground, and in the case of buildings and other structures, the floors of such buildings and other structures closest to the surface of the surrounding grade level (not including basement floors) and the floors of any basements.

> "Reviewable Materials" mean all substances or materials that: (i) are stored in containers or containment structures (such as, for avoidance of doubt, boxes, drums, storage tanks, or storage vaults), or are of such a nature as would ordinarily be kept in such containers or containment structures but are in fact unconfined; (ii) are or may be Hazardous Materials; (iii) are present on the MBIP Tract at the Effective Time; and (iv) HML elects to review to determine whether such substances or materials might be recoverable for commercial use. (By way of example, "Reviewable Materials" includes liquids such as acids, gases such as helium, and solids such as phosphates.)

Gary Rikard
Brunini Law Firm
P.O. Box 119
Jackson, MS 39205

601.960.6932 (work)
601.540.3625 (cell)

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SALVAGE & DEMOLITION PLAN

DRAFT

HARCROS MISSISSIPPI, LLC

VICKSBURG, WARREN COUNTY, MISSISSIPPI

Submitted to: **Office of Pollution Control**
Mississippi Department of Environmental Quality
P. O. Box 10385
Jackson, Mississippi 39289-0385

Submittal Date: **July 2007**

PREPARED BY:
HARCROS MISSISSIPPI LLC

WITH ASSISTANCE BY:
FC&E ENGINEERING, LLC
919 MARQUETTE ROAD
BRANDON, MISSISSIPPI 39042

(601) 824-1860

July 13, 2007

Mr. Trey Hess, P.E.
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

RE: Salvage and Demolition Plan
Harcros Mississippi, LLC
Vicksburg, Mississippi

Dear Mr. Hess:

As requested in your letter dated June 29, 2007, Harcros Mississippi, LLC herewith submits a plan for the salvage and demolition of certain equipment as identified herein.

Harcros will coordinate with the contractors performing these activities and will strive to maintain a safe and clean work environment as appropriate for a demolition and salvage operation. All work will be performed in close coordination with the appropriate entities to ensure that everyone is aware of the activities being performed.

If you should have any questions or require additional information, please contact me at (601) 630-4244, or Mr. Ken Faulkner of FC&E Engineering, LLC at (601) 824-1860. Thank you for your assistance in this matter.

Sincerely,

John Miles
General Manager

cc: Ken Faulkner, P.E., FC&E Engineering, LLC
Gary Rikard, Brunini, Grantham, Grower & Hewes
MBIP
Arcadis

SALVAGE & DEMOLITION
WORK PLAN

Harcros Mississippi LLC
Vicksburg Mississippi

I. Louisiana Chemical Equipment Company (LCEC) and/or its subcontractors will perform a salvage and demolition project of certain property (see Exhibit A) following the agreed Scope of Work (see Exhibit B) for Harcros Mississippi LLC (Harcros) at the Vicksburg site. The planned tasks and schedule of salvage and demolition is shown in Exhibit C. LCEC has extensive experience and competence in salvage and demolition work. Prior to any salvage and/or demolition, or work involving piping or process tanks, hazardous materials will be properly removed, contained as appropriate and disposed of according to Federal and State regulations. LCEC and Harcros will coordinate on work areas and schedules and ensure that the work area is suitable for salvage and demolition activities to commence.

II. Work Procedure

A. LCEC and Harcros have met to review the demolition work and safety procedures. LCEC will give Harcros a daily roster of LCEC personnel entering the site for security purposes. LCEC and Harcros have agreed that all work will be performed under a daily work permit issued by the Harcros onsite coordinator based on daily input from the LCEC onsite coordinator. This daily work permit will show the specific area(s) where work will be performed and any special additional safety work requirements needed, such as cutting and burning permits. The Harcros onsite coordinator will review the daily work area(s) and note any equipment or lines on the work permit that have not been cleaned or contain saleable material and are temporarily excluded from salvage or

demolition. The Harcros onsite coordinator will be responsible for working with other contractors, etc., on the site to keep them informed of the daily work area and resolve any potential conflicts. The Harcros onsite coordinator will also be responsible for monitoring the daily work area(s). LCEC will be responsible for compliance with OSHA safe work procedures including 29 CFR 1926 as well as the OSHA Technical Manual for demolition and LCEC worker training. LCEC will provide for any special evaluations, permits and notifications if special demolition activities such as explosives are required.

B. The emergency contact number for fire, medical, or police response for Vicksburg is 911. In the event of a significant hazardous material spill or leak, US Environmental Services (601-372-3232) is available and oncall.

C. LCEC will perform the demolition and salvage using a variety of equipment and procedures, including hydraulic shears, grabblers, loaders, forklifts, cranes, manlifts, cutting torches, and other tools. Materials will be taken down, cut to desired sizes, loaded into transportation containers, and taken off site for recycle or resale. Normal work schedule will be 40 hours per week (4 x 10 hr days). All cutting and burning operations will cease 30 minutes prior to the end of each work day to allow inspection by onsite coordinators for any residual sparks. All trash and debris generated by the work will be routinely removed to an appropriate offsite disposal location. All activities will be conducted in accordance with OSHA safety requirements.

EXHIBIT A

Property

South Plant

Included:
All structures, tanks & vessels, process equipment, piping, instrument & electrical equipment, mechanical equipment, tools, spare parts & maintenance supplies, buildings & fixtures, rail & railcars, all available drawings, documentation, operating manuals, process descriptions & P&ID's, except as noted below.

Excluded:

A. Cooling towers (however, associated piping and pumps are included)
B. Pad mounted transformers, whether installed or not
C. Any and all vertical stainless steel tanks or bins along with associated pumps and pump suction & tank circulation piping.
D. MultiCote plant, including all equipment, piping, electrical, instruments & buildings
E. Following metal buildings & contents: Atrazine warehouse, K-Carb warehouse, MultiCote blending building, and MultiCote warehouse.
F. Weatherly nitric acid plant & associated tanks, spare parts, air compressors, instrument & electrical equipment, documents, & drawings
G. Concrete foundations, railroad ties, underground piping or tanks, existing trash & debris, drums
H. Electrical service equipment identified as property of Entergy Mississippi.
I. Hazardous materials

MAP ATLAS
ORANGE PEEL

North Plant

Included:
All structures, tanks & vessels, process equipment, piping, instrument & electrical equipment, mechanical equipment, tools, spare parts & maintenance supplies, all available drawings, documentation, operating manuals, process descriptions & P&ID's, except as noted below.

Excluded:

A. Cooling towers (however, associated piping and pumps are included)
B. Pad mounted transformers, whether installed or not
C. Any and all vertical stainless steel tanks or bins along with associated pumps and pump suction & tank circulation piping.
D. Bleach plant, including all equipment, piping, electrical, instruments & building
E. Concrete foundations, underground piping or tanks, existing trash & debris, drums
F. Certain electrical service & distribution equipment
G. Railroad
H. All buildings, contents and fixtures except KNO3 control room
I. Certain pipe racks
J. Hazardous materials

EXHIBIT B

Scope of Work

South Plant and North Plant

A) LCEC shall dismantle and remove all the Property being purchased by LCEC down to the top of concrete foundations.

B) LCEC shall remove certain steel, concrete and brick buildings down to slab foundations.

C) LCEC shall remove utility poles and wire included in Property.

D) LCEC shall remove rail and rail cars

E) LCEC may dispose of brick, cinder block and concrete debris on designated areas in South Plant as fill material.

F) LCEC shall maintain an orderly work site and is responsible for ongoing disposal of any trash or debris generated during removal, salvage or demolition of the Property.

G) LCEC shall coordinate all activities with the designated Harcros onsite employee(s) to obtain daily work permits, communicate and plan specific activities to coordinate with other construction or remediation activities, maintain access to all site areas, and resolve any conflict of activity.

EXHIBIT C
Planned Salvage and Demolition Schedule
LCEC / HML
Vicksburg MS

Work Item	June	July	Aug	Sept	Oct	Nov	Dec
1. Planning	X	X					
2. North plant							
A. Pipe racks/ piping	X	X					
B. Strong Acid		X	X				
C. Crystallizers / refrigeration		X	X				
D. KNO3 tank farm		X					
E. C3 /C4		X	X				
F. Centifuge / Dryer		X	X	X			
G. Control room			X				
H. KCl & Product handling			X	X			
I. Reactor structure			X	X	X		
J. Cleanup & misc. incl buildings				X	X	X	
3. South plant							
A. Pipe racks/piping		X					
B. Empty structures		X					
C. Tanks			X	X			
D. K-Carb				X	X	X	
E. MAP/MKP				X	X	X	
F. Railroad & railcars		X	X				
G. Buildings		X	X	X	X		
H. Electrical distribution				X	X		
I. Cleanup & misc. items					X	X	

Exhibit D, "Section V, Chapter 1, OSHA Technical Manual"

I. PREPARATORY OPERATIONS.
Before the start of every demolition job, the demolition contractor should take a number of steps to safeguard the health and safety of workers at the job site. These preparatory operations involve the overall planning of the demolition job, including the methods to be used to bring the structure down, the equipment necessary to do the job, and the measures to be taken to perform the work safely. Planning for a demolition job is as important as actually doing the work. Therefore, all planning work should be performed by a competent person experienced in all phases of the demolition work to be performed.

The American National Standards Institute (ANSI) in its ANSI A10.6-1983 – *Safety Requirements For Demolition Operations* states:
"No employee shall be permitted in any area that can be adversely affected when demolition operations are being performed. Only those employees necessary for the performance of the operations shall be permitted in these areas."

A. ENGINEERING SURVEY.

1. Prior to starting all demolition operations, OSHA Standard 1926.850(a) requires that an engineering survey of the structure must be conducted by a competent person. The purpose of this survey is to determine the condition of the framing, floors, and walls so that measures can be taken, if necessary, to prevent the premature collapse of any portion of the structure. When indicated as advisable, any adjacent structure(s) or improvements should also be similarly checked. The demolition contractor must maintain a written copy of this survey. Photographing existing damage in neighboring structures is also advisable.

2. The engineering survey provides the demolition contractor with the opportunity to evaluate the job in its entirety. The contractor should plan for the wrecking of the structure, the equipment to do the work, manpower requirements, and the protection of the public. The safety of all workers on the job site should be a prime consideration. During the preparation of the engineering survey, the contractor should plan for potential hazards such as fires, cave-ins, and injuries.

3. If the structure to be demolished has been damaged by fire, flood, explosion, or some other cause, appropriate measures, including bracing and shoring of walls and floors, shall be taken to protect workers and any adjacent structures. It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable material, or similar dangerous substances have been used or stored on the site. If the nature of a substance cannot be easily determined, samples should be taken and analyzed by a qualified person prior to demolition.

4. During the planning stage of the job, all safety equipment needs should be determined. The required number and type of respirators, lifelines, warning signs, safety nets, special face and eye protection, hearing protection, and other worker protection devices outlined in this manual should be determined

during the preparation of the engineering survey. A comprehensive plan is necessary for any confined space entry.

B. UTILITY LOCATION.

1. One of the most important elements of the pre-job planning is the location of all utility services. All electric, gas, water, steam, sewer, and other services lines should be shut off, capped, or otherwise controlled, at or outside the building before demolition work is started. In each case, any utility company that is involved should be notified in advance, and its approval or services, if necessary, shall be obtained.

2. If it is necessary to maintain any power, water, or other utilities during demolition, such lines shall be temporarily relocated as necessary and/or protected. The location of all overhead power sources should also be determined, as they can prove especially hazardous during any machine demolition. All workers should be informed of the location of any existing or relocated utility service.

C. MEDICAL SERVICES AND FIRST AID.

1. Prior to starting work, provisions should be made for prompt medical attention in case of serious injury. The nearest hospital, infirmary, clinic, or physician shall be located as part of the engineering survey. The job supervisor should be provided with instructions for the most direct route to these facilities. Proper equipment for prompt transportation of an injured worker, as well as a communication system to contact any necessary ambulance service, must be available at the job site. The telephone numbers of the hospitals, physicians, or ambulances shall be conspicuously posted.

2. In the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the work site, a person who has a valid certificate in first aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training should be available at the work site to render first aid.

3. A properly stocked first aid kit as determined by an occupational physician, must be available at the job site. The first aid kit should contain approved supplies in a weatherproof container with individual sealed packages for each type of item. It should also include rubber gloves to prevent the transfer of infectious diseases. Provisions should also be made to provide for quick drenching or flushing of the eyes should any person be working around corrosive materials. Eye flushing must be done with water containing no additives. The contents of the kit shall be checked before being sent out on each job and at least weekly to ensure the expended items are replaced.

4. POLICE AND FIRE CONTACT.
The telephone numbers of the local police, ambulance, and fire departments should be available at each job site. This information can prove useful to the job supervisor in the event of any traffic problems, such as the movement of equipment to the job, uncontrolled fires, or other police/fire matters. The police number may also be used to report any vandalism, unlawful entry to the job site, or accidents requiring police assistance.

D. FIRE PREVENTION AND PROTECTION.

1. A "fire plan" should be set up prior to beginning a demolition job. This plan should outline the assignments of key personnel in the event of a fire and provide an evacuation plan for workers on the site. *Common sense* should be the general rule in all fire prevention planning, as follows:
   All potential sources of ignition should be evaluated and the necessary corrective measures taken. Electrical wiring and equipment for providing light, heat, or power should be installed by a competent person and inspected regularly. Equipment powered by an internal combustion engine should be located so that the exhausts discharge well away from combustible materials and away from workers. When the exhausts are piped outside the building, a clearance of at least six inches should be maintained between such piping and combustible material. All internal combustion equipment should be shut down prior to refueling. Fuel for this equipment should be stored in a safe location. Sufficient firefighting equipment should be located near any flammable or combustible liquid storage area. Only approved containers and portable tanks should be used for the storage and handling of flammable and combustible liquids.

2. Heating devices should be situated so that they are not likely to overturn and shall be installed in accordance with their listing, including clearance to combustible material or equipment. Temporary heating equipment, when utilized, should be maintained by competent personnel.

3. Smoking should be prohibited at or in the vicinity of hazardous operations or materials. Where smoking is permitted, safe receptacles shall be provided for smoking materials.

4. Roadways between and around combustible storage piles should be at least 15 feet wide and maintained free from accumulation of rubbish, equipment, or other materials. When storing debris or combustible material inside a structure, such storage shall not obstruct or adversely affect the means of exit.

5. A suitable location at the job site should be designated and provided with plans, emergency information, and equipment, as needed. Access for heavy fire-fighting equipment should be provided on the immediate job site at the start of the job and maintained until the job is completed.

6. Free access from the street to fire hydrants and to outside connections for standpipes, sprinklers, or other fire extinguishing equipment, whether permanent or temporary, should be provided and maintained at all times, as follows:

   - Pedestrian walkways should not be so constructed as to impede access to hydrants.
   - No material or construction should interfere with access to hydrants, Siamese connections, or fire-extinguishing equipment.

7. A temporary or permanent water supply of volume, duration, and pressure sufficient to operate the fire-fighting equipment properly should be made available. Standpipes with outlets should be provided on large multi story

buildings to provide for fire protection on upper levels. If the water pressure is insufficient, a pump should also be provided.

8. An ample number of fully charged portable fire extinguishers should be provided throughout the operation. All motor-driven mobile equipment should be equipped with an approved fire extinguisher.

9. An alarm system, e.g., telephone system, siren, two-way radio, etc., shall be established in such a way that employees on the site and the local fire department can be alerted in case of an emergency. The alarm code and reporting instructions shall be conspicuously posted and the alarm system should be serviceable at the job site during the demolition. Fire cutoffs shall be retained in the buildings undergoing alterations or demolition until operations necessitate their removal.

II. SPECIAL STRUCTURES DEMOLITION.

A. SAFE WORK PRACTICES WHEN DEMOLISHING A CHIMNEY, STACK, SILO, OR COOLING TOWER.

1. **Inspection and Planning.** When preparing to demolish any chimney, stack, silo, or cooling tower, the first step must be a careful, detailed inspection of the structure by an experienced person. If possible, architectural/engineering drawings should be consulted. Particular attention should be paid to the condition of the chimney or stack. Workers should be on the lookout for any structural defects such as weak or acid-laden mortar joints, and any cracks or openings. The interior brickwork in some sections of industrial chimney shafts can be extremely weak. If stack has been banded with steel straps, these bands shall be removed only as the work progresses from the top down. Sectioning of the chimney by water, etc. should be considered.

2. **Safe Work Practice.**
   a. When hand demolition is required, it should be carried out from a working platform. Experienced personnel must install a self-supporting tubular scaffold, suspended platform, or knee-braced scaffolding around the chimney. Particular attention should be paid to the design, support, and tie-in (braces) of the scaffold. A competent person should be present at all times during the erection of the scaffold. It is essential that there be adequate working clearance between the chimney and the work platform. Access to the top of the scaffold should be provided by means of portable walkways. The platforms should be decked solid and the area from the work platform to the wall should be bridged with a minimum of two-inch thick lumber. A back rail 42 inches above the platform, with a midrail covered with canvas or mesh, should be installed around the perimeter of the platform to prevent injury to workers below. Debris netting may be installed below the platform. Excess canvas or plywood exhibits can form a wind-sail that could collapse the scaffold. When working on the work platform, all personnel should wear hard hats, long-sleeve shirts, eye and face protection, such as goggles and face shields, respirators, and safety belts, as required. Care should be taken to assign the proper number of workers to the task. Too many people on a small work platform can lead to accidents.

b. An alternative to the erection of a self-supporting tubular steel scaffold is to "climb" the structure with a creeping bracket scaffold. Careful inspection of the masonry and a decision as to the safety of this alternative must be made by a competent person. It is essential that the masonry of the chimney be in good enough condition to support the bracket scaffold.

c. The area around the chimney should be roped off or barricaded and secured with appropriate warning signs posted. No unauthorized entry should be permitted to this area. It is also good practice to keep a worker, i.e., a supervisor, operating engineer, another worker, or a "safety person," on the ground with a form of communication to the workers above.

d. Special attention should be paid to weather conditions when working on a chimney. No work should be done during inclement weather such as during lightning or high wind situations. The work site should be wetted down, as needed, to control dust.

3. **Debris Clearance.** If debris is dropped inside the shaft, it can be removed through an opening in the chimney at grade level. The opening at grade must be kept relatively small in order not to weaken the structure. If a larger opening is desired, a professional engineer should be consulted. When removing debris by hand, an overhead canopy of adequate strength should be provided. If machines are used for removal of debris, proper overhead protection for the operator should be used. Excessive debris should not be allowed to accumulate inside or outside the shaft of the chimney as the excess weight of the debris can impose pressure on the wall of the structure and might cause the shaft to collapse. The foreman should determine when debris is to be removed, halt all demolition during debris removal, and make sure the area is clear of cleanup workers before continuing demolition.

4. **Demolition by Deliberate Collapse.**
a. Another method of demolishing a chimney or stack is by deliberate collapse. Deliberate collapse requires extensive planning and experienced personnel, and should be used only when conditions are favorable. There must be a clear space for the fall of the structure of at least 45 degrees on each side of the intended fall line and 1½ times the total height of the chimney. Considerable vibration may be set up when the chimney falls, so there should be no sewers or underground services on the line of the fall. Lookouts must be posted on the site and warning signals must be arranged. The public and other workers at the job site must be kept well back from the fall area.

b. The use of explosives is one way of setting off deliberate collapse. This type of demolition should be undertaken only by qualified persons. The entire work area shall be cleared of nonessential personnel before any explosives are placed. Though the use of explosives is a convenient method of bringing down a chimney or stack, there is a considerable amount of vibration produced, and caution should be taken if there is any likelihood of damage.

B. DEMOLITION OF PRESTRESSED CONCRETE STRUCTURES.
1. The different forms of construction used in a number of more or less conventional structures built during the last few decades will give rise to a variety of problems when the time comes for them to be demolished. Prestressed concrete structures fall

in this general category. The most important aspect of demolishing a prestressed concrete structure takes place during the engineering survey. During the survey, a qualified person should determine if the structure to be demolished contains any prestressed members.

2. It is the responsibility of the demolition contractor to inform all workers on the demolition job site of the presence of prestressed concrete members within the structure. They should also instruct them in the safe work practice which must be followed to safely perform the demolition. Workers should be informed of the hazards of deviating from the prescribed procedures and the importance of following their supervisor's instruction.

3. Pretensioned members usually do not have any end anchors, the wires being embedded or bonded within the length of the member. Simple pretensioned beams and slabs of spans up to about 7 meters (23 feet) can be demolished in a manner similar to ordinary reinforced concrete. Pretensioned beams and slabs may be lifted and lowered to the ground as complete units after the removal of any composite concrete covering to tops and ends of the units. To facilitate breaking up, the members should be turned on their sides. Lifting from the structure should generally be done from points near the ends of the units or from lifting point positions. Reuse of lifting eyes, if in good condition, is recommended whenever possible. When units are too large to be removed, consideration should be given to temporary supporting arrangements.

FIGURE V:1-1. CATEGORIES OF PRESTRESSED CONSTRUCTION

There are four main categories of prestressed members. The category or categories should be determined before attempting demolition, bearing in mind that any prestressed structure may contain elements of more than one category.

- **Category 1** Members are prestressed before the application of the superimposed loads, and all cables or tendons are fully bonded in the concrete or grouted within ducts.
- **Category 2** Like Category 1, but the tendons are left ungrouted. This type of construction can sometimes be recognized from the access points that may have been provided for inspection of the cables and anchors. More recently, unbonded tendons have been used in the construction of beams, slabs, and other members; these tendons are protected by grease and surrounded by plastic sheathing, instead of the usual metal duct.
- **Category 3** Members are prestressed progressively as building construction proceeds and the dead load increases, using bonded tendons as in Category 1.
- **Category 4** Like Category 3, but using unbonded tendons as in Category 2.

Examples of construction using members of Categories 3 or 4 are relatively rare. However, they may be found, for example in the podium of a tall building or some types of bridges. They require particular care in demolition.

C. PRECAST UNITS STRESSED SEPARATELY FROM THE MAIN FRAMES OF THE STRUCTURE, WITH END ANCHORS AND GROUTED AND UNGROUTED DUCTS. Before breaking up, units of this type should be lowered to the ground, if possible. It is advisable to seek the counsel of a professional engineer before carrying out this work, especially where there are ungrouted tendons. In general, this is true because grouting is not always 100% efficient. After lowering the units can be turned on their side with the ends up on blocks after any composite concrete is removed. This may suffice to break the unit and release the prestress; if not, a sand bag screen, timbers, or a blast mat as a screen should be erected around the ends and demolition commenced, taking care to clear the area of any personnel. It should be borne in mind that the end blocks may be heavily reinforced and difficult to break up.

D. MONOLITHIC STRUCTURES. The advice of the professional engineer experienced in
prestressed work should be sought before any attempt is made to expose the tendons or anchorages of structures in which two or more members have been stressed together. It will usually be necessary for temporary supports to be provided so that the tendons and the anchorage can be cautiously exposed. In these circumstances it is essential that indiscriminate attempts to expose and destress the tendons and anchorages not be made.

E. PROGRESSIVELY PRESTRESSED STRUCTURES. In the case of progressively prestressed structures, it is essential to obtain the advice of a professional engineer, and to demolish the structure in strict accordance with the engineer's method of demolition. The stored energy in this type of structure is large. In some cases, the inherent properties of the stressed section may delay failure for some time, but the presence of these large prestressing forces may cause sudden and complete collapse with little warning.

F. SAFE WORK PRACTICES WHEN WORKING IN CONFINED SPACES.
1. Demolition contractors often come in contact with confined spaces when demolishing structure at industrial sites. These confined spaces can be generally categorized in two major groups: those with open tops and a depth that restricts the natural movement of air, and enclosed spaces with very limited openings for entry. Examples of these spaces include storage tanks, vessels, degreasers, pits vaults, casing, and silos.

2. The hazards encountered when entering and working in confined spaces are capable of causing bodily injury, illness, and death. Accidents occur among workers because of failure to recognize that a confined space is a potential hazard. It should therefore be considered that the most unfavorable situation exists in every case and that the danger of explosion, poisoning, and asphyxiation will be present at the onset of entry.

III. SAFE BLASTING PROCEDURES.

A. GENERAL SAFE WORK PRACTICES.

1. Blasting Survey and Site Preparation.

a. Prior to the blasting of any structure or portion thereof, a complete written survey must be made by a qualified person of all adjacent improvements and underground

utilities. When there is a possibility of excessive vibration due to blasting operations, seismic or vibration tests should be taken to determine proper safety limits to prevent damage to adjacent or nearby buildings, utilities, or other property.

b. The preparation of a structure for demolition by explosives may require the removal of structural columns, beams or other building components. This work should be directed by a structural engineer or a competent person qualified to direct the removal of these structural elements. Extreme caution must be taken during this preparatory work to prevent the weakening and premature collapse of the structure.

c. The use of explosives to demolish smokestacks, silos, cooling towers, or similar structures should be permitted only if there is a minimum of 90 of open space extended for at least 150% of the height of the structure or if the explosives specialist can demonstrate consistent previous performance with tighter constraints at the site.

2. Fire Precautions.

a. The presence of fire near explosives presents a severe danger. Every effort should be made to ensure that fires or sparks do not occur near explosive materials. Smoking, matches, firearms, open flame lamps, and other fires, flame, or heat-producing devices must be prohibited in or near explosive magazines or in areas where explosives are being handled, transported, or used. In fact, persons working near explosives should not even carry matches, lighters, or other sources of sparks or flame. Open fires or flames should be prohibited within 100 feet of any explosive materials. In the event of a fire which is in imminent danger of contact with explosives, all employees must be removed to a safe area.

b. Electrical detonators can be inadvertently triggered by stray RF (radio frequency) signals from two-way radios. RF signal sources should be restricted from or near to the demolition site, if electrical detonators are used.

3. Personnel Selection.

a. A blaster is a competent person who uses explosives. A blaster must be qualified by reason of training, knowledge, or experience in the field of transporting, storing, handling, and using explosives. In addition, the blaster should have a working knowledge of state and local regulations which pertain to explosives. Training courses are often available from manufacturers of explosives and blasting safety manuals are offered by the Institute of Makers of Explosives (IME) as well as other organizations.

b. Blasters shall be required to furnish satisfactory evidence of competency in handling explosives and in safely performing the type of blasting required. A competent person should always be in charge of explosives and should be held responsible for enforcing all recommended safety precautions in connection with them.

B. TRANSPORTATION OF EXPLOSIVES.

1. Vehicle Safety.

a. Vehicles used for transporting explosives shall be strong enough to carry the load without difficulty, and shall be in good mechanical condition. All vehicles used for the transportation of explosives shall have tight floors, and any exposed spark-producing metal on the inside of the body shall be covered with wood or some other nonsparking material. Vehicles or conveyances transporting explosives shall only be driven by, and shall be under the supervision of, a licensed driver familiar with the local, state, and Federal regulations governing the transportation of explosives. No passengers should be allowed in any vehicle transporting explosives.

b. Explosives, blasting agents, and blasting supplies shall not be transported with other materials or cargoes. Blasting caps shall not be transported in the same vehicle with other explosives. If an open-bodied truck is used, the entire load should be completely covered with a fire and water-resistant tarpaulin to protect it from the elements. Vehicles carrying explosives should not be loaded beyond the manufacturer's safe capacity rating, and in no case should the explosives be piled higher than the closed sides and ends of the body.

c. Every motor vehicle or conveyance used for transporting explosives shall be marked or placarded with warning signs required by OSHA and the DOT. Each vehicle used for transportation of explosives shall be equipped minimally with at least a ten-pound rated, serviceable ABC fire extinguisher. All drivers should be trained in the use of the extinguishers on their vehicle.

d. In transporting explosives, congested traffic and high density population areas should be avoided, where possible, and no unnecessary stops should be made. Vehicles carrying explosives, blasting agents, or blasting supplies shall not be taken inside a garage or shop for repairs or servicing. No motor vehicle transporting explosives shall be left unattended.

C. STORAGE OF EXPLOSIVES.

1. Inventory Handling and Safe Handling.

a. All explosives must be accounted for at all times and all not being used must be kept in a locked magazine. A complete detailed inventory of all explosives received and placed in, removed from, and returned to the magazine should be maintained at all times. Appropriate authorities must be notified of any loss, theft, or unauthorized entry into a magazine.

b. Manufacturers' instructions for the safe handling and storage of explosives are ordinarily enclosed in each case of explosives. The specifics of storage and handling *are best referred to these instructions and the aforementioned IME manuals.* They should be carefully followed. Packages of explosives should not be handled roughly. Sparking metal tools should not be used to open wooden cases. Metallic slitters may be used for opening fiberboard cases, provided the metallic slitter does not come in contact with the metallic fasteners of the case.

c. The oldest stock should always be used first to minimize the chance of deterioration from long storage. Loose explosives or broken, defective, or leaking

packages can be hazardous and should be segregated and properly disposed of in accordance with the specific instructions of the manufacturer. If the explosives are in good condition it may be advisable to repack them. In this case, the explosives supplier should be contacted. Explosives cases should not be opened or explosives packed or repacked while in a magazine.

2. Storage Conditions.

a. Providing a dry, well-ventilated place for the storage of explosives is one of the most important and effective safety measures. Exposure to weather damages most kinds of explosives, especially dynamite and caps. Every precaution should be taken to keep them dry and relatively cool. Dampness or excess humidity may be the cause of misfires resulting in injury or loss of life. Explosives should be stored in properly constructed fire and bullet-resistant structures, located according to the IME American Table of Distances and kept locked at all times except when opened for use by an authorized person. Explosives should not be left, kept, or stored where children, unauthorized persons, or animals have access to them, nor should they be stored in or near a residence.

b. Detonators should be stored in a separate magazine located according to the IME American Table of Distances. *DETONATORS SHOULD NEVER BE STORED IN THE SAME MAGAZINE WITH ANY OTHER KIND OF EXPLOSIVES.*

c. Ideally, arrangements should be made whereby the supplier delivers the explosives to the job site in quantities which will be used up during the work day. An alternative would be for the supplier to return to pick up unused quantities of explosives. If it is necessary for the contractor to store his explosives, he should be familiar with all local requirements for such storage.

D. PROPER USE OF EXPLOSIVES.

1. Blasting operations shall be conducted between sunup and sundown, whenever possible. Adequate signs should be sounded to alert to the hazard presented by blasting. Blasting mats or other containment should be used where there is danger of rocks or other debris being thrown into the air or where there are buildings or transportation systems nearby. Care should be taken to make sure mats and other protection do not disturb the connections to electrical blasting caps.

2. Radio, television, and radar transmitters create fields of electrical energy that can, under exceptional circumstances, detonate electric blasting caps. Certain precautions must be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of extraneous or static electricity.

These precautions shall include:

- Ensuring that mobile radio transmitters on the job site that are less than 100 feet away from electric blasting caps, in other than original containers, shall be de-energized and effectively locked.

- The prominent display of adequate signs, warning against the use of mobile radio transmitters, on all roads within 1,000 feet of the blasting operations.

-Maintaining the minimum distances recommended by the IME between the nearest transmitter and electric blasting caps.

-The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electric storm.

-After loading is completed, there should be as little delay as possible before firing. Each blast should be fired under the direct supervision of the blaster, who should inspect all connections before firing and who should personally see that all persons are in the clear before giving the order to fire. Standard signals, which indicate that a blast is about to be fired and a later all-clear signal shall have been adopted. It is important that everyone working in the area be familiar with these signals and that they be strictly obeyed.

3. PROCEDURES AFTER BLASTING.

1. Inspection After the Blast. Immediately after the blast has been fired, the firing line shall be disconnected from the blasting machine and short-circuited. Where power switches are used, they shall be locked open or in the off position. Sufficient time shall be allowed for dust, smoke, and fumes to leave the blasted area before returning to the spot. An inspection of the area and the surrounding rubble shall be made by the blaster to determine if all charges have been exploded before employees are allowed to return to the operation. All wires should be traced and the search for unexploded cartridges made by the blaster.

2. Disposal of Explosives.

a. Explosives, blasting agents, and blasting supplies that are obviously deteriorated or damaged should not be used, they should be properly disposed of. Explosives distributors will usually take back old stock. Local fire marshals or representatives of the United States Bureau of Mines may also arrange for its disposal. Under no circumstances should any explosives be abandoned.

b. Wood, paper, fiber, or other materials that have contained high explosives should not be used again for any purpose, but should be destroyed by burning. These materials should not be burned in a stove, fireplace, or other confined space. Rather, they should be burned at an isolated outdoor location, at a safe distance from thoroughfares, magazines, and other structures. It is important to check that the containers are entirely empty before burning. During burning, the area should be adequately protected from intruders and all persons kept at least 100 feet from the fire.

Reference

Malmberg, K.B. 1975. EPA *Demolition and Renovation Inspection Procedures.* U.S.E.P.A.:
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STATE OF MISSISSIPPI
HALEY BARBOUR, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
TRUDY FISHER, EXECUTIVE DIRECTOR

June 29, 2007

FILE COPY

Mr. John Miles
Harcros Chemicals Inc.
4280 Rifle Range Road
Vicksburg, MS 39180

Re: Vicksburg Chemical Company (VCC) Site
Deconstruction/Demolition Plan
Vicksburg, Mississippi

Dear John:

It is my understanding that Harcros Chemicals Inc. ("Harcros") is preparing for demolition of the above ground facilities of both the North and South Plan of the subject site in the coming weeks. If you'll recall, during at least two on-site meetings last fall with MDEQ, we discussed the need for a detailed plan outlining activities that Harcros intended to do. It is my understanding that your consultant, Ken Faulkner of FC&E Engineering, was charged with developing the plans and that they were to be submitted to MDEQ for review. Please forward the Deconstruction/Demolition Plan to MDEQ within fifteen (15) days of the date of this letter. The plan must, at a minimum, comply with Occupational Health and Safety Administration (OSHA) requirements for Construction (29 CFR 1926) and address the demolition protocols outlined in Chapter 1 of Section 5 of the OSHA Technical Manual (OTM), (Copy Enclosed). A schedule for all major phases of deconstruction and demolition must be included as well.

Should you have any questions or comments concerning this matter, please contact me at (601) 961-5654.

Sincerely,

Jere "Trey" Hess, P.E.

cc: Lisa Ouzts, Esq. – MDEQ
Jerry Cain, P.E. – MDEQ
Paul Bunge – MS Bluffs Industrial Park

Enclosure

OSHA Technical Manual

TABLE OF CONTENTS NEXT CHAPTER

SECTION V: CHAPTER 1

DEMOLITION

Contents:

I. **Preparatory Operations**
II. **Special Structures Demolition**
III. **Safe Blasting Procedures**
IV. **Bibliography**

I. PREPARATORY OPERATIONS.

Before the start of every demolition job, the demolition contractor should take a number of steps to safeguard the health and safety of workers at the job site. These preparatory operations involve the overall planning of the demolition job, including the methods to be used to bring the structure down, the equipment necessary to do the job, and the measures to be taken to perform the work safely. Planning for a demolition job is as important as actually doing the work. Therefore, all planning work should be performed by a competent person experienced in all phases of the demolition work to be performed.

The American National Standards Institute (ANSI) in its ANSI A10.6-1983 - *Safety Requirements For Demolition Operations* states:

"No employee shall be permitted in any area that can be adversely affected when demolition operations are being performed. Only those employees necessary for the performance of the operations shall be permitted in these areas."

A. ENGINEERING SURVEY.

1. Prior to starting all demolition operations, OSHA Standard 1926.850(a) requires that an engineering survey of the structure must be conducted by a competent person. The purpose of this survey is to determine the condition of the framing, floors, and walls so that measures can be taken, if necessary, to prevent the premature collapse of any portion of the structure. When indicated as advisable, any adjacent structure(s) or improvements should also be similarly checked. The demolition contractor must maintain a written copy of this survey. Photographing existing damage in neighboring structures is also advisable.

2. The engineering survey provides the demolition contractor with the opportunity to evaluate the job in its entirety. The contractor should plan for the wrecking of the structure, the equipment to do the work, manpower requirements, and the protection of the public. The safety of all workers on

the job site should be a prime consideration. During the preparation of the engineering survey, the contractor should plan for potential hazards such as fires, cave-ins, and injuries.

3. If the structure to be demolished has been damaged by fire, flood, explosion, or some other cause, appropriate measures, including bracing and shoring of walls and floors, shall be taken to protect workers and any adjacent structures. It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable material, or similar dangerous substances have been used or stored on the site. If the nature of a substance cannot be easily determined, samples should be taken and analyzed by a qualified person prior to demolition.

4. During the planning stage of the job, all safety equipment needs should be determined. The required number and type of respirators, lifelines, warning signs, safety nets, special face and eye protection, hearing protection, and other worker protection devices outlined in this manual should be determined during the preparation of the engineering survey. A comprehensive plan is necessary for any confined space entry.

B. **UTILITY LOCATION**.

1. One of the most important elements of the pre-job planning is the location of all utility services. All electric, gas, water, steam, sewer, and other services lines should be shut off, capped, or otherwise controlled, at or outside the building before demolition work is started. In each case, any utility company that is involved should be notified in advance, and its approval or services, if necessary, shall be obtained.

2. If it is necessary to maintain any power, water, or other utilities during demolition, such lines shall be temporarily relocated as necessary and/or protected. The location of all overhead power sources should also be determined, as they can prove especially hazardous during any machine demolition. All workers should be informed of the location of any existing or relocated utility service.

C. **MEDICAL SERVICES AND FIRST AID**.

1. Prior to starting work, provisions should be made for prompt medical attention in case of serious injury. The nearest hospital, infirmary, clinic, or physician shall be located as part of the engineering survey. The job supervisor should be provided with instructions for the most direct route to these facilities. Proper equipment for prompt transportation of an injured worker, as well as a communication system to contact any necessary ambulance service, must be available at the job site. The telephone numbers of the hospitals, physicians, or ambulances shall be conspicuously posted.

2. In the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the work site, a person who has a valid certificate in first aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training should be available at the work site to render first aid.

3. A properly stocked first aid kit as determined by an occupational physician, must be available at the job site. The first aid kit should contain approved supplies in a weatherproof container with individual sealed packages for each type of item. It should also include rubber gloves to prevent the transfer of infectious diseases. Provisions should also be made to provide for quick drenching or flushing of the eyes should any person be working around corrosive materials. Eye flushing must be done with water containing no additives. The contents of the kit shall be checked before being sent out on each job and at least weekly to ensure the expended items are replaced.

4. **POLICE AND FIRE CONTACT**. The telephone numbers of the local police, ambulance, and fire departments should be available at each job site. This information can prove useful to the job supervisor in the event of any traffic problems, such as the movement of equipment to the job, uncontrolled fires,

or other police/[redacted]matters. The police number may also be [redacted]d to report any vandalism, unlawful entry to the job site, or accidents requiring police assistance.

D. **FIRE PREVENTION AND PROTECTION.**

1. A "fire plan" should be set up prior to beginning a demolition job. This plan should outline the assignments of key personnel in the event of a fire and provide an evacuation plan for workers on the site. *Common sense* should be the general rule in all fire prevention planning, as follows:

   - All potential sources of ignition should be evaluated and the necessary corrective measures taken.
   - Electrical wiring and equipment for providing light, heat, or power should be installed by a competent person and inspected regularly.
   - Equipment powered by an internal combustion engine should be located so that the exhausts discharge well away from combustible materials and away from workers.
   - When the exhausts are piped outside the building, a clearance of at least six inches should be maintained between such piping and combustible material.
   - All internal combustion equipment should be shut down prior to refueling. Fuel for this equipment should be stored in a safe location.
   - Sufficient firefighting equipment should be located near any flammable or combustible liquid storage area.
   - Only approved containers and portable tanks should be used for the storage and handling of flammable and combustible liquids.

2. Heating devices should be situated so that they are not likely to overturn and shall be installed in accordance with their listing, including clearance to combustible material or equipment. Temporary heating equipment, when utilized, should be maintained by competent personnel.

3. Smoking should be prohibited at or in the vicinity of hazardous operations or materials. Where smoking is permitted, safe receptacles shall be provided for smoking materials.

4. Roadways between and around combustible storage piles should be at least 15 feet wide and maintained free from accumulation of rubbish, equipment, or other materials. When storing debris or combustible material inside a structure, such storage shall not obstruct or adversely affect the means of exit.

5. A suitable location at the job site should be designated and provided with plans, emergency information, and equipment, as needed. Access for heavy fire-fighting equipment should be provided on the immediate job site at the start of the job and maintained until the job is completed.

6. Free access from the street to fire hydrants and to outside connections for standpipes, sprinklers, or other fire extinguishing equipment, whether permanent or temporary, should be provided and maintained at all times, as follows:

   - Pedestrian walkways should not be so constructed as to impede access to hydrants.

   - No material or construction should interfere with access to hydrants, Siamese connections, or fire-extinguishing equipment.

7. A temporary or permanent water supply of volume, duration, and pressure sufficient to operate the fire-fighting equipment properly should be made available. Standpipes with outlets should be provided on large multi story buildings to provide for fire protection on upper levels. If the water pressure is

insufficient, a pu[redacted]should also be provided.

8. An ample number of fully charged portable fire extinguishers should be provided throughout the operation. All motor-driven mobile equipment should be equipped with an approved fire extinguisher.

9. An alarm system, e.g., telephone system, siren, two-way radio, etc., shall be established in such a way that employees on the site and the local fire department can be alerted in case of an emergency. The alarm code and reporting instructions shall be conspicuously posted and the alarm system should be serviceable at the job site during the demolition. Fire cutoffs shall be retained in the buildings undergoing alterations or demolition until operations necessitate their removal.

II. SPECIAL STRUCTURES DEMOLITION.

A. SAFE WORK PRACTICES WHEN DEMOLISHING A CHIMNEY, STACK, SILO, OR COOLING TOWER.

1. **Inspection and Planning**. When preparing to demolish any chimney, stack, silo, or cooling tower, the first step must be a careful, detailed inspection of the structure by an experienced person. If possible, architectural/engineering drawings should be consulted. Particular attention should be paid to the condition of the chimney or stack. Workers should be on the lookout for any structural defects such as weak or acid-laden mortar joints, and any cracks or openings. The interior brickwork in some sections of industrial chimney shafts can be extremely weak. If stack has been banded with steel straps, these bands shall be removed only as the work progresses from the top down. Sectioning of the chimney by water, etc. should be considered.

2. **Safe Work Practice**.

a. When hand demolition is required, it should be carried out from a working platform.

- Experienced personnel must install a self-supporting tubular scaffold, suspended platform, or knee-braced scaffolding around the chimney. Particular attention should be paid to the design, support, and tie-in (braces) of the scaffold.
- A competent person should be present at all times during the erection of the scaffold.
- It is essential that there be adequate working clearance between the chimney and the work platform.
- Access to the top of the scaffold should be provided by means of portable walkways.
- The platforms should be decked solid and the area from the work platform to the wall should be bridged with a minimum of two-inch thick lumber.
- A back rail 42 inches above the platform, with a midrail covered with canvas or mesh, should be installed around the perimeter of the platform to prevent injury to workers below. Debris netting may be installed below the platform.
- Excess canvas or plywood attachments can form a wind-sail that could collapse the scaffold.
- When working on the work platform, all personnel should wear hard hats, long-sleeve shirts, eye and face protection, such as goggles and face shields, respirators, and safety belts, as required.
- Care should be taken to assign the proper number of workers to the task. Too many people on a small work platform can lead to accidents.

b. An alternative to the erection of a self-supporting tubular steel scaffold is to "climb" the structure with a creeping bracket scaffold. Careful inspection of the masonry and a decision as to the safety of this alternative must be made by a competent person. It is essential that the masonry of the chimney be in

good enough condition to support the bracket scaffold.

c. The area around the chimney should be roped off or barricaded and secured with appropriate warning signs posted. No unauthorized entry should be permitted to this area. It is also good practice to keep a worker, i.e., a supervisor, operating engineer, another worker, or a "safety person," on the ground with a form of communication to the workers above.

d. Special attention should be paid to weather conditions when working on a chimney. No work should be done during inclement weather such as during lightning or high wind situations. The work site should be wetted down, as needed, to control dust.

3. **Debris Clearance.** If debris is dropped inside the shaft, it can be removed through an opening in the chimney at grade level.

   - The opening at grade must be kept relatively small in order not to weaken the structure. If a larger opening is desired, a professional engineer should be consulted.
   - When removing debris by hand, an overhead canopy of adequate strength should be provided. If machines are used for removal of debris, proper overhead protection for the operator should be used.
   - Excessive debris should not be allowed to accumulate inside or outside the shaft of the chimney as the excess weight of the debris can impose pressure on the wall of the structure and might cause the shaft to collapse.
   - The foreman should determine when debris is to be removed, halt all demolition during debris removal, and make sure the area is clear of cleanup workers before continuing demolition.

4. **Demolition by Deliberate Collapse.**

   a. Another method of demolishing a chimney or stack is by deliberate collapse. Deliberate collapse requires extensive planning and experienced personnel, and should be used only when conditions are favorable. There must be a clear space for the fall of the structure of at least 45 degrees on each side of the intended fall line and 1½ times the total height of the chimney. Considerable vibration may be set up when the chimney falls, so there should be no sewers or underground services on the line of the fall. Lookouts must be posted on the site and warning signals must be arranged. The public and other workers at the job site must be kept well back from the fall area.

   b. The use of explosives is one way of setting off deliberate collapse. This type of demolition should be undertaken only by qualified persons. The entire work area shall be cleared of nonessential personnel before any explosives are placed. Though the use of explosives is a convenient method of bringing down a chimney or stack, there is a considerable amount of vibration produced, and caution should be taken if there is any likelihood of damage.

B. **DEMOLITION OF PRESTRESSED CONCRETE STRUCTURES.**

1. The different forms of construction used in a number of more or less conventional structures built during the last few decades will give rise to a variety of problems when the time comes for them to be demolished. Prestressed concrete structures fall in this general category. The most important aspect of demolishing a prestressed concrete structure takes place during the engineering survey. During the survey, a qualified person should determine if the structure to be demolished contains any prestressed members.

2. It is the responsibility of the demolition contractor to inform all workers on the demolition job site of the presence of prestressed concrete members within the structure. They should also instruct them in the safe work practice which must be followed to safely perform the demolition. Workers should be informed of the hazards of deviating from the prescribed procedures and the importance of following their supervisor's instruction.

3. Pretensioned members usually do not have any end anchors, the wires being embedded or bonded within the length of the member. Simple Pretensioned beams and slabs of spans up to about 7 meters (23 feet) can be demolished in a manner similar to ordinary reinforced concrete. Pretensioned beams and slabs may be lifted and lowered to the ground as complete units after the removal of any composite concrete covering to tops and ends of the units. To facilitate breaking up, the members should be turned on their sides. Lifting from the structure should generally be done from points near the ends of the units or from lifting point positions. Reuse of lifting eyes, if in good condition, is recommended whenever possible. When units are too large to be removed, consideration should be given to temporary supporting arrangements.

FIGURE V:1-1. CATEGORIES OF PRESTRESSED CONSTRUCTION

There are four main categories of prestressed members. The category or categories should be determined before attempting demolition, bearing in mind that any prestressed structure may contain elements of more than one category.

- **Category 1** Members are prestressed before the application of the superimposed loads, and all cables or tendons are fully bonded in the concrete or grouted within ducts.
- **Category 2** Like Category 1, but the tendons are left ungrouted. This type of construction can sometimes be recognized from the access points that may have been provided for inspection of the cables and anchors. More recently, unbonded tendons have been used in the construction of beams, slabs, and other members; these tendons are protected by grease and surrounded by plastic sheathing, instead of the usual metal duct.
- **Category 3** Members are prestressed progressively as building construction proceeds and the dead load increases, using bonded tendons as in Category 1.
- **Category 4** Like Category 3, but using unbonded tendons as in Category 2.

Examples of construction using members of Categories 3 or 4 are relatively rare. However, they may be found, for example in the podium of a tall building or some types of bridges. They require particular care in demolition.

C. **PRECAST UNITS STRESSED SEPARATELY FROM THE MAIN FRAMES OF THE STRUCTURE, WITH END ANCHORS AND GROUTED AND UNGROUTED DUCTS.** Before breaking up, units of this type should be lowered to the ground, if possible. It is advisable to seek the counsel of a professional engineer before carrying out this work, especially where there are ungrouted tendons. In general, this is true because grouting is not always 100% efficient. After lowering the units can be turned on their side with the ends up on blocks after any composite concrete is removed. This may suffice to break the unit and release the prestress; if not, a sand bag screen, timbers, or a blast mat as a screen should be erected around the ends and demolition commenced, taking care to clear the area of any personnel. It should be borne in mind that the end blocks may be heavily reinforced and difficult to break up.

D. **Monolithic Structures.** The advice of the professional engineer experienced in prestressed work should be sought before any attempt is made to expose the tendons or anchorages of structures in which two or more members have been stressed together. It will usually be necessary for temporary supports to be provided so that the tendons and the anchorage can be cautiously exposed. In these circumstances it is essential that indiscriminate attempts to expose and destress the tendons and anchorages not be made.

E. **Progressively Prestressed Structures**. In the case of progressively prestressed structures, it is essential to obtain the advice of a professional engineer, and to demolish the structure in strict accordance with the engineer's method of demolition. The stored energy in this type of structure is large. In some cases, the inherent properties of the stressed section may delay failure for some time, but the presence of these large prestressing forces may cause sudden and complete collapse with little warning.

F. **SAFE WORK PRACTICES WHEN WORKING IN CONFINED SPACES.**

1. Demolition contractors often come in contact with confined spaces when demolishing structure at industrial sites. These confined spaces can be generally categorized in two major groups: those with open tops and a depth that restricts the natural movement of air, and enclosed spaces with very limited openings for entry. Examples of these spaces include storage tanks, vessels, degreasers, pits vaults, casing, and silos.

2. The hazards encountered when entering and working in confined spaces are capable of causing bodily injury, illness, and death. Accidents occur among workers because of failure to recognize that a confined space is a potential hazard. It should therefore be considered that the most unfavorable situation exists in every case and that the danger of explosion, poisoning, and asphyxiation will be present at the onset of entry.

III. SAFE BLASTING PROCEDURES.

A. GENERAL SAFE WORK PRACTICES.

1. **Blasting Survey and Site Preparation.**

a. Prior to the blasting of any structure or portion thereof, a complete written survey must be made by a qualified person of all adjacent improvements and underground utilities. When there is a possibility of excessive vibration due to blasting operations, seismic or vibration tests should be taken to determine proper safety limits to prevent damage to adjacent or nearby buildings, utilities, or other property.

b. The preparation of a structure for demolition by explosives may require the removal of structural columns, beams or other building components. This work should be directed by a structural engineer or a competent person qualified to direct the removal of these structural elements. Extreme caution must be taken during this preparatory work to prevent the weakening and premature collapse of the structure.

c. The use of explosives to demolish smokestacks, silos, cooling towers, or similar structures should be permitted only if there is a minimum of 90 of open space extended for at least 150% of the height of the structure or if the explosives specialist can demonstrate consistent previous performance with tighter constraints at the site.

2. **Fire Precautions.**

a. The presence of fire near explosives presents a severe danger. Every effort should be made to ensure that fires or sparks do not occur near explosive materials. Smoking, matches, firearms, open flame lamps, and other fires, flame, or heat-producing devices must be prohibited in or near explosive magazines or in areas where explosives are being handled, transported, or used. In fact, persons working near explosives should not even carry matches, lighters, or other sources of sparks or flame. Open fires or flames should be prohibited within 100 feet of any explosive materials. In the event of a fire which is in imminent danger of contact with explosives, all employees must be removed to a safe area.

b. Electrical detonators can be inadvertently triggered by stray RF (radio frequency) signals from two-way radios. RF signal sources should be restricted from or near to the demolition site, if electrical detonators are used.

3. **Personnel Selection.**

a. A blaster is a competent person who uses explosives. A blaster must be qualified by reason of training, knowledge, or experience in the field of transporting, storing, handling, and using explosives. In addition, the blaster should have a working knowledge of state and local regulations which pertain to explosives. Training courses are often available from manufacturers of explosives and blasting safety manuals are offered by the Institute of Makers of Explosives (IME) as well as other organizations.

b. Blasters shall be required to furnish satisfactory evidence of competency in handling explosives and in safely performing the type of blasting required. A competent person should always be in charge of explosives and should be held responsible for enforcing all recommended safety precautions in connection with them.

B. **TRANSPORTATION OF EXPLOSIVES.**

1. **Vehicle Safety.**

a. Vehicles used for transporting explosives shall be strong enough to carry the load without difficulty, and shall be in good mechanical condition. All vehicles used for the transportation of explosives shall have tight floors, and any exposed spark-producing metal on the inside of the body shall be covered with wood or some other nonsparking material. Vehicles or conveyances transporting explosives shall only be driven by, and shall be under the supervision of, a licensed driver familiar with the local, state, and Federal regulations governing the transportation of explosives. No passengers should be allowed in any vehicle transporting explosives.

b. Explosives, blasting agents, and blasting supplies shall not be transported with other materials or cargoes. Blasting caps shall not be transported in the same vehicle with other explosives. If an open-bodied truck is used, the entire load should be completely covered with a fire and water-resistant tarpaulin to protect it from the elements. Vehicles carrying explosives should not be loaded beyond the manufacturer's safe capacity rating, and in no case should the explosives be piled higher than the closed sides and ends of the body.

c. Every motor vehicle or conveyance used for transporting explosives shall be marked or placarded with warning signs required by OSHA and the DOT. Each vehicle used for transportation of explosives shall be equipped minimally with at least a ten-pound rated, serviceable ABC fire extinguisher. All drivers should be trained in the use of the extinguishers on their vehicle.

d. In transporting explosives, congested traffic and high density population areas should be avoided, where possible, and no unnecessary stops should be made. Vehicles carrying explosives, blasting agents, or blasting supplies shall not be taken inside a garage or shop for repairs or servicing. No motor vehicle transporting explosives shall be left unattended.

C. **STORAGE OF EXPLOSIVES.**

1. **Inventory Handling and Safe Handling.**

a. All explosives must be accounted for at all times and all not being used must be kept in a locked magazine. A complete detailed inventory of all explosives received and placed in, removed from, and returned to the magazine should be maintained at all times. Appropriate authorities must be notified of any loss, theft, or unauthorized entry into a magazine.

b. Manufacturers' instructions for the safe handling and storage of explosives are ordinarily enclosed in each case of explosives. The specifics of storage and handling are best referred to these instructions and the aforementioned IME manuals. They should be carefully followed. Packages of explosives should not be handled roughly. Sparking metal tools should not be used to open wooden cases. Metallic slitters may be used for opening fiberboard cases, provided the

metallic slitter d[redacted] not come in contact with the metallic fa[redacted]ers of the case.

c. The oldest stock should always be used first to minimize the chance of deterioration from long storage. Loose explosives or broken, defective, or leaking packages can be hazardous and should be segregated and properly disposed of in accordance with the specific instructions of the manufacturer. If the explosives are in good condition it may be advisable to repack them. In this case, the explosives supplier should be contacted. Explosives cases should not be opened or explosives packed or repacked while in a magazine.

2. **Storage Conditions.**

a. Providing a dry, well-ventilated place for the storage of explosives is one of the most important and effective safety measures. Exposure to weather damages most kinds of explosives, especially dynamite and caps. Every precaution should be taken to keep them dry and relatively cool. Dampness or excess humidity may be the cause of misfires resulting in injury or loss of life. Explosives should be stored in properly constructed fire and bullet-resistant structures, located according to the IME American Table of Distances and kept locked at all times except when opened for use by an authorized person. Explosives should not be left, kept, or stored where children, unauthorized persons, or animals have access to them, nor should they be stored in or near a residence.

b. Detonators should be stored in a separate magazine located according to the IME American Table of Distances. *DETONATORS SHOULD NEVER BE STORED IN THE SAME MAGAZINE WITH ANY OTHER KIND OF EXPLOSIVES.*

c. Ideally, arrangements should be made whereby the supplier delivers the explosives to the job site in quantities which will be used up during the work day. An alternative would be for the supplier to return to pick up unused quantities of explosives. If it is necessary for the contractor to store his explosives, he should be familiar with all local requirements for such storage.

D. **PROPER USE OF EXPLOSIVES.**

1. Blasting operations shall be conducted between sunup and sundown, whenever possible. Adequate signs should be sounded to alert to the hazard presented by blasting. Blasting mats or other containment should be used where there is danger of rocks or other debris being thrown into the air or where there are buildings or transportation systems nearby. Care should be taken to make sure mats and other protection do not disturb the connections to electrical blasting caps.

2. Radio, television, and radar transmitters create fields of electrical energy that can, under exceptional circumstances, detonate electric blasting caps. Certain precautions must be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of extraneous or static electricity. These precautions shall include:

   - Ensuring that mobile radio transmitters on the job site that are less than 100 feet away from electric blasting caps, in other than original containers, shall be de-energized and effectively locked.
   - The prominent display of adequate signs, warning against the use of mobile radio transmitters, on all roads within 1,000 feet of the blasting operations.
   - Maintaining the minimum distances recommended by the IME between the nearest transmitter and electric blasting caps.
   - The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electric storm.
   - After loading is completed, there should be as little delay as possible before firing. Each blast should be fired under the direct supervision of the blaster, who should inspect all connections before firing and who should personally see that all persons are in the clear before giving the order to fire. Standard signals, which indicate that a blast is about to be

fired and a[redacted]r all-clear signal shall have been adopte[redacted]t is important that everyone working in the area be familiar with these signals and that they be strictly obeyed.

3. **PROCEDURES AFTER BLASTING.**

1. **Inspection After the Blast.** Immediately after the blast has been fired, the firing line shall be disconnected from the blasting machine and short-circuited. Where power switches are used, they shall be locked open or in the off position. Sufficient time shall be allowed for dust, smoke, and fumes to leave the blasted area before returning to the spot. An inspection of the area and the surrounding rubble shall be made by the blaster to determine if all charges have been exploded before employees are allowed to return to the operation. All wires should be traced and the search for unexploded cartridges made by the blaster.
2. **Disposal of Explosives.**

a. Explosives, blasting agents, and blasting supplies that are obviously deteriorated or damaged should not be used, they should be properly disposed of. Explosives distributors will usually take back old stock. Local fire marshals or representatives of the United States Bureau of Mines may also arrange for its disposal. Under no circumstances should any explosives be abandoned.

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Occupational Safety & Health Administration
200 Constitution Avenue, NW
Washington, DC 20210

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET (continued)

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. RCRA Empty Crushed Drums	100%
2.	
3.	

Color:	Odor (describe):	Free Liquids:	% Solids:	pH:	Flash Point:	Phenol
Varies	NONE	☐ YES or ☒ NO Content ____%	100%	N/A	N/A °F	N/A ppm

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ YES or ☒ NO
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ YES or ☒ NO
Is this a regulated Toxic Material as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this waste generated at a Federal Superfund Clean Up Site?	☐ YES or ☒ NO

VI. Generator Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste Industries, Inc.

Jerry B. Banks Chief, Groundwater Assessment
AUTHORIZED REPRESENTATIVE NAME AND TITLE (Printed)

Miss. Dept. of Environmental Quality
COMPANY NAME

AUTHORIZED REPRESENTATIVE SIGNATURE

June 21, 2007
DATE

VII. Allied Waste Decision

☐ Approved ☐ Rejected Expiration: _____

Conditions:

Name, Title Signature Date

© Allied Waste, August 2000

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET

Waste Profile #

Requested Disposal Facility: LITTLE DIXIE L38
an Allied Waste Company

I. Generator Information

Date: 06/21/07

Generator Name: Mississippi Department of Environmental Quality			
Generator Site Address: Rifle Range Road			
City: Vicksburg	County: Warren	State: Mississippi	Zip: 39180
Generator State ID Number: MSTMP0002452		SIC Code Number:	
Generator Mailing Address (if different): P.O. Box 20326			
City: Jackson	County: Hinds	State: Mississippi	Zip: 39289
Generator Contact Name: Trey Hess/Jerry Banks			
Phone Number: (601) 961-5654/(601) 961-5221		Fax Number: (601) 961-5300	

II. Transporter Information

Transporter Name: USES			
Transporter Address: 1075 Mendell Davis Drive			
City: Jackson	County: Hinds	State: Mississippi	Zip: 39272
Transporter Contact Name: Robbie Brister			
Phone Number: (601) 372-3232		Fax Number: (601) 372-3356	
State Transportation Number:			

III. Waste Stream Information

Name of Waste: RCRA Empty Drums	
Process Generating Waste: Empty Crushed Drums for Disposal	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE or ☒ POLLUTION CONTROL WASTE
Physical State:	☒ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID ☐ OTHER: ____
Method of Shipment:	☒ BULK ☐ DRUM ☐ BAGGED ☐ OTHER: ____
Estimated Annual Volume:	☒ CUBIC YARDS: 50 ☐ TONS: ____ ☐ OTHER: ____
Frequency:	☒ ONE TIME ☐ DAILY ☐ WEEKLY ☐ MONTHLY ☐ OTHER: ____
Special Handling Instructions:	

IV. Representative Sample Certification

☒ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☐ YES or ☐ NO
Sample Date:	Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE
Sampler's Employer:	
Sampler's Name (printed):	Signature:

© Allied Waste, August 2000

GENERATOR WASTE PROFILE SHEET (continued)

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. RCRA Empty Crushed Drums	100%
2.	
3.	

~~Color:~~	~~Odor (describe):~~	~~Free Liquids:~~	~~% Solids:~~	~~pH:~~	~~Flash Point:~~	~~Phenol~~
Varies	NONE	☐ YES or ☒ NO Content ____%	100%	N/A	N/A °F	N/Appm

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ YES or ☒ NO
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ YES or ☒ NO
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ YES or ☒ NO
~~Is this a regulated Toxic Material as defined by Federal and/or State regulations?~~	~~☐ YES or ☒ NO~~
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ YES or ☒ NO
Is this waste generated at a Federal Superfund Clean Up Site?	☐ YES or ☒ NO

VI. Generator Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will ~~deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any~~ other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste Industries, Inc.

Jerry B. Banks Chief, Groundwater Assessment — Miss. Dept. of Environmental Quality

AUTHORIZED REPRESENTATIVE NAME AND TITLE (Printed) — COMPANY NAME

AUTHORIZED REPRESENTATIVE SIGNATURE — June 21, 2007 — DATE

VII. Allied Waste Decision

☐ Approved ☐ Rejected Expiration: _____

Conditions:

Name, Title — Signature — Date

© Allied Waste, August 2000

TEMPORARY HAZARDOUS WASTE IDENTIFICATION NUMBER APPLICATION

Date of Request MAY 18, 2007

MSTMP0002452

Facility Information:

Contact Person	TREY HESS / JERRY BANKS
Facility Name	MS DEPT. of ENVIRONMENTAL QUALITY
Street Address	RIFLE RANGE ROAD
Mailing Address	
City, State, Zip	VICKSBURG, MS 39180
Phone	601-961-5654 / 601-961-5221

Transporter Information:

Name	
City, State	

TSD Facility Information:

Name	
City, State	

Waste Information:

Quantity (lbs)	
Shipment Date	
EPA Waste Code	D004, D015, D040, P020, P123

Consultant/Contractor:

Name	DAVID ESCUDE / ARCADIS
Address	10352 PLAZA AMERICANA DR.
City, State, Zip	BATON ROUGE, LA 70816
Phone	225-218-9672 ext 245
FAX	225-218-9677

Brief waste description:

Remediation waste from old Vicksburg Chemical Co. site.

Post-it® Fax Note 7671	Date 5/18/07	# of pages ▶
To DAVID ESCUDE	From JERRY BANKS	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

Memorandum

To: File

From: Jere "Trey" Hess, P.E.

cc: Willie McKercher, P.E. - GARD

Date: 04/23/2007

RE: Vicksburg Chemical Company, Site Meeting – 04-18-07

On April 18, 2007, Jerry Banks, Willie McKercher and I met David Escude, Dana Lawton, and Craig Derouen of ARCADIS at the ARCADIS trailer on the subject site. We arrived at 9:55 AM. The purpose of the meeting was to discuss results from recent site sampling events. Craig Derouen led the meeting using the attached Meeting Agenda. General consensus from the group was that there does not appear to have been any significant changes in site conditions since the site was last sampled by EPA in 2005. A few data gaps remain that need to be addressed prior to evaluating and developing a corrective action plan. Two figures were provided (See attached) depicting some of the results along with proposed sampling locations. ARCADIS also provided a list of Immediate Future Activities that we went over. A couple, particularly Asbestos Disposal and Cooling Tower Demolition, are to be discussed with upper management at MDEQ for direction. After concluding the discussion, we moved down to the South Plant to evaluate progress, where we met John Miles of Harcros. After talking briefly with John Miles, we walked to SWMU #2 and the surface water impoundments to get a look at the railroad right-of-way, since the leading edge of the plume may be located underneath it. We left the site at 12:30PM.

ATTACHMENTS

N:\Vicksburg Chemical Company\Memorandum-VCC Visit 2007-04-18.doc

Mississippi Bluffs
Former Vicksburg Chemical
Meeting Agenda
April 18, 2007

Groundwater

- Multiple locations above MDEQ Tier 1 TRGs (see Figure 7)
- Byram marl map
  - Based primarily on 5 borings (GP-SB-22 through GP-SB-26) conducted by ARCADIS
  - Future activities
    - Verify URS boring and well logs
    - Develop cross-section maps
- 13 additional samples for groundwater delineation
  - Sample at former MW-3 location across bayou, or not?
- Will explore additional well placement after groundwater delineation sample results

Soil

- Overall purpose – Define engineered cap boundary
- 3 locations above MDEQ Tier 1 TRGs (see Figure 9)
  - 2 delineation samples north of ammonia spheres for Arsenic detected in GP-SB-07 (0-2)
  - Resample at depth for Toxaphene detected in GP-SB-13 (2-4)
  - Toxaphene detected in GP-SB-16 (0-2) will be scraped along with soil piles
- Kansas City Southern Railroad Right of Way
  - 2 borings proposed at railroad right of way boundary
  - 2 borings proposed at railroad track embankment
- Landfill sampling from SWMU 2 stability analysis
  - OVA reading high for some areas
  - No obstructions that prevented rig from advancing
  - Waiting on the rest of the soil data from the lab

Storm Water

- There are some detected concentrations from the storm water sampling. These will be compared to criteria stated in the Agreed Order once drafted and signed.
- In an e-mail, Carla Brown, MDEQ stated that it takes 3 months to process a pre-treatment permit application, 30 days of which is public comment. Therefore, we'll start that process after groundwater modeling.

Table 2. Summary of Monitor Well Inspections, Baseline Sampling Report, Former Vicksburg Chemical Company, Vicksburg, Mississippi.

MW-1A	Concrete is needed between the protective cover and the well casing. No guard posts. No well lock. Well identification number (ID #) needs to be stenciled to the well.
MW-1C	Protective casing needs paint. One guard post missing. No well lock. Well ID # needs to be stenciled to the well.
MW-2	Protective casing needs paint. No guard posts. No well lock. Well ID # partially marked.
MW-4	Protective casing needs paint. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
MW-5	Concrete pad covered by soil. No guard posts. No well lock. Well ID # partially marked.
MW-6	Protective casing has a broken hinge and needs paint. Concrete pad covered by soil. No guard posts. No well lock. Well ID # partially marked.
MW-7	Concrete pad not present. No guard posts. No well lock. Well ID # partially marked.
MW-8	Protective casing needs paint. One guard post missing. No well lock. Well ID # partially marked. Well casing bent just below ground surface.
MW-9	Top of protective casing rusted out. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
MW-10	No guard posts. No well lock. Concrete pad has small cracks. Well ID # partially marked.
MW-10C	Protective casing not present. One guard post missing. No well lock.
MW-11	Protective casing needs paint. No guard posts. No well lock. Well ID # partially marked.
MW-12	Protective casing needs paint. Concrete pad covered by soil. No guard posts. No well lock. Well ID # partially marked.
MW-12C	Protective casing needs painting. No well lock. Well ID # needs to be stenciled to the well.
MW-13	Protective casing needs paint. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
MW-14	Protective casing rusty and needs paint. No guard posts. No well lock. Well ID # partially marked.
MW-16	Protective casing needs paint. Concrete pad cracked. No guard posts. No well lock. Well ID # needs to be stenciled to the well.

Table 2. Summary of Monitor Well Inspections, Baseline Sampling Report, Former Vicksburg Chemical Company, Vicksburg, Mississippi.

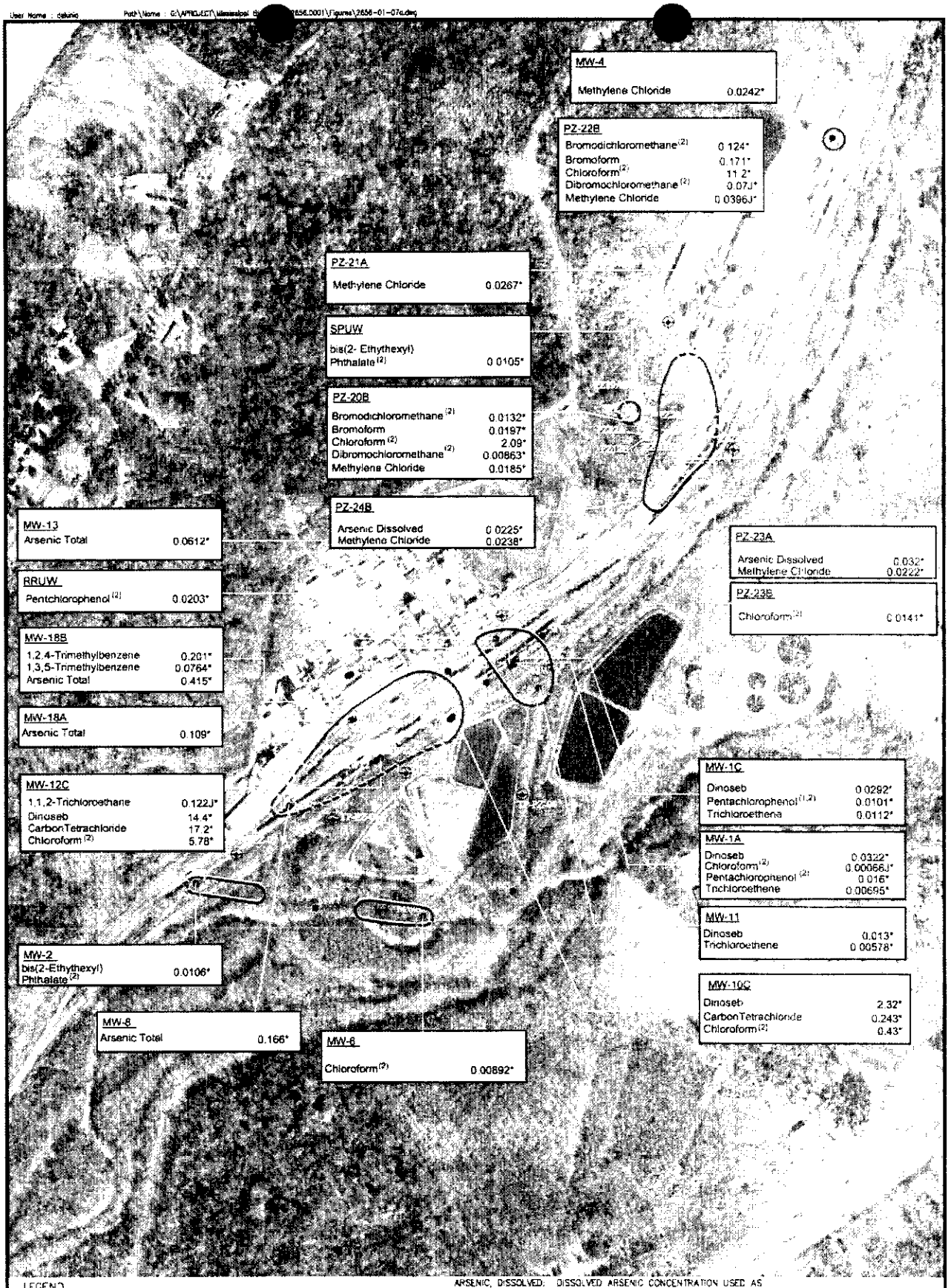
MW-17A	Protective casing needs paint. No well lock. Well ID # needs to be stenciled to the well.
MW-17B	Protective casing needs paint. No well lock. Well ID # needs to be stenciled to the well.
MW-18A	Protective casing needs paint. No concrete pad. No guard posts. No well lock. Well ID # partially marked.
MW-18B	Protective casing needs paint. No concrete pad. No guard posts. No well lock. Well ID # partially marked.
PZ-12A	Protective casing needs paint and is starting to wash out. Concrete pad is partially covered by soil and cracked. No guard posts. No well lock. Well ID # needs to be stenciled to the well. No well cap.
PZ-12B	Protective casing needs paint. Concrete pad is starting to wash out. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-20A	Protective casing needs paint. Concrete pad has been struck and is very loose. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-20B	Protective casing has a broken hinge and needs paint. Concrete pad is broken in half. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-21A	Protective casing has a broken hinge and needs paint. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-22A	Protective casing needs paint. Concrete pad is covered by soil. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-22B	Protective casing has a broken hinge and needs paint. Concrete pad is covered by soil. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-23A	Protective casing has a broken hinge and needs paint. No concrete pad or the concrete pad is covered by soil. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-23B	Protective casing has a broken hinge and needs paint. No concrete pad or the concrete pad is covered by soil. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-24B	No protective casing. Well is damaged and bent (appears to have been hit with a vehicle). The concrete pad needs to be replaced. No guard posts. No well lock. Well ID # needs to be stenciled to the well.

Table 2. Summary of Monitor Well Inspections, Baseline Sampling Report, Former Vicksburg Chemical Company, Vicksburg, Mississippi.

PZ-25B	Protective casing needs paint. Concrete pad in fair condition. No guard posts. No well lock. Well ID # needs to be stenciled to the well.
PZ-26A	Protective casing needs paint. No well lock. Well ID # needs to be stenciled to the well.
PZ-26B	Protective casing needs paint. No well lock. Well ID # needs to be stenciled to the well.
RRUW	Protective casing has a broken hinge and needs paint. No guard posts. No well lock. Well ID # not marked.
SPUW	Protective casing needs paint. Concrete pad is cracked. No guard posts. No well lock. Well ID # needs to be stenciled to the well.

Immediate Future Activities

- Conduct additional soil borings (Scheduled for 4/18 – 19);
- Collect additional groundwater samples via temporary locations;
- Additional TCLP Tank Sampling;
- Removal of material from Buildings;
- Waste characterization and packing;
- Asbestos Disposal and Cooling Tower Demolition;
- Oily Water Disposal from Tall Oil Tank and Drums;
- Drum Crushing;
- Spent Carbon Disposal;
- Drainage Plan; and
- Grounds Maintenance and Storm Water Discharge.



LEGEND

J ESTIMATED VALUE

ALL CONCENTRATIONS ARE IN MILLIGRAMS PER LITER (mg/L)

* CONCENTRATION EXCEEDS MDEQ TIER 1 TRG

B ANALYTE WAS DETECTED IN THE METHOD BLANK

(1) ANALYTICAL RESULT FROM DUPLICATE SAMPLE (DUP02 (020707)) IS PRESENTED.

ARSENIC, DISSOLVED: DISSOLVED ARSENIC CONCENTRATION USED AS IT WAS GREATER THAN TOTAL ARSENIC CONCENTRATION.

(2) BECAUSE THE MDEQ TIER 1 TRG IS LESS THAN THE LABORATORY REPORTING LIMIT (RL), THE RL IS USED AS THE SCREENING VALUE.

AREA EXCEEDING MDEQ TIER 1 TRGs

AREA DELINEATION UNDEFINED

TP-PZ-01 TEMPORARY GROUNDWATER SAMPLING LOCATION (ADDITIONAL SAMPLE LOCATIONS, LAB DATA FOR THESE LOCATIONS WERE NOT AVAILABLE FOR DEPICTION ON THIS MAP.)

0 200' 400' 800'

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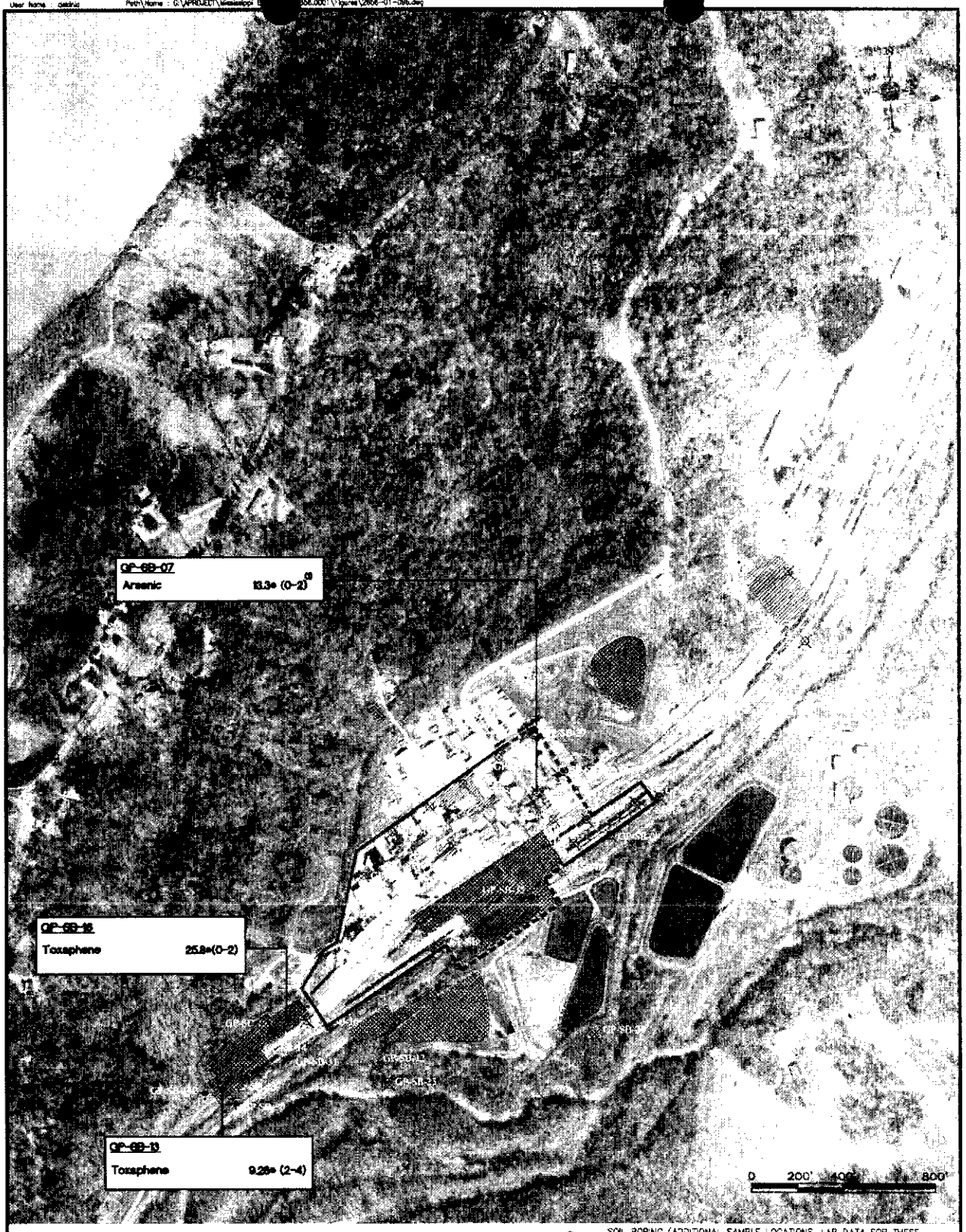
DRAWN BY	CHECKED
SMEN	CAD
PROJECT MANAGER	DEPARTMENT MANAGER
DRE	DRE
DATE	TASK/PHASE NUMBER
5-21-07	0018

ARCADIS
10352 PLAZA AMERICANA DRIVE
BATON ROUGE, LA 70816
TEL: 225-292-1004
FAX: 225-218-8677
WWW.ARCADIS-US.COM

GROUNDWATER CONCENTRATIONS ABOVE MDEQ TIER 1 TRGs

FORMER VICKSBURG CHEMICAL COMPANY SITE

PROJECT NUMBER	DRAWING NUMBER
LA002656.0001	7



LEGEND

GP-SB-07	SOIL BORING LOCATION
	ALL CONCENTRATIONS ARE IN MILLIGRAMS PER KILOGRAMS (mg/kg)
(J)	ANALYTICAL RESULT FROM DUPLICATE SAMPLES (GP-SB-DUP-01 FOR GP-SB-07(0-2) AND GP-SB-DUP-03 FOR PG-SB-21(2-4)) ARE PRESENTED.
J	ESTIMATED VALUE.
*	CONCENTRATION EXCEEDS MDEQ TIER 1 TRG (FOR RESTRICTED USE).
	PROPOSED SOIL CAP BOUNDARY (AREA DELINEATED)
	PROPOSED SOIL CAP BOUNDARY (AREA NEEDS ADDITIONAL DELINEATION)
GP-SB-27	SOIL BORING (ADDITIONAL SAMPLE LOCATIONS, LAB DATA FOR THESE LOCATIONS WERE NOT AVAILABLE FOR DEPICTION ON THIS MAP.)
	ARSENIC CONTAMINATION FOUND WITHIN INVESTIGATED BOUNDARIES
	ARSENIC AND TOXAPHENE CONTAMINATION FOUND WITHIN INVESTIGATED BOUNDARIES
	SOIL/SLUDGE CONTAINING VOAs
	TOXAPHENE CONTAMINATION FOUND WITHIN INVESTIGATED BOUNDARIES
	DINOSEB AND TOXAPHENE CONTAMINATION FOUND WITHIN INVESTIGATED BOUNDARIES

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DRAWN BY: D. EKINA	CHECKED: CAD
PROJECT MANAGER: DRE	DEPARTMENT MANAGER: DRE
DATE: 03-26-07	TASK/PHASE NUMBER: 0018

ARCADIS
10352 PLAZA AMERICANA DRIVE
BATON ROUGE, LA 70816
TEL: 225-292-1004
FAX: 225-218-9477
WWW.ARCADIS-US.COM

SOIL CONCENTRATIONS ABOVE MDEQ TIER 1 TRGs

FORMER VICKSBURG CHEMICAL COMPANY SITE

PROJECT NUMBER: LA002656.0001

DRAWING NUMBER: 9

STATE OF MISSISSIPPI

HALEY BARBOUR

GOVERNOR

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

Memorandum

To: File

From: Jere "Trey" Hess, P.E.

cc: Willie McKercher, P.E. - GARD

Date: 03/13/2007

RE: Vicksburg Chemical Company, Vicksburg, MS

On March 6, 2007, Willie McKercher and I met David Escude, and Craig Derouen of ARCADIS, Paul Bunge of MS Bluffs Industrial Park and John Miles of Harcros at the subject site. We arrived at 1:15 PM. The purpose of the meeting was to discuss schedule and issues needing to be resolved. We met in John Miles' office at the North Plant. Upon arrival, I was provided a copy of the latest Project Task timeline (See Attached) that lists Tasks that have been completed and are planned. During the course of discussions, it became clear that abandoning the railroad (KCS) line would provide the most cost effective way to remediate the site since so much of the contamination is along and under the rail line. Paul Bunge is to talk with the City and the railroad about the ability to do so. ARCADIS is finalizing the evaluation of tank contents, abandoned rail cars, and the stormwater plan. MDEQ is to consider who will be the "generator" of hazardous waste at the site. We left the site at 2:20PM.

N:\Vicksburg Chemical Company\Memorandum-VCC Visit 2007-03-06.doc

OFFICE OF POLLUTION CONTROL

POST OFFICE BOX 10385 • JACKSON, MISSISSIPPI 39289-0385 • TEL: (601) 961-5171 • FAX: (601) 354-6612 • www.deq.state.ms.us

AN EQUAL OPPORTUNITY EMPLOYER

ID	Task Name
1	Quality Assurance Project Plan (QAPP)
2	Health and Safety Plan
3	Prepare Clearing Bid Documents/Select Contractor
4	Storm Water Discharge Events (monthly)
5	Sitewide Clearing
6	Drum Inventory
7	Monitor Well Surveying
8	Drum Inventory Report
9	SWMU 2 Stability Study Work Plan
10	Baseline Sampling Work Plan
11	Solidification/Stabilization Study Work Plan
12	MDEQ Approval of Work Plans
13	GW Sampling
14	Storm Water Sampling
15	Stabilization/Solidification Sampling
16	Fence Installation
17	Deep borings to Byram Marl
18	SWMU 2 - Pipe repair
19	SWMU 2 - Cutting berms
20	Landfill Cap Repair
21	Concrete/Brick Removal
22	Slug tests
23	Culvert Removal
24	Drum Consolidation
25	Sitewide Surveying
26	Oil recycling/liquid disposal
27	Plant Demo
28	Site Characterization Report
29	SWMU 2 Stability Sampling
30	Tank Sampling/Reconciliation
31	Drainage Plan
32	Solidification/Stabalization Report
33	SWMU 2 Stability Report
34	Groundwater Modeling
35	Recovery Trench Landfill Design
36	Contractor Bid Packages
37	Work Plan from Invista/Nitric Acid Plant (South Plant)

Project: Vicksburg Chemical
Date: Mon 3/5/07

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

"Escude, David"
<David.Escude@arcadis-us.com>

03/01/2007 02:46 PM

To <Trey_Hess@deq.state.ms.us>

cc "Derouen, Craig" <Craig.Derouen@arcadis-us.com>, <Willie_McKercher@deq.state.ms.us>

bcc

Subject FW: FW: 2066779 Black and White Tanks

Trey

See email from our "Project Chemist".

Let me know if you have any questions.

Thanks
David

-----Original Message-----
From: Kennedy, Jane
Sent: Thursday, March 01, 2007 2:35 PM
To: Escude, David
Subject: RE: FW: 2066779 Black and White Tanks

Hi David

I briefly reviewed the data in SDG 2066779 presented by Pace Laboratories.

The Laboratory Control Samples (LCSs) are within control limits for all parameters with the exception of pyridine. The pyridine results will be qualified as estimated due to slightly low recoveries.

No other Quality Control notations would warrant qualification of data since the all target analytes are non-detect.

All data is considered to be usable for the intended purpose.

Please let me know if you need anything else or need a more detailed review.

Thanks
Jane

Jane Kennedy
ARCADIS
Phone: (504) 525-9925 [Ext. 11]
Cell: (225) 205-8256
Please note that a NEW e-mail: jane.kennedy@arcadis-us.com will be effective June 1st.

-----Original Message-----
From: Escude, David
Sent: Thursday, March 01, 2007 2:18 PM
To: Kennedy, Jane
Subject: FW: FW: 2066779 Black and White Tanks

Jane

Let me know if this makes sense - I'll give you a call to discuss.

Thanks
David

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Thursday, March 01, 2007 2:05 PM
To: Derouen, Craig
Cc: Willie_McKercher@deq.state.ms.us; Escude, David
Subject: Re: FW: 2066779 Black and White Tanks

Craig,

Looking at P. 4 of the attached for LCS/MS/MSD/ Surrogate recoveries, all I need is something from your "Project Chemist" stating that he/she has reviewed the qualifiers and that no corrective action is required. Once I get that, you can discharge into the storm water ponds.

Also, Willie should be getting with you to get me the results from the stormwater ponds. I need the results very soon (get them to David so he and I can talk about them).

THANKS!!!

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Derouen, Craig" <Craig.Derouen@arcadis-us.com>
03/01/2007 10:14 AM

To: <Trey_Hess@deq.state.ms.us>,
<Willie_McKercher@deq.state.ms.us>

cc: "Escude, David" <David.Escude@arcadis-us.com>,

"Lawton, Dana"

<Dana.Lawton@arcadis-us.com>

Subject

FW: 2066779 Black and White Tanks

Trey,

These results are from the purge water tanks at the site. The sampling indicates that they're non-hazardous. We'd like to know if this water can be discharged to the storm water ponds, or if there was another disposal method you had in mind. Because the results were nonhazardous, we consolidated the water into one tank to get the other tank off of rent.

Thanks,
Craig

-----Original Message-----
From: Cindy Olavesen [mailto:Cindy.Olavesen@pacelabs.com]

Sent: Wednesday, February 28, 2007 6:01 PM
To: Derouen, Craig
Subject: 2066779 Black and White Tanks

Report. Sorry, I couldn't get it to you earlier

have a good evening
cindy

Cindy Olavesen
Pace-New Orleans
504-305-3626-Direct Line
504-469-0555- Fax

Karen Brown-504-305-3615
karen.brown@pacelabs.com

Randy Shackelford - 504-305-3616

william.shackelford@pacelabs.com

FYI, my late day is Wednesday 9:00 to 6:00.

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Trey Hess/HW/OPC/DEQ
03/01/2007 02:04 PM

To "Derouen, Craig" <Craig.Derouen@arcadis-us.com>@INETDEQ
cc Willie McKercher/HW/OPC/DEQ@DEQ, DEscude@arcadis-us.com
bcc Jimmy_Crellin@deq.state.ms.us
Subject Re: FW: 2066779 Black and White Tanks

Craig,

Looking at P. 4 of the attached for LCS/MS/MSD/ Surrogate recoveries, all I need is something from your "Project Chemist" stating that he/she has reviewed the qualifiers and that no corrective action is required. Once I get that, you can discharge into the storm water ponds.

Also, Willie should be getting with you to get me the results from the stormwater ponds. I need the results very soon (get them to David so he and I can talk about them).

THANKS!!!

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Derouen, Craig" <Craig.Derouen@arcadis-us.com>

"Derouen, Craig" <Craig.Derouen@arcadis-us.com>
03/01/2007 10:14 AM

To <Trey_Hess@deq.state.ms.us>, <Willie_McKercher@deq.state.ms.us>
cc "Escude, David" <David.Escude@arcadis-us.com>, "Lawton, Dana" <Dana.Lawton@arcadis-us.com>
Subject FW: 2066779 Black and White Tanks

Trey,

These results are from the purge water tanks at the site. The sampling indicates that they're non-hazardous. We'd like to know if this water can be discharged to the storm water ponds, or if there was another disposal method you had in mind. Because the results were nonhazardous, we consolidated the water into one tank to get the other tank off of rent.

Thanks,

Craig

-----Original Message-----
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Pace Analytical®
New Orleans Laboratory

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

February 28, 2007

Craig Derouen
Arcadis Geraghty & Miller
10352 Plaza Americana Drive
Baton Rouge, LA 70816

FILE COPY

RE: Project: 2066779
RE: Project ID: MS BLUFFS/LA002656.1.13

Dear Craig Derouen:

Enclosed are the analytical results for sample(s) received by the laboratory on February 13, 2007. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cindy Olavesen

Cindy Olavesen

ACCREDITED IN ACCORDANCE WITH nelac

REPORT OF LABORATORY ANALYSIS

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LELAP # 02006

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Pace Analytical®
New Orleans Laboratory

Report of Laboratory Analysis

Project Number: 2066779

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2/28/2007 17:54:47

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Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Project: MS BLUFFS/LA002656.1.13

Project No.: 2066779

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
BLACK TANK (021207)	20501679	Water	02/12/2007	14:45	02/13/2007	14:40
WHITE TANK (021207)	20501680	Water	02/12/2007	15:00	02/13/2007	14:40

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Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Pace Analytical*
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Project Narrative

Pace Analytical Services, Inc.
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St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Project: **2066779**

Sample Receipt Condition:

All samples were received in accordance with EPA protocol.

Holding Times:

All holding times were met.

Blanks:

All blank results were below reporting limits.

Laboratory Control Samples:

LCS recoveries outside of QC limits are qualified in the Report of Quality Control section.

Matrix Spikes and Duplicates:

MS or MSD recoveries outside of QC limits are qualified in the Report of Quality Control section.

Surrogates:

Surrogate recoveries outside of QC limits are qualified in the surrogate results section.

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Project Narrative

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Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Project: 2066779

Analytical Method	Batch	Sample used for QC
EPA 8151	82425	Project sample BLACK TANK (021207)
EPA 8081	82704	Project sample BLACK TANK (021207)
EPA 6010	82487	Batch sample from another client
EPA 7470	82488	Batch sample from another client
EPA 8270	82622	Batch sample from another client
EPA 8260	82542	Batch sample from another client
EPA 9040	82327	Batch sample from another client
SW-846 7.3.4.2	82394	Batch sample from another client
SW-846 7.3.3.2	82395	Batch sample from another client

For the sample used as the original for the DUP or MS/MSD for the batch:

Project sample means a sample from this project was used.
Client sample means a sample from the same client but in a different project was used.
Batch sample means a sample from the a different client was used.

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Phone: 504.469.0333
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LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: BLACK TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501679 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82542

Method: 8260 VOAs TCLP **Units:** mg/L **Target List:** 8260_LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/19/07 **Analyzed:** 02/19/07 17:09 RMP (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		0.100	0.500
78-93-3	2-Butanone (MEK)	1	ND	A11	0.200	200.
56-23-5	Carbon tetrachloride	1	ND		0.100	0.500
108-90-7	Chlorobenzene	1	ND		0.100	100.
67-66-3	Chloroform	1	ND		0.100	6.00
107-06-2	1,2-Dichloroethane	1	ND		0.100	0.500
75-35-4	1,1-Dichloroethene	1	ND		0.100	0.700
127-18-4	Tetrachloroethene	1	ND		0.100	0.700
79-01-6	Trichloroethene	1	ND		0.100	0.500
75-01-4	Vinyl chloride	1	ND		0.100	0.200

10 compound(s) reported

2/28/2007 17:55:29

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
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St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: WHITE TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501680 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82542

Method: 8260 VOAs TCLP **Units:** mg/L **Target List:** 8260 LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/19/07 **Analyzed:** 02/19/07 17:32 RMP (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
71-43-2	Benzene	1	ND		0.100	0.500
78-93-3	2-Butanone (MEK)	1	ND	A11	0.200	200.
56-23-5	Carbon tetrachloride	1	0.186		0.100	0.500
108-90-7	Chlorobenzene	1	ND		0.100	100.
67-66-3	Chloroform	1	0.163		0.100	6.00
107-06-2	1,2-Dichloroethane	1	ND		0.100	0.500
75-35-4	1,1-Dichloroethene	1	ND		0.100	0.700
127-18-4	Tetrachloroethene	1	ND		0.100	0.700
79-01-6	Trichloroethene	1	ND		0.100	0.500
75-01-4	Vinyl chloride	1	ND		0.100	0.200

10 compound(s) reported

2/28/2007 17:55:30

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Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: BLACK TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501679 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82622

Method: 8270 SVOAs TCLP **Units:** mg/L **Target List:** 8270_LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/23/07 **Analyzed:** 02/27/07 13:44 JAM (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
106-46-7	1,4-Dichlorobenzene	1	ND		0.100	7.50
121-14-2	2,4-Dinitrotoluene	1	ND		0.100	0.130
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.100	0.500
118-74-1	Hexachlorobenzene	1	ND		0.100	0.130
67-72-1	Hexachloroethane	1	ND		0.100	3.00
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.100	200.
108-39-4	3-Methylphenol (m-Cresol)	1	ND	A7	0.100	200.
106-44-5	4-Methylphenol (p-Cresol)	1	ND	A7	0.100	200.
98-95-3	Nitrobenzene	1	ND		0.100	2.00
87-86-5	Pentachlorophenol	1	ND		0.250	100.
110-86-1	Pyridine	1	ND		0.100	5.00
95-95-4	2,4,5-Trichlorophenol	1	ND		0.250	400.
88-06-2	2,4,6-Trichlorophenol	1	ND		0.100	2.00

13 compound(s) reported

2/28/2007 17:55:29

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New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
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St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: WHITE TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501680 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82622

Method: 8270 SVOAs TCLP **Units:** mg/L **Target List:** 8270_LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/23/07 **Analyzed:** 02/27/07 14:12 JAM (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
106-46-7	1,4-Dichlorobenzene	1	ND		0.100	7.50.
121-14-2	2,4-Dinitrotoluene	1	ND		0.100	0.130
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.100	0.500
118-74-1	Hexachlorobenzene	1	ND		0.100	0.130
67-72-1	Hexachloroethane	1	ND		0.100	3.00
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.100	200.
108-39-4	3-Methylphenol (m-Cresol)	1	ND	A7	0.100	200.
106-44-5	4-Methylphenol (p-Cresol)	1	ND	A7	0.100	200.
98-95-3	Nitrobenzene	1	ND		0.100	2.00
87-86-5	Pentachlorophenol	1	ND		0.250	100.
110-86-1	Pyridine	1	ND		0.100	5.00
95-95-4	2,4,5-Trichlorophenol	1	ND		0.250	400.
88-06-2	2,4,6-Trichlorophenol	1	ND		0.100	2.00

13 compound(s) reported

2/28/2007 17:55:30

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New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: BLACK TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501679 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82704

Method: 8081 Pests TCLP **Units:** mg/L **Target List:** 8081_LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/23/07 **Analyzed:** 02/27/07 21:17 SRA (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.400
57-74-9	Chlordane	1	ND		0.00100	0.0300
72-20-8	Endrin	1	ND		0.00100	0.0200
76-44-8	Heptachlor	1	ND		0.000500	0.00800
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.00800
72-43-5	Methoxychlor	1	ND		0.00500	10.0
8001-35-2	Toxaphene	1	ND		0.0200	0.500

7 compound(s) reported

2/28/2007 17:55:32

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Report of Laboratory Analysis

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St. Rose . LA 70087

Phone: 504 469.0333
Fax: 504 469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: BLACK TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501679 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82425

Method: 8151 Herbs TCLP **Units:** mg/L **Target List:** 8151_LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/23/07 **Analyzed:** 02/28/07 03:58 SLF (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
94-75-7	2,4-D	1	ND		0.0200	10.0
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00500	1.00

2 compound(s) reported

2/28/2007 17:55:33

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Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: WHITE TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501680 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82704

Method: 8081 Pests TCLP **Units:** mg/L **Target List:** 8081_LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/23/07 **Analyzed:** 02/27/07 22:06 SRA (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.400
57-74-9	Chlordane	1	ND		0.00100	0.0300
72-20-8	Endrin	1	ND		0.00100	0.0200
76-44-8	Heptachlor	1	ND		0.000500	0.00800
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.00800
72-43-5	Methoxychlor	1	ND		0.00500	10.0
8001-35-2	Toxaphene	1	ND		0.0200	0.500

7 compound(s) reported

2/28/2007 17:55:33

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
Regulatory limit denotes an actual regulatory limit or a client-requested notification limit.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

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Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Pace Analytical
New Orleans Laboratory

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client: Arcadis Geraghty & Miller

Client ID: WHITE TANK (021207) **Site:** None

Project: MS BLUFFS/LA002656.1.13 **Project No.:** 2066779 **Sample Qu:**

Lab ID: 20501680 (TCLP) **Matrix:** Water **% Moisture:** n/a

Description: None **Prep Level:** TCLP **Batch:** 82425

Method: 8151 Herbs TCLP **Units:** mg/L **Target List:** 8151_LL20

Collected: 02/12/07 **Received:** 02/13/07

Prep Factor: 1 **Prepared:** 02/23/07 **Analyzed:** 02/28/07 05:20 SLF (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit	Reg. Limit
94-75-7	2,4-D	1	ND		0.0200	10.0
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00500	1.00

2 compound(s) reported

2/28/2007 17:55:33

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of extract. The Prep Factor accounts for a non-routine sample size.
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1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: BLACK TANK (021207)
Client: Arcadis Geraghty & Miller
Project: MS BLUFFS/LA002656.1.13
Site: None
Lab ID: 20501679 (TCLP)
Project No.: 2066779
Description: None
Matrix: Water
%Moisture: n/a
Collected: 02/12/07
Received: 02/13/07

ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting Limit	Prep.	Analysis		Reg. Limit
Arsenic	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:50	KJR (1)	5.00
Barium	EPA 6010	82487	1	ND		mg/L	2.00	17-Feb-07	17-Feb-07 18:50	KJR (1)	100.
Cadmium	EPA 6010	82487	1	ND		mg/L	0.100	17-Feb-07	17-Feb-07 18:50	KJR (1)	1.00
Chromium	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:50	KJR (1)	5.00
Lead	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:50	KJR (1)	5.00
Mercury	EPA 7470	82488	1	ND		mg/L	0.000200	21-Feb-07	21-Feb-07 10:35	MHB1 (1)	0.200
Selenium	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:50	KJR (1)	1.00
Silver	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:50	KJR (1)	5.00

8 parameter(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. PF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitibility.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

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U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: WHITE TANK (021207) **Client:** Arcadis Geraghty & Miller

Project: MS BLUFFS/LA002656.1.13 **Site:** None

Lab ID: 20501680 (TCLP) **Project No.:** 2066779

Description: None **Matrix:** Water **%Moisture:** n/a

Collected: 02/12/07 **Received:** 02/13/07

ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting Limit	Prep.	Analysis		Reg. Limit
Arsenic	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:55	KJR (1)	5.00
Barium	EPA 6010	82487	1	ND		mg/L	2.00	17-Feb-07	17-Feb-07 18:55	KJR (1)	100.
Cadmium	EPA 6010	82487	1	ND		mg/L	0.100	17-Feb-07	17-Feb-07 18:55	KJR (1)	1.00
Chromium	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:55	KJR (1)	5.00
Lead	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:55	KJR (1)	5.00
Mercury	EPA 7470	82488	1	ND		mg/L	0.000200	21-Feb-07	21-Feb-07 10:37	MHB1 (1)	0.200
Selenium	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:55	KJR (1)	1.00
Silver	EPA 6010	82487	1	ND		mg/L	0.200	17-Feb-07	17-Feb-07 18:55	KJR (1)	5.00

8 parameter(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. PF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitibility.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

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New Orleans Laboratory Certifications
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Report of Laboratory Analysis

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: BLACK TANK (021207)
Client: Arcadis Geraghty & Miller
Project: MS BLUFFS/LA002656.1.13
Site: None
Lab ID: 20501679
Project No.: 2066779
Description: None
Matrix: Water
%Moisture: n/a
Collected: 02/12/07
Received: 02/13/07

ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting Limit	Prep.	Analysis		Reg. Limit
Cyanide, Reactive	SW-846 7.3.3.	82395	1	ND		mg/kg	25.0	19-Feb-07	19-Feb-07 15:25	TAE (1)	
Flash Point	EPA 1010	82372	1	>100		deg C		14-Feb-07	14-Feb-07 13:05	SMS2 (1)	
pH	EPA 9040	82327	1	7.77		Std. Units		13-Feb-07	13-Feb-07 17:00	SMS2 (1)	
Sulfide, Reactive	SW-846 7.3.4.	82394	1	ND		mg/kg	50.0	15-Feb-07	15-Feb-07 10:00	SMS2 (1)	

4 parameter(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. PF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitibility.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

2/28/2007 17:55:39

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Report of Laboratory Analysis

Pace Analytical Services, Inc.
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St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Client ID: WHITE TANK (021207)
Client: Arcadis Geraghty & Miller
Project: MS BLUFFS/LA002656.1.13
Site: None
Lab ID: 20501680
Project No.: 2066779
Description: None
Matrix: Water
%Moisture: n/a
Collected: 02/12/07
Received: 02/13/07

ParameterName	Method	Batch	DF	Result	Qu	Units	Reporting Limit	Prep.	Analysis	Reg. Limit
Cyanide, Reactive	SW-846 7.3.3.	82395	1	ND		mg/kg	25.0	19-Feb-07	19-Feb-07 15:25 TAE (1)	
Flash Point	EPA 1010	82372	1	>100		deg C		14-Feb-07	14-Feb-07 13:05 SMS2 (1)	
pH	EPA 9040	82327	1	7.65		Std. Units		13-Feb-07	13-Feb-07 17:00 SMS2 (1)	
Sulfide, Reactive	SW-846 7.3.4.	82394	1	ND		mg/kg	50.0	15-Feb-07	15-Feb-07 10:00 SMS2 (1)	

4 parameter(s) reported

ND denotes Not Detected at or above the adjusted reporting limit.
DF denotes Dilution Factor of final sample. PF denotes sample Prep Factor which accounts for a non-routine sample size.
Reporting Limit is corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
For moisture results, wet denotes result is not corrected for moisture and n/a denotes not applicable.
(1a) pH less than 2.0 or greater than 12.5 is hazardous for corrosivity.
(1b) Flash point less than 140 degrees F is hazardous for ignitibility.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

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Report of Quality Control

Pace Analytical Services, Inc.
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St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8260 **Project:** 2066779 **LCS:** 20502838 2/19/2007 12:17:00 PM

Batch: 82542 **MS:** 20502839 2/19/2007 1:47:00 PM

Units: mg/L **Original for MS:** 20500752 Batch Sample

Parameter Name	LCS Spike	LCS Found	LCSD Found	LCS %Rec	LCSD %Rec	LCS RPD	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	(1)MS RPD	QC Limits LCS	QC Limits MS/MSD	Max RPD	Qu
Benzene	0.4	0.3322		83			0.4	0.00	0.3694	0.365	92	91	1	70 - 135	60 - 144	20	
2-Butanone (MEK)	0.4	0.3952		99			0.4	0.00	0.4	0.1526	100	38	90 *	32 - 157	20 - 168	20	A11
Carbon tetrachloride	0.4	0.4272		107			0.4	0.00	0.4848	0.4994	121	125	3	50 - 166	44 - 170	20	
Chlorobenzene	0.4	0.4364		109			0.4	0.00	0.4708	0.4626	118	116	2	73 - 129	67 - 134	20	
Chloroform	0.4	0.3846		96			0.4	0.00	0.4218	0.4118	106	103	2	71 - 133	64 - 140	20	
1,4-Dichlorobenzene	0.4	0.4594		115			0.4	0.00	0.4884	0.4664	122	117	5	66 - 133	64 - 133	20	
1,2-Dichloroethane	0.4	0.4704		118			0.4	0.00	0.4942	0.4384	124	110	12	53 - 164	51 - 161	20	
1,1-Dichloroethene	0.4	0.3414		85			0.4	0.00	0.3944	0.3962	99	99	0	51 - 143	44 - 152	20	
Hexachloro-1,3-butadiene	0.4	0.3076		77			0.4	0.00	0.313	0.309	78	77	1	49 - 167	27 - 195	20	
Tetrachloroethene	0.4	0.389		97			0.4	0.00	0.4382	0.4542	110	114	4	42 - 156	39 - 151	20	
Trichloroethene	0.4	0.4118		103			0.4	0.00	0.47	0.4616	118	115	2	69 - 136	61 - 141	20	
Vinyl chloride	0.4	0.4554		114			0.4	0.00	0.4018	0.43	101	108	7	40 - 146	28 - 161	20	

12 compound(s) reported

* denotes recovery outside of QC limits.
MS spike concentrations are not corrected for moisture content of the spiked sample.
(1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

2/28/2007 17:55:42

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Report of Quality Control

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Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8270 **Project:** 2066779 **LCS:** 20503211 2/26/2007 6:03:00 PM

Batch: 82622 **MS:** 20503617 2/26/2007 6:32:00 PM

Units: mg/L **Original for MS:** 20502023 Batch Sample

Parameter Name	LCS Spike	LCS Found	LCSD Found	LCS %Rec	LCSD %Rec	LCS RPD	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	(1)MS RPD	QC Limits LCS	QC Limits MS/MSD	Max RPD	Qu
1,4-Dichlorobenzene	0.5	0.1583		32			0.5	0.00	0.2545	0.2372	51	47	7	17 - 97	12 - 98	20	
2,4-Dinitrotoluene	0.5	0.2305		46			0.5	0.00	0.2868	0.3126	57	63	9	43 - 121	36 - 125	20	
Hexachloro-1,3-butadiene	0.5	0.1146		23			0.5	0.00	0.2	0.2146	40	43	7	20 - 101	14 - 102	20	
Hexachlorobenzene	0.5	0.2396		48			0.5	0.00	0.3324	0.3576	67	72	7	44 - 119	32 - 119	20	
Hexachloroethane	0.5	0.1361		27			0.5	0.00	0.2346	0.2201	47	44	6	15 - 96	10 - 101	20	
2-Methylphenol (o-Cresol)	0.5	0.2087		42			0.5	0.00	0.2445	0.2442	49	49	0	32 - 115	27 - 118	20	
4-Methylphenol (p-Cresol)	0.5	0.2083		42			0.5	0.00	0.2437	0.2475	49	50	2	33 - 116	27 - 119	20	A7
Nitrobenzene	0.5	0.2833		57			0.5	0.00	0.3072	0.3141	61	63	2	31 - 118	16 - 136	20	
Pentachlorophenol	0.5	0.1912		38			0.5	0.00	0.3387	0.3881	68	78	14	32 - 133	24 - 147	20	
Pyridine	0.5	0.1529		31 *			0.5	0.00	0.1149	0.0964	23 *	19 *	18	40 - 120	40 - 120	20	
2,4,5-Trichlorophenol	0.5	0.2366		47			0.5	0.00	0.2687	0.3049	54	61	13	41 - 120	35 - 122	20	
2,4,6-Trichlorophenol	0.5	0.2557		51			0.5	0.00	0.3073	0.3284	62	66	7	39 - 120	33 - 124	20	

12 compound(s) reported

* denotes recovery outside of QC limits.
MS spike concentrations are not corrected for moisture content of the spiked sample.
(1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

2/28/2007 17:55:42

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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2066779 **Batch: 82542**

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20501679	Sample S1	131 *	108	101					
20501680	Sample S1	132 *	109	98					
20502837	BLANK S1	131 *	108	101					
20502838	LCS	106	97	101					
20502839	MS	105	96	100					
20502840	MSD	103	92	100					
	QC limits:	71-129	68-124	74-122					

Sur 1: 4-Bromofluorobenzene (S)
Sur 2: Dibromofluoromethane (S)
Sur 3: Toluene-d8 (S)

*** denotes surrogate recovery outside of QC limits.**
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

2/28/2007 17:55:45

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New Orleans Laboratory

Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2066779 **Batch: 82622**

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20501679	Sample	80	75	31	84	21	60		
20501680	Sample	63	66	27	66	19	50		
20503210	BLANK	73	58	30	65	21	46		
20503211	LCS	71	55	28	59	20	45		
20503617	MS	83	71	35	64	22	58		
20503618	MSD	95	74	33	65	21	63		
QC limits:		25-133	36-108	10-109	21-120	15-113	17-130		

Sur 1: 2,4,6-Tribromophenol (S)
Sur 2: 2-Fluorobiphenyl (S)
Sur 3: 2-Fluorophenol (S)
Sur 4: Nitrobenzene-d5 (S)
Sur 5: Phenol-d5 (S)
Sur 6: Terphenyl-d14 (S)

*** denotes surrogate recovery outside of QC limits.**
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

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Report of Method Blank

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Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20502837 (TCLP)

Description: 8260 VOAs Full List TCLP, BLK **Project No.:** 2066779

Method: EPA 8260 **Batch:** 82542 **Units:** mg/L

Prep Factor: 1 **Leached:** **Prepared:** 19-Feb-07 **Analyzed:** 02/19/07 11:54 RMP (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
71-43-2	Benzene	1	ND		0.250
78-93-3	2-Butanone (MEK)	1	ND	A11	0.500
56-23-5	Carbon tetrachloride	1	ND		0.250
108-90-7	Chlorobenzene	1	ND		0.250
67-66-3	Chloroform	1	ND		0.250
107-06-2	1,2-Dichloroethane	1	ND		0.250
75-35-4	1,1-Dichloroethene	1	ND		0.250
127-18-4	Tetrachloroethene	1	ND		0.250
79-01-6	Trichloroethene	1	ND		0.250
75-01-4	Vinyl chloride	1	ND		0.250

10 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

2/28/2007 17:55:48

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health .Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

Pace Analytical®
New Orleans Laboratory

Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20503210 (TCLP)

Description: 8270 SVOAs TCLP Blank **Project No.:** 2066779

Method: EPA 8270 **Batch:** 82622 **Units:** mg/L

Prep Factor: 1 **Leached:** **Prepared:** 23-Feb-07 **Analyzed:** 02/26/07 17:33 JAM (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
106-46-7	1,4-Dichlorobenzene	1	ND		0.100
121-14-2	2,4-Dinitrotoluene	1	ND		0.100
87-68-3	Hexachloro-1,3-butadiene	1	ND		0.100
118-74-1	Hexachlorobenzene	1	ND		0.100
67-72-1	Hexachloroethane	1	ND		0.100
95-48-7	2-Methylphenol (o-Cresol)	1	ND		0.100
108-39-4	3-Methylphenol (m-Cresol)	1	ND	A7	0.100
106-44-5	4-Methylphenol (p-Cresol)	1	ND	A7	0.100
98-95-3	Nitrobenzene	1	ND		0.100
87-86-5	Pentachlorophenol	1	ND		0.250
110-86-1	Pyridine	1	ND		0.100
95-95-4	2,4,5-Trichlorophenol	1	ND		0.250
88-06-2	2,4,6-Trichlorophenol	1	ND		0.100

13 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

2/28/2007 17:55:48

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St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8081 **Project:** 2066779 **LCS:** 20503614 2/27/2007 9:00:00 PM

Batch: 82704 **MS:** 20503615 2/27/2007 9:33:00 PM

Units: mg/L **Original for MS:** 20501679 Client Sample

Parameter Name	LCS Spike	LCS Found	LCSD Found	LCS %Rec	LCSD %Rec	LCS RPD	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	(1)MS RPD	QC Limits LCS	QC Limits MS/MSD	Max RPD	Qu
gamma-BHC (Lindane)	0.005	0.004535		91			0.005	0.00	0.004203	0.003951	84	79	6	39 - 153	18 - 171	20	
Endrin	0.005	0.005975		120			0.005	0.00	0.006198	0.006037	124	121	3	49 - 171	30 - 187	20	
Heptachlor	0.005	0.003001		60			0.005	0.00	0.00355	0.003313	71	66	7	33 - 152	14 - 159	20	
Heptachlor epoxide	0.005	0.004134		83			0.005	0.00	0.00426	0.004105	85	82	4	45 - 144	24 - 158	20	
Methoxychlor	0.005	0.004473		90			0.005	0.00	0.005095	0.00491	102	98	4	19 - 178	10 - 194	20	

5 compound(s) reported

* denotes recovery outside of QC limits.
MS spike concentrations are not corrected for moisture content of the spiked sample.
(1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

2/28/2007 17:55:51

New Orleans Laboratory Certifications
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St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Method: EPA 8151 **Project:** 2066779 **LCS:** 20503463 2/28/2007 3:30:00 AM

Batch: 82425 **MS:** 20503464 2/28/2007 4:25:00 AM

Units: mg/L **Original for MS:** 20501679 Client Sample

Parameter Name	LCS Spike	LCS Found	LCSD Found	LCS %Rec	LCSD %Rec	LCS RPD	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	(1)MS RPD	QC Limits LCS	QC Limits MS/MSD	Max RPD	Qu
2,4-D	0.1	0.1148		115			0.1	0.00	0.1203	0.1106	120	111	8	25 - 163	10 - 182	20	
2,4,5-TP (Silvex)	0.01	0.01144		114			0.01	0.00	0.01162	0.01128	116	113	3	30 - 165	15 - 174	20	

2 compound(s) reported

* denotes recovery outside of QC limits.
MS spike concentrations are not corrected for moisture content of the spiked sample.
(1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

2/28/2007 17:55:51

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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2066779 **Batch: 82425**

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20501679	Sample	114	133						
20501680	Sample	111	114						
20502281	BLANK	45	51						
20502282	LCS	61	66						
20503462	BLANK	126	114						
20503463	LCS	121	116						
20503464	MS	126	141						
20503465	MSD	120	149						
	QC limits:	10-181	10-181						

Sur 1: 2,4-DCPA (Conf)(S)
Sur 2: 2,4-DCPA (S)

* denotes surrogate recovery outside of QC limits.
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

2/28/2007 17:55:54

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA080023
Florida Dept. of Health (NELAC) - E87595
Kansas Dept. of Health Environment - E-10266
U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

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Report of Batch Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Report: 2066779 **Batch: 82704**

Lab ID	Type and Qualifiers	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
20501679	Sample	80	87	50	31				
20501680	Sample	66	66	49	46				
20503613	BLANK	64	64	56	54				
20503614	LCS	87	88	62	59				
20503615	MS	84	93	48	27				
20503616	MSD	82	90	38	24				
	QC limits:	10-157	10-157	18-171	18-171				

Sur 1: Decachlorobiphenyl (Conf)(S)
Sur 2: Decachlorobiphenyl (S)
Sur 3: Tetrachloro-m-xylene (Conf)(S)
Sur 4: Tetrachloro-m-xylene (S)

*** denotes surrogate recovery outside of QC limits.**
D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.
A Lab ID consisting of a batch number with a B suffix is a method blank.
A Lab ID consisting of a batch number with a S suffix is an LCS.
A Lab ID with a MS suffix is a matrix spike.
A Lab ID with a MSD suffix is a matrix spike duplicate.

2/28/2007 17:55:54

New Orleans Laboratory Certifications
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Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20503462 (TCLP)

Description: 8151 Herbs TCLP Blank **Project No.:** 2066779

Method: EPA 8151 **Batch:** 82425 **Units:** mg/L

Prep Factor: 1 **Leached:** **Prepared:** 23-Feb-07 **Analyzed:** 02/28/07 03:03 SLF (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
94-75-7	2,4-D	1	ND		0.0200
93-72-1	2,4,5-TP (Silvex)	1	ND		0.00500

2 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

2/28/2007 17:55:58

New Orleans Laboratory Certifications
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U.S. Dept. of Agriculture Foreign Soil Permit - S-47270

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Report of Method Blank

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Lab ID: 20503613 (TCLP)

Description: 8081 Pests TCLP Blank **Project No.:** 2066779

Method: EPA 8081 **Batch:** 82704 **Units:** mg/L

Prep Factor: 1 **Leached:** **Prepared:** 23-Feb-07 **Analyzed:** 02/27/07 20:44 SRA (1)

CAS Number	Parameter	Dilution	Result	Qu	Reporting Limit
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500
57-74-9	Chlordane	1	ND		0.00100
72-20-8	Endrin	1	ND		0.00100
76-44-8	Heptachlor	1	ND		0.000500
1024-57-3	Heptachlor epoxide	1	ND		0.000500
72-43-5	Methoxychlor	1	ND		0.00500
8001-35-2	Toxaphene	1	ND		0.0200

7 compound(s) reported

ND denotes Not Detected at or above the reporting limit.
DF denotes Dilution Factor.
RL denotes sample Reporting Limit.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Analysis performed in (1) New Orleans, (2) Baton Rouge, (3) Bossier City, (4) Houston, or (0) subcontract or field.

2/28/2007 17:55:58

New Orleans Laboratory Certifications
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Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Project: 2066779

Parameter	Batch	Blank	ARL	Units	LCS Spike	LCS %Rec	LCSD %Rec	LCS RPD	MS Spike	MS %Rec	MSD %Rec	(1)MS DUP RPD	RPD	QC Limits LCS	QC Limits MS/MSD	RPD Max	Qu
Arsenic	82487	ND	0.200	mg/L	2	97			2	101	103	2		79 - 122	68 - 130	20	
Barium	82487	ND	2.00	mg/L	2	101			2	100	105	4		80 - 120	56 - 133	20	
Cadmium	82487	ND	0.100	mg/L	2	95			2	93	98	5		81 - 119	44 - 146	20	
Chromium	82487	ND	0.200	mg/L	2	94			2	92	96	5		81 - 120	58 - 135	20	
Lead	82487	ND	0.200	mg/L	2	95			2	93	96	3		79 - 122	58 - 131	20	
Selenium	82487	ND	0.200	mg/L	2	95			2	100	103	3		76 - 120	59 - 131	20	
Silver	82487	ND	0.200	mg/L	1	99			1	99	105	6		67 - 129	10 - 154	20	
Mercury	82488	ND	0.200	ug/L	1	99			1	99	98	1		80 - 120	75 - 125	20	

2/28/2007 17:56:01

ARL denotes Adjusted Reporting Limit , corrected for sample size, dilution and moisture content as applicable.
* denotes recovery outside of QC limits.
(1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

New Orleans Laboratory Certifications
Louisiana Dept. of Environmental Quality (LELAP) - 02006
Arkansas Dept. of Environmental Quality - 88-0681
Louisiana Dept. of Health and Hospitals / Drinking Water - LA060023
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Pace Analytical*
New Orleans Laboratory

Report of Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Wet Chemistry Quality Control Results

Project: 2066779

Parameter	Batch	Blank	ARL	Units	LCS Spike	LCS %Rec	LCSD %Rec	LCS RPD	MS Spike	MS %Rec	MSD %Rec	(1)MS DUP RPD	QC Limits LCS	QC Limits MS/MSD	RPD Max	Qu
Cyanide, Reac	82395	ND	25.0	mg/kg	100	9							1 - 110	-		
Cyanide, Reac	82395	ND	25.0	mg/kg	100	9			100	3		0	1 - 110	1 - 110	20	
Flash Point	82372			deg C	27	100							-	-		
pH	82327			1. Units	6	100						0	97 - 103	-	20	
Sulfide, Reacti	82394	ND	50.0	mg/kg	500	84							1 - 110	-		
Sulfide, Reacti	82394	ND	50.0	mg/kg	500	88							1 - 110	-		
Sulfide, Reacti	82394	ND	50.0	mg/kg	500	88			500	28		0	1 - 110	1 - 110	20	

2/28/2007 17:56:04

ARL denotes Adjusted Reporting Limit, corrected for sample size, dilution and moisture content as applicable.
* denotes recovery outside of QC limits.
(1) MS RPD is calculated via SW-846 rules: on the basis of spiked sample concentrations rather than spike recoveries.

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New Orleans Laboratory

Report Qualifiers

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose , LA 70087

Phone: 504.469.0333
Fax: 504.469.0555
LELAP # 02006

Project: 2066779

Analyte Qualifiers

Qualifier	Qualifier Description
A7	3-Methylphenol and 4-methylphenol coelute under the conditions used for analysis, therefore the precise isomer in the sample cannot be determined. The sample concentration is arbitrarily reported as 4-methylphenol.
A11	This analyte is a common solvent. Its presence in field samples may be an artifact of sample collection, transport, laboratory storage or analysis.

QC Qualifiers

Qualifier	Qualifier Description
S1	The surrogate recovery was above the QC limit. The data are reported without qualification since the associated target analytes were not detected in the sample.

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ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name LA002656.1.13/ Miss Bluffs

Project Location Vicksburg, MS

Laboratory PACE

Project Manager Craig Deroun

Sampler(s)/Affiliation K. Montgomery/G Cook (ARCADIS)

2066779

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	FULL SCAN TCLP 12 amber glass 4°C	RCI 250 ml HDPE 4°C					Remarks	Total
Black Tank (021207)	L	1445		2	1		205016			Wast Chemist. on Purge Water	3
White Tank (021207)	L	1500		2	1			680		HOT ? Wast Ch. on Purge Water	3

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 6

Relinquished by: [signature]	Organization: Arcadis	Date 2/12/07	Time 1604	Seal Intact?	
Received by: [signature]	Organization: Arcadis	Date 2/12/07	Time 1604	Yes No N/A	
Relinquished by: [signature]	Organization: Arcadis	Date 2/13/07	Time 1135	Seal Intact?	
Received by: [signature]	Organization: PACE	Date 2/13/07	Time 1135	Yes No N/A	
Relinquished by: [signature]	PACE	2/13/07	1440		

Special Instructions/Remarks:

Delivery Method: ☐ In Person ☐ Common Carrier _____ SPECIFY ☒ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

STATE OF MISSISSIPPI

HALEY BARBOUR

GOVERNOR

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

Memorandum

To: File

From: Jere "Trey" Hess, P.E.

cc: Willie McKercher, P.E. - GARD

Date: 01/19/07

RE: Vicksburg Chemical Company, Vicksburg, MS

On January 18, 2007, Willie McKercher and I met David Escude, Dana Lawton and Craig Derouen, at the subject site. We arrived at 8:50 AM. The purpose of the meeting was for ARCADIS to discuss with MDEQ-GARD planned sampling activities related to the remediation of the site and related issues. We met at the entrance to the South Plant located on Dabney Road where ARCADIS is now renting a trailer to serve as a command post for remediation activities. We discussed several issues, including:

1. Work to date, including:
    a. Clearing of trees and brush by US Environmental under subcontract so ARCADIS can get to sample locations and monitoring wells;
    b. Drum Inventory has been completed and only three drums were leaking. In an effort to understand the costs and issues related with dealing with drum and, possibly, tank contents, Craig Derouen is to develop a plan and costs.
    c. Solidification/Stabilization Study Plan has been completed and will be implemented along with the groundwater sampling event.
    d. Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP) have been completed and approved. Sampling is tentatively planned for last week of January 2007.
2. Next steps, including:
    a. Sampling at end of January.
    b. Purge water will be characterized and placed in surface impoundment if non-hazardous.
    c. Railroad should be involved in the near future.

Willie McKercher/HW/OPC/DEQ
01/08/2007 12:07 PM

To Trey Hess/HW/OPC/DEQ
cc
bcc
Subject Vicksburg Chemical comments

At your request, here are the comments I generated on the *Site Baseline Sampling Work Plan* dated December 15, 2006. Please forward these along to David and Craig.

- As discussed with Craig, MDEQ's preference for groundwater sampling is low-flow with peristaltic. We understand this may not always be feasible due to depth to groundwater concerns and in those cases alternatives are fine. For this first round, in order to redevelop the wells as well as sample, MDEQ agrees to allow use of a Grumphos pump for purging then sampling with a bailer once parameters have stabilized properly. After this first event, Arcadis will go to low-flow.

- Page 7, last full paragraph, "At a minimum, the soil samples will be analyzed for the analytical parameters proposed inTable 4, or an analytical parameter set provided by MDEQ." At this time, MDEQ wants to ensure that the parameters are sufficient to meet the requirements of Table 4. However, we want to clarify that when the results are submitted for each analysis required that the full analytical report for that analysis method is submitted. Example - Table 4 lists 14 chemicals. Once the 8260 method is run, MDEQ wants to see the full report of the 40~ish chemicals evaluated during 8260 (Appendix 9) not just the 14 requested.

- Page 9, first paragraph, "Seperate aliquots of groundwater will then be collected from each well for field measurements of pH, specific conductance, and temperature." The way this reads in the paragraph, it sounds like parameters will be evaluated after sampling. Please change to "will be collected during purging from each well". Also, include turbidity in your list of field measurements.

- Appendix B - Water Sampling Log - This log only contains a column for one set of field parameters. MDEQ requires that purge logs with field parameter readings be submitted with groundwater sampling reports. Please either edit the water sampling log or provide a second "purge data log" which shows that the parameters properly stabilized prior to sampling.

Please call if you have any questions, (601) 961-5731.

Willie McKercher, P.E.
Assessment and Remediation II
Mississippi Department of Environmental Quality
Phone: (601) 961-5731
Fax: (601) 961-5300
Willie_McKercher@deq.state.ms.us

"Derouen, Craig"
<CDerouen@arcadis-us.com>

10/30/2006 04:02 PM

To <nancyt@vicksburg.org>

cc <Trey_Hess@deq.state.ms.us>, "Escude, David" <DEscude@arcadis-us.com>, "Lawton, Dana" <DLawton@arcadis-us.com>

bcc

Subject Former Vicksburg Chemical Company - Burning of Cleared Vegetation

History: This message has been forwarded.

Ms. Thomas,

At the end of August 2006, I called you to discuss the burning of cleared vegetation at the former Vicksburg Chemical Company (VCC) site. ARCADIS is now onsite at the former VCC. Today is the start of clearing activities. Burning of cleared material will begin when enough material has been generated to make a burning pile that will take 1 day, or less, to burn. The first pile of material is expected to be ready to burn at the end of this week, or early next week. Burning events will be conducted as needed for the duration of the project (projected to be 30 to 45 days).

Today, I notified Mr. Trey Hess, MDEQ [(601) 961-5654]; Captain Ross with Fire Chief Keith Roger's office in Vicksburg [(601) 636-6371]; Mr. Tommy Walker, Service Forester for Warren and Claiborne County [(601) 638-1227]; and Mr. Donnie Hedgepeth, Mississippi Forestry Commission - Central Dispatch Office [(888) 823-3473] about the planned activities. These offices will be notified again before actual burning takes place. If you have any questions, feel free to call our office at the number listed below.

Thanks,

Craig A. Derouen, PE, MBA
Project Engineer
ARCADIS
10352 Plaza Americana Drive
Baton Rouge, LA 70816
Tel: 225.292.1004
Fax: 225.218.9677
E-mail: cderouen@arcadis-us.com

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

October 25, 2006

FILE COPY

Mr. Rick Springer
Hexion Specialty Chemicals
180 East Broad Street
Columbus, OH 43215

Re: Vicksburg Chemical Company (VCC) Site
Borden Company Parcel
Vicksburg, Mississippi

Dear Mr. Springer:

It is my understanding that Mississippi Bluffs Industrial Park, LLC ("MBIP") is continuing to negotiate with Hexion Specialty Chemicals to acquire the small parcel of property owned by Borden Company to which we referred in our letter to you dated May 25, 2006. Please be advised that should this acreage be acquired by MBIP and the Remediation Account, as described in Agreed Order 5069-05, become fully depleted without the issuance of a "No Further Action" letter, the Mississippi Department of Environmental Quality ("MDEQ") does not intend to require Hexion Specialty Chemicals to perform further corrective action. If, however, the property is not acquired by MBIP and contamination is discovered that could be attributed to Borden Company operations, MDEQ will most likely consider the present property owner as a potentially responsible party (PRP).

Should you have any questions or comments concerning this matter, please contact me at (601) 961-5654.

Sincerely,

Jere "Trey" Hess, P.E.

cc: Lisa Ouzts, Esq. – MDEQ
Keith Turner, Esq.
Trudy Fisher, Esq.

Willie McKercher/HW/OPC/DEQ
10/03/2006 01:18 PM

To Trey Hess/HW/OPC/DEQ@DEQ
cc
bcc
Subject Vicksburg Chemical QAPP

Trey,
The requested changes have been made in the updated Quality Assurance Project Plan (QAPP) for Vicksburg Chemical Company dated September 14, 2006. MDEQ approves this document and will consider it the final draft of the QAPP. Please request that ARCADIS move forward with submission of their sampling plans for the site.

Willie McKercher
Mississippi Department of Environmental Quality
Phone: (601) 961-5731
Fax: (601) 961-5300
Willie_McKercher@deq.state.ms.us

----- Forwarded by Willie McKercher/HW/OPC/DEQ on 10/03/2006 01:11 PM -----

Willie McKercher
09/12/2006 03:13 PM

To: Trey Hess/HW/OPC/DEQ
cc:
Subject: Vicksburg Chemical QAPP

All in all, the QAPP reads pretty well. I have just a few comments that need to be addressed in the final document.

1. Section 10.5 Field Decontamination Equipment needs to provide more detail. EPA requires that the QAPP list out equipment that will require decontamination along with the process to be used. Here we don't need that full list, but it should state that monitoring equipment, stainless steel sampling equipment and drilling equipment will be decontaminated with a brief description of the process. (e.g., handwash with distilled water and alcohol rinse, steam/pressure washing, etc.) Doesn't need to be more than a brief paragraph.

2. The second paragraph of Section 10.5 talks about "poor techniques" but does not include a "decision rule" on how those situations will be quantified or handled. However, there is further discussion on this issue in Section 10.12.3. Section 10.5 needs a reference there to tie in section 10.12.3.

3. Table 3 shows the chemicals of concern, and Table 4 shows the analytical method for testing for each of those chemicals. I just want to be sure that that list is not used in a way so that those are the only chemicals reported. MDEQ will need to see the full scan results for those analytical procedures.

4. The "Water Sampling Log" in Appendix B does not include fields for purge water parameter collection fields. Those records need to be submitted as part of the field data, either on an edited version of this form or a new record form.

The last things would just be to make sure that the final version submitted has all the appropriate signatures. Good document.

Willie McKercher
Mississippi Department of Environmental Quality
Phone: (601) 961-5731
Fax: (601) 961-5300
Willie_McKercher@deq.state.ms.us

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RevitalizationOnline.com Feature | Posted: Thursday, November 09, 2006

When the Game is a Gamble: Dealing with Contamination

Tracee Gingrich

In Vicksburg, Miss., on a bluff overlooking the mighty Mississippi River, acres of untamed growth partially obscure from view an abandoned chemical manufacturing plant. For more than three decades, residue from fertilizer, pesticide, and herbicide processing slowly percolated soil and groundwater, rendering the acreage contaminated and unfit for redevelopment. Following years of legal entanglements, bankruptcy, and funding shortfalls, 540 acres of once-pristine delta land lay idle.

In the spirit of winning against seemingly insurmountable odds, forces united to transform this once-forsaken liability into a valuable asset teeming with restoration, redevelopment, and revenue. Today, Silvertip Project Partners' Mississippi Bluffs Development Project has initiated development of a destination resort complete with casino and 18-hole, championship golf course; high-end residential development; commercial real estate; and a boutique shopping mall. In less than three years—propelled by vision, ingenuity, and fortitude—public and private entities collaborated to accomplish what could easily have taken 30 years under traditional federal cleanup programs.

Shuffling the cards

Events began to unfurl in 2002 when Vicksburg Chemical Company (VCC) shut down plant operations and filed for bankruptcy. Once a formerly profitable fertilizer manufacturing company, the nation's economic downturn had claimed another victim. VCC sought to abandon the property, but the state of Mississippi intervened, and in an unexpected turn of events, a New York bankruptcy court bestowed property guardianship upon the Mississippi Department of Environmental Quality (MDEQ). Suddenly, Mississippi found itself in an unenviable position of having to liquidate, remediate, or maintain a brownfield site. Unknown contamination limited potential buyer interest and lack of funding eliminated state financing of the cleanup. It appeared the only alternative was to turn the site over to the U.S. Environmental Protection Agency (EPA), where it would eventually be designated a Superfund site, being prioritized with other sites vying for remediation funding in its Region 4.

"The state did not have the funds to remediate this property. If the EPA was brought in, it would take decades, and they would seek to recover costs from the state ... I went looking for an answer and I found ARCADIS," said Trudy Fisher, former general counsel for MDEQ and current environmental practice attorney for Brunini, Grantham, Grower & Hewes, a century-old law firm headquartered in Jackson, Miss.

ARCADIS, a global engineering, consulting, and project management company headquartered in the Netherlands, offers a wide range of brownfield remediation products and packages, patented technologies, and perfected techniques. Innovative and trend-setting, the ARCADIS GRiP® Remediation Program offers total and complete remediation for one price. Through ARCADIS' supporting RECLAIMSM program, an extensive redevelopment evaluation is conducted to assess and fulfill each project requirement. "RECLAIMSM is an enabling process," said Paul Newman, director of the Commercial Guaranteed Remediation Program at ARCADIS' U.S. corporate office in Highlands Ranch, Colo. "We ascertain, from a needs standpoint, how to make the financing, remediation, and development work. We partner each component with a solution and deliver a tailor-made program," he added.

Dealing the deck

ARCADIS introduced the Vicksburg project to Paul Bunge, owner of Silvertip Project Partners, LLC. Bunge, an industrial and commercial developer with three decades of experience, has in recent years concentrated efforts on brownfield redevelopment. "The industry [of brownfield redevelopment] is only about 12 years old. It's far from being mature, but it's starting to be understood. When I go and look for brownfield funding, they know what I'm talking about," Bunge said.

The Vicksburg property offered enticing development opportunities with its strategic location to Interstate 20, bisecting the cities of Jackson and Shreveport; one-half mile of river frontage; scenic views; existing industrial facilities with railroad access; and 480 prime, uncontaminated acres. Current housing demand in Warren County had years ago outstripped available land and the city of Vicksburg lacked—in its estimation—the missing link for increased tourism: a championship, 18-hole golf course.

Silvertip Project Partners and ARCADIS responded in earnest following MDEQ's Request for Proposals, presenting themselves as viable partners in revitalization. However, Pandora's Box remained: What was the extent of the contamination and how much would it cost to remediate? Careful available data analysis coupled with ARCADIS' extensive remediation experience culminated in an $8 million tally to remediate the contaminated soil and groundwater.

Silvertip Project Partners, through its newly formed Mississippi Silvertip Development, LLC, deposited $8 million in an escrow account, with MDEQ retaining oversight of the approval and issuance of remediation payments to ARCADIS. With the master developer piece firmly in place and ARCADIS on board to facilitate remediation, the remaining issue was to secure financing for a development project of this magnitude. "We knew from the city they could fund TIF [tax incentive financing], but with a small community there wasn't enough to make this project financially feasible. We decided, let's bootstrap ourselves into this thing by putting together legislation to give us a tax rebate from anyone we can bring onto the site," Bunge said. TIF, originally used in California in the early 1970s, provides financing for public and private improvements through the sale of municipal bonds and tax abatement. In the end, $6 million in TIF bonds were issued by the city of Vicksburg as inducement to include a golf course in the development.

Springboarding off Mississippi's previous tourism incentive package, Fisher crafted House Bill (HB) 1294,

the Mississippi Economic Redevelopment Act, with the Vicksburg Chemical property redevelopment quandary specifically in mind. This legislation offers a state-tax rebate for a period of 10 years, capped at two and one-half times the cost of remediation, to the developer of environmentally impacted property that meets specific guidelines. As stated in Section 2 of HB 1294, "to achieve the combined purposes of encouraging economic development on and around environmentally contaminated sites, it is necessary to assist and encourage such economic development by providing temporary tax incentives within certain counties and municipalities to certain business enterprises." A Redevelopment Project Incentive Fund was created—administered by the Mississippi Development Authority—to receive deposits of state taxes, including sales, income, use, and franchise fees, collected from business enterprises located and operating within the redevelopment project area.

"This is the first time in the history of our state that we've had an economic redevelopment incentive package for a developer of a brownfield site. It's groundbreaking," Fisher said. In effect, the legislation induces a self-propelled incentive, wherein the master developer identifies and encourages businesses to locate on the property, keeping development momentum a priority.

Receiving bi-partisan support, a delegation of county and city officials, state legislators, Mississippi's Governor, Lieutenant Governor, and Secretary of State lent support to the passage of the bill. In unprecedented fashion, the bill was passed in the first session it was introduced. "Everyone was focused on what was in the best interest of the state," Fisher added.

Win-win for everyone

White-elephant status erased, the reality of sustainable development was fast coming into focus. On land where Union and Confederate soldiers clashed and where, in historical hindsight, the outcome of the American Civil War was ensured when General Ulysses S. Grant crossed the Mississippi River and subsequently laid siege to the city of Vicksburg—leading to its eventual surrender—history was once again being made.

"We are pleased that this unique project has been able to move forward. I am proud of the creative solutions we were able to find to deal with a difficult situation. We believe this effort successfully incorporated the principles of environmental protection, land reuse, and economic development. However, the most positive aspect is that for years to come the local community will receive the benefit of property placed back into productive use," said Charles Chisolm, executive director of MDEQ.

Ever keen to leverage progress, the property was retitled into two separate parcels, contaminated and uncontaminated, allowing Mississippi Silvertip Development to proceed with development concurrent with remediation. As of press time, Hale Irwin Golf Design is at work on a championship, 18-hole golf course, taking strategic advantage of native wetlands in its tees and greens design, enhancing the course with bayou ambiance; the industrial complex on site is being demolished and equipment liquidated by Harcros Chemicals; ARCADIS is on the ground implementing an expeditious and thorough remediation; and gaming license in hand, Bunge is currently soliciting proposals from casino operators and resort developers.

While tourists enjoy the amenities of a five-star resort and families gather for backyard barbeques, the once dormant and contaminated condition of the property on which they play will become a backdrop for bragging rights. And in a city made famous for a decisive Civil War battle, the birth of Coca-Cola bottling, and an 81-year-long boycott of Independence Day celebrations, HB 1294 and the subsequent revitalization of valuable land will add another vibrant chapter to the story of Vicksburg, Miss.

Project Team

ARCADIS, an international company headquartered in the Netherlands, is an industry leader in the fields of infrastructure, environment, and facilities. The U.S. headquarters, in Highlands Ranch, Colo., oversee operations for more than 100 offices. With 10,000 employees and more than $1 billion in gross revenue, ARCADIS is dedicated to enhancing the world's mobility, sustainability, and quality of life. Visit www.arcadis-us.com for additional information.

Paul Bunge, an industrial and commercial developer with more than three decades of experience in environmental remediation, has in recent years concentrated efforts on brownfield redevelopment. Working closely with federal, state, and local entities and stakeholders, Bunge capitalizes on his vast expertise to accommodate comprehensive project objectives. For more information, visit www.silvertipprojects.com.

Trudy D. Fisher is a highly respected attorney in the field of environmental law and maintains a litigation and regulatory practice. Her clients include industry and regulated entities on whose behalf she liaises with the federal Environmental Protection Agency and the Mississippi Department of Environmental Quality. Ms. Fisher's representation involves numerous issues, including brownfield re-development, environmental compliance and litigation matters. She has been an active participant in the development of the Mississippi Brownfields Program at both the legislative and regulatory levels. She is continually ranked in the prestigious Best Lawyers in America directory for environmental law, and was selected by the *Mississippi Business Journal* as one of "Mississippi's Leading Business Women."

Paul Newman, vice president and director of Commercial Guaranteed Remediation Program at ARCADIS' U.S. corporate office in Highlands Ranch, Colo., is an environmental attorney specializing in regulatory and guaranteed price remediation strategies. Contact him at pnewman@arcadis-us.com.

Erhardt Werth, executive vice president of Guaranteed Business Solutions for ARCADIS, lectures extensively throughout the United States and Europe on topics relating to environmental risk elimination through performance-based contract models. He can be reached at ewerth@arcadis-us.com.

Tracee Gingrich, former freelance writer and editor whose work has appeared in numerous magazines, journals, books, and web pages, writes for ARCADIS in its Corporate Communications department. She can be reached at tgingrich@arcadis-us.com.

Send your article ideas, news items, and comments to editor@revitalizationonline.com!

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August 31, 2006 02:00 AM US Eastern Timezone

ARCADIS to Remediate Former Vicksburg Chemical Site for $8M

ARNHEM, Netherlands--(BUSINESS WIRE)--Aug. 31, 2006--ARCADIS (NASDAQ: ARCAF, EURONEXT: ARCAD) an international leader in environmental cleanup and engineering, today announced that it has been awarded an $8 million contract for the clean up of a former chemical plant site located in Vicksburg, Mississippi. ARCADIS will perform the cleanup in association with development of the site by Silvertip Project Partners LLC. The contract will be performed under ARCADIS' RECLAIM(SM) program which has been developed over the past few years to enable the redevelopment of environmentally impaired properties.

The Mississippi Department of Environmental Quality (MDEQ) became trustee of the contaminated property during the bankruptcy proceedings for the Vicksburg Chemical Company. Responsibility for the site was a burden on the resources of the MDEQ, which was concerned that remediation of the site would not begin for decades.

ARCADIS, together with Silvertip Project Partners, have responded to this MDEQ concern by creating the "Mississippi Bluffs Project." This combined guaranteed cleanup and development approach will provide funding to start remediation immediately. To make the project economically viable a State tax rebate will be provided for all businesses located on the property for ten years. Silvertip Project Partners will be master developer for the 540-acre project along the scenic banks of the Mississippi River. The project will include high-end commercial and residential sites and an 18-hole championship golf course. ARCADIS will clean up 60 acres of contaminated soil and groundwater. Paul Bunge, Owner of Silvertip Partners, stated, "I believe this is a first of its kind and hope it will serve as a model for other states that are serious about getting their brownfield sites cleaned up and productive."

Steve Blake, CEO for ARCADIS' U.S. operations, stated, "ARCADIS is pleased to have been able to draw upon the development and remediation insights we have gained as one of the country's leading environmental clean up firms focused on enabling the redevelopment of impaired properties. It is a great opportunity for ARCADIS to demonstrate how we can assist state governments with the beneficial reuse of impaired properties that they have inherited."

About ARCADIS

ARCADIS is a global company that provides project management, consultancy and engineering services to enhance mobility, sustainability and quality of life. ARCADIS develops, designs, implements, maintains and operates projects for companies and governments. With 10,000 employees and $1 billion in gross revenue the company is multi-nationally present with a close-knit local network. Expertise and experience are of international significance. ARCADIS is focused on providing added value to clients. For more information, contact Erhardt Werth of ARCADIS at 720.344.3500 or ewerth@arcadis-us.com. Please visit our website at www.arcadis-us.com.

About Silvertip Project Partners, LLC

Silvertip Project Partners, LLC focuses its efforts in Brownfield redevelopment. Brownfield properties are properties where environmental concerns complicate and in many cases prevent traditional real estate redevelopment and economic growth. Silvertip Project Partners, LLC goal is to own the property and manage the environmental remediation and the horizontal development of its projects. Once the restoration project is completed a partner may assume the management role repositioning the property for sale to a builder or vertical developer. For more information, contact Paul Bunge of Silvertip Partners at 303.798.4133 or pbunge@silvertipprojects.com.

Except for historical information contained herein, the statements in this release are forward-thinking statements that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements involve known and unknown risks and uncertainties that may cause the company's actual results in future periods to differ materially from forecasted results. Those risks include, among others, risks associated with possible changes in environmental legislation and risks with regard to the Company's ability to acquire and execute projects. These are other risks described in ARCADIS' filings with the Securities and Exchange Commission over the last 12 months, copies of which will be available from the SEC or may be obtained upon request from the Company.

Contacts

ARCADIS
Erhardt Werth, 720-344-3500
ewerth@arcadis-us.com
www.arcadis-us.com

"Derouen, Craig"
<CDerouen@arcadis-us.com>

08/29/2006 04:42 PM

To <Trey_Hess@deq.state.ms.us>
cc "Escude, David" <DEscude@arcadis-us.com>
bcc
Subject RE: Vicksburg - Burning

Thanks for the information. I made a couple of phone calls and this is what I found out.

City of Vicksburg
Nancy Thomas said that open burning is allowed. A burn permit is required from the City of Vicksburg. We also spoke about the time frame. ARCADIS would like for the clearing phase to be completed in approximately 60 days. She wants to know if this information about upcoming burning at the site is public? She said that the Mayor may ask.

Vicksburg Fire Department
Based on my conversation with Leslie Decareaux at Fire Chief Keith Rogers' office, the fire department will need to be notified prior to burning. They will inspect the piles. Diesel is to be applied to the pile so that it will burn hot and quick. The piles should be small enough to burn in one day.

Mississippi Forestry Commission
I spoke with Tommy Walker, the Service Forester for Warren County. He told me that because the site is in Vicksburg's city limits, a Forestry Commission Permit is not required. He suggested that I give a heads up call to the Forestry Commission's Central Dispatch in Brookhaven at (888) 823-3473 a day or two before the burn.

Based on the information from the air regulations, the City of Vicksburg, the Vicksburg Fire Department, the Forestry Commission, and the Standard Specifications and Supplements, we will allow the clearing contractors to include burning of the cleared material in their bids.

Thanks,
Craig

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Tuesday, August 29, 2006 3:10 PM
To: Derouen, Craig
Cc: Willie_McKercher@deq.state.ms.us; Jerry_Banks@deq.state.ms.us
Subject: Re: Vicksburg - Burning

Craig,

Follow the Air Regs below (See link below Section 7.b. on p. 8). I recommend that you call Nancy Thomas (City of Vicksburg Attorney that I've worked with on this project) @ 601-631-2983 and introduce yourself and tell her about your plans, ask her about local ordinance, and follow them. Same goes for Forestry Commission (http://www.mfc.state.ms.us/).

Also, give me the heads up (and City Fire Dept.) the day (or two) before you actually do it so I don't get a call that "someone's burning contaminated stuff out there."

(http://www.deq.state.ms.us/MDEQ.nsf/pdf/Main_APC-S-1/$File/APC-S-1,%20Amended%20January%2026%202006,%20PDF%20Format,%20Final%20Clean%20Version.pdf?OpenElement)

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Derouen, Craig"
<CDerouen@arcadis-us.com>

08/29/2006 02:40 PM

To <Trey_Hess@deq.state.ms.us>

cc "Escude, David" <DEscude@arcadis-us.com>

Subject Vicksburg - Burning

Trey,

Is it okay to burn the vegetation that will be generated after clearing activities? I found some information on burning in Section 107.22.2 of the Mississippi Standard Specifications and Supplements. The link below will take you to Section 107.

http://fhwapap04.fhwa.dot.gov/nhswp/servlet/Content?loc=D:\apps\nhsw\nhswp\agency\Mississippi\Standard%20Specifications%20and%20Supplements\A%20-%20General%20Provisions\SEC107.pdf#xml=http://fhwapap04.fhwa.dot.gov/nhswp/newDir8c304689673e24253b761966348440/tempFile5.txt

Thanks,
Craig A. Derouen, PE
Project Engineer
ARCADIS
10352 Plaza Americana Drive
Baton Rouge, LA 70816
Tel: 225.292.1004
Fax: 225.218.9677
E-mail: cderouen@arcadis-us.com

Ken Whitten/HW/OPC/DEQ
08/28/2006 08:58 AM

To Trey Hess/HW/OPC/DEQ@DEQ
cc
bcc
Subject Total bill for FHI VCC

Trey

The Total invoices of FHI at Vicksburg Chemical site is $ 1,450,490.01.....

we were in negotiations with the last bill.....

Ken Whitten
Emergency Response Group
Field Services
601-961-5306 work
601-955-9477 cell

August 17, 2006

Mr. Toby Cook, P.E.
Chief, Chemicals Branch
Environmental Permitting Division
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

RE: Washdown Wastewater
Harcros Mississippi, LLC
Vicksburg, Mississippi

Dear Mr. Cook:

Harcros Mississippi, LLC is beginning the process of utilizing portions of the former Vicksburg Chemical site. Specifically, there are three warehouses formerly used to store potassium nitrate fertilizer that Harcros desires to clean out, wash down with potable water, and provide slight renovation to the warehouses to allow the storage of chlorine cylinders or other materials. The three warehouses are a total of approximately 45,000 square feet. The amount of water believed necessary to wash down these warehouses after scraping and sweeping as much dry material out as reasonably possible, is believed to be about 350,000 gallons. This wash down water is proposed to be directed to the on-site wastewater ponds that currently have sufficient freeboard.

Mississippi Bluffs and Arcadis have no objection to this wash down water being sent to the ponds. Based on the anticipated nitrate loading expected to be sent to the ponds, it is believed that minimal impact will be realized in the ponds should a discharge from the ponds be required due to high water levels. Further, it is Harcros' understanding that the current NPDES permit for the Vicksburg Chemical site has sufficiently high permit limits (10,600 lbs/day daily maximum) such that process water similar in nature to this wash down water would not cause an exceedance of the current permit limits.

Harcros will sample the wash down water prior to entering the ponds for pH, Nitrates, Ammonia, Total Phosphorous, and TSS. All work will be performed in close coordination with the appropriate entities to ensure that everyone is aware of the activity being performed.

If you should have any questions or require additional information, please contact me at (601) 831-2035, or Mr. Ken Faulkner of FC&E Engineering, LLC at **(601) 824-1860.** Thank you for your assistance in this matter.

Sincerely,

John Miles
General Manager

cc: Ken Faulkner, P.E., FC&E Engineering, LLC
Trudy Fisher, Brunini, Grantham, Grower & Hewes
MBIP
Arcadis

PROPOSED

BEFORE THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

In Re: Agreed Order of Mississippi Bluffs Industrial Park, LLC, and MCEQ Pertaining to Environmental Compliance at the Former Vicksburg Chemical Company Site In Vicksburg, Mississippi

Order No. _____

AGREED ORDER

COME NOW the Mississippi Commission on Environmental Quality (Commission), acting through the Executive Director of the Mississippi Department of Environmental Quality (MDEQ), and Mississippi Bluffs Industrial Park, LLC, (MBIP) and agree as follows:

1.

On June 23, 2006, MBIP obtained title to the approximate 120 acres upon which the former Vicksburg Chemical Company facility (Plant Site) is located. A copy of the survey depicting the Plant Site is attached to this Agreed Order as Exhibit "A".

2.

Pursuant to Agreed Order No. 5069-05, dated December 19, 2005, MBIP is responsible for overseeing the mitigation of environmental impacts at the Plant Site consistent with the provisions of Agreed Order No. 5069-05, a copy of which is attached as Exhibit "B".

3.

The Parties agree that for some yet to be determined period of time, MBIP needs to operate the existing storm water collection, storage, treatment, and discharge system at the Plant Site as a part of the remediation effort and for continued collection, storage and

treatment of storm water at the Plant Site. The Parties further agree that because the system has not been operated fully since the Plant Site was abandoned, MBIP must have time to inspect the integrity of the existing system.

4.

Within one hundred and eighty (180) days from the date this Agreed Order is executed, MBIP will evaluate the continued need for the system; perform maintenance, if necessary; and repair, if necessary, the storm water collection, treatment and discharge system. All work performed on the system will be through approved Work Authorizations as set forth in Agreed Order No. 5069-05. Within thirty (30) days after notification to MDEQ that it is necessary for the system to continue to operate, MBIP shall submit a permit application for the continued operation of the system. MBIP is authorized to place in the holding ponds wash down water from certain warehouses located at the Plant Site as set forth in Exhibit "C" . MBIP is authorized to discharge from the system as needed based on the capacity of the holding ponds, provided that the wastewater is pH adjusted and routed through a carbon filtration system, if necessary, prior to discharge. Any discharge shall comply with the discharge limits set forth in the NPDES Permit previously issued to Vicksburg Chemical Company which is attached as Exhibit "D".

5.

MBIP agrees to develop an Emergency Response Plan for its activities to minimize impacts to human health and the environment from events such as fires, explosions and unplanned releases of hazardous materials to the air, soil or surface water. At a minimum, the plan shall include the names and numbers of the designated emergency coordinators, the names and numbers of local emergency personnel and first responders, a list of emergency equipment onsite (including its location), and an

evacuation route for facility personnel. This plan shall be maintained onsite throughout the transition and updated as needed.

6.

Nothing in this Agreed Order shall limit the rights of the Mississippi Department of Environmental Quality or the Mississippi Commission on Environmental Quality in the event that MBIP fails to comply with this Agreed Order. The Agreed Order shall be strictly construed to apply to those matters expressly resolved herein.

7.

Nothing contained in this Agreed Order shall limit the rights of MDEQ or the Commission to take enforcement or other actions against Respondent for violations not addressed herein and for future violations of environmental laws, rules, and regulations.

8.

Respondent understands and acknowledges that it is entitled to an evidentiary hearing before the Commission pursuant to Miss. Code Ann. Section 49-17-31 (Rev. 2003), and that it has made an informed waiver of that right.

ORDERED and AGREED, this the ____ day of August, 2006.

_____

Charles H. Chisolm
Executive Director
Mississippi Commission on Environmental Quality

ACCEPTED AND AGREED, this the ___ day of August, 2006:

BY:_____

TITLE:_____

Mississippi Bluffs Industrial Park, LLC

STATE OF _____

COUNTY OF _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named _____who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Bluffs Industrial Park, LLC to sign the aforementioned document.

SWORN TO AND SUBSCRIBED BEFORE ME, this the _____ day of _____, 2006.

_____
Notary Public

My Commission Expires:

ORIGINAL - 6/1/06

BEFORE THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

In Re: Agreed Order of Mississippi Bluffs Industrial Park, LLC, and MCEQ Pertaining to Environmental Compliance at the Former Vicksburg Chemical Company Site in Vicksburg, Mississippi

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The Parties agree that for some yet to be determined period of time, MBIP needs to operate the existing storm water collection, storage, treatment, and discharge system at the Plant Site as a part of the remediation effort. The Parties further agree that because the system has not been operated fully since the Plant Site was abandoned, MBIP must have time to inspect the integrity of the existing system.

4.

Within one hundred and eighty (180) days from the date this Agreed Order is executed, MBIP must evaluate, perform maintenance, and repair the storm water collection, treatment and discharge system. During this time, all work performed on the system will be through approved Work Authorizations as set forth in Agreed Order No. 5069-05. MBIP shall notify MDEQ in writing when the system is operating properly. Within thirty (30) days after notification to MDEQ that the system is operating properly, MBIP shall submit a permit application for the continued operation of the system. MBIP is authorized to discharge from the system as needed based on the capacity of the holding ponds, provided that the wastewater is pH adjusted and routed through the carbon filtration system prior to discharge. Such discharges shall not be injurious to aquatic life.

5.

The parties agree that none of the air emissions equipment previously on site is to be operated until appropriate permits are obtained.

6.

As soon as practicable, but no later than 180 days from the date this Agreed Order is signed by both parties, MBIP shall make a hazardous waste determination of any containers on-site. All hazardous waste shall be handled appropriately prior to disposal. Disposal of all hazardous waste shall be accomplished by December 1, 2006.

7.

MBIP agrees to develop an Emergency Response Plan for the facility to minimize impacts to human health and the environment from events such as fires, explosions and unplanned releases of hazardous materials to the air, soil or surface water. At a minimum, the plan shall include the names and numbers of the designated emergency coordinators, the names and numbers of local emergency personnel and first responders, a list of emergency equipment

onsite (including its location), and an evacuation route for facility personnel. This plan shall be maintained onsite throughout the transition and updated as needed.

8.

Nothing in this Agreed Order shall limit the rights of the Mississippi Department of Environmental Quality or the Mississippi Commission on Environmental Quality in the event that MBIP fails to comply with this Agreed Order. The Agreed Order shall be strictly construed to apply to those matters expressly resolved herein.

9.

Nothing contained in this Agreed Order shall limit the rights of MDEQ or the Commission to take enforcement or other actions against Respondent for violations not addressed herein and for future violations of environmental laws, rules, and regulations.

10.

Respondent understands and acknowledges that it is entitled to an evidentiary hearing before the Commission pursuant to Miss. Code Ann. Section 49-17-31 (Rev. 2003), and that it has made an informed waiver of that right.

ORDERED and AGREED, this the ____ day of June, 2006.

_____

Charles H. Chisolm
Executive Director
Mississippi Commission on Environmental Quality

ACCEPTED AND AGREED, this the ___ day of June, 2006:

BY:_____

TITLE:_____
Mississippi Bluffs Industrial Park, LLC

STATE OF _____

COUNTY OF _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named _____who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Bluffs Industrial Park, LLC to sign the aforementioned document.

SWORN TO AND SUBSCRIBED BEFORE ME, this the _____ day of _____, 2006.

_____
Notary Public

My Commission Expires:

Trey Hess/HW/OPC/DEQ
08/23/2006 11:50 AM

To tfisher@brunini.com, fcengineering@aol.com
cc Toby Cook/EPD/OPC/DEQ@DEQ, Rick Sumrall/ECED/OPC/DEQ@DEQ, Scott Mills/ECED/OPC/DEQ@DEQ,
bcc Trey Hess/HW/OPC/DEQ
Subject Re: Harcros Wash Water - Transitional Agreed Order

Trudy/Ken:

We all sat down yesterday to think through the Transitional Agreed Order changes, particularly Harcros' proposal to send wash water to the pond. At present, we just don't have enough information to make an informed decision. With very little idea as to the characteristics of the washwater (e.g., mg/L of constitutents), the process (i.e., specifics on level of initial DRY removal via scraping, vac trucks, batches, etc.) or the potential impact on the pond and ultimately the river; we are uncomfortable approving with the proposal as it stands today. The meeting involved Toby Cook, Harry Wilson, Jerry Cain, Don Watts, Rick Sumrall, and myself; and we came up with what would probably prove to be some better ideas, including:

1. Develop a DETAILED Plan;
2. Include specifics on how you plan to remove DRY product, possibly using vac truck, shop vac, etc.;
3. Estimate the amount of product that is in the warehouses before and after DRY removal;
4. Conduct a test plot in an effort to determine the amount and concentrations of wastewater generated;
5. ***Use existing tanks (John Miles and I identified at least 3 clean ones at the South Plant that we planned to use for the Tall Oil issue but didn't) and/or get some frac tanks to capture the washwater;
6. ***Once the washwater is captured in tanks, analyze to determine characteristics;
7. ***Store captured washwater until a productive (and possibly profitable) end use is identified (e.g., on farmland, land application sites, etc.) or until CITY is comfortable with accepting;
8. Evaluate specific impact of washwater on the pond and carbon adsorption units (particularly since it doesn't appear from our analytical that stormwater has much in it). In other words, ARCADIS and MDEQ may conclude that the water in the pond needs no treatment and therefore can be discharged "as is." However, the washwater (if ever sent to pond) could change that conclusion, requiring treatment prior to discharge. Since one of MDEQ's roles is to act as steward for the remediation account, ensuring that the $8M is spent on those activities contemplated in the Agreed Order. We're not convinced that adding washwater from Harcros' operation is consistent with the spirit of the Agreed Order (unless there is some compensation/consideration that Harcros is willing to accept in return).
9. Evaluate specific impact of washwater once discharged into MS River IF it is to go into the pond (i.e., # gallons of characterized washwater vs. # gallons of stormwater, discharged from tanks in batches, etc.);

*** In a nutshell: We think the quickest and easiest way to deal with this situation is to do a bang up job of removing DRY Product followed by the capture of wastewater into tanks on-site with final disposition to be either productive/profitable or to CITY.

As to the the Transitional Agreed Order, my thoughts are:

1. Yank the language about washwater and manage it in tanks via an approval letter from EPD and/or ECED of the "Detailed Plan";
2. You mentioned today that you guys yanked the language on Air Equipment because it was a moot point for MBIP since they won't ever operate air equipment. Harcros may EVENTUALLY but that will be dealt with via Air Permit down the road. Unless I hear otherwise from Toby, Rick, or Scott, I think we can be comfortable without the language PROVIDED we all understand that the lack of the verbage doesn't imply you can and any operation without specific approval/permit from MDEQ not an option; and
3. The verbage about Hazardous Waste should remain but the timeline needs to be removed. ARCADIS (via Remediation Account) will be identifying potential stormwater impacts (which will encompass

Hazardous Waste identification). Rationale -> ARCADIS and MDEQ have just started using the Remediation Account and are "feeling out" the process for Work Authorizations, Invoices, etc. We need to get our arms around the WHOLE project and need the flexibility to deal with this issue in the context of the big picture.

Keep in mind that these 3 "thoughts" are my own; and I may have missed something, so I'm looking to Rick, Scott, and Toby to correct/comment on this too. I highly recommend that you two talk to Toby, Scott, and Rick about the wash water. Most of the ideas listed above came from them and they will probably save Hacros time and money in coming up with a good solution.

Questions/Comments -> Call me.

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Escude, David"
<DEscude@arcadis-us.com>
08/23/2006 11:25 AM

To <Trey_Hess@deq.state.ms.us>
cc "Derouen, Craig" <cderouen@arcadis-us.com>, "Paul Bunge" <pbunge@silvertipprojects.com>
bcc
Subject Site Clearing

Trey

Just to keep you in the loop. We have prepared a clearing RFP for the areas affected by the remediation. Craig Derouen will hold a site walk through on Friday with 5 potential bidders to get prices. We will then give them one week to get us the quote. As soon as I get this cost, I will prepare a work authorization as we discussed last week.

Give us a call if you have any questions.

David R. Escude', P.E .
Associate Vice President/Principal Engineer
ARCADIS
10352 Plaza Americana Drive
Baton Rouge, Louisiana 70816
Office 225.292.1004
Direct 225.218.9672 Ext. 245
Fax 225.218.9677

"Trudy Fisher"
<tfisher@brunini.com>
08/17/2006 02:41 PM

To <Lisa_Ouzts@deq.state.ms.us>, <Scott_mills@deq.state.ms.us>, <Trey_Hess@deq.state.ms.us>,
cc <Toby_Cook@deq.state.ms.us>, <fcengineering@aol.com>
bcc
Subject Miss. Bluffs Industrial Park Transition Agreed Order

History: This message has been forwarded.

All, Attached is a revised Transition Agreed Order Ken Faulkner and I would like to discuss with you as soon as possible. This Agreed Order is similar to the transition order we worked on in March of this year. It is different in a few areas: (1) The discussion on the barrels/drums was removed since ARCADIS is conducting a survey of what is out there, seems to us any order is better suited after we all know what we are dealing with. (2) The proposed Order authorizes MBIP to accept wash down water from the warehouse areas that Harcros needs to clean out before laying concrete. (3) Instead of stating that any discharge shall not be injurious to aquatic life, the Agreed Order states all discharges shall comply with the limits in the VCC NPDES permit which is attached as an exhibit.

There are two primary reasons we request as quick of a turn around as possible. First and foremost, the NPDES permit expires at the end of this month and MBIP will have no authority to discharge waste water without the entry of this Order. Secondly, Harcros needs to begin its improvements to the warehouses as soon as it can.

I am collecting the exhibits to the Agreed Order, and by copy of this email ask Ken to send all of you the letter outlining the details of the wash down water from the warehouse areas.

If at all possible, Ken and I would like to meet tomorrow, Friday, to discuss the Order and get the terms finalized. We are available any time during the day Friday. Thanks so much and I look forward to discussing this with you. Trudy

Confidentiality Statement

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To ensure compliance with requirements imposed by the IRS, we inform you that, unless specifically indicated otherwise, any tax advice contained in this communication (including any attachments) was not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code, or (ii) promoting, marketing, or recommending to another party any tax-related matter addressed herein.

AugustRevTransAgreed Order.doc

August 17, 2006

Mr. Toby Cook, P.E.
Chief, Chemicals Branch
Environmental Permitting Division
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

RE: Washdown Wastewater
Harcros Mississippi, LLC
Vicksburg, Mississippi

Dear Mr. Cook:

Harcros Mississippi, LLC is beginning the process of utilizing portions of the former Vicksburg Chemical site. Specifically, there are three warehouses formerly used to store potassium nitrate fertilizer that Harcros desires to clean out, wash down with potable water, and provide slight renovation to the warehouses to allow the storage of chlorine cylinders or other materials. The three warehouses are a total of approximately 45,000 square feet. The amount of water believed necessary to wash down these warehouses after scraping and sweeping as much dry material out as reasonably possible, is believed to be about 350,000 gallons. This wash down water is proposed to be directed to the on-site wastewater ponds that currently have sufficient freeboard.

Mississippi Bluffs and Arcadis have no objection to this wash down water being sent to the ponds. Based on the anticipated nitrate loading expected to be sent to the ponds, it is believed that minimal impact will be realized in the ponds should a discharge from the ponds be required due to high water levels. Further, it is Harcros' understanding that the current NPDES permit for the Vicksburg Chemical site has sufficiently high permit limits (10,600 lbs/day daily maximum) such that process water similar in nature to this wash down water would not cause an exceedance of the current permit limits.

Harcros will sample the wash down water prior to entering the ponds for pH, Nitrates, Ammonia, Total Phosphorous, and TSS. All work will be performed in close coordination with the appropriate entities to ensure that everyone is aware of the activity being performed.

If you should have any questions or require additional information, please contact me at (601) 831-2035, or Mr. Ken Faulkner of FC&E Engineering, LLC at (601) 824-1860. Thank you for your assistance in this matter.

Sincerely,

John Miles
General Manager

cc: Ken Faulkner, P.E., FC&E Engineering, LLC
Trudy Fisher, Brunini, Grantham, Grower & Hewes
MBIP
Arcadis

BEFORE THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

In Re: Agreed Order of Mississippi Bluffs Industrial Park, LLC, and MCEQ Pertaining to Environmental Compliance at the Former Vicksburg Chemical Company Site in Vicksburg, Mississippi

Order No. _____

AGREED ORDER

COME NOW the Mississippi Commission on Environmental Quality (Commission), acting through the Executive Director of the Mississippi Department of Environmental Quality (MDEQ), and Mississippi Bluffs Industrial Park, LLC, (MBIP) and agree as follows:

1.

On June 23, 2006, MBIP obtained title to the approximate 120 acres upon which the former Vicksburg Chemical Company facility (Plant Site) is located. A copy of the survey depicting the Plant Site is attached to this Agreed Order as Exhibit "A".

2.

Pursuant to Agreed Order No. 5069-05, dated December 19, 2005, MBIP is responsible for overseeing the mitigation of environmental impacts at the Plant Site consistent with the provisions of Agreed Order No. 5069-05, a copy of which is attached as Exhibit "B".

3.

The Parties agree that for some yet to be determined period of time, MBIP needs to operate the existing storm water collection, storage, treatment, and discharge system at the Plant Site as a part of the remediation effort and for continued collection, storage and

treatment of storm water at the Plant Site. The Parties further agree that because the system has not been operated fully since the Plant Site was abandoned, MBIP must have time to inspect the integrity of the existing system.

4.

Within one hundred and eighty (180) days from the date this Agreed Order is executed, MBIP will evaluate the continued need for the system; perform maintenance, if necessary; and repair, if necessary, the storm water collection, treatment and discharge system. All work performed on the system will be through approved Work Authorizations as set forth in Agreed Order No. 5069-05. Within thirty (30) days after notification to MDEQ that it is necessary for the system to continue to operate, MBIP shall submit a permit application for the continued operation of the system. MBIP is authorized to place in the holding ponds wash down water from certain warehouses located at the Plant Site as set forth in Exhibit "C" . MBIP is authorized to discharge from the system as needed based on the capacity of the holding ponds, provided that the wastewater is pH adjusted and routed through a carbon filtration system, if necessary, prior to discharge. Any discharge shall comply with the discharge limits set forth in the NPDES Permit previously issued to Vicksburg Chemical Company which is attached as Exhibit "D".

5.

MBIP agrees to develop an Emergency Response Plan for its activities to minimize impacts to human health and the environment from events such as fires, explosions and unplanned releases of hazardous materials to the air, soil or surface water. At a minimum, the plan shall include the names and numbers of the designated emergency coordinators, the names and numbers of local emergency personnel and first responders, a list of emergency equipment onsite (including its location), and an

evacuation route for facility personnel. This plan shall be maintained onsite throughout the transition and updated as needed.

6.

Nothing in this Agreed Order shall limit the rights of the Mississippi Department of Environmental Quality or the Mississippi Commission on Environmental Quality in the event that MBIP fails to comply with this Agreed Order. The Agreed Order shall be strictly construed to apply to those matters expressly resolved herein.

7.

Nothing contained in this Agreed Order shall limit the rights of MDEQ or the Commission to take enforcement or other actions against Respondent for violations not addressed herein and for future violations of environmental laws, rules, and regulations.

8.

Respondent understands and acknowledges that it is entitled to an evidentiary hearing before the Commission pursuant to Miss. Code Ann. Section 49-17-31 (Rev. 2003), and that it has made an informed waiver of that right.

ORDERED and AGREED, this the ____ day of August, 2006.

_____

Charles H. Chisolm
Executive Director
Mississippi Commission on Environmental Quality

ACCEPTED AND AGREED, this the ___ day of August, 2006:

BY:_____

TITLE:_____

Mississippi Bluffs Industrial Park, LLC

STATE OF _____

COUNTY OF _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named _____who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Bluffs Industrial Park, LLC to sign the aforementioned document.

SWORN TO AND SUBSCRIBED BEFORE ME, this the _____ day of _____, 2006.

_____
Notary Public

My Commission Expires:

STATE OF MISSISSIPPI

HALEY BARBOUR

GOVERNOR

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

Memorandum

To: File

From: Jere "Trey" Hess, P.E., DEE

Date: 08/01/06

RE: Vicksburg Chemical Company, Vicksburg, MS

On August 1, 2006, Willie McKercher, Thomas Wallace, and I responded to a call from David Escude of ARCADIS about a leak from one of the tanks at the South Plant. We arrived at the site at 10:40 AM and were met by Kipper Montgomery (225-205-8246) of ARCADIS, Don Warren (601-278-7814) of United States Environmental Services, and John Miles (601-831-2035) of Harcros Chemicals Inc. Also present were Todd Huskey and Gerald McDill, former VCC employees now working for Harcros and two other representatives of USES.

The small leak was discovered by Harcros personnel late last week from a old flange on the bottom of the Tall Oil storage tank located near sample location # 5-13 found in the attached Figure 3 (See Attached photos). The secondary containment has approximately 20 inches of rainwater in it with approximately 3-5 inches of tall oil floating on the surface. There are at least three minor leaks from the secondary containment wall with minor surface soil staining around sample location #5-13. It was agreed that USES will have a crew come out tomorrow morning with a vacuum truck to remove the tall oil from the storage tank, then replace the flange, followed by pumping the tall oil back into the tank, including the tall oil in the secondary containment. Water from the secondary containment will be left in place and Oil Gator® (bioremediation absorbent material) will be used to address the small area of contaminated soils.

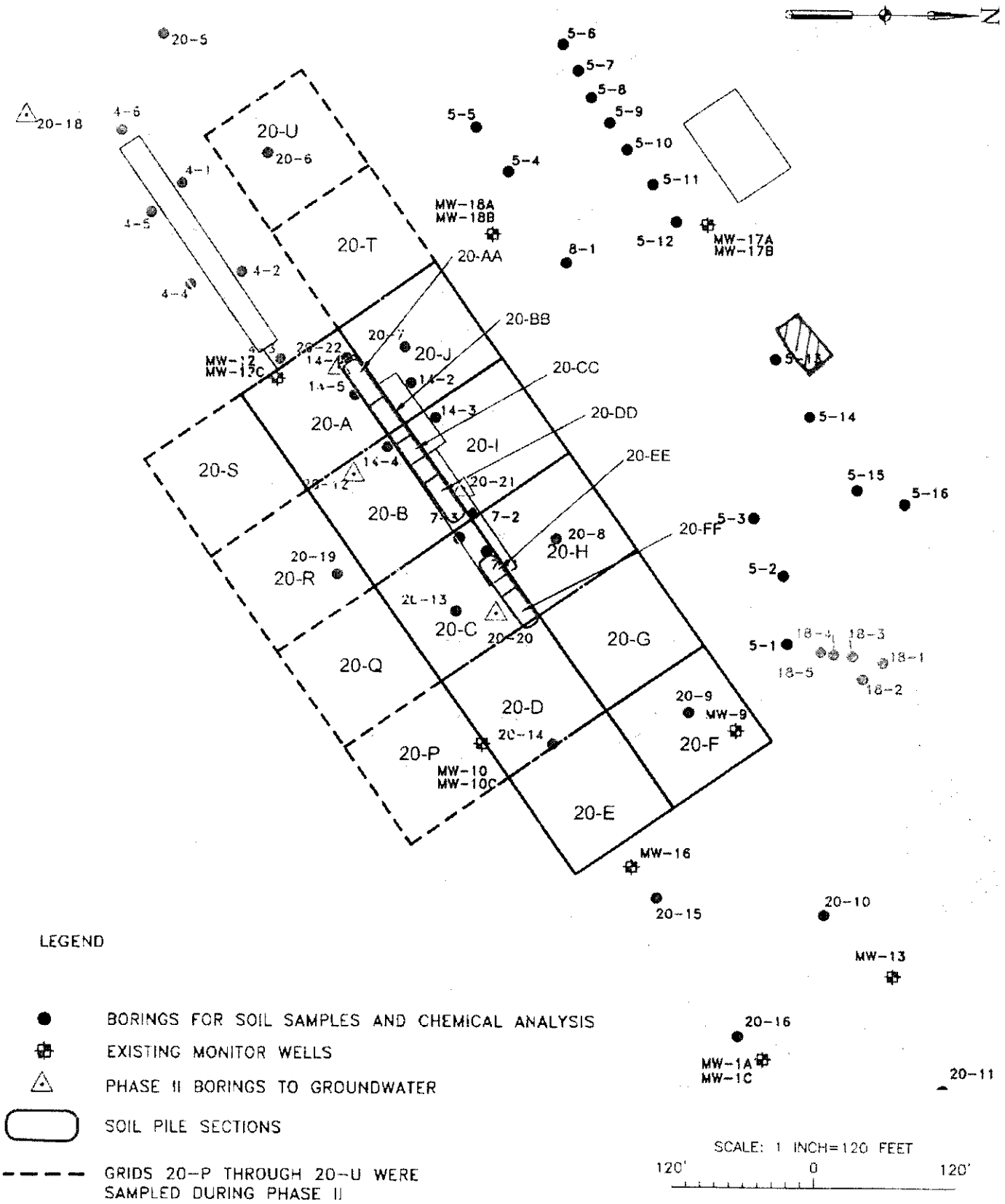
We also sat down with John Miles to discuss issues related to storm water run-off and the use of the impoundments and NPDES discharge by Harcros for water needed to wash down the warehouses. He mentioned that the NPDES permit has a 5000 lbs/day limit on nitrates and that the wash down would be nowhere near that high. Since both the impoundment is needed both for storm water (Remediation Account) and Harcros (wash water), we agreed to share the cost of operation. We discussed the following ideas:

- Harcros will get a cost estimate for Todd Huskey to operate the pumps on a monthly basis to deal with stormwater that has accumulated in the impoundment.
- The price cost estimate (either a fixed monthly cost or a per hour cost), once agreed upon, will be a subcontractor charge that ARCADIS will invoice to the Remediation Account.
- Harcros will move the electricity under its name within the month.

- Harcros will coordinate the running of electricity to the South plant, particularly to an area where the sump is located. This can be "sub-metered" by Harcros and be a line item for Remediation Account.
- A working pump is needed in that area to send water to the impoundment. ARCADIS needs to address this.

John mentioned that Ken Faulkner will be assisting him in managing the deconstruction/demolition of the site for Harcros. We also agreed that the interim order that Mississippi Bluffs Industrial Park (MBIP) and MDEQ have created needs to be signed since the NPDES permit is nearing its expiration date. He also mentioned that they have a tight schedule for deconstruction set by MBIP of 18 months (as of end of June, 2006). Finally, we agreed that much of the work that Harcros will be doing involves operations that are managed by MDEQ's Environmental Permits Division (EPD) and Environmental Compliance and Enforcement Division (ECED). I plan to advise Toby Cook and Scott Mills that they should engage with Harcros on their operations to ensure compliance with appropriate regulations. After visiting the leaking area, we left the site at 12:20 PM.

N:\Vicksburg Chemical Company\Memorandum-VCC Visit 08-01-2006.doc



FILE LOCATION: K:\CEOAR\04004\92B607C3.DWG LAYOUT 1

VICKSBURG CHEMICAL
VICKSBURG, MISSISSIPPI

URS
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

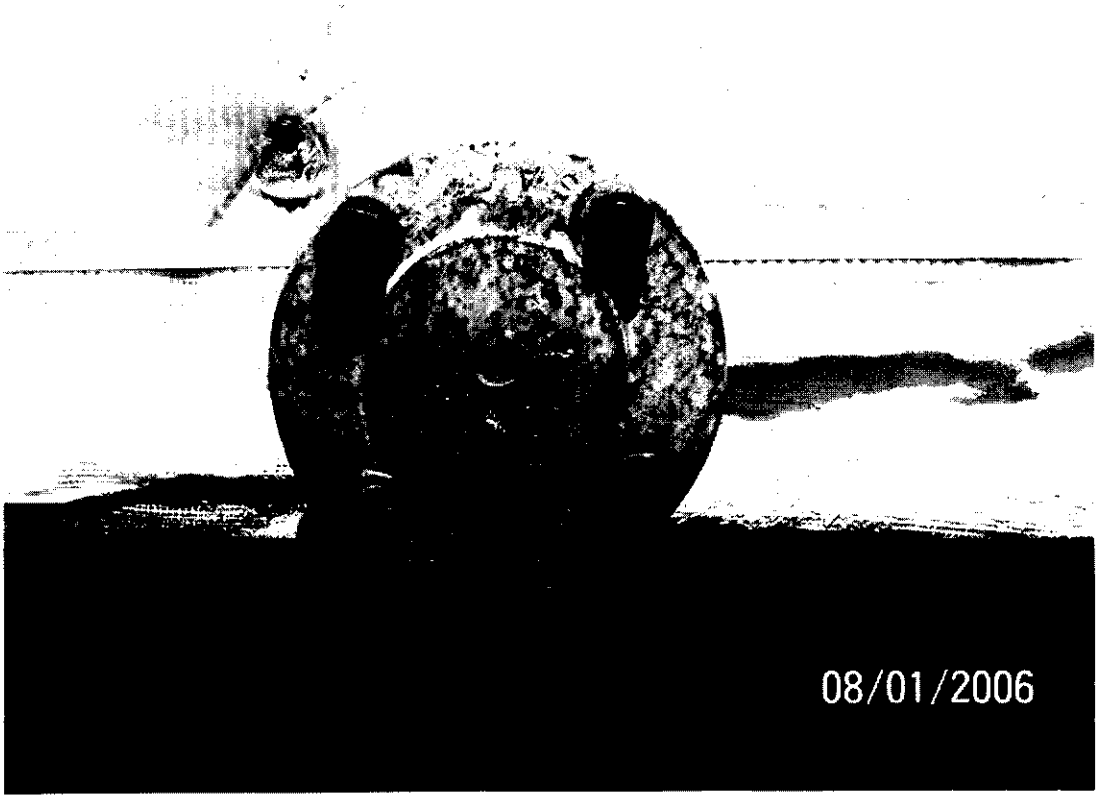
SCALE:	DRAWN BY: PCG	DATE: 7/18/01
1"=120'	CHKD. BY:	DATE:

RAILROAD AREA NEAR FORMER TOXAPHENE & DINOSEB MANUFACTURING

SURFACE SOIL COMPOSITE SAMPLING GRID AND SOIL PILE COMPOSITE SAMPLING SECTIONS

PROJ. NO. 35092B007C

FIG. NO. 3


08/01/2006

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STATE OF MISSISSIPPI

HALEY BARBOUR

GOVERNOR

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

July 28, 2006

Armand "Skipper" Guizerix, III
1st Vice President
Personal Trust Services
1301 Washington Street
Vicksburg, MS 39180

FILE COPY

Re: Vicksburg Chemical Corporation

Dear Skip:

The Mississippi Commission on Environmental Quality, acting by and through the Executive Director of the Mississippi Department of Environmental Quality, has directed conveyance of the Vicksburg Chemical real and personal property to Mississippi Bluffs Industrial Park, LLC ("MBIP") and to Mississippi Bluffs Development, LLC. The industrial grade platinum which is currently located in the Trustmark vault is part of the conveyance and is included in the Bill of Sale transferring the Vicksburg Chemical personal property to MBIP. Ms. Trudy Fisher, an attorney with Brunini, Grantham, Grower & Hewes in Jackson, serves as legal counsel to the Mississippi Bluffs entities. On behalf of the Department, I request that Trustmark allow Ms. Fisher to take possession of the platinum on behalf of her clients. The trust account which you are currently managing is not part of the conveyance and will remain under MDEQ control.

Thank you for your time and consideration. If you have any questions, or need anything further, please do not hesitate to call at (601)961-5654.

Sincerely,

Jere "Trey" Hess, P.E.

cc: Trudy Fisher, Esq.
Lisa Thompson Ouzts, Esq.

The Vicksburg Post.

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News

Carole Brand, left and Scott Freeny of Phelps Dunbar Law Firm, show a map of the preliminary routing plan for the casino and championship golf course area to Minor Ferris after Tuesday's meeting. **(Matt Lantrip • The Vicksburg Post)**

Zoning board gives casino go-ahead

By Matt Hinton

[7/12/06] A group asking to build what could be Vicksburg's seventh casino got its first official go-ahead Tuesday from the city's Board of Zoning Appeals.

The lay board voted 4-0 to approve a request for special exception from Mississippi Bluffs Development Inc., which has a site on the riverside portion of the 480-acre tract surrounding the closed Vicksburg Chemical plant.

The step is the first in a process that can take years. Next, Mississippi Bluffs will go back before the Mississippi Gaming Commission at the commission's next meeting on July 20 for approval to put together a more detailed plan.

Vicksburg has four casinos, all developed in 1993 and 1994. Two other companies have cleared all local and state steps to start construction, but have not done so.

Last month, Mississippi Bluffs was on the state Gaming Commission agenda for a 50,000-square-foot building holding about 1,500 slot machines and 35 table games, but was sent back to local authorities because it had not cleared local zoning ordinances.

"It has been years in the making. We're at a point where we can finally proceed with development," said Paul Bunge, Denver-based developer and founder of Mississippi Bluffs Development. Bunge is also planning a golf course laid out by Hale Irwin Golf Design and outlet shopping developments on the property under his Colorado firm, Silver Tip Project Partners LLC.

"This is a very preliminary step to get them going through the process," said

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City Planner W[illegible]ne Mansfield.

Of the two essentially cleared to start construction, Lakes Gaming Mississippi LLC, received site approval for a $200 million casino in February 2005, and its development plan was approved five months later. Its site approval expires in February 2007. The Lakes site is west of U.S. 61 South and south of the Baxter Wilson Steam Electric Plant.

The other, Riverwalk Casino, received site approval for a $42 million development on an area of land north of Rainbow Casino in July 2005, and its development plan was approved in December. Its site approval expires in July 2007.

Industry reports are mixed on Vicksburg's future as a gaming site, which may affect financing. Some analysts say the market has potential while others say it has topped out at about $200 million per year in gross gaming revenue for the four operators.

Two of the original developers, Harrah's and the Isle of Capri, have sold. Harrah's is now Horizon and is owned by a Kentucky-based firm. The Isle is to become DiamondJacks later this year. Ameristar and Rainbow, the other two original developers, have had almost annual expansions. Ameristar is about halfway through with a multilevel parking garage to be followed by a second hotel.

Bunge said Monday only the golf course, which has been blueprinted already by golfing legend Irwin's Arizona-based design firm, is the only "for sure" development at this stage.

"We've got a lot of work to do in terms of research and land planning and marketing," he said, adding that he does not believe seven casinos can survive in a city of about 25,000 people. "We see that as an extremely attractive gaming site, No. 1, and No. 2, believe we can turn Vicksburg into an attraction rather than a day area."

The former Vicksburg Chemical property, on both sides of Warrenton Road south of the river bridges between Rifle Range Road and U.S. 61 South, had been under the control of bankruptcy courts in New York and Delaware and later the Mississippi Department of Environmental Quality since the plant filed for bankruptcy in 2003.

The site was officially transferred from MDEQ to Bunge last week, in a deal that hinged on Bunge's pledge to fund an $8 million cleanup on the 50 to 60 acres physically occupied by the former chemical plant, of which about 20 acres are contaminated, said City Attorney Nancy Thomas. The remainder of the tract is largely undeveloped kudzu-covered hills and hollows.

"Until about a month and a half ago, when we were certain we were going to get the property, we didn't want to speculate" about other possible developments, Bunge said.

The Dutch company Arcadis has been contracted to handle the cleanup of the contaminated acres. Another company, Harcros Engineering, will demolish the old plant structure.

Bunge said that land could be used for a park, part of the golf course or as a distribution center for Harcros which could use some of the chemical plant's old equipment to sell as spare parts. He has also said there will not be any residential or commercial construction on the actual plant site.

Several property owners who live adjacent to the proposed course attended the meeting but said they were only on hand to listen, ask questions and review the map drawn by the Irwin design group. Board president Tim Fagerburg said public comments would be welcomed when Mississippi Bluffs

The Vicksburg Post.

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News

Distribution center planned for part of Vicksburg Chemical

By Fred Messina

[7/29/06] Part of the former Vicksburg Chemical Co. tract will reopen as a distribution center for chemical products.

John Miles, general manager of Harcros Mississippi LLC and formerly vice president of operation for Vicksburg Chemical, said the company plans to have a distribution center open at the site off Rifle Range Road by late September.

Harcros Mississippi is a subsidiary of Harcros Chemical, which is based in Kansas City, Mo.

Vicksburg Chemical, a maker of fertilizer and several other chemicals, closed in March 2002 after its parent company, Cedar Chemical Corp., filed for bankruptcy.

The site was used for production of agricultural and other chemicals for nearly 50 years, starting as Spencer Chemical on the south end of the site in 1953. Later, a second plant was built on the north end by Southwest Potash. The operation was consolidated when Cedar took over the operation.

"Harcros is part of the deal for the old chemical plant site with Silver Tip" Project Partners LLC, Miles said.

Owned by Paul Bunge, a developer who lives in Denver., Silver Tip has announced potentials for the 480-tract that include a golf course, retailing and residential area and a casino.

Miles said Harcros' plans to open a center in the warehouses of the chemical plant site where it will repackage and custom blend some of the variety of industrial chemicals it handles. The company's sales and distribution operation is in Jackson now.

Bunge acquired the tract from the Mississippi Department of Environmental Quality, which became the owner through the bankruptcy action, in return for a pledge to spend up to $8 million to clean up a waste burial site which is remote from the production site Harcros plans to use.

"They plan to eventually close the Jackson operation and move it to Vicksburg," Miles said. "Vicksburg is central, geographically, for Harcros' business."

In addition to its operation in Mississippi, the company has other distribution centers in Louisiana, Arkansas, Tennessee, Alabama, Georgia and Florida.

Once the local sales and distribution center opens in September, he said the company plans to put about 25 to 30 people to work and hopes to increase that number to 50 or 60 people within the next few years.

"We will not do any basic chemical manufacturing," Miles said. He said liquid

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and dry chemi[redacted] will [redacted]e into the center by rail, trucks a[redacted] con[redacted]ers called totes and be shipped to end-users either as custom blends of chemicals or repackaged individual chemicals.

"We anticipate Vicksburg being a master distribution center," Miles said. That means the local center will also ship chemicals to other Harcros locations.

He said Harcros has a long-term lease with Silver Tip for the north end of the property and will own all of the structures and buildings on the land. Except for the buildings and equipment Harcros will use for its distribution center, the rest of the structures will be sold either as used equipment or scrap metal.

As part of the years-long litigation after the bankruptcy filing, Warren County forgave back taxes owed by the former owner.

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came back to the city with a more detailed site plan, pending its approval by the Gaming Commission next week.

Roughly half a dozen residents quietly expressed concerns to Bunge and his lawyers, from Jackson firm Phelps-Dunbar, about a casino's effects on parking and aesthetics along their homes' scenic river views atop the bluffs.

"I think the golf course is great, but the casino, I'm not so sure about," said Minor Ferris, who lives at 3 Riverwood Place, on the northern boundary of the tract. "It's hard to make a decision without knowing anything."

The addition of a golf course has been one of the Leyens administration's priorities since he took office in 2001. After several unsuccessful efforts with other developers, the city reached an agreement last November with Bunge to build a course.

In other business, the board:

• Denied an application for special exception to C-4 general commercial codes for James Fondren, who appealed to build storage warehouses at 3207 Plaza Drive.

Board members said they were impressed by the presentation of Fondren's lawyer, Louis Field, but were concerned that an approval in one case could undermine its consistent rejection of portable and manufactured buildings in the past.

"Once you make the exception, you begin a slippery slope process," said board member Jack Burrell, who led the motion to deny the buildings.

Fondren has 10 days to file for a protest hearing with the Board of Mayor and Aldermen.

• Approved a request from the city to eliminate a manufactured home permit fee in zoning ordinances, under the recommendation of city Zoning Director Dalton McCarty, who said regular inspections of the homes made the fee redundant.

The board's next regular meeting will be Aug. 1 at 5 p.m.

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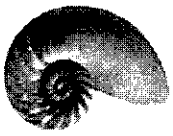

Jerry Banks/HW/OPC/DEQ
07/07/2006 08:31 AM

To Bannister.Beverly@epa.gov, Johnston.Jon@epa.gov, Kumar.Narindar@epa.gov, Butler.Lael@epa.gov, Ghosh.Mita@epa.gov, Lynch.Mary@epa.gov,
cc Trey Hess/HW/OPC/DEQ@DEQ
bcc
Subject Vicksburg Chemical Company

Just wanted to give you a quick update on the Vicksburg Chemical Company site. I have just sent an email to Don Christy over there to advise him of recent events. The deeds to the property have been transferred an the remediation escrow account has been funded. On July 10, our on-site contractor, who has been there since abandonment will be demobilizing and passing on responsibilities to Silvertip/MS Bluffs and/or Harcros. We anticipate the first work authorization funded out to the Remediation Account to be issued for the site in a matter of weeks. If you have any questions give me a call at 601-961-5221.

"Paul Bunge" <pbunge@silvertipprojects.com>

07/05/2006 05:57 PM

To <Trey_Hess@deq.state.ms.us>, <DEscude@arcadis-us.com>
cc <Lisa_Ouzts@deq.state.ms.us>, <Jerry_Banks@deq.state.ms.us>, <Ken_Whitten@deq.state.ms.us>, <tfisher@brunini.com>
bcc
Subject RE: VCC - Ferguson Harbor

Before we get too far, if we need to answer a call after dark for the remediation or the ponds or any remediation we should probably have some lights as well as some water. We will discuss on the 11th. Please let's not assume that the only remediation power or water are the pond pumps. At least not yet.

Paul Bunge
Silvertip Project Partners LLC
860 Bramblewood Dr.
Castle Rock, CO 80108
303 798-4133
303 888-9191 cell
303 798-4122 fax

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Wednesday, July 05, 2006 9:05 AM
To: DEscude@arcadis-us.com
Cc: Lisa_Ouzts@deq.state.ms.us; Jerry_Banks@deq.state.ms.us; Ken_Whitten@deq.state.ms.us; tfisher@brunini.com; pbunge@silvertipprojects.com
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TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

----- Forwarded by Trey Hess/HW/OPC/DEQ on 07/05/2006 09:38 AM -----

"Paul Bunge"
<pbunge@silvertip
projects.com>

07/05/2006 09:16
AM

To
"'Escude, David'"
<DEscude@arcadis-us.com>

cc
<Trey_Hess@deq.state.ms.us>

Subject
FW: VCC - Ferguson Harbor

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----- Forwarded by Trey Hess/HW/OPC/DEQ on 06/30/2006 09:17 AM -----

Trey
Hess/HW/OPC/DEQ

06/28/2006 04:01 PM

To: Paul Bunge

cc: tfisher@brunini.com, DEscude@arcadis-us.com, Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry_Banks/HW/OPC/DEQ, Ken Whitten

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No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.394 / Virus Database: 268.9.8/380 - Release Date: 6/30/2006

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No virus found in this incoming message.

Checked by AVG Free Edition.
Version: 7.1.394 / Virus Database: 268.9.9/382 - Release Date: 7/4/2006

"Paul Bunge" <pbunge@silvertipprojects.com>
07/05/2006 09:16 AM

To "'Escude, David'" <DEscude@arcadis-us.com>
cc <Trey_Hess@deq.state.ms.us>
bcc
Subject FW: VCC - Ferguson Harbor

History: This message has been forwarded.

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Cc: tfisher@brunini.com; DEscude@arcadis-us.com; Lisa_Ouzts@deq.state.ms.us; Jerry_Banks@deq.state.ms.us; Ken_Whitten@deq.state.ms.us
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Trey Hess/HW/OPC/DEQ
06/28/2006 04:01 PM

To Paul Bunge
cc tfisher@brunini.com, DEscude@arcadis-us.com, Lisa

Ouzts/Legal/Admin/DEQ@DEQ,
Jerry_Banks/HW/OPC/DEQ, Ken Whitten
Subject

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"Escude, David"
<DEscude@arcadis-us.com>
07/05/2006 09:42 AM

To "Paul Bunge" <pbunge@silvertipprojects.com>
cc <Trey_Hess@deq.state.ms.us>
bcc
Subject RE: VCC - Ferguson Harbor

Trey

You may have already sent this to me but could you get me the contact information for Ferguson Harbor?

Thanks
David

-----Original Message-----
From: Paul Bunge [mailto:pbunge@silvertipprojects.com]
Sent: Wednesday, July 05, 2006 8:16 AM
To: Escude, David
Cc: Trey_Hess@deq.state.ms.us
Subject: FW: VCC - Ferguson Harbor

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Cc: tfisher@brunini.com; DEscude@arcadis-us.com;
Lisa_Ouzts@deq.state.ms.us; Jerry_Banks@deq.state.ms.us;
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Trey Hess/HW/OPC/DEQ

To: Paul Bunge

06/28/2006 04:01 PM

cc: tfisher@brunini.com, DEscude@arcadis-us.com, Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry_Banks/HW/OPC/DEQ, Ken Whitten

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No virus found in this incoming message.
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Version: 7.1.394 / Virus Database: 268.9.8/380 - Release Date: 6/30/2006

"Paul Bunge"
<pbunge@silvertipprojects.com>
07/05/2006 09:58 AM

To "'Escude, David'" <DEscude@arcadis-us.com>
cc <Trey_Hess@deq.state.ms.us>
bcc
Subject RE: VCC - Ferguson Harbor

I do not have it. Could you get it from Trey or MDEQ?

Paul Bunge
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Trey Hess/HW/OPC/DEQ
07/05/2006 10:05 AM

To David Escude
cc Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry_Banks/HW/OPC/DEQ, Ken Whitten, tfisher@brunini.com, pbunge@silvertipprojects.com
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To <Trey_Hess@deq.state.ms.us>, <DEscude@arcadis-us.com>
cc <Lisa_Ouzts@deq.state.ms.us>, <Jerry_Banks@deq.state.ms.us>, <Ken_Whitten@deq.state.ms.us>, <tfisher@brunini.com>
bcc
Subject RE: VCC - Ferguson Harbor

I don't disagree (at least initially) but we will be meeting in Vicksburg to sort a lot of this out on the 11th. We either need to buy a few days to get our act together or Arcadis needs to get it now and we will get it figured out when Kevin arrives on the 11th.

Paul Bunge
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Either directly or through the existing contract with F/H would you please maintain the power and water contract through the end of July? We will sort
out the long term usage next and contracts next week.

Paul Bunge
Silvertip Project Partners LLC
860 Bramblewood Dr.
Castle Rock, CO 80108
303 798-4133
303 888-9191 cell
303 798-4122 fax

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Friday, June 30, 2006 8:33 AM
To: pbunge@silvertipprojects.com
Cc: tfisher@brunini.com; DEscude@arcadis-us.com;
Lisa_Ouzts@deq.state.ms.us;
Jerry_Banks@deq.state.ms.us; Ken_Whitten@deq.state.ms.us
Subject: Fw: VCC - Ferguson Harbor

Paul,

Power/Water is in Ferguson Harbor's name. Their plan is to transfer them sometime before the 10th to the appropriate party. Please let me know who that will be ASAP and how that party wishes to coordinate the transfer.

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

----- Forwarded by Trey Hess/HW/OPC/DEQ on 06/30/2006 09:17 AM -----

Trey
Hess/HW/OPC/DEQ

06/28/2006 04:01 PM

To: Paul Bunge

cc: tfisher@brunini.com, DEscude@arcadis-us.com, Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry_Banks/HW/OPC/DEQ, Ken Whitten

Subject: VCC - Ferguson Harbor

Paul,

As per our conversation today, Ferguson Harbor will remain on-site until July 10, 2006 to allow MBIP and/or Harcros an opportunity to get a transition team in to handle the site. Ferguson Harbor has pumped down the impoundments as promised. On July 10th, Ferguson Harbor will leave the site and MBIP/Harcros will handle site per their agreements from that time forward.

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--
No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.1.394 / Virus Database: 268.9.8/380 - Release Date: 6/30/2006

--
No virus found in this incoming message.
Checked by AVG Free Edition.

Version: 7.1.394 / Virus Database: 268.9.9/382 - Release Date: 7/4/2006

ESCROW AGREEMENT

This Escrow Agreement (this "Escrow Agreement") is made and entered into on this the 23rd day of June, 2006, by and among **Mississippi Silvertip Development LLC ("Silvertip"), Mississippi Bluffs Industrial Park LLC ("MBIP"), ARCADIS G&M, Inc. ("ARCADIS"), Mississippi Department of Environmental Quality ("MDEQ"),** and **Trustmark National Bank, as Escrow Agent ("Escrow Agent").**

A. Whereas, on December 19, 2005, the Mississippi Commission on Environmental Quality, Harcros Chemicals, Inc., Silvertip, and ARCADIS entered into an Agreed Order related to the remediation of the Plant Site (as defined in the Agreed Order) previously owned and occupied by Vicksburg Chemical Company.

B. Whereas, pursuant to the Agreed Order, ARCADIS and MBIP entered into a Professional Services Agreement (the "PSA") pursuant to which ARCADIS will perform remediation services with respect to the Plant Site.

C. Whereas, pursuant to the Agreed Order, Silvertip agreed to establish an escrow account in the amount of Eight Million Dollars ($8,000,000) to be used for the assessment and remediation of environmental impacts at the Plant Site as directed by MDEQ and as set forth in the PSA.

D. Whereas, Silvertip has designated MBIP as the grantee of the Plant Site as contemplated by the Agreed Order, and has made available to MBIP the sum of Eight Million Dollars ($8,000,000) to establish the Remediation Account contemplated by the Agreed Order.

E. Whereas, MBIP desires to deposit the sum of Eight Million Dollars ($8,000,000) (the "Escrowed Funds") with Escrow Agent to hold and administer as the Remediation Account contemplated by the Agreed Order.

F. Whereas, Silvertip, MBIP, ARCADIS, MDEQ, and Escrow Agent desire to enter into this Agreement in order to agree on the terms and conditions of the holding and disbursing of the Escrowed Funds.

Now therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. **Defined Terms.** All capitalized terms not otherwise defined herein shall have the meanings set forth in the Agreed Order.

2. **Establishment of Escrow.** Silvertip is causing MBIP to deposit, and MBIP is depositing, the Escrowed Funds with Escrow Agent. Escrow Agent hereby agrees

to act as escrow agent and to hold, safeguard and disburse the Escrowed Funds pursuant to the terms and conditions of this Escrow Agreement. All interest and earnings on the Escrowed Funds shall be and become a part of the Escrowed Funds.

3. **Investment of Funds.** The Escrowed Funds shall be invested by Escrow Agent in a money market account comprised solely of direct obligations of the United States of America or any of its agencies, or obligations fully guaranteed or issued by the United States of America or any of its agencies as allowed by Miss. Code Ann. § 27-105-33 (Rev. 2005).

4. **Payment of Escrow Funds.**

   A. No disbursement of the Escrowed Funds may be made without MDEQ's written approval, which approval shall not be unreasonably withheld.

   B. As long as the PSA is in effect, Escrow Agent may disburse all or any portion of the Escrowed Funds to pay applications for payment submitted by ARCADIS pursuant to the PSA in accordance with and in reliance upon joint written instructions from both MBIP and MDEQ. Escrow Agent shall have no responsibility to make an investigation or determination of any facts underlying such instructions or as to whether any conditions upon which the funds are to be released have been fulfilled or not fulfilled, or to whom funds are released.

   C. In the event the PSA is terminated, and MBIP (or its successor) does not within ninety (90) days thereafter enter into a replacement remediation agreement with a replacement contractor, in both cases subject to the approval of MDEQ, MDEQ thereafter shall have sole authority to direct the disbursement of the Escrowed Funds for the remediation of the Plant Site.

   D. In the event MDEQ issues a no further action letter with respect to remediation at the Plant Site, and provided that Escrow Agent has been provided acknowledgment from ARCADIS that final payment has been received by ARCADIS under the PSA, the remaining balance of the Escrowed Funds, if any, shall be paid by Escrow Agent to MBIP.

5. **Conflict with Terms of Agreement.** In the event that Escrow Agent receives instructions, claims or demands from MBIP or MDEQ that, in its opinion, conflict with any provision of this Agreement, or is otherwise uncertain of its rights and duties hereunder, it shall without liability of any kind be entitled to refrain from taking any action, and its sole obligation in such instances shall be to keep safely the Escrowed Cash until it shall be directed otherwise in writing by all of the other parties hereto or by a final and non-appealable judgment, decree or order of a court of competent jurisdiction. Escrow Agent may deposit the

Escrowed Cash into a court of competent jurisdiction and upon such deposit, Escrow Agent shall be relieved of any further liability or responsibility with respect thereto.

6. **Termination of Escrow.** This Escrow Agreement shall be terminated immediately upon the payment of the entirety of the Escrowed Funds according to the terms of this Escrow Agreement.

7. **Duties of Escrow Agent.**

A. Escrow Agent shall not be under any duty to give the Escrowed Funds held by it hereunder any greater degree of care than it gives its own similar property.

B. Escrow Agent shall be entitled to rely upon any order, judgment, certification, demand, notice, instrument or other writing delivered to it hereunder without being required to determine the authenticity or the correctness of any fact stated therein or the propriety or validity of the service thereof. Escrow Agent may act in reliance upon any instrument or signature believed by it to be genuine and may assume that the person purporting to give receipt or advice or make any statement or execute any document in connection with the provisions hereof has been duly authorized to do so. Escrow Agent may conclusively presume that the undersigned representative of any party hereto which is an entity other than a natural person has full power and authority to instruct Escrow Agent on behalf of that party unless written notice to the contrary is delivered to Escrow Agent.

C. Escrow Agent (and any successor Escrow Agent) may at any time resign as such by delivering the Escrowed Funds to any successor Escrow Agent jointly designated by the other parties hereto in writing whereupon Escrow Agent shall be discharged of and from any and all further obligations arising in connection with this Escrow Agreement. The resignation of Escrow Agent will take effect on the earlier of (a) the appointment of a successor or (b) the day which is thirty (30) days after the date of delivery of its written notice of resignation to the other parties hereto. If at that time Escrow Agent has not received a designation of a successor Escrow Agent, Escrow Agent's sole responsibility after that time shall be to retain and safeguard the Escrowed Funds until receipt of a designation of successor Escrow Agent or a joint written disposition instruction by the other parties hereto.

8. **Limited Responsibility.** This Escrow Agreement expressly sets forth all the duties of Escrow Agent with respect to any and all matters pertinent hereto. No implied duties or obligations shall be read into this Escrow Agreement against

Escrow Agent. Escrow Agent shall not be bound by the provisions of any agreement among the other parties hereto except this Escrow Agreement.

9. **Notices.**

A. Any notice, permission, approval, demand, or request affecting any obligations or terms must be in writing and shall be deemed to be given on the date: (i) delivered by hand, or (ii) three (3) days after being mailed by certified mail.

B. All mailings shall be to the address of the party shown or to any subsequent address in the United States of America requested:

Silvertip:

Mississippi Silvertip Development LLC
c/o Paul Bunge
860 Bramblewood Drive
Castle Rock, Colorado 80108

MBIP:

Mississippi Bluffs Industrial Park LLC
c/o Paul Bunge
860 Bramblewood Drive
Castle Rock, Colorado 80108

ARCADIS:

ARCADIS G&M, Inc.
Attention: David Escude
10352 Plaza Americana Drive
Baton Rouge, Louisiana 70816

MDEQ:

Mississippi Department of Environmental Quality
Charles H. Chisolm, Executive Director
P.O. Box 20305
2380 Highway 80 West (39204)
Jackson, MS 39289-1305

Escrow Agent:

Trustmark National Bank
Attention: Sandy Carter
Post Office Box 291
Jackson, Mississippi 39205-0291

10. **Miscellaneous.**

A. This Escrow Agreement may be executed in one or more counterparts, each of which will be deemed to be an original and all of which, when taken together, will be deemed to constitute one and the same.

B. The headings of sections in this Escrow Agreement are provided for convenience only and will not affect its construction or interpretation.

C. The rights and remedies of the parties to this Escrow Agreement are cumulative and not alternative. Neither the failure nor any delay by any party in exercising any right, power, or privilege under this Escrow Agreement or the documents referred to in this Escrow Agreement will operate as a waiver of such right, power, or privilege, and no single or partial exercise of any such right, power, or privilege will preclude any other or further exercise of such right, power, or privilege or the exercise of any other right, power, or privilege. To the maximum extent permitted by applicable law, (i) no claim or right arising out of this Escrow Agreement or the documents referred to in this Escrow Agreement can be discharged by one party, in whole or in part, by a waiver or renunciation of the claim or right unless in writing signed by the other party; (ii) no waiver that may be given by a party will be applicable except in the specific instance for which it is given; and (iii) no notice to or demand on one party will be deemed to be a waiver of any obligation of such party or of the right of the party giving such notice or demand to take further action without notice or demand as provided in this Escrow Agreement or the documents referred to in this Escrow Agreement.

D. This Escrow Agreement supersedes all prior agreements among the parties with respect to its subject matter and constitutes (along with the documents referred to in this Escrow Agreement) a complete and exclusive statement of the terms of the agreement between the parties with respect to its subject matter. This Escrow Agreement may not be amended except by a written agreement executed by MBIP, MDEQ, and Escrow Agent.

E. This Escrow Agreement shall be governed by the laws of the State of Mississippi, without regard to conflicts of law principles.

IN WITNESS WHEREOF, the parties have executed and delivered this Escrow Agreement as of the date first written above.

MISSISSIPPI SILVERTIP DEVELOPMENT LLC

By: SILVERTIP OF MISSISSIPPI LLC
Its Manager

By: _____
Paul Bunge, Manager

MISSISSIPPI BLUFFS INDUSTRIAL PARK LLC

By: SILVERTIP OF MISSISSIPPI LLC
Its Manager

By: _____
Paul Bunge, Manager

ARCADIS G&M, INC.

By: _____
Paul Newman
Its: Vice President

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

By: _____
Its: _____

TRUSTMARK NATIONAL BANK, as Escrow Agent

By: _____
Its: FVP + TO

FILE COPY

Trey Hess/HW/OPC/DEQ
07/03/2006 01:13 PM

To steveob@lcec.com, agrotenberg@lcec.com
cc
bcc
Subject Vicksburg Chemical Co. - Deal is DONE!!!

Steve/Al:

As promised, I wanted to let you know that the deeds have been transferred and the remediation escrow account has been funded. Over the next 7 days, our contractor, who has been there on-site since abandonment, will be demobilizing and passing on responsibilities to Silvertip/MS Bluffs and/or Harcros.

TREY

Trey Hess/HW/OPC/DEQ
06/30/2006 09:32 AM

To Paul Bunge
cc tfisher@brunini.com, DEscude@arcadis-us.com, Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry Banks/HW/OPC/DEQ@DEQ, Ken Whitten
bcc
Subject Fw: VCC - Ferguson Harbor

Paul,

Power/Water is in Ferguson Harbor's name. Their plan is to transfer them sometime before the 10th to the appropriate party. Please let me know who that will be ASAP and how that party wishes to coordinate the transfer.

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

----- Forwarded by Trey Hess/HW/OPC/DEQ on 06/30/2006 09:17 AM -----

Trey Hess/HW/OPC/DEQ
06/28/2006 04:01 PM

To Paul Bunge
cc tfisher@brunini.com, DEscude@arcadis-us.com, Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry_Banks/HW/OPC/DEQ, Ken Whitten
Subject VCC - Ferguson Harbor

Paul,

As per our conversation today, Ferguson Harbor will remain on-site until July 10, 2006 to allow MBIP and/or Harcros an opportunity to get a transition team in to handle the site. Ferguson Harbor has pumped down the impoundments as promised. On July 10th, Ferguson Harbor will leave the site and MBIP/Harcros will handle site per their agreements from that time forward.

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385

(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

rick.springer@hexion.com
06/29/2006 02:01 PM

To Trey_Hess@deq.state.ms.us
cc
bcc
Subject Re: VCC Site - Borden/Hexion Property Letter

History: This message has been replied to.

Could you resend please. I show a blank page. Thanks.

Rick Springer
Hexion Specialty Chemicals, Inc.
180 East Broad Street
Columbus, Ohio 43215
Telephone: 614-225-7427
Fax: 614-225-7639
Rick.Springer@hexion.com

Trey_Hess@deq.state.ms.us

06/29/2006 02:56 PM

To: rick.springer@hexion.com
cc:
Subject: VCC Site - Borden/Hexion Property Letter

Rick,

Here's a PDF of the letter we sent to you in latter part of May.

TREY

(See attached file: Hexion.pdf)

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Hexion.pdf

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

May 25, 2006

FILE COPY

Mr. Rick Springer
Hexion Specialty Chemicals
180 East Broad Street
Columbus, OH 43215

Re: Vicksburg Chemical Company (VCC) Site
Borden Company Parcel
Vicksburg, Mississippi

Dear Mr. Springer:

It is my understanding that Mississippi Bluffs Industrial Park, LLC ("MBIP") is negotiating with you to acquire the small parcel of property owned by Borden Company which is encompassed by the VCC plant site. The Mississippi Department of Environmental Quality ("MDEQ") concurs that if this acreage is acquired by MBIP, the Remediation Account will be used to investigate and remediate the Borden Company parcel. If, however, the property is not acquired by MBIP and contamination is discovered that could be attributed to Borden Company operations, MDEQ will most likely consider the present property owner as a potentially responsible party (PRP).

Should you have any questions or comments concerning this matter, please contact Trey Hess, who is serving as Project Manager for MDEQ, at (601) 961-5654.

Sincerely,

Charles H. Chisolm
Executive Director

CHC/TH:jar
cc: Lisa Ouzts, Esq. - MDEQ
Trudy Fisher, Esq.

The Vicksburg Post.

SINCE 1883 - EVERYTHING A HOMETOWN NEWSPAPER SHOULD BE

Print Page

THURSDAY JUNE 29, 2006 Last modified: Wednesday, June 28, 2006 1:07 PM CDT

Vicksburg Chemical land sold

By Matt Hinton

[6/28/06]The sale of the Vicksburg Chemical property to a Colorado-based development group was completed Tuesday, clearing the way for the development of shopping and housing areas, a golf course and perhaps a casino, city officials said this morning.

The land, free if cleaned up, was transferred to Silver Tip of Mississippi LLC, headed by Denver-based developer Paul Bunge, by the Mississippi Department of Environmental Quality.

"It means the golf course will happen," Mayor Laurence Leyens said this morning. Leyens has pushed for a privately built course to be added to the one public and one private facility now available.

"We're looking forward to moving ahead," Bunge said by telephone. Silver Tip will begin marketing the land to developers in coming weeks, he said.

As something of a surprise, Bunge also appeared on the agenda of the Mississippi Gaming Commission earlier this month, proposing a casino with 1,500 slot machines and 35 table games in a 50,000-square-foot building on a riverside portion of the 480-acre tract.

Mississippi Bluffs Development LLC did not appear at the meeting, having been told to clear Vicksburg zoning authorities first. Leyens said at the time no mention of a casino development had been brought up during initial talks with Bunge. The group is expected to resubmit the proposal to the commission when it receives the OK from the city's Board of Zoning Appeals, which could come as soon as the board's next meeting on July 11.

The property is on both sides of Warrenton Road south of the river bridges between Rifle Range Road and U.S. 61 South. It has been under MDEQ's control since Vicksburg Chemical filed for bankruptcy in 2003.

The deal hinged on a pledge by Bunge for an $8 million cleanup on the 50 to 60 acres physically occupied by the former chemical plant, of which about 20 acres are contaminated, said City Attorney Nancy Thomas. The remainder of the tract is largely undeveloped kudzu-covered hills and hollows.

The Dutch company Arcadis will be on site soon to handle the cleanup, Bunge said. Another company, Harcross Engineering, will demolish the old plant structure.

Bunge said the land could be used for a park, part of the golf course or as a distribution center for Harcross, which could use some of the chemical plant's old equipment to sell as spare parts. He has also said there will not be any residential or commercial construction on the plant site.

The addition of a golf course has been one of the Leyens administration's priorities since he took office in 2001. After several unsuccessful efforts with other developers, the city reached an agreement last November with Bunge to build a course, to be called Mississippi Bluffs. The course will come with a price tag of $6 million to $12 million, Bunge said, depending on the scope of the project. The higher estimate depends on the addition of a high-profile golf name to attach to the course.

There is no timetable for any of the post-cleanup development. Bunge said the projects will be marketed to investment bankers.

Vicksburg now has four casinos, all built within two years of a local option vote in 1992. Several other projects were announced but have not moved forward for a variety of reasons. Two projects have now cleared most regulatory hurdles leading to the start of construction. Neither has started building.

Close Window [x]

Trey Hess/HW/OPC/DEQ
06/28/2006 04:01 PM

To pbunge@silvertipprojects.com
cc tfisher@brunini.com, DEscude@arcadis-us.com, Lisa Ouzts/Legal/Admin/DEQ@DEQ, Jerry_Banks/HW/OPC/DEQ, Ken Whitten
bcc
Subject VCC - Ferguson Harbor

Paul,

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TREY

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MS Dept. of Environmental Quality
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Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Paul Bunge" <pbunge@silvertipprojects.com>
06/28/2006 01:20 PM

To <Trey_Hess@deq.state.ms.us>
cc
bcc
Subject RE: Site Meeting

I can give Chet a call, but first I would be interested in the State's position regarding their role in the contamination and clean-up. Please give me a call when you get a moment so we can discuss.

Paul Bunge
Silvertip Project Partners LLC
860 Bramblewood Dr.
Castle Rock, CO 80108
303 798-4133
303 888-9191 cell
303 798-4122 fax

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Wednesday, June 28, 2006 12:08 PM
To: pbunge@silvertipprojects.com
Cc: tfisher@brunini.com; PNewman@arcadis-us.com; DEscude@arcadis-us.com; Lisa_Ouzts@deq.state.ms.us; Willie_McKercher@deq.state.ms.us; Jerry_Banks@deq.state.ms.us
Subject: Re: Site Meeting

Paul,

July (for me) is just one of those months.....

Here's my schedule.

July 4 (off)
July 6-7 (mornings, most likely) - Prep for Trial
July 10-15 - OUT
July 25-28 - Prep for Trial
July 31-August 4 - In Court

The other times in July are okay and since you'll be in town on 19th and 20th, we should plan to get together.

I think a good portion of your Agenda can be addressed in my absence. I plan to have Willie McKercher (of MDEQ) be there to listen to your plans. Give me a time for him to be there.

As far as the railroad is concerned (#4) and golf course on contamination (#3), I feel comfortable that ARCADIS can give us a number of cleanup options after we get the baseline assessment done, ranging from working around the RR to more intrusive approaches and golf course capping. We'll have to evaluate them once ARCADIS has the info necessary to develop them (i.e., I need a scope of work from ARCADIS to do the baseline assessment).

FYI -> It may be a good idea that you start talking to RR. Here's their contact information:

KCS owns property in the area of Vicksburg Chemical Company in Vicksburg,

MS. Should you require specific information, access or discussion regarding environmental cleanup on the KCS property, please direct your inquiry to my office with copies to Mr. Douglas Banks.

Chet Culley
General Director
Environmental - HazMat
KCS
816-983-1343
PO Box 219335
Kansas City, MO 64121-9335

TREY

Jere "Trey" Hess, P.E., BCEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
101 W. Capitol Street (39201)
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(601) 961-5654
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"Paul Bunge" <pbunge@silvertip projects.com>

06/28/2006 12:02 PM

To "'Mirner, Kevin'" <KMirner@harcroschem.com>, "'Escude, David'" <DEscude@arcadis-us.com>, <Trey_Hess@deq.state.ms.us>, <msodl@innovation-capital.com>, <rstephens@innovation-capital.com>

cc "'Benkirane, Driss'" <driss.benkirane@dbzco.com>

Subject Site Meeting

Gentlemen:
Let's try to meet on the site on the 11th of July. We have several agendas that need to be addressed.

1. Layout of lease area leading to the survey
2. Coordination of demo and remediation
3. Clearing the plant site and contaminated areas with the golf course in consideration
4. The part the RR is going to play in the remediation

5. Layout of road to casino site
6. layout clearing around casino site

I am sure there will be a significant number of additional issues by then. FYI, I will be back the following week at least on Wednesday and Thursday for the Gaming Commission Hearing

Paul Bunge
Silvertip Project Partners LLC
860 Bramblewood Dr.
Castle Rock, CO 80108
303 798-4133
303 888-9191 cell
303 798-4122 fax

Trey Hess/HW/OPC/DEQ
06/28/2006 01:08 PM

To "Paul Bunge" <pbunge@silvertipprojects.com>@INETDEQ
cc tfisher@brunini.com, PNewman@arcadis-us.com, DEscude@arcadis-us.com, Lisa Ouzts/Legal/Admin/DEQ@DEQ,
bcc
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office with copies to Mr. Douglas Banks.
Chet Culley
General Director
Environmental - HazMat
KCS
816-983-1343
PO Box 219335
Kansas City, MO 64121-9335
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MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
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http://www.brownfields.ms

"Paul Bunge" <pbunge@silvertipprojects.com>

"Paul Bunge"
<pbunge@silvertipprojects.com>

06/28/2006 12:02 PM

To "'Mirner, Kevin'" <KMirner@harcroschem.com>, "'Escude, David'" <DEscude@arcadis-us.com>, <Trey_Hess@deq.state.ms.us>, <msodl@innovation-capital.com>, <rstephens@innovation-capital.com>

cc "'Benkirane, Driss'" <driss.benkirane@dbzco.com>

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303 798-4133
303 888-9191 cell
303 798-4122 fax

"Paul Bunge"
<pbunge@silvertipprojects.com>
06/28/2006 12:02 PM

To "'Mirner, Kevin'" <KMirner@harcroschem.com>, "'Escude, David'" <DEscude@arcadis-us.com>, <Trey_Hess@deq.state.ms.us>,
cc "'Benkirane, Driss'" <driss.benkirane@dbzco.com>
bcc
Subject Site Meeting

History: This message has been replied to.

Gentlemen:
Let's try to meet on the site on the 11th of July. We have several agendas that need to be addressed.

1. Layout of lease area leading to the survey
2. Coordination of demo and remediation
3. Clearing the plant site and contaminated areas with the golf course in consideration
4. The part the RR is going to play in the remediation
5. Layout of road to casino site
6. layout clearing around casino site

I am sure there will be a significant number of additional issues by then.
FYI, I will be back the following week at least on Wednesday and Thursday for the Gaming Commission Hearing

Paul Bunge
Silvertip Project Partners LLC
860 Bramblewood Dr.
Castle Rock, CO 80108
303 798-4133
303 888-9191 cell
303 798-4122 fax

Trustmark
Wealth Management

1301 Washington St Vicksburg, MS 39180

FILE COPY

June 27, 2006

Ms. Lisa Ouzts
Sr. Attorney
Mississippi Department of Environmental Quality

RE: The Silvertip Development, MS Bluffs Industrial Park

Dear Lisa:

Please accept this as evidence that $8,000,000 has been transferred on June 27, 2006 @ 4:00 central standard time from the Wheeless Shappley Bailess & Rector Trust Account # 8101207584 into the above referenced Department of Environmental Quality Account #1050004153(attached) for overnight investment.

These funds will be available for your control through this vehicle in the morning.

Sincerely,

Armand Guizerix III
1st Vice President & Trust Officer

[redacted] FILE COPY

TRUSTMARK NATIONAL BANK
Asset Details

Run on 6/27/2006 3:56:37 PM
As of 06/27/2006
Combined Portfolios
Settlement Date Basis

Account: 1050004153
MS SILVERTIP DEVELOPMENT, MS BLUFFS INDUSTRIAL PARK, ARCADIS G&M INC., AND MS DEPARTMENT OF ENVIRONMENTAL QUALITY

Administrator: SANDY CARTER @ 601-208-2347

Investment Officer: MACHELLE ANTHONY @ 601-208-5843

Investment Authority: None
Investment Objective:

Ticker	Description	Units	Price	Tax Cost	Book Value	Market Value	Unrealized Gain/Loss	% of Portfolio	Est. Income	Yield	Pricing Date
	CASH									0.00	
	Total Portfolio			0.00	0.00	0	0	100.00	0	0.00	

[redacted] [redacted]

"Trudy Fisher"
<tfisher@brunini.com>
06/26/2006 02:52 PM

To <Lisa_Ouzts@deq.state.ms.us>, <Trey_Hess@deq.state.ms.us>
cc
bcc
Subject VCC

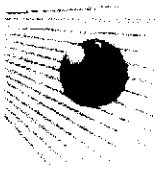
Bill Shappley's escrow account is being wired the total funds, but the Remediation Account will not be funded until tomorrow. Sorry. I have a 9:00 meeting in the morning, but will be checking emails and making sure things stay on track. The deal is done with the money getting to Shappley's escrow, just ready to get remediation account funded and the deeds in hand.

Confidentiality Statement

The information contained in this electronic message from the law firm of Brunini, Grantham, Grower & Hewes, PLLC is confidential or privileged. The information is intended to be for the use of the individual or entity named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the contents of this message is prohibited. If you have received this electronic message in error, please notify us immediately by telephone at (601) 948-3101.

IRS Circular 230 Notice

To ensure compliance with requirements imposed by the IRS, we inform you that, unless specifically indicated otherwise, any tax advice contained in this communication (including any attachments) was not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code, or (ii) promoting, marketing, or recommending to another party any tax-related matter addressed herein.



Lisa Ouzts/Legal/Admin/DEQ
06/26/2006 12:48 PM

To "Trudy Fisher" <tfisher@brunini.com>@INETDEQ
cc Trey_Hess@deq.state.ms.us
bcc
Subject Re: VCC CLosing

That's great. I'll be on standby to receive the written statement.

"Trudy Fisher" <tfisher@brunini.com>

06/26/2006 11:55 AM

To <Trey_Hess@deq.state.ms.us>, <Lisa_Ouzts@deq.state.ms.us>
cc
Subject VCC CLosing

We should be getting the money within the hour. Closing statement being signed by all parties and that is all that is left. Sandy knows schedule.

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FILE COPY

June 23, 2006

VIA FACSIMILE NO. 601-960-6902

Trudy Fisher, Esq.
Brunini, Grantham, Grower & Hewes
P.O. Drawer 119
Jackson, MS 39205-0119

Don Ogden
First American Title Insurance Company
1080 River Oaks Drive, Suite B 202
Jackson, MS 39232

Re: Vicksburg Chemical Property

Dear Trudy and Don:

As you know, Ferguson Harbor has been serving as MDEQ's contractor providing security and other services at the abandoned Vicksburg Chemical site. Ferguson Harbor is the only contractor retained by the state to provide services at the Vicksburg Chemical site. MDEQ has no notice of any mechanics' or contractors' liens filed by Ferguson Harbor. Further, MDEQ does not expect any such liens to be filed. MDEQ will pay all invoices for Ferguson Harbor's services directed by MDEQ at the site up to the date the property is conveyed.

I understand that First American will rely on this letter to delete the standard exception for unrecorded contractors' liens from the title insurance policies.

If you have any questions, please do not hesitate to call.

Sincerely,

Lisa Thompson Ouzts
Senior Attorney

cc: Roy Furrh, Esq.
Trey Hess, P.E.

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Casino firm turned back for zoning OK

By Danny Barrett Jr.

[6/16/06] **JACKSON** - The Mississippi Gaming Commission delayed a decision on a site approval request Thursday from a group asking to build a casino on part of the former Vicksburg Chemical site, saying the applicants must first clear zoning hurdles with the city.

Mississippi Bluffs Development LLC, headed in part by Denver-based developer Paul Bunge of Silver Tip of Mississippi LLC, remained on the agenda for the monthly meeting of the state's gaming oversight board until the item came up.

On the recommendation of executive director Larry Gregory, the commission decided to hear the request at a future meeting. No representative of the company attended Thursday's meeting.

Nancy Allen of Vicksburg's zoning department said late Thursday \the group's application to have its zoning designation has not arrived, but was expected. If it does come in by the final week of the month, it will appear on the Vicksburg Board of Zoning Appeals agenda for July 11.

The company's intention to apply for a gaming license came as a surprise, Mayor Laurence Leyens has said. Previously, the group has talked only about developing a golf course and residential and retail properties on the 480-acre tract south of Rifle Range Road.

Its application to the Gaming Commission estimates having 1,500 slot machines and 35 table games in a 50,000-square-foot casino on one of four parcels of land formerly occupied by the chemical plant, vacant since its owners declared bankruptcy in 2002.

The parcel on the west side of Warrenton Road, like three of the four existing casinos in Vicksburg, borders the Mississippi River and is the smallest of the four parcels in the tract.

In December, the Mississippi Department of Environmental Quality, which obtained the deed to the tract in the bankruptcy action, agreed to have Silver Tip spend $8 million to clean up the portion used for chemical production and burial of waste.

Bunge has said no development would take place on the former plant site, which was contaminated. That would appear to be the case, as the intent to apply for the casino license identifies a parcel across Warrenton Road from the plant site.

The project joins two other proposed casinos that are further along in the process. Lakes Gaming Mississippi LLC received site approval in February 2005 and its development plan was OK'd in July 2005. Its site approval expires Feb. 16, 2007.

The Lakes casino is expected to cost about $200 million and is planned to be

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built on pilings along the Mississippi River near Meadow La[illegible].

The other, Riverwalk Casino, received its site approval in July 2005, and its development plan was approved in December 2005. Its site approval expires July 14, 2007.

The Riverwalk casino is a $42 million development and is to be built on an area of land above the river and north of Rainbow Casino near the Warrenton neighborhood.

Site approval is granted for two years, and a third approval is necessary from the Mississippi Gaming Commission.

Additionally, a new casino must have a permit issued by the city.

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Company tells casino plans for chemical company site

By Danny Barrett Jr.

[6/15/06]

The number of companies seeking a license to operate a casino in Vicksburg will grow by one today as the development group involved in cleaning up the former Vicksburg Chemical site appears before the Mississippi Gaming Commission.

Mississippi Bluffs Development LLC, headed in part by Denver-based developer Paul Bunge of Silver Tip of Mississippi LLC, has announced its intention to apply for a gaming license.

In the application, the company estimates having 1,500 slot machines and 35 table games in a 50,000-square-foot casino on one of four parcels of land formerly occupied by the now-defunct chemical company.

The parcel on the west side of Warrenton Road, like three of the four existing casinos in Vicksburg, borders the Mississippi River.

In public meetings and press releases, the developer and city officials have touted building a championship golf course, residential retail space on the 480-acre tract along Rifle Range Road between Interstate 20 and an east-west portion of U.S. 61. No public acknowledgment of casino plans has been made by either side.

Bunge did not return calls for comment Wednesday, but the casino intent is documented in legal advertisements and by the commission's agenda. The licensing process has many steps, beginning with approval of a site as meeting criteria defined in the state's 1990 authorization statute. That law says any state-licensed casino must be along the Mississippi Gulf Coast or Mississippi River or tributary. In December, MDEQ signed an agreement for Silver Tip to spend $8 million to clean up the land abandoned to state ownership when the Memphis-based chemical firm declared bankruptcy.

The tract includes land on both sides of Warrenton Road south of the river bridges. Most of it is hilly land wooded with only a portion on Rifle Range Road used as a plant site starting in the 1950s. The land includes sites where toxic waste was buried when that was legal and other contaminated portions.

In March, Warren County supervisors voted to forgive $218,490 in unpaid property taxes from 2004.

The project joins two other proposed casinos that are further along in the licensing process. One, Lakes Gaming Mississippi LLC, obtained initial site approval in February 2005 and had its development plan approved in July 2005. Lakes Entertainment of Minnesota plans for that casino to be built on pilings along the Mississippi River near Meadow Lane. The resort would be built between the river and U.S. 61 South.

Initially, the project was expected to cost about $200 million.

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The other, Magnolia Hill LLC, is expected to be before the commission next month to change its trade name to Riverwalk Casino from its original name, Pot of Gold Casino and Magnolia Hills Resort, commission chairman Larry Gregory said.

Reached late Wednesday, John L. Maxey, a Jackson attorney representing the Magnolia Hill group, said the potential of another new casino will not affect its approval process.

"I don't think it will affect us," Maxey said, adding that news of the Mississippi Bluffs application came as a surprise.

The Riverwalk Casino is to be built on an area of land above the river and north of Rainbow Casino near the Warrenton neighborhood.

Officials with Lakes Entertainment in Minnesota did not return calls. Site approval on Lakes expires Feb. 16, 2007. It expires for Riverwalk July 14, 2007. Site approval is granted for two years and a third approval is necessary from the Mississippi Gaming Commission for the development to proceed.

Following some gains in employees and revenues after Hurricane Katrina temporarily put casinos on the Gulf Coast out of business, tax revenues to local government has showed that profits have dropped a bit. That fits a pattern predicted by leading industry analysts as early as February.

However, one local casino general manager welcomes any competition and said the economic impact should be felt by all casinos.

"We always welcome the competition. We'd love to have them," said Curt Follmer, general manager of Rainbow Casino.

Any suggestions of a diluted casino market resulting from what would become seven casinos in a city of about 26,000 people were downplayed by Maxey.

Follmer was skeptical about the viability of having so many casinos in Vicksburg, despite his openness to more competition.

"I don't see the investment banking industry providing the money for three (new) projects here," he said.

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BILL OF SALE PURSUANT TO COURT ORDERS AND OTHER REGULATORY AGENCY ORDERS DETAILED HEREINBELOW

WHEREAS, on March 8, 2002 (the "Petition Date") Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("VCC") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") in Case Nos. 02-11039 and 02-11040 (SMB); and

WHEREAS, on the Petition Date VCC was vested with title to certain tracts or parcels of land containing 680 acres, more or less, in Vicksburg, Warren County, Mississippi, together with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (collectively, the "Vicksburg Facility"); and

WHEREAS, on October 18, 2002, the Bankruptcy Court entered an order styled "Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief" (the "Abandonment Order"), wherein the respective lands and other personal or mixed property of the Debtors were found to be of inconsequential value and benefit to the estates of the Debtors, including the land and other personal or mixed property comprising the Vicksburg Facility and, further, that the estates of the Debtors lacked sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Vicksburg Facility, and abandoned the Vicksburg Facility to the

IN TESTIMONY WHEREOF, witness the signature of the Grantor on this the

_____ day of _____, 2006.

VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented herein by its duly appointed and authorized Receiver pursuant to authority of Order attached hereto as Attachment "C"

By: _____
CARRIE TILLMAN as the VCC Non-Bankruptcy Estate Receiver (the "Grantor")

STATE OF DELAWARE

COUNTY OF NEW CASTLE

PERSONALLY appeared before me, the undersigned authority in and for the said county and state, on this _____ day of _____, 2006, within my jurisdiction, the within named, **CARRIE TILLMAN**, who acknowledged to me that she is the duly authorized Receiver of **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation,** acting under authority and direction granted by Order of the Court of Chancery of the State of Delaware in the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation, bearing C.A. No. 1940-N on the docket thereof, a copy of which Order is attached hereto as Attachment "C", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "D", and that for and on behalf of the said Vicksburg Chemical Company in her capacity as Receiver, and as the act and deed of said Vicksburg Chemical Company in undertaking all actions necessary to effect and confirm the transfer

of that part of the real property of the said Vicksburg Chemical Company which is described upon Attachment "A" hereto, she executed the above and foregoing instrument, after first having been duly authorized so to do.

Notary Public

My Commission Expires:

LINDA L. CARNEY, NOTARY PUBLIC
State of Delaware, New Castle County
Commission No. 20031664591
My Commission Expires June 25, 2007

LINDA L. CARNEY
MY COMMISSION EXPIRES June 25, 2007
NOTARY PUBLIC
STATE OF DELAWARE

SPECIAL WARRANTY DEED PURSUANT TO COURT ORDERS AND OTHER REGULATORY AGENCY ORDERS DETAILED HEREINBELOW

WHEREAS, on March 8, 2002 (the "Petition Date") Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("VCC") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") in Case Nos. 02-11039 and 02-11040 (SMB); and

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WHEREAS, on October 18, 2002, the Bankruptcy Court entered an order styled "Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief" (the "Abandonment Order"), wherein the respective lands and other personal or mixed property of the Debtors were found to be of inconsequential value and benefit to the estates of the Debtors, including the land and other personal or mixed property comprising the Vicksburg Facility and, further, that the estates of the Debtors lacked sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Vicksburg Facility, and abandoned the Vicksburg Facility to the Vicksburg non-bankruptcy estate (the "VCC Non-Bankruptcy Estate") as of 11:59 p.m. on October 14, 2002, a copy of which Abandonment Order is attached hereto as Attachment "C" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

IN TESTIMONY WHEREOF, witness the signature of the Grantor on this the _____ day of _____, 2006.

VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented herein by its duly appointed and authorized Receiver pursuant to authority of Order attached hereto as Attachment "E"

By: _____
CARRIE TILLMAN, as the VCC Non-Bankruptcy Estate Receiver (the "Grantor")

STATE OF DELAWARE
COUNTY OF NEW CASTLE

PERSONALLY appeared before me, the undersigned authority in and for the said county and state, on this _____ day of _____, 2006, within my jurisdiction, the within named, **CARRIE TILLMAN**, who acknowledged to me that she is the duly authorized **Receiver of VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation,** acting under authority and direction granted by Order of the Court of Chancery of the State of Delaware in the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation, bearing C.A. No. 1940-N on the docket thereof, a copy of which Order is attached hereto as Attachment "E", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "F", and that for and on behalf of the said Vicksburg Chemical Company in her capacity as Receiver, and as the act and deed of said Vicksburg Chemical Company in undertaking all actions necessary to effect and confirm the transfer of that part of the real property of the said Vicksburg Chemical Company which is described upon Attachment "A" hereto, she executed the above and foregoing instrument, after first having been duly authorized so to do.

_____
Notary Public

My Commission Expires: _____

LINDA L. CARNEY NOTARY PUBLIC
State of Delaware, New Castle County
Commission No. 20021664591
My Commission Expires June 25, 2007

LINDA L. CARNEY NOTARY PUBLIC MY COMMISSION EXPIRES June 25, 2007 STATE OF DELAWARE

TRACT D-1: PART OF LOT 3 OF THE JETT SURVEY & PART LOTS 1 & 2 OF MAGNOLIA PLANTATION IN PART OF SECTIONS 3, 4, 5, 8, 9, 10 & 17, TOWNSHIP 15 NORTH, RANGE 3 EAST, VICKSBURG, WARREN COUNTY, MISSISSIPPI:

Commencing at a 2 ½" iron pipe marking the Southwest corner of Section 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi and run thence along the South line of said Section 10, S 79°58'11" E, 439.67' to a 2" iron pipe, said 2" iron pipe being further described as the POINT OF BEGINNING of the following described tract. From said POINT OF BEGINNING, run thence S 12°00'00" W, 1023.46' to an iron pin on the North Right-of-Way of Highway 61 South By-Pass; thence along the North Right-of-Way of said Highway 61 South By-Pass the following courses and distances: S 68°21'00" W, 341.87' to a concrete right-of-way marker ; thence S 55°35'19" W, 247.52' to a concrete right-of-way marker; thence S 11°58'01" E, 400.78' to a concrete right-of-way marker; thence S 56°12'58" W, 458.32' to a concrete right-of-way marker; thence N 34°38'57" W, 49.18' to a concrete right-of-way marker; thence S 68°18'00" W, 359.00' to an iron pin; thence N 87°24'59" W, 241.97' to a concrete right-of-way marker; thence S 14°48'37" E, 305.90' to a concrete right-of-way marker; thence S 56°22'19" W, 249.29' to a concrete right-of-way marker; thence N 34°04'10" W, 318.74' to a concrete right-of-way marker; thence N 87°43'17" W, 500.00' to an iron pin; thence S 33°58'34" W, 263.76' to a concrete right-of-way marker; thence S 02°33'52" E, 221.04' to an iron pin on the South line of Section 8; thence along the South line of said Section 8, West, 779.84' to an iron pin; thence leaving the South line of Section 8 and run South, 702.00' to an iron pin; thence N 69°30'00" W, 185.00' to an iron pin; thence S 86°00'00" W, 270.00' to an iron pin; thence West, 232.58' to a point on the East right-of-way of a railroad track; thence along the East right-of-way of said railroad track, N 21°21'16" E, 704.00' to an iron pin on the South line of Section 8; thence along the South line of Section 8, West, 760.28' to an iron pin on the East right-of-way of Hwy. 61, now called Warrenton Road; thence along a 04°21'30" curve to the right (having a central angle of 67°36'30" rt. and a centerline radius of 1314.63') a chord of N 10°15'09" E, 1226.88' to an iron pin at the point of tangency of said curve; thence continuing along the East right-of-way of said Warrenton Road, N 39°16'13" E, 350.88'; thence continuing along the East right-of-way of said Warrenton Road, N 36°51'20" E, 408.05'; thence leaving the East right-of-way of said Warrenton Road and run S 14°54'00" W, 143.17' to an iron pin; thence S 08°33'00" W, 293.50' to an iron pin; thence S 12°33'00" W, 413.00' to a concrete post; thence S 74°01'58" E, 164.94' to a 2 ½" iron pipe; thence N 58°30'55" E, 358.12' to an iron pin; thence N 14°24'00" E, 151.32' to a 2" iron pipe; thence N 07°10'00" E, 107.50' to an iron pin; thence N 76°41'28" W, 219.91' to an iron pin; thence N 41°50'00" W, 263.03' to an iron pin; thence N 08°33'00" E, 52.46' to an iron pin; thence N 14°54'00" W, 143.17' to an iron pin on the East right-of-way of Warrenton Road; thence along the East right-of-way of Warrenton Road, N 33°32'26" E, 152.12' to an iron pin; thence leaving the East right-of-way of said Warrenton Road and run S 58°47'00" E, 341.70' to an iron pin at the

SPECIAL WARRANTY DEED PURSUANT TO COURT ORDERS AND OTHER REGULATORY AGENCY ORDERS DETAILED HEREINBELOW

WHEREAS, on March 8, 2002 (the "Petition Date") Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("VCC") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") in Case Nos. 02-11039 and 02-11040 (SMB); and

WHEREAS, on the Petition Date VCC was vested with title to certain tracts or parcels of land containing 680 acres, more or less, in Vicksburg, Warren County, Mississippi, together with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (collectively, the "Vicksburg Facility"); and

WHEREAS, on October 18, 2002, the Bankruptcy Court entered an order styled "Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief" (the "Abandonment Order"), wherein the respective lands and other personal or mixed property of the Debtors were found to be of inconsequential value and benefit to the estates of the Debtors, including the land and other personal or mixed property comprising the Vicksburg Facility and, further, that the estates of the Debtors lacked sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Vicksburg Facility, and abandoned the Vicksburg Facility to the Vicksburg non-bankruptcy estate (the "VCC Non-Bankruptcy Estate") as of 11:59 p.m. on October 14, 2002, a copy of which Abandonment Order is attached hereto as Attachment "C" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

IN TESTIMONY WHEREOF, witness the signature of the Grantor on this the _____ day of _____, 2006.

VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented herein by its duly appointed and authorized Receiver pursuant to authority of Order attached hereto as Attachment "E"

By: _____
CARRIE TILLMAN, as the VCC Non-Bankruptcy Estate Receiver (the "Grantor")

STATE OF DELAWARE
COUNTY OF NEW CASTLE

PERSONALLY appeared before me, the undersigned authority in and for the said county and state, on this _____ day of _____, 2006, within my jurisdiction, the within named, **CARRIE TILLMAN**, who acknowledged to me that she is the duly authorized **Receiver** of **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation,** acting under authority and direction granted by Order of the Court of Chancery of the State of Delaware in the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation, bearing C.A. No. 1940-N on the docket thereof, a copy of which Order is attached hereto as Attachment "E", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "F", and that for and on behalf of the said Vicksburg Chemical Company in her capacity as Receiver, and as the act and deed of said Vicksburg Chemical Company in undertaking all actions necessary to effect and confirm the transfer of that part of the real property of the said Vicksburg Chemical Company which is described upon Attachment "A" hereto, she executed the above and foregoing instrument, after first having been duly authorized so to do.

_____
Notary Public

My Commission Expires:

LINDA L. CARNEY, NOTARY PUBLIC
State of Delaware, New Castle County
Commission No. 20031664591
My Commission Expires June 25, 2007

LINDA L. CARNEY
MY COMMISSION EXPIRES June 25, 2007
NOTARY PUBLIC
STATE OF DELAWARE

TRACT P-1: PART OF SECTIONS 3,4,5,8,9 & 10, TOWNSHIP 15 NORTH, RANGE 3 EAST, VICKSBURG, WARREN COUNTY, MISSISSIPPI

BEGINNING at an iron pin on the West side of a ditch, said iron pin being further described as lying N 75°10'58" W, 1773.60' from a 2 ½" iron pipe marking the Southwest corner of Section 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi and run thence N 41°11'15" E, 239.94' to an iron pin; thence N 48°32'32" E. 290.75' to an iron pin; thence N 05°29'53" W, 310.80' to an iron pin; thence N 27°27'19" E, 275.17' to an iron pin; thence N 28°57'37" E, 193.32' to an iron pin; thence N 00°55'04" W, 120.20' to an iron pin; thence N 02°10'35" E, 556.62' to an iron pin; thence N 37°18'43" E, 216.46' to an iron pin; thence S 73°23'47" E, 490.81' to an iron pin; thence N 59°07'55" E, 932.53' to an iron pin; thence N 27°12'08" E, 179.85' to an iron pin; thence N 10°53'34" E, 765.83' to an iron pin; thence N 52°29'13" E, 78.78' to an iron pin; thence N 70°28'36" E, 217.79' to an iron pin; thence N 50°05'05" E, 714.15' to an iron pin; thence N 68°07'47" E, 88.55' to an iron pin; thence N 68°07'50" E, 93.07' to an iron pin on the West line of Rifle Range Road; thence along the West line of Rifle Range Road, S 35°05'00" E, 43.07' to an iron pin; thence continuing along the West line of Rifle Range Road, S 27°42'45" E, 130.79' to an iron pin; thence continuing along the West line of Rifle Range Road S 22°33'22" E, 295.33' to an iron pin; thence continuing along the West line of Rifle Range Road S 20°21'10" E, 121.48'to an iron pin at a point where said West line of Rifle Range Road intercepts the center of a creek; thence leaving the West line of Rifle Range Road and run along the center of said creek the following courses and distances:
S 13°37'27" W, 280.96'; S 22°23'38" W, 228.33'; S 15°16'59" W, 410.75';
S 39°08'27" W, 239.59'; S 19°21'42" W, 245.57'; S 44°32'44" W, 617.87';
S 41°54'30" W, 158.39'; S 53°03'19" W, 187.36'; S 49°20'11" W, 190.75';
S 49°30'19" W, 222.86'; S 21°50'24" W, 183.57'; S 08°05'35" W, 265.79';
S 07°33'05" W, 213.43'; S 13°07'18" E, 174.28'; S 21°31'09" W, 146.47';
S 03°54'38" E, 124.97'; S 64°50'02" W, 167.35'; S 88° 51'31" W, 207.17';
S 41°03'24" W, 119.42'; N 81°34'40" W, 203.48'; N 67°07'26" W, 187.06';
S 87°42'08" W, 271.49'; N 82°58'30" W, 88.05'; N 70°13'07" W, 60.37';
S 65°30'17" W, 405.54'; thence leaving the center of said creek and run N 43° 19'25" W, 303.36' to the POINT OF BEGINNING and containing 120.87 Acres and being situated in part of Sections 3, 4, 5, 8, 9, & 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi.

LESS AND EXCEPT THEREFROM that certain parcel heretofore conveyed to Perkins Industries, Inc. by virtue of deed dated June 1, 1982, recorded in Book 666 at Page 576 and certain easement rights arising under instrument styled "Assignment of Easement" dated June 1, 1982, recorded in Book 666 at Page 577, Borden, Inc., successor to Perkins Industries, Inc. having thereafter conveyed the same property and easement rights therein to Borden Chemical, Inc. by deed recorded in Book 1072 at Page 316, reference to each of which instruments is hereby made.

Trey Hess/HW/OPC/DEQ
06/01/2006 11:32 AM

To
cc
bcc
Subject Fw: Vicksburg Chemical

----- Forwarded by Lisa Ouzts/Legal/Admin/DEQ on 06/01/2006 10:49 AM -----

Roy Furrh/Legal/Admin/DEQ

05/31/2006 05:09 PM

To CLT@cscentityservices.com
cc Lisa Ouzts/Legal/Admin/DEQ@DEQ
Subject Vicksburg Chemical

Dear Ms. Tillman:

Attached are two (2) deeds for the Cedar Chemical/Vicksburg Chemical property (one for the plant site and another for the remaining real property) and a bill of sale for the personal property. Please execute these documents pursuant to your authority as receiver of the property granted to you by the Delaware Court of Chancery for Castle County and pursuant to Section 11. of Mississippi Commission on Environmental Quality Order No. 5069 05 dated December 19, 2005. I would appreciate your e-mailing the documents to me as soon as they are executed and send me the signed originals via overnight delivery. My address is as follows:

Roy Furrh, Esq.
Mississippi Department of Environmental Quality
General Counsel
2380 Highway 80 West
Jackson, MS 39204

Thank you for acting as receiver for the property. Your assistance in helping us to accomplish the conveyance of the Cedar Chemical/Vicksburg Chemical property has been valuable and is appeciated.

Very truly yours,

Roy Furrh
General Counsel

Attachments

VCC PLANT DEED.pdf

VCC DEV DEED.pdf

VCC BILL OF SALE.pdf

SPECIAL WARRANTY DEED PURSUANT TO COURT ORDERS AND OTHER REGULATORY AGENCY ORDERS DETAILED HEREINBELOW

WHEREAS, on March 8, 2002 (the "Petition Date") Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("VCC") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") in Case Nos. 02-11039 and 02-11040 (SMB); and

WHEREAS, on the Petition Date VCC was vested with title to certain tracts or parcels of land containing 680 acres, more or less, in Vicksburg, Warren County, Mississippi, together with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (collectively, the "Vicksburg Facility"); and

WHEREAS, on October 18, 2002, the Bankruptcy Court entered an order styled "Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief" (the "Abandonment Order"), wherein the respective lands and other personal or mixed property of the Debtors were found to be of inconsequential value and benefit to the estates of the Debtors, including the land and other personal or mixed property comprising the Vicksburg Facility and, further, that the estates of the Debtors lacked sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Vicksburg Facility, and abandoned the Vicksburg Facility to the Vicksburg non-bankruptcy estate (the "VCC Non-Bankruptcy Estate") as of 11:59 p.m. on October 14, 2002, a copy of which Abandonment Order is attached hereto as Attachment "C" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, the Abandonment Order further granted the Mississippi Department of Environmental Quality ("MDEQ") the right of access to the Vicksburg Facility for the purpose of assessing environmental conditions and performing all removal, remediation, corrective actions and measures deemed necessary by MDEQ and ordered the VCC Non-Bankruptcy Estate to convey title to the Vicksburg Facility or parts thereof to any entity identified by MDEQ by a written request of MDEQ, and that any entity to whom the Vicksburg Facility or any parts thereof are transferred (a "Transferee") is to be given a copy of the Abandonment Order (being the same instrument sometimes referred to as the "Stipulation and Order") and that such Transferee be bound by the terms thereof; and

WHEREAS, the secured lenders who held mortgages, liens, and other security interests in the Vicksburg Facility prior to the filing of the Petition, represented by JPMorgan Chase Bank, as Agent Bank (collectively, the Secured Lenders") consented to the action of the Bankruptcy Court, which specifically ordered in numbered Paragraph 15 in the Abandonment Order, that all mortgages, liens, and other security interests in the Vicksburg Facility or any part thereof, including the land, buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (the "Secured Lender Liens") shall and are unconditionally and irrevocably deemed released, discharged and terminated as of the Effective Time of the abandonment of the Vicksburg Facility to the VCC Non-Bankruptcy Estate and the Vicksburg Facility thereupon deemed free and clear of the Secured Lender Liens, and, further that the Abandonment Order (a/k/a Stipulation and Order) is deemed binding upon and shall govern the acts of all entities, including, without limitation, all filing agents, filing officers, title agents, title companies, administrative agencies, governmental departments, secretaries of state, federal, state, and local officials and all other persons and entities who may be required by operation of law, the duties of their office or contract, to accept, file, register or otherwise record or release any documents or instruments; and

WHEREAS, the Abandonment Order is deemed to be a "Final Order" (the "Final Order") as detailed in numbered Paragraph 21 thereof, all such times for appeal, rehearing, and the like, having long since passed; and

WHEREAS, in a Final Agreed Order dated December 19, 2005, bearing MDEQ Order No. 5069-05 (the "MDEQ Designation Order") MDEQ selected and designated two entities as Transferees of title of the Vicksburg Facility, namely, Mississippi Bluffs Development LLC, a Delaware limited liability company duly qualified in Mississippi (the "Development LLC") and Mississippi Bluffs Industrial Park, LLC, a Mississippi limited liability company (the "Industrial LLC") a copy of which MDEQ Designation Order (without inclusion of the attachments thereto) is attached hereto as Attachment "D" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, MDEQ subsequently filed a petition in the Court of Chancery of the State of Delaware in and for the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation" bearing C. A. No. 1940-N on the docket thereof (the "Delaware Proceeding") wherein MDEQ sought appointment of CARRIE TILLMAN as Receiver of Vicksburg Chemical Company, an insolvent Delaware corporation (being the same entity identified as the VCC Non-Bankruptcy Estate) for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property (being the same property as the Vicksburg Facility") to the designee of MDEQ, the Delaware Proceeding further reciting same is undertaken pursuant to the Abandonment Order of the Bankruptcy Court; and

WHEREAS, the relief sought by MDEQ in the Delaware Proceeding was thereafter granted and Carrie Tillman appointed as Receiver (the "VCC Non-Bankruptcy Estate Receiver") pursuant to order entered February 22, 2006 (the "Delaware Order") a copy of which Delaware Order is attached hereto as Attachment "E", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "F", each of which are incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, MDEQ, by written request to the VCC Non-Bankruptcy Estate Receiver, has directed that portion of the VCC Facility which is described hereinbelow be transferred and conveyed to the Development LLC and the remaining portion of the VCC Facility, which is described in a companion deed of even date herewith and recorded simultaneously in the land records of Warren County, Mississippi, and recorded therein in Deed Book ____ at Page ____, be transferred and conveyed to the Industrial Park LLC.

NOW THEREFORE, IN CONSIDERATION of the mutual covenants and benefits to MDEQ and to the VCC Non-Bankruptcy Estate and for the further consideration of the fulfillment of the terms and provisions of the Abandonment Order and of the Delaware Order, the sufficiency of all of which is hereby acknowledged, the undersigned **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented hereby by its duly authorized Receiver, CARRIE TILLMAN, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the property described hereinbelow and solely in her capacity as the VCC Non-Bankruptcy Estate Receiver and pursuant to the provisions of the Delaware Order described hereinabove (the "Grantor")** does hereby **GRANT, BARGAIN, SELL, CONVEY and WARRANT SPECIALLY** unto **MISSISSIPPI BLUFFS DEVELOPMENT LLC,** a Delaware limited liability company duly qualified in Mississippi (the "Development LLC") all of that portion of the Vicksburg Facility situated in the City of Vicksburg, County of Warren, State of Mississippi, being more particularly described as follows; to wit:

[SEE SCHEDULE A DESCRIPTION RIDER ATTACHED HERETO AS ATTACHMENT "A" DESCRIBING TRACTS D-1, D-2, D-3, D-4, D-5, D-6, AND D-7, LESS/EXCEPT A TRACT OF LAND DESIGNATED AS TRACT P-1]

This conveyance and the special warranty hereof are subject to those certain exceptions to warranty as revealed by recent title examination of the land records of Warren County, Mississippi as same pertain to the Property conveyed hereby, which exceptions are detailed within Schedule B of a certain title commitment and policy issued in First American Title Insurance Company (collectively, the "Permitted Exceptions") which Permitted Exceptions are detailed as follows:

[SEE SCHEDULE B PERMITTED EXCEPTIONS ATTACHED HERETO AS ATTACHMENT "B"]

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IN TESTIMONY WHEREOF, witness the signature of the Grantor on this the _____ day of _____, 2006.

VICKSBURG CHEMICAL COMPANY, an *insolvent Delaware corporation, represented herein by* its duly appointed and authorized Receiver pursuant to authority of Order attached hereto as Attachment "E"

By:_____
CARRIE TILLMAN, as the VCC Non-Bankruptcy Estate Receiver (the "Grantor")

STATE OF DELAWARE
COUNTY OF NEW CASTLE

PERSONALLY appeared before me, the undersigned authority in and for the said county and state, on this _____ day of _____, 2006, within my jurisdiction, the within named, **CARRIE TILLMAN**, who acknowledged to me that she is the duly authorized **Receiver** of **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation,** acting under authority and direction granted by Order of the Court of Chancery of the State of Delaware in the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation, bearing C.A. No. 1940-N on the docket thereof, a copy of which Order is attached hereto as Attachment "E", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "F", and that for and on behalf of the said Vicksburg Chemical Company in her capacity as Receiver, and as the act and deed of said Vicksburg Chemical Company in undertaking all actions necessary to effect and confirm the transfer of that part of the real property of the said Vicksburg Chemical Company which is described upon Attachment "A" hereto, she executed the above and foregoing instrument, after first having been duly authorized so to do.

_____
Notary Public

My Commission Expires:_____

TRACT D-1: PART OF LOT 3 OF THE JETT SURVEY & PART LOTS 1 & 2 OF MAGNOLIA PLANTATION IN PART OF SECTIONS 3, 4, 5, 8, 9, 10 & 17, TOWNSHIP 15 NORTH, RANGE 3 EAST, VICKSBURG, WARREN COUNTY, MISSISSIPPI:

Commencing at a 2 ½" iron pipe marking the Southwest corner of Section 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi and run thence along the South line of said Section 10, S 79°58'11" E, 439.67' to a 2" iron pipe, said 2" iron pipe being further described as the POINT OF BEGINNING of the following described tract. From said POINT OF BEGINNING, run thence S 12°00'00" W, 1023.46' to an iron pin on the North Right-of-Way of Highway 61 South By-Pass; thence along the North Right-of-Way of said Highway 61 South By-Pass the following courses and distances: S 68°21'00" W, 341.87' to a concrete right-of-way marker ; thence S 55°35'19" W, 247.52' to a concrete right-of-way marker; thence S 11°58'01" E, 400.78' to a concrete right-of-way marker; thence S 56°12'58" W, 458.32' to a concrete right-of-way marker; thence N 34°38'57" W, 49.18' to a concrete right-of-way marker; thence S 68°18'00" W, 359.00' to an iron pin; thence N 87°24'59" W, 241.97' to a concrete right-of-way marker; thence S 14°48'37" E, 305.90' to a concrete right-of-way marker; thence S 56°22'19" W, 249.29' to a concrete right-of-way marker; thence N 34°04'10" W, 318.74' to a concrete right-of-way marker; thence N 87°43'17" W, 500.00' to an iron pin; thence S 33°58'34" W, 263.76' to a concrete right-of-way marker; thence S 02°33'52" E, 221.04' to an iron pin on the South line of Section 8; thence along the South line of said Section 8, West, 779.84' to an iron pin; thence leaving the South line of Section 8 and run South, 702.00' to an iron pin; thence N 69°30'00" W, 185.00' to an iron pin; thence S 86°00'00" W, 270.00' to an iron pin; thence West, 232.58' to a point on the East right-of-way of a railroad track; thence along the East right-of-way of said railroad track, N 21°21'16" E, 704.00' to an iron pin on the South line of Section 8; thence along the South line of Section 8, West, 760.28' to an iron pin on the East right-of-way of Hwy. 61, now called Warrenton Road; thence along a 04°21'30" curve to the right (having a central angle of 67°36'30" rt. and a centerline radius of 1314.63') a chord of N 10°15'09" E, 1226.88' to an iron pin at the point of tangency of said curve; thence continuing along the East right-of-way of said Warrenton Road, N 39°16'13" E, 350.88'; thence continuing along the East right-of-way of said Warrenton Road, N 36°51'20" E, 408.05'; thence leaving the East right-of-way of said Warrenton Road and run S 14°54'00" W, 143.17' to an iron pin; thence S 08°33'00" W, 293.50' to an iron pin; thence S 12°33'00" W, 413.00' to a concrete post; thence S 74°01'58" E, 164.94' to a 2 ½" iron pipe; thence N 58°30'55" E, 358.12' to an iron pin; thence N 14°24'00" E, 151.32' to a 2" iron pipe; thence N 07°10'00" E, 107.50' to an iron pin; thence N 76°41'28" W, 219.91' to an iron pin; thence N 41°50'00" W, 263.03' to an iron pin; thence N 08°33'00" E, 52.46' to an iron pin; thence N 14°54'00" W, 143.17' to an iron pin on the East right-of-way of Warrenton Road; thence along the East right-of-way of Warrenton Road, N 33°32'26" E, 152.12' to an iron pin; thence leaving the East right-of-way of said Warrenton Road and run S 58°47'00" E, 341.70' to an iron pin at the

Southeast corner of Lot 54 of Walnut Ridge Subdivision; thence along the rear lot line of Walnut Ridge Subdivision the following courses and distances: N 40°25'21" E, 732.43' to an iron pin at an angle point; thence continuing N 31°56'47" E, 673.50' to an iron pin at an angle point; thence continuing N 68°10'35" W, 53.76' to an iron pin at an angle point; thence continuing N 06°56'12" E, 365.99' to an iron pin at an angle point; thence continuing N 00°15'40" W, 207.78' to an iron pin at an angle point; thence continuing N 15°42'37" E, 413.37' to an iron pin at an angle point; thence continuing N 03°47'31" E, 428.36' to an iron pin at an angle point; thence continuing N 26°25'11" E, 79.01' to an iron pin at an angle point; thence continuing N 47°20'34" E, 250.98' to an iron pin at an angle point; thence continuing N 30°14'59" E, 166.50' to an iron pin at an angle point; thence continuing N 07°15'00" W, 189.70' to an iron pin at an angle point; thence continuing N 16°10'00" E, 118.50' to an iron pin at an angle point; thence continuing S 56°06'13" E, 167.00' to an iron pin at an angle point; thence continuing N 32°41'24" E, 410.55' to an iron pin at the common corner of Sections 5,6,8 & 9, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi; thence along the West line of Section 5, Township 15 North, Range 3 East, N 03°00'00" W, 602.91' to an iron pin on the East right-of-way of Warrenton Road; thence along the East right-of-way of Warrenton Road on a 02°30'00" curve to the left (having a central angle of 15°53'30" lt. and a centerline radius of 229.83') a chord of N 22°24'36" E, 379.66' to an iron pin at the point of tangencey of said curve; thence continuing along the East right-of-way of Warrenton Road on a 03°07'54" curve to the right (having a central angle of 28°39'00" rt. and a centerline radius of 1829.56') a chord of N 19°54'37" E, 133.51' to an iron pin at an offset in the right-of-way; thence along said offset, S 67°56'23" E, 40.00' to an iron pin; thence continuing along said offset, a chord of N 24°24'32" E, 142.58' to an iron pin; thence continuing along said offset, N 63°14'32" W, 30.00' to an iron pin; thence continuing along the East right-of-way of said Warrenton Road on said 03°07'54" curve to the right a chord of N 34°34'28" E, 481.33' to an iron pin at another offset in said right-of-way; thence along said offset, N 47°36'32" W, 10.00' to an iron pin; thence continuing along the East right-of-way of said Warrenton Road on said 03°07'54" curve to the rt. a chord of N 44°24'04" E, 124.81' to the point of tangency of said curve; thence continuing along the East right-of-way of said Warrenton Road, N 46°24'38" E, 235.93' to the Point of Curvature of a 03°00'00" curve to the left; thence along said 03°00'00" curve to the left (having a central angle of 30°16'00" lt. and a centerline radius of 1909.85') a chord of N 31°16'38" E, 1023.30' to an iron pin at the point of tangency of said curve; thence continuing along the East right-of-way of said Warrenton Road, N 16°08'38" E, 159.20' to an iron pin at a point where the East right-of-way of said Warrenton Road intersects the South line of Dabney Drive; thence leaving the East right-of-way of Warrenton Road and run along the South line of said Dabney Drive along several irregular curves the following chords: N 51°43'48" E, 109.11' to an iron pin; thence continuing N 77°36'39" E, 107.53' to an iron pin; thence continuing S 86°56'06" E, 300.07' to an iron pin; thence continuing S 86°40'12" E, 144.73' to an iron pin; thence continuing N 84°16'08" E, 256.15' to an iron pin; thence continuing

N 80°56'14" E, 89.18' to an iron pin at a point where the South line of said Dabney Drive intersects the West line of Rifle Range Road; thence along the West line of said Rifle Range Road along several irregular curves the following chords; S 07°40'41" E, 262.50' to an iron pin; thence continuing S 28°25'33" E, 266.41' to an iron pin; thence S 20°09'44" E, 273.79' to an iron pin; thence S 25°12'51" E, 184.64' to an iron pin; thence S 35°05'00" E, 483.12' to an iron pin; thence S 27°42'45" E, 130.79' to an iron pin; thence S 22°33'22" E, 295.33' to an iron pin; thence S 20°21'10" E, 211.11' to an iron pin; thence S 22°12'00" E, 127.00' to an iron pin; thence S 07°07'00" E, 154.00' to an iron pin; thence S 09°38'35" W, 21.21' to an iron pin at the Northeast corner of the Walker parcel as described in Deed Book 628 at Page 432 of the Land Records of Warren County, Mississippi; thence leaving the West side of said Rifle Range Road and run along the North line of said Walker parcel N 87°06'50" W, 37.22' to an iron pin; thence S 05°30'00" W, 17.00' to an iron pin; thence N 87°00'00" W, 46.00' to an iron pin; thence S 08°20'40" W, 77.08' to an iron pin; thence S 85°30'00" E, 87.00' to an iron pin on the West line of Rifle Range Road; thence along the West line of Rifle Range Road the following courses and distances: S 11°38'00" W, 318.00' to an iron pin; thence S 27°25'17" W, 201.18' to an iron pin; thence S 16°23'51" W, 98.78' to an iron pin; thence S 01°58'35" W, 148.02' to an iron pin; thence S 03°00'44" E, 330.73' to an iron pin at the Northeast corner of the City of Vicksburg tract as recorded in Deed Book 476 at Page 513 of the Land Records of Warren County, Mississippi; thence leaving the West line of Rifle Range Road and run along the North line of said City of Vicksburg tract, N 87°36'55" W, 115.95' to an iron pin; thence S 16°47'52" W, 222.00' to an iron pin; thence N 89°30'00" W, 658.46 to the Northwest corner of said City of Vicksburg tract, said point being further described as lying in the center of Stout's Bayou; thence along the centerline of said Stout's Bayou the following courses and distances: S 44°32'44" W, 3.09'; thence continuing S 41°54'30" W, 158.39'; thence continuing S 53°03'19" W, 187.36'; thence continuing S 49°20'11" W. 190.75'; thence continuing S 49°30'19" W, 222.86'; thence continuing S 21°50'24" W, 183.57'; thence continuing S 08°05'35" W, 265.79'; thence continuing S 07°33'05" W. 213.43' W, to the Southwest corner of said City of Vicksburg tract; thence leaving the centerline of Stout's Bayou and run along the South line of said City of Vicksburg tract, East, 578.81' to an iron pin; thence S 03°30'00" W, 36.30' to an iron pin; thence S 42°26'00" W, 81.23' to an iron pin; thence S 12°00'00" W, 897.32' to the POINT OF BEGINNING and containing 516.72 Acres and being situated in part of Lot 3 of the Jett Survey & part of Lots 1 & 2 of Magnolia Plantation and in part of Sections 3,4,5,8,9,10 & 17, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi.

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LESS AND EXCEPT FROM TRACT D-1 THOSE CERTAIN TRACTS OR PARCELS OF LAND KNOWN AS TRACT P-1, SAME COMPRISING THE INDUSTRIAL PLANT SITE FORMERLY KNOWN AS VICKSBURG CHEMICAL COMPANY LYING AND BEING SITUATED IN PART OF SECTIONS 3,4,5,8,9 & 10, TOWNSHIP 15 NORTH, RANGE 3 EAST, VICKSBURG, WARREN COUNTY, MISSISSIPPI, VIZ:

TRACT P-1: BEGINNING at an iron pin on the West side of a ditch, said iron pin being further described as lying N 75°10'58" W, 1773.60' from a 2 ½" iron pipe marking the Southwest corner of Section 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi and run thence N 41°11'15" E, 239.94' to an iron pin; thence N 48°32'32" E. 290.75' to an iron pin; thence N 05°29'53" W, 310.80' to an iron pin; thence N 27°27'19" E, 275.17' to an iron pin; thence N 28°57'37" E, 193.32' to an iron pin; thence N 00°55'04" W, 120.20' to an iron pin; thence N 02°10'35" E, 556.62' to an iron pin; thence N 37°18'43" E, 216.46' to an iron pin; thence S 73°23'47" E, 490.81' to an iron pin; thence N 59°07'55" E, 932.53' to an iron pin; thence N 27°12'08" E, 179.85' to an iron pin; thence N 10°53'34" E, 765.83' to an iron pin; thence N 52°29'13" E, 78.78' to an iron pin; thence N 70°28'36" E, 217.79' to an iron pin; thence N 50°05'05" E, 714.15' to an iron pin; thence N 68°07'47" E, 88.55' to an iron pin; thence N 68°07'50" E, 93.07' to an iron pin on the West line of Rifle Range Road; thence along the West line of Rifle Range Road, S 35°05'00" E, 43.07' to an iron pin; thence continuing along the West line of Rifle Range Road, S 27°42'45" E, 130.79' to an iron pin; thence continuing along the West line of Rifle Range Road S 22°33'22" E, 295.33' to an iron pin; thence continuing along the West line of Rifle Range Road S 20°21'10" E, 121.48'to an iron pin at a point where said West line of Rifle Range Road intercepts the center of a creek; thence leaving the West line of Rifle Range Road and run along the center of said creek the following courses and distances:
S 13°37'27" W, 280.96'; S 22°23'38" W, 228.33'; S 15°16'59" W, 410.75';
S 39°08'27" W, 239.59'; S 19°21'42" W, 245.57'; S 44°32'44" W, 617.87';
S 41°54'30" W, 158.39'; S 53°03'19" W, 187.36'; S 49°20'11" W, 190.75';
S 49°30'19" W, 222.86'; S 21°50'24" W, 183.57'; S 08°05'35" W, 265.79';
S 07°33'05" W, 213.43'; S 13°07'18" E, 174.28'; S 21°31'09" W, 146.47';
S 03°54'38" E, 124.97'; S 64°50'02" W, 167.35'; S 88° 51'31" W, 207.17';
S 41°03'24" W, 119.42'; N 81°34'40" W, 203.48'; N 67°07'26" W, 187.06';
S 87°42'08" W, 271.49'; N 82°58'30" W, 88.05'; N 70°13'07" W, 60.37';
S 65°30'17" W, 405.54'; thence leaving the center of said creek and run N 43° 19'25" W, 303.36' to the POINT OF BEGINNING and containing 120.87 Acres and being situated in part of Sections 3, 4, 5, 8, 9, & 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi..

TRACT D-2: PART OF SECTION 9, TOWNSHIP 15 NORTH, RANGE 3 EAST, VICKSBURG, WARREN COUNTY, MISSISSIPPI:

Commencing at a 2 ½" iron pipe marking the Southwest corner of Section 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi and run thence along the South line of said Section 10, S 79°58'11" E, 439.67' to a 2" iron pipe, run thence S 12°00'00" W, 2334.03' to a point; thence S 60°33'52" W, 133.30' to an iron pin on the South right-of-way of Highway 61 South By-Pass, said iron pin being further described as the POINT OF BEGINNING of the following described tract. From said POINT OF BEGINNING, run thence S 60°33'52" W, 502.02' to an iron pin on the South right-of-way of said Highway 61 South By-Pass; thence along the South right-of-way of said Highway 61 South By-pass, N 00°57'34" E, 172.05' to an iron pin; thence continuing N 55°25'18" E, 100.00' to an iron pin; thence continuing N 87°04'57" E, 352.46' to the POINT OF BEGINNING and containing 1.07 Acres and being situated in part of Section 9, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi.

TRACT D-3: An irregular tract of land, being a part of Lot 1 of the Magnolia Plantation as shown by map or plat of record in Book 69, page 92 of the Records of the Chancery Clerk's Office of Warren County, Mississippi, in Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, lying westerly of and adjoining the Westerly line of Kansas City Southern Railroad Company's right of way (formerly Illinois Central Railroad Company) located in said Section 17, more particularly described as follows:

Beginning at the point of intersection of the North line of said Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, and the Westerly right of way line of Kansas City Southern Railroad Company's present 100 foot wide right of way (formerly Illinois Central Railroad Company) said point being 50 feet Westerly from the center line of the main railroad track measured at a right angle thereto (the "Railroad Right of Way"); thence South 38 degrees 40 minutes West 140 feet to a point in the Easterly line of the 50 foot wide strip of land acquired by Warren County, Mississippi, from The Yazoo and Mississippi Valley Railroad Company (predecessor to Kansas City Southern Railroad Company and to Illinois Central Railroad Company) by agreement dated September 10, 1918 (the "Warren County Strip") referenced in deed recorded in Deed Book 298 at Page 297 of the land records of Warren County, Mississippi, and, from said Point of Beginning run thence southerly along said Easterly line of the Warren County Strip a distance of 550 feet to a point in the Westerly line of the Railroad Right of Way; run thence Northerly along the Westerly line of the Railroad Right of Way line parallel with and 50 feet perpendicularly distant Westerly from said center line of the main track of the Railroad Right of Way a distance of 690 feet to the point of beginning, containing an area of 0.33 of an acre, more or less, being an irregular tract of land, being a part of Lot 1 of the Magnolia Plantation in Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, heretofore included as one of the parcels conveyed to Spencer Chemical Company by Illinois Central Railroad Company in deed dated September 16, 1952, recorded in Deed Book 298 at Page 297 of the land records of Warren County, Mississippi.

TRACT D-4: A triangular parcel of land, being a part of Lot 1 of the Magnolia Plantation as shown by map or plat of record in Book 69, page 92 of the Records of the Chancery Clerk's Office of Warren County, Mississippi, in Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, lying westerly of and adjoining the Westerly line of Kansas City Southern Railroad Company's *present 100 foot wide right of way (formerly Illinois Central Railroad Company)* located in said Section 17, more particularly described as follows:

To reach the Point of Beginning, commence at the point of intersection of the North line of said Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, and the Westerly right of way line of Kansas City Southern Railroad Company's right of way (formerly Illinois Central Railroad Company) said point being 50 feet Westerly from the center line of the main railroad track measured at a right angle thereto (the "Railroad Right of Way") and, from said point run thence South 38 degrees 40 minutes West a distance of 209 feet; thence South 40 degrees 50 minutes West a distance of 80 feet to the point of beginning of the tract of land herein conveyed, which point is also described as being the point of intersection of the Easterly line of the present 100 foot wide strip of the Railroad Right of Way and the Westerly line of the 50 foot wide strip of land acquired by Warren County, Mississippi, from The Yazoo and Mississippi Valley Railroad Company (predecessor to Kansas City Southern Railroad Company and to Illinois Central Railroad Company) by agreement dated September 10, 1918 (the "Warren County Strip") referenced in deed recorded in Deed Book 298 at Page 297 of the land records of Warren County, Mississippi, and, from said Point of Beginning run thence South 40 degrees 50 minutes West along said Easterly line of the above mentioned 100 foot wide Railroad Right of Way a distance of 370 feet to a point; thence South 38 degrees 15 minutes West along said Easterly line of the Railroad Right of Way a distance of 180 feet to a point in the Northerly line of abandoned Wigwam Road; thence North 87 degrees 30 minutes East along said Northerly line of said abandoned Wigwam Road a distance of 202 feet to a point in the Westerly line of the above mentioned Warren County Strip; run thence Northerly along said Westerly line of the Warren County Strip a distance of 430 feet to the Point of Beginning, containing an area of 0.95 of an acre, more or less, being a part of Lot 1 of the Magnolia Plantation in Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, heretofore included as one of the parcels conveyed to Spencer Chemical Company by Illinois Central Railroad Company in deed dated September 16, 1952, recorded in Deed Book 298 at Page 297 of the land records of Warren County, Mississippi.

LESS AND EXCEPT THEREFROM any portion thereof which lies West of the West boundary of the public road now commonly known as Warrenton Road (formerly known as U. S. Highway 61) as described in and conveyed by deed from Gulf Oil Corporation (successor to Spencer Chemical Company) by deed dated November 4, 1964, recorded in Deed Book 394 at Page 81.

The legal description of Tract D-4 having been made more definite and certain by recent survey of Strickland Surveying & Mapping, Inc. dated March 24, 2006, same is further described as a triangular parcel of land, being a part of Lot 1 of the Magnolia Plantation as shown by map or plat of record in Book 69, page 92 of the Records of the Chancery Clerk's Office of Warren County, Mississippi, in Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, viz:

To reach the point of beginning, commence at a point where the North line of Section 17, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi (same further being the North line of Magnolia Plantation as shown by plat of record in Book 69 at Page 92 of the aforesaid land records) intersects the Easterly right of way line of Warrenton Road (formerly known as U. S. Highway 61) and from said point run thence East along the North line of said Section 17 (and along the North line of said Magnolia Plantation) 596.58 feet, to a point where the North line of said Section 17 (and of Magnolia Plantation) intersects the West line of the Kansas City Southern Railroad Company's present 100 foot wide right of way (formerly Illinois Central Railroad Company) said point being 50 feet Westerly from the center line of the main railroad track measured at a right angle thereto (the "Railroad Right of Way"), same further being the Northernmost apex of the lands described above as Tract D-3; thence leaving the North line of said Section 17 and leaving the Westerly Railroad Right of Way and run along the Westerly line of said Tract D-3, South 38 degrees 40 minutes 00 seconds West 140.00 feet to an angle point in the Westerly line of said Tract D-3, which point is further described as the Northernmost apex of a certain strip of land 50 feet in width acquired by Warren County, Mississippi from The Yazoo and Mississippi Valley Railroad Company (predecessor to Kansas City Southern Railroad Company and to Illinois Central Railroad Company) by agreement dated September 10, 1918, referenced in deed recorded in Deed Book 298 at Page 297 of the Land Records of Warren County, Mississippi (the "Warren County 50-foot Strip"); thence leaving the Westerly line of said Tract D-3 and run along the Northwesterly line of the Warren County 50-foot Strip, South 38 degrees 40 minutes 00 seconds West 149.00 feet to a point, which point marks the Point of Beginning of the lands comprising Tract D-4 hereof (the "Tract D-4 POB") which point is also an angle point in the Northwesterly line of the Warren County 50-foot Strip; from said Tract D-4 POB run thence along the Westerly line of the Warren County 50-foot Strip South 20 degrees 10 minutes 27 seconds West 369.32 feet to a point on the Northeasterly right of way of Warrenton Road (formerly known as U. S. Highway 61); thence leaving the Westerly line of the Warren County 50-foot Strip and run along the Northeasterly right of way of said Warrenton Road North 28 degrees 20 minutes 17 seconds West 139.41 feet to a point; thence leaving the Northeasterly right of way of said Warrenton Road and run thence North 40 degrees 50 minutes 00 seconds East 296.00 feet to the Tract D-4 POB, containing 0.43 acre, more or less, in part Lot 1 of the Magnolia Plantation as shown by plat of record in Book 69 at Page 92 of the aforesaid land records, Section 17, Township 15 North, Range 3 East, Warren County, Mississippi.

TRACT D-5: That certain tract or parcel of land being a part of Lot 1 and part of Lot 2 of the Magnolia Plantation in Section 17, Township 15 North, Range 3 East, Warren County, Mississippi, conveyed by W. L. Farrior, et ux, to Spencer Chemical Company by deed dated October 20, 1952, recorded in Deed Book 294 at Page 240 and bounded as follows, viz: On the North by the North line of Section 17, Township 15 North, Range 3 East, Warren County, Mississippi; on the South and East by that property conveyed by F. C. Klare to Yazoo and Mississippi Valley Railroad Company on October 21, 1916 and recorded in Deed Book 139, page 372 of the Warren County Land Records; and on the South and West by the present right-of-way of the public road known as Warrenton Road (formerly known as U.S. Highway 61) and being a part of Lot Two of Magnolia Plantation Survey as shown by map or plat of record in Book 69, page 92 of the Records of the Chancery Clerk's Office of Warren County, Mississippi, in Section 17, Township 15 North, Range 3 East, Warren County, Mississippi.

TRACT D-6: All of Lot 51 of Walnut Ridge Subdivision as shown by plat of record in Plat Book 116 at Page 186 of the land records of Warren County, Mississippi, and that part of Lot 52 of said Walnut Ridge Subdivision as shown by plat of record in Plat Book 116 at Page 186 of the land records of Warren County, Mississippi, described as a strip of land 18 feet in width along the North side of said Lot 52 of said Walnut Ridge Subdivision as shown by plat of record in Plat Book 116 at Page 186 of the land records of Warren County, Mississippi, more particularly described as follows, viz: Beginning at the Northwest corner of Lot 52 of said Walnut Ridge Subdivision as shown by the aforedescribed plat thereof and run thence South 31 degrees West along the West line of Lot 52 and the East right of way line of the public road now known as Warrenton Road (formerly known as U. S. Highway 61), a distance of 18 feet to a point; then leaving the West line of Lot 52 and the East right of way line of said Warrenton Road and run thence South 60 degrees East, a distance sufficient to reach the East line of Lot 52 of said Walnut Ridge Subdivision, same having been said to be 400 feet, more or less, within deed in favor of The Spencer Chemical Company dated March 31, 1952, recorded in Deed Book 294 at Page 305 (the "Spencer Deed") of the Warren County Land Records, but having a distance of 385.05 feet as determined by survey by Strickland Surveying & Mapping, Inc. (the "Strickland Survey") dated March 1, 2006, but, nevertheless, along said course a distance sufficient to reach the East line of Lot 52 of said Walnut Ridge Subdivision; run thence along the East line of said Lot 52 of said Walnut Ridge Subdivision, having a course and distance published in the Spencer Deed of North 40 degrees, 15 minutes East, 18.24 feet, but having a course of North 40 degrees, 25 minutes, 21 seconds East within the Strickland Survey, but, nevertheless, along a course and distance sufficient to reach the Northeast corner of Lot 52 and the Northwest corner of Lot 51 of said Walnut Ridge Subdivision; thence leaving the East line of Walnut Ridge Subdivision and run along the common line of Lot 51 and Lot 52 having a course and distance published in the Spencer Deed North 60 degrees West a distance of 403 feet, more or less, to the Northwest corner of Lot 52 and the Southeast corner of Lot 51, and the Point of Beginning of the strip of land within said Lot 52 described herein, which said Lot 51 and the strip of land within said Lot 52 were heretofore conveyed in fee simple to Spencer Chemical Company, predecessor in title to Vicksburg Chemical Company, which deed in favor of Spencer is recorded in Deed Book 294 at Page 305 of the Land Records of Warren County, Mississippi.

TRACT D-7: Those certain tracts or parcels of land lying and being situate in Sections 4, 5, and 6, Township 15 North, Range 3 East, and part of the Jett Survey, all in Vicksburg, Warren County, Mississippi, viz:

Commencing at a point (the "Point of Beginning") on the Westerly right-of-way line of that certain public road presently (*circa* March, 2006) known as Warrenton Road (formerly known as U. S. Highway 61) which point marks the Southeast corner of lands situated in Section 5, Township 15 North, Range 3 East, Warren County, Mississippi, described as "Parcel Two" within that certain warranty deed heretofore executed by W. S. Gordon in favor of The Carter Oil Company dated July 25, 1940, recorded in Deed Book 217 at Page 396 of the land records of Warren County, Mississippi (the "First Carter Deed"), and from said Point of Beginning thence leaving the Westerly line of said Warrenton Road and run along the South line of lands conveyed by and described within the First Carter Deed [which South line is further depicted upon plat attached to instrument appearing of record in Deed Book 214 at Page 558 (specifically at Page 560 thereof) said to be prepared for Mr. W. S. Gordon (the "Gordon Plat") whereupon same is identified as the Southwest corner of the "Jno. Gilbert 22.426 Acres" parcel] same initially running along the South line of lands in said Section 5 described as Parcel Two within the First Carter Deed and as depicted upon the Gordon Plat, and, thereafter, along the South line of lands in Section 6, Township 15 North, Range 3 East described as "First" in the First Carter Deed and as depicted upon the Gordon Plat as the South line of the "S.R. Hughes 17.975 Acres" parcel, having a course and distances published in the First Carter Deed (and inversely depicted upon the Gordon Plat) of North 89 degrees 30 minutes West 534.5 feet and 1132 feet, respectively, but having actual courses and distances as established by survey of Strickland Surveying & Mapping, Inc. dated March 1, 2006 (the "Strickland Survey"), viz: North 88 degrees 41 minutes 00 seconds West 552.95 feet to an iron pin found; North 88 degrees 44 minutes 20 seconds West 353.00 feet to an iron pin found [at a point on the top bank of the Mississippi River (the "Top Bank") as located by and depicted upon the Strickland Survey; thereafter, leaving the point marking the Top Bank and continuing along the South lines of land described within and conveyed by said First Carter Deed and depicted upon the Gordon Plat along a course and sufficient distance to reach the thalweg of the Mississippi River (the "Thalweg"); thence leaving the South line of lands depicted upon the Gordon Plat extended Westerly to the Thalweg and leaving the South line of lands conveyed by and described within the First Carter Deed and run thence in a Northeasterly direction following the meanderings of the Thalweg a distance sufficient to reach a point where the Thalweg intersects the Northerly line projected Westerly of lands heretofore conveyed and described by deed executed by W. S. Gordon in favor of The Carter Oil Company dated July 8, 1940, recorded in Deed Book 217 at Page 398 of the land records of Warren County, Mississippi (the "Second Carter Deed"); thence leaving the Thalweg and run in an Easterly direction along the Westerly projection of the North line of lands conveyed and described by the Second Carter Deed, same further described as the Westerly projection of the North line of Lot 3 of that certain subdivision known as the Jett Survey, recorded in Deed Book 61 at Page 288 of the land records of Warren County, Mississippi, same further being in Section 5, Township 15 North, Range 3 East, Warren County, Mississippi, having a course as established by the Strickland Survey of North 88 degrees 40 minutes 00 seconds East and a distance sufficient to reach the Northeast corner of Lot 3 of the said Jett Survey, same being the Northeast corner of lands conveyed by and described in the Second Carter Deed and the same point depicted upon plat referenced in the text thereof; thence leaving the North line of Lot 3 of the Jett Survey and run along the Easterly line of lands conveyed by and described within the Second Carter Deed, same being contiguous with the Westerly line of lands conveyed to Lucian Minor Ferris, et ux, by deed recorded in Deed Book 250 at Page 350, and, thereafter to Lucian Minor Ferris, Jr. by deed recorded in Deed Book

558 at Page 503, each within the aforesaid Land Records (collectively, the "Ferris Deed"), having, in each instance the following courses and distances published in both the Second Carter Deed and in the Ferris Deed, viz: South 28 degrees 30 minutes West 273.00 feet to an iron; South 69 degrees 30 minutes West 385.00 feet to an iron; South 230.00 feet to an iron; South 47 degrees 30 minutes East 250.00 feet to an iron; South 18 degrees East 460.00 feet to an iron, but having actual courses and distances as established by the Strickland Survey of South 28 degrees 18 minutes 00 seconds West 273.00 feet to an iron pin found; South 69 degrees 18 minutes 00 seconds West 385.00 feet to an iron pin found; South 230.00 feet to an iron pin found; South 47 degrees 18 minutes 00 seconds East 250.00 feet to an iron pin found; South 18 degrees 00 minutes 00 seconds East 460.00 feet to an iron pin found, which latter point, in the text of both the Second Carter Deed and the Ferris Deed is said to be on the West line of Lot 5 of the said Jett Survey, but, in any event, along such courses and distances into which Carter Oil Company went into possession following delivery of the Second Carter Deed; thence continuing along a line said to be the West line of Lot 5 of said Jett Survey within both the Second Carter Deed and within the Ferris Deed, South 08 degrees 45 minutes 00 seconds West 200.00 feet to an iron pin found (which point is said to mark the Southeast corner of Lot 3 of the Jett Survey within the Ferris Deed) and which point marks the Southeast corner of the lands described and conveyed by the Second Carter Deed and a point on the North line of lands described and conveyed within the First Carter Deed; run thence along the North line of lands described and conveyed as Parcel One within the First Carter Deed, having a course and distance published therein of South 89 degrees 30 minutes East 117 feet, but having an actual course and distance as determined by the Strickland Survey of South 89 degrees 18 minutes 00 seconds East 101.24 feet, but, nevertheless, along a course with a distance sufficient to reach the West right-of-way line of said Warrenton Road (said to be U. S. Highway 61 in the text of the First Carter Deed); run thence along the West right-of-way line of said Warrenton Road in a Southwesterly direction along the East line of lands described and conveyed as Parcel One in the First Carter Deed, and, thereafter, along the East line of lands described and conveyed as Parcel Two therein and along an arc of a three degree curve [having a central angle of 30 degrees 16 minutes 00 seconds left and a centerline radius of *1,909.85 feet and an arc distance of 1,008.89 feet]* a chord of South 32 degrees 14 minutes 15 seconds West a distance of 910.05 feet to an iron pin found; thence continuing along the Westerly right-of-way line of Warrenton Road South 46 degrees 24 minutes 38 seconds West a distance of 311.89 feet to an iron pin found at the Southeast corner of the First Carter Deed, which point marks the Point of Beginning, containing 39.24 acres, more or less, above the Top Bank of the Mississippi River as determined by and depicted upon the Strickland Survey, it being the intention herein to describe all lands into which Carter Oil Company went into possession by virtue of deeds recorded in Deed Book 217 at Pages 396 and 398, respectively, all lying and being situate in Sections 4, 5, and 6, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi, and part of the Jett Survey, TOGETHER WITH all those certain tracts or parcels lying West of the West line of the lands hereinabove described which serves to extend the Northerly and Southerly lines thereof in a Westerly direction to the thalweg of the Mississippi River and the boundary line between the states of Mississippi and Louisiana and all riparian and other rights created by the fact that the property hereinabove described is bounded on the West or fronts on the Mississippi River, it being the intention herein to describe all right, title and interest in and to all of the accretions, alluvions, avulsions, batture and other riparian rights in and to said Mississippi River extending to the thalweg thereof and together with all right, title and interest in and to any adjacent strips or gores owned or claimed by Vicksburg Chemical Company or its predecessors in title.

Schedule B/Attachment "B" to Receiver Deed (Development) and Related Security Instruments
Permitted Exceptions to Title
Mississippi Bluffs Development LLC

ITEM 1: Ad valorem taxes for the year 2006, not due and payable until January 1, 2007, delinquent after February 1, 2007 and subsequent years thereafter.

ITEM 2: Intentionally omitted.

ITEM 3. Any prior reservation or conveyance, together with release of damages, of minerals of every kind and character, including, but not limited to, oil, gas, sand and gravel, in, on, and under the subject property, including, but not limited to: a) provisions contained within deed executed by The Carter Oil Company dated July 11, 1951, filed for record July 24, 1951, recorded in Book 290 at Page 196, wherein a portion of the subject property, containing 64.50 acres, more or less, is conveyed and the mineral interest specified therein reserved unto the Grantors and b) provisions contained within deed executed by George T. Houston, III, et al., dated September 4, 1951, filed for record October 8, 1951, recorded in Book 290 at Page 569, wherein a portion of the subject property, containing 167.75 acres, more or less, is conveyed and the mineral interest specified therein reserved unto the Grantors, but, wherein, in each instance, the respective Grantors agree not to drill any well within 200 feet of any permanent building upon the lands therein described but specify that the Grantee shall leave available to those Grantors, their lessees and assigns, at least 3 drill sites as detailed therein.

ITEM 4: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines and telephone and telegraph wires, granted by Mary Ella Hughes by instrument dated January 27, 1943, recorded in Book 232 at Page 66, depicted and designated as Exception 4 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 5: Intentionally omitted.

ITEM 6: Right of Way and Easement in favor of The Mayor and Aldermen of the City of Vicksburg, 20 feet for the location, operation and maintenance of a sanitary sewer line, granted by Spencer Chemical Company by instrument dated May 24, 1957, filed for record July 22, 1960, recorded in Book 360 at Page 441, wherein the lands through which said easement extend are described, said easement being that depicted and designated as Exception 6 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 7: Easement in favor of the City of Vicksburg, 10 feet in width, for the location, operation and maintenance of a water line, granted by Spencer Chemical Company, by instrument dated September 20, 1952, filed for record July 22, 1960, recorded in Book 360 at Page 445, wherein the lands through which said easement extend are described, said easement being that depicted and designated as Exception 7 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 8: Intentionally omitted.

ITEM 9: Rights of Way and Easements in favor of Mississippi Power & Light Company, granted by Gulf Oil Corporation (successor mesne conveyances to Spencer Chemical Company and eventual grantor of Vicksburg Chemical Company) by instrument dated November 4, 1964, recorded in Book 394 at Page 137, each 20 feet in width, over and across part of Sections 9 and 10, Township 15 North, Range 3 East over and across three separate parcels of land, more particularly described therein, for the location, operation and maintenance of an electric and communications circuit or circuits, depicted and designated as Exception 9, Parcel 1, Parcel 2 and Parcel 3, upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 10: Easement, 15 feet in width, described in instrument executed by American Metal Climax, Inc. ("AMAX") in favor of Gulf Oil Corporation for location, operation, maintenance, repair, replacement and removal of railroad spur tract dated February 10, 1965, recorded in Book 396 at page 230, depicted and designated as Exception 10 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 11: Sewer Easement, over and across those parts of Sections 9 and 10, Township 15 North, Range 3 East more particularly described in instrument executed by Vicksburg Chemical Company, a Mississippi Corporation, successor by mesne conveyances to AMAX, for construction, operation, maintenance and removal of a four inch waste effluent pipeline for transportation of waste effluent for Grantee's plant to the sewage disposal plant owned and operated by the City of Vicksburg, in favor of Gulf Oil Corporation dated May 24, 1973, recorded in Book 504 at Page 427, depicted and designated as Exception 11 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 12: Drainage Easement in favor of State Highway Commission of Mississippi granted by Eagle River Chemical Corp. by instrument dated November 11, 1977, filed for record February 3, 1978, recorded in Book 584 at Page 549, being a parcel containing 2.87 acres, more or less, in Section 9, Township 15 North, Range 3 East, more particularly described therein, depicted and designated as Exception 12 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 13: Right of way for electric power transmission line dated April 30, 1980, recorded in Book 630 at Page 211 granted by A. J. Messina in favor of Vertac, Inc., over and across Section 10, Township 15 North, Range 3 East, described in said instrument, the rights of Vertac, Inc. in and to said easement having been subsequently assigned by Vertac, Inc. to Mississippi Power & Light Company, by instrument recorded in Book 632 at Page 42, depicted and designated as Exception 13 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 14: Easement for location, construction, operation and maintenance of an electric transforming substation and appurtenances thereto by instrument dated April 14, 1980, recorded in Book 630 at Page 320, granted by Vertac Chemical Corporation in favor of Mississippi Power & Light Company, upon, over and across Sections 5, 9 and 10, Township 15 North, Range 3 East, described in said instrument, depicted and designated as Exception 14 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 15: Permanent easement in favor of Mississippi Fuel Company, 30 feet in width, for the location, operation and maintenance of a pipeline, for transmission of oil, gas and other minerals, granted by Cedar Chemical Corporation, by instrument dated October 9, 1987, filed for record November 18, 1987, recorded in Book 830 at Page 46, wherein the lands through which said easement extend are described as being part of Sections 8, 9, 10 and 17, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 15 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 16: Intentionally omitted.

ITEM 17: Permanent Sewer Easement in favor of the Mayor and Aldermen of the City of Vicksburg, 35 feet in width for the location, operation and maintenance of a sanitary sewer line, granted by Vicksburg Chemical Company by instrument dated April 12, 1994, filed for record April 28, 1994, recorded in Book 1008 at Page 810, wherein the lands through which said easement extend are described as Sections 8 and 9, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 17 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 18: Permanent Sewer Easement in favor of the Mayor and Aldermen of the City of Vicksburg, 20 feet in width for the location, operation and maintenance of a sanitary sewer line, granted by Vicksburg Chemical Company by instrument dated April 12, 1994, filed for record April 28, 1994, recorded in Book 1008 at Page 818, wherein the lands through which said easement extend are described as Section 8, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 18 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 19: Right of Way and Easement in favor of Mississippi Power & Light Company, granted by Vicksburg Chemical Company by instrument dated February 11, 1992, recorded in Book 952 at Page 725, 30 feet in width, over and across part of Section 4, Township 15 North, Range 3 East, at a location said to be "staked and pointed out to the Grantor" for the location, operation and maintenance of an electric and communications circuit or circuits, depicted and designated as Exception 19 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 20: Easement and Right of Way in favor of Rainbow Development Corporation, 15 feet in width , for the location, operation and maintenance of a sanitary sewer line and for a water line granted by Vicksburg Chemical Company by instrument dated December 27, 1994, filed for record December 30, 1994, recorded in Book 1030 at Page 832, wherein the lands through which said easement extend are described as Sections 8, 9 and 10, Township 15 North, Range 3 East, reserving the right on the part of the Grantor to tie into any lift stations constructed by the Grantee, said easement being that depicted and designated as Exception 20 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, and having been subsequently assigned by the Grantee therein unto the Mayor and Aldermen of the City of Vicksburg by instrument October 16, 1995, recorded in Deed Book 1060 at Page 167.

ITEM 21: Intentionally omitted.

ITEM 22: Right of Way and Easements in favor of Vicksburg Refining, Inc., 30 feet in width and approximately 600 feet in length, for the installation and maintenance of one ten inch water line, same to be buried 36 to 48 inches from the surface and backfilled to Grantor's specifications, granted by Vicksburg Chemical Company by instrument dated September 11, 1978, recorded in Book 598 at Page 269, depicted and designated as Exception 22 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 23: Right of Way and Easement in favor of Mississippi Gas & Electric Company, 10 feet in width, for the location, operation and maintenance of an electric circuit or circuits, granted by J. L. Blackwell, by instrument dated May 15, 1930, recorded in Book 180 at Page 484, depicted and designated as Exception 23 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 24: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines and telephone and telegraph wires, granted by J. L. Blackwell, et ux, by instrument dated January 26, 1943, recorded in Book 232 at Page 43, depicted and designated as Exception 24 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 25: Right of Way and Easement in favor of United Gas Pipeline Company of unspecified width, for the construction, operation and maintenance of an underground gas pipeline, granted by the State of Mississippi, represented by its State Land Commissioner, by instrument dated February 3, 1943, recorded in Book 232 at Page 138, depicted and designated as Exception 25 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 26: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines and telephone and telegraph wires, granted by A. J. Messina, et ux, by instrument dated August 19, 1952, recorded in Book 296 at Page 541, depicted and designated as Exception 26 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 27: Release of Damages contained within deed dated November 30, 1921, recorded in Book 152 at Page 100, executed by Samuel R. Hughes and Mary Ella Hughes in favor of Yazoo and Mississippi Valley Railroad, wherein fee simple title to a certain parcel of land containing 0.86 acre adjoining the easterly side of the said Railroad's right of way in Section 8, Township 15 North, Range 3 East, same depicted and identified as Exception 27 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, which release of damages extends to and all claims or damages from floods, water, overflow or in any manner arising by the construction of any track, embankment, roadbed over other portions of Grantors' lands over which such right of way may extend or for any other act of the Railroad which may cause any damage to any of Grantors' lands in Warren County, Mississippi, such release being deemed a covenant running with the land, it being noted that 239 acres, more or less, of the subject property descends through this chain of title.

ITEM 28: Right of Way and Easement in favor of Mississippi Power & Light Company, 30 feet in width, over and across part of Lots 51 and 52 of Walnut Ridge Subdivision, for the location, operation and maintenance of an electric circuit or circuits, granted by Mrs. M. E. Hughes, *et vir*, by instrument dated October 18, 1941, recorded in Book 227 at Page 1, depicted and designated as Exception 28 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 29: Release of Damages contained within deed dated January 11, 1952, recorded in Book 292 at Page 447, executed by Illinois Central Railroad in favor of Spencer Chemical Company, wherein fee simple title to a certain parcel of land containing 1.0 acre adjoining the easterly side of the said Railroad's right of way in Section 9, Township 15 North, Range 3 East, same designated and depicted as Exception 29 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, which release of damages extends to any and all claims or damages of every kind and character growing out of or resulting from of the lands conveyed thereby to Grantor's property, including but not limited to damages from overflow or improper drainage, whether past, present or future.

ITEM 30: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines, granted by W. M. Hawkins by instrument dated February 4, 1943, recorded in Book 232 at Page 98, depicted and designated as Exception 30 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 31: Right of Way and Easement in favor of Mississippi Power & Light Company, 30 feet in width for ingress and egress running from Rifle Range Road to the east side of that certain parcel containing 1.75 acres, more or less, conveyed in fee simple to that entity by Gulf Oil Corporation by instrument dated November 4, 1964, recorded in Book 394 at Page 78, depicted and designated as Exception 31 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 32: Right of Way and Easement in favor of Mississippi Gas & Electric Company, 10 feet in width, for the location, operation and maintenance of an electric circuit or circuits, granted by N. Vick Robbins, *et ux*, by instrument dated May 16, 1930, recorded in Book 180 at Page 505, depicted and designated as Exception 32 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 33: Right of Way and Easement in favor of Mississippi Gas & Electric Company, 10 feet in width, for the location, operation and maintenance of an electric circuit or circuits for a service line not to exceed 3 wires and to carry not more than 13,800 volts, granted by Mrs. Mary Ella Hughes, by instrument dated June 19, 1930, recorded in Book 180 at Page 492, depicted and designated as Exception 33 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 34: Rights of Mississippi Power & Light Company for continued location, operation and maintenance of an electric circuit or circuits over and across the right of way and easement identified as the "13 KV Vicksburg-Port Gibson wood pole, single circuit, three wire transmission line" conveyed to that entity by Mississippi Gas & Electric Company, by instrument dated December 31, 1930, recorded in Book 182 at Page 281, depicted and designated as Exceptions 23, 31, 32 and 33 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 35: Right of Way and Easement reserved by Benjamin F. Marx, *et ux*, 18 feet in width, over and across the North side of Lot 52 of Walnut Ridge Subdivision reserved by those individuals within instrument dated June 1, 1950, recorded in Book 284 at Page 30, wherein Lot 51 and the same 18 foot wide strip along the North line of said Lot 52 of said subdivision are conveyed in fee simple to Louise M. Goode, which easement so reserved is for continued ingress and egress to property continuing in ownership of Marx, et ux, South of said Lot 52, the said Louise M. Goode having thereafter conveyed the same lands to Spencer Chemical Company by deed recorded in Book 294 at Page 305, which easement is depicted and designated as Exception 35 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 36: Right of Way and Easement in favor of The Mayor and Aldermen of the City of Vicksburg, upon a parcel of land in the form of a square measuring 50 feet on each side for the purpose of location, operation and maintenance of a sewage lift station thereon together with ingress and egress over a private road leading from Rifle Range Road to said parcel, granted by Spencer Chemical Company by instrument dated September 11, 1957, recorded in Book 360 at Page 385, depicted and designated as Exception 36 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 37: As to those portions of the subject property affected thereby, rights of Warren County, Mississippi, for continued location and maintenance of roadways and adjacent drainage ditches or facilities within the right of way of Rifle Range Road, arising under various grants styled "Landowners Conveyance of Perpetual Easements to Warren County, Mississippi, on Project 75-G Cane Ridge, Wigwam and Rifle Range Road--From Jonestown to Rifle Range and Rifle Range-Wigwam Road from Stouts Station to U. S. Highway No. 61" providing, in some instances, that no signs, billboards or other advertising devices shall be constructed within 150 feet of the center line of said Rifle Range Road, same being recorded in numerous counterparts, including, *inter alia*, insofar as same affects the subject property hereof, but not limited to, that executed on behalf of Spencer Chemical Company, dated March 25, 1954, recorded in Book 310 at Page 90.

ITEM 38: As to those portions of the subject property which abut that certain public thoroughfare known (*circa* 1996) as "Old" U. S. Highway 61 or Warrenton Road, restrictions contained within various grants of right of way from the owners of land through with said highway was constructed, each in favor of the State Highway Commission of Mississippi, each providing that no signs, billboards or other advertising devices shall be constructed within 150 feet of the center line of said highway, same being recorded in numerous counterparts, each substantially in the same form, including, *inter alia*, insofar as same affects the subject property hereof, but not limited to, that executed by Mrs. Mary Ella Hughes, dated July 10, 1937, recorded in Book 204 at Page 116, and each further authorizing the said State Highway Commission and its agents and employees to enter upon such premises to remove such advertising devices erected in violation thereof without liability for damage to property.

ITEM 39: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg, 20 feet in width, for the location, operation and maintenance of a sanitary sewer line, granted by Cedar Chemical Company by instrument dated November 4, 1994, recorded in Book 1028 at Page 227, wherein the lands through which said easement extend are described, together with a temporary construction easement 10 feet in width adjacent thereto, said temporary easement now thought to be terminated, said easement being that depicted and designated as Exception 39 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 40: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg, 40 feet in width, over and across that part of Section 10, Township 15 North, Range 3 East described in instrument dated September 28, 1969, recorded in Book 462 at Page 387, for the location, operation and maintenance of water mains, granted by Gulf Oil Corporation, said easement being that depicted and designated as Exception 40 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 41: Rights of Perkins Industries, Inc. ("Perkins") grantee of Gulf Oil Corporation, acting through Gulf Oil Chemicals Company, a division thereof ("Gulf") for continued use of private roadways for ingress to and from Rifle Range Road designated on plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, as "Plant Entrance Road" and leading to parcel identified on said plat as "Perkins Ref:666/576" (the "Perkins Parcel") and for continued use of Railroad Spur Tract and Sewer Easement granted Gulf Oil Company as detailed hereinabove in Items 10 and 11, respectively, and for continued usage of such other easements (collectively, the "Gulf Easements") which Gulf was entitled to use during such time as Gulf remained vested with title and possession of the Gulf Parcel, which rights on the part of Perkins arise by virtue of deed executed by Gulf to Perkins dated June 1, 1982, recorded in Book 666 at Page 576 and by instrument styled "Assignment of Easement" dated June 1, 1982, recorded in Book 666 at Page 577, notwithstanding that Assignment of Easement only referred to the Sewer Easement identified in Exception 11 above, the right of Perkins for continued access and use of the Rail Spur Track being thought to have become prescriptive in nature if not by grant, said Gulf Parcel and Plant Entrance Road being that depicted and designated as Exception 41 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, Borden, Inc., successor to Perkins Industries, Inc. having thereafter conveyed the same property and easement rights therein to Borden Chemical, Inc. by deed recorded in Book 1072 at Page 316.

ITEM 42: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines, granted by W. L. Farrior, *et ux*, by instrument dated January 26, 1943, recorded in Book 232 at Page 42, in and under Part Lots 1 and 2 of Magnolia Plantation, in Section 17, Township 15 North, Range 3 East, depicted and designated as Exception 42 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

Item 43: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg for the location, operation and maintenance of a sanitary sewer lift station and sewer line, upon, over and across that part of Section 10, Township 15 North, Range 3 East as described in and granted by Alfred J. Messina, MD. by instrument dated June 21, 1957, recorded in Book 338 at Page 439, said easement being that depicted and designated as Exception 43 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 44: Right of Way and Easement in favor of Mississippi Power & Light Company, of unspecified width, over and across part of Section 10, Township 15 North, Range 3 East for stringing wires from an existing 13.8 KV line designated the "Southwest Potash Line" and placing anchors on the side of an existing line pole and the continued location, operation and maintenance of an electric circuit or circuits thereon, granted by A. J. Messina by instrument dated October 21, 1961, recorded in Book 366 at Page 454, same further restricting the number of structures which Grantee may place thereon to two and further granting the Grantee the right to clear trees or other obstructions for an additional 10 feet on both sides of said right of way, which right of way is depicted and designated as Exception 44 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 45: Right of Way and Easement in favor of United Gas Pipeline Company, having an initial width of thirty (30) feet and having the right to increase same by an additional thirty (30) feet, the initial 30 foot width being for the construction, operation and maintenance of two gas pipelines over and across that part of Section 10, Township 15 North, Range 3 East described within and granted by A. J. Messina, et ux, by instrument dated June 29, 1961, recorded in Book 368 at Page 302, depicted and designated as Exception 45 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, it being thought that the second line anticipated herein has been installed within this easement and that the right of way width in this area is, most likely, now 60 feet in width.

ITEM 46: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg forty (40) feet in width, for the location, operation and maintenance of sanitary sewer mains, water mains and other utility lines, upon, over and across that part of Section 10, Township 15 North, Range 3 East as described in and granted by Alfred J. Messina, MD., by instrument dated August 1, 1969, recorded in Book 462 at Page 370, said easement being that depicted and designated as Exception 46 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 47: Right of Way and Easement in favor of Mississippi Power & Light Company, of unspecified width, over and across part of Section 10, Township 15 North, Range 3 East for installation of four anchors and guys only from an existing line designated "Circuits 5NO2, 5NO3, 5NO4 Line" granted by A. J. Messina by instrument dated September 13, 1971, recorded in Book 482 at Page 1, which right of way is depicted and designated as Exception 47 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 48: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg thirty (30) feet in width, for the location, operation and maintenance of a sanitary sewer line, upon, over and across that part of Section 10, Township 15 North, Range 3 East North of and adjacent to the North property of the City of Vicksburg sewage treatment plant, as described in and granted by Alfred J. Messina, MD., by instrument dated November 19, 1980, recorded in Book 640 at Page 249, said easement being that depicted and designated as Exception 48 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 49: Permanent easement in favor of Mississippi Fuel Company, 30 feet in width, for the location, operation and maintenance of a pipeline, for transmission of oil, gas and other minerals, granted by Cecilia M. Cox and Catherine M. Melsheimer, by instrument dated May 5, 1987, filed for record June 10, 1987, recorded in Book 816 at Page 67, wherein the lands through which said easement extend are described as being part of Section 10, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 49 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 50: Intentionally omitted.

ITEM 51: Encroachment of corner of residential improvements from Lot 30 of Walnut Ridge Subdivision onto the subject property and of fences associated with such residential improvements from Lots 30 and 31 of said Walnut Ridge Subdivisions, each as depicted as Exception 51 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006, and rights of the owner of such encroachments under fence to continue to maintain same, whether such rights be by prescription or whether same may have ripened to ownership by possession.

ITEM 52: Rights of the United Gas Pipeline and/or Town of Port Gibson for continued location and maintenance of a segment of its underground gas pipeline(s) in, on or under that portion of the subject property identified as a part of Lot 3 of the Jett Survey and part of Section 5, Township 15 North, Range 3 East, west of Warrenton Road or "Old" U. S. Highway 61, depicted as Exception 52 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006, and rights of the owner of such underground pipeline to continue to maintain same, whether such rights be by prescription or grant of easement, no recorded easement having been found, but same thought to be the Northerly extension of pipeline easement crossing Section 8 of said Township and Range as described in Book 330 at Page 215.

ITEM 53: Encroachment of mobile home onto that portion of the subject property situate in Section 17, Township 15 North, Range 3 East which is North of Old Wigwam Road, identified as "(Ref. 298/297)" and depicted as Exception 53 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 54: Encroachment of fence onto the extreme Southeast corner of that portion of the subject property situate in Section 17, Township 15 North, Range 3 East which is North of Old Wigwam Road, identified as "(Ref. 298/297)" and depicted as Exception 54 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 55: Rights of Kansas City Southern Railroad for continued operation, maintenance and location of rails and other uses associated with railroad operations on, across and over a strip of land, 100 feet in width, extending in a Northeasterly-Southwesterly direction across the entire length of the subject property as depicted as Exception 55 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006, it being noted that the estate vested in said Railroad's predecessor appears to be that of a right of way and not fee simple title (with the exception of the parcels conveyed in fee simple to the Yazoo & Mississippi Valley Railroad by deeds described in Item 27 hereinabove).

ITEM 56: Rights of Bessie W. Colmery and May Grace Anderson and their successors in title for continued ingress and egress over and across an existing roadway, 30 feet in width, leading in a Southerly direction from Old U. S. Highway 61 (Warrenton Road) to lands South of Lot 54 of Walnut Ridge Subdivision, conveyed to those parties by deeds recorded in Book 218 at Page 546 and Book 233 at Page 193, respectively, same being part of Section 8, Township 15 North, Range 3 East and depicted as Exception 56 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 57: Intentionally omitted.

ITEM 58: Intentionally omitted.

ITEM 59. Intentionally omitted.

ITEM 60. Intentionally omitted.

ITEM 61: Intentionally omitted.

ITEM 62: Right of Way and Easement in favor of Mississippi Gas & Electric Company (predecessor to Mississippi Power & Light Company) ten (10) feet in width for location, construction, reconstruction, operation, and maintenance of an electric circuit or circuits across, over, under a part of Lots 1 and 2 of Magnolia Plantation Subdivision in Section 17, Township 15 North, Range 3 East granted by Mrs. Enola S. Carnathan by instrument dated May 1, 1930, recorded in Book 180 at Page 486, which right of way is depicted and designated as Exception 62 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 63: Encroachment of storage buildings (2) onto that portion of the subject property situate in Section 17, Township 15 North, Range 3 East which is North of Old Wigwam Road, identified as "(Ref. 298/297)" and depicted as Exception 63 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 64: Encroachment of portable fence onto that portion of the subject property situate in Section 8, Township 15 North, Range 3 East which is North of that certain tract identified as Not in Ownership Colmery (Ref. 218/546)" and depicted as Exception 64 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 65: Encroachment of storage building onto that portion of the subject property situate in Section 8, Township 15 North, Range 3 East which is North of that certain tract identified as Not in Ownership Colmery (Ref. 218/546)" and depicted as Exception 64 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK

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In re:	Chapter 11
CEDAR CHEMICAL CORPORATION and VICKSBURG CHEMICAL COMPANY,	Case Nos. 02-11039 (SMB) and 02-11040 (SMB)
Debtors.	Jointly Administered

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STIPULATION AND ORDER AUTHORIZING ABANDONMENT OF WEST HELENA MANUFACTURING FACILITY AND VICKSBURG MANUFACTURING FACILITY AND GRANTING RELATED RELIEF
(A&F No. 031)

WHEREAS on March 8, 2002 (the "Petition Date"), Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("Vicksburg") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Court");

WHEREAS Cedar owns certain lots, pieces, tracts or parcels of land located at or near 49 Phillips Road 311 in West Helena, Arkansas, more particularly described in Exhibit A hereto, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "West Helena Facility");

ATTACHMENT "C" TO RECEIVER DEED
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WHEREAS Vicksburg owns certain lots, pieces, tracts or parcels of land located at or near 4280 Rifle Range Road in Vicksburg, Mississippi, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "**Vicksburg Facility**;" the term "**Vicksburg Facility**" includes all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi);

WHEREAS on August 29, 2002 the Debtors filed a motion (the "**Motion**") pursuant to sections 105(a) and 554(a) of the Bankruptcy Code seeking an order authorizing the abandonment by Cedar of the West Helena Facility and the abandonment by Vicksburg of the Vicksburg Facility and granting related relief;

WHEREAS the Court signed an order dated September 4, 2002 scheduling a hearing on the Motion (the "**Scheduling Order**");

WHEREAS a statement in support of the Motion was filed by JPMorgan Chase Bank, as agent (the "**Agent**") to the pre-petition secured lenders (the "**Secured Lenders**"), as listed under a certain Credit Agreement dated as of November 3, 1995, as amended, supplemented or otherwise modified, among Cedar, the Secured Lenders and the Agent (to avoid doubt, "Secured Lenders" does not include the Debtors, any affiliate of the Debtors, Trans Resources Inc., and Arie Genger);

WHEREAS the Arkansas Department of Environmental Quality (the "**ADEQ**"), the Mississippi Commission on Environmental Quality and the Mississippi Department of Environmental Quality

UNITED STATES BANKRUPTCY COURT
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(collectively, the "MDEQ") and the United States on behalf of the Environmental Protection Agency (the "EPA") (together with the ADEQ and the MDEQ the "Agencies" and each individually an "Agency"), and Harcros Chemicals Inc. each filed objections to the Motion;

WHEREAS the Agent and the Debtors filed a joint reply to the objections of the Agencies;

WHEREAS on or about September 26, 2002, the MDEQ issued Order No. 4486-02 purporting, among other things, to enjoin Vicksburg from transferring the Vicksburg Facility to another party without complying with Debtors' environmental permits.

WHEREAS good and sufficient notice of the Motion has been provided by the Debtors in accordance with the terms of the Scheduling Order;

WHEREAS a hearing on the Motion was held on September 25, 2002; and an evidentiary hearing on the Motion was held on October 7, 2002 (the "Evidentiary Hearing");

WHEREAS the West Helena Facility and the Vicksburg Facility (collectively, the "Facilities") are of inconsequential value and benefit to the estates of the Debtors and that such estates lack sufficient unencumbered assets with which to continue the maintenance, management and oversight of the Facilities;

WHEREAS, the Debtors have cooperated with the Agencies in the transition of the Facilities prior to their proposed abandonment;

WHEREAS the Debtors, the Agencies and the Agent (on behalf of the Secured Lenders) agree to compromise and resolve the various objections to the Motion as provided herein;

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration receipt of which is hereby acknowledged;

UNITED STATES BANKRUPTCY COURT
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IT IS HEREBY STIPULATED and agreed to by and between the parties, subject to approval by the Court, as follows, and upon approval by the Court, it is hereby ORDERED that:

1. The Court has jurisdiction to hear and consider the Motion pursuant to 28 U.S.C. § 1334 and 28 U.S.C. § 157 and to grant the relief requested therein.

2. This is a core proceeding under 28 U.S.C. § 157(b).

3. Good and sufficient notice of the Motion, the proposed abandonment of the Facilities and of the hearings scheduled thereon has been provided and any other requirement for notice be, and hereby is, dispensed with.

4. The Motion, as modified and conditioned herein, is hereby granted.

5. The Facilities are of inconsequential value and benefit to the estates of the Debtors and such estates lack sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Facilities.

6. All requirements of section 554(a) of the Bankruptcy Code for the abandonment of the Facilities have been satisfied and sufficient circumstances exist in these cases to justify the approval of such abandonment, as conditioned herein.

7. The Facilities are hereby abandoned to the pre-petition Debtors effective 11:59 p.m. on October 14, 2002 (the "Effective Time"). The West Helena Facility shall be deemed abandoned to the Cedar non-bankruptcy estate and the Vicksburg Facility shall be deemed abandoned to the Vicksburg non-bankruptcy estate.

8. The Debtors and their respective officers, employees, directors, the pre-petition Debtors' officers, employees and directors and Marotta Gund Budd & Dzera LLC and any of its employees

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(collectively, "MGB") shall have no obligation for the management or operation of the Facilities subsequent to the Effective Time.

9. The Debtors and the officers, employees, agents and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, agents or directors of the Debtors or pre-petition Debtors) shall be free of any liability for any occurrence or event with respect to (i) the Vicksburg Facility occurring subsequent to the Effective Time and (ii) the West Helena Facility occurring subsequent to 5:00 p.m. Eastern Standard Time on October 18, 2002 arising from the abandonment.

10. The United States, on behalf of the EPA, covenants not to sue the officers, employees, and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, or directors of the Debtors or pre-petition Debtors) or MGB for civil liability with respect to the Facilities for any cause of action or other claim for relief asserting environmental liability pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. § 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.), the Clean Water Act (42 U.S.C. § 1251 et seq.) or any state statute, including any regulations promulgated thereunder, for any occurrence or event with respect to the Facilities occurring subsequent to the Effective Time, provided however that this covenant not to sue shall not apply with respect to any affirmative acts of operation or disposal by such persons with respect to the Facilities occurring after the abandonment authorized herein. This covenant not to sue does not pertain to any matters other than those specified in this paragraph.

11. In consideration for the Agent's agreement to allow the Debtors to use an additional amount of cash collateral up to $10,000 to continue the current environmental monitoring and oversight of the West Helena Facility until 5:00 pm Eastern Standard Time on Friday, October 18, 2002 (after which time the

ADEQ or its agent will enter upon the site and assure continued environmental monitoring and oversight of the West Helena Facility), the ADEQ hereby and forever discharges, releases and covenants not to sue, to take any other civil judicial or administrative action (including for injunctive relief) against, or to seek any reimbursement of past or future response costs against, the Agent or any of the Secured Lenders in respect of any hazardous substances, pollutants, contaminants or other environmental conditions, present or existing on or under, or emanating from, the West Helena Facility from the beginning or time until 5:00 pm Eastern Standard Time on Friday, October 18, 2002, including, without limitation, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901 et seq.), the Clean Air Act (42 U.S.C. Sections 7401 et seq.), the Clean Water Act (42 U.S.C. Sections 1251 et seq.), and Titles 8 and 15 of the Arkansas Code, in each case as amended and including any regulations promulgated thereunder. This Stipulation and Order settles and resolves, without the admission or adjudication of any issue of fact or law, the Agent's and each of the Secured Lenders' potential liability to the ADEQ, with respect to all matters addressed herein, and the Agent and each of the Secured Lenders shall be entitled to protection against contribution claims to the maximum extent provided pursuant to 42 U.S.C. Section 9613(f)(2).

12. After the Effective Time, the EPA and ADEQ, and their agents, shall at all times have the right to access the West Helena Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the West Helena Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions

UNITED STATES BANKRUPTCY COURT

or response measures. Debtors agree to request that ENSAFE provide ADEQ copies of any documents generated, collected or otherwise in the possession of ENSAFE that relate to the West Helena Facility.

13. The Debtors are authorized to cancel any insurance policies pertaining to the Facilities as of the Effective Time, except to the extent the premiums for such insurance coverage have been paid in full and the Debtors would not be entitled to a refund, if such insurance coverage was canceled.

14. After the Effective Time, the EPA and MDEQ, and their agents, shall at all times have the right to access the Vicksburg Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the Vicksburg Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions or response measures. This provision shall not act in derogation of Miss. Code Ann. § 49-17-21 or pre-existing state permit conditions with regard to access.

15. With the consent of the Secured Lenders, all mortgages, liens and other security interests held by the Secured Lenders in the Facilities or any part thereof, including the land and any buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (the "Secured Lender Liens"), shall be, and are hereby unconditionally and irrevocably deemed released, discharged and terminated as of the Effective Time and the abandonment of the West Helena Facility to the Cedar non-bankruptcy estate and the abandonment of the Vicksburg Facility to the Vicksburg non-bankruptcy estate shall, in each case, be free and clear of the Secured Lender Liens, and this Stipulation and Order shall be binding upon and govern the acts of all entities, including, without limitation, all filing agents, filing officers, title agents, title companies, administrative

UNITED STATES BANKRUPTCY COURT
SEAL

agencies, governmental departments, secretaries of state, federal, state and local officials and all other persons and entities who may be required, by operation of law, the duties of their office or contract, to accept, file, register or otherwise record or release any documents or instruments.

16. Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by its terms.

17. Absent an objection, the leases for personal property located at the Facilities (the "Facility Leases"), a schedule of certain of such leases is annexed hereto as Schedule I, shall be deemed rejected pursuant to section 365(a) of the Bankruptcy Code, as of one day subsequent to the date that the Debtors provide the lessors under the Facility Leases (the "Lessors") with notice by overnight delivery of such proposed rejection. Such notice also shall provide (i) for a ten-day period within which such Lessors may file an objection to such rejection and (ii) that the Lessors should immediately contact Mr. Philip Gund, the Debtors' "Restructuring Officer" or a person designated by Mr. Gund to arrange for a pick-up of the personal property under the Facility Leases.

18. MDEQ, by its agreement to this Stipulation and Order, does not waive any defenses created by Miss. Code Ann. § 11-46-9, nor accept any liabilities not otherwise imposed by operation of law.

19. The Debtors waive and relinquish their interest, if any, in (i) Trustmark National Bank Trust and Asset Management Account No. 35-L903-00-8; (ii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "EPA Agreement"); (iii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "Mississippi Department of Natural Resources Agreement "); and (iv) Amendment dated June 27, 1986 to the Mississippi Department of Natural Resources Agreement.

20. Each signatory to this Stipulation and Order certifies that he or she is authorized to enter into the terms and conditions of this Stipulation and Order and to bind legally the party represented by him or her except that the execution of this Stipulation and Order by the Assistant Attorney General is required with respect to the United States.

21. This Stipulation and Order shall be deemed a "Final Order" when (i) the time to appeal or seek review, rehearing, reargument or certiorari has expired and no stay of appeal is in effect or petition for review, rehearing, reargument or certiorari proceeding is pending; or (ii) an appeal of this Stipulation and Order has been affirmed and the time for further appeal has expired.

22. As a contribution to the environmental cleanup of the Facilities, the Debtors shall pay $200,000 to the ADEQ and $200,000 to the MDEQ from the "proceeds of any sale by the Debtors of the EPA Registrations" deposited into "Avoidance Realization Account" as provided in paragraph 19 of the "Final Order (i) Authorizing Use of Cash Collateral (ii) Providing for Adequate Protection and (iii) Granting Related Relief dated August 21, 2002 (the "Final Cash Collateral Order"), notwithstanding any provisions in the Final Cash Collateral Order to the contrary, but only to the extent the ADEQ and MDEQ

are granted allowed administrative claims in those amounts under section 503(b) of the Bankruptcy Code. The MDEQ and ADEQ shall be entitled to such an administrative priority to the extent that they can demonstrate that such expenses were incurred with respect to the Facilities and were consistent with applicable environmental laws. The ADEQ and MDEQ agree that the Debtors or any chapter 7 trustee in the Debtors' cases will have no administrative expense liability to the MDEQ and ADEQ in excess of the $200,000 claims provided herein. Solely in connection with the confirmation of a chapter 11 plan, the Agencies agree not to object to a plan on the basis of section 1129(a) (9)(A) of the Bankruptcy Code. The abandonment of the Facilities and payment of $400,000 shall be without prejudice to additional administrative expenses or general unsecured claims of the United States, except to the extent that the United States asserts a claim as an assignee of ADEQ or MDEQ. Nothing in this Stipulation and Order shall waive or prejudice any right of any party to object to additional claims by the EPA on any ground other than a lack of an entitlement to an administrative priority based on the abandonment of the Facilities. The United States may perfect a lien for its costs with respect to the Facilities on the abandoned property to the extent permitted by applicable law.

23. The Debtors are authorized to transfer or otherwise make available all books and records relating to the Vicksburg Facility and/or the West Helena Facility (the "Facility Books and Records") to any Agency making such request without further order of the Court. Subject to further order of the Court, the Debtors shall secure and preserve the Facility Books and Records until such time as they are transferred to an Agency and provide each of the Agencies at least ten (10) days notice of their intention to destroy or discard any of the Facility Books and Records or transfer such Facility Books and Records to one of the Agencies.

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24. The Debtors are hereby authorized to execute and deliver any instrument and perform any other act that is necessary in order to effectuate the purposes of this Stipulation and Order.

25. This Court shall retain jurisdiction to hear and determine any matter arising from or relating to this Stipulation and Order.

Dated: October 18, 2002

FOR THE DEBTORS

/S/_____
Yehuda Yoked, President
Cedar Chemical Corporation

/S/_____
Yehuda Yoked, President
Vicksburg Chemical Company

AGREED as to paragraphs 1 through 7 (inclusively), 11, 15, 20, 21, 24 and 25. NO OBJECTION as to the remaining paragraphs.

FOR THE AGENT, ON BEHALF OF
THE SECURED LENDERS

Dated: October 18, 2002

/S/_____
Benjamin Kaminetzky (BK 7741)
DAVIS POLK & WARDWELL
450 Lexington Avenue
New York, New York 10017

Counsel for JPMorgan Chase Bank, as
Agent for the Secured Lenders

MANAGE... UNITED STATES BANKRUPTCY COURT

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: New York, New York
October 17, 2002

JAMES B. COMEY
United States Attorney for the
Southern District of New York
Attorney for the United States

By: /S/_____
David J. Kennedy (DK-8307)
Assistant United States Attorney
100 Church Street - 19th Floor
New York, New York 10007
Temp. Tel: (718) 422-5649
Temp. Fax: (718) 422-1789

Except as to paragraph 9:

_____
THOMAS L. SANSONETTI
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044 - 7611

Dated: Washington, DC
October __, 2002

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Atlanta, Georgia
October 18, 2002

/S/_____
J. I. PALMER, Jr.
Regional Administrator
U.S. Environmental Protection Agency,
61 Forsyth Street, S.E.
Atlanta, Georgia 30303
(404) 562-9674; telefax: (404) 562-9664

Region 4

UNITED STATES BANKRUPTCY COURT SEAL

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Dallas, Texas
October 17, 2002

/S/_____
MARK A. PEYCKE
Chief, Superfund Branch
Office of Regional Counsel, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, Texas 75202
(214) 665-3159; telefax: (214) 665-6460

IMANAGE:40801.8

Dated: October 17, 2002

FOR THE MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

/S/_____
Charles H. Chisolm
Executive Director

Dated: October 17, 2002

/S/_____
Chuck D. Barlow
General Counsel

UNITED STATES BANKRUPTCY COURT
DAMAGE:60801.8

Dated: October 18, 2002

FOR THE ARKANSAS DEPARTMENT
OF ENVIRONMENTAL QUALITY

/S/_____
Marcus Devine
Director

IT IS SO ORDERED:

Dated: New York, New York
October 18, 2002

/s/ STUART M. BERNSTEIN
Chief United States Bankruptcy Judge

I hereby attest and certify on 3/16/06
that this document is a full, true and correct
copy of the original filed on the court's
electronic case filing system.

Clerk, US Bankruptcy Court, SDNY

By _____ Deputy Clerk

IMANAGE:69801.1

Schedule I
Personal Property Leases of the Debtors at the Facilities

A. West Helena Facility Leases

Equipment	Contact	Account #	Monthly Payment
Fork Lift SN 5AM09021	Grady Jones Co, Inc. 901-365-8830	112725	659.12
Fork Lift	Grady Jones Co, Inc. 901-365-8830	112725	400.00
Fork Lift	Citicorp Del-Lease, Inc. 800-227-6766		1,075.68
Phone System	Avaya Financial Services 800-5276-9876 X7401	8623553	1,385.95
Xerox 5828 Copier sn 2 WU-063639	Xerox Capital Services, LLC	953303484	126.70
Xerox 5828 Copier sn 2 WU-070028	Xerox Capital Services, LLC	958867558	219.30

B. Vicksburg Facility Leases

Equipment	Contact	Account #	Monthly Payment
Locomotive	Birmingham Rail & Locomotive Company		5,000.00
Office F&F	Steelcase Financial Service		1,540.94
2001 Tiago Motor Home	Americal Lease Plans, Inc.		1,238.26
Hyster Forklift Ser# H177B26045Y	NMHG Financial Services		414.00

IMANAGE:

Equipment	Contact	Account #	Monthly Payment
Hyster Forklift Ser# H177B31403Y	De Lage Landen Financial Services, Inc. 800-736-0220	143257	488.99
Hyster Forklift Ser# H177B31404Y	De Lage Landen Financial Services, Inc. 800-736-0220	143257	488.99

Exhibit A

Description of West Helena Facility

EXHIBIT A

Description of the Land

Commencing at the Southeast corner of Section 14, T2S, R4E, thence West 3517.8 feet; thence North 1980.0 feet; thence N 35 degrees, 34' W 1122.6 feet to the East right-of-way of State Highway No 242; thence N 54 degrees 12' E 1553.1 feet along said East right-of-way of State Highway No. 242 to the Northerly line of a Dedicated Street and the point of beginning; thence, from the point of the beginning, S39 degrees 58' E 1341.7 feet along the Northerly line of said Dedicated Street; thence N 28 degrees 42' E 827.9 feet; thence S 55 degrees 45' E 806.3 feet; thence N 28 degrees 42' E 197.6 feet to the Southerly line of a 50 foot Easement recorded in Book 506, Page 462, of the Official Records of Phillips County, Arkansas; thence N 53 degrees 29' W 810.0 feet along the Southerly line of said Easement recorded in Book 506, Page 462, to the Westerly line thereof; thence N 28 degrees 42' E 50.5 feet along the Westerly line of said Easement recorded in Book 506, Page 462, to the Southerly right-of-way of the Missouri Pacific Railroad; thence N 53 degrees 29' W 919.5 feet along said Southerly right-of-way of the Missouri Pacific Railroad to the East right-of-way of State Highway No. 242; thence S 54 degrees 12' W 822.6 feet, more or less, along said East right-of-way of State Highway No. 242 to the point of beginning; and

Commencing at the Southeast corner of Section 14, Township 2 South Range 4 East; thence West 3517.8 feet; thence North 1980 feet; thence North 35 degrees 34' West 1122.6 feet to the Easterly right of way of State Highway No. 242; thence North 54 degrees 12' East 790.52 feet along said Easterly right of way to the point of beginning; thence, from the point of beginning, continue North 54 degrees 12' East 702.58 feet to the Southerly right of way of an industrial road; thence South 39 degrees 58' East 1243.29 feet along said Southerly right of way to the Westerly right of way of a proposed road; thence South 54 degrees 12' West 702.58 feet along said Westerly right of way; thence of North 39 degrees 58' West 1243.29 feet to the point of beginning.

I hereby attest and certify on 3/16/06 that this document is a full, true and correct copy of the original filed on the court's electronic case filing system.

Clerk, US Bankruptcy Court, SDNY

By: _____ Deputy Clerk

UNITED STATES BANKRUPTCY COURT

BEFORE THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

In Re: **Agreed Order Of Harcros Chemicals, Inc., Mississippi Silvertip Development, LLC, Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. To Mitigate Environmental Impacts At The Former Vicksburg Chemical Company Property In Vicksburg, Mississippi**

Order No. 5069-05

AGREED ORDER

Come now the Mississippi Commission on Environmental Quality ("Commission"), acting through the staff and Executive Director of the Mississippi Department of Environmental Quality ("MDEQ"), Harcros Chemicals, Inc. ("Harcros"), Mississippi Silvertip Development, LLC ("Silvertip"), Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. ("ARCADIS"), and agree as follows:

1. Vicksburg Chemical Company ("VCC") owns, and for many years prior to March 2002 operated, a chemical manufacturing facility, hereafter referred to as the "Plant Site," at 4280 Rifle Range Road in Vicksburg, Mississippi. The Plant Site, which consists of approximately 40 acres, from time to time, produced fertilizer products, pesticides, and other chemicals. The soil and groundwater underneath the Plant Site now is contaminated with various chemicals. In 1992, the United States Environmental Protection Agency ("EPA") and Cedar Chemical Corporation ("Cedar"), VCC's parent corporation, entered a consent decree (Consent Decree, Civil Number W92-008B) requiring assessment and remediation activities at the Plant Site. Since that time, much study, but little remediation, has been accomplished at the Plant Site.

2. On March 8, 2002, VCC and Cedar filed petitions in bankruptcy in the United States Bankruptcy Court for the Southern District of New York. VCC and Cedar then filed with that court a motion to allow the "abandonment" of the VCC property,

hereafter referred to as the "Vicksburg Facility"[1] and of a sister facility owned by Cedar in West Helena, Arkansas. The Commission, through MDEQ, the Arkansas Department of Environmental Quality ("ADEQ"), EPA Region 4, EPA Region 6, and the United States Department of Justice ("USDOJ") contested this motion. The court eventually approved an agreement between the parties whereby Cedar and VCC were allowed to abandon the properties from the bankruptcy estate; thus causing the properties to revert to the ownership of the pre-petition debtors or, as the bankruptcy court termed it, the "non-bankruptcy estate" (which included no remaining assets) and freeing the bankruptcy estate from further responsibility for the properties except as required by the court's order. See Stipulation And Order Authorizing Abandonment Of West Helena Manufacturing Facility And Vicksburg Manufacturing Facility And Granting Related Relief, Case Nos. 02-11039 (SMB) and 02-11040 (SMB) (Bankr. S.D.N.Y. Oct. 18, 2002) ("Stipulation and Order"), attached to this Agreed Order as Exhibit 1.

3. The court's order provides in part:

> Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by them.

The Commission is fulfilling its duty to provide a copy of the Stipulation and Order by attaching that document as Exhibit 1 to this Agreed Order.

[1] The Stipulation and Order defines the "Vicksburg Facility" as "all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi." Stipulation and Order at 2. The terms "Vicksburg Facility" and "VCC property" as used in this order are defined in the same way. By securing the bankruptcy court's definition of the term in this fashion, MDEQ gained the authority to control the final disposition not only of the contaminated 40 ± acre Plant Site, but also of the 500 ± acres of additional real estate owned by VCC in Warren County, which is not believed to be contaminated, and all materials and equipment on that property.

4. Beginning in late 2002, the Commission conducted a request for proposal process by which it solicited offers from parties interested in obtaining all or part of the Vicksburg Facility. Harcros submitted a proposal through which, among other things, it identified ARCADIS as its remediation contractor at the Plant Site and committed to include the City of Vicksburg in determining the future land use of the uncontaminated areas of the Vicksburg Facility. On August 29, 2003, MDEQ selected the Harcros proposal for implementation. On January 13, 2005, the Harcros proposal was amended to include Silvertip as an additional partner. Under the amended proposal, Silvertip is responsible for the remediation of the Plant Site and compliance with this Agreed Order. Harcros intends to locate certain chemical blending and mixing operations at the Plant Site, as well as distribution facilities. This Agreed Order sets forth the commitments that Silvertip now makes to the Commission in consideration for the transfer of the respective property and facilities and as part of the implementation of the proposal.

5. On the date of the conveyance of the Vicksburg Facility, Silvertip shall simultaneously establish an escrow account ("Remediation Account") in the amount of $8,000,000.00 for the purpose of receiving and administering the funds of the Remediation Account. The Remediation Account shall be opened in the names of both Mississippi Bluffs Industrial Park, LLC and ARCADIS.[2] The funds, including all interest earned on the Remediation Account, shall be used for the mitigation of environmental impacts at the Plant Site as directed by MDEQ and as set forth in the Professional Services Agreement ("PSA") attached as Exhibit 2. MDEQ shall be a party to the escrow agreement establishing the Remediation Account, and the escrow agreement shall provide that no disbursements can be made from the Remediation Account without MDEQ's written approval, which approval shall not be unreasonably withheld. The

[2] ARCADIS will perform remediation work at the plant site. Mississippi Bluffs Industrial Park, LLC will receive conveyance of the 40± acre Plant Site and will oversee ARCADIS's remediation efforts.

escrow agreement shall also provide that the remaining balance of the Remediation Account, if any, shall be returned to Silvertip after receipt of a no further action letter from MDEQ, or at MDEQ's concurrence.

6. ARCADIS shall perform remediation services as set forth in the PSA. Those services include an initial baseline assessment of the Plant Site, followed by development of a groundwater remediation plan, a soil action plan, subsequent implementation of the plans, implementation of any institutional controls, and any other work required by MDEQ that is reasonable and related to remediation of the Plant Site to the extent that sufficient funding is available in the Remediation Account. This work shall be performed pursuant to Work Authorizations with MDEQ's written approval as set forth in the PSA. One of the objectives of this Agreed Order is to have a "remedy in place"[3] within three years, at which time long term operation, maintenance, and monitoring will be evaluated. The parties acknowledge that the term "remedy in place" does not necessarily mean that remediation will be complete within three years. Thus, the Remediation Account will continue to be utilized to pay remediation costs until remediation is complete, as determined by MDEQ, or until funds in the Remediation Account are exhausted. The costs and charges associated with any Work Authorizations approved by MDEQ shall be the allowable cost of remediation for purposes of House Bill 1294, enacted in the 2005 General Session.

7. In the event that the termination provisions of the PSA are triggered and ARCADIS no longer serves as the contractor, then Mississippi Bluffs Industrial Park, LLC shall select another remediation contractor, with MDEQ's written approval, and

[3] "Remedy in Place (RIP)" means that a final remedial action has been constructed and implemented and is operating as planned in the remedial design. An example of a Remedy in Place is a pump-and-treat system that is installed, is operating as designed, and will continue to operate until cleanup levels have been attained. Because operation of the remedy is ongoing, the site cannot be considered Response Complete which will be determined by MDEQ.

ARCADIS shall be removed as a party to this Agreed Order, and the Remediation Account after payment of fees owed under the PSA. In the event that MDEQ does not, for whatever reason, approve the selection of another contractor by Mississippi Bluffs Industrial Park, LLC, MDEQ shall select another contractor and shall direct the expenditure of funds from the escrow account for the remediation of the Plant Site.

8. Silvertip and Mississippi Bluffs Industrial Park, LLC will satisfy its obligations under this Agreed Order and cannot be deemed in default of the Agreed Order, and neither Silvertip nor the entities designated in Exhibit 3, or their constituent owners, successors, or assigns will have liability for pre-existing environmental conditions at the Plant Site as of the effective date of this Agreed Order; upon the establishment by Silvertip of the Remediation Account as set forth in this Agreed Order and in the PSA.[4]

9. Harcros, as an occupant in its chemical blending, mixing, and/or distribution operations, shall provide ARCADIS reasonable access to the Plant Site to perform remediation services, and shall not interfere with or impede the remediation services. ARCADIS agrees to use reasonable precaution in the remediation activities at the Plant Site to prevent any unreasonable interference or disturbance to the business operations of Harcros at the Plant Site.

10. The parties to this Agreed Order agree that the trust fund created at First National Bank, Vicksburg, Mississippi (now known as Trustmark National Bank) by two trust agreements between First National Bank and Vertac Chemical Corporation, dated October 6, 1982, as amended by a trust agreement dated June 27, 1986 wherein Cedar was substituted for Vertac Chemical Corporation in the trust agreement are not

[4] Silvertip will meet its obligations under the amended proposal by paying $8,000,000.00 into the Remediation Account. Mississippi Bluffs Industrial Park, LLC, to which the 40± acre Plant Site will be conveyed, will oversee ARCADIS's remediation efforts. Mississippi Bluffs Development, LLC will develop the 500± acres that are not believed to be contaminated.

considered a part of the "Vicksburg Facility" as defined in the aforementioned Stipulation and Order. Therefore, ownership of the referenced trust fund lies exclusively with MDEQ.

11. Upon execution of this Agreed Order, MDEQ shall direct the Vicksburg non-bankruptcy estate to transfer its complete interests in the "Vicksburg Facility" in two parcels of property to entities designated by Silvertip as set forth in Exhibit 3. The remaining terms of this Agreed Order are not effective until the parcels have been conveyed as set forth in Exhibit 3 and the conveyances have been recorded in the land records in Warren County, Mississippi.

12. Nothing contained in this Agreed Order shall limit the rights of the MDEQ or the Commission to take enforcement or other actions against Harcros, Silvertip, or Mississippi Bluffs Industrial Park, LLC for future violations of environmental laws, rules, and regulations.

13. Nothing contained in this Agreed Order is intended to create any obligation or liability of ARCADIS relating to the contamination at the Plant Site, except as agreed upon under the terms of the PSA.

ORDERED and AGREED, this the 19th day of December, 2005.

Charles H. Chisolm
Executive Director
Mississippi Commission on
Environmental Quality

AGREED, this the 25 day of October, 2005.

BY: _____

TITLE: MANAGING MEMBER
Mississippi Silvertip
Development, LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Silvertip Development, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25 day of October, 2005.

BY: _____

TITLE: MANAGING MEMBER
Mississippi Bluffs Industrial Park,
LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Bluffs Industrial Park, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25th day of October, 2005.

BY: Erhardt Werth

TITLE: EXECUTIVE VICE PRESIDENT
ARCADIS G&M, Inc.

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Erhardt Werth who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by ARCADIS G&M, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Gleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 1st day of ~~October~~ November, 2005.

BY: [signature]

TITLE: President & CEO
Harcros Chemical, Inc.

SUSAN G. LOCKE
Notary Public - State of Kansas
My Appt. Expires 7-6-09

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named KEVIN G. MIRNER who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Harcros Chemical, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 1st day of ~~October~~ November, 2005.

Susan G. Locke
Notary Public

My Commission Expires:

7-6-09

EFiled: Feb 23 2006 2:20
Transaction ID 10645293

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

IN AND FOR NEW CASTLE COUNTY

IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation) C.A. NO 1940-N

ORDER

NOW, THEREFORE, upon the petition of the Mississippi Department of Environmental Quality ("Petitioner"), for the appointment of Carrie Tillman as Receiver of Vicksburg Chemical Company (the "Company"), an insolvent Delaware corporation, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to the designee of Petitioner; and

WHEREAS, upon consideration of the foregoing and it appearing that the Company is insolvent and that the Abandoned Property is to be transferred to the Petitioner's designee pursuant to an order of the U.S. Bankruptcy Court for the Southern District of New York dated October 18, 2002;

IT IS ORDERED, this 22nd day of February, 2006, that:

1. Carrie Tillman be, and hereby is, appointed as Receiver for the Company, pursuant to the provisions of 8 Del. C. § 291, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to Petitioner's designee.

2. The appointment of the Receiver shall not affect any dissolution, liquidation, winding up, revocation or continuation of the Company's bankruptcy estate.

3. The Receiver shall serve without bond.

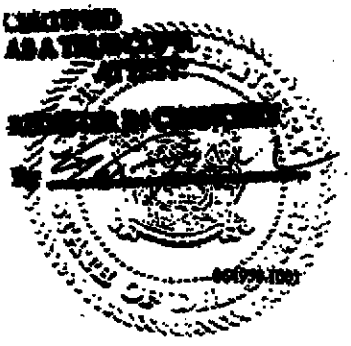
4. Pursuant to Court of Chancery Rule 148, Court of Chancery Rules 149 through 168 shall not be applicable to this proceeding. Instead, Receiver shall, within sixty (60) days of

ATTACHMENT 1 TO RECEIVER DEED
PAGE 1 OF 2

her appointment, file with this Court a report stating that she has taken all actions necessary to effect and confirm the transfer to Petitioner's designee of the Abandoned Property. Receiver shall automatically be discharged following her appointment, and this case shall be dismissed, unless Receiver or any other interested person shall petition the Court within sixty (60) days following appointment of Receiver and show good cause why Receiver should not be discharged and the case dismissed.

5. The validity, interpretation and performance of this Order shall be governed by the laws of the State of Delaware, without regard to Delaware's conflicts of laws principles. This Court hereby retains jurisdiction for the purposes of implementing the terms of this Order, including the resolution of any disputes that may arise with respect to the interpretation or effectuation of any of the provisions of this Order.

The Honorable Vice Chancellor



GRANTED EFiled: Apr 19 2006 4:00PM EDT
Transaction ID 11083963

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

IN AND FOR NEW CASTLE COUNTY

IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation) C.A. NO 1940-N

ORDER

NOW, THEREFORE, upon the petition of the Mississippi Department of Environmental Quality ("Petitioner"), for the appointment of Carrie Tillman as Receiver of Vicksburg Chemical Company (the "Company"), an insolvent Delaware corporation, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to the designee of Petitioner; and

WHEREAS, upon consideration of the foregoing and it appearing that the Company is insolvent and that the Abandoned Property is to be transferred to the Petitioner's designee pursuant to an order of the U.S. Bankruptcy Court for the Southern District of New York dated October 18, 2002; and

WHEREAS, on February 22, 2006, this Court entered an Order appointing Carrie Tillman as Receiver for the Company pursuant to the provisions of 8 Del. C. § 291; and

WHEREAS, the Receiver has not completed all actions necessary to effect and confirm the transfer of the Abandoned Property, as previously defined;

IT IS ORDERED, this 19 day of April, 2006, that:

1. The appointment of Carrie Tillman as Receiver for the Company shall be extended for an additional 60 days from the date of this Order.

2. All other provisions of the Court's Order of February 22, 2006 shall remain in full force and effect.

/s/ Donald F. Parsons Jr.
Vice Chancellor Donald F. Parsons Jr.

CERTIFIED
AS A TRUE COPY:
ATTEST:

REGISTER IN CHANCERY

By

DB02:5279470.1 064958.1001

Attachment "F" to Receiver Deed
Page 1 of 2

Court: DE Court of Chancery

Judge: Parsons, Donald F

File & Serve reviewed Transaction ID: 11035563

Current date: 4/19/2006

Case number: 1940-N

Case name: In Re: Vicksburg Chemical Co

/s/ Judge Donald F Parsons Jr

Grantors' Address:

c/o P. O. Drawer 119
Jackson, MS 29201
Attn: Rod Clement
Phone: 205-394-7946

Grantee's Address:

c/o P. O. Drawer 119
Jackson, MS 39201
Attn: Rod Clement
Phone: 601-933-0088

THIS INSTRUMENT PREPARED BY/TO BE RETURNED TO:
William L. Shappley
P. O. Box 991
1301 Washington Street, 800 Trustmark Building
Vicksburg, MS 39181-0991
Phone: 601-636.8451
Facsimile: 601.636.8481
Internet: www.wsbr@vicksburg.com

INDEXING INSTRUCTIONS
RECORDING INSTRUCTIONS
TO THE CHANCERY CLERK OF WARREN COUNTY, MISSISSIPPI:
The property described in this instrument is situated as follows:

Part Fr. Sections 3, 4, 5, 8, 9, 10, 17 of Township 15 North, Range 3 East, and Part of Lot 3 of the Jett Survey, and Part of Lots 1 and 2 of Magnolia Plantation, Vicksburg, Warren County, Mississippi

Please index accordingly in your sectional indices.

SPECIAL WARRANTY DEED PURSUANT TO COURT ORDERS AND OTHER REGULATORY AGENCY ORDERS DETAILED HEREINBELOW

WHEREAS, on March 8, 2002 (the "Petition Date") Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("VCC") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") in Case Nos. 02-11039 and 02-11040 (SMB); and

WHEREAS, on the Petition Date VCC was vested with title to certain tracts or parcels of land containing 680 acres, more or less, in Vicksburg, Warren County, Mississippi, together with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (collectively, the "Vicksburg Facility"); and

WHEREAS, on October 18, 2002, the Bankruptcy Court entered an order styled "Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief" (the "Abandonment Order"), wherein the respective lands and other personal or mixed property of the Debtors were found to be of inconsequential value and benefit to the estates of the Debtors, including the land and other personal or mixed property comprising the Vicksburg Facility and, further, that the estates of the Debtors lacked sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Vicksburg Facility, and abandoned the Vicksburg Facility to the Vicksburg non-bankruptcy estate (the "VCC Non-Bankruptcy Estate") as of 11:59 p.m. on October 14, 2002, a copy of which Abandonment Order is attached hereto as Attachment "C" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, the Abandonment Order further granted the Mississippi Department of Environmental Quality ("MDEQ") the right of access to the Vicksburg Facility for the purpose of assessing environmental conditions and performing all removal, remediation, corrective actions and measures deemed necessary by MDEQ and ordered the VCC Non-Bankruptcy Estate to convey title to the Vicksburg Facility or parts thereof to any entity identified by MDEQ by a written request of MDEQ, and that any entity to whom the Vicksburg Facility or any parts thereof are transferred (a "Transferee") is to be given a copy of the Abandonment Order (being the same instrument sometimes referred to as the "Stipulation and Order") and that such Transferee be bound by the terms thereof; and

WHEREAS, the secured lenders who held mortgages, liens, and other security interests in the Vicksburg Facility prior to the filing of the Petition, represented by JPMorgan Chase Bank, as Agent Bank (collectively, the Secured Lenders") consented to the action of the Bankruptcy Court, which specifically ordered in numbered Paragraph 15 in the Abandonment Order, that all mortgages, liens, and other security interests in the Vicksburg Facility or any part thereof, including the land, buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (the "Secured Lender Liens") shall and are unconditionally and irrevocably deemed released, discharged and terminated as of the Effective Time of the abandonment of the Vicksburg Facility to the VCC Non-Bankruptcy Estate and the Vicksburg Facility thereupon deemed free and clear of the Secured Lender Liens, and, further that the Abandonment Order (a/k/a Stipulation and Order) is deemed binding upon and shall govern the acts of all entities, including, without limitation, all filing agents, filing officers, title agents, title companies, administrative agencies, governmental departments, secretaries of state, federal, state, and local officials and all other persons and entities who may be required by operation of law, the duties of their office or contract, to accept, file, register or otherwise record or release any documents or instruments; and

WHEREAS, the Abandonment Order is deemed to be a "Final Order" (the "Final Order") as detailed in numbered Paragraph 21 thereof, all such times for appeal, rehearing, and the like, having long since passed; and

WHEREAS, in a Final Agreed Order dated December 19, 2005, bearing MDEQ Order No. 5069-05 (the "MDEQ Designation Order") MDEQ selected and designated two entities as Transferees of title of the Vicksburg Facility, namely, Mississippi Bluffs Development LLC, a Delaware limited liability company duly qualified in Mississippi (the "Development LLC") and Mississippi Bluffs Industrial Park, LLC, a Mississippi limited liability company (the "Industrial LLC") a copy of which MDEQ Designation Order (without inclusion of the attachments thereto) is attached hereto as Attachment "D" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, MDEQ subsequently filed a petition in the Court of Chancery of the State of Delaware in and for the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation" bearing C. A. No. 1940-N on the docket thereof (the "Delaware Proceeding") wherein MDEQ sought appointment of CARRIE TILLMAN as Receiver of Vicksburg Chemical Company, an insolvent Delaware corporation (being the same entity identified as the VCC Non-Bankruptcy Estate) for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property (being the same property as the Vicksburg Facility") to the designee of MDEQ, the Delaware Proceeding further reciting same is undertaken pursuant to the Abandonment Order of the Bankruptcy Court; and

WHEREAS, the relief sought by MDEQ in the Delaware Proceeding was thereafter granted and Carrie Tillman appointed as Receiver (the "VCC Non-Bankruptcy Estate Receiver") pursuant to order entered February 22, 2006 (the "Delaware Order") a copy of which Delaware Order is attached hereto as Attachment "E", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "F", each of which are incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, MDEQ, by written request to the VCC Non-Bankruptcy Estate Receiver, has directed that portion of the VCC Facility which is described hereinbelow be transferred and conveyed to the Development LLC and the remaining portion of the VCC Facility, which is described in a companion deed of even date herewith and recorded simultaneously in the land records of Warren County, Mississippi, and recorded therein in Deed Book ____ at Page ____, be transferred and conveyed to the Industrial Park LLC.

NOW THEREFORE, IN CONSIDERATION of the mutual covenants and benefits to MDEQ and to the VCC Non-Bankruptcy Estate and for the further consideration of the fulfillment of the terms and provisions of the Abandonment Order and of the Delaware Order, the sufficiency of all of which is hereby acknowledged, the undersigned **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented hereby by its duly authorized Receiver, CARRIE TILLMAN, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the property described hereinbelow and solely in her capacity as the VCC Non-Bankruptcy Estate Receiver and pursuant to the provisions of the Delaware Order described hereinabove (the "Grantor")** does hereby **GRANT, BARGAIN, SELL, CONVEY and WARRANT SPECIALLY** unto **MISSISSIPPI BLUFFS INDUSTRIAL PARK, LLC,** a Mississippi limited liability company (the "Industrial *LLC*") all of that portion of the Vicksburg Facility situated in the City of Vicksburg, County of Warren, State of Mississippi, being more particularly described as follows; to wit:

[SEE SCHEDULE A DESCRIPTION RIDER ATTACHED HERETO AS ATTACHMENT "A" DESCRIBING TRACT P-1, LESS/EXCEPT A TRACT OF LAND DESIGNATED AS BORDEN CHEMICAL PARCEL]

This conveyance and the special warranty hereof are subject to those certain exceptions to warranty as revealed by recent title examination of the land records of Warren County, Mississippi as same pertain to the Property conveyed hereby, which exceptions are detailed within Schedule B of a certain title commitment and policy issued in First American Title Insurance Company (collectively, the "Permitted Exceptions") which Permitted Exceptions are detailed as follows:

[SEE SCHEDULE B PERMITTED EXCEPTIONS ATTACHED HERETO AS ATTACHMENT "B"]

[THE BALANCE OF THIS PAGE LEFT BLANK INTENTIONALLY]

IN TESTIMONY WHEREOF, witness the signature of the Grantor on this the _____ day of _____, 2006.

VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented herein by its duly appointed and authorized Receiver pursuant to authority of Order attached hereto as Attachment "E"

By:_____
CARRIE TILLMAN, as the VCC Non-Bankruptcy Estate Receiver (the "Grantor")

STATE OF DELAWARE
COUNTY OF NEW CASTLE

PERSONALLY appeared before me, the undersigned authority in and for the said county and state, on this _____ day of _____, 2006, within my jurisdiction, the within named, **CARRIE TILLMAN**, who acknowledged to me that she is the duly authorized **Receiver** of **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation**, acting under authority and direction granted by Order of the Court of Chancery of the State of Delaware in the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation, bearing C.A. No. 1940-N on the docket thereof, a copy of which Order is attached hereto as Attachment "E", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "F", and that for and on behalf of the said Vicksburg Chemical Company in her capacity as Receiver, and as the act and deed of said Vicksburg Chemical Company in undertaking all actions necessary to effect and confirm the transfer of that part of the real property of the said Vicksburg Chemical Company which is described upon Attachment "A" hereto, she executed the above and foregoing instrument, after first having been duly authorized so to do.

_____
Notary Public

My Commission Expires:_____

TRACT P-1: PART OF SECTIONS 3,4,5,8,9 & 10, TOWNSHIP 15 NORTH, RANGE 3 EAST, VICKSBURG, WARREN COUNTY, MISSISSIPPI

BEGINNING at an iron pin on the West side of a ditch, said iron pin being further described as lying N 75°10'58" W, 1773.60' from a 2 ½" iron pipe marking the Southwest corner of Section 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi and run thence N 41°11'15" E, 239.94' to an iron pin; thence N 48°32'32" E. 290.75' to an iron pin; thence N 05°29'53" W, 310.80' to an iron pin; thence N 27°27'19" E, 275.17' to an iron pin; thence N 28°57'37" E, 193.32' to an iron pin; thence N 00°55'04" W, 120.20' to an iron pin; thence N 02°10'35" E, 556.62' to an iron pin; thence N 37°18'43" E, 216.46' to an iron pin; thence S 73°23'47" E, 490.81' to an iron pin; thence N 59°07'55" E, 932.53' to an iron pin; thence N 27°12'08" E, 179.85' to an iron pin; thence N 10°53'34" E, 765.83' to an iron pin; thence N 52°29'13" E, 78.78' to an iron pin; thence N 70°28'36" E, 217.79' to an iron pin; thence N 50°05'05" E, 714.15' to an iron pin; thence N 68°07'47" E, 88.55' to an iron pin; thence N 68°07'50" E, 93.07' to an iron pin on the West line of Rifle Range Road; thence along the West line of Rifle Range Road, S 35°05'00" E, 43.07' to an iron pin; thence continuing along the West line of Rifle Range Road, S 27°42'45" E, 130.79' to an iron pin; thence continuing along the West line of Rifle Range Road S 22°33'22" E, 295.33' to an iron pin; thence continuing along the West line of Rifle Range Road S 20°21'10" E, 121.48'to an iron pin at a point where said West line of Rifle Range Road intercepts the center of a creek; thence leaving the West line of Rifle Range Road and run along the center of said creek the following courses and distances:
S 13°37'27" W, 280.96'; S 22°23'38" W, 228.33'; S 15°16'59" W, 410.75';
S 39°08'27" W, 239.59'; S 19°21'42" W, 245.57'; S 44°32'44" W, 617.87';
S 41°54'30" W, 158.39'; S 53°03'19" W, 187.36'; S 49°20'11" W, 190.75';
S 49°30'19" W, 222.86'; S 21°50'24" W, 183.57'; S 08°05'35" W, 265.79';
S 07°33'05" W, 213.43'; S 13°07'18" E, 174.28'; S 21°31'09" W, 146.47';
S 03°54'38" E, 124.97'; S 64°50'02" W, 167.35'; S 88° 51'31" W, 207.17';
S 41°03'24" W, 119.42'; N 81°34'40" W, 203.48'; N 67°07'26" W, 187.06';
S 87°42'08" W, 271.49'; N 82°58'30" W, 88.05'; N 70°13'07" W, 60.37';
S 65°30'17" W, 405.54'; thence leaving the center of said creek and run N 43° 19'25" W, 303.36' to the POINT OF BEGINNING and containing 120.87 Acres and being situated in part of Sections 3, 4, 5, 8, 9, & 10, Township 15 North, Range 3 East, Vicksburg, Warren County, Mississippi.

LESS AND EXCEPT THEREFROM that certain parcel heretofore conveyed to Perkins Industries, Inc. by virtue of deed dated June 1, 1982, recorded in Book 666 at Page 576 and certain easement rights arising under instrument styled "Assignment of Easement" dated June 1, 1982, recorded in Book 666 at Page 577, Borden, Inc., successor to Perkins Industries, Inc. having thereafter conveyed the same property and easement rights therein to Borden Chemical, Inc. by deed recorded in Book 1072 at Page 316, reference to each of which instruments is hereby made.

Schedule B/Attachment "B" to Receiver Deed (Development) and Related Security Instruments
Permitted Exceptions to Title
Mississippi Bluffs Development LLC

ITEM 1: Ad valorem taxes for the year 2006, not due and payable until January 1, 2007, delinquent after February 1, 2007 and subsequent years thereafter.

ITEM 2: Intentionally omitted.

ITEM 3. Any prior reservation or conveyance, together with release of damages, of minerals of every kind and character, including, but not limited to, oil, gas, sand and gravel, in, on, and under the subject property, including, but not limited to: a) provisions contained within deed executed by The Carter Oil Company dated July 11, 1951, filed for record July 24, 1951, recorded in Book 290 at Page 196, wherein a portion of the subject property, containing 64.50 acres, more or less, is conveyed and the mineral interest specified therein reserved unto the Grantors and b) provisions contained within deed executed by George T. Houston, III, et al., dated September 4, 1951, filed for record October 8, 1951, recorded in Book 290 at Page 569, wherein a portion of the subject property, containing 167.75 acres, more or less, is conveyed and the mineral interest specified therein reserved unto the Grantors, but, wherein, in each instance, the respective Grantors agree not to drill any well within 200 feet of any permanent building upon the lands therein described but specify that the Grantee shall leave available to those Grantors, their lessees and assigns, at least 3 drill sites as detailed therein.

ITEM 4: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines and telephone and telegraph wires, granted by Mary Ella Hughes by instrument dated January 27, 1943, recorded in Book 232 at Page 66, depicted and designated as Exception 4 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 5: Intentionally omitted.

ITEM 6: Right of Way and Easement in favor of The Mayor and Aldermen of the City of Vicksburg, 20 feet for the location, operation and maintenance of a sanitary sewer line, granted by Spencer Chemical Company by instrument dated May 24, 1957, filed for record July 22, 1960, recorded in Book 360 at Page 441, wherein the lands through which said easement extend are described, said easement being that depicted and designated as Exception 6 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 7: Easement in favor of the City of Vicksburg, 10 feet in width, for the location, operation and maintenance of a water line, granted by Spencer Chemical Company, by instrument dated September 20, 1952, filed for record July 22, 1960, recorded in Book 360 at Page 445, wherein the lands through which said easement extend are described, said easement being that depicted and designated as Exception 7 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 8: Intentionally omitted.

ITEM 9: Rights of Way and Easements in favor of Mississippi Power & Light Company, granted by Gulf Oil Corporation (successor mesne conveyances to Spencer Chemical Company and eventual grantor of Vicksburg Chemical Company) by instrument dated November 4, 1964, recorded in Book 394 at Page 137, each 20 feet in width, over and across part of Sections 9 and 10, Township 15 North, Range 3 East over and across three separate parcels of land, more particularly described therein, for the location, operation and maintenance of an electric and communications circuit or circuits, depicted and designated as Exception 9, Parcel 1, Parcel 2 and Parcel 3, upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 10: Easement, 15 feet in width, described in instrument executed by American Metal Climax, Inc. ("AMAX") in favor of Gulf Oil Corporation for location, operation, maintenance, repair, replacement and removal of railroad spur tract dated February 10, 1965, recorded in Book 396 at page 230, depicted and designated as Exception 10 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 11: Sewer Easement, over and across those parts of Sections 9 and 10, Township 15 North, Range 3 East more particularly described in instrument executed by Vicksburg Chemical Company, a Mississippi Corporation, successor by mesne conveyances to AMAX, for construction, operation, maintenance and removal of a four inch waste effluent pipeline for transportation of waste effluent for Grantee's plant to the sewage disposal plant owned and operated by the City of Vicksburg, in favor of Gulf Oil Corporation dated May 24, 1973, recorded in Book 504 at Page 427, depicted and designated as Exception 11 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 12: Drainage Easement in favor of State Highway Commission of Mississippi granted by Eagle River Chemical Corp. by instrument dated November 11, 1977, filed for record February 3, 1978, recorded in Book 584 at Page 549, being a parcel containing 2.87 acres, more or less, in Section 9, Township 15 North, Range 3 East, more particularly described therein, depicted and designated as Exception 12 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 13: Right of way for electric power transmission line dated April 30, 1980, recorded in Book 630 at Page 211 granted by A. J. Messina in favor of Vertac, Inc., over and across Section 10, Township 15 North, Range 3 East, described in said instrument, the rights of Vertac, Inc. in and to said easement having been subsequently assigned by Vertac, Inc. to Mississippi Power & Light Company, by instrument recorded in Book 632 at Page 42, depicted and designated as Exception 13 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 14: Easement for location, construction, operation and maintenance of an electric transforming substation and appurtenances thereto by instrument dated April 14, 1980, recorded in Book 630 at Page 320, granted by Vertac Chemical Corporation in favor of Mississippi Power & Light Company, upon, over and across Sections 5, 9 and 10, Township 15 North, Range 3 East, described in said instrument, depicted and designated as Exception 14 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 15: Permanent easement in favor of Mississippi Fuel Company, 30 feet in width, for the location, operation and maintenance of a pipeline, for transmission of oil, gas and other minerals, granted by Cedar Chemical Corporation, by instrument dated October 9, 1987, filed for record November 18, 1987, recorded in Book 830 at Page 46, wherein the lands through which said easement extend are described as being part of Sections 8, 9, 10 and 17, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 15 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 16: Intentionally omitted.

ITEM 17: Permanent Sewer Easement in favor of the Mayor and Aldermen of the City of Vicksburg, 35 feet in width for the location, operation and maintenance of a sanitary sewer line, granted by Vicksburg Chemical Company by instrument dated April 12, 1994, filed for record April 28, 1994, recorded in Book 1008 at Page 810, wherein the lands through which said easement extend are described as Sections 8 and 9, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 17 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 18: Permanent Sewer Easement in favor of the Mayor and Aldermen of the City of Vicksburg, 20 feet in width for the location, operation and maintenance of a sanitary sewer line, granted by Vicksburg Chemical Company by instrument dated April 12, 1994, filed for record April 28, 1994, recorded in Book 1008 at Page 818, wherein the lands through which said easement extend are described as Section 8, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 18 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 19: Right of Way and Easement in favor of Mississippi Power & Light Company, granted by Vicksburg Chemical Company by instrument dated February 11, 1992, recorded in Book 952 at Page 725, 30 feet in width, over and across part of Section 4, Township 15 North, Range 3 East, at a location said to be "staked and pointed out to the Grantor" for the location, operation and maintenance of an electric and communications circuit or circuits, depicted and designated as Exception 19 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 20: Easement and Right of Way in favor of Rainbow Development Corporation, 15 feet in width , for the location, operation and maintenance of a sanitary sewer line and for a water line granted by Vicksburg Chemical Company by instrument dated December 27, 1994, filed for record December 30, 1994, recorded in Book 1030 at Page 832, wherein the lands through which said easement extend are described as Sections 8, 9 and 10, Township 15 North, Range 3 East, reserving the right on the part of the Grantor to tie into any lift stations constructed by the Grantee, said easement being that depicted and designated as Exception 20 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, and having been subsequently assigned by the Grantee therein unto the Mayor and Aldermen of the City of Vicksburg by instrument October 16, 1995, recorded in Deed Book 1060 at Page 167.

ITEM 21: Intentionally omitted.

ITEM 22: Right of Way and Easements in favor of Vicksburg Refining, Inc., 30 feet in width and approximately 600 feet in length, for the installation and maintenance of one ten inch water line, same to be buried 36 to 48 inches from the surface and backfilled to Grantor's specifications, granted by Vicksburg Chemical Company by instrument dated September 11, 1978, recorded in Book 598 at Page 269, depicted and designated as Exception 22 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 23: Right of Way and Easement in favor of Mississippi Gas & Electric Company, 10 feet in width, for the location, operation and maintenance of an electric circuit or circuits, granted by J. L. Blackwell, by instrument dated May 15, 1930, recorded in Book 180 at Page 484, depicted and designated as Exception 23 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 24: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines and telephone and telegraph wires, granted by J. L. Blackwell, et ux, by instrument dated January 26, 1943, recorded in Book 232 at Page 43, depicted and designated as Exception 24 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 25: Right of Way and Easement in favor of United Gas Pipeline Company of unspecified width, for the construction, operation and maintenance of an underground gas pipeline, granted by the State of Mississippi, represented by its State Land Commissioner, by instrument dated February 3, 1943, recorded in Book 232 at Page 138, depicted and designated as Exception 25 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 26: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines and telephone and telegraph wires, granted by A. J. Messina, et ux, by instrument dated August 19, 1952, recorded in Book 296 at Page 541, depicted and designated as Exception 26 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 27: Release of Damages contained within deed dated November 30, 1921, recorded in Book 152 at Page 100, executed by Samuel R. Hughes and Mary Ella Hughes in favor of Yazoo and Mississippi Valley Railroad, wherein fee simple title to a certain parcel of land containing 0.86 acre adjoining the easterly side of the said Railroad's right of way in Section 8, Township 15 North, Range 3 East, same depicted and identified as Exception 27 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, which release of damages extends to and all claims or damages from floods, water, overflow or in any manner arising by the construction of any track, embankment, roadbed over other portions of Grantors' lands over which such right of way may extend or for any other act of the Railroad which may cause any damage to any of Grantors' lands in Warren County, Mississippi, such release being deemed a covenant running with the land, it being noted that 239 acres, more or less, of the subject property descends through this chain of title.

ITEM 28: Right of Way and Easement in favor of Mississippi Power & Light Company, 30 feet in width, over and across part of Lots 51 and 52 of Walnut Ridge Subdivision, for the location, operation and maintenance of an electric circuit or circuits, granted by Mrs. M. E. Hughes, *et vir*, by instrument dated October 18, 1941, recorded in Book 227 at Page 1, depicted and designated as Exception 28 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 29: Release of Damages contained within deed dated January 11, 1952, recorded in Book 292 at Page 447, executed by Illinois Central Railroad in favor of Spencer Chemical Company, wherein fee simple title to a certain parcel of land containing 1.0 acre adjoining the easterly side of the said Railroad's right of way in Section 9, Township 15 North, Range 3 East, same designated and depicted as Exception 29 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, which release of damages extends to any and all claims or damages of every kind and character growing out of or resulting from of the lands conveyed thereby to Grantor's property, including but not limited to damages from overflow or improper drainage, whether past, present or future.

ITEM 30: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines, granted by W. M. Hawkins by instrument dated February 4, 1943, recorded in Book 232 at Page 98, depicted and designated as Exception 30 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 31: Right of Way and Easement in favor of Mississippi Power & Light Company, 30 feet in width for ingress and egress running from Rifle Range Road to the east side of that certain parcel containing 1.75 acres, more or less, conveyed in fee simple to that entity by Gulf Oil Corporation by instrument dated November 4, 1964, recorded in Book 394 at Page 78, depicted and designated as Exception 31 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 32: Right of Way and Easement in favor of Mississippi Gas & Electric Company, 10 feet in width, for the location, operation and maintenance of an electric circuit or circuits, granted by N. Vick Robbins, *et ux*, by instrument dated May 16, 1930, recorded in Book 180 at Page 505, depicted and designated as Exception 32 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 33: Right of Way and Easement in favor of Mississippi Gas & Electric Company, 10 feet in width, for the location, operation and maintenance of an electric circuit or circuits for a service line not to exceed 3 wires and to carry not more than 13,800 volts, granted by Mrs. Mary Ella Hughes, by instrument dated June 19, 1930, recorded in Book 180 at Page 492, depicted and designated as Exception 33 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 34: *Rights of Mississippi* Power & Light Company for continued location, operation and maintenance of an electric circuit or circuits over and across the right of way and easement identified as the "13 KV Vicksburg-Port Gibson wood pole, single circuit, three wire transmission line" conveyed to that entity by Mississippi Gas & Electric Company, by instrument dated December 31, 1930, recorded in Book 182 at Page 281, depicted and designated as Exceptions 23, 31, 32 and 33 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 35: Right of Way and Easement reserved by Benjamin F. Marx, *et ux*, 18 feet in width, over and across the North side of Lot 52 of Walnut Ridge Subdivision reserved by those individuals within instrument dated June 1, 1950, recorded in Book 284 at Page 30, wherein Lot 51 and the same 18 foot wide strip along the North line of said Lot 52 of said subdivision are conveyed in fee simple to Louise M. Goode, which easement so reserved is for continued ingress and egress to property continuing in ownership of Marx, et ux, South of said Lot 52, the said Louise M. Goode having thereafter conveyed the same lands to Spencer Chemical Company by deed recorded in Book 294 at Page 305, which easement is depicted and designated as Exception 35 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 36: Right of Way and Easement in favor of The Mayor and Aldermen of the City of Vicksburg, upon a parcel of land in the form of a square measuring 50 feet on each side for the purpose of location, operation and maintenance of a sewage lift station thereon together with ingress and egress over a private road leading from Rifle Range Road to said parcel, granted by Spencer Chemical Company by instrument dated September 11, 1957, recorded in Book 360 at Page 385, depicted and designated as Exception 36 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 37: As to those portions of the subject property affected thereby, rights of Warren County, Mississippi, for continued location and maintenance of roadways and adjacent drainage ditches or facilities within the right of way of Rifle Range Road, arising under various grants styled "Landowners Conveyance of Perpetual Easements to Warren County, Mississippi, on Project 75-G Cane Ridge, Wigwam and Rifle Range Road--From Jonestown to Rifle Range and Rifle Range-Wigwam Road from Stouts Station to U. S. Highway No. 61" providing, in some instances, that no signs, billboards or other advertising devices shall be constructed within 150 feet of the center line of said Rifle Range Road, same being recorded in numerous counterparts, including, *inter alia*, insofar as same affects the subject property hereof, but not limited to, that executed on behalf of Spencer Chemical Company, dated March 25, 1954, recorded in Book 310 at Page 90.

ITEM 38: As to those portions of the subject property which abut that certain public thoroughfare known (*circa* 1996) as "Old" U. S. Highway 61 or Warrenton Road, restrictions contained within various grants of right of way from the owners of land through with said highway was constructed, each in favor of the State Highway Commission of Mississippi, each providing that no signs, billboards or other advertising devices shall be constructed within 150 feet of the center line of said highway, same being recorded in numerous counterparts, each substantially in the same form, including, *inter alia*, insofar as same affects the subject property hereof, but not limited to, that executed by Mrs. Mary Ella Hughes, dated July 10, 1937, recorded in Book 204 at Page 116, and each further authorizing the said State Highway Commission and its agents and employees to enter upon such premises to remove such advertising devices erected in violation thereof without liability for damage to property.

ITEM 39: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg, 20 feet in width, for the location, operation and maintenance of a sanitary sewer line, granted by Cedar Chemical Company by instrument dated November 4, 1994, recorded in Book 1028 at Page 227, wherein the lands through which said easement extend are described, together with a temporary construction easement 10 feet in width adjacent thereto, said temporary easement now thought to be terminated, said easement being that depicted and designated as Exception 39 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 40: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg, 40 feet in width, over and across that part of Section 10, Township 15 North, Range 3 East described in instrument dated September 28, 1969, recorded in Book 462 at Page 387, for the location, operation and maintenance of water mains, granted by Gulf Oil Corporation, said easement being that depicted and designated as Exception 40 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 41: Rights of Perkins Industries, Inc. ("Perkins") grantee of Gulf Oil Corporation, acting through Gulf Oil Chemicals Company, a division thereof ("Gulf") for continued use of private roadways for ingress to and from Rifle Range Road designated on plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, as "Plant Entrance Road" and leading to parcel identified on said plat as "Perkins Ref:666/576" (the "Perkins Parcel") and for continued use of Railroad Spur Tract and Sewer Easement granted Gulf Oil Company as detailed hereinabove in Items 10 and 11, respectively, and for continued usage of such other easements (collectively, the "Gulf Easements") which Gulf was entitled to use during such time as Gulf remained vested with title and possession of the Gulf Parcel, which rights on the part of Perkins arise by virtue of deed executed by Gulf to Perkins dated June 1, 1982, recorded in Book 666 at Page 576 and by instrument styled "Assignment of Easement" dated June 1, 1982, recorded in Book 666 at Page 577, notwithstanding that Assignment of Easement only referred to the Sewer Easement identified in Exception 11 above, the right of Perkins for continued access and use of the Rail Spur Track being thought to have become prescriptive in nature if not by grant, said Gulf Parcel and Plant Entrance Road being that depicted and designated as Exception 41 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, Borden, Inc., successor to Perkins Industries, Inc. having thereafter conveyed the same property and easement rights therein to Borden Chemical, Inc. by deed recorded in Book 1072 at Page 316.

ITEM 42: Right of Way and Easement in favor of United Gas Pipeline Company, of unspecified width, for the construction, operation and maintenance of gas pipelines, granted by W. L. Farrior, *et ux*, by instrument dated January 26, 1943, recorded in Book 232 at Page 42, in and under Part Lots 1 and 2 of Magnolia Plantation, in Section 17, Township 15 North, Range 3 East, depicted and designated as Exception 42 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

Item 43: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg for the location, operation and maintenance of a sanitary sewer lift station and sewer line, upon, over and across that part of Section 10, Township 15 North, Range 3 East as described in and granted by Alfred J. Messina, MD. by instrument dated June 21, 1957, recorded in Book 338 at Page 439, said easement being that depicted and designated as Exception 43 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 44: Right of Way and Easement in favor of Mississippi Power & Light Company, of unspecified width, over and across part of Section 10, Township 15 North, Range 3 East for stringing wires from an existing 13.8 KV line designated the "Southwest Potash Line" and placing anchors on the side of an existing line pole and the continued location, operation and maintenance of an electric circuit or circuits thereon, granted by A. J. Messina by instrument dated October 21, 1961, recorded in Book 366 at Page 454, same further restricting the number of structures which Grantee may place thereon to two and further granting the Grantee the right to clear trees or other obstructions for an additional 10 feet on both sides of said right of way, which right of way is depicted and designated as Exception 44 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 45: Right of Way and Easement in favor of United Gas Pipeline Company, having an initial width of thirty (30) feet and having the right to increase same by an additional thirty (30) feet, the initial 30 foot width being for the construction, operation and maintenance of two gas pipelines over and across that part of Section 10, Township 15 North, Range 3 East described within and granted by A. J. Messina, et ux, by instrument dated June 29, 1961, recorded in Book 368 at Page 302, depicted and designated as Exception 45 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006, it being thought that the second line anticipated herein has been installed within this easement and that the right of way width in this area is, most likely, now 60 feet in width.

ITEM 46: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg forty (40) feet in width, for the location, operation and maintenance of sanitary sewer mains, water mains and other utility lines, upon, over and across that part of Section 10, Township 15 North, Range 3 East as described in and granted by Alfred J. Messina, MD., by instrument dated August 1, 1969, recorded in Book 462 at Page 370, said easement being that depicted and designated as Exception 46 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 47: Right of Way and Easement in favor of Mississippi Power & Light Company, of unspecified width, over and across part of Section 10, Township 15 North, Range 3 East for installation of four anchors and guys only from an existing line designated "Circuits 5NO2, 5NO3, 5NO4 Line" granted by A. J. Messina by instrument dated September 13, 1971, recorded in Book 482 at Page 1, which right of way is depicted and designated as Exception 47 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 48: Right of Way and Permanent Easement in favor of The Mayor and Aldermen of the City of Vicksburg thirty (30) feet in width, for the location, operation and maintenance of a sanitary sewer line, upon, over and across that part of Section 10, Township 15 North, Range 3 East North of and adjacent to the North property of the City of Vicksburg sewage treatment plant, as described in and granted by Alfred J. Messina, MD., by instrument dated November 19, 1980, recorded in Book 640 at Page 249, said easement being that depicted and designated as Exception 48 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 49: Permanent easement in favor of Mississippi Fuel Company, 30 feet in width, for the location, operation and maintenance of a pipeline, for transmission of oil, gas and other minerals, granted by Cecilia M. Cox and Catherine M. Melsheimer, by instrument dated May 5, 1987, filed for record June 10, 1987, recorded in Book 816 at Page 67, wherein the lands through which said easement extend are described as being part of Section 10, Township 15 North, Range 3 East, said easement being that depicted and designated as Exception 49 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 50: Intentionally omitted.

ITEM 51: Encroachment of corner of residential improvements from Lot 30 of Walnut Ridge Subdivision onto the subject property and of fences associated with such residential improvements from Lots 30 and 31 of said Walnut Ridge Subdivisions, each as depicted as Exception 51 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006, and rights of the owner of such encroachments under fence to continue to maintain same, whether such rights be by prescription or whether same may have ripened to ownership by possession.

ITEM 52: Rights of the United Gas Pipeline and/or Town of Port Gibson for continued location and maintenance of a segment of its underground gas pipeline(s) in, on or under that portion of the subject property identified as a part of Lot 3 of the Jett Survey and part of Section 5, Township 15 North, Range 3 East, west of Warrenton Road or "Old" U. S. Highway 61, depicted as Exception 52 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006, and rights of the owner of such underground pipeline to continue to maintain same, whether such rights be by prescription or grant of easement, no recorded easement having been found, but same thought to be the Northerly extension of pipeline easement crossing Section 8 of said Township and Range as described in Book 330 at Page 215.

ITEM 53: Encroachment of mobile home onto that portion of the subject property situate in Section 17, Township 15 North, Range 3 East which is North of Old Wigwam Road, identified as "(Ref. 298/297)" and depicted as Exception 53 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 54: Encroachment of fence onto the extreme Southeast corner of that portion of the subject property situate in Section 17, Township 15 North, Range 3 East which is North of Old Wigwam Road, identified as "(Ref. 298/297)" and depicted as Exception 54 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 55: Rights of Kansas City Southern Railroad for continued operation, maintenance and location of rails and other uses associated with railroad operations on, across and over a strip of land, 100 feet in width, extending in a Northeasterly-Southwesterly direction across the entire length of the subject property as depicted as Exception 55 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006, it being noted that the estate vested in said Railroad's predecessor appears to be that of a right of way and not fee simple title (with the exception of the parcels conveyed in fee simple to the Yazoo & Mississippi Valley Railroad by deeds described in Item 27 hereinabove).

ITEM 56: Rights of Bessie W. Colmery and May Grace Anderson and their successors in title for continued ingress and egress over and across an existing roadway, 30 feet in width, leading in a Southerly direction from Old U. S. Highway 61 (Warrenton Road) to lands South of Lot 54 of Walnut Ridge Subdivision, conveyed to those parties by deeds recorded in Book 218 at Page 546 and Book 233 at Page 193, respectively, same being part of Section 8, Township 15 North, Range 3 East and depicted as Exception 56 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 57: Intentionally omitted.

ITEM 58: Intentionally omitted.

ITEM 59. Intentionally omitted.

ITEM 60. Intentionally omitted.

ITEM 61: Intentionally omitted.

ITEM 62: *Right of Way and Easement in favor of Mississippi Gas & Electric Company (predecessor to* Mississippi Power & Light Company) ten (10) feet in width for location, construction, reconstruction, operation, and maintenance of an electric circuit or circuits across, over, under a part of Lots 1 and 2 of Magnolia Plantation Subdivision in Section 17, Township 15 North, Range 3 East granted by Mrs. Enola S. Carnathan by instrument dated May 1, 1930, recorded in Book 180 at Page 486, which right of way is depicted and designated as Exception 62 upon plat of survey of Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 63: Encroachment of storage buildings (2) onto that portion of the subject property situate in Section 17, Township 15 North, Range 3 East which is North of Old Wigwam Road, identified as "(Ref. 298/297)" and depicted as Exception 63 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 64: Encroachment of portable fence onto that portion of the subject property situate in Section 8, Township 15 North, Range 3 East which is North of that certain tract identified as Not in Ownership Colmery (Ref. 218/546)" and depicted as Exception 64 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

ITEM 65: Encroachment of storage building onto that portion of the subject property situate in Section 8, Township 15 North, Range 3 East which is North of that certain tract identified as Not in Ownership Colmery (Ref. 218/546)" and depicted as Exception 64 upon plat of survey by Strickland Surveying & Mapping, Inc., dated March 24, 2006.

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK

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In re:	Chapter 11	
CEDAR CHEMICAL CORPORATION and VICKSBURG CHEMICAL COMPANY,	Case Nos.	02-11039 (SMB) and 02-11040 (SMB)
Debtors.	Jointly Administered	

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STIPULATION AND ORDER AUTHORIZING ABANDONMENT OF WEST HELENA MANUFACTURING FACILITY AND VICKSBURG MANUFACTURING FACILITY AND GRANTING RELATED RELIEF
(A&F No. 031)

WHEREAS on March 8, 2002 (the "Petition Date"), Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("Vicksburg") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Court");

WHEREAS Cedar owns certain lots, pieces, tracts or parcels of land located at or near 49 Phillips Road 311 in West Helena, Arkansas, more particularly described in Exhibit A hereto, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "West Helena Facility");

ATTACHMENT "C" TO RECEIVER DEED
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WHEREAS Vicksburg owns certain lots, pieces, tracts or parcels of land located at or near 4280 Rifle Range Road in Vicksburg, Mississippi, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "**Vicksburg Facility**;" the term "**Vicksburg Facility**" includes all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi);

WHEREAS on August 29, 2002 the Debtors filed a motion (the "**Motion**") pursuant to sections 105(a) and 554(a) of the Bankruptcy Code seeking an order authorizing the abandonment by Cedar of the West Helena Facility and the abandonment by Vicksburg of the Vicksburg Facility and granting related relief;

WHEREAS the Court signed an order dated September 4, 2002 scheduling a hearing on the Motion (the "**Scheduling Order**");

WHEREAS a statement in support of the Motion was filed by JPMorgan Chase Bank, as agent (the "**Agent**") to the pre-petition secured lenders (the "**Secured Lenders**"), as listed under a certain Credit Agreement dated as of November 3, 1995, as amended, supplemented or otherwise modified, among Cedar, the Secured Lenders and the Agent (to avoid doubt, "Secured Lenders" does not include the Debtors, any affiliate of the Debtors, Trans Resources Inc., and Arie Genger);

WHEREAS the Arkansas Department of Environmental Quality (the "**ADEQ**"), the Mississippi Commission on Environmental Quality and the Mississippi Department of Environmental Quality

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(collectively, the "MDEQ") and the United States on behalf of the Environmental Protection Agency (the "EPA") (together with the ADEQ and the MDEQ the "Agencies" and each individually an "Agency"), and Harcros Chemicals Inc. each filed objections to the Motion;

WHEREAS the Agent and the Debtors filed a joint reply to the objections of the Agencies;

WHEREAS on or about September 26, 2002, the MDEQ issued Order No. 4486-02 purporting, among other things, to enjoin Vicksburg from transferring the Vicksburg Facility to another party without complying with Debtors' environmental permits.

WHEREAS good and sufficient notice of the Motion has been provided by the Debtors in accordance with the terms of the Scheduling Order;

WHEREAS a hearing on the Motion was held on September 25, 2002; and an evidentiary hearing on the Motion was held on October 7, 2002 (the "Evidentiary Hearing");

WHEREAS the West Helena Facility and the Vicksburg Facility (collectively, the "Facilities") are of inconsequential value and benefit to the estates of the Debtors and that such estates lack sufficient unencumbered assets with which to continue the maintenance, management and oversight of the Facilities;

WHEREAS, the Debtors have cooperated with the Agencies in the transition of the Facilities prior to their proposed abandonment;

WHEREAS the Debtors, the Agencies and the Agent (on behalf of the Secured Lenders) agree to compromise and resolve the various objections to the Motion as provided herein;

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration receipt of which is hereby acknowledged;

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UNITED STATES BANKRUPTCY COURT

IT IS HEREBY STIPULATED and agreed to by and between the parties, subject to approval by the Court, as follows, and upon approval by the Court, it is hereby ORDERED that:

1. The Court has jurisdiction to hear and consider the Motion pursuant to 28 U.S.C. § 1334 and 28 U.S.C. § 157 and to grant the relief requested therein.

2. This is a core proceeding under 28 U.S.C. § 157(b).

3. Good and sufficient notice of the Motion, the proposed abandonment of the Facilities and of the hearings scheduled thereon has been provided and any other requirement for notice be, and hereby is, dispensed with.

4. The Motion, as modified and conditioned herein, is hereby granted.

5. The Facilities are of inconsequential value and benefit to the estates of the Debtors and such estates lack sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Facilities.

6. All requirements of section 554(a) of the Bankruptcy Code for the abandonment of the Facilities have been satisfied and sufficient circumstances exist in these cases to justify the approval of such abandonment, as conditioned herein.

7. The Facilities are hereby abandoned to the pre-petition Debtors effective 11:59 p.m. on October 14, 2002 (the "Effective Time"). The West Helena Facility shall be deemed abandoned to the Cedar non-bankruptcy estate and the Vicksburg Facility shall be deemed abandoned to the Vicksburg non-bankruptcy estate.

8. The Debtors and their respective officers, employees, directors, the pre-petition Debtors' officers, employees and directors and Marotta Gund Budd & Dzera LLC and any of its employees

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(collectively, "MGB") shall have no obligation for the management or operation of the Facilities subsequent to the Effective Time.

9. The Debtors and the officers, employees, agents and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, agents or directors of the Debtors or pre-petition Debtors) shall be free of any liability for any occurrence or event with respect to (i) the Vicksburg Facility occurring subsequent to the Effective Time and (ii) the West Helena Facility occurring subsequent to 5:00 p.m. Eastern Standard Time on October 18, 2002 arising from the abandonment.

10. The United States, on behalf of the EPA, covenants not to sue the officers, employees, and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, or directors of the Debtors or pre-petition Debtors) or MGB for civil liability with respect to the Facilities for any cause of action or other claim for relief asserting environmental liability pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. § 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.), the Clean Water Act (42 U.S.C. § 1251 et seq.) or any state statute, including any regulations promulgated thereunder, for any occurrence or event with respect to the Facilities occurring subsequent to the Effective Time, provided however that this covenant not to sue shall not apply with respect to any affirmative acts of operation or disposal by such persons with respect to the Facilities occurring after the abandonment authorized herein. This covenant not to sue does not pertain to any matters other than those specified in this paragraph.

11. In consideration for the Agent's agreement to allow the Debtors to use an additional amount of cash collateral up to $10,000 to continue the current environmental monitoring and oversight of the West Helena Facility until 5:00 pm Eastern Standard Time on Friday, October 18, 2002 (after which time the

ADEQ or its agent will enter upon the site and assure continued environmental monitoring and oversight of the West Helena Facility), the ADEQ hereby and forever discharges, releases and covenants not to sue, to take any other civil judicial or administrative action (including for injunctive relief) against, or to seek any reimbursement of past or future response costs against, the Agent or any of the Secured Lenders in respect of any hazardous substances, pollutants, contaminants or other environmental conditions, present or existing on or under, or emanating from, the West Helena Facility from the beginning or time until 5:00 pm Eastern Standard Time on Friday, October 18, 2002, including, without limitation, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901 et seq.), the Clean Air Act (42 U.S.C. Sections 7401 et seq.), the Clean Water Act (42 U.S.C. Sections 1251 et seq.), and Titles 8 and 15 of the Arkansas Code, in each case as amended and including any regulations promulgated thereunder. This Stipulation and Order settles and resolves, without the admission or adjudication of any issue of fact or law, the Agent's and each of the Secured Lenders' potential liability to the ADEQ, with respect to all matters addressed herein, and the Agent and each of the Secured Lenders shall be entitled to protection against contribution claims to the maximum extent provided pursuant to 42 U.S.C. Section 9613(f)(2).

12. After the Effective Time, the EPA and ADEQ, and their agents, shall at all times have the right to access the West Helena Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the West Helena Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions

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or response measures. Debtors agree to request that ENSAFE provide ADEQ copies of any documents generated, collected or otherwise in the possession of ENSAFE that relate to the West Helena Facility.

13. The Debtors are authorized to cancel any insurance policies pertaining to the Facilities as of the Effective Time, except to the extent the premiums for such insurance coverage have been paid in full and the Debtors would not be entitled to a refund, if such insurance coverage was canceled.

14. After the Effective Time, the EPA and MDEQ, and their agents, shall at all times have the right to access the Vicksburg Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the Vicksburg Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions or response measures. This provision shall not act in derogation of Miss. Code Ann. § 49-17-21 or pre-existing state permit conditions with regard to access.

15. With the consent of the Secured Lenders, all mortgages, liens and other security interests held by the Secured Lenders in the Facilities or any part thereof, including the land and any buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (the "Secured Lender Liens"), shall be, and are hereby unconditionally and irrevocably deemed released, discharged and terminated as of the Effective Time and the abandonment of the West Helena Facility to the Cedar non-bankruptcy estate and the abandonment of the Vicksburg Facility to the Vicksburg non-bankruptcy estate shall, in each case, be free and clear of the Secured Lender Liens, and this Stipulation and Order shall be binding upon and govern the acts of all entities, including, without limitation, all filing agents, filing officers, title agents, title companies, administrative

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agencies, governmental departments, secretaries of state, federal, state and local officials and all other persons and entities who may be required, by operation of law, the duties of their office or contract, to accept, file, register or otherwise record or release any documents or instruments.

16. Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by its terms.

17. Absent an objection, the leases for personal property located at the Facilities (the "Facility Leases"), a schedule of certain of such leases is annexed hereto as Schedule I, shall be deemed rejected pursuant to section 365(a) of the Bankruptcy Code, as of one day subsequent to the date that the Debtors provide the lessors under the Facility Leases (the "Lessors") with notice by overnight delivery of such proposed rejection. Such notice also shall provide (i) for a ten-day period within which such Lessors may file an objection to such rejection and (ii) that the Lessors should immediately contact Mr. Philip Gund, the Debtors' "Restructuring Officer" or a person designated by Mr. Gund to arrange for a pick-up of the personal property under the Facility Leases.

18. MDEQ, by its agreement to this Stipulation and Order, does not waive any defenses created by Miss. Code Ann. § 11-46-9, nor accept any liabilities not otherwise imposed by operation of law.

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19. The Debtors waive and relinquish their interest, if any, in (i) Trustmark National Bank Trust and Asset Management Account No. 35-L903-00-8; (ii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "EPA Agreement"); (iii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "Mississippi Department of Natural Resources Agreement "); and (iv) Amendment dated June 27, 1986 to the Mississippi Department of Natural Resources Agreement.

20. Each signatory to this Stipulation and Order certifies that he or she is authorized to enter into the terms and conditions of this Stipulation and Order and to bind legally the party represented by him or her except that the execution of this Stipulation and Order by the Assistant Attorney General is required with respect to the United States.

21. This Stipulation and Order shall be deemed a "Final Order" when (i) the time to appeal or seek review, rehearing, reargument or certiorari has expired and no stay of appeal is in effect or petition for review, rehearing, reargument or certiorari proceeding is pending; or (ii) an appeal of this Stipulation and Order has been affirmed and the time for further appeal has expired.

22. As a contribution to the environmental cleanup of the Facilities, the Debtors shall pay $200,000 to the ADEQ and $200,000 to the MDEQ from the "proceeds of any sale by the Debtors of the EPA Registrations" deposited into "Avoidance Realization Account" as provided in paragraph 19 of the "Final Order (i) Authorizing Use of Cash Collateral (ii) Providing for Adequate Protection and (iii) Granting Related Relief dated August 21, 2002 (the "Final Cash Collateral Order"), notwithstanding any provisions in the Final Cash Collateral Order to the contrary, but only to the extent the ADEQ and MDEQ

are granted allowed administrative claims in those amounts under section 503(b) of the Bankruptcy Code. The MDEQ and ADEQ shall be entitled to such an administrative priority to the extent that they can demonstrate that such expenses were incurred with respect to the Facilities and were consistent with applicable environmental laws. The ADEQ and MDEQ agree that the Debtors or any chapter 7 trustee in the Debtors' cases will have no administrative expense liability to the MDEQ and ADEQ in excess of the $200,000 claims provided herein. Solely in connection with the confirmation of a chapter 11 plan, the Agencies agree not to object to a plan on the basis of section 1129(a) (9)(A) of the Bankruptcy Code. The abandonment of the Facilities and payment of $400,000 shall be without prejudice to additional administrative expenses or general unsecured claims of the United States, except to the extent that the United States asserts a claim as an assignee of ADEQ or MDEQ. Nothing in this Stipulation and Order shall waive or prejudice any right of any party to object to additional claims by the EPA on any ground other than a lack of an entitlement to an administrative priority based on the abandonment of the Facilities. The United States may perfect a lien for its costs with respect to the Facilities on the abandoned property to the extent permitted by applicable law.

23. The Debtors are authorized to transfer or otherwise make available all books and records relating to the Vicksburg Facility and/or the West Helena Facility (the "Facility Books and Records") to any Agency making such request without further order of the Court. Subject to further order of the Court, the Debtors shall secure and preserve the Facility Books and Records until such time as they are transferred to an Agency and provide each of the Agencies at least ten (10) days notice of their intention to destroy or discard any of the Facility Books and Records or transfer such Facility Books and Records to one of the Agencies.

24. The Debtors are hereby authorized to execute and deliver any instrument and perform any other act that is necessary in order to effectuate the purposes of this Stipulation and Order.

25. This Court shall retain jurisdiction to hear and determine any matter arising from or relating to this Stipulation and Order.

Dated: October 18, 2002

FOR THE DEBTORS

/S/_____
Yehuda Yoked, President
Cedar Chemical Corporation

/S/_____
Yehuda Yoked, President
Vicksburg Chemical Company

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF MISSISSIPPI
1941

AGREED as to paragraphs 1 through 7 (inclusively), 11, 15, 20, 21, 24 and 25. NO OBJECTION as to the remaining paragraphs.

FOR THE AGENT, ON BEHALF OF
THE SECURED LENDERS

Dated: October 18, 2002

/S/_____

Benjamin Kaminetzky (BK 7741)
DAVIS POLK & WARDWELL
450 Lexington Avenue
New York, New York 10017

Counsel for JPMorgan Chase Bank, as
Agent for the Secured Lenders

IMANAGE

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: New York, New York
October 17, 2002

JAMES B. COMEY
United States Attorney for the
Southern District of New York
Attorney for the United States

By: /S/_____
David J. Kennedy (DK-8307)
Assistant United States Attorney
100 Church Street - 19th Floor
New York, New York 10007
Temp. Tel: (718) 422-5649
Temp. Fax: (718) 422-1789

Except as to paragraph 9:

_____
THOMAS L. SANSONETTI
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044 - 7611

Dated: Washington, DC
October __, 2002

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Atlanta, Georgia
October 18, 2002

/S/_____
J. I. PALMER, Jr.
Regional Administrator
U.S. Environmental Protection Agency,
61 Forsyth Street, S.E.
Atlanta, Georgia 30303
(404) 562-9674; telefax: (404) 562-9664

Region 4

UNITED STATES BANKRUPTCY COURT
SEAL

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Dallas, Texas
October 17, 2002

/S/_____
MARK A. PEYCKE
Chief, Superfund Branch
Office of Regional Counsel, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, Texas 75202
(214) 665-3159; telefax: (214) 665-6460

IMANAGE:60801.1

Dated: October 17, 2002

FOR THE MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

/S/_____
Charles H. Chisolm
Executive Director

Dated: October 17, 2002

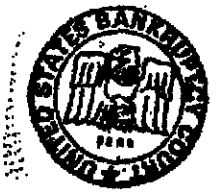
/S/_____
Chuck D. Barlow
General Counsel

UNITED STATES BANKRUPTCY COURT
1841
IMANAGE:60881.8

Dated: October 18, 2002

FOR THE ARKANSAS DEPARTMENT
OF ENVIRONMENTAL QUALITY

/S/_____
Marcus Devine
Director



IT IS SO ORDERED:

Dated: New York, New York
October 18, 2002

/s/ STUART M. BERNSTEIN
Chief United States Bankruptcy Judge

I hereby attest and certify on 3/16/06
that this document is a full, true and correct
copy of the original filed on the court's
electronic case filing system.

Clerk, US Bankruptcy Court, SDNY

By: _____ Deputy Clerk

DMANAGE:40001.8

Schedule I
Personal Property Leases of the Debtors at the Facilities

A. West Helena Facility Leases

Equipment	Contact	Account #	Monthly Payment
Fork Lift SN 5AM09021	Grady Jones Co, Inc. 901-365-8830	112725	659.12
Fork Lift	Grady Jones Co, Inc. 901-365-8830	112725	400.00
Fork Lift	Citicorp Del-Lease, Inc. 800-227-6766		1,075.68
Phone System	Avaya Financial Services 800-5276-9876 X7401	8623553	1,385.95
Xerox 5828 Copier sn 2 WU-063639	Xerox Capital Services, LLC	953303484	126.70
Xerox 5828 Copier sn 2 WU-070028	Xerox Capital Services, LLC	958867558	219.30

B. Vicksburg Facility Leases

Equipment	Contact	Account #	Monthly Payment
Locomotive	Birmingham Rail & Locomotive Company		5,000.00
Office F&F	Steelcase Financial Service		1,540.94
2001 Tiago Motor Home	Americal Lease Plans, Inc.		1,238.26
Hyster Forklift Ser# H177B26045Y	NMHG Financial Services		414.00

IMANAGE:60

Equipment	Contact	Account #	Monthly Payment
Hyster Forklift Ser# H177B31403Y	De Lage Landen Financial Services, Inc. 800-736-0220	143257	488.99
Hyster Forklift Ser# H177B31404Y	De Lage Landen Financial Services, Inc. 800-736-0220	143257	488.99

Exhibit A

Description of West Helena Facility

EXHIBIT A

Description of the Land

Commencing at the Southeast corner of Section 14, T2S, R4E, thence West 3517.8 feet; thence North 1980.0 feet; thence N 35 degrees, 34' W 1122.6 feet to the East right-of-way of State Highway No 242; thence N 54 degrees 12' E 1553.1 feet along said East right-of-way of State Highway No. 242 to the Northerly line of a Dedicated Street and the point of beginning; thence, from the point of the beginning, S39 degrees 58' E 1341.7 feet along the Northerly line of said Dedicated Street; thence N 28 degrees 42' E 827.9 feet; thence S 55 degrees 45' E 806.3 feet; thance N 28 degrees 42' E 197.6 feet to the Southerly line of a 50 foot Easement recorded in Book 506, Page 462, of the Official Records of Phillips County, Arkansas; thence N 53 degrees 29' W 810.0 feet along the Southerly line of said Easement recorded in Book 506, Page 462, to the Westerly line thereof; thence N 28 degrees 42' E 50.5 feet along the Westerly line of said Easement recorded in Book 506, Page 462, to the Southerly right-of-way of the Missouri Pacific Railroad; thence N 53 degrees 29' W 919.5 feet along said Southerly right-of-way of the Missouri Pacific Railroad to the East right-of-way of State Highway No. 242; thence S 54 degrees 12' W 822.6 feet, more or less, along said East right-of-way of State Highway No. 242 to the point of beginning; and

Commencing at the Southeast corner of Section 14, Township 2 South Range 4 East; thence West 3517.8 feet; thence North 1980 feet; thence North 35 degrees 34' West 1122.6 feet to the Easterly right of way of State Highway No. 242; thence North 54 degrees 12' East 790.52 feet along said Easterly right of way to the point of beginning; thence, from the point of beginning, continue North 54 degrees 12' East 702.58 feet to the Southerly right of way of an industrial road; thence South 39 degrees 58' East 1243.29 feet along said Southerly right of way to the Westerly right of way of a proposed road; thence South 54 degrees 12' West 702.58 feet along said Westerly right of way; thence of North 39 degrees 58' West 1243.29 feet to the point of beginning.

I hereby attest and certify on 3/16/06 that this document is a full, true and correct copy of the original filed on the court's electronic case filing system.

Clerk, US Bankruptcy Court, SDNY

By: _____ Deputy Clerk

UNITED STATES BANKRUPTCY COURT

BEFORE THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

In Re: Agreed Order Of Harcros Chemicals, Inc., Mississippi Silvertip Development, LLC, Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. To Mitigate Environmental Impacts At The Former Vicksburg Chemical Company Property In Vicksburg, Mississippi

Order No. 5069-05

AGREED ORDER

Come now the Mississippi Commission on Environmental Quality ("Commission"), acting through the staff and Executive Director of the Mississippi Department of Environmental Quality ("MDEQ"), Harcros Chemicals, Inc. ("Harcros"), Mississippi Silvertip Development, LLC ("Silvertip"), Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. ("ARCADIS"), and agree as follows:

1. Vicksburg Chemical Company ("VCC") owns, and for many years prior to March 2002 operated, a chemical manufacturing facility, hereafter referred to as the "Plant Site," at 4280 Rifle Range Road in Vicksburg, Mississippi. The Plant Site, which consists of approximately 40 acres, from time to time, produced fertilizer products, pesticides, and other chemicals. The soil and groundwater underneath the Plant Site now is contaminated with various chemicals. In 1992, the United States Environmental Protection Agency ("EPA") and Cedar Chemical Corporation ("Cedar"), VCC's parent corporation, entered a consent decree (Consent Decree, Civil Number W92-008B) requiring assessment and remediation activities at the Plant Site. Since that time, much study, but little remediation, has been accomplished at the Plant Site.

2. On March 8, 2002, VCC and Cedar filed petitions in bankruptcy in the United States Bankruptcy Court for the Southern District of New York. VCC and Cedar then filed with that court a motion to allow the "abandonment" of the VCC property,

hereafter referred to as the "Vicksburg Facility"[1] and of a sister facility owned by Cedar in West Helena, Arkansas. The Commission, through MDEQ, the Arkansas Department of Environmental Quality ("ADEQ"), EPA Region 4, EPA Region 6, and the United States Department of Justice ("USDOJ") contested this motion. The court eventually approved an agreement between the parties whereby Cedar and VCC were allowed to abandon the properties from the bankruptcy estate; thus causing the properties to revert to the ownership of the pre-petition debtors or, as the bankruptcy court termed it, the "non-bankruptcy estate" (which included no remaining assets) and freeing the bankruptcy estate from further responsibility for the properties except as required by the court's order. See Stipulation And Order Authorizing Abandonment Of West Helena Manufacturing Facility And Vicksburg Manufacturing Facility And Granting Related Relief, Case Nos. 02-11039 (SMB) and 02-11040 (SMB) (Bankr. S.D.N.Y. Oct. 18, 2002) ("Stipulation and Order"), attached to this Agreed Order as Exhibit 1.

3. The court's order provides in part:

> Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by them.

The Commission is fulfilling its duty to provide a copy of the Stipulation and Order by attaching that document as Exhibit 1 to this Agreed Order.

---

[1] The Stipulation and Order defines the "Vicksburg Facility" as "all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi." Stipulation and Order at 2. The terms "Vicksburg Facility" and "VCC property" as used in this order are defined in the same way. By securing the bankruptcy court's definition of the term in this fashion, MDEQ gained the authority to control the final disposition not only of the contaminated 40 ± acre Plant Site, but also of the 500 ± acres of additional real estate owned by VCC in Warren County, which is not believed to be contaminated, and all materials and equipment on that property.

4. Beginning in late 2002, the Commission conducted a request for proposal process by which it solicited offers from parties interested in obtaining all or part of the Vicksburg Facility. Harcros submitted a proposal through which, among other things, it identified ARCADIS as its remediation contractor at the Plant Site and committed to include the City of Vicksburg in determining the future land use of the uncontaminated areas of the Vicksburg Facility. On August 29, 2003, MDEQ selected the Harcros proposal for implementation. On January 13, 2005, the Harcros proposal was amended to include Silvertip as an additional partner. Under the amended proposal, Silvertip is responsible for the remediation of the Plant Site and compliance with this Agreed Order. Harcros intends to locate certain chemical blending and mixing operations at the Plant Site, as well as distribution facilities. This Agreed Order sets forth the commitments that Silvertip now makes to the Commission in consideration for the transfer of the respective property and facilities and as part of the implementation of the proposal.

5. On the date of the conveyance of the Vicksburg Facility, Silvertip shall simultaneously establish an escrow account ("Remediation Account") in the amount of $8,000,000.00 for the purpose of receiving and administering the funds of the Remediation Account. The Remediation Account shall be opened in the names of both Mississippi Bluffs Industrial Park, LLC and ARCADIS.[2] The funds, including all interest earned on the Remediation Account, shall be used for the mitigation of environmental impacts at the Plant Site as directed by MDEQ and as set forth in the Professional Services Agreement ("PSA") attached as Exhibit 2. MDEQ shall be a party to the escrow agreement establishing the Remediation Account, and the escrow agreement shall provide that no disbursements can be made from the Remediation Account without MDEQ's written approval, which approval shall not be unreasonably withheld. The

[2] ARCADIS will perform remediation work at the plant site. Mississippi Bluffs Industrial Park, LLC will receive conveyance of the 40± acre Plant Site and will oversee ARCADIS's remediation efforts.

escrow agreement shall also provide that the remaining balance of the Remediation Account, if any, shall be returned to Silvertip after receipt of a no further action letter from MDEQ, or at MDEQ's concurrence.

6. ARCADIS shall perform remediation services as set forth in the PSA. Those services include an initial baseline assessment of the Plant Site, followed by development of a groundwater remediation plan, a soil action plan, subsequent implementation of the plans, implementation of any institutional controls, and any other work required by MDEQ that is reasonable and related to remediation of the Plant Site to the extent that sufficient funding is available in the Remediation Account. This work shall be performed pursuant to Work Authorizations with MDEQ's written approval as set forth in the PSA. One of the objectives of this Agreed Order is to have a "remedy in place"[3] within three years, at which time long term operation, maintenance, and monitoring will be evaluated. The parties acknowledge that the term "remedy in place" does not necessarily mean that remediation will be complete within three years. Thus, the Remediation Account will continue to be utilized to pay remediation costs until remediation is complete, as determined by MDEQ, or until funds in the Remediation Account are exhausted. The costs and charges associated with any Work Authorizations approved by MDEQ shall be the allowable cost of remediation for purposes of House Bill 1294, enacted in the 2005 General Session.

7. In the event that the termination provisions of the PSA are triggered and ARCADIS no longer serves as the contractor, then Mississippi Bluffs Industrial Park, LLC shall select another remediation contractor, with MDEQ's written approval, and

[3] "Remedy in Place (RIP)" means that a final remedial action has been constructed and implemented and is operating as planned in the remedial design. An example of a Remedy in Place is a pump-and-treat system that is installed, is operating as designed, and will continue to operate until cleanup levels have been attained. Because operation of the remedy is ongoing, the site cannot be considered Response Complete which will be determined by MDEQ.

ARCADIS shall be removed as a party to this Agreed Order, and the Remediation Account after payment of fees owed under the PSA. In the event that MDEQ does not, for whatever reason, approve the selection of another contractor by Mississippi Bluffs Industrial Park, LLC, MDEQ shall select another contractor and shall direct the expenditure of funds from the escrow account for the remediation of the Plant Site.

8. Silvertip and Mississippi Bluffs Industrial Park, LLC will satisfy its obligations under this Agreed Order and cannot be deemed in default of the Agreed Order, and neither Silvertip nor the entities designated in Exhibit 3, or their constituent owners, successors, or assigns will have liability for pre-existing environmental conditions at the Plant Site as of the effective date of this Agreed Order; upon the establishment by Silvertip of the Remediation Account as set forth in this Agreed Order and in the PSA.[4]

9. Harcros, as an occupant in its chemical blending, mixing, and/or distribution operations, shall provide ARCADIS reasonable access to the Plant Site to perform remediation services, and shall not interfere with or impede the remediation services. ARCADIS agrees to use reasonable precaution in the remediation activities at the Plant Site to prevent any unreasonable interference or disturbance to the business operations of Harcros at the Plant Site.

10. The parties to this Agreed Order agree that the trust fund created at First National Bank, Vicksburg, Mississippi (now known as Trustmark National Bank) by two trust agreements between First National Bank and Vertac Chemical Corporation, dated October 6, 1982, as amended by a trust agreement dated June 27, 1986 wherein Cedar was substituted for Vertac Chemical Corporation in the trust agreement are not

[4] Silvertip will meet its obligations under the amended proposal by paying $8,000,000.00 into the Remediation Account. Mississippi Bluffs Industrial Park, LLC, to which the 40± acre Plant Site will be conveyed, will oversee ARCADIS's remediation efforts. Mississippi Bluffs Development, LLC will develop the 500± acres that are not believed to be contaminated.

considered a part of the "Vicksburg Facility" as defined in the aforementioned Stipulation and Order. Therefore, ownership of the referenced trust fund lies exclusively with MDEQ.

11. Upon execution of this Agreed Order, MDEQ shall direct the Vicksburg non-bankruptcy estate to transfer its complete interests in the "Vicksburg Facility" in two parcels of property to entities designated by Silvertip as set forth in Exhibit 3. The remaining terms of this Agreed Order are not effective until the parcels have been conveyed as set forth in Exhibit 3 and the conveyances have been recorded in the land records in Warren County, Mississippi.

12. Nothing contained in this Agreed Order shall limit the rights of the MDEQ or the Commission to take enforcement or other actions against Harcros, Silvertip, or Mississippi Bluffs Industrial Park, LLC for future violations of environmental laws, rules, and regulations.

13. Nothing contained in this Agreed Order is intended to create any obligation or liability of ARCADIS relating to the contamination at the Plant Site, except as agreed upon under the terms of the PSA.

ORDERED and AGREED, this the 19th day of December, 2005.

Charles H. Chisolm
Executive Director
Mississippi Commission on
Environmental Quality

AGREED, this the 25 day of October, 2005.

BY: _____

TITLE: MANAGING MEMBER
Mississippi Silvertip
Development, LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Silvertip Development, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25 day of October, 2005.

BY: _____

TITLE: MANAGING MEMBER
Mississippi Bluffs Industrial Park,
LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Bluffs Industrial Park, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25th day of October, 2005.

BY: Erhardt Werth

TITLE: EXECUTIVE VICE PRESIDENT
ARCADIS G&M, Inc.

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Erhardt Werth who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by ARCADIS G&M, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 1st day of ~~October~~ November, 2005.

BY: [signature]

TITLE: President & CEO
Harcros Chemical, Inc.

SUSAN G. LOCKE
Notary Public - State of Kansas
My Appt. Expires 7-6-09

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named KEVIN G. MURNER who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Harcros Chemical, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 1st day of ~~October~~ November, 2005.

Susan G. Locke
Notary Public

My Commission Expires:

7-6-09

EFiled: Feb 23 2006 2:20
Transaction ID 10645293

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

IN AND FOR NEW CASTLE COUNTY

IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation) C.A. NO 1940-N

ORDER

NOW, THEREFORE, upon the petition of the Mississippi Department of Environmental Quality ("Petitioner"), for the appointment of Carrie Tillman as Receiver of Vicksburg Chemical Company (the "Company"), an insolvent Delaware corporation, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to the designee of Petitioner; and

WHEREAS, upon consideration of the foregoing and it appearing that the Company is insolvent and that the Abandoned Property is to be transferred to the Petitioner's designee pursuant to an order of the U.S. Bankruptcy Court for the Southern District of New York dated October 18, 2002;

IT IS ORDERED, this 22nd day of February, 2006, that:

1. Carrie Tillman be, and hereby is, appointed as Receiver for the Company, pursuant to the provisions of 8 Del. C. § 291, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to Petitioner's designee.

2. The appointment of the Receiver shall not affect any dissolution, liquidation, winding up, revocation or continuation of the Company's bankruptcy estate.

3. The Receiver shall serve without bond.

4. Pursuant to Court of Chancery Rule 148, Court of Chancery Rules 149 through 168 shall not be applicable to this proceeding. Instead, Receiver shall, within sixty (60) days of

ATTACHMENT "E" TO RECEIVER DEED
PAGE 1 OF 2

Court: DE Court of Chancery

Judge: Parsons, Donald F

File & Serve reviewed Transaction ID: 11035563

Current date: 4/19/2006

Case number: 1940-N

Case name: In Re: Vicksburg Chemical Co

/s/ Judge Donald F Parsons Jr

Grantors' Address:

c/o P. O. Drawer 119
Jackson, MS 29201
Attn: Rod Clement
Phone: 205-394-7946

Grantee's Address:

c/o P. O. Drawer 119
Jackson, MS 39201
Attn: Rod Clement
Phone: 601-933-0088

THIS INSTRUMENT PREPARED BY/TO BE RETURNED TO:
William L. Shappley
P. O. Box 991
1301 Washington Street, 800 Trustmark Building
Vicksburg, MS 39181-0991
Phone: 601-636.8451
Facsimile: 601.636.8481
Internet: www.wsbr@vicksburg.com

INDEXING INSTRUCTIONS
RECORDING INSTRUCTIONS
TO THE CHANCERY CLERK OF WARREN COUNTY, MISSISSIPPI:
The property described in this instrument is situated as follows:

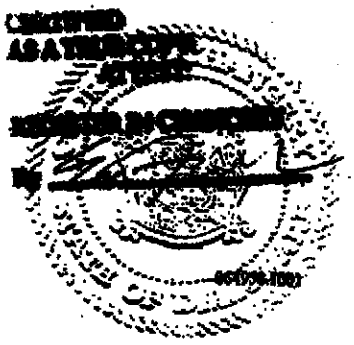
Part Fr. Sections 3, 4, 5, 8, 9, 10, 17 of Township 15 North, Range 3 East, and Part of Lot 3 of the Jett Survey, and Part of Lots 1 and 2 of Magnolia Plantation, Vicksburg, Warren County, Mississippi

Please index accordingly in your sectional indices.

her appointment, file with this Court a report stating that she has taken all actions necessary to effect and confirm the transfer to Petitioner's designee of the Abandoned Property. Receiver shall automatically be discharged following her appointment, and this case shall be dismissed, unless Receiver or any other interested person shall petition the Court within sixty (60) days following appointment of Receiver and show good cause why Receiver should not be discharged and the case dismissed.

5. The validity, interpretation and performance of this Order shall be governed by the laws of the State of Delaware, without regard to Delaware's conflicts of laws principles. This Court hereby retains jurisdiction for the purposes of implementing the terms of this Order, including the resolution of any disputes that may arise with respect to the interpretation or effectuation of any of the provisions of this Order.

The Honorable Donald F. Parsons, Jr.
Vice Chancellor



GRANTED EFiled: Apr 19 2006 4:00PM EDT Transaction ID 11083963

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

IN AND FOR NEW CASTLE COUNTY

IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation) C.A. NO 1940-N

ORDER

NOW, THEREFORE, upon the petition of the Mississippi Department of Environmental Quality ("Petitioner"), for the appointment of Carrie Tillman as Receiver of Vicksburg Chemical Company (the "Company"), an insolvent Delaware corporation, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to the designee of Petitioner; and

WHEREAS, upon consideration of the foregoing and it appearing that the Company is insolvent and that the Abandoned Property is to be transferred to the Petitioner's designee pursuant to an order of the U.S. Bankruptcy Court for the Southern District of New York dated October 18, 2002; and

WHEREAS, on February 22, 2006, this Court entered an Order appointing Carrie Tillman as Receiver for the Company pursuant to the provisions of 8 Del. C. § 291; and

WHEREAS, the Receiver has not completed all actions necessary to effect and confirm the transfer of the Abandoned Property, as previously defined;

IT IS ORDERED, this 19 day of April, 2006, that:

1. The appointment of Carrie Tillman as Receiver for the Company shall be extended for an additional 60 days from the date of this Order.

2. All other provisions of the Court's Order of February 22, 2006 shall remain in full force and effect.

/s/ Donald F. Parsons Jr.
Vice Chancellor Donald F. Parsons Jr.

CERTIFIED
AS A TRUE COPY:
ATTEST:

REGISTER IN CHANCERY
By

DB02:5279470.1 064958.1001

Attachment "F" to Receiver Deed
Page 1 of 2

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

May 25, 2006

FILE COPY

Mr. Rick Springer
Hexion Specialty Chemicals
180 East Broad Street
Columbus, OH 43215

Re: Vicksburg Chemical Company (VCC) Site
Borden Company Parcel
Vicksburg, Mississippi

Dear Mr. Springer:

It is my understanding that Mississippi Bluffs Industrial Park, LLC ("MBIP") is negotiating with you to acquire the small parcel of property owned by Borden Company which is encompassed by the VCC plant site. The Mississippi Department of Environmental Quality ("MDEQ") concurs that if this acreage is acquired by MBIP, the Remediation Account will be used to investigate and remediate the Borden Company parcel. If, however, the property is not acquired by MBIP and contamination is discovered that could be attributed to Borden Company operations, MDEQ will most likely consider the present property owner as a potentially responsible party (PRP).

Should you have any questions or comments concerning this matter, please contact Trey Hess, who is serving as Project Manager for MDEQ, at (601) 961-5654.

Sincerely,

Charles H. Chisolm
Executive Director

CHC/TH:jar
cc: Lisa Ouzts, Esq. - MDEQ
Trudy Fisher, Esq.

LIFE COPY

Jerry Banks/HW/OPC/DEQ
04/11/2006 03:02 PM

To Trey Hess/HW/OPC/DEQ@DEQ
cc
bcc
Subject Fw: Vicksburg Chemical

—— Forwarded by Jerry Banks/HW/OPC/DEQ on 04/11/2006 02:59 PM ——

chester.a.culley@kcsr.com
10/27/2005 09:08 AM

To: Jerry_Banks@deq.state.ms.us, douglas.a.banks@kcsr.com, glen.h.ebeling@kcsr.com, kevin.d.mcintosh@kcsr.com, thomas.j.healey@kcsr.com
cc:
Subject: Vicksburg Chemical

KCS owns property in the area of Vicksburg Chemical Company in Vicksburg, MS. Should you require specific information, access or discussion regarding environmental cleanup on the KCS property, please direct your inquiry to my office with copies to Mr. Douglas Banks.

Chet Culley
General Director
Environmental - HazMat
KCS
816-983-1343
PO Box 219335
Kansas City, MO 64121-9335

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

April 7, 2006

VIA FACSIMILE

Trudy Fisher, Esq.
Brunini, Grantham, Grower & Hewes
P.O. Drawer 119
Jackson, MS 39205-0119

Don Ogden
First American Title Insurance Company
1080 River Oaks Drive, Suite B 202
Jackson, MS 39232

Re: Vicksburg Chemical Property

Dear Trudy and Don:

As you know, Ferguson Harbor has been serving as MDEQ's contractor providing security and other services at the abandoned Vicksburg Chemical site. Ferguson Harbor is the only contractor retained by the state to provide services at the Vicksburg Chemical site. MDEQ has no notice of any mechanics' or contractors' liens filed by Ferguson Harbor. Further, MDEQ does not expect any such liens to be filed. MDEQ will pay all invoices for Ferguson Harbor's services directed by MDEQ at the site up to the date the property is conveyed.

I understand that First American will rely on this letter to delete the standard exception for unrecorded contractors' liens from the title insurance policies.

If you have any questions, please do not hesitate to call.

Sincerely,

Lisa Thompson Ouzts
Senior Attorney

cc: Roy Furrh, Esq.
Trey Hess, P.E.

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News

County forgives taxes on abandoned Vicksburg Chemical site

By Danny Barrett Jr.

[3/22/06]

Warren County officials jumped through legal hoops Tuesday to forgive unpaid taxes and clear the way for a redevelopment project on former industrial land in south Vicksburg.

Friday is the expected closing date for a Colorado firm to take ownership of the former Vicksburg Chemical tract where a golf course, shopping center and residential area are planned.

Previously, members of the county governing board said they had no authority to write off past-due taxes on the 480-acre site that had accumulated since the chemical plant closed and went into bankruptcy.

A unanimously OK'd four-page resolution, however, clears more than $218,490 in uncollected property taxes for 2004.

Written by board attorney Paul Winfield, the resolution cites a state statute that allows the board to go back one year to void an assessed tax value.

Trudy Fisher, legal counsel for Harcros Chemical, appeared before the board Monday, requesting the board act in advance of a drop-dead date of Friday for closing the deal to get clear title to the property. Supervisors originally planned to consult with Mississippi State Tax Commission officials until meetings fell through.

"We would have preferred having this advice in writing from the tax commission, but it usually won't take such active participation," Winfield said later.

The board delayed action on Fisher's request until it heard from Winfield and from Tax Assessor Richard Holland.

The assessor told supervisors that the property's new developers, Silver Tip of Colorado, would pay three years' worth of real property taxes in 2006 under a revised assessment based on projected values in the first year of new development. A separate state statute allows that move, Winfield said later. Normally, as unpaid property taxes accrue, they become a lien on the title to land and no new deed of ownership can be filed until past taxes are paid.

For 4 1/2 years, from 2001 through 2005, property taxes went uncollected on the property abandoned by Vicksburg Chemical in 2002.

Taxes assessed for 2000 to 2003 were forgiven when the U.S. Bankruptcy

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Court for the Southern District of New York allowed the company to abandon the site to the ownership of the Mississippi Department of Environmental Quality.

Part of the resolution recognized MDEQ as the legal owner of the property when it protested the assessed value in 2004, giving the board the authority to act on that request and finding the site has a "negative value" and ordering a "zero value" for 2004.

Fisher and other legal counsel with Harcros and Silver Tip had gone before the county periodically over the last two years to persuade them to clear the tax liability on the site so they could purchase it for redevelopment.

In December, MDEQ signed an agreement for Silver Tip, a company operated by Colorado-based developer Paul Bunge, to spend $8 million to clean up the abandoned land.

The tract includes land on both sides of Warrenton Road south of the river bridges. Most of the hilly land is wooded with only a portion on Rifle Range Road used to make a variety of chemical products starting in the 1950s. The land does include sites where waste was buried and other contaminated portions.

During its board meeting Monday, the city authorized the mayor to begin paperwork on a development agreement and a purchase and sale agreement with Silver Tip. The proposed golf course would be called Mississippi Bluffs.

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Former chemical plant site closer to being golf course

By Amanda V. Hebert

[3/8/06]

The former Vicksburg Chemical property is one step closer to becoming a golf course and boutique shopping center after the City Board of Mayor and Aldermen adopted a resolution Tuesday declaring the property, currently under the control of the Mississippi Department of Environmental Quality, a redevelopment area.

In December, MDEQ signed an agreement for Silver Tip, a company operated by Colorado-based developer Paul Bunge, to spend $8 million to clean up the abandoned Vicksburg Chemical site.

The property, 480 acres on both sides of Warrenton Road south of the river bridges near Rifle Range Road and U.S. 61 South, has been under MDEQ's control since Vicksburg Chemical filed for bankruptcy in 2002.

Bunge has said the $8 million cleanup of the site, of which about 20 acres are believed to be contaminated from the former chemical plant, will be directed by a Norwegian company, Arcadis, which has U.S. headquarters in Denver and Baton Rouge.

City Attorney Nancy Thomas said the resolution was created based on a year-old state law that formed an incentive program for developers to clean up areas the state declares contaminated. Thomas said the program allows redevelopment taxes and fees, such as sales taxes and privilege license fees, to be paid into a fund that will be given back to the developer upon completion of the project, in exchange for funding the site cleanup. She said the city had to adopt the resolution because city taxes, as well as state taxes, will be committed to the fund if the project is completed.

Thomas said the incentive for the city and the state is they don't have to come up with any money up front for the cleanup. Trudy Fisher, the attorney for Silver Tip and Harcross Chemical Company, said a tentative closing date of March 17 has been set for the purchase of the property.

"We hope things will move quickly," Fisher said.

She said cleanup could begin within 30 days of the closing and MDEQ will be overseeing the remediation of the property.

"We're extremely ecstatic that the property will be cleaned up and developed and we will still have a golf course, not at the taxpayers' expense," said Mayor Laurence Leyens.

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IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

IN AND FOR NEW CASTLE COUNTY

IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation) C.A. NO 1940-N

ORDER

NOW, THEREFORE, upon the petition of the Mississippi Department of Environmental Quality ("Petitioner"), for the appointment of Carrie Tillman as Receiver of Vicksburg Chemical Company (the "Company"), an insolvent Delaware corporation, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to the designee of Petitioner; and

WHEREAS, upon consideration of the foregoing and it appearing that the Company is insolvent and that the Abandoned Property is to be transferred to the Petitioner's designee pursuant to an order of the U.S. Bankruptcy Court for the Southern District of New York dated October 18, 2002;

IT IS ORDERED, this 22nd day of February, 2006, that:

1. Carrie Tillman be, and hereby is, appointed as Receiver for the Company, pursuant to the provisions of 8 Del. C. § 291, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to Petitioner's designee.

2. The appointment of the Receiver shall not affect any dissolution, liquidation, winding up, revocation or continuation of the Company's bankruptcy estate.

3. The Receiver shall serve without bond.

4. Pursuant to Court of Chancery Rule 148, Court of Chancery Rules 149 through 168 shall not be applicable to this proceeding. Instead, Receiver shall, within sixty (60) days of

her appointment, file with this Court a report stating that she has taken all actions necessary to effect and confirm the transfer to Petitioner's designee of the Abandoned Property. Receiver shall automatically be discharged following her appointment, and this case shall be dismissed, unless Receiver or any other interested person shall petition the Court within sixty (60) days following appointment of Receiver and show good cause why Receiver should not be discharged and the case dismissed.

5. The validity, interpretation and performance of this Order shall be governed by the laws of the State of Delaware, without regard to Delaware's conflicts of laws principles. This Court hereby retains jurisdiction for the purposes of implementing the terms of this Order, including the resolution of any disputes that may arise with respect to the interpretation or effectuation of any of the provisions of this Order.

Donald J. Parsons, Jr.
The Honorable Vice Chancellor

BILL OF SALE PURSUANT TO COURT ORDERS AND OTHER REGULATORY AGENCY ORDERS DETAILED HEREINBELOW

WHEREAS, on March 8, 2002 (the "Petition Date") Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("VCC") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Bankruptcy Court") in Case Nos. 02-11039 and 02-11040 (SMB); and

WHEREAS, on the Petition Date VCC was vested with title to certain tracts or parcels of land containing 680 acres, more or less, in Vicksburg, Warren County, Mississippi, together with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (collectively, the "Vicksburg Facility"); and

WHEREAS, on October 18, 2002, the Bankruptcy Court entered an order styled "Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief" (the "Abandonment Order"), wherein the respective lands and other personal or mixed property of the Debtors were found to be of inconsequential value and benefit to the estates of the Debtors, including the land and other personal or mixed property comprising the Vicksburg Facility and, further, that the estates of the Debtors lacked sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Vicksburg Facility, and abandoned the Vicksburg Facility to the

Vicksburg non-bankruptcy estate (the "VCC Non-Bankruptcy Estate") as of 11:59 p.m. on October 14, 2002, a copy of which Abandonment Order is attached hereto as Attachment "A" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, the Abandonment Order further granted the Mississippi Department of Environmental Quality ("MDEQ") the right of access to the Vicksburg Facility for the purpose of assessing environmental conditions and performing all removal, remediation, corrective actions and measures deemed necessary by MDEQ and ordered the VCC Non-Bankruptcy Estate to convey title to the Vicksburg Facility or parts thereof to any entity identified by MDEQ by a written request of MDEQ, and that any entity to whom the Vicksburg Facility or any parts thereof are transferred (a "Transferee") is to be given a copy of the Abandonment Order (being the same instrument sometimes referred to as the "Stipulation and Order") and that such Transferee be bound by the terms thereof; and

WHEREAS, the secured lenders who held mortgages, liens, and other security interests in the Vicksburg Facility prior to the filing of the Petition, represented by JPMorgan Chase Bank, as Agent Bank (collectively, the Secured Lenders") consented to the action of the Bankruptcy Court, which specifically ordered in numbered Paragraph 15 in the Abandonment Order, that all mortgages, liens, and other security interests in the Vicksburg Facility or any part thereof, including the land, buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (the "Secured Lender Liens") shall and are unconditionally and irrevocably deemed released, discharged and terminated as of the Effective Time of the abandonment of the Vicksburg Facility to the VCC Non-Bankruptcy Estate and the Vicksburg Facility thereupon deemed free and clear of the Secured

Lender Liens, and, further that the Abandonment Order (a/k/a Stipulation and Order) is deemed binding upon and shall govern the acts of all entities, including, without limitation, all filing agents, filing officers, title agents, title companies, administrative agencies, governmental departments, secretaries of state, federal, state, and local officials and all other persons and entities who may be required by operation of law, the duties of their office or contract, to accept, file, register or otherwise record or release any documents or instruments; and

WHEREAS, the Abandonment Order is deemed to be a "Final Order" (the "Final Order") as detailed in numbered Paragraph 21 thereof, all such times for appeal, rehearing, and the like, having long since passed; and

WHEREAS, in a Final Agreed Order dated December 19, 2005, bearing MDEQ Order No. 5069-05 (the "MDEQ Designation Order") MDEQ selected and designated two entities as Transferees of title of the Vicksburg Facility, namely, Mississippi Bluffs Development LLC, a Delaware limited liability company duly qualified in Mississippi (the "Development LLC") and Mississippi Bluffs Industrial Park, LLC, a Mississippi limited liability company (the "Industrial LLC") a copy of which MDEQ Designation Order (without inclusion of the attachments thereto) is attached hereto as Attachment "B" and incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, MDEQ subsequently filed a petition in the Court of Chancery of the State of Delaware in and for the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation" bearing C. A. No. 1940-N on the docket thereof (the "Delaware Proceeding") wherein MDEQ sought appointment of CARRIE TILLMAN as Receiver of Vicksburg Chemical Company, an insolvent Delaware corporation (being the same entity

identified as the VCC Non-Bankruptcy Estate) for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property (being the same property as the Vicksburg Facility") to the designee of MDEQ, the Delaware Proceeding further reciting same is undertaken pursuant to the Abandonment Order of the Bankruptcy Court; and

WHEREAS, the relief sought by MDEQ in the Delaware Proceeding was thereafter granted and Carrie Tillman appointed as Receiver (the "VCC Non-Bankruptcy Estate Receiver") pursuant to order entered February 22, 2006 (the "Delaware Order") a copy of which Delaware Order is attached hereto as Attachment "C", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "D", each of which are incorporated herein for all purposes in the interpretation and construction of this instrument; and

WHEREAS, MDEQ, by written request to the VCC Non-Bankruptcy Estate Receiver, has directed that the VCC Non-Bankruptcy Estate Receiver convey all of the VCC facility that is personal property to the Industrial Park LLC.

NOW THEREFORE, IN CONSIDERATION of the mutual covenants and benefits to MDEQ and to the VCC Non-Bankruptcy Estate and for the further consideration of the fulfillment of the terms and provisions of the Abandonment Order and of the Delaware Order, the sufficiency of all of which is hereby acknowledged, the undersigned **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented hereby by its duly authorized Receiver, CARRIE TILLMAN, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the property described hereinbelow and solely in her capacity as the VCC Non-Bankruptcy Estate**

Receiver and pursuant to the provisions of the Delaware Order described hereinabove (the "Grantor") does hereby **GRANT, BARGAIN, SELL and CONVEY to Mississippi Bluffs Industrial Park, LLC,** a Mississippi limited liability company, all of that portion of the Vicksburg Facility that is personal property, including but not limited to, all equipment.

This conveyance is made "as is", "where is", and without any warranties of any kind or nature.

[THE BALANCE OF THIS PAGE LEFT BLANK INTENTIONALLY]

IN TESTIMONY WHEREOF, witness the signature of the Grantor on this the

_____ day of _____, 2006.

VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation, represented herein by its duly appointed and authorized Receiver pursuant to authority of Order attached hereto as Attachment "C"

By:_____
CARRIE TILLMAN, as the VCC Non-Bankruptcy Estate Receiver (the "Grantor")

STATE OF DELAWARE

COUNTY OF NEW CASTLE

PERSONALLY appeared before me, the undersigned authority in and for the said county and state, on this _____ day of _____, 2006, within my jurisdiction, the within named, **CARRIE TILLMAN**, who acknowledged to me that she is the duly authorized **Receiver** of **VICKSBURG CHEMICAL COMPANY, an insolvent Delaware corporation**, acting under authority and direction granted by Order of the Court of Chancery of the State of Delaware in the County of New Castle styled "IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation, bearing C.A. No. 1940-N on the docket thereof, a copy of which Order is attached hereto as Attachment "C", amended by Order (the "Amended Order") extending the dates of authority for action by such Receiver, a copy of which Amended Order is likewise attached hereto as Attachment "D", and that for and on behalf of the said Vicksburg Chemical Company in her capacity as Receiver, and as the act and deed of said Vicksburg Chemical Company in undertaking all actions necessary to effect and confirm the transfer

of that part of the real property of the said Vicksburg Chemical Company which is described upon Attachment "A" hereto, she executed the above and foregoing instrument, after first having been duly authorized so to do.

_____
Notary Public

My Commission Expires:

_____

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK

---x

In re:	Chapter 11	
CEDAR CHEMICAL CORPORATION and VICKSBURG CHEMICAL COMPANY,	Case Nos.	02-11039 (SMB) and 02-11040 (SMB)
Debtors.	Jointly Administered	

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STIPULATION AND ORDER AUTHORIZING ABANDONMENT OF WEST HELENA MANUFACTURING FACILITY AND VICKSBURG MANUFACTURING FACILITY AND GRANTING RELATED RELIEF
(A&F No. 031)

WHEREAS on March 8, 2002 (the "Petition Date"), Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("Vicksburg") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Court");

WHEREAS Cedar owns certain lots, pieces, tracts or parcels of land located at or near 49 Phillips Road 311 in West Helena, Arkansas, more particularly described in Exhibit A hereto, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "West Helena Facility");

ATTACHMENT "A" TO BILL OF SALE

WHEREAS Vicksburg owns certain lots, pieces, tracts or parcels of land located at or near 4280 Rifle Range Road in Vicksburg, Mississippi, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "**Vicksburg Facility**;" the term "**Vicksburg Facility**" includes all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi);

WHEREAS on August 29, 2002 the Debtors filed a motion (the "**Motion**") pursuant to sections 105(a) and 554(a) of the Bankruptcy Code seeking an order authorizing the abandonment by Cedar of the West Helena Facility and the abandonment by Vicksburg of the Vicksburg Facility and granting related relief;

WHEREAS the Court signed an order dated September 4, 2002 scheduling a hearing on the Motion (the "**Scheduling Order**");

WHEREAS a statement in support of the Motion was filed by JPMorgan Chase Bank, as agent (the "**Agent**") to the pre-petition secured lenders (the "**Secured Lenders**"), as listed under a certain Credit Agreement dated as of November 3, 1995, as amended, supplemented or otherwise modified, among Cedar, the Secured Lenders and the Agent (to avoid doubt, "Secured Lenders" does not include the Debtors, any affiliate of the Debtors, Trans Resources Inc., and Arie Genger);

WHEREAS the Arkansas Department of Environmental Quality (the "ADEQ"), the Mississippi Commission on Environmental Quality and the Mississippi Department of Environmental Quality

UNITED STATES BANKRUPTCY COURT SEAL

(collectively, the "MDEQ") and the United States on behalf of the Environmental Protection Agency (the "EPA") (together with the ADEQ and the MDEQ the "Agencies" and each individually an "Agency"), and Harcros Chemicals Inc. each filed objections to the Motion;

WHEREAS the Agent and the Debtors filed a joint reply to the objections of the Agencies;

WHEREAS on or about September 26, 2002, the MDEQ issued Order No. 4486-02 purporting, among other things, to enjoin Vicksburg from transferring the Vicksburg Facility to another party without complying with Debtors' environmental permits.

WHEREAS good and sufficient notice of the Motion has been provided by the Debtors in accordance with the terms of the Scheduling Order;

WHEREAS a hearing on the Motion was held on September 25, 2002; and an evidentiary hearing on the Motion was held on October 7, 2002 (the "Evidentiary Hearing");

WHEREAS the West Helena Facility and the Vicksburg Facility (collectively, the "Facilities") are of inconsequential value and benefit to the estates of the Debtors and that such estates lack sufficient unencumbered assets with which to continue the maintenance, management and oversight of the Facilities;

WHEREAS, the Debtors have cooperated with the Agencies in the transition of the Facilities prior to their proposed abandonment;

WHEREAS the Debtors, the Agencies and the Agent (on behalf of the Secured Lenders) agree to compromise and resolve the various objections to the Motion as provided herein;

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration receipt of which is hereby acknowledged;

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF ARKANSAS

IT IS HEREBY STIPULATED and agreed to by and between the parties, subject to approval by the Court, as follows, and upon approval by the Court, it is hereby ORDERED that:

1. The Court has jurisdiction to hear and consider the Motion pursuant to 28 U.S.C. § 1334 and 28 U.S.C. § 157 and to grant the relief requested therein.

2. This is a core proceeding under 28 U.S.C. § 157(b).

3. Good and sufficient notice of the Motion, the proposed abandonment of the Facilities and of the hearings scheduled thereon has been provided and any other requirement for notice be, and hereby is, dispensed with.

4. The Motion, as modified and conditioned herein, is hereby granted.

5. The Facilities are of inconsequential value and benefit to the estates of the Debtors and such estates lack sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Facilities.

6. All requirements of section 554(a) of the Bankruptcy Code for the abandonment of the Facilities have been satisfied and sufficient circumstances exist in these cases to justify the approval of such abandonment, as conditioned herein.

7. The Facilities are hereby abandoned to the pre-petition Debtors effective 11:59 p.m. on October 14, 2002 (the "Effective Time"). The West Helena Facility shall be deemed abandoned to the Cedar non-bankruptcy estate and the Vicksburg Facility shall be deemed abandoned to the Vicksburg non-bankruptcy estate.

8. The Debtors and their respective officers, employees, directors, the pre-petition Debtors' officers, employees and directors and Marotta Gund Budd & Dzera LLC and any of its employees

IMANAGE-[illegible]

(collectively, "MGB") shall have no obligation for the management or operation of the Facilities subsequent to the Effective Time.

9. The Debtors and the officers, employees, agents and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, agents or directors of the Debtors or pre-petition Debtors) shall be free of any liability for any occurrence or event with respect to (i) the Vicksburg Facility occurring subsequent to the Effective Time and (ii) the West Helena Facility occurring subsequent to 5:00 p.m. Eastern Standard Time on October 18, 2002 arising from the abandonment.

10. The United States, on behalf of the EPA, covenants not to sue the officers, employees, and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, or directors of the Debtors or pre-petition Debtors) or MGB for civil liability with respect to the Facilities for any cause of action or other claim for relief asserting environmental liability pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. § 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.), the Clean Water Act (42 U.S.C. § 1251 et seq.) or any state statute, including any regulations promulgated thereunder, for any occurrence or event with respect to the Facilities occurring subsequent to the Effective Time, provided however that this covenant not to sue shall not apply with respect to any affirmative acts of operation or disposal by such persons with respect to the Facilities occurring after the abandonment authorized herein. This covenant not to sue does not pertain to any matters other than those specified in this paragraph.

11. In consideration for the Agent's agreement to allow the Debtors to use an additional amount of cash collateral up to $10,000 to continue the current environmental monitoring and oversight of the West Helena Facility until 5:00 pm Eastern Standard Time on Friday, October 18, 2002 (after which time the

ADEQ or its agent will enter upon the site and assure continued environmental monitoring and oversight of the West Helena Facility), the ADEQ hereby and forever discharges, releases and covenants not to sue, to take any other civil judicial or administrative action (including for injunctive relief) against, or to seek any reimbursement of past or future response costs against, the Agent or any of the Secured Lenders in respect of any hazardous substances, pollutants, contaminants or other environmental conditions, present or existing on or under, or emanating from, the West Helena Facility from the beginning or time until 5:00 pm Eastern Standard Time on Friday, October 18, 2002, including, without limitation, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901 et seq.), the Clean Air Act (42 U.S.C. Sections 7401 et seq.), the Clean Water Act (42 U.S.C. Sections 1251 et seq.), and Titles 8 and 15 of the Arkansas Code, in each case as amended and including any regulations promulgated thereunder. This Stipulation and Order settles and resolves, without the admission or adjudication of any issue of fact or law, the Agent's and each of the Secured Lenders' potential liability to the ADEQ, with respect to all matters addressed herein, and the Agent and each of the Secured Lenders shall be entitled to protection against contribution claims to the maximum extent provided pursuant to 42 U.S.C. Section 9613(f)(2).

12. After the Effective Time, the EPA and ADEQ, and their agents, shall at all times have the right to access the West Helena Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the West Helena Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions

UNITED STATES BANKRUPTCY COURT

or response measures. Debtors agree to request that ENSAFE provide ADEQ copies of any documents generated, collected or otherwise in the possession of ENSAFE that relate to the West Helena Facility.

13. The Debtors are authorized to cancel any insurance policies pertaining to the Facilities as of the Effective Time, except to the extent the premiums for such insurance coverage have been paid in full and the Debtors would not be entitled to a refund, if such insurance coverage was canceled.

14. After the Effective Time, the EPA and MDEQ, and their agents, shall at all times have the right to access the Vicksburg Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the Vicksburg Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions or response measures. This provision shall not act in derogation of Miss. Code Ann. § 49-17-21 or pre-existing state permit conditions with regard to access.

15. With the consent of the Secured Lenders, all mortgages, liens and other security interests held by the Secured Lenders in the Facilities or any part thereof, including the land and any buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (the "Secured Lender Liens"), shall be, and are hereby unconditionally and irrevocably deemed released, discharged and terminated as of the Effective Time and the abandonment of the West Helena Facility to the Cedar non-bankruptcy estate and the abandonment of the Vicksburg Facility to the Vicksburg non-bankruptcy estate shall, in each case, be free and clear of the Secured Lender Liens, and this Stipulation and Order shall be binding upon and govern the acts of all entities, including, without limitation, all filing agents, filing officers, title agents, title companies, administrative

UNITED STATES BANKRUPTCY COURT

agencies, governmental departments, secretaries of state, federal, state and local officials and all other persons and entities who may be required, by operation of law, the duties of their office or contract, to accept, file, register or otherwise record or release any documents or instruments.

16. Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by its terms.

17. Absent an objection, the leases for personal property located at the Facilities (the "Facility Leases"), a schedule of certain of such leases is annexed hereto as Schedule I, shall be deemed rejected pursuant to section 365(a) of the Bankruptcy Code, as of one day subsequent to the date that the Debtors provide the lessors under the Facility Leases (the "Lessors") with notice by overnight delivery of such proposed rejection. Such notice also shall provide (i) for a ten-day period within which such Lessors may file an objection to such rejection and (ii) that the Lessors should immediately contact Mr. Philip Gund, the Debtors' "Restructuring Officer" or a person designated by Mr. Gund to arrange for a pick-up of the personal property under the Facility Leases.

18. MDEQ, by its agreement to this Stipulation and Order, does not waive any defenses created by Miss. Code Ann. § 11-46-9, nor accept any liabilities not otherwise imposed by operation of law.

19. The Debtors waive and relinquish their interest, if any, in (i) Trustmark National Bank Trust and Asset Management Account No. 35-L903-00-8; (ii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "EPA Agreement"); (iii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "Mississippi Department of Natural Resources Agreement "); and (iv) Amendment dated June 27, 1986 to the Mississippi Department of Natural Resources Agreement.

20. Each signatory to this Stipulation and Order certifies that he or she is authorized to enter into the terms and conditions of this Stipulation and Order and to bind legally the party represented by him or her except that the execution of this Stipulation and Order by the Assistant Attorney General is required with respect to the United States.

21. This Stipulation and Order shall be deemed a "Final Order" when (i) the time to appeal or seek review, rehearing, reargument or certiorari has expired and no stay of appeal is in effect or petition for review, rehearing, reargument or certiorari proceeding is pending; or (ii) an appeal of this Stipulation and Order has been affirmed and the time for further appeal has expired.

22. As a contribution to the environmental cleanup of the Facilities, the Debtors shall pay $200,000 to the ADEQ and $200,000 to the MDEQ from the "proceeds of any sale by the Debtors of the EPA Registrations" deposited into "Avoidance Realization Account" as provided in paragraph 19 of the "Final Order (i) Authorizing Use of Cash Collateral (ii) Providing for Adequate Protection and (iii) Granting Related Relief dated August 21, 2002 (the "Final Cash Collateral Order"), notwithstanding any provisions in the Final Cash Collateral Order to the contrary, but only to the extent the ADEQ and MDEQ

are granted allowed administrative claims in those amounts under section 503(b) of the Bankruptcy Code. The MDEQ and ADEQ shall be entitled to such an administrative priority to the extent that they can demonstrate that such expenses were incurred with respect to the Facilities and were consistent with applicable environmental laws. The ADEQ and MDEQ agree that the Debtors or any chapter 7 trustee in the Debtors' cases will have no administrative expense liability to the MDEQ and ADEQ in excess of the $200,000 claims provided herein. Solely in connection with the confirmation of a chapter 11 plan, the Agencies agree not to object to a plan on the basis of section 1129(a) (9)(A) of the Bankruptcy Code. The abandonment of the Facilities and payment of $400,000 shall be without prejudice to additional administrative expenses or general unsecured claims of the United States, except to the extent that the United States asserts a claim as an assignee of ADEQ or MDEQ. Nothing in this Stipulation and Order shall waive or prejudice any right of any party to object to additional claims by the EPA on any ground other than a lack of an entitlement to an administrative priority based on the abandonment of the Facilities. The United States may perfect a lien for its costs with respect to the Facilities on the abandoned property to the extent permitted by applicable law.

23. The Debtors are authorized to transfer or otherwise make available all books and records relating to the Vicksburg Facility and/or the West Helena Facility (the "Facility Books and Records") to any Agency making such request without further order of the Court. Subject to further order of the Court, the Debtors shall secure and preserve the Facility Books and Records until such time as they are transferred to an Agency and provide each of the Agencies at least ten (10) days notice of their intention to destroy or discard any of the Facility Books and Records or transfer such Facility Books and Records to one of the Agencies.

24. The Debtors are hereby authorized to execute and deliver any instrument and perform any other act that is necessary in order to effectuate the purposes of this Stipulation and Order.

25. This Court shall retain jurisdiction to hear and determine any matter arising from or relating to this Stipulation and Order.

Dated: October 18, 2002

FOR THE DEBTORS

/S/_____
Yehuda Yoked, President
Cedar Chemical Corporation

/S/_____
Yehuda Yoked, President
Vicksburg Chemical Company

AGREED as to paragraphs 1 through 7 (inclusively), 11, 15, 20, 21, 24 and 25. NO OBJECTION as to the remaining paragraphs.

FOR THE AGENT, ON BEHALF OF
THE SECURED LENDERS

Dated: October 18, 2002

/S/_____
Benjamin Kaminetzky (BK 7741)
DAVIS POLK & WARDWELL
450 Lexington Avenue
New York, New York 10017

Counsel for JPMorgan Chase Bank, as
Agent for the Secured Lenders

IMANAGE

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: New York, New York
October 17, 2002

JAMES B. COMEY
United States Attorney for the
Southern District of New York
Attorney for the United States

By: /S/_____
David J. Kennedy (DK-8307)
Assistant United States Attorney
100 Church Street - 19th Floor
New York, New York 10007
Temp. Tel: (718) 422-5649
Temp. Fax: (718) 422-1789

Except as to paragraph 9:

_____
THOMAS L. SANSONETTI
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044 - 7611

Dated: Washington, DC
October ___, 2002

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Atlanta, Georgia
October 18, 2002

/S/_____
J. I. PALMER, Jr.
Regional Administrator
U.S. Environmental Protection Agency,
61 Forsyth Street, S.E.
Atlanta, Georgia 30303
(404) 562-9674; telefax: (404) 562-9664

Region 4

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF INDIANA

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Dallas, Texas
October 17, 2002

/S/_____
MARK A. PEYCKE
Chief, Superfund Branch
Office of Regional Counsel, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, Texas 75202
(214) 665-3159; telefax: (214) 665-6460

UNITED STATES BANKRUPTCY COURT
DMANAGE:60801.5

Dated: October 17, 2002

FOR THE MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

/S/_____
Charles H. Chisolm
Executive Director

Dated: October 17, 2002

/S/_____
Chuck D. Barlow
General Counsel

UNITED STATES BANKRUPTCY COURT
IMANAGE:

Dated: October 18, 2002

FOR THE ARKANSAS DEPARTMENT
OF ENVIRONMENTAL QUALITY

/S/_____
Marcus Devine
Director

IMANAGE:60801.8

IT IS SO ORDERED:

Dated: New York, New York
October 18, 2002

/s/ STUART M. BERNSTEIN
Chief United States Bankruptcy Judge

I hereby attest and certify on 3/16/06 that this document is a full, true and correct copy of the original filed on the court's electronic case filing system.

Clerk, US Bankruptcy Court, SDNY

By: _____ Deputy Clerk

DMANAGE:60001.8

Schedule I
Personal Property Leases of the Debtors at the Facilities

A. West Helena Facility Leases

Equipment	Contact	Account #	Monthly Payment
Fork Lift SN 5AM09021	Grady Jones Co, Inc. 901-365-8830	112725	659.12
Fork Lift	Grady Jones Co, Inc. 901-365-8830	112725	400.00
Fork Lift	Citicorp Del-Lease, Inc. 800-227-6766		1,075.68
Phone System	Avaya Financial Services 800-5276-9876 X7401	S623553	1,385.95
Xerox 5828 Copier sn 2 WU-063639	Xerox Capital Services, LLC	953303484	126.70
Xerox 5828 Copier sn 2 WU-070028	Xerox Capital Services, LLC	958867558	219.30

B. Vicksburg Facility Leases

Equipment	Contact	Account #	Monthly Payment
Locomotive	Birmingham Rail & Locomotive Company		5,000.00
Office F&F	Steelcase Financial Service		1,540.94
2001 Tiago Motor Home	Americal Lease Plans, Inc.		1,238.26
Hyster Forklift Ser# H177B26045Y	NMHG Financial Services		414.00

IMANAGE:69

Equipment	Contact	Account #	Monthly Payment
Hyster Forklift Ser# H177B31403Y	De Lage Landen Financial Services, Inc. 800-736-0220	143257	488.99
Hyster Forklift Ser# H177B31404Y	De Lage Landen Financial Services, Inc. 800-736-0220	143257	488.99

Exhibit A

Description of West Helena Facility

EXHIBIT A

Description of the Land

Commencing at the Southeast corner of Section 14, T2S, R4E, thence West 3517.8 feet; thence North 1980.0 feet; thence N 35 degrees, 34' W 1122.6 feet to the East right-of-way of State Highway No 242; thence N 54 degrees 12' E 1553.1 feet along said East right-of-way of State Highway No. 242 to the Northerly line of a Dedicated Street and the point of beginning; thence, from the point of the beginning, S39 degrees 58' E 1341.7 feet along the Northerly line of said Dedicated Street; thence N 28 degrees 42' E 827.9 feet; thence S 55 degrees 45' E 806.3 feet; thence N 28 degrees 42' E 197.6 feet to the Southerly line of a 50 foot Easement recorded in Book 506, Page 462, of the Official Records of Phillips County, Arkansas; thence N 53 degrees 29' W 810.0 feet along the Southerly line of said Easement recorded in Book 506, Page 462, to the Westerly line thereof; thence N 28 degrees 42' E 50.5 feet along the Westerly line of said Easement recorded in Book 506, Page 462, to the Southerly right-of-way of the Missouri Pacific Railroad; thence N 53 degrees 29' W 919.5 feet along said Southerly right-of-way of the Missouri Pacific Railroad to the East right-of-way of State Highway No. 242; thence S 54 degrees 12' W 822.6 feet, more or less, along said East right-of-way of State Highway No. 242 to the point of beginning; and

Commencing at the Southeast corner of Section 14, Township 2 South Range 4 East; thence West 3517.8 feet; thence North 1980 feet; thence North 35 degrees 34' West 1122.6 feet to the Easterly right of way of State Highway No. 242; thence North 54 degrees 12' East 790.52 feet along said Easterly right of way to the point of beginning; thence, from the point of beginning, continue North 54 degrees 12' East 702.58 feet to the Southerly right of way of an industrial road; thence South 39 degrees 58' East 1243.29 feet along said Southerly right of way to the Westerly right of way of a proposed road; thence South 54 degrees 12' West 702.58 feet along said Westerly right of way; thence of North 39 degrees 58' West 1243.29 feet to the point of beginning.

I hereby attest and certify on 3/16/06 that this document is a full, true and correct copy of the original filed on the court's electronic case filing system.

Clerk, US Bankruptcy Court, SDNY

By: _____ Deputy Clerk

UNITED STATES BANKRUPTCY COURT

BEFORE THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

In Re: **Agreed Order Of Harcros Chemicals, Inc., Mississippi Silvertip Development, LLC, Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. To Mitigate Environmental Impacts At The Former Vicksburg Chemical Company Property In Vicksburg, Mississippi**

Order No. 5069-05

AGREED ORDER

Come now the Mississippi Commission on Environmental Quality ("Commission"), acting through the staff and Executive Director of the Mississippi Department of Environmental Quality ("MDEQ"), Harcros Chemicals, Inc. ("Harcros"), Mississippi Silvertip Development, LLC ("Silvertip"), Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. ("ARCADIS"), and agree as follows:

1. Vicksburg Chemical Company ("VCC") owns, and for many years prior to March 2002 operated, a chemical manufacturing facility, hereafter referred to as the "Plant Site," at 4280 Rifle Range Road in Vicksburg, Mississippi. The Plant Site, which consists of approximately 40 acres, from time to time, produced fertilizer products, pesticides, and other chemicals. The soil and groundwater underneath the Plant Site now is contaminated with various chemicals. In 1992, the United States Environmental Protection Agency ("EPA") and Cedar Chemical Corporation ("Cedar"), VCC's parent corporation, entered a consent decree (Consent Decree, Civil Number W92-008B) requiring assessment and remediation activities at the Plant Site. Since that time, much study, but little remediation, has been accomplished at the Plant Site.

2. On March 8, 2002, VCC and Cedar filed petitions in bankruptcy in the United States Bankruptcy Court for the Southern District of New York. VCC and Cedar then filed with that court a motion to allow the "abandonment" of the VCC property,

ATTACHMENT "B" TO BILL OF SALE

hereafter referred to as the "Vicksburg Facility"[1] and of a sister facility owned by Cedar in West Helena, Arkansas. The Commission, through MDEQ, the Arkansas Department of Environmental Quality ("ADEQ"), EPA Region 4, EPA Region 6, and the United States Department of Justice ("USDOJ") contested this motion. The court eventually approved an agreement between the parties whereby Cedar and VCC were allowed to abandon the properties from the bankruptcy estate; thus causing the properties to revert to the ownership of the pre-petition debtors or, as the bankruptcy court termed it, the "non-bankruptcy estate" (which included no remaining assets) and freeing the bankruptcy estate from further responsibility for the properties except as required by the court's order. See Stipulation And Order Authorizing Abandonment Of West Helena Manufacturing Facility And Vicksburg Manufacturing Facility And Granting Related Relief, Case Nos. 02-11039 (SMB) and 02-11040 (SMB) (Bankr. S.D.N.Y. Oct. 18, 2002) ("Stipulation and Order"), attached to this Agreed Order as Exhibit 1.

3. The court's order provides in part:

> Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by them.

The Commission is fulfilling its duty to provide a copy of the Stipulation and Order by attaching that document as Exhibit 1 to this Agreed Order.

---

[1] The Stipulation and Order defines the "Vicksburg Facility" as "all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi." Stipulation and Order at 2. The terms "Vicksburg Facility" and "VCC property" as used in this order are defined in the same way. By securing the bankruptcy court's definition of the term in this fashion, MDEQ gained the authority to control the final disposition not only of the contaminated 40 ± acre Plant Site, but also of the 500 ± acres of additional real estate owned by VCC in Warren County, which is not believed to be contaminated, and all materials and equipment on that property.

4. Beginning in late 2002, the Commission conducted a request for proposal process by which it solicited offers from parties interested in obtaining all or part of the Vicksburg Facility. Harcros submitted a proposal through which, among other things, it identified ARCADIS as its remediation contractor at the Plant Site and committed to include the City of Vicksburg in determining the future land use of the uncontaminated areas of the Vicksburg Facility. On August 29, 2003, MDEQ selected the Harcros proposal for implementation. On January 13, 2005, the Harcros proposal was amended to include Silvertip as an additional partner. Under the amended proposal, Silvertip is responsible for the remediation of the Plant Site and compliance with this Agreed Order. Harcros intends to locate certain chemical blending and mixing operations at the Plant Site, as well as distribution facilities. This Agreed Order sets forth the commitments that Silvertip now makes to the Commission in consideration for the transfer of the respective property and facilities and as part of the implementation of the proposal.

5. On the date of the conveyance of the Vicksburg Facility, Silvertip shall simultaneously establish an escrow account ("Remediation Account") in the amount of $8,000,000.00 for the purpose of receiving and administering the funds of the Remediation Account. The Remediation Account shall be opened in the names of both Mississippi Bluffs Industrial Park, LLC and ARCADIS.[2] The funds, including all interest earned on the Remediation Account, shall be used for the mitigation of environmental impacts at the Plant Site as directed by MDEQ and as set forth in the Professional Services Agreement ("PSA") attached as Exhibit 2. MDEQ shall be a party to the escrow agreement establishing the Remediation Account, and the escrow agreement shall provide that no disbursements can be made from the Remediation Account without MDEQ's written approval, which approval shall not be unreasonably withheld. The

[2] ARCADIS will perform remediation work at the plant site. Mississippi Bluffs Industrial Park, LLC will receive conveyance of the 404± acre Plant Site and will oversee ARCADIS's remediation efforts.

escrow agreement shall also provide that the remaining balance of the Remediation Account, if any, shall be returned to Silvertip after receipt of a no further action letter from MDEQ, or at MDEQ's concurrence.

6. ARCADIS shall perform remediation services as set forth in the PSA. Those services include an initial baseline assessment of the Plant Site, followed by development of a groundwater remediation plan, a soil action plan, subsequent implementation of the plans, implementation of any institutional controls, and any other work required by MDEQ that is reasonable and related to remediation of the Plant Site to the extent that sufficient funding is available in the Remediation Account. This work shall be performed pursuant to Work Authorizations with MDEQ's written approval as set forth in the PSA. One of the objectives of this Agreed Order is to have a "remedy in place"[3] within three years, at which time long term operation, maintenance, and monitoring will be evaluated. The parties acknowledge that the term "remedy in place" does not necessarily mean that remediation will be complete within three years. Thus, the Remediation Account will continue to be utilized to pay remediation costs until remediation is complete, as determined by MDEQ, or until funds in the Remediation Account are exhausted. The costs and charges associated with any Work Authorizations approved by MDEQ shall be the allowable cost of remediation for purposes of House Bill 1294, enacted in the 2005 General Session.

7. In the event that the termination provisions of the PSA are triggered and ARCADIS no longer serves as the contractor, then Mississippi Bluffs Industrial Park, LLC shall select another remediation contractor, with MDEQ's written approval, and

[3] "Remedy in Place (RIP)" means that a final remedial action has been constructed and implemented and is operating as planned in the remedial design. An example of a Remedy in Place is a pump-and-treat system that is installed, is operating as designed, and will continue to operate until cleanup levels have been attained. Because operation of the remedy is ongoing, the site cannot be considered Response Complete which will be determined by MDEQ.

ARCADIS shall be removed as a party to this Agreed Order, and the Remediation Account after payment of fees owed under the PSA. In the event that MDEQ does not, for whatever reason, approve the selection of another contractor by Mississippi Bluffs Industrial Park, LLC, MDEQ shall select another contractor and shall direct the expenditure of funds from the escrow account for the remediation of the Plant Site.

8. Silvertip and Mississippi Bluffs Industrial Park, LLC will satisfy its obligations under this Agreed Order and cannot be deemed in default of the Agreed Order, and neither Silvertip nor the entities designated in Exhibit 3, or their constituent owners, successors, or assigns will have liability for pre-existing environmental conditions at the Plant Site as of the effective date of this Agreed Order; upon the establishment by Silvertip of the Remediation Account as set forth in this Agreed Order and in the PSA.[4]

9. Harcros, as an occupant in its chemical blending, mixing, and/or distribution operations, shall provide ARCADIS reasonable access to the Plant Site to perform remediation services, and shall not interfere with or impede the remediation services. ARCADIS agrees to use reasonable precaution in the remediation activities at the Plant Site to prevent any unreasonable interference or disturbance to the business operations of Harcros at the Plant Site.

10. The parties to this Agreed Order agree that the trust fund created at First National Bank, Vicksburg, Mississippi (now known as Trustmark National Bank) by two trust agreements between First National Bank and Vertac Chemical Corporation, dated October 6, 1982, as amended by a trust agreement dated June 27, 1986 wherein Cedar was substituted for Vertac Chemical Corporation in the trust agreement are not

[4] Silvertip will meet its obligations under the amended proposal by paying $8,000,000.00 into the Remediation Account. Mississippi Bluffs Industrial Park, LLC, to which the 40± acre Plant Site will be conveyed, will oversee ARCADIS's remediation efforts. Mississippi Bluffs Development, LLC will develop the 500± acres that are not believed to be contaminated.

considered a part of the "Vicksburg Facility" as defined in the aforementioned Stipulation and Order. Therefore, ownership of the referenced trust fund lies exclusively with MDEQ.

11. Upon execution of this Agreed Order, MDEQ shall direct the Vicksburg non-bankruptcy estate to transfer its complete interests in the "Vicksburg Facility" in two parcels of property to entities designated by Silvertip as set forth in Exhibit 3. The remaining terms of this Agreed Order are not effective until the parcels have been conveyed as set forth in Exhibit 3 and the conveyances have been recorded in the land records in Warren County, Mississippi.

12. Nothing contained in this Agreed Order shall limit the rights of the MDEQ or the Commission to take enforcement or other actions against Harcros, Silvertip, or Mississippi Bluffs Industrial Park, LLC for future violations of environmental laws, rules, and regulations.

13. Nothing contained in this Agreed Order is intended to create any obligation or liability of ARCADIS relating to the contamination at the Plant Site, except as agreed upon under the terms of the PSA.

ORDERED and AGREED, this the 19th day of December, 2005.

Charles H. Chisolm
Executive Director
Mississippi Commission on
Environmental Quality

AGREED, this the 25 day of October, 2005.

BY: _____

TITLE: MANAGING MEMBER
Mississippi Silvertip
Development, LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Silvertip Development, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25 day of October, 2005.

BY: _____

TITLE: MANAGING MEMBER
Mississippi Bluffs Industrial Park,
LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Bluffs Industrial Park, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25th day of October, 2005.

BY: Erhardt Werth

TITLE: EXECUTIVE VICE PRESIDENT
ARCADIS G&M, Inc.

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Erhardt Werth who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by ARCADIS G&M, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 1st day of ~~October~~ November, 2005.

BY: [signature]

TITLE: President & CEO
Harcros Chemical, Inc.

SUSAN G. LOCKE
Notary Public - State of Kansas
My Appt. Expires 7-6-09

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Kevin G. Mirner who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Harcros Chemical, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 1st day of ~~October~~ November, 2005.

Susan G. Locke
Notary Public

My Commission Expires:

7-6-09

EFiled: Feb 23 2006 2:20
Transaction ID 10645293

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

IN AND FOR NEW CASTLE COUNTY

IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation) C.A. NO 1940-N

ORDER

NOW, THEREFORE, upon the petition of the Mississippi Department of Environmental Quality ("Petitioner"), for the appointment of Carrie Tillman as Receiver of Vicksburg Chemical Company (the "Company"), an insolvent Delaware corporation, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to the designee of Petitioner; and

WHEREAS, upon consideration of the foregoing and it appearing that the Company is insolvent and that the Abandoned Property is to be transferred to the Petitioner's designee pursuant to an order of the U.S. Bankruptcy Court for the Southern District of New York dated October 18, 2002;

IT IS ORDERED, this 22nd day of February, 2006, that:

1. Carrie Tillman be, and hereby is, appointed as Receiver for the Company, pursuant to the provisions of 8 Del. C. § 291, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to Petitioner's designee.

2. The appointment of the Receiver shall not affect any dissolution, liquidation, winding up, revocation or continuation of the Company's bankruptcy estate.

3. The Receiver shall serve without bond.

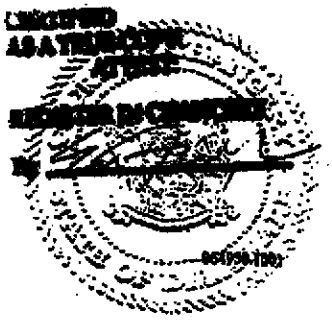
4. Pursuant to Court of Chancery Rule 148, Court of Chancery Rules 149 through 168 shall not be applicable to this proceeding. Instead, Receiver shall, within sixty (60) days of

ATTACHMENT "C" TO BILL OF SALE

her appointment, file with this Court a report stating that she has taken all actions necessary to effect and confirm the transfer to Petitioner's designee of the Abandoned Property. Receiver shall automatically be discharged following her appointment, and this case shall be dismissed, unless Receiver or any other interested person shall petition the Court within sixty (60) days following appointment of Receiver and show good cause why Receiver should not be discharged and the case dismissed.

5. The validity, interpretation and performance of this Order shall be governed by the laws of the State of Delaware, without regard to Delaware's conflicts of laws principles. This Court hereby retains jurisdiction for the purposes of implementing the terms of this Order, including the resolution of any disputes that may arise with respect to the interpretation or effectuation of any of the provisions of this Order.

The Honorable Vice Chancellor



GRANTED

EFiled: Apr 19 2006 4:00PM EDT
Transaction ID 11083963

IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

IN AND FOR NEW CASTLE COUNTY

IN RE VICKSBURG CHEMICAL COMPANY, a Delaware corporation) C.A. NO 1940-N

ORDER

NOW, THEREFORE, upon the petition of the Mississippi Department of Environmental Quality ("Petitioner"), for the appointment of Carrie Tillman as Receiver of Vicksburg Chemical Company (the "Company"), an insolvent Delaware corporation, for the sole and limited purpose of undertaking all actions necessary to effect and confirm the transfer of the Abandoned Property to the designee of Petitioner; and

WHEREAS, upon consideration of the foregoing and it appearing that the Company is insolvent and that the Abandoned Property is to be transferred to the Petitioner's designee pursuant to an order of the U.S. Bankruptcy Court for the Southern District of New York dated October 18, 2002; and

WHEREAS, on February 22, 2006, this Court entered an Order appointing Carrie Tillman as Receiver for the Company pursuant to the provisions of 8 Del. C. § 291; and

WHEREAS, the Receiver has not completed all actions necessary to effect and confirm the transfer of the Abandoned Property, as previously defined;

IT IS ORDERED, this 19 day of April, 2006, that:

1. The appointment of Carrie Tillman as Receiver for the Company shall be extended for an additional 60 days from the date of this Order.

2. All other provisions of the Court's Order of February 22, 2006 shall remain in full force and effect.

/s/ Donald F. Parsons Jr.
Vice Chancellor Donald F. Parsons Jr.

CERTIFIED
AS A TRUE COPY:
ATTEST:

REGISTER IN CHANCERY
By

DB02:5279470.1 064958.1001

ATTACHMENT "D" TO BILL OF SALE

Court: DE Court of Chancery

Judge: Parsons, Donald F

File & Serve reviewed Transaction ID: 11035563

Current date: 4/19/2006

Case number: 1940-N

Case name: In Re: Vicksburg Chemical Co

/s/ Judge Donald F Parsons Jr

STATE OF MISSISSIPPI
HALEY BARBOUR, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FOR IMMEDIATE RELEASE
December 19, 2005

CONTACT: Robbie Wilbur
601/961-5277

MDEQ FINALIZES AGREEMENT TO CLEAN UP FORMER VICKSBURG CHEMICAL SITE

(JACKSON, Miss.) – The Mississippi Department of Environmental Quality (MDEQ) has finalized an agreement for a developer to spend $8 million dollars to clean up the abandoned Vicksburg Chemical site in Vicksburg, Mississippi. The developer, Mississippi Silvertip Development, LLC, along with Harcros Chemicals, Inc., Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc., intends to sustainably reuse the plant site and surrounding acreage once the cleanup begins in early 2006.

Harcros plans to create a number of jobs with its chemical blending, mixing, or distribution operation on the abandoned plant site; and ARCADIS, a national leader in environmental cleanup, will perform the remediation services with MDEQ oversight and control. Silvertip plans to construct high-end commercial and residential sites and a championship golf course on a good portion of the remaining acreage.

On March 8, 2002, VCC and its parent company, Cedar Chemical Corp. (Cedar), filed for bankruptcy in the United States Bankruptcy Court for the Southern District of New York. VCC and Cedar then filed with that court a motion to allow the abandonment of the VCC property, potentially leaving uncontrolled hazardous conditions at the site. The Mississippi Commission on Environmental Quality, the Arkansas Department of Environmental Quality (ADEQ), EPA Region 4, EPA Region 6, and the United States Department of Justice contested this motion. The court eventually approved an agreement between the parties allowing VCC to abandon its properties and authorizing MDEQ to direct VCC the transfer of the VCC property to any entity identified by MDEQ. Since that time, MDEQ has kept the site under its control while structuring an agreement to cleanup the plant site in a manner protective of human health and the environment. MDEQ believes the finalized agreement successfully incorporates the principles of environmental protection, land reuse, and economic development.

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MISSISSIPPI DEPARTMENT
OF ENVIRONMENTAL QUALITY

CHAIN OF CUSTODY RECORD

OFFICE OF
POLLUTION CONTROL
P. O. Box 10385
Jackson, Mississippi 39289-0385

MSD

PROJECT LEADER

REMARKS

PROJECT NAME/LOCATION: Vicksburg Chemical, Vicksburg

DATA TO:

ESD SAMPLE TYPES
1. SURFACE WATER
2. GROUND WATER
3. POTABLE WATER
4. WASTEWATER
5. LEACHATE
6. SOIL/SEDIMENT
7. SLUDGE
8. WASTE
9. AIR
10. FISH
11. OTHER

SAMPLER

ANALYSIS: CIRCLE/ADD parameters desired. List no. of containers submitted.

STATION NO.	SAMPLE TYPE	DATE (~~19~~ 2005)	TIME	COMP	GRAB	STATION LOCATION/DESCRIPTION	TOTAL CONTAINERS	VOA	Semi volatile org. cpds.	Pest/PCBs + Toxaphene + Dyrosets	METALS	CYANIDE					TAG NO./REMARKS	Custody Seals Intact at Lab	Seals Not Intact Upon Receipt by Lab	LAB USE ONLY
	1	9/20	9:00		X	SWS1	9	3	2	2	2									29065
						Temp 2.1°C														

RELINQUISHED BY: (PRINT)	DATE/TIME	RECEIVED BY: (PRINT)	RELINQUISHED BY: (PRINT)	DATE/TIME	RECEIVED BY: (PRINT)
(SIGN) [signature]	9/20/05 1025	(SIGN) Tammy Sawyer [signature]	(SIGN)		(SIGN)
RELINQUISHED BY: (PRINT)	DATE/TIME	RECEIVED BY: (PRINT)	RELINQUISHED BY: (PRINT)	DATE/TIME	RECEIVED BY: (PRINT)
(SIGN)		(SIGN)	(SIGN)		(SIGN)

DISTRIBUTION: White and Yellow copies accompany sample shipment to laboratory; Yellow copy retained by laboratory
White copy is returned to samplers; Pink copy retained by samplers.

PAGE ____ OF ____ 8/90

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Vicksburg Chemical
County Code _____ NPDES Permit No. _____
Discharge No. _____ Date Requested 9/20/05
Sample Point Identification SWS 1
Requested By Andy McCain Data To Andy McCain
Type of Sample: Grab (X) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Clear 80°F Collected By Andy McCain
Where Taken _____

	Type	Parameters	Preservative	Date	Time
1.	Surface Water	VOC	HCL	9/20/05	9:00
2.	"	Semi VOC	ICE	"	"
3.	[redacted] "	Metals	[illegible]	"	"
4.	"	Pesticides + Toxaphene	ICE	"	"
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By Tammy Dawson Date 9/20/05 Time 1025
Recorded By _____ Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/1		*
COD	(000340)	( )	mg/1		
TOC	(000680)	( )	mg/1		
Suspended Solids	(099000)	( )	mg/1		
TKN	(000625)	( )	mg/1		
Ammonia-N	(000610)	( )	mg/1		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/1		
Oil and Grease(1)	(000550)	( )	mg/1		
Oil and Grease(2)	(000550)	( )	mg/1		
Chlorides	(099016)	( )	mg/1		
Phenol	(032730)	( )	mg/1		
Total Chromium	(001034)	( )	mg/1		
Hex. Chromium	(001032)	( )	mg/1		
Zinc	(001092)	( )	mg/1		
Copper	(001042)	( )	mg/1		
Lead	(017501)	( )	mg/1		
Cyanide	(000722)	( )	mg/1		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks Pesticides + Toxaphene + Dynoseb

*Date of Test Initiation

29065

Sample Receipt

Mississippi DEQ/OPC Laboratory

Sample I.D. AA29065
Location code **C14600062**
Location Description **VICKSBURG CHEMICAL SWS1**
Sample collector **AMCCAIN**
Collection date: **09/20/2005**
Lab submittal date: **09/20/2005**
Due date: **09/20/2005**
Matrix: **SURFACEWATER**

Login record file: ***050920102231***

Collection time: **09:00**
Lab submittal time: **10:20**

Division Code: **3858**

STUDY **COMPLIANCE**
PERMIT_NO _____
DISCHARGE_NO _____
WADES_NO _____
OTHER_NO **SWS 1**
SAMPLE_LOCATION **SWS 1**
COUNTY_CODE **149 WARREN**
REQUESTED_BY **ANDY McCAIN**

Analyses ordered	Method	Due Date
EPA 8260 VOLATILE ORGANICS IN WATER	8260W	09/27/2005
EPA 8270 SEMIVOL ORG COMPOUNDS	8270	10/31/2005
Extract For Semi-Volatile Analysis		09/27/2005
EPA 8081 PESTICIDES Water	8081	10/31/2005
Extract For Pesticides		09/27/2005
Arsenic, Total (ug/L as As)	200.7	10/18/2005
Barium, Total (ug/L as Ba)	200.7	10/18/2005
Cadmium, Total (ug/L as Cd)	200.7	10/18/2005
Chromium, Total (ug/L as Cr)	200.7	10/18/2005
Lead, Total (ug/L as Pb)	200.7	10/18/2005
Mercury, Total (ug/L as Hg)	245.1	10/18/2005
Selenium, Total (ug/L as Se)	200.7	10/18/2005
Silver, Total (ug/L as Ag)	200.7	10/18/2005

Please refer to the indicated sample I.D. number whan making inquiries.

Received by: _____

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

COMPLIANCE MONITORING REPORT

To:	ANDY McCAIN	QA Type:	
		Date Collected	06/13/2005
		Time Collected:	11:15
		Sample Collector:	AMCCAIN
		To Lab:	SV
Sample ID:	AA27701	Sample Type:	GROUNDWATER
Facility Name:	VICKSBURG CHEMICAL	Received By:	TAMMY SAWYER
Sampling Loc:	MW 10	LIMS Login Date:	06/13/2005
Site ID:	COMPLIANCE	LIMS Login Time:	16:13
Discharge No:		COC Date:	06/13/2005
Other No:	MW-10	COC Time:	1613
Permit No:		Project:	3858
Latitude:		Study:	COMPLIANCE
Longitude:			
County:	149 WARREN	Reporting Date:	07/05/2005

ANALYTE	METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
4,4'-DDE	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
4,4'-DDT	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
Aldrin	8081	ND	ug/L	0.34	JK	6/14/05	6/17/05
alpha-BHC	8081	ND	ug/L	0.35	JK	6/14/05	6/17/05
Alpha-Chlordane	8081	ND	ug/L	0.08	JK	6/14/05	6/17/05
Atrazine	8081	ND	ug/L	80	JK	6/14/05	6/17/05
beta-BHC	8081	ND	ug/L	0.23	JK	6/14/05	6/17/05
Chlordane Tech	8081	ND	ug/L	25	JK	6/14/05	6/17/05
Chlorpyrifos	8081	ND	ug/L	0.35	JK	6/14/05	6/17/05
Cis-Permethrin	8081	ND	ug/L	3.76	JK	6/14/05	6/17/05
delta-BHC	8081	ND	ug/L	0.24	JK	6/14/05	6/17/05
Dicofol	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
Dieldrin	8081	ND	ug/L	0.44	JK	6/14/05	6/17/05
Endosulfan I	8081	ND	ug/L	0.37	JK	6/14/05	6/17/05

Endosulfan II	8081	ND	ug/L	0.4	JK	6/14/05	6/17/05
Endosulfan sulfate	80[redacted]	ND	ug/L	0.35[redacted]	JK	6/14/05	6/17/05
Endrin	8081	ND	ug/L	0.39	JK	6/14/05	6/17/05
Endrin aldehyde	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
Endrine Ketone	8081	ND	ug/L	0.6	JK	6/14/05	6/17/05
Gama-Chlordane	8081	ND	ug/L	0.3	JK	6/14/05	6/17/05
gamma-BHC (Lindane)	8081	ND	ug/L	0.25	JK	6/14/05	6/17/05
Guthion	8081	ND	ug/L	4.06	JK	6/14/05	6/17/05
Heptachlor	8081	ND	ug/L	0.32	JK	6/14/05	6/17/05
Heptachlor epoxide	8081	ND	ug/L	0.32	JK	6/14/05	6/17/05
Hexachlorobenzene	8081	ND	ug/L	0.15	JK	6/14/05	6/17/05
Methoxychlor	8081	ND	ug/L	0.86	JK	6/14/05	6/17/05
Mirex	8081	ND	ug/L	0.25	JK	6/14/05	6/17/05
Pendimethalin	8081	ND	ug/L	1.2	JK	6/14/05	6/17/05
Simazine	8081	ND	ug/L	80	JK	6/14/05	6/17/05
Toxaphene	8081	ND	ug/L	0.86	JK	6/14/05	6/17/05
Trans-Permethrin	8081	ND	ug/L	0.95	JK	6/14/05	6/17/05
Trifluralin	8081	ND	ug/L	0.35	JK	6/14/05	6/17/05
z DCB	8081	43%	ug/L	20-127	JK	6/14/05	6/17/05
z TCMX	8081	74%	ug/L	56-125	JK	6/14/05	6/17/05
1,1,1,2-Tetrachloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1,1-Trichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1,2,2-Tetrachloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1,2-Trichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1-Dichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1-Dichloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1-Dichloropropene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,3-Trichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,3-Trichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,4-Trichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,4-Trimethylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dibromo-3-chloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dibromoethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,3,5-Trimethylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,3-Dichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,3-Dichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,4-Dichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05

2,2-Dichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
2-Butanone (MEK)	82[redacted]	ND	ug/L	25	BA	6/16/05	6/20/05
2-Chlorotoluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
2-Hexanone	8260W	ND	ug/L	25	BA	6/16/05	6/20/05
4-Chlorotoluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
4-Isopropyltoluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
4-Methyl-2-pentanone (MIBK)	8260W	ND	ug/L	25	BA	6/16/05	6/20/05
Acetone	8260W	ND	ug/L	25	BA	6/16/05	6/20/05
Benzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromochloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromodichloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromoform	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromomethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Carbon Tetrachloride	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chloroform	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
cis-1,2-Dichloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
cis-1,3-Dichloropropene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Dibromochloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Dibromomethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Dichlorodifluoromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Ethylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Hexachlorobutadiene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Isopropylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
m & p -Xylene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Methyl tertiary butyl ether	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Methylene Chloride	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Naphthalene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
n-Butylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
n-Propylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
o - Xylene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
sec-Butylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Styrene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
tert-Butylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Tetrachloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Toluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
trans-1,2-Dichloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05

trans-1,3-dichloropropene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Trichloroethene	82	ND	ug/L	5	BA	6/16/05	6/20/05
Trichlorofluoromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Vinyl Chloride	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
z 1,2-Dichloroethane-d4	8260W	104%	ug/L	80-120	BA	6/16/05	6/20/05
z Dibromofluromethane	8260W	120%	ug/L	80-118	BA	6/16/05	6/20/05
z p-Bromoflurobenzene	8260W	101%	ug/L	80-115	BA	6/16/05	6/20/05
z Toluene-d8	8260W	89%	ug/L	80-118	BA	6/16/05	6/20/05

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
TIE: Tentatively Identified or Estimated
>: greater than
z: surrogate

COC Date: Date Chain of Custody Signed
COC Time: Time Chain of Custody Signed

SAMPLE COMMENTS:

ENVIRONMENT CONDITION: SUNNY 90 DEGREES FAHRENHEIT

DRINKING WATER STANDARDS

REMARKS: NEED DINOSEB AND TOXAPHENE

No Dinoseb or Toxaphene detected. JK

Dinoseb MQL 5.0ppb, run by acid extraction and analysis of free acids by GC/MS.

Approved By:

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Vicksburg Chem
County Code _____ NPDES Permit No. _____
Discharge No. _____ Date Requested 6-13-05
Sample Point Identification MW 10
Requested By _____ Data To Andy McCain
Type of Sample: Grab (X) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Sunny 90° Collected By Andy McCain
Where Taken _____

	Type	Parameters	Preservative	Date	Time
1.	GWater	VOC	HCL/ICE	6-13-05	11:15
2.	11	Pesticides/Dynasolv toxaphene	ICE	11	11
3.					
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By [signature] Date 6/13/05 Time 1613
Recorded By _____ Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/l		
Oil and Grease(1)	(000550)	( )	mg/l		
Oil and Grease(2)	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks _____

*Date of Test Initiation

1856

2770

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

COMPLIANCE MONITORING REPORT

To:	ANDY McCAIN	QA Type:	
		Date Collected	06/13/2005
		Time Collected:	14:15
		Sample Collector:	AMCCAIN
		To Lab:	SV
Sample ID:	AA27702	Sample Type:	GROUNDWATER
Facility Name:	VICKSBURG CHEMICAL	Received By:	TAMMY SAWYER
		LIMS Login Date:	06/13/2005
Sampling Loc:	MW 12	LIMS Login Time:	16:13
Site ID:	COMPLIANCE	COC Date:	06/13/2005
Discharge No:		COC Time:	1613
Other No:	MW-12	Project:	3858
Permit No:		Study:	COMPLIANCE
Latitude:			
Longitude:		Reporting Date:	07/05/2005
County:	149 WARREN		

ANALYTE	METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
4,4'-DDD	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
4,4'-DDE	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
4,4'-DDT	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
Aldrin	8081	ND	ug/L	0.34	JK	6/14/05	6/17/05
alpha-BHC	8081	ND	ug/L	0.35	JK	6/14/05	6/17/05
Alpha-Chlordane	8081	ND	ug/L	0.08	JK	6/14/05	6/17/05
Atrazine	8081	ND	ug/L	80	JK	6/14/05	6/17/05
beta-BHC	8081	ND	ug/L	0.23	JK	6/14/05	6/17/05
Chlordane Tech	8081	ND	ug/L	25	JK	6/14/05	6/17/05
Chlorpyrifos	8081	ND	ug/L	0.35	JK	6/14/05	6/17/05
Cis-Permethrin	8081	ND	ug/L	3.76	JK	6/14/05	6/17/05
delta-BHC	8081	ND	ug/L	0.24	JK	6/14/05	6/17/05
Dicofol	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
Dieldrin	8081	ND	ug/L	0.44	JK	6/14/05	6/17/05
Endosulfan I	8081	ND	ug/L	0.37	JK	6/14/05	6/17/05

Endosulfan II	8081	ND	ug/L	0.4	JK	6/14/05	6/17/05
Endosulfan sulfate	80[redacted]	ND	ug/L	0.35[redacted]	JK	6/14/05	6/17/05
Endrin	8081	ND	ug/L	0.39	JK	6/14/05	6/17/05
Endrin aldehyde	8081	ND	ug/L	0.5	JK	6/14/05	6/17/05
Endrine Ketone	8081	ND	ug/L	0.6	JK	6/14/05	6/17/05
Gama-Chlordane	8081	ND	ug/L	0.3	JK	6/14/05	6/17/05
gamma-BHC (Lindane)	8081	ND	ug/L	0.25	JK	6/14/05	6/17/05
Guthion	8081	ND	ug/L	4.06	JK	6/14/05	6/17/05
Heptachlor	8081	ND	ug/L	0.32	JK	6/14/05	6/17/05
Heptachlor epoxide	8081	ND	ug/L	0.32	JK	6/14/05	6/17/05
Hexachlorobenzene	8081	ND	ug/L	0.15	JK	6/14/05	6/17/05
Methoxychlor	8081	ND	ug/L	0.86	JK	6/14/05	6/17/05
Mirex	8081	ND	ug/L	0.25	JK	6/14/05	6/17/05
Pendimethalin	8081	ND	ug/L	1.2	JK	6/14/05	6/17/05
Simazine	8081	ND	ug/L	80	JK	6/14/05	6/17/05
Toxaphene	8081	ND	ug/L	0.86	JK	6/14/05	6/17/05
Trans-Permethrin	8081	ND	ug/L	0.95	JK	6/14/05	6/17/05
Trifluralin	8081	ND	ug/L	0.35	JK	6/14/05	6/17/05
z DCB	8081	60%	ug/L	20-127	JK	6/14/05	6/17/05
z TCMX	8081	84%	ug/L	56-125	JK	6/14/05	6/17/05
1,1,1,2-Tetrachloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1,1-Trichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1,2,2-Tetrachloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1,2-Trichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1-Dichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1-Dichloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,1-Dichloropropene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,3-Trichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,3-Trichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,4-Trichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2,4-Trimethylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dibromo-3-chloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dibromoethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dichloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,2-Dichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,3,5-Trimethylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,3-Dichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,3-Dichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
1,4-Dichlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05

2,2-Dichloropropane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
2-Butanone (MEK)	82[redacted]	ND	ug/L	25	BA	6/16/05	6/20/05
2-Chlorotoluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
2-Hexanone	8260W	ND	ug/L	25	BA	6/16/05	6/20/05
4-Chlorotoluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
4-Isopropyltoluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
4-Methyl-2-pentanone (MIBK)	8260W	ND	ug/L	25	BA	6/16/05	6/20/05
Acetone	8260W	ND	ug/L	25	BA	6/16/05	6/20/05
Benzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromochloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromodichloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromoform	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Bromomethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Carbon Tetrachloride	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chlorobenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chloroethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chloroform	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Chloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
cis-1,2-Dichloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
cis-1,3-Dichloropropene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Dibromochloromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Dibromomethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Dichlorodifluoromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Ethylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Hexachlorobutadiene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Isopropylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
m & p -Xylene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Methyl tertiary butyl ether	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Methylene Chloride	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Naphthalene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
n-Butylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
n-Propylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
o - Xylene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
sec-Butylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Styrene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
tert-Butylbenzene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Tetrachloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Toluene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
trans-1,2-Dichloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05

trans-1,3-dichloropropene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Trichloroethene	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Trichlorofluoromethane	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
Vinyl Chloride	8260W	ND	ug/L	5	BA	6/16/05	6/20/05
z 1,2-Dichloroethane-d4	8260W	103%	ug/L	80-120	BA	6/16/05	6/20/05
z Dibromofluromethane	8260W	* 124%	ug/L	80-118	BA	6/16/05	6/20/05
z p-Bromoflurobenzene	8260W	102%	ug/L	80-115	BA	6/16/05	6/20/05
z Toluene-d8	8260W	89%	ug/L	80-118	BA	6/16/05	6/20/05

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
TIE: Tentatively Identified or Estimated
>: greater than
z: surrogate

COC Date: Date Chain of Custody Signed
COC Time: Time Chain of Custody Signed

SAMPLE COMMENTS:

ENVIRONMENT CONDITION: SUNNY 90 DEGREES FAHRENHEIT

DRINKING WATER STANDARDS

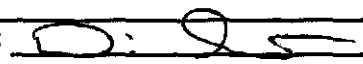
REMARKS: NEED DINOSEB AND TOXAPHENE

No Toxaphene or Dinoseb detected. JK

Dinoseb MQL 5.0ppb. Dinoseb analyzed by acid extraction, analysis of free acids by GC/MS. JK

Volatiles:

*Dibromofluoromethane-surr exceeded limit. BA

Approved By: 

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Vicksburg Chemical
County Code _____ NPDES Permit No. _____
Discharge No. _____ Date Requested 6-13-05
Sample Point Identification MW17
Requested By Andy McCain Data To Andy McCain
Type of Sample: Grab (X) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Sunny 90° Collected By Andy McCain
Where Taken _____

	Type	Parameters	Preservative	Date	Time
1.	G. Water	VOC	HCL/ice	6-13-05	14:15
2.	"	Pesticide/Dynasch Toxaphene	ICE	"	"
3.					
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By Tommy Sawyer Date 6/13/05 Time 1613
Recorded By _____ Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/1		*
COD	(000340)	( )	mg/1		
TOC	(000680)	( )	mg/1		
Suspended Solids	(099000)	( )	mg/1		
TKN	(000625)	( )	mg/1		
Ammonia-N	(000610)	( )	mg/1		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/1		
Oil and Grease(1)	(000550)	( )	mg/1		
Oil and Grease(2)	(000550)	( )	mg/1		
Chlorides	(099016)	( )	mg/1		
Phenol	(032730)	( )	mg/1		
Total Chromium	(001034)	( )	mg/1		
Hex. Chromium	(001032)	( )	mg/1		
Zinc	(001092)	( )	mg/1		
Copper	(001042)	( )	mg/1		
Lead	(017501)	( )	mg/1		
Cyanide	(000722)	( )	mg/1		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks _____

*Date of Test Initiation

1858

27702

Sample Receipt

Mississippi DEQ/OPC Laboratory

Sample I.D. AA27701
Location code **COMPLIANCE**
Location Description **VICKSBURG CHEMICAL**
Sample collector **AMCCAIN**
Collection date: **06/13/2005**
Lab submittal date: **06/13/2005**
Due date: **06/13/2005**
Matrix: **GROUNDWATER**

Login record file: **050613161846**

Collection time: **11:15**
Lab submittal time: **16:13**

Division Code: **3858**

STUDY **COMPLIANCE**
PERMIT_NO _____
DISCHARGE_NO _____
WADES_NO _____
OTHER_NO **MW-10**
SAMPLE_LOCATION **MW 10**
COUNTY_CODE **149 WARREN**
REQUESTED_BY _____

Analyses ordered	Method	Due Date
EPA 8260 VOLATILE ORGANICS IN WATER	8260W	06/20/2005
EPA 8081 PESTICIDES Water	8081	07/24/2005
Extract For Pesticides		06/20/2005

Sample I.D. AA27702
Location code **COMPLIANCE**
Location Description **VICKSBURG CHEMICAL**
Sample collector **AMCCAIN**
Collection date: **06/13/2005**
Lab submittal date: **06/13/2005**
Due date: **06/13/2005**
Matrix: **GROUNDWATER**

Login record file: **050613161846**

Collection time: **14:15**
Lab submittal time: **16:13**

Division Code: **3858**

STUDY **COMPLIANCE**
PERMIT_NO _____
DISCHARGE_NO _____
WADES_NO _____
OTHER_NO **MW-12**
SAMPLE_LOCATION **MW 12**
COUNTY_CODE **149 WARREN**
REQUESTED_BY _____

Analyses ordered	Method	Due Date
EPA 8260 VOLATILE ORGANICS IN WATER	8260W	06/20/2005
EPA 8081 PESTICIDES Water	8081	07/24/2005
Extract For Pesticides		06/20/2005

Please refer to the indicated sample I.D. numbers whan making inquiries.

Received by: _____

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Vicksburg Chem
County Code _____ NPDES Permit No. _____
Discharge No. _____ Date Requested 6-13-05
Sample Point Identification MW 10
Requested By _____ Data To Andy McCain
Type of Sample: Grab (X) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Sunny 90° Collected By Andy McCain
Where Taken _____

	Type	Parameters	Preservative	Date	Time
1.	GWater	VOC	HCL/ICE	6-13-05	11:15
2.	"	Pesticides/Dynaseb	ICE	"	"
3.		toxaphene			
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By [signature] Date 6/13/05 Time 1613
Recorded By _____ Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/l		
Oil and Grease(1)	(000550)	( )	mg/l		
Oil and Grease(2)	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks _____

*Date of Test Initiation

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Vicksburg Chemical
County Code _____ NPDES Permit No. _____
Discharge No. _____ Date Requested 6-13-05
Sample Point Identification MW12
Requested By Andy McCain Data To Andy McCain
Type of Sample: Grab ~~X~~ Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Sunny 90° Collected By Andy McCain
Where Taken _____

	Type	Parameters	Preservative	Date	Time
1.	G. Water	VOC	HCL/ice	6-13-05	1415
2.	"	Pesticide/Herb Toxicant	ICE	"	"
3.					
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By _____ Date 6/13/05 Time 1613
Recorded By _____ Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/l		
Oil and Grease(1)	(000550)	( )	mg/l		
Oil and Grease(2)	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks _____

*Date of Test Initiation

1858

MISSISSIPPI DEPARTMENT
OF ENVIRONMENTAL QUALITY

CHAIN OF CUSTODY RECORD

POLLUTION CONTROL
LABORATORY
121 Fairmont Plaza
Pearl, Mississippi 39208

PROJECT NAME: Vicksburg Chemical

LOCATION: Vicksburg, Warren Co

SHIPPED TO:

DATA TO: Andy McCain

SAMPLE TYPES
1. SURFACE WATER
2. GROUND WATER
3. POTABLE WATER
4. WASTEWATER
5. LEACHATE
6. SOIL/SEDIMENT
7. SLUDGE
8. WASTE
9. AIR
10. FISH
11. OTHER

SAMPLERS (SIGN)
A. Andy McCain
B.
C.
D.

SITE NO.	SAMPLE TYPE	DATE (2005 ~~19~~)	TIME	COMP	GRAB	STATION LOCATION/DESCRIPTION	TOTAL CONTAINERS	COD, TOC, NUTRIENTS	BOD, SOLIDS	METALS (Total) (TCLP)	EXT. ORG/PEST/PCBs (TCLP)	PURG. AROMATICS/ HALOCARBONS	CYANIDE	FECAL COLIFORM	Oil & Grease/TPH	Phenolics	VOC	Pesticides + Dynaseb	REMARKS	LAB USE ONLY
	2	6-13	11:15		X	MW10	5										3	2		27701
	2	6-13	2:15 PM		X	MW12	5										3	2		27702
						NEED DINOSEB & TOXAPHENE														
						Temp. 1.5°C														

CIRCLE/ADD parameter desired. List no. of containers submitted.

ANALYSIS

RELINQUISHED BY: (PRINT)	DATE/TIME	RECEIVED BY: (PRINT)	RELINQUISHED BY: (PRINT)	DATE/TIME	RECEIVED BY: (PRINT)
B. Yowel (SIGN) [signature]	6/13/05 1613	Tammy Sawyer (SIGN) [signature]	(SIGN)		(SIGN)
RELINQUISHED BY: (PRINT) (SIGN)	DATE/TIME	RECEIVED BY: (PRINT) (SIGN)	RELINQUISHED BY: (PRINT) (SIGN)	DATE/TIME	RECEIVED BY: (PRINT) (SIGN)

NOTICE: Must use a separate form for each ice chest.

DISTRIBUTION: White and Yellow copies accompany sample shipment to lab; Yellow copy retained by lab; White copy is returned to samplers; Pink copy retained by samplers.

PAGE ____ OF ____

3/91

1766
9/19/02

MDEQ OPC Locational Data Entry Form

Site Name: VICKSBURG CHEMICAL COMPANY

Address: 4280 RIFLE RANGE ROAD

City: VICKSBURG State: MS Zip: 39180

County: WARREN

Site Unique Identifier: MS0027995 MSD 990 71408

Site Unique Identifier Description: PERMIT #
(Permit #, EPA ID, Monitoring Station #, etc.)

Latitude: 32 Degrees 18 Minutes 04.0 Seconds

Longitude: 90 Degrees 53 Minutes 57.7 Seconds

Elevation: 180 Ft.

Method of Collection:
____ G3 - Differential
X G5 - Automonous / SA Off

Point Description:

X PG - Plant Entrance (General)
____ NE - NE Corner of Land Parcel
____ SE - SE Corner of Land Parcel
____ NW - NW Corner of Land Parcel
____ SW - SE Corner of Land Parcel
____ CE - Center of Facility
____ WL - Well*
____ WM - Ambient Water Monitoring Station
____ AM - Ambient Air Monitoring Station

Comments: FRONT GATE TO FACILITY.

*This point should be used only for wells in cases where there is no other identifiable facility.

Collected by: CHUCK GRAY

Date Collected: 7/11/02

1766

Locational Data Entry Form Supplement

Page 2 of 2

Site Name: VICKSBURG CHEMICAL COMPANY

Point Unique Identifier: 001

Point Unique Description: DISCHARGE #

(Stack #, Discharge #, Monitoring Station #, etc.)

Latitude: 32 Degrees 17 Minutes 39.5 Seconds

Longitude: 90 Degrees 54 Minutes 18.8 Seconds

Elevation: 180 Ft.

Method of Collection:
- ____ G3 - Differential
- X G5 - Autonomous / SA Off

Point Description:

- ____ AS - Air Release Stack
- ____ AV - Air Release Vent
- ____ ST - Storage Tank Vent
- ____ WR - Water Release Pipe
- ____ SP - Lagoon or Settling Pond
- ____ LW - Liquid Waste Treatment Unit
- ____ AE - Atmos. Emissions Trtmnt / Disp
- ____ SD - Solid Waste Trtmnt / Disp Unit
- ____ SS - Solid Waste Storage Area
- ____ LF - Loading Facility
- ____ PU - Process Unit
- ____ WL - Well (Describe in Comments)
- ____ WM - Water Monitoring Station
- ____ AM - Air Monitoring Station
- X OT - Other (Describe in Comments)
- ____ UN - Unknown

Comments: EFFLUENT SAMPLING POINT

Collected by: CHUCK GRAY

Date Collected: 7/11/02

TRUST AGREEMENT

THIS AGREEMENT, entered into as of the 6th day of October, 1982, by and between VERTAC CHEMICAL CORPORATION, a Delaware corporation (the "Grantor"), and FIRST NATIONAL BANK, Vicksburg, Mississippi (the "Trustee").

WHEREAS, the Mississippi Department of Natural Resources ("MS.DNR"), an agency of the State of Mississippi, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility,

WHEREAS, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A.

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund (the "Fund") for the benefit of MS.DNR. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by MS.DNR.

Section 4. Payment for Closure and Post-Closure Care. The Trustee shall make payments from the Fund as the Executive Director of MS.DNR shall direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Executive Director of MS.DNR from the Fund for closure and post-closure expenditures in such amounts as said Executive Director shall direct in writing. In addition, the Trustee shall refund to the

Grantor such amounts as said Executive Director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the

application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Executive Director of MS.DNR a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and said Executive Director shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Executive Director of MS.DNR, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully

protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Executive Director of MS.DNR to the Trustee shall be in writing, signed by the said Executive Director or his designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or MS.DNR hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or MS.DNR, except as provided herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the Executive Director of MS.DNR, by certified mail within 10 days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Executive Director of MS.DNR, or by the Trustee and the Executive Director of MS.DNR, if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided

in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Executive Director of MS.DNR, or by the Trustee and the said Executive Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Executive Director of MS.DNR issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Mississippi.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers duly authorized

and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in the Mississippi Hazardous Waste Regulations, Rule 264.151(a)(1), as such regulations were constituted on the date hereof.

ATTEST:

By: _____
Title: _____

VERTAC CHEMICAL CORPORATION

By: _____
Title: _____

GRANTOR

[Seal]

ATTEST:

By: _____
Title: _____

FIRST NATIONAL BANK, Vicksburg, Mississippi

By: _____
Title: _____

TRUSTEE

[Seal]

STATE OF TENNESSEE
COUNTY OF SHELBY

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared John C. Bumpers, with whom I am personally acquainted and who, upon oath, acknowledged himself to be the Vice President and Secretary of Vertac Chemical Corporation, the within named bargainor, a corporation, and that he, as such Vice President and Secretary, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as such Vice President and Secretary.

WITNESS my hand and Notarial Seal at office this ___ day of _____, 1983.

Notary Public

My Commission Expires:

My Commission Expires 12-8-85

STATE OF MISSISSIPPI
COUNTY OF WARREN

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared Joe Schmitt, with whom I am personally acquainted and who, upon oath, acknowledged himself to be the Senior Trust Officer & Vice President of First National Bank, Vicksburg, Mississippi, the within named bargainor, a corporation, and that he, as such _____, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as such OFFICER.

WITNESS my hand and Notarial Seal at office this 30th day of June, 1983.

Barbara Clark
Notary Public

My Commission Expires:

July 16, 1985

EXHIBIT A

Facilities and Cost Estimates

Vertac Chemical Corporation
Vicksburg Plant
P. O. Box 3
Vicksburg, Mississippi 39180

EPA ID# MSD 990714081

Closure	$ 30,000.00
Post-Closure	$ 75,000.00

EXHIBIT B

The Fund shall be established by the initial deposit hereunder by Grantor in the sum of Five Thousand Two Hundred Fifty Dollars ($5,250.00), plus interest thereon, as a result of the termination of a previously existing Trust Agreement between the Grantor and First National Bank, Vicksburg, Mississippi, containing substantially identical terms as the foregoing Trust Agreement, said Trust Agreement having been terminated incident to the formation of the foregoing Trust.

AMENDMENT TO TRUST AGREEMENT DATED AS OF OCTOBER 6, 1982

This Amendment, executed as of the 27th day of June, 1986 by each of the undersigned.

W I T N E S S E T H:

WHEREAS, the undersigned, Vertac Chemical Corporation ("Grantor") and First National Bank, Vicksburg, Mississippi ("Trustee") entered into a Trust Agreement dated as of October 6, 1982 (the "Trust Agreement") in order for Grantor to provide a vehicle by which it could provide financial assurance for closure and/or post-closure care of its Vicksburg Plant (the "Facility") in accordance with certain regulations of the Mississippi Department of Natural Resources ("MS.DNR") applicable to Grantor; and

WHEREAS, the Grantor has conveyed to Cedar Chemical Corporation, a Delaware Corporation ("Cedar"), all of its right, title and interest in and to the Facility, which is the subject of said Trust Agreement; and

WHEREAS, Cedar has agreed to assume the Grantor's obligations under the Trust Agreement, and desires to be substituted for and in place of the original Grantor in said Trust Agreement; and

WHEREAS, the MS.DNR, acting by its Executive Director and the Trustee agree that Cedar may replace Vertac Chemical Corporation as the Grantor named in said Trust Agreement.

NOW, THEREFORE, the undersigned agree that Cedar Chemical Corporation be and it hereby is substituted as the Grantor in the Trust Agreement in the place and stead of Vertac Chemical Corporation, the original Grantor, and that, as such substitute Grantor, Cedar shall enjoy all the rights and assume all of the obligations of the original Grantor contained in the Trust Agreement.

EXECUTED by the undersigned as of the 27th day of June, 1986.

ATTEST:

VERTAC CHEMICAL CORPORATION

By: Pres. & CEO

ATTEST:

CEDAR CHEMICAL CORPORATION

By:

ATTEST:

FIRST NATIONAL BANK, VICKSBURG, MISSISSIPPI

By:

ATTEST:

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES

By:

ACKNOWLEDGMENT

STATE OF TENNESSEE
COUNTY OF SHELBY

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared J. Randal Tomblin and Johnny L. Hanna, with whom I am personally acquainted, and who, upon oath, acknowledged themselves to be the President and CEO and Vice President of Vertac Chemical Corporation, the within named bargainor, a corporation, and they as such President and CEO and Vice President, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by themselves as such President and CEO and Vice President.

WITNESS my hand and seal, at office in Memphis, this 19th day of August, 1986.

NOTARY PUBLIC

My Commission Expires:

May 30, 1988

STATE OF TENNESSEE
COUNTY OF SHELBY

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared John C. Bumpers and John C. Whitsitt, Jr., with whom I am personally acquainted and who, upon oath acknowledged themselves to be the Vice President and Treasurer of Cedar Chemical Corporation, the within named bargainor, a corporation, and they as such Vice President and Treasurer, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by themselves as Vice President and Treasurer.

WITNESS my hand and seal, at office in Memphis, this 19th day of August, 1986.

NOTARY PUBLIC

My Commission Expires: May 30, 1988

ACKNOWLEDGMENT

STATE OF MISSISSIPPI
COUNTY OF WARREN

Before me, a Notary Public in and for said state and county, duly commissioned and qualified, personally appeared Joe Schmitt, with whom I am personally acquainted, and who, upon oath, acknowledged himself to be the Vice Pres. & Senior T. O. of First National Bank, Vicksburg, the within named bargainor, Trustee herein, and that he as such officer, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as such officer.

WITNESS my hand and seal, at office in Vicksburg, Ms., this 28 day of March, ~~1986.~~ 1988

NOTARY PUBLIC

My Commission Expires:

~~MY COMMISSION EXPIRES JULY 16, 1989.~~

STATE OF MISSISSIPPI
COUNTY OF HINDS

Before me, a Notary Public in and for said state and county, duly commissioned and qualified, personally appeared Charles L. Blalock, with whom I am personally acquainted, and who, upon oath acknowledged himself to be the Executive Director of the Mississippi Department of Natural Resources, the within named bargainor, an agency of the State of Mississippi, and he as such Executive Director executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Executive Director.

WITNESS my hand and seal, at office in Jackson, this 7th day of October, 1986.

NOTARY PUBLIC

My Commission Expires:
My Commission Expires August 6, 1987.

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

COMPLIANCE MONITORING REPORT

To:	ANDY McCAIN	QA Type:	
		Date Collected	09/20/2005
		Time Collected:	09:00
		Sample Collector:	AMCCAIN
		To Lab:	SV
Sample ID:	AA29065	Sample Type:	SURFACEWATER
Facility Name:	VICKSBURG CHEMICAL SWS1	Received By:	TAMMY SAWYER
		LIMS Login Date:	09/20/2005
Sampling Loc:	SWS 1	LIMS Login Time:	10:20
Site ID:	C14600062	COC Date:	09/20/2005
Discharge No:		COC Time:	1025
Other No:	SWS 1	Project:	3858
Permit No:		Study:	COMPLIANCE
Latitude:			
Longitude:		Reporting Date:	10/20/2005
County:	149 WARREN		

ANALYTE	METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
Arsenic, Total (ug/L as As)	200.7	56.6	ug/L	2.2	BB	9/22/05	9/22/05
Barium, Total (ug/L as Ba)	200.7	90.9	ug/L	0.22	BB	9/21/05	9/21/05
Cadmium, Total (ug/L as Cd)	200.7	ND	ug/L	0.27	BB	9/22/05	9/22/05
Chromium, Total (ug/L as Cr)	200.7	ND	ug/L	0.53	BB	9/22/05	9/22/05
Lead, Total (ug/L as Pb)	200.7	ND	ug/L	2.1	BB	9/22/05	9/22/05
Selenium, Total (ug/L as Se)	200.7	10.3	ug/L	6.5	BB	9/22/05	9/22/05
Silver, Total (ug/L as Ag)	200.7	ND	ug/L	1.0	BB	9/22/05	9/22/05
Mercury, Total (ug/L as Hg)	245.1	ND	ug/L	0.5	BB	9/20/05	9/20/05
4,4'-DDD	8081	ND	ug/L	0.5	JK	9/26/05	9/30/05
4,4'-DDE	8081	ND	ug/L	0.5	JK	9/26/05	9/30/05
4,4'-DDT	8081	ND	ug/L	0.5	JK	9/26/05	9/30/05
Aldrin	8081	ND	ug/L	0.34	JK	9/26/05	9/30/05
alpha-BHC	8081	ND	ug/L	0.35	JK	9/26/05	9/30/05
Alpha-Chlordane	8081	ND	ug/L	0.08	JK	9/26/05	9/30/05
Atrazine	8081	ND	ug/L	80	JK	9/26/05	9/30/05

beta-BHC	8081	ND	ug/L	0.23	JK	9/26/05	9/30/05
Chlordane Tech	8081	ND	ug/L	25	JK	9/26/05	9/30/05
Chlorpyrifos	8081	ND	ug/L	0.35	JK	9/26/05	9/30/05
Cis-Permethrin	8081	ND	ug/L	3.76	JK	9/26/05	9/30/05
delta-BHC	8081	ND	ug/L	0.24	JK	9/26/05	9/30/05
Dicofol	8081	ND	ug/L	0.5	JK	9/26/05	9/30/05
Dieldrin	8081	ND	ug/L	0.44	JK	9/26/05	9/30/05
Endosulfan I	8081	ND	ug/L	0.37	JK	9/26/05	9/30/05
Endosulfan II	8081	ND	ug/L	0.4	JK	9/26/05	9/30/05
Endosulfan sulfate	8081	ND	ug/L	0.35	JK	9/26/05	9/30/05
Endrin	8081	ND	ug/L	0.39	JK	9/26/05	9/30/05
Endrin aldehyde	8081	ND	ug/L	0.5	JK	9/26/05	9/30/05
Endrine Ketone	8081	ND	ug/L	0.6	JK	9/26/05	9/30/05
Gama-Chlordane	8081	ND	ug/L	0.3	JK	9/26/05	9/30/05
gamma-BHC (Lindane)	8081	ND	ug/L	0.25	JK	9/26/05	9/30/05
Guthion	8081	ND	ug/L	4.06	JK	9/26/05	9/30/05
Heptachlor	8081	ND	ug/L	0.32	JK	9/26/05	9/30/05
Heptachlor epoxide	8081	ND	ug/L	0.32	JK	9/26/05	9/30/05
Hexachlorobenzene	8081	ND	ug/L	0.15	JK	9/26/05	9/30/05
Methoxychlor	8081	ND	ug/L	0.86	JK	9/26/05	9/30/05
Mirex	8081	ND	ug/L	0.25	JK	9/26/05	9/30/05
Pendimethalin	8081	ND	ug/L	1.2	JK	9/26/05	9/30/05
Simazine	8081	ND	ug/L	80	JK	9/26/05	9/30/05
Toxaphene	8081	ND	ug/L	0.86	JK	9/26/05	9/30/05
Trans-Permethrin	8081	ND	ug/L	0.95	JK	9/26/05	9/30/05
Trifluralin	8081	ND	ug/L	0.35	JK	9/26/05	9/30/05
z DCB	8081	46%	ug/L	20-127	JK	9/26/05	9/30/05
z TCMX	8081	79%	ug/L	56-125	JK	9/26/05	9/30/05
1,1,1,2-Tetrachloroethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,1,1-Trichloroethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,1,2,2-Tetrachloroethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,1,2-Trichloroethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,1-Dichloroethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,1-Dichloroethene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,1-Dichloropropene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2,3-Trichlorobenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2,3-Trichloropropane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2,4-Trichlorobenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2,4-Trimethylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2-Dibromo-3-chloropropane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05

1,2-Dibromoethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2-Dichlorobenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2-Dichloroethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,2-Dichloropropane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,3,5-Trimethylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,3-Dichlorobenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,3-Dichloropropane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
1,4-Dichlorobenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
2,2-Dichloropropane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
2-Butanone (MEK)	8260W	ND	ug/L	25	BA	9/21/05	9/21/05
2-Chlorotoluene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
2-Hexanone	8260W	ND	ug/L	25	BA	9/21/05	9/21/05
4-Chlorotoluene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
4-Isopropyltoluene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
4-Methyl-2-pentanone (MIBK)	8260W	ND	ug/L	25	BA	9/21/05	9/21/05
Acetone	8260W	ND	ug/L	25	BA	9/21/05	9/21/05
Benzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Bromobenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Bromochloromethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Bromodichloromethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Bromoform	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Bromomethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Carbon Tetrachloride	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Chlorobenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Chloroethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Chloroform	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Chloromethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
cis-1,2-Dichloroethene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
cis-1,3-Dichloropropene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Dibromochloromethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Dibromomethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Dichlorodifluoromethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Ethylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Hexachlorobutadiene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Isopropylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
m & p -Xylene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Methyl tertiary butyl ether	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Methylene Chloride	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Naphthalene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
n-Butylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05

n-Propylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
o - Xylene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
sec-Butylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Styrene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
tert-Butylbenzene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Tetrachloroethene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Toluene	8260W	TRACE 4.70	ug/L	5	BA	9/21/05	9/21/05
trans-1,2-Dichloroethene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
trans-1,3-dichloropropene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Trichloroethene	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Trichlorofluoromethane	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
Vinyl Chloride	8260W	ND	ug/L	5	BA	9/21/05	9/21/05
z 1,2-Dichloroethane-d4	8260W	98%	ug/L	80-120	BA	9/21/05	9/21/05
z Dibromofluromethane	8260W	98%	ug/L	80-118	BA	9/21/05	9/21/05
z p-Bromoflurobenzene	8260W	105%	ug/L	80-115	BA	9/21/05	9/21/05
z Toluene-d8	8260W	110%	ug/L	80-118	BA	9/21/05	9/21/05
1,2,4-Trichlorobenzene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
1,2-Dichlorobenzene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
1,3-Dichlorobenzene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
1,4-Dichlorobenzene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2,4,5-Trichlorophenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2,4,6-Trichlorophenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2,4-Dichlorophenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2,4-Dimethylphenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2,4-Dinitrophenol	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
2,4-Dinitrotoluene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2,6-Dinitrotoluene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2-Chloronaphthalene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2-Chlorophenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2-Methylnaphthalene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2-Methylphenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
2-Nitroaniline	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
2-Nitrophenol	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
3,3'-Dichlorobenzidine	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
3-Nitroaniline	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
4,6-Dinitro-2-methylphenol	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
4-Bromophenyl-phenylether	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
4-Chloro-3-methylphenol	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
4-Chloroaniline	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
4-Chlorophenyl-phenylether	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05

4-Methylphenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
4-Nitroaniline	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
4-Nitrophenol	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
Acenaphthene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Acenaphthylene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Anthracene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Benzo[a]anthracene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Benzo[a]pyrene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Benzo[b]fluoranthene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Benzo[g,h,i]perylene	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
Benzo[k]fluoranthene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Benzoic Acid	8270	TRACE 2.41	ug/L	50.00	JES	9/26/05	9/30/05
Benzyl alcohol	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
bis(2-Chloroethoxy)methane	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
bis(2-Chloroethyl)ether	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
bis(2-chloroisopropyl)ether	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
bis(2-Ethylhexyl)phthalate	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Butylbenzylphthalate	8270	TRACE 1.04	ug/L	10.00	JES	9/26/05	9/30/05
Carbazole	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Chrysene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Dibenz[a,h]anthracene	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
Dibenzofuran	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Diethylphthalate	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Dimethylphthalate	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Di-n-butylphthalate	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Di-n-octylphthalate	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Fluoranthene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Fluorene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Hexachlorobenzene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Hexachlorobutadiene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Hexachlorocyclopentadiene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Hexachloroethane	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
Indeno[1,2,3-cd]pyrene	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
Isophorone	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Naphthalene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Nitrobenzene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
N-Nitroso-di-n-propylamine	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
n-Nitrosodiphenylamine	8270	ND	ug/L	20.00	JES	9/26/05	9/30/05
Pentachlorophenol	8270	ND	ug/L	50.00	JES	9/26/05	9/30/05
Phenanthrene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05

Phenol	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
Pyrene	8270	ND	ug/L	10.00	JES	9/26/05	9/30/05
z 2,4,6-Tribromophenol	8270	82%	ug/L	10-123	JES	9/26/05	9/30/05
z 2-Fluorobiphenyl	8270	73%	ug/L	43-116	JES	9/26/05	9/30/05
z 2-Fluorophenol	8270	90%	ug/L	21-100	JES	9/26/05	9/30/05
z Nitrobenzene-d5	8270	77%	ug/L	35-114	JES	9/26/05	9/30/05
z Phenol-d5	8270	98%	ug/L	10-194	JES	9/26/05	9/30/05
z Terphenyl-d14	8270	81%	ug/L	33-141	JES	9/26/05	9/30/05

ABBREVIATIONS / DEFINITIONS

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

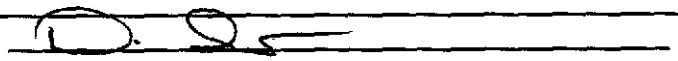
<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
TIE: Tentatively Identified or Estimated
>: greater than
z: surrogate

COC Date: Date Chain of Custody Signed
COC Time: Time Chain of Custody Signed

SAMPLE COMMENTS:

ENVIRONMENT CONDITION: CLEAR 80 F

PESTICIDES AND TOXOPHENE AND DINOSEB

Approved By: 

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. _____

I. GENERAL INFORMATION: Facility Name Vicksburg Chemical
County Code _____ NPDES Permit No. _____
Discharge No. _____ Date Requested 9/20/05
Sample Point Identification SWS 1
Requested By Andy McCain Data To Andy McCain
Type of Sample: Grab (X) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Clear 80°F Collected By Andy McCain
Where Taken _____

	Type	Parameters	Preservative	Date	Time
1.	Surface Water	VOC	HCL	9/20/05	9:00
2.	"	Semi VOC	ICE	"	"
3.	"	Metals	Nitric Acid	"	"
4.	"	+ Pesticides + Toxaphene + Dynoseb	ICE	"	"
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	( )			
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By Tammy Dwyer Date 9/20/05 Time 1025
Recorded By _____ Date Sent to State Office _____

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform(1)	(074055)	( )	colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )	colonies/100 ml		*
Total Phosphorus	(000665)	( )	mg/l		
Oil and Grease(1)	(000550)	( )	mg/l		
Oil and Grease(2)	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____
_____	_____	( )	_____	_____	_____

Remarks Pesticides + Toxaphene + Dynoseb

*Date of Test Initiation

29065

IN THE CIRCUIT COURT OF HINDS COUNTY, MISSISSIPPI
FIRST JUDICIAL DISTRICT

FILED
APR 27 2005
BARBARA DUNN, CIRCUIT CLERK
D.C.

PACIFIC CHLORINE, INC. §
§
v. § NO. 251-05-000027CIV
§
MISSISSIPPI DEPARTMENT OF §
ENVIRONMENTAL QUALITY, AND §
THE CITY OF VICKSBURG §

FIRST AMENDED COMPLAINT

Pacific Chlorine, Inc. ("PCI") files this suit against the Mississippi Department of Environmental Quality ("MDEQ") and the City of Vicksburg ("the City") and would respectfully show the following.

A. Parties

1. PCI is a California corporation.

2. MDEQ is an agency of the government of the State of Mississippi. The City is a political subdivision organized under the laws of the State of Mississippi. MDEQ may be served with citation by serving Attorney General Jim Hood, Mississippi Attorney General's Office, Carroll Gartin Justice Building, 450 High Street, Jackson, Mississippi, 39201. The City may be served with citation by serving Mayor Laurence E. Leyens, City Hall, 1401 Walnut Street, Vicksburg, Mississippi, 39181.

B. Jurisdiction

3. This Court has jurisdiction over MDEQ and the City pursuant to Miss. Code Ann. §11-46-13. This Court has jurisdiction over the controversy because the damages are within the jurisdictional limits of this Court.

11. Since the Abandonment Order, PCI has followed to the letter all RFP requirements of the MDEQ. The MDEQ's solicitations have enabled the MDEQ to receive from PCI valuable information that has been utilized in current remediation plans for the Vicksburg Facility.

12. Since examining the relevant documents obtained via a FOIA request, it has become apparent that the MDEQ, despite the Abandonment Order, was going to follow the lead of the City in disposing of the Vicksburg Facility. It has also become clear that the City never had any intention of allowing the chemical plant to be reopened. The MDEQ was aware of this yet continued to give encouragement to PCI for the sole purpose of obtaining free due diligence regarding the remediation of the Vicksburg Facility. In addition, MDEQ placed additional requirements on PCI that were not required of other entities seeking the Vicksburg Facility.

13. But for the MDEQ's misrepresentations, PCI would not have continued its due diligence and solicitation efforts or shared the due diligence it performed with the MDEQ. PCI relied upon the representations from the MDEQ that the plant might be reopened and continued to perform due diligence that was provided to the MDEQ and the City. PCI has sustained damages of more than $280,000.

14. The City and the MDEQ have been unjustly enriched by PCI as both the MDEQ and the City have received, at no cost or expense, valuable remediation information that would not have been provided if the entities had been truthful with PCI.

15. Despite the fact that PCI submitted a superior bid, including the fact that PCI would re-open the chemical plant while simultaneously remediating the property at its own expense, MDEQ awarded the Vicksburg Facility to Harcross. In addition, this decision was made prior to Harcross even submitting a bid to purchase the Vicksburg Facility.

E. Breach of Contract

16. In violation of the terms of the agreement to maintain the confidentiality of PCI's due diligence, MDEQ and the City have shared PCI's due diligence with third parties. These actions constitute a breach of that agreement.

17. As a result of these breaches, PCI has been seriously damaged in an amount at least equal to the amount expended in the due diligence process.

F. Tortious Breach of Contract

18. As described above in paragraphs 5 through 16, the breaches of the agreement to maintain the confidentiality of PCI's due diligence, combined with (a) MDEQ's and the City's misrepresentations regarding the bidding process for the Vicksburg Facility, and (b) the fact that a decision had already been made regarding what entity would be awarded the Vicksburg Facility, constitutes tortious breach of contract, the result of which has been serious damages to PCI in an amount in excess of $280,000.

G. Promissory Estoppel

19. As described above in paragraphs 5 through 16, PCI reasonably relied on promises and/or implicit promises made by the defendants or some of them, to its own detriment, which resulted in damages to PCI in an amount in excess of $280,000.

H. Fraud

20. The conduct described above in paragraphs 5 through 16 constitutes fraud as MDEQ and the City knowingly made material and false representations to PCI regarding the Vicksburg Facility bidding process in an effort to get PCI to act in response to those false representations; PCI relied on those false representations and acted to its detriment and has been seriously damaged as a result. In addition, the

defendants or some of them fraudulently concealed their conduct as described herein to prevent PCI from knowing their true intent and to deter PCI from going forward with legal action.

I. Unjust Enrichment

21. As a result of the conduct described above in paragraphs 5 through 16, including MDEQ's and the City's malicious, arbitrary and capricious decision to award the Vicksburg Facility to Harcross before Harcross had even submitted an inferior bid, has resulted in MDEQ and the City being unjustly enriched in an amount not less than $280,000.

J. Breach of the Duty of Good Faith and Fair Dealing

22. The conduct described above in paragraphs 5 through 16 constitutes a breach of the implied duty of good faith and fair dealing.

K. Conspiracy

23. Through the actions described above in paragraphs 5 through 16, MDEQ and the City have engaged in a conspiracy to (a) defraud PCI; (b) breach the agreement to maintain the confidentiality of PCI's due diligence; (c) tortiously breach the agreement to maintain the confidentiality of PCI's due diligence; (d) breach the implied duty of good faith and fair dealing; and (e) to gain access to PCI's confidential due diligence related to the Vicksburg Facility at no expense to themselves. As a result of this conspiracy, PCI has been damaged in an amount in excess of $280,000.

L. Negligent Misrepresentation

24. MDEQ and the City, without exercising reasonable care, made material misrepresentations to, and failed to disclose to PCI material information. PCI reasonably relied on these misrepresentations and suffered damages as a result of that reliance.

M. Negligence

25. As described above in paragraphs 5 through 16, MDEQ and the City owed a duty of care to PCI, both the MDEQ and the City breached that duty and as a proximate cause of that breach, PCI was damaged.

N. Due Process Violation

26. As described above in paragraphs 5 through 16, MDEQ's handling of the Vicksburg Facility contract and awarding of that contract to Harcross was unsupported by substantial evidence; was arbitrary and capricious, and was beyond the power of the MDEQ. As a result of this improper handling of the Vicksburg Facility contract, PCI was damaged.

O. Conditions Precedent

27. All conditions precedent have been performed or have occurred as required by statute, including the notice requirement found in Miss. Code Ann. 11-46-11.

P. Prayer

28. For these reasons, PCI asks that the Defendants be cited to appear and answer and that PCI have judgment against Defendants for the following:

a. PCI's actual damages.

b. Prejudgment and post-judgment interest.

c. PCI's attorney fees.

d. Costs of suit.

e. All other relief, in law and in equity, to which PCI may be entitled.

Respectfully submitted,

C. Maison Heidelberg, MSB 9559
MAISON HEIDELBERG P.A.
759 Woodlands Parkway, Suite 220
Ridgeland, Mississippi 39157
(601) 351-3333
Fax: (601) 956-2090

ATTORNEY FOR PLAINTIFF

be passed to any entity identified by MDEQ.

9. Even before the entry of the Abandonment Order, PCI had expressed an interest in acquiring the Vicksburg Facility. After the Abandonment Order was entered, the MDEQ sent out a formal request for proposal for the sale of the Vicksburg Facility. As part of that request for proposals, MDEQ represented that it did "...not intend to enter into a period of 'exclusive negotiations' with either party" interested in the Vicksburg Facility. As a result, PCI relied on these representations by the MDEQ and diligently pursued negotiations with the MDEQ for the acquisition of the Vicksburg Facility. If it was successful in acquiring the Vicksburg Facility, PCI intended to reopen the chemical plant while simultaneously engaging in the remediation of the entire Vicksburg Facility at its own expense. In reliance on the MDEQ representations, PCI expended approximately $280,000 in complying with the many conditions precedent of the MDEQ for the sale of the Vicksburg Facility and as part of its due diligence. As part of this process, MDEQ and the City agreed that MDEQ and the City would maintain the confidentiality of the documents resulting from PCI's efforts. Based on these guarantees of confidentiality, PCI turned over to the MDEQ the due diligence it had performed regarding the remediation of the Vicksburg Facility without charge.

10. At no time during this process was PCI told that a decision had already been made that the chemical plant would not be reopened. Neither was PCI told that the MDEQ had abrogated to the City its authority under the Abandonment Order or that the City was working with PCI's competitor on that company's proposal for the Vicksburg facility. While the MDEQ and the City both encouraged PCI to perform and share due diligence regarding the remediation of the Vicksburg Facility, it has become apparent that PCI was unwittingly used by the MDEQ and the City.

C. Venue

4. Venue for this suit is proper in the Circuit Court of Hinds County, Mississippi, First Judicial District pursuant to Miss. Code Ann. §11-46-13 as all or a substantial part of the events or omissions underlying PCI's claims occurred in Hinds County, Mississippi.

D. Facts

5. On March 8, 2002 Cedar Chemical Corporation and Vicksburg Chemical Company ("VCC") (collectively "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York; Case numbers 02-11039 (SMB) and 02-11040 (SMB).

6. VCC was the owner of certain lots, pieces, tracts or parcels of land located at or near 4280 Rifle Range Road in Vicksburg Mississippi, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property except for such equipment and the like as has been leased by VCC or otherwise owned by other parties (the "Vicksburg Facility").

7. On August 29, 2002 the Debtors filed a motion pursuant to sections 105(a) and 554(a) of the Bankruptcy Code seeking, in relevant part, an order authorizing the abandonment of the Vicksburg Facility by VCC.

8. On or about October 18, 2002, the Court entered a *Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief* (the "Abandonment Order"). Under the Abandonment Order, the Vicksburg Facility was abandoned free of all Secured Lender Liens and the Vicksburg Facility (or parts thereof) could

STATE OF MISSISSIPPI
DAVID RONALD MUSGROVE, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FACSIMILE COVER LETTER

Date: 9/4/03 Number of pages including cover: 4

Telecopy No.: 961-5300

To: Trey Hess

From: Chuck D. Barlow
Chief - Legal Division
Mississippi Department of Environmental Quality
Phone: (601) 961-5076
Facsimile No. (601) 961-5349

Re: _____

* * * * *

Attachment: _____

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Date: September 4, 2003

To:

Mr. Charles Barlow	**Telecopier:**	601-961-5349
Charles Barlow		601-961-5349
Nancy Thomas		601-634-6232

From: William W. Rucker

Pages: 3 *(Includes This Cover Sheet)*

Comments: **Please see the attached.**

The information contained in this facsimile message is legally privileged and confidential information intended only for the use of the individual or entity named above.

PLEASE CALL (713) 528-2800 TO REPORT ANY TRANSMISSION PROBLEMS.

RUCKER & MIDDLETON, L.L.P.
ATTORNEYS AT LAW
A REGISTERED LIMITED LIABILITY PARTNERSHIP
3272 WESTHEIMER, SUITE 14
HOUSTON, TEXAS 77098

TELEPHONE (713) 528-2800
TELECOPIER (713) 528-5011

Email: rucker@rmllp.com
Internet: www.rmllp.com

WILLIAM W. RUCKER

September 4, 2003

Mr. Charles Chisholm, Director
Mississippi Department of Environmental Quality
2380 Highway 80 West
Jackson, Mississippi 39204

Via Facsimile 601-961-5349

Charles Barlow, Esq.
Mississippi Department of Environmental Quality
2380 Highway 80 West
Jackson, Mississippi 39204

Via Facsimile 601-961-5349

Nancy Thomas, Esq.
City Attorney
City of Vicksburg
1401 Walnut St.
Vicksburg, MS 39180

Via Facsimile 601-634-6232

Re: Pacific Chlorine, Inc./ Vicksburg Chemical Property in Vicksburg, Mississippi

Dear Ms. Thomas and Gentlemen:

This firm represents Pacific Chlorine, Inc. ("PCI"). In connection with its then proposed acquisition of the Vicksburg Chemical property, PCI submitted to each of you numerous confidential and proprietary documents. Given that you have rejected PCI as a possible purchaser of this property, PCI would request the return of all documents provided to each of you.

You are accordingly requested (a) to return all materials (including all copies or facsimiles thereof) that were provided to you by or on behalf of PCI; (b) to the extent you have provided such data to any other person or party, to please identify any such person or party; and (c) to identify any documents that you might refuse to return to PCI.

While the request is made for all tangible documents submitted to you, including emails and fax transmissions, PCI specifically requests the return of the following:

"Phoenix Project (Business Plan)" in 3 volumes - 6 copies each:
1 - Confidential Memorandum - 2
2 - Appendices - 2
3 - Financial Supplement - 1
All dated 12/20/02

"First Proposal" in 2 parts - 6 copies each:
1 - Response to MDEQ Request for Proposal dated 1/29/03 4
2 - Exhibit A: Remediation of Soil and Groundwater 4

"First Proposal Review Presentation"- 6 copies; dated and presented to MDEQ 2/25/03 - 1

"Second Proposal" in 6 parts - 6 copies
1 - Proposal – 4 → GIVEN 6
2 - Proposal Presentation – NO ←
3 - PCI Value Proposition Analysis dated and presented to MDEQ 8/21/03 – GIVEN 6 – 4
4 - Exhibit A: Remediation Plan / GFPR Contract
5 - Exhibit B: Monitoring Plan
6 - Exhibit C: Contingency Plan dated and delivered to MDEQ 8/22/03

NO
GIVEN 3

In closing, my client has asked me to wish you well in your endeavors to remediate the Vicksburg Chemical property. As you might appreciate, PCI would like to see the City of Vicksburg's land use requirements accommodated, and jobs returned to the community to the full potential of the facility. PCI remains interested in playing an active role in the accomplishment of those goals, should such an opportunity arise in the future.

Please do not hesitate to contact me in the event of any questions.

Sincerely,

William W. Rucker

WWR:jlb

cc: Pacific Chlorine, Inc.

RUCKER & MIDDLETON, L.L.P.
ATTORNEYS AT LAW
A REGISTERED LIMITED LIABILITY PARTNERSHIP
3272 WESTHEIMER, SUITE 14
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WILLIAM W. RUCKER

Email: rucker@rmllp.com
Internet: www.rmllp.com

October 31, 2003

Freedom of Information Administrator
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, Mississippi 39289-1305

By Fax 601-354-6356

Re: Freedom of Information Request

Dear Sir or Madam:

The undersigned makes this FOI request for the following information:

1. All proposals to the MDEQ from Hercros Chemicals, Inc. during calendar year 2003 concerning Hercros' proposed purchase of Vicksburg Chemical Company's Vicksburg, Mississippi property (or any portion thereof).

2. All communications (including email) between the MDEQ and the City of Vicksburg, Mississippi during calendar year 2003 concerning the sale or utilization of Vicksburg Chemical Company's Vicksburg, Mississippi property (or any portion thereof).

3. All contracts or other written agreements between the MDEQ and the City of Vicksburg, Mississippi since January 1, 2002 concerning the sale or utilization of Vicksburg Chemical Company's Vicksburg, Mississippi property (or any portion thereof).

4. All communications (including email) between the MDEQ and Vicksburg Chemical Company since January 1, 2002 concerning the sale or utilization of Vicksburg Chemical Company's Vicksburg, Mississippi property (or any portion thereof).

5. All communications (including email) between the MDEQ and Yehuda Yoked since January 1, 2002 concerning the sale or utilization of Vicksburg Chemical Company's Vicksburg, Mississippi property (or any portion thereof).

6. All regulations applicable in calendar year 2003 concerning the MDEQ's issuance of request for proposals.

For purposes of the foregoing, references to "Vicksburg Chemical Company's Vicksburg, Mississippi property" means that certain real property consisting of approximately 640 acres located at 4280 Rifle Range Road, Vicksburg, Mississippi together with any and all improvements situated thereon.

Upon information and belief, all of the foregoing documents are located at the MDEQ office at 2380 Highway 80 West, Jackson, Mississippi 39204.

To the extent possible, I request that all of the foregoing documents be copied for me. As contemplated by all applicable laws and regulations, I will be responsible for the costs of reproduction and certification (as filed with the Secretary of State's Office in accordance with the Public Records Act).

My complete name, business address, and other contact information are set forth in the above letterhead.

Thank you for your prompt courtesies in this regard.

Sincerely,

William W. Rucker

WWR:js

STATE OF MISSISSIPPI
DAVID RONALD MUSGROVE, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FACSIMILE COVER LETTER

Date: 4-15-04 Number of pages including cover: 5

Telecopy No.: 961-5302

To: Trey Hess

From: Kelly Riley
Senior Attorney
Mississippi Department of Environmental Quality
Phone: (601) 961-5369
Facsimile No. (601) 961-5349

Re: [redacted]

* * * * *

Attachment:

THE INFORMATION CONTAINED IN THIS FACSIMILE MESSAGE IS PRIVILEGED AND CONFIDENTIAL INFORMATION INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY NAMED ABOVE. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE IMMEDIATELY NOTIFY US BY TELEPHONE AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA THE U. S. POSTAL SERVICE. THANK YOU.

If you do not receive the complete transmission of this document, call Sharon Smith at (601) 961-5359.

LEGAL DIVISION
POST OFFICE BOX 20305 • JACKSON, MISSISSIPPI 39289-1305 • TEL: (601) 961-5171 • FAX: (601) 961-5349 • www.deq.state.ms.us
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WILLIAM W. RUCKER

Email: rucker@rmllp.com
Internet: www.rmllp.com

TELECOPY TRANSMISSION FORM
TELECOPIER NUMBER (713) 528-5011

Date: April 15, 2004

To: Mr. Charles Chisholm, Director
Mississippi Department of Environmental Quality

Telecopier: 601-961-5794

To: The Honorable Laurence E. Leyens, Mayor
The City of Vicksburg

Telecopier: 601-631-3764

From: William W. Rucker

Pages: 4 *(Includes This Cover Sheet)*

Comments: **Please see the attached.**

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TELEPHONE (713) 528-2800
TELECOPIER (713) 528-5011

WILLIAM W. RUCKER

Email: rucker@rmllp.com
Internet: www.rmllp.com

April 15, 2004

BY FEDEX
Mr. Charles Chisholm, Director
Mississippi Department of Environmental Quality
2380 Highway 80 West
Jackson, Mississippi 39204

BY FEDEX
The Honorable Laurence E. Leyens, Mayor
The City of Vicksburg
P.O. 150
Vicksburg, Mississippi 39181-0150

Re: Claim of Pacific Chlorine, Inc. ("PCI") against the Mississippi Department of Environmental Quality ("MDEQ") and the City of Vicksburg Mississippi (the "City")

Dear Sir or Madam:

On March 8, 2002 Cedar Chemical Corporation and Vicksburg Chemical Company ("VCC") (collectively "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York; Case numbers 02-11039 (SMB) and 02-11040 (SMB).

VCC was the owner of certain lots, pieces, tracts or parcels of land located at or near 4280 Rifle Range Road in Vicksburg Mississippi, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property except for such equipment and the like as has been leased by VCC or otherwise owned by other parties (the "Vicksburg Facility").[1]

[1] Without limitation to this description, a non-operating chemical plant was situated on the Vicksburg Facility.

On August 29, 2002 the Debtors filed a motion pursuant to sections 105(a) and 554(a) of the Bankruptcy Code seeking, in relevant part, an order authorizing the abandonment of the Vicksburg Facility by VCC.

On or about October 18, 2002, the Court entered a *Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief* (the "Abandonment Order"). Under the Abandonment Order, the Vicksburg Facility was abandoned free of all Secured Lender Liens and the Vicksburg Facility (or parts thereof) could be passed to any entity identified by MDEQ.

Even before the entry of the Abandonment Order, PCI had expressed an interest in acquiring the Vicksburg Facility. After the Abandonment Order was entered and procedures for the sale of the Vicksburg Facility were formalized, PCI diligently pursued negotiations with the MDEQ for the acquisition of the Vicksburg Facility.

As you are aware, PCI intended to reopen the chemical plant while simultaneously engaging in the remediation of the entire Vicksburg Facility. PCI expended approximately $270,000 in complying with the many conditions precedent of the MDEQ for the sale of the Vicksburg Facility.

At no time during this process was PCI told that a decision had already been made that the chemical plant would not be reopened. Neither was PCI told that the MDEQ had abrogated to the City its authority under the Abandonment Order. While the MDEQ and the City both encouraged PCI to perform and share due diligence regarding the remediation of the Vicksburg Facility, it is now apparent that PCI was unwittingly used.

Since the Abandonment Order, PCI has followed to the letter all RFP requirements of the MDEQ. The MDEQ's solicitations have enabled the MDEQ to receive from PCI valuable information that has been utilized in current remediation plans for the Vicksburg Facility.

It is regrettably apparent that the MDEQ, despite the Abandonment Order, was going to follow the lead of the City in disposing of the Vicksburg Facility. It is likewise clear, that the City never had any intention of allowing the chemical plant to be reopened. The MDEQ was aware of this yet continued to give encouragement to PCI for the sole purpose of obtaining free due diligence regarding the remediation of the Vicksburg Facility. What was required of PCI was not required of other entities seeking the Vicksburg Facility.

But for the MDEQ's misrepresentations, PCI would not have continued its due diligence and solicitation efforts. PCI relied upon the representations from the MDEQ that the plant might be reopened and continued to perform due diligence that was provided to the MDEQ and the City. PCI has sustained damages of $282,329.95

The City and the MDEQ have been unjustly enriched by PCI as both the MDEQ and the City have received, at no cost or expense, valuable remediation information that would not have been provided if the entities had been truthful with PCI.

The MDEQ and the City have engaged in a conspiracy to defraud PCI.

Despite the seriousness of these charges, PCI would prefer to resolve these issues without having to file suit. Nonetheless, we have been authorized to file suit if these matters cannot be resolved within the next 60 days.

Sincerely,

William W. Rucker

WWR:js

cc: ***By FedEx***
J. I. Palmer, Jr.
Regional Administrator
U.S. Environmental Protection Agency
61 Forsyth Street, S.E.
Atlanta, Georgia 30303

By Telecopier 601-961-5794
Mr. Charles Chisholm, Director
Mississippi Department of Environmental Quality

By Telecopier 601-631-3764
The Honorable Laurence E. Leyens, Mayor
The City of Vicksburg

Client

RECEIVED
MAY 12 2004
OFFICE OF THE
EXECUTIVE SECRETARIAT

Pacific Chlorine, Inc.

40 Loraine Court
San Francisco, CA 94118
Tel: 415.221.5637
Fax: 415.221.5684

March 30, 2004

WH375877 EPA

George W. Bush
President, United State of America
The White House
1600 Pennsylvania Ave.
Washington, DC 20500

Re: Status of Former Vicksburg Chemical Company Facility, Vicksburg, MS

Dear President Bush,

The former Vicksburg Chemical Company facility was abandoned in October 2002 in bankruptcy proceedings in the Southern District of New York. Vicksburg Chemical Company ("VCC") was previously owned by Arie Genger, a dual citizen of the U.S. and Israel. Under the terms of the abandonment order, the facility is to be sold at the direction of the Mississippi Department of Environmental Quality. My firm has pursued acquiring the facility from the moment it was abandoned.

Two features indicated the facility may be an attractive investment opportunity:
1 - The plant was the only U.S. manufacturer of potassium nitrate, a specialty fertilizer.
2 - The plant was the only U.S. manufacturer of dinitrogen tetroxide (N_2O_4), a non-flammable, non-combustible component of rocket fuels and a strategic material for which the plant was sole supplier to the DOD on a $30,000,000 contract.

The facility was substantially contaminated from pesticide production which ceased in the mid 1980's. A 1992 Consent Decree held VCC responsible for cleaning up the facility, including a requirement that VCC provide financial assurance for the cleanup. This was not done. When abandoned, the facility was still contaminated and no remediation plan had been approved by any governing body. No financial assurance had been put in place by VCC.

VCC closed the facility prior to abandonment. Approximately 100 high paying jobs were lost. Creditors of VCC lost in excess of $80 million. Local businesses supporting the plant were decimated. State and national suppliers lost the facility as a customer. U.S. customers of potassium nitrate were without choice but to buy from foreign suppliers, including a similar facility owned by Mr. Genger in Haifa, Israel. Of greater national interest, the DOD supply contract was also canceled after decades of supply without an alternative supplier in place.

Since the discovery of extensive contamination in the 1980's by environmental authorities, the only marked result has been the 1992 Consent Decree. This year, state level remediation requirements were issued but the facility is regulated by federal law. No cleanup is underway. The facility remains contaminated.

Vicksburg Chemical Overview:

Pacific Chlorine, Inc. (PCI) has been engaged in the pursuit of acquiring the real property and manufacturing assets of Vicksburg Chemical Company ("VCC") in Vicksburg, MS since 2002. The property was abandoned pursuant to a court order from the Southern District of New York Bankruptcy Court in October, 2002. The prior owner of the company was Arie Genger, a dual citizen of the US and Israel and former undersecretary to Prime Minister Sharon while Mr. Sharon headed Defense. Under the terms of the abandonment order, the VCC facility will be sold or transferred at the direction of the Mississippi Department of Environmental Quality.

PCI had a business relationship with VCC at the time facility was shutdown as part of the bankruptcy. From that relationship, PCI had knowledge of, and was attracted to the business. Key features were:
1 - The plant was the only U.S. manufacturer of potassium nitrate, a specialty fertilizer.
2 - The plant was the only U.S. manufacturer of dinitrogen tetroxide (N_2O_4), a non-flammable, non-combustible component of rocket fuels and a strategic material for which the plant was sole supplier to the DOD on a $30,000,000 contract.

The property was substantially contaminated from pesticide production which occurred prior to the mid 1980's. A Consent Decree has been in place since April 1992 that held the company responsible for cleaning up the property, including a requirement that the company provide financial assurance for the cleanup.

At the time the property was abandoned, it was still un-remediated. No remediation plan had been approved by the governmental agencies with jurisdiction, and no financial assurance had been put in place by the company. The bankruptcy court's abandonment order granted the control of, and responsibility for, the property and facility to EPA and the Mississippi Department of Environmental Quality (MDEQ). Barely a month after the abandonment, PCI asked to make a proposal to the MDEQ to run the facility and remediate the property. PCI was told to wait until MDEQ was ready to address the issue.

Prior to abandonment, the facility was shut down. Approximately 100 high paying jobs were lost. Creditors had lost in excess of $80 million. Local business that supported the plant had been decimated. State and national suppliers had lost the plant as customer, and U.S. customers of potassium nitrate were without choice but to buy from foreign suppliers, including a similar facility also owned by Mr. Genger in Haifa, Israel. Also, the DOD supply contract had been canceled after decades of supply.

A new DOD contract have allowed the plant to resume operation, but fortunately it appeared that another Mississippi company could develop the ability to produce the key material, providing competition in DOD's efforts to secure supply at a fair price. Mr. Genger's management team determined that Vicksburg Chemical could resume operation within the bankruptcy proceedings as a debtor-in-possession and offered the DOD a supply contract at approximately $75 million over 5 years. In mid-2002, Mississippi Chemical Corp. in Yazoo City, MS was awarded the contract at approximately $25 million over 5 years. While MissChem had no production capacity in place at the time of the award, the contract provided for them to construct a facility so that at the time the contract would expire in 2007, they would be the only U.S. producer capable of supplying the requirement. Unfortunately, less than a year after the award, MissChem filed bankruptcy under Chapter 11. Many believe the company will not survive. Recently the CEO resigned.

Assuming MissChem remains viable, PCI is concerned that if a choice of suppliers does not exist when the contract with MissChem ends, the DOD may face cost levels approaching or even exceeding the $75 million previously offered by Vicksburg Chemical. PCI's investigations have determined that the Vicksburg facility could operate soundly with a $30 million DOD contract.

The only other entity that has expressed significant interest in the property is Harcros Chemicals of St. Louis, MO, who had a prior relationship with Vicksburg Chemical similar to PCI's. Working in conjunction with ARCADIS of Denver, CO, they have not demonstrated any serious commitment to restarting the facility. Conversely, in a joint meeting with the EPA Region 4 Executive Director's office, they advised they were really only interested in having a distribution center and being a customer of the facility. The meeting occurred about 10 days after the abandonment. The subject was cleaning up the property and returning jobs to the community.

For over 18 months, PCI has pursued its plan to remediate the property and restart the operations, returning the jobs to the community. PCI spent over $200,000 in our initial attempt and a total of nearly $300,000 including subsequent efforts. As PCI's investigation began, bankruptcy documents revealed that the company had filed bankruptcy and abandoned the property because the estate no longer had the funds to conduct the cleanup, estimated by the company to be $20-30 million. Last summer, PCI secured a contract to have the property remediated for about $3 million in compliance with guidelines established by MDEQ.

There have been other plans for the property. The Mayor of Vicksburg wants somebody to build a golf course. With the plant operating, an adequate buffer zone would be required and much of the remaining land is not suitable for golf course development. Fortunately, land surrounding the property is suitable and in combination with suitable portions of the property, would allow adequate space for golf course development. While PCI is not opposed to the presence of a golf course outside an appropriate buffer zone, PCI's investigations have been unable to support the economic feasibility of a golf course, whether contained solely on the property or in combination with surrounding land. Community leaders outside the Mayor's office have expressed disbelief in the viability of the golf course. PCI has been unable to find any support for the golf course in the community at large.

In February 2003, six months after abandonment, bids for the facility were taken by MDEQ. PCI was told their proposal did not contain sufficient guarantees that PCI would remediate the property without taxpayer expense. This means that PCI was unwilling to assume unlimited liability for remediation requirements that had not yet been defined by the authorities. At the City of Vicksburg's request, a development company's proposal was selected to build a golf course and casino resort. The proposal expressly disclaimed any responsibility for cleanup. PCI was told by MDEQ that they had no assurance that the development company would consummate a deal and "we would all have to wait and see what happens". Two months later, the discussions had collapsed. No results progressive to the property had been achieved.

In May 2003, PCI was informed by the MDEQ that they were waiting for "leadership from the Mayor of Vicksburg" and that "we would all have to wait and see what would happen". The City of Vicksburg notified PCI that they were having discussions with Harcros/Arcadis and were in support of those companies' effort to acquire the property. Subsequently, MDEQ solicited proposals. In August, at the City of Vicksburg's request, Harcros/ARCADIS was awarded the right to exclusive negotiations to acquire the property. After seven months, they have not been able to consummate any agreement. In late February, PCI was informed by MDEQ that "we will all have to wait and see what happens".

Vicksburg Chemical Overview:

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Since the discovery in the 1980's by environmental authorities that substantial contamination existed, only the following results have been achieved: In 1992, a Consent Decree was placed in effect. In 2004, state level remediation requirements have been issued for property regulated by federal law. In the meantime, property in a small community remains contaminated and its economy has lost approximately 100 jobs and the accompanying $6 million annual payroll.

My company has invested nearly $300,000 in our effort to acquire and operate the facility. More importantly, we have become dedicated to the men and women of Vicksburg who worked at the plant, and their families and others whose livelihoods have depended on this operation for the last 45 years. They are decent, hard-working Americans. I have found them largely to be people of great faith and I continue to pray daily for their welfare.

Reopening the plant is economically viable. The remediation is manageable. Our plan requires no government handout. Neither should anyone else. Regrettably, local decision makers have been unable to bring the matter to conclusion and local newspapers recently reported the need for multi-million dollar taxpayer funding to remediate the facility. This is totally unnecessary.

We appreciate fully that you have greater priorities. However, we are asking that your office investigate the matter and, if you find it appropriate, cause the necessary decisions to be made to re-open the plant and conduct the remediation under our management without further taxpayer burden. We have included additional overview information in the attached.

Sincerely and respectfully,

Scott L. Wilderman
President
Pacific Chlorine, Inc.

c: w/ attachment:

Donald H. Rumsfeld
Secretary of Defense
1000 Defense Pentagon
Washington, DC 20301-1000

Michael O. Leavitt
EPA Administrator
1101A
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Governor Haley Barbour
P.O. Box 139
Jackson, MS 39205

Pacific Chlorine, Inc.
49 Lansdale Court San Francisco, CA 94116

George W. Bush
President, United States of America
The White House
1600 Pennsylvania Avenue
Washington, DC 20500

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APR 14 2004
MAIL ANALYSIS

APR 05 2004

V#155

QC/#009

CAMU Site Background Document

This report contains descriptions of the 39 CAMUs for which the Agency had good data that are either approved or in the process of obtaining approval. The report contains information on the general purpose of each CAMU, whether the CAMU was used for treatment and/or storage only, or for permanent disposal, the types of wastes managed, treatment (if used), and descriptions of technical components of the CAMU, including liners, caps and groundwater remedial and monitoring systems. At the end of each site description is an evaluation of how the site would compare to the proposed CAMU minimum requirements for treatment and design, including EPA's interpretation of whether any proposed adjustment factors or alternate standards would likely be available at the site. As a result, this document provides information on the potential impact of the amendments on similar CAMU decisions in the future. EPA describes its analysis of potential impacts on future CAMU decisions in the *Economic Analysis of the Proposed Amendments to the Corrective Action Management Unit (CAMU) Rule*, which is in the docket for this rulemaking. The information contained in this report was obtained primarily from interviews with EPA Regional RCRA corrective action and Superfund project managers associated with the CAMUs.

In reading this report, it is important to note:

* The technical information is not presented in a uniform manner, since the ways in which CAMU requirements were expressed varied from site to site. For example, in some cases, target treatment levels were expressed as constituent concentrations, in others as health-based levels.

* The report does not contain the same categories of information for every site, but instead generally only includes that information necessary to judge consistency with the amendments (in some cases, information not necessary for the analysis is included in the background section for informational purposes). In some cases, information on waste characteristics or detailed treatment requirement information is not included in the analysis, because is not necessary to assess consistency with the proposed amendments. For example, where initial constituent concentration data are not given, and treatment standards at the site are to Universal Treatment Standards (UTS) for all constituents, EPA can make the general conclusion, without having information on initial constituent concentrations, that the proposed treatment standard (at 10xUTS for PHCs) would be met.

* EPA is not seeking additional comment on the specific CAMU decisions discussed in this report (whether they are final, or, as in a few cases, proposed). The purpose of this report is to analyze whether the amendments in the proposed rule are consistent with past CAMU decisions (or initial decisions).

* As a general matter, no attempt was made in this analysis to differentiate between wastes that are RCRA hazardous and would otherwise be subject to the LDRs, and wastes that are part of cleanup, may contain hazardous constituents, but would not be subject to the LDRs. Under the proposed amendments, wastes not subject to the LDRs would not be subject to the proposed treatment requirements.

* The proposed treatment standard would require that the Regional Administrator designate any principal hazardous constituents (PHCs) present in CAMU-eligible waste on a site-specific basis, taking into account the process typically used by EPA or the authorized state for establishing cleanup levels or goals at a site, including such factors as reasonably anticipated land use at the facility (e.g., residential, industrial or agricultural) and exposure pathways of concern. For the purpose of assessing potential application of the proposed treatment requirements, in this report, a surrogate was used for the proposed site-specific process for designating PHCs. Specifically, this report uses the "Bright Line" concentrations for soils published in the proposed HWIR-media rule (see 61 FR 18780, 18854-18859 (April 29, 1996)), because they are based on a 1 X 10-3 potential direct risk level from ingestion or inhalation of carcinogens and a potential direct risk from ingestion or inhalation of non-carcinogens of an order of magnitude or greater over their reference dose. This is the standard approach for determining PHCs via these pathways recommended in the proposed amendments.

This was a somewhat conservative approach, however, because the Bright Line numbers assume standard residential exposure assumptions, and not assumptions that might be altered at any site based on site-specific factors. This approach should, however, offset any underestimation of the treatment likely to be required under the amendments due to the identification of potential PHC pathways for which a specific risk level is not recommended in the proposed rule language (e.g., waste-to-groundwater pathway).

* In analyzing treatment and/or storage only CAMUs, this report focuses only on whether CAMUs that would be subject to the requirement for a Subtitle D (or alternate) liner under the proposed amendments would meet that standard. This report does not include an analysis of whether the proposed performance standards, decision factors, management practice requirements or closure requirement modeled on the staging pile rules would be met. This approach was taken because the goal of this report is to determine whether replacing largely performance-based standards with national minimum standards (with opportunities for site-specific alternatives) would preclude the types of CAMU decisions that have been made to date. Under the proposal, the standards for treatment and/or storage only CAMUs would remain largely performance based. In addition, the Agency would not expect much change in treatment and/or storage-only CAMU design as a result of imposition of these staging piles standards, because the staging pile standards were designed to reflect the general approach of the current CAMU rule decision criteria (see 63 FR 65874, 65915 (November 30, 1998)) and common remedial decision-making considerations and practices.

* With regard to comparing caps to the requirements in the proposed standard, the report typically only notes whether a cap designed to prevent infiltration of liquids was required, and does not attempt to characterize the design of the cap or otherwise determine whether the cap would meet the proposed cap standard. This approach was taken because the proposed cap standard is a common-sense standard that is consistent with basic engineering principles. In other words, if a site decision-maker is going to require a cap designed to prevent infiltration at all, the considerations outlined in the proposed rule

requirement would necessarily be considered. Therefore, in this analysis, in cases where a cap designed to prevent infiltration was required, EPA assumed that the cap would meet the proposed cap standard.

Corrective Action Management Unit (CAMU) Summary

A. Summary and Overview Information

1. Name and Location:	Vicksburg Chemical Company- EPA Region IV Vicksburg, MS ID#: MSD990714081 (Formerly called: Cedar Chemical Company)
2. Purpose of CAMU:	The CAMU has been and will continue to be used for the treatment and storage of soils and other remediation wastes, and will likely be used for the final disposal of such materials after treatment. Treatment will take place in an existing units (former tank basins). A temporary unit, pursuant to 40 CFR Part 264, Subpart S, within the CAMU, was used for a treatability study to determine the optimum conditions for biodegradation.
3. Wastes Involved:	Soil contaminated with biodegradable pesticides (toxaphene, dinoseb). Plans are to determine whether the use of zero-valent iron will improve the remediation of toxaphene contamination. Arsenic is also a contaminant, and studies of appropriate treatment methods are ongoing. The treatment goals are to have the soils meet health-based levels and no longer be managed as hazardous wastes.
4. Engineering Controls:	Seek clean-closure of the treatment/storage area within the CAMU. Units used for treatment may be lined, if warranted. No decision has yet been made on the engineering controls for final disposal pending further treatability studies on the arsenic. A cap to prevent infiltration and direct exposure, and groundwater monitoring would likely be used if engineering controls are warranted (e.g., the remaining levels do not meet health-based "contained-out" numbers).
5. Type of CAMU:	The CAMU was approved in February 1998. The CAMU unit occupies approximately one third of the 130 acres presently and formerly used for plant operations.

B. Waste Characteristics

In each site description, where available or applicable, Table 1 shows the constituents present in the wastes, their concentrations, potential "principal hazardous constituents" (PHCs), and the "Bright Line" concentrations for the contaminants. Where applicable, the table also includes the treatment concentration goals for the constituents, as well as the universal treatment standard (UTS) standards and the proposed alternate treatment standards (these terms and context are described in the cover page for this report).

Table 1

Constituents of Concern	Potential PHCs		Treatment	
	Existing Concentration (mg/kg) [Maximum Found in Soil or Concrete or Sludge/Sediment in Sumps]	Bright Line concentration[1] (ppm)	Treatment concentration goal [mg/kg Soil or Concrete or Sludge/Sediment in Sumps]	UTS[1] (mg/L TCLP) 10 X UTS (mg/L TCLP) for metals; UTS[1] (mg/kg) 10 X UTS (mg/kg) for organics)
Toxaphene				
	31.7	– 2.2*	2.6	2.6 mg/kg; 26 mg/kg
Dinoseb				
	97.5^	– 880*	80	2.5 mg/kg[3]; 25 mg/kg
Atrazine				
	52.8	– 11*	400	--
Cyanazine				
	8.98[2]	– _*	--	--
Toluene				
	0.278	180,000 (13 mg/l) 520**	16,000	10 mg/kg; 100 mg/kg
Arsenic (mainly from Monosodium Methyl Arsonate (MSMA)				
	2,870	– 2.7*	20 ppm***	5.0 mg/l; 50 mg/l

1. – = value not available

2. Detected in 7 of 90 samples
3. 40 CFR § 268.40 (40 CFR § 268.48 does not have a value for dinoseb))
^ 640 ppm found in 1989, prior to issuing Order
( ) Leach level as in 60 FR 66465-66466, December 21, 1995
* Region 9 Preliminary Remediation Goals (PRGs) Table: Industrial Soil
** Region 9 PRGs Table – Soil Saturation Level (i.e., concentration below risk-based level at which soil is saturated with the constituent)
*** Average background soil concentration

C. Waste Treatment Characteristics

A treatability study conducted in a temporary unit for the wastes showed that the risk-based (contained out) levels for the pesticides are attainable. As noted above, a study of zero-valent iron technology is planned to improve toxaphene removal. Research is being done to find innovative technologies for arsenic.

D. Unit Design Standards

Some of the technical details for design of the treatment/storage and disposal aspects of this CAMU are under consideration and have not been determined yet. Consideration is being given to cross media transfer from storage and treatment, and a liner may be required to supplement the treatment units (former tank basins) and storage areas, for example, of the higher risk cleanup wastes that are staged prior to being sent offsite for treatment and disposal. A cap to prevent infiltration and direct exposure, and groundwater monitoring would likely be used if engineering controls are warranted (e.g., the remaining levels do not meet health-based "contained-out" numbers).

E. Other Factors

The CAMU was also used for storage of wastes being sent off site for treatment and disposal, particularly sludge and debris.

F. Initial Evaluation of Vicksburg Against Proposed Amendments

It is EPA's best professional judgment, based on available site data, that this CAMU would likely be consistent with the proposed amendments to the CAMU rule. Treatment of any potential PHCs is to site-specific health-based levels, which is consistent with application of adjustment factor B. Attaining the health-based levels for arsenic may not be possible, based on the results to date of treatability studies. If that is the case, the final treatment decision would be consistent with application of proposed adjustment factor A. The engineering details have not been finalized yet for the treatment/storage areas or the areas for final disposal, but because this is an existing unit, the proposed minimum liner standards for new units wound not apply.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

4WD-RPB

SEP 07 [illegible]

SUBJ: Region 4 Management of Contaminated Media

FROM: Maher Budeir, RCRA Programs Branch MB
James Smith, RCRA Programs Branch
John Dickinson, RCRA Programs Branch
Leo Romanowski, RCRA Programs Branch
Wes Hardegree, RCRA Programs Branch
Anna Torgrimson, Compliance and Enforcement Branch
Judy Sophianopoulos, Compliance and Enforcement Branch
Joan Redleaf-Durbin, Environmental Accountability Division

THRU: Narindar Kumar, Chief
RCRA Programs Branch

Jewell Grubbs, Chief
RCRA Enforcement and Compliance Branch

TO: Addressees

On December 8, 1992 Region 4 issued Guidance Number TSC-92-02 regarding Management of Contaminated Media. Since then, several Rules and Interpretations that influence this guidance have been developed. The Workgroup has developed the attached document to update and supercede the existing 1992 guidance. The 1992 guidance was used as a starting basis for the "new" Management of Contaminated Media Guidance. Then, it was modified and amended to incorporate all changes necessary for consistency and compliance with the recently promulgated Rules and other interpretations.

All States in the region were provided with draft copies of this document while it was being developed, and were offered the opportunity to comment. All comments received from the States and from EPA staff were incorporated as appropriate.

The procedures and management practices set forth in this guidance should be followed by EPA Region 4 and all others who actively manage contaminated media at sites within the region, regardless of whether such management activities are voluntary or carried out in response to EPA or State regulations or directives. This guidance will be made available to the public on the Region 4's Internet web page. Questions regarding the Guidance may be directed to the workgroup members listed above.

Please note that this Guidance is not binding on authorized state hazardous waste programs. Authorized states may have more stringent management standards for contaminated media. Authorized state hazardous waste programs must be consulted for additional information

Attachment

Addressees: Region 4 RCRA State Directors
Jon Johnston, Chief, Federal facilities Branch
Doug Lair, Chief, Emergency Response & Removal Branch
Robert Jourdan, Chief, North Site Management Branch
Curt Fehn, Chief, South Site Management Branch
Franklin Hill, Chief, Program Services Branch
Elmer Akins, Chief, Office of Technical Services
Ann Heard, Environmental Accountability Division

Management of Contaminated Media

EPA, Region 4

July 22, 1999

I. What is the Purpose of This Guidance Document?[1]

The Purpose of this document is to provide guidance that combines into one document the requirements of RCRA Subtitle C and all rules and guidance issued by EPA relevant to managing contaminated media. It is Region 4's intention to provide an easy-to-follow guidance that promotes timely corrective action and closure activities while staying in full compliance with all applicable and relevant rules and guidance. This document explains how to manage environmental media (i.e., groundwater, surface water, soils, sediments) contaminated with hazardous waste once those media are removed or displaced from their original location by human activity. Guidance in this document is not meant to be used to develop cleanup criteria. Another objective of this document is to facilitate consistency throughout the region in managing media contaminated with hazardous waste. This is particularly important when media or waste is transferred across state lines.

On December 8, 1992 EPA, Region 4 issued a guidance memorandum entitled Management of Contaminated Media (1992 Guidance). Since then, several rules and regulatory interpretations affecting the management of contaminated media have been proposed and finalized. The most recent and important of these documents include the Phase IV Land Disposal Restrictions Rule (LDR)(63 FR 28556-28753, May 26, 1998); Memorandum on Management of Remediation Waste Under RCRA, dated October 14, 1998 (EPA530-F-98-026), and the Hazardous Waste Identification Rule addressing Contaminated Media (HWIR-Media) (63 FR 65873-65947, November 30, 1998). This document replaces and supercedes the 1992 Guidance and incorporates additional requirements and clarifications to ensure compliance and consistency with the new rules and interpretations.

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[1] The policies and procedures established in this document are intended solely for the guidance of employees of the U.S. Environmental Protection Agency. They are not intended and can not be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to act at variance with these policies and procedures and to change them at any time without public notice.

It is important to emphasize that this guidance is only intended to be an interpretation of RCRA regulations. Nothing in this guidance is intended to change or supercede actual RCRA regulatory requirements.

II. What is Contaminated Media?

The term "environmental media" or "media" in this document refers to soils, sediments, groundwater, and surface water. The definition does NOT include any process wastes or sludges.

EPA Region 4 has established that the criteria used to determine if a medium requires management is based upon human health and environmental risk. By definition, a medium is "contaminated" if one or more hazardous constituent(s), as identified in 40 CFR Part 261 Appendix VIII, are present above concentrations that present an unacceptable risk level to human health or environment, above a promulgated standard when available, and above naturally occurring (background) levels [this is specifically for areas where there are naturally occurring high levels of Appendix VIII constituents].

Risk-based levels for hazardous constituents should be developed in a manner consistent with EPA guidelines for assessing human health and environmental risks from hazardous constituents, with the aid of a toxicologist (and an ecologist, where appropriate). The RCRA RFI Guidance and the CERCLA Risk Assessment Guidance (RAG) should be consulted for further explanation on risk evaluations.

Additionally, EPA has issued a document "EPA's Contaminated Sediment Management Strategy" (EPA-823-F-98-004, April 1998). The Strategy has the following goals: 1) prevent the volume of contaminated sediments from increasing; 2) reduce the volume of existing contaminated sediment; 3) ensure that sediment dredging and dredged material disposal are managed in an environmentally sound manner; and 4) develop scientifically sound sediment management tools for use in pollution prevention, source control, remediation and dredge material

management. Management of contaminated sediments pursuant to this guidance will help address the third goal of the Contaminated Sediment Management Strategy.

Generator knowledge may be used in determining if a medium is expected to be contaminated with hazardous waste. If contamination with hazardous waste is expected, then sampling and analysis must be conducted to determine the appropriate management method of the medium.

III. When Does This Guidance Apply?

This guidance applies to contaminated media generated during the following activities:

- RCRA corrective actions;
- site investigations;
- clean up of spills of listed or characteristic hazardous waste or products, regardless of the regulatory vehicle under which the cleanup is conducted, and including voluntary cleanup, CERCLA, and state-funded cleanup;
- closure of RCRA treatment, storage, or disposal units.

The procedures and management practices set forth in this guidance should be followed by EPA Region 4 and all others who actively manage contaminated media at sites within the region, regardless of whether such management activities are voluntary or carried out in response to EPA or State regulations or directives.

IV. How Does the HWIR-Media Rule Affect This Guidance?

The HWIR Media Rule includes provisions to facilitate management of remediation waste under a remedial action plan (RAP) without the requirements to have a site wide corrective action. The definition of remediation waste in this rule is broader than the contaminated media definition in this document. Remediation waste in the HWIR-Media Rule includes solid and hazardous waste and contaminated media generated in a cleanup process. A facility that manages remediation waste may

manage those wastes under a RAP. Under a RAP, a facility is subject to the applicable provisions of 40 CFR part 264 except subparts B, C and D.

The HWIR-Media rule also includes a provision to use permitted "staging piles" to temporarily store non-flowing hazardous remediation waste under the HSWA corrective action without triggering LDR requirements. This provision is addressed later in this guidance.

One other exemption this rule provides is for dredged sediments. When sediments are dredged and discharged to an aquatic environment they are no longer regulated by RCRA, but they are regulated by the Clean Water Act and the Marine Protection, Research and Sanctuaries Act. This exemption from RCRA regulation, however, does not apply to land disposed sediments.

The HWIR Media provides the regulatory vehicle to manage remediation waste including contaminated media. However, this guidance provides the step by step logic that needs to be followed to determine if contaminated media has to be managed in accordance to the HWIR-Media, other RCRA provisions, or if they can be outside any RCRA provisions.

V. Contaminated Media Management

Management of contaminated media follows one of the following three categories:

1. Media Contaminated with Hazardous Waste That Must be Managed In Accordance with RCRA Subtitle C Requirements:
According to the HWIR-Media Rule these media are subject to all RCRA requirements except subparts B, C, and D. These media include the P- and U-listed hazardous wastes, media contaminated with listed hazardous waste, and media exhibiting a hazardous waste characteristic. These subcategories are outlined further in the following paragraphs:

(a) P- and U- Listed Hazardous Waste:

The P- and U- waste listings represent a special situation whereby contaminated media are listed hazardous wastes. As stated in 40 CFR §261.33(d), the following materials or items are hazardous wastes if and when they are discarded:

> **Any residues or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.**

These contaminated media are P- and U-listed hazardous wastes and are subject to all RCRA requirements. However, if the contaminated media are decontaminated to meet risk based standards or the promulgated standards, when available, then they no longer meet the listing and therefore are not a listed hazardous waste nor do they "contain" a listed hazardous waste.

(b) Media Contaminated with Listed Hazardous Waste:

A medium contaminated by listed hazardous waste clearly falls within the scope of the "contained-in" policy, and must be managed under RCRA subtitle C. However, if the level of contamination is below the risk based levels or promulgated standards, when available, for all hazardous constituents and the medium does not exhibit a hazardous characteristic, the medium may be deemed decontaminated, and it no longer "contains" hazardous waste.

(c) Media Contaminated with a Characteristic Hazardous Waste:

Media contaminated with a characteristic hazardous waste must be tested for the hazardous waste characteristic. A medium exhibiting a hazardous waste characteristic must be managed in accordance with Subtitle C regulations until it no longer exhibits a hazardous characteristic and concentrations of all underlying hazardous constituents are below risk based levels or promulgated standard, when available.

2. Media Contaminated With Hazardous Constituents but do not Contain Hazardous Waste:

This category includes two subcategories (a) media that contained hazardous waste, and were treated so that they no longer contain hazardous waste or exhibit a hazardous characteristic and (b) media that were not known to contain hazardous waste. These two subcategories are further discussed in the following paragraphs:

(a) Media That Contained Hazardous Waste, And Were Treated so That they no Longer Contain Hazardous Waste or Exhibit a Hazardous Waste Characteristic:

When a medium contaminated with hazardous waste is treated so that hazardous constituents concentrations are below the appropriate health based levels and the medium does not exhibit any of the hazardous waste characteristics, the medium can be determined not to contain hazardous waste. However, such medium is subject to LDR and must meet the LDR requirements as outlined in Section VI of this document, or obtain a treatability variance. When a medium is treated to meet both risk based standards and LDR requirements, then it can be managed in accordance with best management practices. Best management practices must, among other things, ensure that these contaminated media do not contribute to the degradation of uncontaminated media, and that no unacceptable cross media transfer (soil to air, or soil to water, etc.) takes place.

(b) Media That are Not Known to Contain Hazardous Waste:

Although media generated under this category may contain hazardous constituents, they are not regulated under RCRA. However, to ensure that these media are managed in a manner that is protective of the human health and the environment, best management practices have to be used to manage these media. Best management practices must, among other things, ensure that these contaminated media do not contribute to the degradation of uncontaminated media, and that no unacceptable cross media transfer (soil to air, or soil to water, etc.) takes place. "Best Management Practices" determination may include activities ranging from actively treating media to keeping the media on site with no further action.

3. Media Contaminated with Hazardous Waste but Managed in either an Area of Contamination (AOC), a Corrective Action Management Unit (CAMU), or a Staging Pile:

Media containing hazardous waste would normally fall under category 1 (must be managed as hazardous waste). If those media are to be managed in an AOC, a CAMU, or a staging pile, LDR requirements no longer apply. Using one of these media management units does not constitute "placement," and therefore, does not trigger LDR and other RCRA requirements.

The AOC policy was articulated in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). See 53 FR 51444, and 55 FR 8758-8760, March 8, 1990. See also EPA guidance, March 13, 1996 EPA memo, "Use of the Area of Contamination Concept During RCRA Cleanup." This policy covers in-situ waste management techniques carried out within an AOC. Certain discrete areas of generally dispersed contamination (AOCs) can be equated to a RCRA landfill and movement of hazardous waste and or contaminated media within those areas would not be considered land disposal.

The CAMU rule created a new type of RCRA unit specifically intended for treatment, storage, and disposal of hazardous remediation waste. A CAMU

must be approved by EPA or an authorized state, and designated in a permit or a corrective action order. The CAMU regulations of 40 CFR 264.552 were promulgated February 16, 1993 (58 FR 8658). Contaminated media in a CAMU are not subject to LDR requirements.

The HWIR-Media Rule provided for staging piles that may be permitted under HSWA. A staging pile is a temporary storage area that may be permitted to store remediation waste, including contaminated media, for a period up to two years. The design and specifications of the staging pile must be approved by the RCRA program director. The program director may also grant a one time extension of 180 days for the staging pile operation. Contaminated media in the staging pile are not subject to LDR requirements.

A medium is exempt from LDR requirements as long as it is managed within an AOC, a CAMU, or a staging pile. A summary of the AOC policy and CAMU regulations is presented in the October 14, 1998, EPA memo, "Management of Remediation Waste Under RCRA".

In cases where treatment is required, the treatment must address all Appendix VIII constituents which are above risk based levels, promulgated standard, when available, or background, not merely the Appendix VIII constituent for which the waste was listed or which caused the medium to exhibit a hazardous characteristic. If treatment is to occur on-site, all RCRA investigation and corrective action plans submitted to EPA Region 4 for review and approval should include a sampling and analysis protocol for verifying that a medium has been decontaminated. Sampling frequency for verifying decontamination will depend on a number of site-specific factors, such as the source of the contaminated medium, nature, extent and degree of contamination, and type of treatment. As an example, for small amounts of contaminated media (soil samples, drill cuttings, well purge water, etc.), testing of each drum or batch might provide adequate verification of decontamination. However, for large scale remediation of groundwater, periodic sampling might be appropriate.

Chapter 9 of SW-846 provides more specific information regarding appropriate sampling procedures and frequencies.

VI. How Does the LDR Phase IV Rule Effect This Guidance?

The Phase IV Land Disposal Restrictions Rule was finalized on May 26, 1998. In addition to updating the treatment standards for hazardous waste and the universal treatment standards, the rule includes a section on alternative LDR treatment standards for contaminated soil (40 CFR 268.49) (ASTS). Contaminated soils must meet the standards specified in 40 CFR 268.49 prior to placing them into a land disposal or a land treatment unit. Similarly, contaminated groundwater or surface water must meet the universal treatment standards (UTS) in 40 CFR 268.48 for wastewater prior to land disposal. By meeting the standards specified in 40 CFR 268.49 contaminated soil may be land disposed, however, this does not mean that it does not contain hazardous waste. Soils must still meet the criteria specified in the contained-in policy, as discussed in section V.1 above, before it is determined not to contain hazardous waste. Media within the scope described in Section V as categories 1. (a), (b), (c), and 2.(a) are all subject to LDR requirements, unless a variance is obtained from EPA or an authorized state.

There is no correlation between risk based screening numbers that are normally used in site cleanup, and the UTS and ASTS in the LDR rule. This is because the UTS and ASTS are technology based, whereas the site cleanup numbers are normally risk based. This lack of correlation results in UTSs and/or ASTS being above risk based levels for some constituents and below them for others.

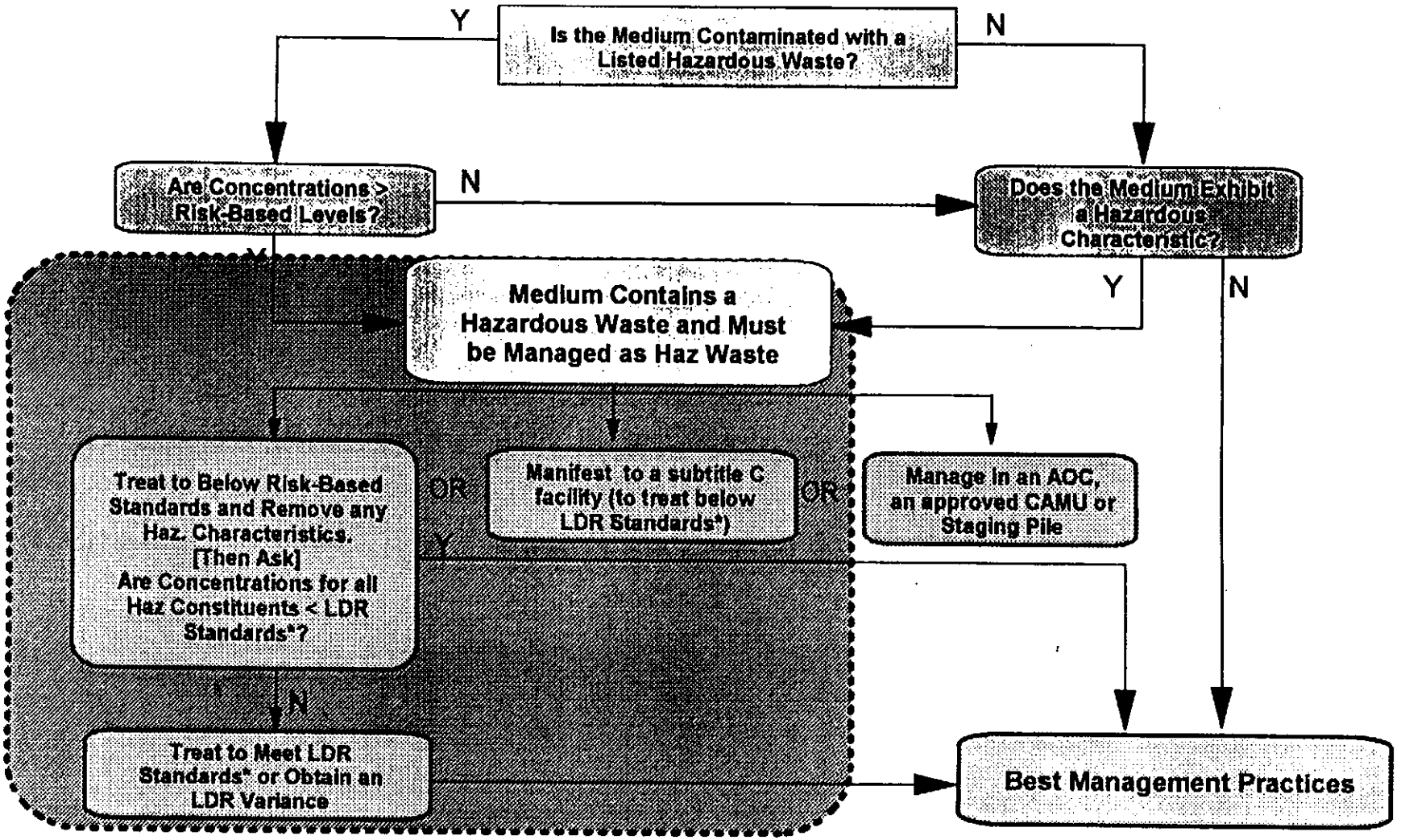
Prior to land disposal or land treatment, hazardous constituent concentration in the contaminated media must be compared to the standards in the LDR rule. If the risk based levels are met, and the LDR standards are not, the facility may apply for an LDR variance in accordance with CFR 268.44.

VII. In Summary

Media containing hazardous waste must be managed in accordance with RCRA Subtitle C. If contaminated media are treated so that concentrations of hazardous constituents are below risk based levels or promulgated standards, when available, and the media do not exhibit any of the hazardous waste characteristics, then the media can be managed in accordance with best management practices. If a medium is to be land disposed or land treated, LDR requirements must be met.

The October 14, 1998, EPA memo, "Management of Remediation Waste Under RCRA" summarizes all regulations, policy, and interpretation documents that address management of media contaminated with hazardous waste. The attached flow diagram presents the logical progression to follow in determining the appropriate level of management needed.

Management of Contaminated Media
EPA, Region 4



* LDR Standards may be the Universal Treatment Standards or, when applicable, the Alternate LDR Treatment Standards for Contaminated Soil (40 CFR 268.49)

Area where LDR Applies

Area of Contamination Policy (AOC)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 25 1996

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Norman H. Nosenchuck, P.E., Director
Division of Solid & Hazardous Materials
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233-7250

Dear Mr. Nosenchuck:

Thank you for your letter requesting additional information on the scope and applicability of the Area of Contamination (AOC) concept. Independent of your request, EPA recently completed guidance on application of the AOC concept during cleanups regulated under the Resource Conservation and Recovery Act (RCRA) and other cleanups. This guidance is attached.

As you requested, we have reviewed the June 11, 1992 letter from Sylvia K. Lowrance to Douglas H. Green regarding application of the AOC concept to routine earthmoving and grading activities. The discussion in the June 11, 1992 letter continues to reflect Agency policy on areas of contamination.

The area of contamination concept was discussed in detail in the preamble to the National Contingency Plan (55 FR 8758-8760, March 8, 1990). Through the AOC concept, EPA recognizes that certain discrete areas of generally dispersed contamination may be equated to RCRA landfills. Just as movement of hazardous wastes within a landfill would not typically constitute a new act of treatment, storage or disposal for purposes of RCRA, movement of media contaminated by hazardous wastes within an area of contamination does not typically trigger RCRA requirements. While the area of contamination concept was first explained in the CERCLA NCP, it is based on an interpretation of RCRA. It applies equally to RCRA corrective action sites and other actions.

In most cases the AOC concept is applied in the context of a government overseen cleanup action, and delineation of AOCs are reviewed, overseen and approved as part of those actions. However, since the AOC concept is an interpretation of current Federal statutory and regulatory requirements, its application outside overseen cleanup actions does not require oversight or

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advance approval at the Federal level. When the AOC concept is applied outside the context of an overseen cleanup action, EPA encourages consultation with the appropriate agency and routinely cautions individuals that mis-application of the AOC concept could, potentially, result in substantial fines and penalties associated with improper disposal of hazardous waste. EPA also routinely cautions individuals that state standards may be more stringent and may require oversight or advance approval of all AOCs.

In your letter, you mention the specific concern that individuals could store soils contaminated with hazardous wastes in temporary piles anywhere within an overall area of contamination while installing pipelines or foundation footings and then replace the soil, "all with no RCRA regulatory requirements or governmental oversight." We note that, while movement of soil contaminated with hazardous waste within an area of contamination would not typically trigger RCRA, the AOC concept in no way shields individuals from otherwise applicable cleanup requirements. For example, in many states discovery of contaminated soils triggers reporting requirements under the state cleanup program. In these cases, if a state determined that cleanup was warranted it could require management or removal of contaminated soils, independent of RCRA. We believe that, addressing potential cleanup needs for contaminated soils discovered during normal earthmoving and grading activities using cleanup laws is more appropriate than imposing the RCRA permitting process on these activities.

Thank you for your concern regarding the AOC concept. EPA continues to believe that proper application of this concept will support appropriate remedies and expedite cleanup processes, not encourage avoidance of legitimate cleanup obligations. For additional information, your staff may wish to contact Elizabeth McManus or Hugh Davis, of my staff, at (703) 308-8657 and (703) 308-8633, respectively.

Sincerely yours,

Elizabeth A. Cotsworth

Michael Shapiro, Director
Office of Solid Waste

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 13 1995

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Use of the Area of Contamination (AOC) Concept During RCRA Cleanups

FROM: Michael Shapiro, Director
Office of Solid Waste

Stephen D. Luftig, Director
Office of Emergency and Remedial Response

Jerry Clifford, Director
Office of Site Remediation Enforcement

TO: RCRA Branch Chiefs
CERCLA Regional Managers

This memorandum confirms that, under current regulations, certain broad areas of contamination (AOCs) may be considered RCRA landfills. Under certain conditions, hazardous wastes may be moved within such areas without triggering RCRA land disposal restrictions or minimum technology requirements. This memorandum also describes the distinctions between the final Corrective Action Management Unit (CAMU) regulations and the Area of Contamination (AOC) approach, and encourages appropriate use of both options to expedite remedial actions.

Area of Contamination Approach

The area of contamination concept was discussed in detail in the preamble to the National Contingency Plan (55 FR 8758-8760, March 8, 1990). In this discussion, EPA clarified that certain discrete areas of generally dispersed contamination (called "areas of contamination" or "AOCs") could be equated to a RCRA landfill and that movement of hazardous wastes within those areas would not be considered land disposal and would not trigger the RCRA land disposal restrictions. The NCP also discusses using the concept of "placement" to determine which requirements might apply within an AOC. The concept of "placement" is important because placement of hazardous waste into a landfill or other land based unit is considered land disposal,

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which triggers the land disposal restrictions, and may trigger other RCRA requirements including permitting (at a non-CERCLA site), closure and post-closure. In the NCP, EPA stated, "placement does not occur when waste is consolidated within an AOC, when it is treated in situ, or when it is left in place." Placement does occur, and additional RCRA requirements may be triggered, when wastes are moved from one AOC to another (e.g., for consolidation) or when waste is actively managed (e.g., treated *ex situ*) within or outside the AOC and returned to the land. Additional information on when placement does and does not occur is provided in the attached guidance document, *Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions*, OSWER Directive 9347.3-05FS, July 1989.

Although the AOC concept was initially discussed in the context of the CERCLA program, it applies equally to RCRA corrective action sites, cleanups under state law, and voluntary cleanups[1]. For additional information on the AOC concept, see, for example, the October 9, 1990 memorandum from Sylvia Lowrance to David Ullrich, "Replacement of Contaminated Soil and Debris Treated under a Treatability Variance," the January 7, 1991 letter from Don Clay to Richard Stoll, and the June 11, 1992 letter from Sylvia Lowrance to Douglas Green (attached).

The interpretations of landfill, placement and the area of contamination concept discussed in the NCP preamble were reiterated by EPA in the 1990 subpart S proposal (55 FR 30798, July 27, 1990). In the 1990 proposal, EPA termed AOCs at RCRA facilities "Corrective Action Management Units" or "CAMUs." Although the name was changed, from AOC to CAMU, the CAMU concept discussed in the 1990 proposal was equivalent to the AOC concept (although, as discussed below, the CAMU concept was broadened when the final CAMU rule was issued). In response to great interest in the CAMU/AOC concept as discussed in the 1990 proposal, EPA issued a fact sheet titled *Use of the Corrective Action Management Unit Concept* in August 1992 (attached). In the August, 1992 fact sheet, EPA further reiterated the AOC concept by explaining that broad areas of contamination, including specific subunits[2], could be considered landfills under the RCRA regulations and discussed activities which would or would not trigger additional RCRA requirements when conducted in such areas.

The discussions of the AOC approach in the NCP preamble, 1990 subpart S proposal, and the August, 1992 fact sheet continue to reflect EPA's interpretation of current statutory and regulatory provisions. They remain useful guidance documents when the AOC approach is

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[1] Although advance approval at the Federal level is not required for private parties to take advantage of the AOC concept, we encourage them to consult with the appropriate agency to ensure they implement the AOC concept appropriately. It should be noted that the agency responsible for determining that the AOC concept is being properly applied might not be the same as the agency overseeing cleanup at a site. Additionally, states may have more stringent standards which require consultation and/or prior approval of an AOC.

[2] Note, if the subunit were a RCRA regulated unit, inclusion of the unit within an AOC could necessitate a RCRA permit modification or a change under RCRA interim status.

under consideration at RCRA corrective action sites, Superfund sites and during other cleanup actions involving the movement or consolidation of hazardous waste, or media and debris contaminated with hazardous waste.

Relationship of the AOC Concept to the Final CAMU Rules

On February 16, 1993, EPA published final Corrective Action Management Unit regulations (58 FR 8658, February 16, 1993). The final CAMU rule differs from the AOC approach in important respects. First, the CAMU regulations create a new type of RCRA unit - a "Corrective Action Management Unit" or "CAMU." CAMUs are distinct from the type of units listed in RCRA Section 3004(k)[3]. Second, only EPA and authorized states may choose to designate CAMUs for management of remediation waste during RCRA corrective action and other cleanups. Third, the CAMU regulations expanded the flexibility available for management of remediation wastes beyond that offered by the AOC approach. Under the CAMU regulations, certain activities which would normally be considered placement are allowed when carried out in an agency-approved CAMU, including: remediation waste[4] may be removed from a CAMU and replaced (before or after treatment) in the same or a different CAMU; remediation waste may be consolidated into a CAMU before or after treatment; and, remediation waste may be moved (again, before or after treatment) between two or more CAMUs at the same facility.

While the CAMU concept contained in the final CAMU rule was historically an outgrowth of the AOC concept, it has a separate statutory and regulatory basis; therefore, it supplements rather than supersedes the AOC concept. The AOC concept was not altered when the final CAMU rules were promulgated and it does not depend on the existence of the CAMU rule.

As you may be aware, several parties challenged the CAMU rule. The lawsuit has been stayed pending promulgation of the final Hazardous Waste Identification Rule for contaminated media ("HWIR-Media"). At the time the stay was issued, EPA stated that the HWIR-Media rule was expected to replace a substantial portion of the CAMU rule; however, as long as the CAMU rule remains in effect, CAMUs may be used to facilitate protective remedies under RCRA, CERCLA, and state cleanup authorities. If a CAMU is under consideration, we recommend you take the following steps, in addition to the CAMU approval steps required at 40 CFR § 264.552:

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[3] RCRA Section 3004(k) defines the term land disposal, when used with respect to a specified hazardous waste, to include placement of such hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave.

[4] Remediation waste is defined as: "all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under 40 CFR § 264.101 and RCRA section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA sections 3004(v) or 3008(h) for releases beyond the facility boundary.

1) explain the potential risks associated with CAMUs to facility owner/operators by informing them that the CAMU rule has been challenged and that EPA may issue a proposal to withdraw it; 2) where possible, mitigate potential risks associated with CAMUs by, for example, implementing a CAMU remedy within the shortest possible time frame; and 3) document all CAMU decisions completely, emphasizing how the CAMU provides support for the best site-specific remedy.

Continued Use of the AOC Concept

Both AOCs and CAMUs can be used to expedite effective and protective remedial actions; however, EPA encourages the use of the AOC concept in cases where the additional flexibility provided in the final CAMU regulations is not needed. For example, the AOC concept is particularly useful for consolidation of contiguous units or areas of contaminated soil. Using the AOC concept, a RCRA facility owner/operator with a large contiguous area of soil contamination could consolidate such soils into a single area or engineered unit within an AOC without triggering the RCRA land disposal restrictions or minimum technology requirements. Use of the AOC concept would not be affected by the pending litigation over CAMU or any changes in the CAMU rule. In addition, please note, the AOC and CAMU concepts only address management of materials which would otherwise be subject to RCRA (i.e., hazardous wastes, or media and debris contaminated with hazardous waste). RCRA regulated materials are a subset of the materials managed during site cleanups.

We know you will continue to use the AOC and CAMU concepts to support appropriate remedies and to expedite cleanup processes. If you have any questions regarding the AOC or CAMU concepts, please contact Elizabeth McManus, Hugh Davis or Robin Anderson at (703) 308-8657, (703) 308-8633, and (703) 603-8747, respectively.

attachments

cc: Susan Bromm, OECA
Elizabeth Cotsworth, OSW
Larry Reed, OERR
Jim Woolford, FFRRO
Barbara Pace, OGC
George Wyeth, OGC
Earl Salo, OGC
RCRA Regional Division Directors
Superfund Regional Division Directors

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

9484.1994(01)

APR - 6 1994

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Mr. Scott M. DuBoff
WINSTON & STRAWN
1400 L Street, N.W.
Washington, D.C. 20005-3502

Dear Mr. DuBoff:

In your letter of February 9, 1994, you request clarification of the Agency's interpretation of "active management" in the closing of waste management facilities (surface impoundments) that contain waste sludges meeting the description of waste types that became subject to Subtitle C of the Resource Conservation and Recovery Act (RCRA) after the impoundments had been permanently removed from service. Specifically, this request seeks verification of a site-specific case described in the letter.

In the specific case of an impoundment which stopped receiving or generating any hazardous wastes prior to the effective date of the newly identified characteristic or newly identified listing, and the impoundment is the final disposal site for the wastes, the unit is not subject to regulation under 40 CFR parts 264 or 265 (See 55 FR 39410, September 27, 1990 and 55 FR 46383, November 2, 1990). However, it should be noted that inactive units that are located at facilities otherwise subject to Subtitle C interim status or permitting requirements are solid waste management units subject to corrective action requirements under sections 3008(h) and 3004(u) of RCRA. Any treatment, storage, or disposal of wastes (i.e., active management) in the unit after the effective date of the new listing or characteristic could subject the unit and wastes to Subtitle C control.

Section 3005 of RCRA prohibits the operation of hazardous waste treatment, storage, or disposal facilities without a permit. EPA interprets the term "disposal" for purposes of RCRA Subtitle C regulation to have the same meaning as the term "land disposal" as defined under section RCRA 3004(k). Therefore, conducting any of the activities that constitute "land disposal" of hazardous waste will subject the unit to Subtitle C permitting and land disposal restrictions. "Land disposal" occurs when hazardous wastes are placed into a unit, including when hazardous

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wastes from different units are consolidated into one unit, or removed and treated outside a unit and redeposited, or treated within the unit in an incinerator, impoundment, or tank and then redeposited. "Land disposal" does not occur, for example, when hazardous wastes are moved or consolidated within a unit, treated in situ, or capped in place, or when non-hazardous solid waste is added to the unit. As noted in the final rule which identified wastewater treatment sludges from petroleum refining as hazardous wastes (55 FR 46383, November 2, 1990), EPA does not view the one time removal of wastes during closure as changing the status of the unit with respect to permitting, as long as there has not been ongoing management of the waste in the impoundment. One-time removals do "generate" waste, and this waste must comply with treatment standards prior to final land disposal.

It also should be noted that although the movement of waste within a unit would not constitute land disposal under RCRA 3005 or 3004(k) (as described above), this activity would generally be defined as "disposal" under RCRA section 1004(3) and thus be subject to RCRA section 7003 authorities.

During closure-in-place, the sludges are often mixed with a stabilizing material designed to stabilize the sludge either chemically or physically to provide sufficient bearing capacity for the placement of an impervious cap and to prevent migration of any contaminants to groundwater from a unit. Conducting activities that constitute hazardous waste "treatment" (including in situ treatment) would subject the unit to permit requirements as a hazardous waste treatment facility.

Because "treatment" may be occurring during activities designed to stabilize the wastes prior to capping, Subtitle C permitting may be triggered. However, whether or not the addition of material to improve the load-bearing ability of final cover actually involves the physical or chemical stabilization (i.e., treatment) of RCRA hazardous waste is a site-specific determination. Therefore, we will forward your letter to Region V and help the appropriate Regional staff obtain any additional national guidance they may require.

Sincerely,

David Bussard, Director
Characterization and Assessment Division

cc: David Fagan, OSW/PSPD, 5303W
Richard Witt, OGC, 2355
Mike Ribody, Region V

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 31 1992

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Use of the Corrective Action Management Unit (CAMU) Concept

TO: Waste Management Division Directors, Regions I - X
RCRA Branch Chiefs, Regions I - X
RCRA Regional Counsel, Regions I - X

FROM: Sylvia Lowrance, Director
Office of Solid Waste

Bruce Diamond, Director
Office of Waste Programs Enforcement

At the February 1992 Stabilization Conference in Colorado Springs we discussed the possibility of implementing the corrective action management unit (CAMU) concept before final promulgation of the Subpart S regulations. At that time OSWER made a commitment to provide further guidance to the Regions on how to use existing RCRA regulations to achieve some of the remedial benefits of the CAMU. The attached document, "Use of the Corrective Action Management Unit Concept," provides that guidance.

The CAMU portion of Subpart S is on a current schedule to be finalized by December 1992. The attached guidance, which was developed jointly by OSWER and OGC, clarifies the Agency's legal authority for utilizing a CAMU-like approach before the CAMU rule is finalized, and provides guidance on when and how to use the concept. The concept can be applied during final remedies, and in the implementation of stabilization actions to reduce imminent threats and contain releases. We encourage the use of this concept whenever the success of the remedial option at a particular facility will be enhanced.

If you have any questions regarding the content of this guidance, please call Dave Fagan at (202) 260-4497.

cc: Lisa Friedman, OGC
Henry Longest, OERR
Kathie Stein, OE

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response Washington, D.C. 20460

August 1992

EPA

Use of the Corrective Action Management Unit Concept

Office of Solid Waste

BACKGROUND

Beginning in 1992, EPA began implementing a new strategy to increase the pace of cleanup and to achieve positive environmental results at RCRA treatment, storage and disposal facilities (TSDFs) requiring corrective action. While comprehensive facility cleanup is still the long-term goal for the RCRA Corrective Action Program, this new initiative emphasizes the importance of stabilizing sites by controlling releases and preventing the further spread of contaminants.

At most RCRA facilities, stabilization or final remedial actions will involve excavation and on-site management of contaminated soils, sludges and other wastes that are subject to the RCRA Subtitle C hazardous waste regulations. In these situations, a number of issues can arise regarding the applicability of certain RCRA requirements, and how these requirements may affect the remedial activities. Specifically, experience in the RCRA and CERCLA remedial programs has shown that the RCRA land disposal restrictions (LDRs) and minimum technology requirements (MTRs) may limit the types of remedial options available at sites, as well as affect the types of specific technologies that may be used, the volumes of materials that are managed, and other features of remedies under consideration.

Recognizing that strict application of these RCRA requirements may limit or constrain desirable remedies, including stabilization programs, EPA is developing an important regulatory concept, known as the Corrective Action Management Unit (CAMU), to facilitate effective and protective remedial actions. This concept, first discussed in the proposed Subpart S corrective action regulations (55 FR 30798, July 27, 1990), is similar to the Superfund concept of the "area of contamination," in which broad areas of contamination, often including specific subunits, are considered to be a single land disposal unit for remedial purposes.

CAMUs may be particularly useful for specific remedial activities such as consolidation of units or contaminated surficial soils. For example, a group of unlined inactive lagoons that are continuing sources of releases to groundwater may be best remediated by removing and treating the concentrated wastes in another unit, and excavating the remaining low-concentration contaminated soils from underneath the lagoons. These soils could then be consolidated and placed into a protective and cost-effective single-capped unit, thereby controlling further releases to groundwater. In other situations site remediations will require excavation of large quantities of relatively low-level contaminated surficial soils. In these cases a protective and cost-effective remedy might be to excavate the soils and consolidate them into a single area or engineered unit within the area of contamination. For both of these examples, application of LDRs and possibly MTR requirements would result in a more costly and complex remedy, that may delay remediation and result in little additional environmental protection for the site.

As proposed in the Subpart S rule, there may be certain types of situations in which application of the CAMU concept (55 FR 30842) would be inappropriate. In addition, several

factors (55 FR 30883) may be considered by decision-makers in determining how CAMUs would actually be designated at sites. Although owner/operators may propose a specific area as a CAMU, it is the responsibility of EPA or the authorized State to determine whether a CAMU is necessary and appropriate, and, if so, to determine the boundaries of the unit.

The Subpart S regulations have not yet been finalized. However, although the CAMU concept has been presented only in proposed regulations, existing regulatory authority may be used to implement this type of approach in site remediations and stabilization actions. The Agency's experience with the RCRA and CERCLA remedial programs indicates that the CAMU concept could be applied immediately to great advantage at a significant number of RCRA cleanup sites. This guidance is presented to clarify the use of the CAMU concept prior to final regulations.

USE OF LANDFILL DESIGNATION FOR REMEDIAL PURPOSES

Specifically, certain contaminated areas at sites that require remediation, including groups of units in such areas, may be designated as a "landfill" under the current RCRA landfill definition (40 CFR § 260.10). Designating such an area of a facility as a landfill within the existing regulatory framework can achieve remedial benefits similar to those that would be obtained by using CAMUs under the Subpart S proposal. Prior to the promulgation of final CAMU rules, EPA encourages the use of this approach at contaminated sites, where it can promote effective and expeditious remedial solutions. EPA recommends that decisions on designating certain contaminated areas or groups of units as a landfill be made in accordance with applicable regulations and generally in accordance with the CAMU provisions in the Subpart S proposal.

Owner/operators proposing to address certain areas at a facility as a single landfill for remedial purposes should request approval from EPA or the authorized State agency. The Regional Administrator or the authorized State Director will be the ultimate decision-maker as to whether such a landfill unit will help achieve the remedial objectives at the facility. EPA recommends decisions to use existing authorities, waivers, or variances to achieve many of the same objectives as the proposed Subpart S rule CAMU provisions should generally follow the proposed regulatory provisions (55 FR 30883) and preamble discussion (55 FR 30842) in defining the boundaries of the remedial unit. The Region or authorized State may also look to Superfund guidance in the designation of AOCs (55 FR 8758-8760).

Designating an area of contamination as a "landfill" will require that the unit comply with certain RCRA requirements that are applicable to landfills. The specific requirements that apply will differ, depending on whether the landfill is considered to be: (1) an existing non-regulated landfill, or (2) a regulated hazardous waste landfill. This distinction is determined by the regulatory status of the units or areas that are included as part of the landfill. The following discussion explains further the requirements associated with these two types of landfills.

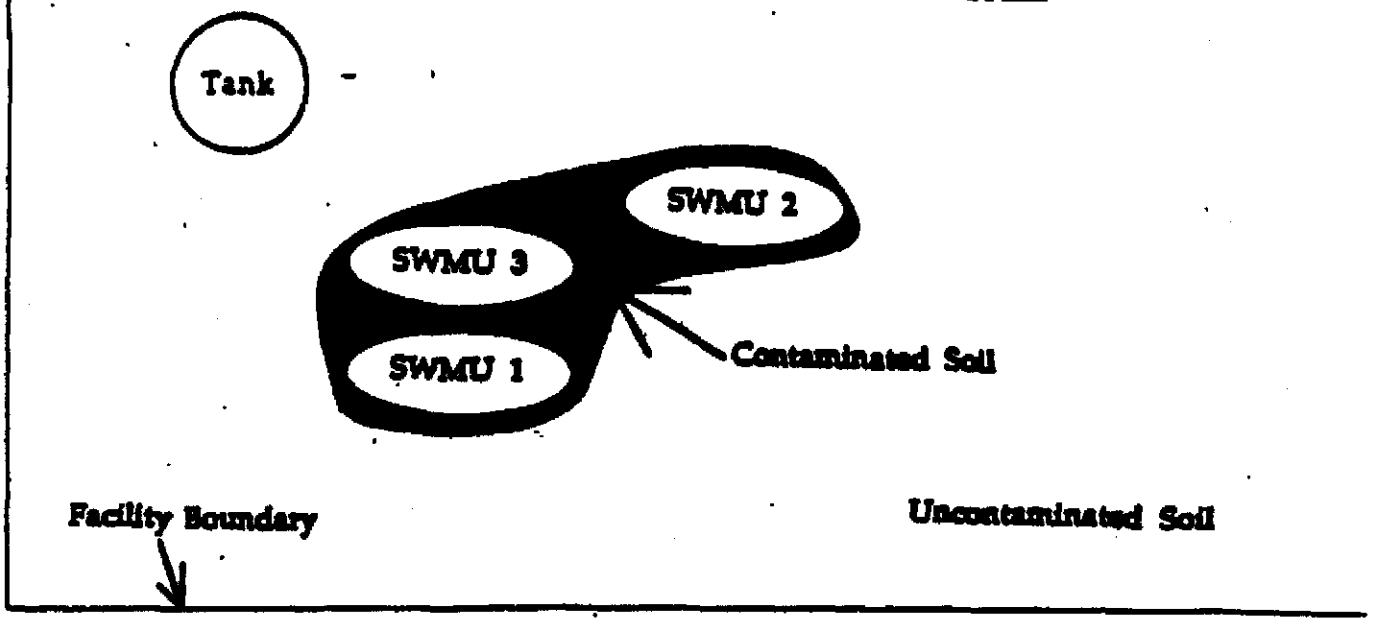
Existing Non-Regulated Landfills

Figure 1 shows an area of contamination at a facility that includes several land-based solid waste management units (SWMUs) that are not regulated as hazardous waste units under RCRA (e.g., because all of the disposal occurred before the RCRA hazardous waste regulations went into effect). By designating this area as a single landfill, EPA can approve movement and consolidation of hazardous wastes and soils contaminated with hazardous waste within the unit boundary, without triggering the LDRs or MTRs. For example, contaminated soils in and around SWMUs 1 and 2 could be consolidated into SWMU 3 and capped without triggering LDR requirements.

This landfill would not be subject to the RCRA Part 264 or Part 265 design and operating requirements for hazardous waste landfills. This is because the landfill would not have received hazardous waste after November 19, 1980. (See 40 CFR § 270.1(c)). In the absence of specific Part 264 or 265 requirements for such units, appropriate ground water monitoring and closure requirements for the landfill can be determined by EPA or the State as part of the corrective action remedial decision-making process. These requirements would be based on an assessment of site specific factors, such as waste characteristics, site hydrogeology, exposure potential, and other factors. This allows the regulator further flexibility in designing remedial solutions which are effective and protective based on actual site conditions.

These non-regulated landfills would remain exempt from regulation under Parts 264 and 265, under the following circumstances:

FIGURE 1
EXISTING NON-REGULATED LANDFILL



- The landfill cannot receive hazardous waste from other units, either on-site or off-site. The landfill could, however, receive non-hazardous wastes as part of the cleanup actions. If it were to receive hazardous waste, the landfill would become a regulated unit (40 CFR § 270.1(c)) subject to the requirements of Subparts F (40 CFR § 264.90) and G (40 CFR § 264.110). The facility permit would have to be modified accordingly (for interim status facilities, a change would have to be approved under 40 CFR § 270.72), and the wastes would have to be treated to comply with applicable LDR standards prior to placement in the landfill.

- If hazardous waste treatment (including in-situ treatment) takes place within the landfill, the owner/operator must comply with all Part 264 or 265 requirements applicable to the treatment unit, and must modify the permit or Part A to include the new treatment unit.

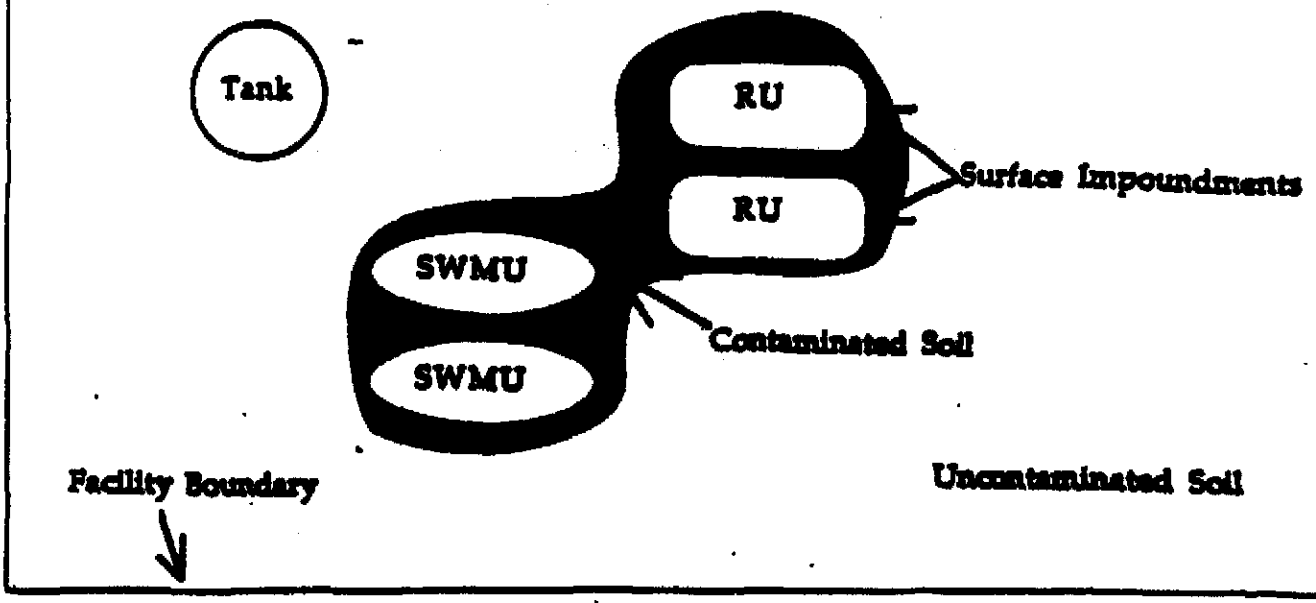
- Similarly, residuals from treatment of hazardous wastes that have been removed from the landfill and treated in a non-land-based unit cannot be redeposited into the landfill unless the residuals meet the LDRs. If the residuals were still hazardous by characteristic or still contained hazardous waste, disposal of the residuals into the landfill would require the landfill to be designated a "regulated unit," as the unit would have received hazardous waste after July 26, 1982.

- Hazardous wastes transferred from the non-regulated landfill to another land-based unit would also have to meet LDR standards.

Regulated Landfills

Figure 2 shows an area of contamination that could be designated as a landfill, which contains two regulated units (as defined in 40 CFR § 264.90). As with the previous example in Figure 1, designating this area as a landfill would allow wastes to be moved and consolidated within the area without triggering the LDRs. However, because this landfill contains regulated units, the entire area must be considered a regulated unit. Accordingly, the following requirements would apply:

FIGURE 2
REGULATED LANDFILL



- The unit boundaries of the original regulated units that were specified on the Part A or Part B application would have to be redesignated to encompass the entire new landfill unit, according to the applicable procedures in 40 CFR §§ 270.72, 270.41 or 270.42.

- The landfill would have to comply with applicable Part 264 or 265 requirements for landfills, including the Subpart F ground water monitoring requirements and Subpart G closure and post-closure requirements. Subpart F requirements would generally involve installation of additional ground water monitoring wells. Compliance with Subpart G would likely also require modifications to the closure and post-closure plans for the unit.

MTRs would not necessarily apply to these newly designated regulated landfills. If the original regulated unit located within the landfill was not subject to the MTRs (i.e., the landfill was not new or expanding after 1984), the landfill could be considered by the Agency or authorized State to be a redesignation of that existing unit, rather than a lateral expansion. As such, the landfill would not be subject to the MTRs. However, if the regulated unit encompassed by the landfill was originally subject to MTRs, the entire area of the landfill would be subject to MTRs.

SUMMARY

Existing regulatory standards (e.g., replacement of treatment residuals into the CAMU triggers the LDRs) cannot be waived to implement the CAMU concept prior to a final CAMU rulemaking. EPA is considering removing some of these limitations in the final rule. Nonetheless, despite these current limitations, there may be a number of situations where the use of landfills can yield substantial benefits in remediating sites. EPA recommends that the guidance provided in this fact sheet be used in evaluating the use of landfills to implement timely and protective corrective actions at RCRA facilities.

FOR FURTHER INFORMATION

Inquiries concerning the guidance contained in this fact sheet should be directed to Dave Pagan (202) 260-4497, or Anne Price (202) 260-6725.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 11 1992

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Mr. Douglas H. Green
Piper & Marbury
1200 Nineteenth Street, N.W.
Washington, D.C. 20036-2430

Dear Mr. Green:

Thank you for your letter of April 30, 1992, requesting clarification of the Environmental Protection Agency's (EPA's) interpretation of the applicability of certain Resource Conservation and Recovery Act (RCRA) requirements to common excavation-type activities.

The particular situation which you presented in your letter involves excavation of soils, such as trenching operations for pipeline installation, where the soils may be hazardous by characteristic, or may contain listed hazardous wastes. We understand that your questions specifically relate to excavations being conducted on public roadways or at other similar locations that are not necessarily associated with or are part of a RCRA-regulated treatment, storage, or disposal facility.

In the example which you cited in your letter, the soils from the excavation or construction activities are temporarily moved within the area of contamination, and subsequently redeposited into the same excavated area. In these situations, we agree that such activity does not constitute treatment, storage, or disposal of a hazardous waste under RCRA. The activity of placing waste in the ground would not normally meet the regulatory definitions of "treatment" or "storage" (40 CFR 260.10). In addition, as you noted in your letter, movement of wastes within an area of contamination does not constitute "land disposal" and thus does not trigger RCRA hazardous waste disposal requirements (55 FR 8666, March 8, 1990). Thus, RCRA requirements such as land disposal restrictions would not apply.

With respect to generator requirements, as you indicated, a hazardous waste "generator" is one, by site, who produces a hazardous waste or first causes the waste to be regulated as hazardous (40 CFR 260.10). In the circumstances you described, the excavation does not "produce" the hazardous waste, nor does it subject the waste to hazardous waste regulation since, as

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discussed above, the activity you described is not "treatment," storage," or "land disposal" of hazardous waste. Therefore, we agree that the activity is not subject to any generator requirements.

Please let me know if you have any further questions regarding this issue.

Sincerely yours,

Sylvia K. Lawrence, Director
Office of Solid Waste

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 16 1991

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: LDR Applicability for Investigative Derived Waste

FROM: Caroline H. Wehling CHW
Attorney
Solid Waste and Emergency
Response Division (LE-132S)

TO: Steven C. Golian
Chief
Remedial Guidance Section (OS-220)

This is in response to your request for guidance on compliance with land disposal restrictions for investigative-derived wastes which are temporarily stored in drums within an AOC pending response selection. Specifically you have asked whether a drum is in itself a RCRA "unit" such that, if waste is removed from the drum, it must meet LDR requirements prior to redeposition in the AOC.

I agree that, in certain circumstances, the placement of hazardous waste from an AOC into a drum within the AOC, followed by replacement in the AOC would not constitute "land disposal" for RCRA purposes. For RCRA regulatory purposes, "land disposal" is the placement of waste into a land disposal unit (such as an AOC). Land disposal of hazardous wastes is subject to the pretreatment requirements of the LDR program. Movement of hazardous waste from a storage unit (such as a tank or container storage area) into a land disposal unit constitutes "land disposal" of hazardous waste.

As we have discussed, a drum is not in itself a RCRA unit. See 40 C.F.R. 260.10 (definition of "hazardous waste management unit"). However, drums and the land on which drums are placed may constitute a RCRA storage unit, specifically a "container storage area". Thus, if the drum storage you described involved the placement of hazardous waste into drums within a separate storage or treatment area, either on land within the AOC or on a pad, the removal of waste and replacement into the AOC could

constitute land disposal. On the other hand, EPA does not generally consider drums placed within a landfill to form "container storage areas". Thus, if waste is placed into drums which remain within the AOC and which are not placed into a separate storage or treatment area, such placement would not be considered a unit distinct from the landfill itself. As a result, removal of waste from the drums and redeposition within the landfill would not constitute land disposal.

Please call me if you have any additional questions about this. I can be reached at FTS 382-7720.

cc: Tina Kaneen, OGC
Larry Starfield, OGC
George Wyeth, OGC
John Hollister, OERR
Dave Fagan, OSW

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 7 1991

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Richard G. Stoll
Freedman, Levy, Kroll & Simonds
1050 Connecticut Ave. N.W.
Washington, D.C. 20036-5366

Dear Mr. Stoll,

This letter is in response to your inquiry dated August 22, 1990 concerning the applicability of EPA's "Superfund LDR Guides." As you asserted, those interpretations of RCRA were found in the 1990 NCP and other CERCLA documents, but you asked whether those interpretations apply at all sites, regardless of whether the cleanup activity is being conducted under federal CERCLA authorities.

The preamble to the 1990 NCP represents an official Agency-wide position concerning the interpretation of RCRA and other statutes relevant to federally-mandated CERCLA cleanups (see 53 FR 51394, 51443-45 (December 21,1988) and 55 FR 8666, 8758-62 (March 8,1990)). The LDR Guides implement these interpretations in more detail. These interpretations of RCRA would apply at Superfund sites and at non-Superfund sites. Therefore, in general, the answer to your question about the applicability of the LDR Guides and NCP interpretations is that they apply wherever the cleanup involves a RCRA waste. However, it is conceivable that some of the interpretations of RCRA developed to apply to federal CERCLA sites may not exactly match non-CERCLA circumstances because of different statutory constraints or authorities. With that caveat, let me address the specific issues and questions raised in your letter.

First, your comments focus on the interpretations of Area of Contamination (AOC), "placement," and the presumption of entitlement to treatability variances for contaminated soil and debris. Your principal concern focused on whether the interpretations offered of these issues in the NCP and LDR Guides apply at all sites. The answer is yes.

Second, you also questioned whether the NCP interpretations and the LDR Guides noted above apply equally where "a party may want to move or treat contaminated soil and debris as part of a

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RCRA corrective action, as part of a cleanup carried out under State law, and/or as part of a voluntary cleanup." The answer is yes.

Third, you asked whether in situ treatment that is not "placement" at a CERCLA site is also not placement at a non-CERCLA site (site A in your letter). The answer is yes.

Fourth, you question whether excavation and movement of contaminated soil within a certain area would be "placement" at a non-CERCLA site (site B), since you interpret it not to be placement at a CERCLA site. The limited facts given in that question do not allow us to unambiguously state whether there is "placement" at either site, although as a general rule the AOC concept is operable at RCRA corrective action sites. It should be noted, however, that designation of an AOC is a function performed by the regulating agency.

Fifth, you asked whether the presumption in favor of treatability variances and definition of appropriate alternative treatment would be the same for a non-CERCLA site (site C). The answer is that any presumption in favor of a treatability variance would be the same whether the site is a RCRA site or a federal or private party CERCLA site.

I hope that this response meets your needs. If you need additional information or clarification, please contact Steve Golian at (703) 308-8360.

Sincerely,

Don R. Oley
Assistant Administrator

OSW - 206

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 9 1990

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONS

MEMORANDUM

SUBJECT: Replacement of Contaminated Soil and Debris Treated under a Treatability Variance

FROM: Sylvia K. Lowrance, Director
Office of Solid Waste

TO: David Ullrich, Acting Director
Waste Management Division, Region V

This memorandum is in response to your correspondence of April 25, 1990, in which you requested guidance in relation to six specific questions dealing generally with how the RCRA land disposal restrictions may affect certain remedial situations. We apologize for the delay in responding to your request; however, it was necessary for us to insure consensus at Headquarters in order to address the questions you have posed. We offer the following response to those six questions:

1. Q: Can soil and debris which has been treated in a tank within the area of contamination (AOC) in accordance with a treatability variance be replaced within the area of contamination without meeting any additional 40 CFR Part 264 requirements?

A: If contaminated soil and debris is treated to meet standards specified in a treatability variance that has been approved by the Agency, the treated soil/debris may then be placed in any treatment, storage or disposal unit that is in compliance with RCRA Subtitle C. This could include an "area of contamination" (i.e., a RCRA landfill) that has been designated by the Regional Administrator for the purpose of remediating the facility or site. Thus, as a regulatory matter, there would be no real distinction between soil/debris that is treated to the standard(s) set in the treatability variance and then placed in another unit, as opposed to "pure" hazardous wastes that are treated to the applicable Part 268 standards, and placed in another unit, except as discussed in the response to Question #5 (concerning contaminated media which no longer contains any waste).

By stating in your question that the treated wastes are to be redeposited into the AOC, we assume there is an

implied question as to what design and operating standards would then be applicable to the AOC itself. This is discussed in our response to question #6, below.

2. Q: Has the policy set forth on Page 5.12 of the document Implementing the Land Disposal Restrictions, October 1989, been revised?

   A: This policy has not been revised. The policy states that once an owner/operator receives a treatability variance, completes treatment, and has a treatment residual to be land disposed, the residue can be directed to any permitted or interim status unit.

3. Q: For the purpose of land disposal, is the residue of soil treated under a treatability variance to be distinguished from the residue of waste treated according to treatment standards?

   A: No. See response to Question 1, above.

4. Q: For the purpose of land disposal, is the residue of soil treated under a treatability variance in a tank within the area of contamination to be distinguished from the residue of soil treated under a treatability variance in a tank outside of the area of contamination?

   A: No. The location of the tank in relation to the "area of contamination" would not create a distinction as to how or where the treatment residuals could be land disposed. This assumes, of course, that the wastes have been treated to the standards specified in the treatability variance. A tank cannot be considered a part of the AOC (landfill), regardless of where it is physically located; thus, its location would have no bearing on the standards that would apply to management of the contaminated soils (or other hazardous wastes, for that matter) after they have been treated in the tank.

5. Q: Is a treatability variance for soil and debris to be considered in effect a delisting? Do the principles of the "contained in" policy for the treatment of contaminated ground water have any applicability to the treatment of contaminated soil and debris?

   A: A treatability variance for soil/debris does not have the effect of a delisting approved for the waste. The treated residuals typically will still contain hazardous wastes, and thus must be managed as such. In contrast, when wastes are delisted they are generally no longer subject to Subtitle C regulation.

   The "contained in" policy applies to ground water

and other contaminated media such as soil which are contaminated with listed hazardous wastes. Thus, if ground water or soil are treated such that concentrations of the listed wastes are at or below health based levels, the ground water or soil would no longer "contain" the hazardous wastes, and would therefore be no longer subject to Subtitle C regulation.

6. Q: If an AOC can be considered a RCRA unit for the purpose of closure, would an AOC ever be considered equivalent to a RCRA compliant unit for the purpose of disposal? (See page 6 of OSWER Directive 9234.2-04FS RCRA ARARs: Focus on Closure Requirements.)

A: As outlined in the cited ARARs manual, the AOC is a concept which can be applied in the context of remediation under CERCLA response actions or RCRA corrective actions. It is in many ways analogous to situations where two or more regulated surface impoundments would be treated as one unit in the context of closure of the impoundments.

When applied in the context of RCRA corrective actions or CERCLA remedial actions, the AOC concept would allow the Regional Administrator to designate a broadly contaminated contiguous area to be a RCRA "unit" (i.e., a landfill) for the purpose of implementing the remedy. In an existing landfill, the movement or consolidation of hazardous wastes within the designated area would not by itself trigger Subtitle C requirements (including the land disposal restrictions and the RCRA minimum technology requirements) since that movement or consolidation does not constitute "disposal" for Subtitle C purposes. If, however, wastes are excavated from the designated area, treated in another unit, and subsequently redeposited into the same area or unit, disposal has occurred, and the landfill would have to comply with applicable Part 264 or 265 requirements, including the LDRs, MTRs, closure standards (264.310), and the ground water monitoring requirements of Subpart F, Part 264 or 265.

The proposed Subpart S corrective action rule explains the AOC (described therein as the "corrective action management unit") concept in more detail. However, if you have more specific questions or issues regarding AOCs, we will be glad to work with you or your staff to resolve them.

If there are any questions on the above responses to your questions, please contact Dave Fagan (FTS 382-4497) or Judy

View Record Detail

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

September 5, 1990

Richard G. Stoll
Freedman, Levy, Kroll & Simonds
Washington Square
1050 Connecticut Ave., N.W.
Washington, D.C. 20036-5366

Dear Mr. Stoll:

This is in response to your request for confirmation that certain activities do not require a hazardous waste management permit under the Resource Conservation and Recovery Act ("RCRA"). Specifically, you have asked whether movement of hazardous waste that does not constitute "land disposal" would nonetheless require a hazardous waste disposal permit. It would not.

Section 3005 of RCRA prohibits the operation of a hazardous waste treatment, storage or disposal facility without a permit. EPA has interpreted the term "disposal" for purposes of RCRA Subtitle C regulation to have the same meaning as the term "land disposal" as defined under Section 3004(k). 53 Fed. Reg. 51444 (December 21, 1988) (defining "treatment", "storage" and "disposal" under Subtitle C of RCRA); 55 Fed. Reg. 8759, 8760 (March 8, 1990). Moreover, EPA has interpreted "land disposal" under Section 3004(k) to include movement of hazardous waste into a unit, but not movement within the unit. 55 Fed. Reg. 8759, 8760 (March 8, 1990). As a, result, movement of hazardous waste within a land disposal unit --- for instance, the transfer of waste from one part of a hazardous waste disposal unit to another part of that unit --- would not constitute "disposal" under Section 3005 and thus would not require a permit. See 55 Fed. Reg. 8760 (March 8, 1990) (earthmoving operations within a land disposal unit would not be subject to Subtitle C disposal requirements or permitting).

Note, however, that if such transfer were associated with land treatment activities, the unit may be subject to permit requirements as a hazardous waste treatment facility. In addition, the movement of waste within a unit would generally constitute "disposal" as defined under Section 1004(3) and thus be subject to Section 7003 authorities.

If you have further questions about this issue please feel free to contact me or Carrie Wehling of my staff.

Sincerely,

Lisa K. Friedman
Associate General Counsel
Solid Waste and Emergency
Response Division (LE-132S)

LAW OFFICES
FREEDMAN, LEVY, KROLL & SIMONDS

July 10, 1990

Lisa K. Friedman, Esq.
Associate General Counsel
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LE-132S
Room 503, West Tower
401 M Street, S.W.
Washington, D. C. 20460

Dear Lisa:

I am seeking your confirmation that certain types of hazardous waste movement will not trigger the need for a disposal permit under RCRA. If you agree with my analysis and conclusions, I ask that you please send me a letter stating this.

EPA has recently explained in some detail how to determine whether various types of activities constitute "placement" for purposes of triggering land disposal restrictions (LDRs) under RCRA. EPA's interpretations may be found in (1) OSWER Directive 9347.3-05FS, July 1989, also known as "Superfund LDR Guide #5;" (2) the proposed NCP preamble of December 21, 1988, particularly at 53 Fed. Reg. 51444, and (3) the final NCP preamble of March 8, 1990, particularly at 55 Fed. Reg. 8758-60.

In these documents, the concept of "placement" within or outside an "Area of contamination" (AOC) is pivotal. Essentially, EPA has stated that the act of moving hazardous wastes within a single AOC will not be considered "placement" that triggers LDRs (unless such movement also includes placing the waste in a separate unit such as incinerator or tank within the AOC).

While these documents deal with placement in the LDR context, they do not generally address the equally important issue of whether certain activity triggers the need for a permit under RCRA. Based upon my review of the statute, EPA regulations, and various EPA preamble statements, I have the following conclusion: any moving of hazardous waste not placement for purposes of triggering LDRs similarly trigger the need for a RCRA disposal permit. My analysis follows.

First, RCRA §1004(3) defines "disposal" quite broadly, and goes well beyond active "placement" to include passive leaking, leaching, etc. The statutory requirement to obtain a permit, however, is not triggered merely by any such disposal. Rather RCRA §3005(a) requires only that disposal facilities have permits. See first sentence of §3005(a). The statute does not define the term "disposal facility." EPA's regulations, however, have defined this term consistently since 1980:

> Disposal facility means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

40 CFR 260.10 (emphasis added).

Even at this early stage of the analysis, one can detect the basis for my conclusion. "Placement" of waste is a key to the definition of a disposal facility, and a disposal facility is necessary to trigger the requirement for a disposal permit.

Recent EPA discussions provide strong support for this conclusion. In the final "first third" LDR preamble, EPA made the following statement in responding to a comment:

> Thus, only facilities where hazardous waste is intentionally placed into land or water after November 19, 1980 require a RCRA disposal permit.

53 Fed. Reg. 31149, cols. 1-2, August 17, 1988 (emphasis added).

This statement may still beg the question whether EPA defines "placed" (or "placement") in the same way for both LDR-triggering and disposal permit-triggering purposes. In the final NCP preamble of March 8, 1990, however, EPA moves clearly in this direction:

> Under RCRA section 1004(3), the term "disposal" is very broadly defined and includes any "discharge, deposit, injection, dumping, spilling, leaking, or placing" of waste into or any land or water. Thus, "disposal" (in a statutory, rather than the regulatory subtitle C meaning of the term) would include virtually any movement of waste, whether within a unit or across a unit boundary. In fact, the RCRA definition of "disposal" has been interpreted by numerous courts to include passive leaking, whore no active management is involved (see, e.g., U.S. v. Waste Industries, Inc.

> 734 F.2d.159 (4th Cir. 1984)). However, Congress did not use the term "disposal" as its trigger for the RCRA land disposal restrictions, but instead specifically defined the new, and more narrow, term "land disposal" in section 3004(k). The broader "disposal" language continues to be applicable to RCRA provisions other than those in subtitle C. such as section 7003.

55 Fed. Reg. 8759, emphasis added.

In this passage, EPA makes quite clear that the broad definition of disposal in RCRA §1004(3) not only is inapplicable to LDRs but also is inapplicable throughout the entirety of Subtitle C. Instead, EPA relies on the term "placement" as it appears in RCRA §3004 (k) to define disposal for all purposes throughout Subtitle C. 55 Fed. Reg. 8759, col. 2.

If there were any further doubt about the linkage of the concept of "placement" in the LDR context and the concept of "placed" in the permit context, EPA appears to have resolved it in an example in the same preamble. After noting that certain movement of wastes within a unit would not be placement that triggers LDRs, EPA says that the requirement to obtain a RCRA permit would similarly not apply. 55 Fed. Reg. 8759-60.

I submit that all this points to only one logical conclusion: when one appropriately determines that a particular act is not placement for LDR purposes, such act will therefore not trigger the need for a disposal permit under RCRA.

I ask that you please confirm in writing the validity of my conclusion. I look forward to hearing from you.

Very truly yours,

Richard G. Stoll

FaxBack # 11950

Federal Register

Thursday
March 8, 1990

Part II

Environmental Protection Agency

40 CFR Part 300

National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule

requirements. Rather, given the need to ensure finality of remedy selection in order to achieve expeditious cleanup of sites, and given the length of time often required to design, negotiate, and implement remedial actions, EPA believes that this is the most reasonable interpretation of the statute.

As EPA discusses elsewhere in this preamble, one variation to this policy occurs when a component of the remedy was not identified when the ROD is signed. In that situation, EPA will comply with ARARs in effect when that component is identified (e.g., during remedial design), which could include requirements promulgated both before and after the ROD was signed. EPA notes that newly promulgated or modified requirements may directly apply or be more relevant and appropriate to certain locations, actions or contaminants than existing standards and, thus, may be potential ARARs for future responses.

It is important to note that a policy of freezing ARARs at the time of the ROD signing will not sacrifice protection of human health and the environment, because the remedy will be reviewed for protectiveness every five years, considering new or modified requirements at that point, or more frequently, if there is reason to believe that the remedy is no longer protective of health and environment.

In response to the specific comments received, EPA notes that under this policy, EPA does not intend that a remedy must be modified solely to attain a newly promulgated or modified requirement. Rather, a remedy must be modified if necessary to protect human health and the environment; newly promulgated or modified requirements contribute to that evaluation of protectiveness. For example, a new requirement for a chemical at a site may indicate that the cleanup level selected for the chemical corresponds to a cancer risk of 10^{-5} rather than 10^{-4}, as originally thought. The original remedy would then have to be modified because it would result in exposures outside the acceptable risk range that generally defines what is protective.

This policy that newly promulgated or modified requirements should be considered during protectiveness reviews of the remedy, but should not require a reopening of the ROD during implementation every time a new state or federal standard is promulgated or modified, was discussed in the preamble to the proposed rule (55 FR at 51440) but not in the rule section itself. For the reasons outlined above, EPA believes that this concept is critical to the expeditious and cost-effective accomplishment of remedies duly selected under CERCLA and the NCP, and thus is appropriate for inclusion in § 300.430(f)(1)(ii)(B) of the final NCP. This will afford both the public and implementing agencies greater clarity as to when and how requirements must be considered during CERCLA responses, and thus will allow the CERCLA program to carry out selected remedies with greater certainty and efficiency. Of course, off-site CERCLA remedial actions are subject to the substantive and procedural requirements of applicable federal, state, and local laws at the time of off-site treatment, storage or disposal.

Final rule: EPA is adding the following language to the rule at § 300.430(f)(1)(ii)(B):

(II) On-site remedial actions selected in a ROD must attain those ARARs that are identified at the time of ROD signature or provide grounds for invoking a waiver under § 300.430(f)(1)(ii)(C)(3).

(1) Requirements that are promulgated or modified after ROD signature must be attained (or waived) only when determined to be applicable or relevant and appropriate and necessary to ensure that the remedy is protective of human health and the environment.

(2) Components of the remedy not described in the ROD must attain (or waive) requirements that are identified as applicable or relevant and appropriate at the time the amendment to the ROD or the explanation of significant differences describing the component is signed.

Name: Applicability of RCRA requirements.

Proposed rule: The preamble to the proposed rule discussed when RCRA subtitle C requirements will be applicable for site cleanups (53 FR 51443). It described the prerequisites for "applicability" at length, which are that: (1) The waste must be a listed or characteristic RCRA hazardous waste *and* (2) treatment, storage or disposal occurred after the effective date of the RCRA requirements under consideration (for example, because the activity at the CERCLA site constitutes treatment, storage, or disposal, as defined by RCRA).

The preamble explained how EPA will determine when a waste at a CERCLA site is a listed RCRA hazardous waste. It noted that it is often necessary to know the origin of the waste to determine whether it is a listed waste and that, if such documentation is lacking, the lead agency may assume it is not a listed waste.

The preamble discussed how EPA will determine that a waste is a characteristic hazardous waste under RCRA. It stated that EPA can test to determine whether a waste exhibits a characteristic or can use best professional judgment to determine whether testing is necessary, "applying knowledge of the hazard characteristic in light of the materials or process used."

The preamble also discussed when a CERCLA action constitutes "land disposal," defined as placement into a land disposal unit under section 3004(k) of RCRA, which triggers several significant requirements, including RCRA land disposal restrictions (LDRs) and closure requirements (when a unit is closed). It equated an area of contamination (AOC), consisting of continuous contamination of varying amounts and types at a CERCLA site, to a single RCRA land disposal unit, and stated that movement within the unit does not constitute placement. It also stated that placement occurs when waste is redeposited after treatment in a separate unit (e.g., incinerator or tank), or when waste is moved from one AOC to another. Placement does not occur when waste is consolidated within an AOC, when it is treated in situ, or when it is left in place.

Response to comments: EPA received many comments on its discussion of when RCRA requirements can be applicable to CERCLA response actions. On the issue of compliance with RCRA in general, most of these commenters argued that RCRA requirements are not intended for site cleanup actions, that such compliance will result in delays and that RCRA requirements are often unnecessary to protect human health and the environment at CERCLA sites. Other commenters argued, however, that EPA is trying to avoid compliance with RCRA requirements. Most of the comments, however, focused on when LDRs are applicable to CERCLA actions and on EPA's discussion of what actions associated with remediation trigger LDRs.

Some commenters opposed EPA's interpretation of "land disposal" or "placement" as too lenient, believing that EPA is trying to avoid compliance with RCRA laws, particularly LDRs. These commenters argued that LDRs should be applicable when hazardous wastes are managed, excavated, or moved in any way. One argued that ARARs waivers are available to address situations when the LDR levels cannot be achieved and should be used as necessary, rather than trying to narrowly define the universe of ARARs to avoid waivers. This commenter was also concerned with EPA's use of the term "unit," calling it an inappropriate concept for Superfund sites because it

will allow the excavation and redeposition of waste within very large areas without ever meeting RCRA design and operating standards and LDR. One commenter asserted that EPA concerns on LDRs stem from an unjustifiable belief that LDR cleanup levels cannot be achieved.

Other commenters believed that the definition of "placement" should provide more flexibility. One asserted that replacement of treated residuals in the proximate area should not constitute placement. The commenter argued that Congress intended to address, preventively or prospectively, the original act of disposal, and that an innocent government or public entity should not be required to assume the entire environmental responsibility of the original disposers. The commenter also argued that establishing that replacement of treated waste triggers LDRs will be a serious disincentive to treating wastes. Some commenters argued that LDRs should not be relevant and appropriate where the CERCLA waste to be disposed on land is merely similar in composition to RCRA banned waste.

Other commenters argued that LDRs are inappropriate for CERCLA remedial actions. They noted an inherent conflict between LDRs, which require treatment to BDAT levels, and the CERCLA process, and claimed that LDRs will supplant CERCLA's "carefully articulated and balanced approach to remedy selection." Commenters asserted that compliance with LDRs will create technical problems because of differences between CERCLA wastes and those evaluated for LDRs. The solutions recommended by these commenters primarily focused on narrowing or eliminating RCRA applicability, but included suggestions for creating treatability groups for CERCLA-type waste and seeking legislative waivers from LDRs for Superfund actions at NPL sites.

One commenter believed that the concept of "unit" is not readily transferable to CERCLA sites due to the age and former uses of many of the site undergoing remediation. Given the ramifications of LDRs, the commenter argued, it may be more reasonable to create a presumption of treating the entire site as one "unit," even if remediation includes a series of operable units.

Some comments were received on EPA's statements on consolidating waste. One stated that consolidation of small amounts of waste across units should not be considered placement, because that will lead to less environmentally sound and less cost-effective solutions, particularly if LDRs are triggered. Another recommended that EPA should allow consolidation of small volumes of waste anywhere on-site, for purposes of storage or treatment, without triggering otherwise applicable RCRA standards. Another commenter requested clarification that consolidation within a unit included normal earthmoving and grading operations.

1. *Actions constituting land disposal.* EPA disagrees with commenters who considered EPA's interpretation of the definition of "land disposal" under RCRA section 3004(k) to be too narrow. These commenters argued that any movement of waste should be considered "placement" of waste, and thus "land disposal" under RCRA section 3004(k).

The definition of "land disposal" is central to determining whether the RCRA LDRs are applicable to a hazardous waste which is being managed as part of a CERCLA response action, or RCRA closure or corrective action. The term "land disposal" is defined under RCRA section 3004(k) as including, but not limited to, "any placement of such hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave." The terms "landfill", "surface impoundment," and the others, refer to specific types of units defined under RCRA regulations. Thus, Congress generally defined the scope of the LDR program as the placement of hazardous waste in a land disposal unit, as those units are defined under RCRA regulations.

EPA has consistently interpreted the phrase "placement * * * in" one of these land disposal units to mean the placement of hazardous wastes into one of these units, not the movement of waste within a unit. See e.g., 51 FR 40677 (Nov. 7, 1986) and 54 FR 41566-67 (October 10, 1989)(supplemental proposal of possible alternative interpretations of "land disposal"). EPA believes that its interpretation that the "placement * * * in" language refers to a transfer of waste into a unit (rather than simply any movement of waste) is not only consistent with a straightforward reading of section 3004(k), but also with the Congressional purpose behind the LDRs. The central concern of Congress in establishing the LDR program was to reduce or eliminate the practice of disposing of untreated hazardous waste at RCRA hazardous waste facilities. The primary aim of Congress was prospective rather than directed at already-disposed waste within a land disposal unit. See 51 FR 40677 (Nov. 7, 1986). Moreover, interpreting section 3004(k) to require application of the LDRs to any movement of waste could be difficult to implement and could interfere with necessary operations at an operating RCRA facility. For instance, when hazardous waste is disposed of in a land disposal unit at an operating RCRA facility, there may well be some "movement" of the waste already in the unit: Under the commenters' approach, such movement without pretreatment of the moved waste could be in violation of the LDRs. Thus, under the commenters' interpretation, virtually no operational activities could occur at any RCRA land disposal unit containing hazardous waste without pretreatment of any waste disturbed by the operation: clearly an infeasible approach.

EPA also believes that this interpretation of section 3004(k) is supported by the legislative history for this provision (see 129 Cong. Rec. H8139 (Oct. 8, 1983)(statement of Rep. Breaux)), and by the Congressional choice to define "land disposal" more narrowly for purposes of application of the LDRs than the already-existing term "disposal", which has a much broader meaning under RCRA. Under RCRA section 1004(3), the term "disposal" is very broadly defined and includes any "discharge, deposit, injection, dumping, spilling, leaking, or placing" of waste into or on any land or water. Thus, "disposal" (in a statutory, rather than the regulatory subtitle C meaning of the term) would include virtually any movement of waste, whether within a unit or across a unit boundary. In fact, the RCRA definition of "disposal" has been interpreted by numerous courts to include passive leaking, where no active management is involved (see, e.g., *U.S. v. Waste Industries, Inc.*, 734 F.2d 159 (4th Cir. 1984)). However, Congress did not use the term "disposal" as its trigger for the RCRA land disposal restrictions, but instead specifically defined the new, and more narrow, term "land disposal" in section 3004(k). The broader "disposal" language continues to be applicable to RCRA provisions other than those in subtitle C, such as section 7003. Thus, for the reasons outlined above, EPA believes that the existing interpretation, that movement of waste within a unit does not constitute "land disposal" for purposes of application of the RCRA LDRs, is reasonable.

With respect to the commenter who asked whether normal earthmoving and grading operations within a land disposal unit constitute "placement into

the unit", under EPA's interpretation of RCRA section 3004(k), such activity would not be "placement into the unit" and thus the RCRA LDRs and other subtitle C disposal requirements would not be applicable (nor would the requirement to obtain a permit under RCRA or minimum technology requirements in RCRA section 3004(o) apply).

Given this interpretation of section 3004(k), EPA does not believe that it is necessary to invoke ARAR waivers of LDRs for any movement of waste within a unit, which was the alternative suggested by the commenters. Nor does EPA believe that the widespread use of such waivers would be practical or desirable. 54 FR 41566–69 (October 10, 1989).

EPA also does not fully agree with the commenters who argued that the RCRA concept of "unit" does not apply to CERCLA sites. The commenters who criticized the application of the RCRA "unit" to the CERCLA area of contamination for purposes of section 3004(k) believed it to be either too broad, allowing large areas to escape the LDRs, or too narrow, not allowing entire CERCLA sites to be considered a single "unit". In contrast to hazardous waste management units at a RCRA facility, CERCLA sites often do not involve discrete waste management units, but rather involve land areas on or in which there can be widespread areas of generally dispersed contamination. Thus, determining the boundaries of the RCRA land disposal "unit," for which section 3004(k) would require application of the LDRs at these sites, is not always self-evident.

EPA generally equates the CERCLA area of contamination with a single RCRA land-based unit, usually a landfill. 54 FR 41444 (December 21, 1988). The reason for this is that the RCRA regulatory definition of "landfill" is generally defined to mean a land disposal unit which does not meet the definition of any other land disposal unit, and thus is a general "catchall" regulatory definition for land disposal units. As a result, a RCRA "landfill" could include a non-discrete land area on or in which there is generally dispersed contamination. Thus, EPA believes that it is appropriate generally to consider CERCLA areas of contamination as a single RCRA land-based unit, or "landfill". However, since the definition of "landfill" would not include discrete, widely separated areas of contamination, the RCRA "unit" would not always encompass an entire CERCLA site.

Waste consolidation from different units or AOCs at a CERCLA site are subject to any applicable RCRA requirements regardless of the volume of the waste or the purpose of the consolidation. Thus, EPA disagrees with those commenters that asserted that small volumes of hazardous waste at a CERCLA site can be consolidated anywhere on-site for storage or treatment purposes without consideration of any applicable RCRA requirements. Such requirements may, however, be subject to ARAR waivers in appropriate circumstances.

The remaining comments received with respect to EPA's interpretation of section 3004(k) discussed the achievability of LDR cleanup levels, questioned the appropriateness of applying the LDRs to remedial actions, and requested more flexibility regarding the LDRs. These comments were the basis for EPA's supplemental notice and proposed reinterpretation of section 3004(k), which is discussed below.

In light of the numerous comments received on the interpretation of "land disposal" in RCRA section 3004(k), as it relates to removal, treatment, and redeposition of hazardous wastes generated by CERCLA and RCRA remedial and other activities, and in view of the important policy decisions that RCRA LDRs pose for the CERCLA and RCRA programs, EPA decided to separately and more fully discuss the issue, the interpretation outlined in the proposed NCP, and possible alternative interpretations of "land disposal". In a supplemental notice to the proposed NCP (54 FR 41566 (Oct. 10, 1989)), EPA outlined several technical, policy, and legal issues concerning LDR applicability to removal, treatment, and redeposition of hazardous wastes, and requested comment on two alternative interpretations of "land disposal". The first alternative would allow the excavation and replacement of previously disposed hazardous wastes in the same unit or area of contamination; since the same wastes would remain in the same unit, this activity would not constitute "land disposal". Under the second alternative, hazardous wastes could be excavated and redeposited either within the original unit or area of contamination, or elsewhere at the site in a new or existing unit. These interpretations would allow greater flexibility in remedial decision-making, in the context of both CERCLA actions and RCRA corrective actions and closures.

On November 6 and 7, 1989, EPA held a forum on contaminated soil and groundwater ("Contaminated Media Forum") to provide an opportunity for interested groups to further address these issues. The Contaminated Media Forum was attended by representatives from EPA, states, environmental groups, Congress, and the regulated community. A summary of the concerns raised and suggested solutions appears in the public docket for this rulemaking.

2. *Selection of LDR treatment standards.* Upon further examination, EPA believes that many of the problems discussed in the supplemental notice, and raised by commenters, result from treatment standards developed pursuant to the RCRA LDR program that are generally inappropriate or infeasible when applied to contaminated soil and debris. As discussed in the October 1989 notice, EPA's experience under CERCLA has been that treatment of large quantities of soil and debris containing relatively low levels of contamination using LDR "best demonstrated available technology" (BDAT) is often inappropriate. 54 FR 41567, 41566 (October 10, 1989). EPA noted that:

> Experience with the CERCLA program has shown that many sites will have large quantities—in some cases, many thousands of cubic meters—of soils that are contaminated with relatively low concentrations of hazardous wastes. These soils often should be treated, but treatment with the types of technologies that would meet the standard of BDAT may yield little if any environmental benefit over other treatment based remedial options.

54 FR 41566 (October 10, 1989). Examples of these and other situations reflecting EPA's experience concerning the inappropriateness of incinerating contaminated soil and debris are included in the record for this rule. In addition, as discussed below, EPA has experienced problems in achieving the current nonconbustion LDRs for contaminated soil and debris. Based on EPA's experience to date and the virtually unanimous comments supporting this conclusion, EPA has determined that, until specific standards for soils and debris are developed, current BDAT standards are generally inappropriate or unachievable for soil and debris from CERCLA response actions and RCRA corrective actions and closures. Instead, EPA presumes that, because contaminated soil and debris is significantly different from the wastes evaluated in establishing the BDAT standards, it cannot be treated in accordance with those standards and thus qualifies for a treatability variance from those standards under 40 CFR 268.44.

Accordingly, persons seeking a treatability variance from LDR treatment standards for contaminated soil and debris do not need to demonstrate on a case-by-case basis

that BDAT standards for prohibited hazardous wastes are inappropriate or not achievable. As an alternative, persons seeking a treatability variance for soil and debris may meet the appropriate levels or percentage reductions in the currently available guidance (Superfund LDR Guidance #6A, "Obtaining a Soil and Debris Treatability Variance for Remedial Actions", EPA OSWER Directive 9347.3-06FS, July 1989). In the context of Superfund Records of Decision (ROD), this means that EPA will generally include such a variance in the proposed plan and ROD when treatment of contaminated soil and debris is an element of the remedial action. Further, EPA intends to issue guidance supplementing the Superfund Guidance #6A to expedite the processing of such treatability variances in conjunction with established remedy selection procedures.

Treatment standards for prohibited hazardous wastes are based on performance achievable by application of BDAT. 51 FR at 40578 (Nov. 7, 1986). BDAT, however, is not a technology-forcing program, nor does it always require the lowest possible levels of waste treatment achievable with any technology. See 130 Cong. Rec. S9178 (July 25, 1984) (Statement of Sen. Chaffee introducing the amendment that became RCRA section 3004(m)). Rather, what Congress contemplated is a scheme whereby hazardous wastes are to be treated using the technology (or technologies) generally considered to be suitable for the waste and that substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration. Id.; see also H. Rep. No. 198, 98th Cong. 1st Sess. 33; S. Rep. No. 284, 98th Cong. 1st Sess. 16-17.

EPA's rules developing treatment standards likewise recognize that the treatment standards be based on appropriate technologies even if more stringent treatment methods are technically feasible. 51 FR at 40588-592 (Nov. 7, 1986). For example, EPA has generally based treatment standards for organic contaminants in wastewaters (normally defined as aqueous materials containing less than 1% total organic compound (TOC) and total suspended solids (TSS)) on technologies other than incineration (or other combustion), even though such organics could be treated to lower levels if the wastewaters were incinerated. This is because incineration (or other combustion) is not normally an appropriate technology for wastewaters, notwithstanding its capability of performing to lower levels than conventional wastewater treatment. More generally, EPA's rules on treatability variances recognize that prohibited wastes be treated by appropriate technologies. The rules thus state that a petitioner may request a treatability variance "where the treatment technology is not appropriate to the waste". 40 CFR 268.44(a).

Similarly, treatability variances are warranted where the applicable numerical treatment standard for the waste cannot be achieved. 40 CFR 268.44(a). For this reason, EPA has found that current BDAT standards based on noncombustion technology also warrant a treatability variance for soil and debris. The complex matrices often present in soil and debris may reduce the effectiveness of stabilization and other noncombustion technologies in treating these wastes. For example, the presence of oil and grease or sulfites in the mixture may substantially interfere with the stabilization process. More generally, stabilization is a complex treatment process and its application to unique soil and debris mixtures is not yet well understood. EPA's development of alternative treatment levels in the Superfund Guidance #6A noted above was based on available data for soil and debris mixtures and thus is more tailored with respect to achievability than the existing BDAT standards for these waste mixtures. The difference between these levels and the existing BDAT standards for these wastes demonstrates the feasibility of achieving the current BDAT standards for soil and debris. These alternative numbers thus support EPA's presumption that the BDAT standards are generally inappropriate or not achievable for soil and debris.

This presumption is supported by the commenters on the December, 1988 and October, 1989 proposals. EPA received numerous comments from a wide range of commenters discussing the inappropriateness or infeasibility of applying BDAT standards to contaminated soil and debris. The principal reason given for the inappropriateness of the current BDAT standards was the complexity of soil and debris mixtures and the interference with treatability caused by unique matrices of contaminants in the soil and debris. Moreover, commenters noted that wastestream-derived BDATs have not been fully demonstrated for many contaminated soils and debris and that the presence of trace quantities of one waste in soil and debris may inappropriately require use of a treatment method that would not otherwise be applicable to the other wastes present. These comments were further supported by comments made at the Contaminated Media Forum.

The Agency's experience also supports this conclusion of general inappropriateness or infeasibility of current BDAT standards for soil and debris. For example, as indicated above EPA has developed alternative treatment levels for soil and debris in the Superfund #6A guidance which are based on the application of the specific treatment technologies to soil and debris, rather than industrial process wastes. Thus, these alternative levels, which are better tailored to the treatability of the complex soil and debris mixtures found at Superfund sites, reflect Agency experience concerning the inappropriateness or infeasibility of current BDAT for soil and debris.

EPA has long indicated its intention to develop separate treatment standards for contaminated soil and debris (without regard, incidentally, to the origin of such waste, so that the treatment standards would apply whether the soil and debris is generated from a CERCLA action or some other activity). 51 FR 40577 (Nov. 7, 1986). Although the Agency has already expended considerable effort on such standards, it has not been able to propose or promulgate regulations because of the more pressing need to implement the rest of the land disposal prohibition statutory provisions before the various statutory deadlines. See RCRA sections 3004 (d), (e), and (g). EPA does not expect that the same level of treatment performance will be required for soil and debris as for industrial process wastes.

In the interim period until EPA promulgates these treatment standards, contaminated soil and debris are subject to the same treatment standards as the prohibited hazardous wastes that they contain, unless a variance is appropriate and is approved according to 40 CFR 268.44. 53 FR at 31146-149 (Aug. 17, 1988) and *Chemical Waste Management* v. EPA, 869 F.2d 1526, 1535-46, 1538-40 (D.C. Cir. 1989). Where standards for the underlying waste are based on the performance of incineration, EPA has granted national capacity variances for the contaminated soils and debris because there is insufficient national capacity to treat these wastes. 40 CFR 268.30(c), 268.31(a)(1), 268.32(d)(1), 268.33(b), and 268.34(d). Where BDAT treatment standards are in effect, it is possible to petition for a treatability variance based on the inappropriateness of the BDAT standards to treat the contaminated soil and debris. 40 CFR 268.44(a). As discussed earlier, EPA

believes that it is unnecessary for petitioners (or the lead Agency in CERCLA response actions) to make site-specific demonstrations that BDAT standards are inappropriate for contaminated soil and debris. The numerous comments and Agency experience supporting a presumption that the BDAT standards are inappropriate or not achievable is clearly warranted at this time because the criteria in 40 CFR 268.44 for treatability variances are generally met for soil and debris. As a result, under EPA's established treatability variance procedures (40 CFR 268.44), variance applications for contaminated soil and debris do not need to demonstrate that the physical and chemical properties differ significantly from wastes analyzed in developing the treatment standard and that, therefore, the waste cannot be treated to specified levels or by specified methods. Petitions need only focus on justifying the proposed alternative levels of performance, using existing interim guidance containing suggested treatment levels for soil and debris (Superfund LDR Guidance #6A, "Obtaining a Soil and Debris Treatability Variance for Remedial Actions", EPA OSWER Directive 9347.3-06FS, July 1989) as a benchmark.

Although the presumption is that BDAT standards are not appropriate for soil and debris, there may be special circumstances where EPA determines that the existing BDAT standards are appropriate for contaminated soils and debris at a particular site, such as where high levels of combustible organics in soil are present. In these circumstances, the Agency would make a determination that treatment to the BDAT standards was appropriate and would require such treatment.

EPA regulations provide that treatability variances may be issued on a site-specific basis. 40 CFR 268.44(h).[22] Thus, they may be approved simultaneously with the issuance of a RCRA permit, the approval of a RCRA closure plan, or the selection of a remedy in a CERCLA response action in the ROD. In the case of an on-site CERCLA response action, the procedural requirements of the variance process do not apply. See CERCLA sections 121(e)(1) and 121(d)(2). The variance decision will be made as part of EPA's remedy selection process, during which data justifying alternative treatment levels will be included in the administrative record files, and public participation opportunities and Agency response to comment will be afforded as appropriate under this rule.

In EPA's view, the Agency's determination that the BDAT standards are generally inappropriate for contaminated soil and debris addresses many of the practical concerns raised by commenters in the supplemental notice on the Agency's interpretation of the term "land disposal". For this reason, and because EPA has had insufficient time to review and evaluate the many lengthy and complex issues raised by commenters on the supplemental notice, EPA is deferring any final decision to modify that interpretation. (EPA will respond to comments on the alternatives in the supplemental notice when the Agency makes a final decision on the proposed reinterpretation of land disposal.) Until a final decision is made, the interpretation announced in the preamble to the proposed NCP and discussed in section 1 above will remain in effect.

Final rule: There is no rule language on this issue.

Name: Determination of whether a waste is a hazardous waste.

Proposed rule: The preamble to the proposed rule discussed how to determine whether hazardous waste regulated under RCRA Subtitle C was present at a site (53 FR 51444).

Response to comments: Some commenters raised questions about EPA's discussion about determining whether a waste exhibits a hazardous characteristic. One argued that EPA cannot assume a waste is not a characteristic waste in the absence of testing and should therefore adopt a liberal and inclusive approach to determining whether RCRA applies to avoid expensive and time-consuming testing. Another commenter asked for clarification on who was responsible for applying "process knowledge" to determine whether a waste was a hazardous waste in the absence of testing. The commenter asserted that, under RCRA, EPA exercises prosecutorial discretion if a generator, acting in good faith, decides incorrectly that his waste is not hazardous. EPA notes that when it determines that there is a violation there will normally be some kind of enforcement action taken; the level and type of prosecutorial response will depend on a number of factors, for example, the size of the company, the significance of the violation, the intent, etc.

Under RCRA rules, a generator is not required to test, but may use knowledge of the waste and its constituents to judge whether the waste exhibits a characteristic. (See 40 CFR 262.11(c).) EPA believes this should also apply if the lead agency or PRP at a CERCLA site is the "generator." EPA wants to make clear, however, that a decision that a waste is not characteristic in the absence of testing may not be arbitrary, but must be based on site-specific information and data collected on the constituents and their concentrations during investigations of the site. Based on site data, it will be very clear in some cases that a waste cannot be characteristic; for example, if a waste does not contain a constituent regulated as EP toxic, a decision that the waste does not exhibit this characteristic can reliably be made without testing for EP toxicity. EPA does not expect to undertake testing when it can otherwise be determined with reasonable certainty whether or not the waste will exhibit a characteristic.

In response to the second concern, the determination whether a waste is a hazardous waste may be made by EPA, the state, or a PRP, depending on the nature of the action. EPA will take any necessary or appropriate action if decisions about the hazardous nature of the waste are in error or are made without proper basis.

Several commenters discussed the question of whether RCRA requirements can be applicable to RCRA hazardous waste disposed of before the RCRA requirements went into effect in 1980. One commenter argued that they could not be, unless the waste exhibited a characteristic at the time of the CERCLA action. However, as one commenter noted, EPA has consistently maintained in enforcement actions that RCRA requirements apply to any waste

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[22] In light of today's determination, the application of this rule requires clarification in two respects. First, although EPA is today establishing a general presumption that BDAT standards are inappropriate or not achievable for treating soil and debris, the Agency does not believe that this presumption triggers the rulemaking variance procedures in 40 CFR 268.44(a). Even with the presumption, treatment levels will be determined on a case-by-case basis, and commenters may submit information contending that the presumption is not applicable in a particular case. Thus, it is EPA's view that the site-specific, non-rulemaking procedures in 40 CFR 268.44(h) are entirely appropriate. See 53 FR 31200-31200 (August 17, 1988).

Second, EPA does not interpret its site specific variance procedures as invariably requiring applicants to demonstrate that they cannot meet applicable treatment levels or methods. The first sentence of 40 CFR 268.44(h) makes it clear that an applicant may make one of two demonstrations to qualify for a variance: he may show either that he cannot meet a treatment standard, or that a treatment method (or the method underlying the standard) is inappropriate for his waste. The final sentence of § 268.44(h), identifying the showing an applicant must include in his variance application, on its terms applies only to applications submitted under the first criterion. EPA's presumption, however, applies to soil and debris regardless of which of the two types of variances apply.

materials disposed of prior to 1980 when those materials are managed or disposed of today. EPA agrees with this latter comment and believes that this policy applies to CERCLA actions as well. This was also upheld in a recent DC Court of Appeals decision, *Chemical Waste Management v. EPA*, 869 F.2d 1526 (DC Cir. 1989). RCRA requirements can apply when the CERCLA action constitutes treatment, storage or disposal of RCRA hazardous waste. Note that RCRA requirements may also be relevant and appropriate to pre-1980 waste.

One commenter suggested that EPA allow consolidation, for purposes of storage or treatment, of small volumes of wastes without triggering RCRA standards. In response, while EPA appreciates the concerns with meeting substantive storage and treatment requirements for small amounts of waste, EPA believes that waste should be managed according to standards when those standards are ARARs unless a waiver (such as for interim measures) can be justified. It should be noted that RCRA may not be applicable for small quantity generators, as defined under RCRA; however, a determination would still have to be made about whether any RCRA requirements would be relevant and appropriate to small quantities.

Final rule: There is no rule language on this issue.

Name: When RCRA requirements are relevant and appropriate to CERCLA actions.

Proposed rule: The preamble to proposed § 300.400(g)(2)(i), identification of applicable or relevant and appropriate requirements, criteria for relevant and appropriate, stated that RCRA requirements may be relevant and appropriate when a waste is similar in composition to a RCRA listed waste (53 FR 51446).

Response to comments: 1. *RCRA requirements as relevant and appropriate for wastes similar to RCRA hazardous waste.* Several commenters expressed concern that RCRA requirements may be potentially relevant and appropriate for waste that is not a RCRA hazardous waste, but is similar to a RCRA hazardous waste. Commenters argued that virtually any waste or CERCLA substance is similar to a RCRA hazardous waste in some way, either in chemical composition, in toxicity, in mobility, or in persistence, and were concerned that this policy represented an enormous expansion of the RCRA program.

EPA believes that RCRA requirements can potentially be relevant and appropriate to wastes other than those that are known to be hazardous waste. For example, some information or records must be available that identify the source of the waste in order to determine that the waste is a listed hazardous waste. As a result, two separate wastes could be identical in composition, but only one identified as a RCRA hazardous waste because manifests are available that identify it as a listed waste. RCRA requirements would be applicable for the manifested waste, but not for the other, even though the two wastes are physically the same. EPA believes that RCRA requirements can be potentially relevant and appropriate when the waste cannot be definitively identified as a listed hazardous waste.

EPA wants to emphasize, however, that a number of the factors identified in § 300.400(g)(2) should be considered in determining whether a RCRA requirement is relevant and appropriate. The similarity of the waste to RCRA hazardous waste or the presence of a RCRA constituent alone does not create a presumption that a RCRA requirement will be relevant and appropriate. Nor is it always necessary or useful to conduct an in-depth, constituent-by-constituent comparison of a CERCLA waste with RCRA hazardous wastes, because most RCRA requirements are the same regardless of the specific composition of the hazardous waste. Indeed, the statute requires attainment of those requirements that are relevant and appropriate under the circumstances of the release. Thus, the decision about whether a RCRA requirement is relevant and appropriate is based on consideration of a variety of factors, including the nature of the waste and its hazardous properties, other site characteristics, and the nature of the requirement itself.

EPA anticipates that it will often find some RCRA requirements to be relevant and appropriate at a site and others not, even for the same waste. This is because certain waste characteristics shared with RCRA hazardous wastes may be more important than others when evaluating whether a given requirement is relevant and appropriate. For example, the mobility of the waste, among other factors, may be a key concern in evaluating whether the RCRA requirement that the cap used in closing a landfill be less permeable than the bottom liner (40 CFR 264.310(a)(5)) is relevant and appropriate. Other properties of the waste might be more important in evaluating the relevance and appropriateness of other RCRA requirements.

2. *RCRA requirements as relevant and appropriate for mining wastes.* Several commenters asked EPA to state in the NCP or its preamble that RCRA subtitle C requirements will not be relevant and appropriate to mining wastes. They noted that, recognizing the unique characteristics of mining wastes, Congress exempted certain mining wastes from regulation as hazardous wastes under RCRA until EPA completed studies on these wastes to determine specifically whether such regulation was appropriate. On July 3, 1986, EPA published its determination for beneficiation and extraction wastes which found that regulation under subtitle C was not warranted for these wastes, because EPA believes such requirements, " * * * if universally applied, would be either unnecessary to protect human health and the environment, technically infeasible, or economically impracticable to implement." [51 FR 24496.] The commenters argue, therefore, that subtitle C requirements, which are not legally applicable to these mining wastes, also cannot be relevant and appropriate, since EPA has formally made the determination that those requirements are not appropriate for such wastes.

The commenters emphasized that mining waste sites differ in a number of ways from industrial wastes sites. They argue that mining wastes are of enormous volume and generally of lower toxicity, that the sites typically cover extremely large areas and may present less hazard because they tend to be in drier climates, reducing leaching potential, or contain constituents that are less mobile. For these reasons, which formed the basis of EPA's decision under RCRA, RCRA requirements would not be relevant and appropriate for mining sites remediated under CERCLA. Commenters requested that EPA give guidance specifically in the NCP to ensure consistent decisions on ARARs at mining sites.

EPA agrees that RCRA requirements for hazardous waste will not be applicable to those mining wastes excluded from regulation by the statute. [Note, however, that EPA has recently removed certain mineral processing wastes from the mining waste exclusion, making them subject to subtitle C, 54 FR 36592, September 1, 1989; 55 FR 2322, January 23, 1990. EPA has also promulgated regulations listing certain wastes from mineral processing operations as hazardous, 53 FR 35412, September 13, 1988.] In addition, EPA agrees that RCRA subtitle C requirements will generally not be

relevant and appropriate for those mining wastes for which EPA has specifically determined that such regulation is not warranted. The reason is that the factors that caused EPA not to regulate these wastes as hazardous include many of the same factors that EPA considers in judging whether a requirement is relevant and appropriate at a particular site.

However, EPA does not agree that RCRA requirements for hazardous waste can never be relevant and appropriate for CERCLA remediation of *mining sites. In its determination for* beneficiation and extraction wastes, EPA found that, *"if universally applied,"* subtitle C requirements would not be appropriate for mining wastes. (51 FR 24500.) However, a decision about whether a requirement is relevant and appropriate is made on a case-by-case basis, based on the specific characteristics of the site and the release. There may be some sites where the site circumstances differ significantly from those which caused EPA to decide that subtitle C regulation is not warranted and where certain *requirements are appropriate* and well-suited to the site or portions of the site. In such a situation, some RCRA requirements may be relevant and appropriate.

EPA is developing regulations under subtitle D of RCRA designed specifically for mining wastes that will not be regulated as hazardous waste. When promulgated, these regulations are likely to be either applicable or relevant and appropriate for remediation of mining sites.

Another commenter stated that EPA needs to develop a long-term initiative to simplify the use of RCRA ARARs. EPA recognizes that the interaction between the two laws can be very complicated and continues to work to resolve and give *guidance on issues* involving CERCLA compliance with RCRA laws.

Final rule: There is no rule language on this issue.

Name: Examples of potential federal and state ARARs and TBCs.

Potential ARARs and TBCs include, but are not limited to, the following:

1. *Federal requirements which may be potential applicable or relevant and appropriate requirements.* i. EPA's Office of Solid Waste administers, inter alia, the Resource Conservation and Recovery Act of 1976, as amended, (42 U.S.C. 6901). Potentially applicable or relevant and appropriate requirements pursuant to that Act are:

a. Open Dump Criteria—Pursuant to RCRA subtitle D criteria for classification of solid waste disposal facilities (40 CFR part 257).

Note: Only relevant to nonhazardous wastes.

b. RCRA subtitle C requirements governing standards for owners and *operators of hazardous waste treatment,* storage, and disposal facilities: (40 CFR part 264, for permitted facilities, and 40 CFR part 265, for interim status facilities):

(1) Ground-Water Protection and Monitoring (40 CFR 264.90–264.109).

(2) Closure and Post Closure (40 CFR 264.110–264.120).

(3) Containers (40 CFR 264.170–264.178).

(4) Tanks (40 CFR 264.190–264.199).

(5) Surface Impoundments (40 CFR 264.220–264.249).

(6) Waste Piles (40 CFR 264.250–264.269).

(7) Land Treatment (40 CFR 264.270–264.299).

(8) Landfills (40 CFR 264.300–264.339).

(9) Incinerators (40 CFR 264.340–264.999).

(10) Land Disposal Restrictions (40 CFR 268.1–268.50).

(11) Dioxin-containing wastes (50 FR 1978).

(12) Standards of performance for storage vessels for petroleum liquids (40 CFR part 60, subparts K and K(a)].

(13) Codification rule for 1984 RCRA amendments (50 FR 28702, July 15, 1985; 52 FR 45788, December 1, 1987).

ii. EPA's Office of Water administers several potentially applicable or relevant and appropriate statutes and regulations issued thereunder:

a. Section 14.2 of the Public Health Service Act as amended by the Safe Drinking Water Act, as amended, (42 U.S.C. 300(f)).

(1) Maximum Contaminant Levels (for all sources of drinking water exposure). (40 CFR 141.11–141.16).

(2) Maximum Contaminant Level Goals (40 CFR 141.50–141.52, 50 FR 46936).

(3) Underground Injection Control Regulations (40 CFR parts 144, 145, 146, 147).

b. Clean Water Act, as amended, (33 U.S.C. 1251).

(1) Requirements established pursuant to sections 301, 302, 303 (including state water quality standards), 304, 306, 307, (including federal pretreatment requirements for discharge into a publicly owned treatment works), 308, 402, 403 and 404 of the Clean Water Act. (33 CFR parts 320–330, 40 CFR parts 122, 123, 125, 131, 230, 231, 233, 400–469).

(2) Available federal water quality criteria documents are listed at 45 FR 79318, November 28, 1980; 49 FR 5831, February 15, 1984; 50 FR 30784, July 29, 1985; 51 FR 8012, March 7, 1986; 51 FR 22978, June 26, 1986; 51 FR 43665, December 3, 1986; 52 FR 6213, March 2, 1987; 53 FR 177, January 5, 1988; 53 FR 19028, May 26, 1988; 53 FR 33177, August 30, 1988; 54 FR 19227, May 4, 1989.

(3) Clean Water Act section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material (40 CFR part 230).

(4) Procedures for Denial or Restriction of Disposal Sites for Dredged Material (Clean Water Act section 404(c) Procedures, 33 CFR parts 320–330, 40 CFR part 231).

c. Marine Protection, Research, and Sanctuaries Act (33 U.S.C. 1401). (1) Incineration at sea requirements (40 CFR parts 220–225, 227–229. See also 40 CFR 125.120–125.124).

iii. EPA's Office of Pesticides and Toxic Substances administers the Toxic Substances Control Act (15 U.S.C. 2601). Potentially applicable or relevant and appropriate requirements pursuant to that Act are:

PCB requirements generally: 40 CFR part 761: Manufacturing, Processing, Distribution in Commerce, and Use of PCBs and PCB Items (40 CFR 761.20–761.30); Markings of PCBs and PCB Items (40 CFR 761.40–761.45); Storage and Disposal (40 CFR 761.60–761.79); Records and Reports (40 CFR 761.180–761.185, 761.187 and 761.193). See also 40 CFR 129.105, 750.

iv. EPA's Office of External Affairs *administers potentially applicable or* relevant and appropriate requirements regarding requirements for floodplains and wetlands (40 CFR part 6, Appendix A).

v. EPA's Office of Air and Radiation administers several potentially applicable or relevant and appropriate statutes and regulations issued thereunder:

a. The Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 2022) and Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 CFR part 192).

b. Clean Air Act (42 U.S.C. 7401). (1) National Primary and Secondary Ambient Air Quality Standards (40 CFR part 50).

(2) Standards for Protection Against Radiation (10 CFR part 20). See also 10 CFR parts 10, 40, 60, 61, 72, 960, 961.

(3) National Emission Standards for Hazardous Air Pollutants (40 CFR part 61). See also 40 CFR 427.110–427.116, 763.

(4) *New source performance* standards (40 CFR part 60).

vi. Other Federal Requirements:

a. National Historic Preservation Act (16 U.S.C. 470). Compliance with NHPA

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EPA

Superfund LDR Guide #5

Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions

CERCLA Section 121(d)(2) specifies that on-site Superfund remedial actions shall attain "other Federal standards, requirements, criteria, limitations, or more stringent State requirements that are determined to be legally applicable or relevant and appropriate (ARAR) to the specified circumstances at the site." In addition, the National Contingency Plan (NCP) requires that on-site removal actions attain ARARs to the extent practicable. Off-site removal and remedial actions must comply with legally applicable requirements. This guide outlines the process used to determine whether the Resource Conservation and Recovery Act (RCRA) land disposal restrictions (LDRs) established under the Hazardous and Solid Waste Amendments (HSWA) are "applicable" to a CERCLA response action. More detailed guidance on Superfund compliance with the LDRs is being prepared by the Office of Solid Waste and Emergency Response (OSWER).

For the LDRs to be applicable to a CERCLA response, the action must constitute placement of a restricted RCRA hazardous waste. Therefore, site managers (OSCs, RPMs) must answer three separate questions to determine if the LDRs are applicable:

(1) Does the response action constitute placement?

(2) Is the CERCLA substance being placed also a RCRA hazardous waste? and if so

(3) Is the RCRA waste restricted under the LDRs?

Site managers also must determine if the CERCLA substances are California list wastes, which are a distinct category of RCRA hazardous wastes restricted under the LDRs (see Superfund LDR Guide #2).

(1) DOES THE RESPONSE CONSTITUTE PLACEMENT?

The LDRs place specific restrictions (e.g., treatment of waste to concentration levels) on RCRA hazardous wastes prior to their placement in land disposal units. Therefore, a key determination is whether the response action will constitute placement of wastes into a land disposal unit. As defined by RCRA, land disposal units include landfills, surface impoundments, waste piles, injection wells, land treatment facilities, salt dome formations, underground mines or caves, and concrete bunkers or vaults. If a CERCLA response includes disposal of wastes in any of these types of off-site land disposal units, placement will occur. However, uncontrolled hazardous waste sites often have widespread and dispersed contamination, making the concept of a RCRA unit less useful for actions involving on-site disposal of wastes. Therefore, to assist in defining when "placement" does and does not occur for CERCLA actions involving on-site disposal of wastes, EPA uses the concept of "areas of contamination" (AOCs), which may be viewed as equivalent to RCRA units, for the purposes of LDR applicability determinations.

An AOC is delineated by the areal extent (or boundary) of contiguous contamination. Such contamination must be continuous, but may contain varying types and concentrations of hazardous substances. Depending on site characteristics, one or more AOCs may be delineated. Highlight 1 provides some examples of AOCs.

Highlight 1: EXAMPLES OF AREAS OF CONTAMINATION (AOCs)

- A waste source (e.g., waste pit, landfill, waste pile) and the surrounding contaminated soil.
- A waste source, and the sediments in a stream contaminated by the source, where the contamination is continuous from the source to the sediments.*
- Several lagoons separated only by dikes, where the dikes are contaminated and the lagoons share a common liner.

* The AOC does not include any contaminated surface or ground water that may be associated with the land-based waste source.

For on-site disposal, placement occurs when wastes are moved from one AOC (or unit) into another AOC (or unit). Placement does not occur when wastes are left in place, or moved within a single AOC. Highlight 2 provides scenarios of when placement does and does not occur, as defined in the proposed NCP. The Agency is current reevaluating the definition of placement prior to the promulgation of the final NCP, and therefore, these scenarios are subject to change.

Highlight 2: PLACEMENT

Placement does occur when wastes are:

- Consolidated from different AOCs into a single AOC;
- Moved outside of an AOC (for treatment or storage, for example) and returned to the same or a different AOC; or
- Excavated from an AOC, placed in a separate unit, such as an incinerator or tank that is within the AOC, and redeposited into the same AOC.

Placement does not occur when wastes are:

- Treated in situ;
- Capped in place;
- Consolidated within the AOC; or
- Processed within the AOC (but not in a separate unit, such as a tank) to improve its structural stability (e.g., for capping or to support heavy machinery).

In summary, if placement on-site or off-site does not occur, the LDRs are not applicable to the Superfund action.

(2) IS THE CERCLA SUBSTANCE A RCRA HAZARDOUS WASTE?

Because a CERCLA response must constitute placement of a restricted RCRA hazardous waste for the LDRs to be applicable, site managers must evaluate whether the contaminants at the CERCLA site are RCRA hazardous wastes. Highlight 3 briefly describes the two types of RCRA hazardous wastes --listed and characteristic wastes.

Highlight 3: RCRA HAZARDOUS WASTES

A RCRA solid waste* is hazardous if it is listed or exhibits a hazardous characteristic.

Listed RCRA Hazardous Wastes

Any waste listed in Subpart D of 40 CFR 261, including:

- F waste codes (Part 261.31)
- K waste codes (Part 261.32)
- P waste codes (Part 261.33(e))
- U waste codes (Part 261.33(f))

Characteristic RCRA Hazardous Wastes

Any waste exhibiting one of the following characteristics, as defined in 40 CFR 261:

- Ignitability
- Corrosivity
- Reactivity
- Extraction Procedure (EP) Toxicity

* A solid waste is any material that is discarded or disposed of (i.e., abandoned, recycled in certain ways, or considered inherently waste-like). The waste may be solid, semi-solid, liquid, or a contained gaseous material. Exclusions from the definition (e.g., domestic sewage sludge) appear in 40 CFR 261.4(a). Exemptions (e.g., household wastes) are found in 40 CFR 261.4(b).

Site managers are not required to presume that a CERCLA hazardous substance is a RCRA hazardous waste unless there is affirmative evidence to support such a finding. Site managers, therefore, should use 'reasonable efforts' to determine whether a substance is a RCRA listed or characteristic waste. (Current data collection efforts during CERCLA removal and

remedial site investigations should be sufficient for this purpose.) For listed hazardous wastes, if manifests or labels are not available, this evaluation likely will require fairly specific information about the waste (e.g., source, prior use, process type) that is "reasonably ascertainable" within the scope of a Superfund investigation. Such information may be obtained from facility business records or from an examination of the processes used at the facility. For characteristic wastes, site managers may rely on the results of the tests described in 40 CFR 261.21 - 261.24 for each characteristic or on knowledge of the properties of the substance. Site managers should work with Regional RCRA staff, Regional Counsel, State RCRA staff, and Superfund enforcement personnel, as appropriate, in making these determinations.

In addition to understanding the two categories of RCRA hazardous wastes, site managers will also need to understand the derived-from rule, the mixture rule, and the contained-in interpretation to identify correctly whether a CERCLA substance is a RCRA hazardous waste. These three principles, as well as an introduction to the RCRA delisting process, are described below.

Derived-from Rule (40 CFR 261.3(c)(2))

The derived-from rule states that any solid waste derived from the treatment, storage, or disposal of a listed RCRA hazardous waste is itself a listed hazardous waste (regardless of the concentration of hazardous constituents). For example, ash and scrubber water from the incineration of a listed waste are hazardous wastes on the basis of the derived-from rule. Solid wastes derived from a characteristic hazardous waste are hazardous wastes only if they exhibit a characteristic.

Mixture Rule (40 CFR 261.3(a)(2))

Under the mixture rule, when any solid waste and a listed hazardous waste are mixed, the entire mixture is a listed hazardous waste. For example, if a generator mixes a drum of listed F006 electroplating waste with a non-hazardous wastewater (wastewaters are solid wastes - see Highlight 3), the entire mixture of the F006 and wastewater is a listed hazardous waste. Mixtures of solid wastes and characteristic hazardous wastes are hazardous only if the mixture exhibits a characteristic.

Contained-in Interpretation (OSW Memorandum dated November 13, 1986)

The contained-in interpretation states that any mixture of a non-solid waste and a RCRA listed hazardous waste must be managed as a hazardous waste as long as the material contains (i.e., is above health-based levels) the listed hazardous waste. For example, if soil or ground water (i.e., both non-solid wastes) contain an F001 spent solvent, that soil or ground water must be managed as a RCRA hazardous waste, as long as it "contains" the F001 spent solvent.

Delisting (40 CFR 260.20 and .22)

To be exempted from the RCRA hazardous waste "system," a listed hazardous waste, a mixture of a listed and solid waste, or a derived-from waste must be delisted (according to 40 CFR 260.20 and .22). Characteristic hazardous wastes never need to be delisted, but can be treated to no longer exhibit the characteristic. A contained-in waste also does not have to be delisted; it only has to "no longer contain" the hazardous waste.

If site managers determine that the hazardous substance(s) at the site is a RCRA hazardous waste(s), they should also determine whether that RCRA waste is a California list waste. California list wastes are a distinct category of RCRA wastes restricted under the LDRs (see Superfund LDR Guide #2).

(3) IS THE RCRA WASTE RESTRICTED UNDER THE LDRs?

If a site manager determines that a CERCLA waste is a RCRA hazardous waste, this waste also must be restricted for the LDRs to be an applicable requirement. A RCRA hazardous waste becomes a restricted waste on its HSWA statutory deadline or sooner if the Agency promulgates a standard before the deadline. Because the LDRs are being phased in over a period of time (see Highlight 4), site managers may need to determine what type of restriction is in

Highlight 4: LDR STATUTORY DEADLINES

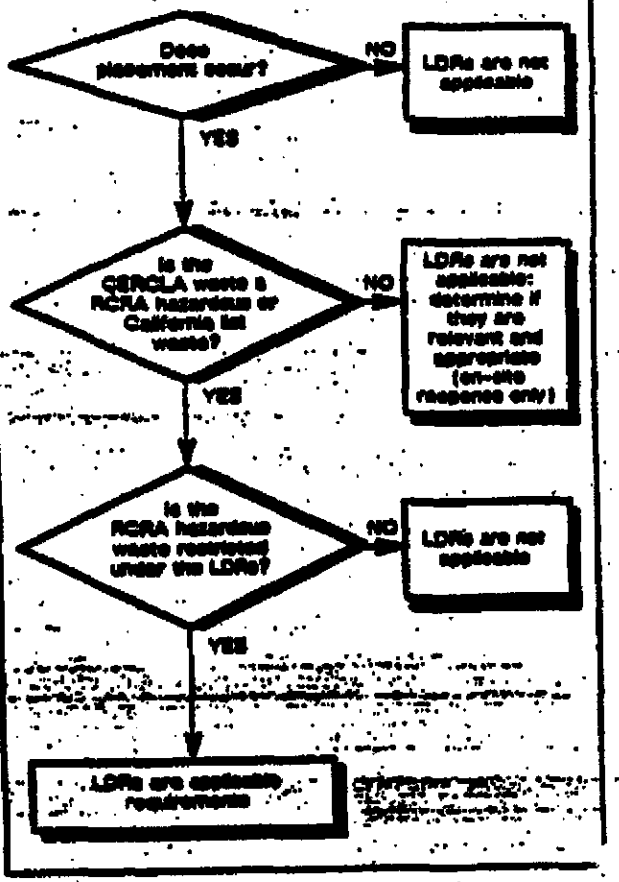
Waste	Statutory Deadline
Spent Solvent and Dioxin-Containing Wastes	November 8, 1986
California List Wastes	July 8, 1987
First Third Wastes	August 8, 1988
Spent Solvent, Dioxin-Containing, and California List Soil and Debris From CERCLA/RCRA Corrective Actions	November 8, 1988
Second Third Wastes	June 8, 1989
Third Third Wastes	May 8, 1990
Newly Identified Wastes	Within 6 months of identification as a hazardous waste

effect at the time placement is to occur. For example, if the RCRA hazardous wastes at a site are currently under a national capacity extension when the CERCLA decision document is signed, site managers should evaluate whether the response action will be completed before the extension expires. If these wastes are disposed of in surface impoundments or landfills prior to the expiration of the extension, the receiving unit would have to meet minimum technology requirements, but the wastes would not have to be treated to meet the LDR treatment standards.

APPLICABILITY DETERMINATIONS

If the site manager determines that the LDRs are applicable to the CERCLA response based on the previous three questions, the site manager must: (1) comply with the LDR restriction in effect, (2) comply with the LDRs by choosing one of the LDR compliance options (e.g., Treatability Variance, No Migration Petition), or (3) invoke an ARAR waiver (available only for on-site actions). If the LDRs are determined not to be applicable, then, for on-site actions only, the site manager should determine if the LDRs are relevant and appropriate. The process for determining whether the LDRs are applicable to a CERCLA action is summarized in Highlight 5.

Highlight 5 - DETERMINING WHEN LDRS ARE APPLICABLE REQUIREMENTS



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Wednesday
December 21, 1988

Part V

Environmental Protection Agency

40 CFR Part 300
National Oil and Hazardous Substances Pollution Contingency Plan; Proposed Rule

would need to comply with the applicable closure requirements for those units in completing the remedial action. Second, if the lead agency determines that RCRA listed or characteristic hazardous waste is present at the site (even if the waste was disposed before the effective date of the requirement) and the proposed CERCLA action involves treatment, storage, or disposal as defined under RCRA, then RCRA requirements related to those actions would be applicable.

These two scenarios are contingent upon determinations that RCRA Subtitle C hazardous waste is present and on the identification of the period of waste management. To determine whether a waste is a listed waste under RCRA, it is often necessary to know the source. However, at many CERCLA sites no information exists on the source of the wastes nor are references available citing the date of disposal. The lead agency should use available site information, manifests, storage records, and vouchers in an effort to ascertain the source of these contaminants. When this documentation is not available, the lead agency may assume that the wastes are not listed RCRA hazardous wastes, unless further analysis or information becomes available which allows the lead agency to determine that the wastes are listed RCRA hazardous wastes. If the lead agency assumes the wastes are not listed RCRA hazardous wastes and it is determined that the wastes are not characteristic wastes under RCRA (see discussion below, 17.i.) RCRA requirements would not be applicable to CERCLA actions, but may be relevant and appropriate if the CERCLA action involves treatment, storage or disposal and/or if the wastes are similar or identical to RCRA hazardous waste.

Under certain circumstances, although no historical information exists about the waste and when it was treated, stored, or disposed, it may be possible to identify the wastes as RCRA characteristic wastes. With respect to hazardous characteristics, (ignitability, corrosivity, reactivity, or EP toxicity), it is the responsibility of the generator (in this case, the lead agency or PRP conducting the action) to determine if the wastes exhibit any of these characteristics (defined in 40 CFR 261.21 through 24). The lead agency must use best professional judgment to determine, on a site-specific basis, if testing for hazardous characteristics is necessary. Testing is required unless it can be determined, by "applying knowledge of the hazard characteristic in light of the materials or process used," that the waste does not have hazardous characteristics (40 CFR 262.11(c)).

In determining whether to test for the toxicity characteristic using the Extraction Procedure (EP) Toxicity Test, it may be possible to assume that certain low concentrations of waste are not toxic. For example, if the total waste concentration is 20 times or less the EP Toxicity concentration, the waste cannot be characteristic hazardous waste. In such a case RCRA requirements would not be applicable and would not likely be relevant or appropriate unless the waste also contained other RCRA hazardous wastes and the CERCLA action involved treatment, storage, or disposal.

If the wastes exhibit hazardous characteristics, RCRA requirements are potentially applicable if the wastes also were either treated, stored, or disposed after the effective date of the applicable RCRA requirement or if the CERCLA actions will involve treatment, storage, or disposal.

ii. *Actions constituting treatment, storage, or disposal.* Many CERCLA actions occur in areas of contamination that contain waste treated, disposed of, or stored prior to November 19, 1980. If left untouched, wastes in such areas are not currently regulated under Subtitle C of RCRA. (Solid waste management units at RCRA facilities are regulated by the 3004(u) corrective action requirements.) However, certain physical movement, alteration, or disturbance of RCRA hazardous waste associated with a remedial action may meet the RCRA definition of treatment, storage, or disposal. For instance, treatment has occurred when the CERCLA remedial action uses "any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, dispose of; or amenable for recovery, amenable for storage, or reduced in volume." 40 CFR 260.10.

Similarly, storage occurs when a CERCLA remedial action involves the "holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere." 40 CFR 260.10.

Land disposal occurs when RCRA hazardous waste is placed into a land disposal unit, including a "landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave." RCRA section 3004(k).

Movement of hazardous waste entirely within a unit does not constitute "land disposal" under Subtitle C of RCRA. However, movement of hazardous waste into a unit (i.e., across the boundary of a unit) does constitute "land disposal."

In many cases CERCLA sites contain areas of contamination (with differing levels of concentration, including hot spots, of hazardous substances, pollutants, or contaminants) that may be characterized as a unit, usually a landfill, under RCRA. In such cases where RCRA hazardous waste is moved into the area of contamination, RCRA disposal requirements are applicable to the disturbed waste and certain land disposal requirements (such as for closure) may be applicable to the area where the waste is received.

Therefore, the following activities constitute land disposal under RCRA Subtitle C where the waste involved is RCRA hazardous waste:

a. Wastes from different units are consolidated into one unit;

b. Waste is removed and treated outside a unit and redeposited into the same or another unit; or

c. Waste is picked up from the unit and treated within the area of contamination in an incinerator, surface impoundment, or tank and then redeposited into the unit (does not include in-situ treatment).

In contrast, an example of an activity that does not constitute "land disposal" is the mere consolidation of RCRA hazardous wastes within a unit. Similarly, the covering and sealing off of hazardous waste, called "capping with waste in place," is also not considered "land disposal" and RCRA Subtitle C requirements would not be applicable. If some of the waste at a site is moved into another unit, but other waste is left behind in the original unit (the unit in which such waste was found), "land disposal" applies only with regard to the waste that is moved into another unit. Under these examples, however, certain RCRA land disposal requirements might nevertheless be relevant and appropriate to such wastes. (See ARARs preamble sections below, 16.iii. and 17.)

iii. *Hypothetical examples of compliance with RCRA: land disposal restrictions.* Land disposal restrictions under RCRA sections 3004 (d) through (k) are triggered whenever there is placement of RCRA hazardous wastes subject to land disposal restrictions ("banned waste") into a land-based unit. Such land disposal does not occur when

wastes disposed prior to the effective date of the applicable prohibition only become subject to the LDRs if they are removed from the land and placed into a land disposal unit after the effective date of the applicable prohibition. (See 53 FR 31138, 31148, (August 17, 1988) and *Chemical Waste Management v. US EPA*, 86 9 F.2d 1526, 1538 (D.C. Cir. 1989)), "treatment or disposal of [hazardous waste] will be subject to the [LDR] regulation only if that treatment or disposal occurs after the promulgation of applicable treatment standards.") Similarly, environmental media contaminated by hazardous wastes placed before the effective dates of the applicable land disposal restrictions does not become subject to the LDRs unless they are removed from the land and placed into a land disposal unit after the effective dates of the applicable restrictions.

The land disposal restrictions do not attach to environmental media contaminated by hazardous wastes when the wastes were placed before the effective dates of the applicable land *disposal prohibitions. If these media are* determined not to contain hazardous wastes before they are removed from the land, then they can be managed as non-hazardous contaminated media and they're not subject to land disposal restrictions. For example, soil contaminated by acetone land disposed ("placed") in 1986 (prior to the effective date of the land disposal prohibition for acetone) and, while still in the land, determined not to contain hazardous waste, is not subject to the land disposal restrictions.[17] This is consistent with the Agency's approach in the HWIR-waste rule, where it indicates that LDRs do not attach to wastes that are not hazardous at the time they are first generated (60 FR 66344, December 21, 1995).

Since application of the land disposal restrictions is limited, in order to determine if a given environmental medium must comply with LDRs one must know the origin of the material contaminating the medium (i.e., hazardous waste or not hazardous waste), the date(s) the material was placed (i.e., before or after the effective date of the applicable land disposal prohibition), and whether or not the medium still contains hazardous waste (i.e., contained-in decision or not).

Facility owner/operators should make a good faith effort to determine whether media were contaminated by hazardous wastes and ascertain the dates of placement. The Agency believes that by using available site- and waste-specific information such as manifests, vouchers, bills of lading, sales and inventory records, storage records, sampling and analysis reports, accident reports, site investigation reports, spill reports, inspection reports and logs, and enforcement orders and permits, facility owner/operators would typically be able to make these determinations. However, as discussed earlier in the preamble of today's proposal, if information is not available or inconclusive, facility owner/operators may generally assume that the material contaminating the media were not hazardous wastes. Similarly, if environmental media were determined to be contaminated by hazardous waste, but if information on the dates of placement is unavailable or inconclusive, facility owner/operators may, in most cases assume the wastes were placed before the effective date.

The Agency believes that, in general, it is reasonable to assume that environmental media do not contain hazardous wastes placed after the effective dates of the applicable land disposal prohibitions when information on the dates of placement is unavailable or inconclusive, in part, because current regulations, in effect since the early 1980's, require generators of hazardous waste to keep detailed records of the amounts of hazardous waste they generate. These records document whether the waste meets land disposal treatment standards and list the dates and locations of the waste's ultimate disposition. With these records, the Agency should be able to determine if environmental media were contaminated by hazardous wastes and if they would be subject to the land disposal restrictions.

In addition, EPA believes that the majority of environmental media contaminated by hazardous wastes were contaminated prior to the effective dates of the applicable land disposal restrictions. Generally, the contamination of environmental media by hazardous waste after the effective date of the applicable land disposal restriction would involve a violation of the LDRs, subject to substantial fines and penalties, including criminal sanctions. The common exception would be one-time spills of hazardous waste or hazardous materials. In these cases, the Agency believes that, typically, independent reporting and record keeping requirements (e.g., CERCLA sections 102 and 103 reporting requirements or state spill reporting requirements) coupled with ordinary "good housekeeping" procedures, result in records that will allow the Agency to determine the nature of the spilled material, and the date (or a close approximation of the date) of the spill. The Agency requests comments on this approach and on any other assumptions, records, or standards of evaluation that would ensure that facility owner/operators would identify any contaminated media subject to land disposal restrictions properly and completely.

Information on contained-in decisions should be immediately available since, generally, these determinations are made by a regulatory agency on a site-specific basis and careful records are kept.

2. Treatment Requirements—§ 269.30

a. Approach to treatment requirements and recommendations of the FACA Committee. RCRA section 3004(m) requires that treatment standards for wastes restricted from land disposal, "* * * specify those levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized." A recurring debate through EPA's development of the land disposal restriction program has been whether treatment standards should be technology-based (i.e., based on performance of a treatment technology) or risk-based (i.e., based on assessment of risks to human health and the environment that are posed by the wastes). The Agency believes that both approaches are allowed. It has long been recognized that Congress did not directly address the questions of how to set treatment standards in the language of section 3004(m).[18] In addition, Congress did not specifically address whether the LDR treatment standards for newly generated wastes and remediation wastes must be identical; the structure of RCRA's LDR provisions suggests that Congress believed that remediation waste may merit special consideration. (See, RCRA sections 3004(d)(3) and 3004(e)(3), which

[17] Similarly, soil contaminated by acetone placed in a solid waste management unit in 1986, but leaked into the soil at some point after 1986, is not subject to the land disposal restrictions provided that, while the soil is still in the land, the Director determines it does not contain hazardous wastes. LDRs would not attach because, in this case, it is the initial placement of hazardous waste that determines whether there is a duty to comply with LDRs.

[18] See, e.g., 51 FR 40572, 40578 (November 7, 1986); *Hazardous Waste Treatment Council v. US EPA*, 886 F.2d 355, 361–3 D.C. Cir. 1989); 55 FR 6640, 6641 (February 26, 1990). The legislative history of section 3004(m) is likewise inconclusive. See discussion of the legislative history at 55 FR 6640, 6641–6642 (February 26, 1990)"[a]t a minimum, the [legislative history shows] that Congress did not provide clear guidance on the meaning of 'minimize threats'."

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FILE COPY

January 13, 2005

Mr. Kevin Mirner
Harcros Chemicals, Inc.
5200 Speakers Road
P. O. Box 2930
Kansas City, Kansas 66110-3000

Mr. Paul Bunge
Silvertip Project Partners
860 Bramblewood Drive
Castle Rock, Colorado 80108

Re: *Development of Vicksburg Chemical Company Property*

Dear Kevin and Paul:

Silvertip Project Partners, LLC, has partnered with Harcros Chemicals, Inc., and ARCADIS to pursue cleanup and development of the Vicksburg Chemical Property. The Department earlier decided to move forward with the Harcros Chemical Company proposal and now considers the proposal to be modified to include Silvertip Project Partners.

The Department will negotiate exclusively with Silvertip Project Partners and Harcros Chemicals Inc. ***as long as reasonable progress is being made toward a final solution***. Based upon our discussions and the current plan of action, it seems that we all will know whether this project will move to closure by April 30, 2005. At that time the Department will re-evaluate whether it is prudent to continue negotiations with Silvertip and Harcros. We appreciate your efforts to date. Please keep us informed of your progress.

Sincerely,

Charles H. Chisolm
Executive Director

CHC:jar
cc: Trudy D. Fisher, Esq.

ЕЩЕ СОБА

Statement of Excessive Assessment
For Tax Year 2003

FILE COPY

STATE OF MISSISSIPPI

COUNTY OF HINDS

Personally appeared before me, the undersigned authority in and for the aforesaid County and State, Jere (Trey) Hess, who, after being first duly sworn, states on his oath as follows:

1. I am a citizen of Madison County, Mississippi.

2. I have approximately eleven (11) years of environmental experience with the Mississippi Department of Environmental Quality (MDEQ), which includes, but is not limited to, assessing the extent of contamination on sites throughout Mississippi and working with property owners, consultants, and other interested parties to find an acceptable method of remediating these sites.

3. I currently am the Brownfields Program Coordinater for MDEQ.

4. Based upon my personal knowledge and experience in working to establish the full extent of contamination on site and associated costs for cleanup, it is my professional opinion that the property cost estimates for fully remediating the environmental contamination at the former Vicksburg Chemical property well exceed the county tax assessor's estimates of property tax assessments.

5. A Progress Report Corrective Measures Study was submitted by URS Corporation on behalf of Vicksburg Chemical in March 2002 that includes a range of $1,002,427.00 to $4,318,200.00 for cleanup of the referenced property. This document is not attached to this affidavit since it is voluminous, but is available for inspection at MDEQ pursuant to the Mississippi Open Records Act, Miss. Code Ann. §§ 25-61-1, *et seq.*

6. I have prepared a summary of the report referenced in Paragraph 5 above as it relates to cleanup costs, which is attached to this affidavit as Exhibit 1.

Further, Affiant saith not.

Jere (Trey) Hess

SWORN TO AND SUBSCRIBED BEFORE ME, this the 27th day of August, 2004.

Sharon A. Smith
NOTARY PUBLIC

[SEAL]

My Commission Expires:

NOTARY PUBLIC STATE OF MISSISSIPPI AT LARGE
MY COMMISSION EXPIRES: Jun 7, 2007
BONDED THRU NOTARY PUBLIC UNDERWRITERS

Cleanup Cost Estimation Summary

Introduction

The following is a summary of Section Four of the Progress Report Corrective Measures Study for the Vicksburg Chemical Site, dated March 2002. The Study was generated on behalf of Vicksburg Chemical Company by URS Corporation out of Baton Rouge, Louisiana. The report identifies three areas, called Solid Waste Management Units (SWMUs), where corrective action is to be focused. They are:

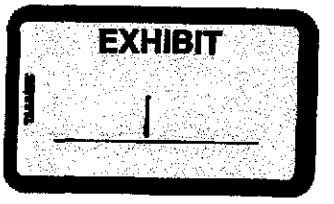
A. Soil in SWMU 20
B. Groundwater in SWMU 20
C. Groundwater in SWMU 11, 12, 15

Eight alternatives were formulated for "A", five for "B", and four for "C". Costs associated with each alternative are listed below.

Alternative	Description	Total Cost (Net Present Value)
A-2	Removal and Soil Cap	$275,827
A-3	Removal with Cap of Geosynthetics and Soil	$418,600
A-4	Removal with Complete Geosynthetic Liner and Soil Cap	$446,300
A-5	In-Situ Treatment by Composting plus Iron Addition	$2,268,200
A-6	In-Situ Treatment by Injection of Fenton's Reagent	$462,300
A-7	Ex-Situ Treatment by Composting Plus Iron	$2,010,800
A-8	Offsite Disposal in Landfill	$1,216,000
B-1	No Action, Natural Attenuation Monitoring	$39,300
B-2	In-Situ Treatment with Fenton's Reagent	$715,000
B-3	Ex-Situ Treatment with Fenton's Reagent	$620,000
B-5	Ex-Situ Treatment with Carbon Adsorption	$265,200
C-1	In-Situ Treatment by Injection of Precipitating Agents	$1,335,000
C-2	Ex-Situ Treatment by Precipitation/Flocculation/Settling	$687,300
C-4	Ex-Situ Treatment by Phytoremediation	$1,334,000

Findings

From this information, cleanup costs can be estimated to range between **$1,002,427.00** (Alternatives A-2, B-1, and C-2) and **$4,318,200.00** (Alternatives A-5, B-2, and C-1). These cleanup cost estimates were generated from the information that had been collected prior to March 2002. Since that time, no cleanup activities have commenced due to the abandonment of the facility. It should be noted that the Mississippi Department of Environmental Quality has been negotiating with a prospective purchaser, Harcros Chemicals, Inc., for several months. Harcros' environmental consultant, ARCADIS G&M, Inc., has developed a more current cleanup cost estimate of **$8,000,000.00**.



I hereby certify that I have prepared this summary using the information submitted in the URS document and have attempted to the best of my ability to include true and accurate statements and further certify that the calculations reflected in this summary are directly in line with the information included in the URS document.

Jere (Trey) Hess

SWORN TO AND SUBSCRIBED BEFORE ME, this the 27th day of August, 2004.

Sharon A. Smith
NOTARY PUBLIC

[SEAL]

My Commission Expires:

NOTARY PUBLIC STATE OF MISSISSIPPI AT LARGE
MY COMMISSION EXPIRES: Jan 7, 2007
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HEADLINE NEWS

MDEQ chooses Mississippi Silvertip

December 28, 2005

VICKSBURG — The Mississippi Department of Environmental Quality (MDEQ) has finalized an agreement for a developer to spend $8 million to clean up the abandoned Vicksburg Chemical site. The developer, Mississippi Silvertip Development, LLC, along with Harcros Chemicals Inc., Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M Inc., intends to reuse the plant site and surrounding acreage once the cleanup begins in early 2006.

Harcros plans to create a number of new jobs through its chemical blending, mixing or distribution operation. ARCADIS, a national environmental cleanup company, will perform remediation services under MDEQ oversight and control. Silvertip plans to construct high-end commercial and residential sites and a championship golf course on a portion of the remaining acreage.

On March 8, 2002, Vicksburg Chemical and its parent company, Cedar Chemical Corporation, filed for bankruptcy, and Cedar also filed a motion to allow the abandonment of the Vicksburg Chemical property, potentially leaving uncontrolled hazardous conditions at the site. A number of entities opposed the motion, and the court eventually approved an agreement between the parties allowing Vicksburg Chemical to abandon its properties and authorizing the MDEQ to direct the company to transfer the Vicksburg Chemical property to any entity identified by the MDEQ.

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December 27, 2005

Portfolio

From staff and wire reports

MDEQ OKs plan for $8M cleanup

The state Department of Environmental Quality has finalized an agreement for a developer to spend $8 million dollars to clean up the abandoned Vicksburg Chemical site in Vicksburg.

Mississippi Silvertip Development LLC, along with Harcros Chemicals Inc., Mississippi Bluffs Industrial Park LLC and ARCADIS G&M Inc., intends to reuse the plant site and surrounding acreage once the cleanup begins in early 2006.

Harcros plans to create a number of jobs with its chemical blending, mixing or distribution operation on the abandoned plant site; and ARCADIS, a national leader in environmental cleanup, will perform the remediation services with DEQ oversight and control. Silvertip plans to construct high-end commercial and residential sites and a championship golf course on a good portion of the remaining acreage.

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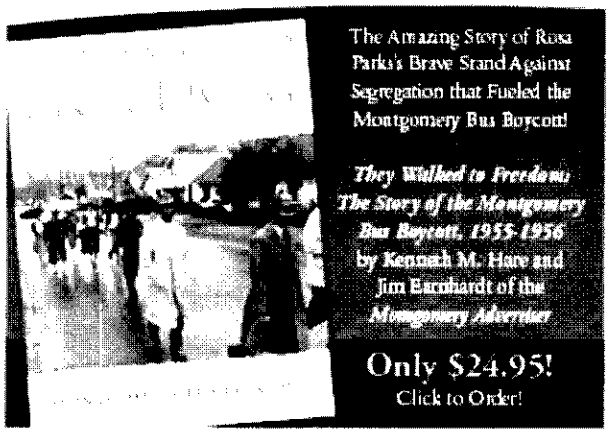

Tokyo, Seoul markets score

Tokyo and Seoul shares rose to new highs Monday, but many Asian markets remained closed for the Christmas holidays. Canadian, U.S. and most European markets also were closed.

Japan's Nikkei 225 index surged to its highest level in more than five years as investors bought into technology issues, retailers and textiles. The Nikkei rose 166.30 points, or 1 percent, to finish at 16,107.67 -- its highest close since October 2000.

Before Monday's session, the Nikkei has climbed more than 31 percent this year on renewed optimism for the country's economic recovery. But the Nikkei is still far below its all-time closing high of 38,915.87 set Dec. 29, 1989. The plunge that followed in the early 1990s contributed to the economy's nearly 15-year slump.

In Seoul, South Korean shares also rose to a new record high on gains by technology and telecom issues. The Korea Composite Stock Price Index, or Kospi, added 8.04 points, or 0.6 percent, to 1,367.57.

Samsung, Sony in talks on chips

Samsung Electronics Co., the world's largest memory chip maker, confirmed Monday that it is in talks with Sony Corp. to supply NAND flash memory chips.

"We are talking to major companies including Sony to supply our NAND flash chips, but no details have been decided yet," Samsung spokeswoman Lee Eun-Hee said.

Sony is seeking to secure NAND flash chips of eight gigabytes or higher, and the order amount is expected to be more than a fifth of Samsung's total NAND flash output from next year, according to the report.

The two sides are expected to sign a contract in the first half of 2006, the Korea Economic Daily reported Monday, citing unnamed sources.

In November, Apple Computer Inc. entered into a $500 million long-term contract for Samsung to supply flash memory chips through 2010.

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The Vicksburg Post Tuesday, December 20, 2005

To: TREY [redacted]55 961-5300
RE: Nancy Thomas

Board signs new lease deal for operation of port terminal

By Danny Barrett Jr.
dbarrett@vicksburgpost.com

New lease agreements have been reached between the Warren County Port Commission and Kinder-Morgan Terminals, commissioners said Monday.

According to terms approved at the Port Commission's monthly meeting Monday, the company, an operator of the Port of Vicksburg's dry bulk terminal, accepted a one-year contract to pay base rent of $135,000 per year. A percentage of the company's gross terminal sales, paid as part of the previous lease, has been deleted from the new lease.

The company, which experienced an estimated 11 percent growth in 2004, had been paying 10 percent of its gross terminal sales in the previous lease.

Based on the company's estimated earnings for 2002 and 2003, the dropping of the percentage means at least $1 million lost to the Port Commission.

Combined, Kinder-Morgan, Inc. and its general partner, Kinder-Morgan Energy Partners, L.P. have an estimated enterprise value of $30 billion.

Additionally, the company agreed to provide the commission with monthly financial and quarterly marketing reports.

The agreement came after months of negotiations between Kinder-Morgan and various commission members after the previous lease expired at the end of 2004.

The new lease will take effect Jan. 1.

In other business, the commission delayed action on a horse show arena and stable megaplex proposed for 43 acres adjacent to county-owned property near Ceres Industrial Complex.

Hearne Hathaway, the project's lead developer, appeared before the commission to discuss rights-of-way to access the planned facility, which is between Ceres and Clear Creek Plantation.

The complex at the Flowers site, which would be named Lil Bit O Texas, would host six to 12 horse shows annually, he said, with 492 stables, 40 of which would be climate-controlled stables capable of housing horses, but it will not be a public facility, Hathaway said.

One proposal Hathaway is still requesting is building a road to county standards that would be maintained as a private road by Hathaway's one-man operation.

Commission Chairman Johnny Moss advised since commission attorney Mack Varner was not present, more legal ramifications had to be studied before the board went any further.

"My question right now is what will this do to us down the road," Moss said.

Varner also was not present at Hathaway's initial appearance before the commission on Nov. 21.

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MDEQ, Vicksburg Chemical complete deal

Only step left is clearing bankruptcy court in New York

The Mississippi Department of Environmental Quality has finalized an agreement for a developer to spend $8 million to clean up the abandoned Vicksburg Chemical site.

The property, 480 acres on both sides of Warrenton Road south of the river bridges near Rifle Range Road and U.S. 61 South, has been under MDEQ's control since Vicksburg Chemical filed for bankruptcy in 2002.

The finalized agreement with MDEQ, announced in an MDEQ press release Monday, means the only hurdle left for the start of building on the property by Colorado-based developer Paul Bunge, who is planning to build a golf course, housing and shopping along the Mississippi River, is the approval of the U.S. Bankruptcy Court in the Southern District of New York.

"The court will direct Vicksburg Chemical to sign the deed over to the developer," said Mayor Laurence Leyens, who said the process is a formality.

Leyens said it will probably take four to six weeks to get a court hearing. Bunge said the plans for the development will move forward as soon as the deal is closed.

"It's been four very long years," Leyens said. "We're excited about it."

The MDEQ press release said the cleanup of the property is set to begin in early 2006.

"MDEQ believes the finalized agreement successfully incorporates the principles of environmental protection, land reuse and economic development," said the press release.

Bunge also has said he may pursue approval to build a casino on the property that adjoins the river, but no application had been filed with city or state officials.

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STATE OF MISSISSIPPI
HALEY BARBOUR, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FOR IMMEDIATE RELEASE
December 19, 2005

CONTACT: Robbie Wilbur
601/961-5277

MDEQ FINALIZES AGREEMENT TO CLEAN UP FORMER VICKSBURG CHEMICAL SITE

(JACKSON, Miss.) – The Mississippi Department of Environmental Quality (MDEQ) has finalized an agreement for a developer to spend $8 million dollars to clean up the abandoned Vicksburg Chemical site in Vicksburg, Mississippi. The developer, Mississippi Silvertip Development, LLC, along with Harcros Chemicals, Inc., Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc., intends to sustainably reuse the plant site and surrounding acreage once the cleanup begins in early 2006.

Harcros plans to create a number of jobs with its chemical blending, mixing, or distribution operation on the abandoned plant site; and ARCADIS, a national leader in environmental cleanup, will perform the remediation services with MDEQ oversight and control. Silvertip plans to construct high-end commercial and residential sites and a championship golf course on a good portion of the remaining acreage.

On March 8, 2002, VCC and its parent company, Cedar Chemical Corp. (Cedar), filed for bankruptcy in the United States Bankruptcy Court for the Southern District of New York. VCC and Cedar then filed with that court a motion to allow the abandonment of the VCC property, potentially leaving uncontrolled hazardous conditions at the site. The Mississippi Commission on Environmental Quality, the Arkansas Department of Environmental Quality (ADEQ), EPA Region 4, EPA Region 6, and the United States Department of Justice contested this motion. The court eventually approved an agreement between the parties allowing VCC to abandon its properties and authorizing MDEQ to direct VCC the transfer of the VCC property to any entity identified by MDEQ. Since that time, MDEQ has kept the site under its control while structuring an agreement to cleanup the plant site in a manner protective of human health and the environment. MDEQ believes the finalized agreement successfully incorporates the principles of environmental protection, land reuse, and economic development.

###

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

December 19, 2005

Mr. Paul Bunge
Mississippi Silvertip Development, LLC
Mississippi Bluffs Industrial Park, LLC
Mississippi Bluffs Development, LLC
860 Bramblewood Drive
Castle Rock, CO 80108

FILE COPY

Mr. Paul Newman
ARCADIS G&M Inc.
630 Plaza Drive, Suite 200
Highlands Ranch, CO 80129-2379

Mr. Kevin Mirner
Harcros Chemical
P.O. Box 2930
Kansas City, KS 66110-2930

Re: Vicksburg Chemical Company Site
Agreed Order
Vicksburg, Miss' sippi

Gentlemen:

It is with great pleasure that I inform you that I have today signed Agreed Order No. 5069-05, pertaining to the abandoned Vicksburg Chemical Company ("VCC") site, on behalf of the Mississippi Commission on Environmental Quality. A copy of the Agreed Order is enclosed for your records.

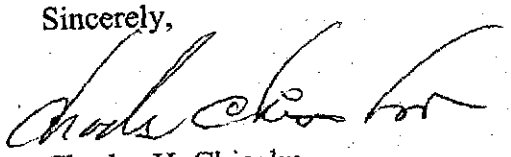
Pursuant to the terms of the Agreed Order, on the date the property is conveyed, Mississippi Silvertip Development, LLC will simultaneously set up an escrow account ("Remediation Account") in the amount of $8,000,000 to be used for remediation of the site. Once the property is conveyed, the Mississippi Department of Environmental Quality ("MDEQ") will no longer be responsible for security and stormwater collection and treatment at the site. Also, the Agreed Order includes provisions for assuring that long term closure and post-closure care, including operation, maintenance, and monitoring are evaluated. We have agreed

that at least $500,000 must remain in the Remediation Account after the site has reached "Remedy in Place" status, as defined in the Agreed Order, for long term closure and post-closure care which includes operation and maintenance at the site. This amount may be adjusted once the results of additional site investigation are evaluated by Silvertip, its consultant, and MDEQ.

I understand that Mississippi Bluffs Industrial Park, LLC will acquire the small parcel of property owned by Borden Company which is located adjacent to the VCC plant site. The Mississippi Department of Environmental Quality ("MDEQ") concurs that this acreage, which is surrounded by the VCC facility, will be included in the investigation and remediation activities funded by the Remediation Account defined in the Agreed Order.

MDEQ looks forward to working with you to ensure that the site is cleaned up in a manner which will protect human health and the environment and in restoring the site to a productive use for the community.

Sincerely,



Charles H. Chisolm
Executive Director

CHC/LO:jar
Enclosure
cc: Trudy Fisher, Esq.

BEFORE THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

In Re: **Agreed Order Of Harcros Chemicals, Inc., Mississippi Silvertip Development, LLC, Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. To Mitigate Environmental Impacts At The Former Vicksburg Chemical Company Property in Vicksburg, Mississippi**

Order No. 5069-05

AGREED ORDER

Come now the Mississippi Commission on Environmental Quality ("Commission"), acting through the staff and Executive Director of the Mississippi Department of Environmental Quality ("MDEQ"), Harcros Chemicals, Inc. ("Harcros"), Mississippi Silvertip Development, LLC ("Silvertip"), Mississippi Bluffs Industrial Park, LLC, and ARCADIS G&M, Inc. ("ARCADIS"), and agree as follows:

1. Vicksburg Chemical Company ("VCC") owns, and for many years prior to March 2002 operated, a chemical manufacturing facility, hereafter referred to as the "Plant Site," at 4280 Rifle Range Road in Vicksburg, Mississippi. The Plant Site, which consists of approximately 40 acres, from time to time, produced fertilizer products, pesticides, and other chemicals. The soil and groundwater underneath the Plant Site now is contaminated with various chemicals. In 1992, the United States Environmental Protection Agency ("EPA") and Cedar Chemical Corporation ("Cedar"), VCC's parent corporation, entered a consent decree (Consent Decree, Civil Number W92-008B) requiring assessment and remediation activities at the Plant Site. Since that time, much study, but little remediation, has been accomplished at the Plant Site.

2. On March 8, 2002, VCC and Cedar filed petitions in bankruptcy in the United States Bankruptcy Court for the Southern District of New York. VCC and Cedar then filed with that court a motion to allow the "abandonment" of the VCC property,

hereafter referred to as the "Vicksburg Facility"[1] and of a sister facility owned by Cedar in West Helena, Arkansas. The Commission, through MDEQ, the Arkansas Department of Environmental Quality ("ADEQ"), EPA Region 4, EPA Region 6, and the United States Department of Justice ("USDOJ") contested this motion. The court eventually approved an agreement between the parties whereby Cedar and VCC were allowed to abandon the properties from the bankruptcy estate, thus causing the properties to revert to the ownership of the pre-petition debtors or, as the bankruptcy court termed it, the "non-bankruptcy estate" (which included no remaining assets) and freeing the bankruptcy estate from further responsibility for the properties except as required by the court's order. See Stipulation And Order Authorizing Abandonment Of West Helena Manufacturing Facility And Vicksburg Manufacturing Facility And Granting Related Relief, Case Nos. 02-11039 (SMB) and 02-11040 (SMB) (Bankr. S.D.N.Y. Oct. 18, 2002) ("Stipulation and Order"), attached to this Agreed Order as Exhibit 1.

3. The court's order provides in part:

> Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by them.

The Commission is fulfilling its duty to provide a copy of the Stipulation and Order by attaching that document as Exhibit 1 to this Agreed Order.

---

[1] The Stipulation and Order defines the "Vicksburg Facility" as "all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi." Stipulation and Order at 2. The terms "Vicksburg Facility" and "VCC property" as used in this order are defined in the same way. By securing the bankruptcy court's definition of the term in this fashion, MDEQ gained the authority to control the final disposition not only of the contaminated 40 ± acre Plant Site, but also of the 500 ± acres of additional real estate owned by VCC in Warren County, which is not believed to be contaminated, and all materials and equipment on that property.

4. Beginning in late 2002, the Commission conducted a request for proposal process by which it solicited offers from parties interested in obtaining all or part of the Vicksburg Facility. Harcros submitted a proposal through which, among other things, it identified ARCADIS as its remediation contractor at the Plant Site and committed to include the City of Vicksburg in determining the future land use of the uncontaminated areas of the Vicksburg Facility. On August 29, 2003, MDEQ selected the Harcros proposal for implementation. On January 13, 2005, the Harcros proposal was amended to include Silvertip as an additional partner. Under the amended proposal, Silvertip is responsible for the remediation of the Plant Site and compliance with this Agreed Order. Harcros intends to locate certain chemical blending and mixing operations at the Plant Site, as well as distribution facilities. This Agreed Order sets forth the commitments that Silvertip now makes to the Commission in consideration for the transfer of the respective property and facilities and as part of the implementation of the proposal.

5. On the date of the conveyance of the Vicksburg Facility, Silvertip shall simultaneously establish an escrow account ("Remediation Account") in the amount of $8,000,000.00 for the purpose of receiving and administering the funds of the Remediation Account. The Remediation Account shall be opened in the names of both Mississippi Bluffs Industrial Park, LLC and ARCADIS.[2] The funds, including all interest earned on the Remediation Account, shall be used for the mitigation of environmental impacts at the Plant Site as directed by MDEQ and as set forth in the Professional Services Agreement ("PSA") attached as Exhibit 2. MDEQ shall be a party to the escrow agreement establishing the Remediation Account, and the escrow agreement shall provide that no disbursements can be made from the Remediation Account without MDEQ's written approval, which approval shall not be unreasonably withheld. The

[2] ARCADIS will perform remediation work at the plant site. Mississippi Bluffs Industrial Park, LLC will receive conveyance of the 40± acre Plant Site and will oversee ARCADIS's remediation efforts.

escrow agreement shall also provide that the remaining balance of the Remediation Account, if any, shall be returned to Silvertip after receipt of a no further action letter from MDEQ, or at MDEQ's concurrence.

6. ARCADIS shall perform remediation services as set forth in the PSA. Those services include an initial baseline assessment of the Plant Site, followed by development of a groundwater remediation plan, a soil action plan, subsequent implementation of the plans, implementation of any institutional controls, and any other work required by MDEQ that is reasonable and related to remediation of the Plant Site to the extent that sufficient funding is available in the Remediation Account. This work shall be performed pursuant to Work Authorizations with MDEQ's written approval as set forth in the PSA. One of the objectives of this Agreed Order is to have a "remedy in place"[3] within three years, at which time long term operation, maintenance, and monitoring will be evaluated. The parties acknowledge that the term "remedy in place" does not necessarily mean that remediation will be complete within three years. Thus, the Remediation Account will continue to be utilized to pay remediation costs until remediation is complete, as determined by MDEQ, or until funds in the Remediation Account are exhausted. The costs and charges associated with any Work Authorizations approved by MDEQ shall be the allowable cost of remediation for purposes of House Bill 1294, enacted in the 2005 General Session.

7. In the event that the termination provisions of the PSA are triggered and ARCADIS no longer serves as the contractor, then Mississippi Bluffs Industrial Park, LLC shall select another remediation contractor, with MDEQ's written approval, and

[3] "Remedy in Place (RIP)" means that a final remedial action has been constructed and implemented and is operating as planned in the remedial design. An example of a Remedy in Place is a pump-and-treat system that is installed, is operating as designed, and will continue to operate until cleanup levels have been attained. Because operation of the remedy is ongoing, the site cannot be considered Response Complete which will be determined by MDEQ.

ARCADIS shall be removed as a party to this Agreed Order, and the Remediation Account after payment of fees owed under the PSA. In the event that MDEQ does not, for whatever reason, approve the selection of another contractor by Mississippi Bluffs Industrial Park, LLC, MDEQ shall select another contractor and shall direct the expenditure of funds from the escrow account for the remediation of the Plant Site.

8. Silvertip and Mississippi Bluffs Industrial Park, LLC will satisfy its obligations under this Agreed Order and cannot be deemed in default of the Agreed Order, and neither Silvertip nor the entities designated in Exhibit 3, or their constituent owners, successors, or assigns will have liability for pre-existing environmental conditions at the Plant Site as of the effective date of this Agreed Order, upon the establishment by Silvertip of the Remediation Account as set forth in this Agreed Order and in the PSA.[4]

9. Harcros, as an occupant in its chemical blending, mixing, and/or distribution operations, shall provide ARCADIS reasonable access to the Plant Site to perform remediation services, and shall not interfere with or impede the remediation services. ARCADIS agrees to use reasonable precaution in the remediation activities at the Plant Site to prevent any unreasonable interference or disturbance to the business operations of Harcros at the Plant Site.

10. The parties to this Agreed Order agree that the trust fund created at First National Bank, Vicksburg, Mississippi (now known as Trustmark National Bank) by two trust agreements between First National Bank and Vertac Chemical Corporation, dated October 6, 1982, as amended by a trust agreement dated June 27, 1986 wherein Cedar was substituted for Vertac Chemical Corporation in the trust agreement are not

[4] Silvertip will meet its obligations under the amended proposal by paying $8,000,000.00 into the Remediation Account. Mississippi Bluffs Industrial Park, LLC, to which the 40± acre Plant Site will be conveyed, will oversee ARCADIS's remediation efforts. Mississippi Bluffs Development, LLC will develop the 500± acres that are not believed to be contaminated.

considered a part of the "Vicksburg Facility" as defined in the aforementioned Stipulation and Order. Therefore, ownership of the referenced trust fund lies exclusively with MDEQ.

11. Upon execution of this Agreed Order, MDEQ shall direct the Vicksburg non-bankruptcy estate to transfer its complete interests in the "Vicksburg Facility" in two parcels of property to entities designated by Silvertip as set forth in Exhibit 3. The remaining terms of this Agreed Order are not effective until the parcels have been conveyed as set forth in Exhibit 3 and the conveyances have been recorded in the land records in Warren County, Mississippi.

12. Nothing contained in this Agreed Order shall limit the rights of the MDEQ or the Commission to take enforcement or other actions against Harcros, Silvertip, or Mississippi Bluffs Industrial Park, LLC for future violations of environmental laws, rules, and regulations.

13. Nothing contained in this Agreed Order is intended to create any obligation or liability of ARCADIS relating to the contamination at the Plant Site, except as agreed upon under the terms of the PSA.

ORDERED and AGREED, this the 19th day of December, 2005.

Charles H. Chisolm
Executive Director
Mississippi Commission on
Environmental Quality

AGREED, this the 25 day of October, 2005.

BY:

TITLE: MANAGING MEMBER
Mississippi Silvertip
Development, LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Silvertip Development, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

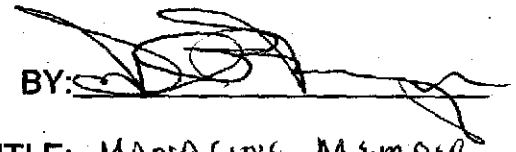
SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25 day of October, 2005.

BY: 

TITLE: MANAGING MEMBER
Mississippi Bluffs Industrial Park,
LLC

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Paul Bunge who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Mississippi Bluffs Industrial Park, LLC, to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Coleman
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 25th day of October, 2005.

BY: Erhardt Werth

TITLE: EXECUTIVE VICE PRESIDENT
ARCADIS G&M, Inc.

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named Erhardt Werth who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by ARCADIS G&M, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 25th day of October, 2005.

Sheri Ademan
Notary Public

My Commission Expires:

December 12, 2005

AGREED, this the 1st day of ~~October~~ NOVEMBER, 2005.

BY:

TITLE: PRESIDENT & CEO
Harcros Chemical, Inc.

SUSAN G. LOCKE
Notary Public - State of Kansas
My Appt. Expires 7-6-09

PERSONALLY APPEARED BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, the within named KEVIN G. MIRNER who, first being duly sworn, did state upon his/her oath and acknowledge to me that he/she is authorized by Harcros Chemical, Inc., to sign this Agreed Order and to enter this Agreed Order on behalf of that limited liability corporation.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 1st day of ~~October~~ NOVEMBER, 2005.

Susan G. Locke
Notary Public

My Commission Expires:

7-6-09

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK

----x

In re:	Chapter 11	
CEDAR CHEMICAL CORPORATION and VICKSBURG CHEMICAL COMPANY,	Case Nos.	02-11039 (SMB) and 02-11040 (SMB)
Debtors.	Jointly Administered	

----x

STIPULATION AND ORDER AUTHORIZING ABANDONMENT OF WEST HELENA MANUFACTURING FACILITY AND VICKSBURG MANUFACTURING FACILITY AND GRANTING RELATED RELIEF
(A&F No. 031)

WHEREAS on March 8, 2002 (the "**Petition Date**"), Cedar Chemical Corporation ("**Cedar**") and Vicksburg Chemical Company ("**Vicksburg**") (collectively the "**Debtors**") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "**Bankruptcy Code**") with the United States Bankruptcy Court for the Southern District of New York (the "**Court**");

WHEREAS Cedar owns certain lots, pieces, tracts or parcels of land located at or near 49 Phillips Road 311 in West Helena, Arkansas, more particularly described in **Exhibit A** hereto, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "**West Helena Facility**");

WHEREAS Vicksburg owns certain lots, pieces, tracts or parcels of land located at or near 4280 Rifle Range Road in Vicksburg, Mississippi, along with all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder except for such equipment and the like as have been leased by Vicksburg or otherwise owned by other parties (the "**Vicksburg Facility**;" the term "**Vicksburg Facility**" includes all real property and all buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property owned by Vicksburg, and not merely leased by Vicksburg or otherwise owned by other parties, lying within Warren County, Mississippi);

WHEREAS on August 29, 2002 the Debtors filed a motion (the "**Motion**") pursuant to sections 105(a) and 554(a) of the Bankruptcy Code seeking an order authorizing the abandonment by Cedar of the West Helena Facility and the abandonment by Vicksburg of the Vicksburg Facility and granting related relief;

WHEREAS the Court signed an order dated September 4, 2002 scheduling a hearing on the Motion (the "**Scheduling Order**");

WHEREAS a statement in support of the Motion was filed by JPMorgan Chase Bank, as agent (the "**Agent**") to the pre-petition secured lenders (the "**Secured Lenders**"), as listed under a certain Credit Agreement dated as of November 3, 1995, as amended, supplemented or otherwise modified, among Cedar, the Secured Lenders and the Agent (to avoid doubt, "Secured Lenders" does not include the Debtors, any affiliate of the Debtors, Trans Resources Inc., and Arie Genger);

WHEREAS the Arkansas Department of Environmental Quality (the "**ADEQ**"), the Mississippi Commission on Environmental Quality and the Mississippi Department of Environmental Quality

(collectively, the "**MDEQ**") and the United States on behalf of the Environmental Protection Agency (the "**EPA**") (together with the ADEQ and the MDEQ the "**Agencies**" and each individually an "**Agency**"), and Harcros Chemicals Inc. each filed objections to the Motion;

WHEREAS the Agent and the Debtors filed a joint reply to the objections of the Agencies;

WHEREAS on or about September 26, 2002, the MDEQ issued Order No. 4486-02 purporting, among other things, to enjoin Vicksburg from transferring the Vicksburg Facility to another party without complying with Debtors' environmental permits.

WHEREAS good and sufficient notice of the Motion has been provided by the Debtors in accordance with the terms of the Scheduling Order;

WHEREAS a hearing on the Motion was held on September 25, 2002; and an evidentiary hearing on the Motion was held on October 7, 2002 (the "**Evidentiary Hearing**");

WHEREAS the West Helena Facility and the Vicksburg Facility (collectively, the "Facilities") are of inconsequential value and benefit to the estates of the Debtors and that such estates lack sufficient unencumbered assets with which to continue the maintenance, management and oversight of the Facilities;

WHEREAS, the Debtors have cooperated with the Agencies in the transition of the Facilities prior to their proposed abandonment;

WHEREAS the Debtors, the Agencies and the Agent (on behalf of the Secured Lenders) agree to compromise and resolve the various objections to the Motion as provided herein;

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration receipt of which is hereby acknowledged;

IT IS HEREBY STIPULATED and agreed to by and between the parties, subject to approval by the Court, as follows, and upon approval by the Court, it is hereby ORDERED that:

1. The Court has jurisdiction to hear and consider the Motion pursuant to 28 U.S.C. § 1334 and 28 U.S.C. § 157 and to grant the relief requested therein.

2. This is a core proceeding under 28 U.S.C. § 157(b).

3. Good and sufficient notice of the Motion, the proposed abandonment of the Facilities and of the hearings scheduled thereon has been provided and any other requirement for notice be, and hereby is, dispensed with.

4. The Motion, as modified and conditioned herein, is hereby granted.

5. The Facilities are of inconsequential value and benefit to the estates of the Debtors and such estates lack sufficient unencumbered assets with which to continue the maintenance, management, and oversight of the Facilities.

6. All requirements of section 554(a) of the Bankruptcy Code for the abandonment of the Facilities have been satisfied and sufficient circumstances exist in these cases to justify the approval of such abandonment, as conditioned herein.

7. The Facilities are hereby abandoned to the pre-petition Debtors effective 11:59 p.m. on October 14, 2002 (the "Effective Time"). The West Helena Facility shall be deemed abandoned to the Cedar non-bankruptcy estate and the Vicksburg Facility shall be deemed abandoned to the Vicksburg non-bankruptcy estate.

8. The Debtors and their respective officers, employees, directors, the pre-petition Debtors' officers, employees and directors and Marotta Gund Budd & Dzera LLC and any of its employees

(collectively, "MGB") shall have no obligation for the management or operation of the Facilities subsequent to the Effective Time.

9. The Debtors and the officers, employees, agents and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, agents or directors of the Debtors or pre-petition Debtors) shall be free of any liability for any occurrence or event with respect to (i) the Vicksburg Facility occurring subsequent to the Effective Time and (ii) the West Helena Facility occurring subsequent to 5:00 p.m. Eastern Standard Time on October 18, 2002 arising from the abandonment.

10. The United States, on behalf of the EPA, covenants not to sue the officers, employees, and directors of the Debtors and pre-petition Debtors (but solely in their capacity as officers, employees, or directors of the Debtors or pre-petition Debtors) or MGB for civil liability with respect to the Facilities for any cause of action or other claim for relief asserting environmental liability pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. § 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.), the Clean Water Act (42 U.S.C. § 1251 et seq.) or any state statute, including any regulations promulgated thereunder, for any occurrence or event with respect to the Facilities occurring subsequent to the Effective Time, provided however that this covenant not to sue shall not apply with respect to any affirmative acts of operation or disposal by such persons with respect to the Facilities occurring after the abandonment authorized herein. This covenant not to sue does not pertain to any matters other than those specified in this paragraph.

11. In consideration for the Agent's agreement to allow the Debtors to use an additional amount of cash collateral up to $10,000 to continue the current environmental monitoring and oversight of the West Helena Facility until 5:00 pm Eastern Standard Time on Friday, October 18, 2002 (after which time the

ADEQ or its agent will enter upon the site and assure continued environmental monitoring and oversight of the West Helena Facility), the ADEQ hereby and forever discharges, releases and covenants not to sue, to take any other civil judicial or administrative action (including for injunctive relief) against, or to seek any reimbursement of past or future response costs against, the Agent or any of the Secured Lenders in respect of any hazardous substances, pollutants, contaminants or other environmental conditions, present or existing on or under, or emanating from, the West Helena Facility from the beginning or time until 5:00 pm Eastern Standard Time on Friday, October 18, 2002, including, without limitation, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901 et seq.), the Clean Air Act (42 U.S.C. Sections 7401 et seq.), the Clean Water Act (42 U.S.C. Sections 1251 et seq.), and Titles 8 and 15 of the Arkansas Code, in each case as amended and including any regulations promulgated thereunder. This Stipulation and Order settles and resolves, without the admission or adjudication of any issue of fact or law, the Agent's and each of the Secured Lenders' potential liability to the ADEQ, with respect to all matters addressed herein, and the Agent and each of the Secured Lenders shall be entitled to protection against contribution claims to the maximum extent provided pursuant to 42 U.S.C. Section 9613(f)(2).

12. After the Effective Time, the EPA and ADEQ, and their agents, shall at all times have the right to access the West Helena Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the West Helena Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions

or response measures. Debtors agree to request that ENSAFE provide ADEQ copies of any documents generated, collected or otherwise in the possession of ENSAFE that relate to the West Helena Facility.

13. The Debtors are authorized to cancel any insurance policies pertaining to the Facilities as of the Effective Time, except to the extent the premiums for such insurance coverage have been paid in full and the Debtors would not be entitled to a refund, if such insurance coverage was canceled.

14. After the Effective Time, the EPA and MDEQ, and their agents, shall at all times have the right to access the Vicksburg Facility for purposes of continuing the operation of the ponds and wastewater systems, as the Agencies deem appropriate, conducting investigations relating to contamination at or near the Vicksburg Facility, obtaining samples, assessing the need for, planning, or implementing additional response measures, or performing any and all removal or remedial activities, corrective actions or response measures. This provision shall not act in derogation of Miss. Code Ann. § 49-17-21 or pre-existing state permit conditions with regard to access.

15. With the consent of the Secured Lenders, all mortgages, liens and other security interests held by the Secured Lenders in the Facilities or any part thereof, including the land and any buildings, structures, improvements, facilities, equipment, fixtures, and other tangible chattels and articles of tangible personal property thereon, therein or thereunder (the "**Secured Lender Liens**"), shall be, and are hereby unconditionally and irrevocably deemed released, discharged and terminated as of the Effective Time and the abandonment of the West Helena Facility to the Cedar non-bankruptcy estate and the abandonment of the Vicksburg Facility to the Vicksburg non-bankruptcy estate shall, in each case, be free and clear of the Secured Lender Liens, and this Stipulation and Order shall be binding upon and govern the acts of all entities, including, without limitation, all filing agents, filing officers, title agents, title companies, administrative

agencies, governmental departments, secretaries of state, federal, state and local officials and all other persons and entities who may be required, by operation of law, the duties of their office or contract, to accept, file, register or otherwise record or release any documents or instruments.

16. Upon written request by the ADEQ, the Cedar non-bankruptcy estate shall convey title to the West Helena Facility or parts thereof to any entity identified by the ADEQ, and upon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by its terms.

17. Absent an objection, the leases for personal property located at the Facilities (the "Facility Leases"), a schedule of certain of such leases is annexed hereto as Schedule I, shall be deemed rejected pursuant to section 365(a) of the Bankruptcy Code, as of one day subsequent to the date that the Debtors provide the lessors under the Facility Leases (the "Lessors") with notice by overnight delivery of such proposed rejection. Such notice also shall provide (i) for a ten-day period within which such Lessors may file an objection to such rejection and (ii) that the Lessors should immediately contact Mr. Philip Gund, the Debtors' "Restructuring Officer" or a person designated by Mr. Gund to arrange for a pick-up of the personal property under the Facility Leases.

18. MDEQ, by its agreement to this Stipulation and Order, does not waive any defenses created by Miss. Code Ann. § 11-46-9, nor accept any liabilities not otherwise imposed by operation of law.

19. The Debtors waive and relinquish their interest, if any, in (i) Trustmark National Bank Trust and Asset Management Account No. 35-L903-00-8; (ii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "EPA Agreement"); (iii) Trust Agreement dated October 6, 1982 between Vertac Chemical Corporation, as Grantor and First National Bank, as Trustee (the "Mississippi Department of Natural Resources Agreement "); and (iv) Amendment dated June 27, 1986 to the Mississippi Department of Natural Resources Agreement.

20. Each signatory to this Stipulation and Order certifies that he or she is authorized to enter into the terms and conditions of this Stipulation and Order and to bind legally the party represented by him or her except that the execution of this Stipulation and Order by the Assistant Attorney General is required with respect to the United States.

21. This Stipulation and Order shall be deemed a "Final Order" when (i) the time to appeal or seek review, rehearing, reargument or certiorari has expired and no stay of appeal is in effect or petition for review, rehearing, reargument or certiorari proceeding is pending; or (ii) an appeal of this Stipulation and Order has been affirmed and the time for further appeal has expired.

22. As a contribution to the environmental cleanup of the Facilities, the Debtors shall pay $200,000 to the ADEQ and $200,000 to the MDEQ from the "proceeds of any sale by the Debtors of the EPA Registrations" deposited into "Avoidance Realization Account" as provided in paragraph 19 of the "Final Order (i) Authorizing Use of Cash Collateral (ii) Providing for Adequate Protection and (iii) Granting Related Relief dated August 21, 2002 (the "Final Cash Collateral Order"), notwithstanding any provisions in the Final Cash Collateral Order to the contrary, but only to the extent the ADEQ and MDEQ

are granted allowed administrative claims in those amounts under section 503(b) of the Bankruptcy Code. The MDEQ and ADEQ shall be entitled to such an administrative priority to the extent that they can demonstrate that such expenses were incurred with respect to the Facilities and were consistent with applicable environmental laws. The ADEQ and MDEQ agree that the Debtors or any chapter 7 trustee in the Debtors' cases will have no administrative expense liability to the MDEQ and ADEQ in excess of the $200,000 claims provided herein. Solely in connection with the confirmation of a chapter 11 plan, the Agencies agree not to object to a plan on the basis of section 1129(a) (9)(A) of the Bankruptcy Code. The abandonment of the Facilities and payment of $400,000 shall be without prejudice to additional administrative expenses or general unsecured claims of the United States, except to the extent that the United States asserts a claim as an assignee of ADEQ or MDEQ. Nothing in this Stipulation and Order shall waive or prejudice any right of any party to object to additional claims by the EPA on any ground other than a lack of an entitlement to an administrative priority based on the abandonment of the Facilities. The United States may perfect a lien for its costs with respect to the Facilities on the abandoned property to the extent permitted by applicable law.

23. The Debtors are authorized to transfer or otherwise make available all books and records relating to the Vicksburg Facility and/or the West Helena Facility (the "Facility Books and Records") to any Agency making such request without further order of the Court. Subject to further order of the Court, the Debtors shall secure and preserve the Facility Books and Records until such time as they are transferred to an Agency and provide each of the Agencies at least ten (10) days notice of their intention to destroy or discard any of the Facility Books and Records or transfer such Facility Books and Records to one of the Agencies.

24. The Debtors are hereby authorized to execute and deliver any instrument and perform any other act that is necessary in order to effectuate the purposes of this Stipulation and Order.

25. This Court shall retain jurisdiction to hear and determine any matter arising from or relating to this Stipulation and Order.

Dated: October 18, 2002

FOR THE DEBTORS

/S/_____
Yehuda Yoked, President
Cedar Chemical Corporation

/S/_____
Yehuda Yoked, President
Vicksburg Chemical Company

AGREED as to paragraphs 1 through 7 (inclusively), 11, 15, 20, 21, 24 and 25. NO OBJECTION as to the remaining paragraphs.

FOR THE AGENT, ON BEHALF OF
THE SECURED LENDERS

Dated: October 18, 2002

/S/_____
Benjamin Kaminetzky (BK 7741)
DAVIS POLK & WARDWELL
450 Lexington Avenue
New York, New York 10017

Counsel for JPMorgan Chase Bank, as
Agent for the Secured Lenders

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: New York, New York
October 17, 2002

JAMES B. COMEY
United States Attorney for the
Southern District of New York
Attorney for the United States

By: /S/_____
David J. Kennedy (DK-8307)
Assistant United States Attorney
100 Church Street - 19th Floor
New York, New York 10007
Temp. Tel: (718) 422-5649
Temp. Fax: (718) 422-1789

Except as to paragraph 9:

Dated: Washington, DC
October __, 2002

_____
THOMAS L. SANSONETTI
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044 - 7611

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Atlanta, Georgia
October 18, 2002

Region 4

/S/_____
J. I. PALMER, Jr.
Regional Administrator
U.S. Environmental Protection Agency,
61 Forsyth Street, S.E.
Atlanta, Georgia 30303
(404) 562-9674; telefax: (404) 562-9664

Except as to paragraph 9, and subject to the approval of the Assistant Attorney General:

Dated: Dallas, Texas
October 17, 2002

/S/_____
MARK A. PEYCKE
Chief, Superfund Branch
Office of Regional Counsel, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, Texas 75202
(214) 665-3159; telefax: (214) 665-6460

Dated: October 17, 2002

FOR THE MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE MISSISSIPPI COMMISSION ON ENVIRONMENTAL QUALITY

/S/_____
Charles H. Chisolm
Executive Director

Dated: October 17, 2002

/S/_____
Chuck D. Barlow
General Counsel

Dated: October 18, 2002

FOR THE ARKANSAS DEPARTMENT
OF ENVIRONMENTAL QUALITY

/S/_____
Marcus Devine
Director

IT IS SO ORDERED:

Dated: New York, New York
October 18, 2002

/s/ STUART M. BERNSTEIN
Chief United States Bankruptcy Judge

EXHIBIT 2
Professional Service Agreement

ARCADIS

PROFESSIONAL SERVICES AGREEMENT

APPROVED BY WORK AUTHORIZATION

This PROFESSIONAL SERVICES AGREEMENT (the "Agreement") is made as of October 25 2005 between Mississippi Bluffs Industrial Park, LLC (hereinafter referred to as the "Client") and ARCADIS G&M, Inc., a Delaware corporation (hereinafter referred to as "ARCADIS"), jointly referred to as the "Parties."

ARCADIS represents that it is knowledgeable and experienced in providing professional technical, engineering and consulting services; and

Client will have environmental remediation obligations in connection with its purchase of the former Vicksburg Chemical Company property in Vicksburg, Mississippi ("Site"). Such remediation will be completed pursuant to an Agreed Order between Client, Mississippi Silvertip Development, LLC, ARCADIS, Harcros Chemicals, Inc., and the Mississippi Department of Environmental Quality ("MDEQ"). The Client desires to have ARCADIS perform such professional services pursuant to and more particularly described in the General Scope of Work and/or approved Work Authorizations.

NOW THEREFORE, in consideration of the mutual covenants and promises and other good and valuable consideration contained herein, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:

1. Services to be Performed

ARCADIS agrees to diligently and professionally perform professional consulting services and produce all of the deliverables, described in this Agreement and all exhibits hereto for the proper completion of the General Scope of Services described in Exhibit A.

Services performed under this Agreement may also be detailed in and determined by Work Authorizations approved by the Client, MDEQ and ARCADIS in the form attached hereto as Attachment 1, which shall constitute a part of this Agreement.

ARCADIS shall have no obligation to commence the Services as stipulated in this Agreement and/or any associated Work Authorization until both this Agreement and the applicable Work Authorization are fully executed and delivered to ARCADIS. Any schedule requirements applicable to ARCADIS Services will be set forth in Exhibit A. Services shall include all the work necessary to perform the work described in the Work Authorization and this Agreement.

ARCADIS shall faithfully perform the Services required under this Agreement in accordance with standard of care, skill, training, diligence and judgment provided by competent professionals who perform work of a similar nature to the work described in this Agreement and any Work Authorization.

2. Payment for Services

Client agrees to pay for the Services performed by ARCADIS in accordance with this Agreement and any approved Work Authorization. Except as provided below, payment for Services are set forth and shall be subject to the ARCADIS standard invoicing practices in the attached Exhibit B, which is incorporated herein. Payment Terms shall specify Lump Sum Fees, Hourly Billing Rates, and Reimbursable Expenses, and provide for interest on payments not timely made, and for the suspension of work and attorneys' fees in the event that payments are not made by the Client.

Upon execution of this agreement, an escrow account ("Remediation Account") shall be established by Client at _____ ("Escrow Agent") in the amount of $8,000,000 for the purpose of receiving and administering the funds of the Remediation Account. The Remediation Account shall be opened in the names of both Client and ARCADIS as their interests appear hereunder and such funds in the Remediation Account will be used to compensate ARCADIS for services provided under this Agreement at the Site. ARCADIS and MDEQ shall be the beneficiaries of the escrow account. All interest earned on the Remediation Account will be used to pay for performing services performed at the Site. The Escrow Agent for the Remediation Account shall make payments to ARCADIS from the Remediation Account in connection with accomplishment of tasks described in the various Work Authorizations. ARCADIS shall submit an invoice along with evidence of the accomplishment of the tasks simultaneously to the Escrow Agent, Client, and MDEQ by Federal Express overnight service. MDEQ will provide written approval of the invoice within 21 days from its receipt of the invoice. The Escrow Agent shall issue the payment to ARCADIS ___ days after receipt of MDEQ's written approval of the invoice.

A. Client and MDEQ shall have twenty-one (21) days from the receipt of each invoice within which to deliver written objections concerning such invoice to both the Escrow Agent and ARCADIS. Each objection shall set forth with specificity the nature of the objection. In the event notice of objection to an invoice is provided as required herein, Client, MDEQ, and ARCADIS shall use their best efforts to resolve the objection to the disputed Invoice. Payment of the undisputed portion of the disputed invoice shall be due within thirty (30) days of the Client's and MDEQ's receipt of the invoice. Payment of the disputed portion of the disputed invoice shall be due within thirty (30) days of the Parties' resolution of the disputed Invoice. All objections to invoices that have not been resolved within 60 days shall be subject to dispute resolution as provided herein. Objections to payment of invoices must be based on one or more of the following reasons:

   (1) ARCADIS has failed to complete the task in question as specified in any Work Authorization, including but not limited to a failure to use ordinary and customary rates and charges in accordance with any Work Authorization,

   (2) Services are not being performed in accordance with the Agreement or the Agreed Order due to the fault or negligence of ARCADIS (or its agents, subcontractors, or materials suppliers),

   (3) ARCADIS has failed to make payments in accordance with the terms of ARCADIS' contracts with its subcontractors or for labor, materials, or equipment supplied to the Site,

(4) A claim against Client or the Site, has been filed by a third party, based solely on the Services performed by ARCADIS,

(5) ARCADIS or its agent, subcontractor, or materials supplier has caused damage to Client or the Site, or

(6) ARCADIS is otherwise failing to comply with a material provision of the Agreement and the Agreed Order.

B. ARCADIS shall instruct Escrow Agent to deliver to ARCADIS and Client and MDEQ monthly statements showing all activity occurring with respect to the Remediation Account.

C. Neither Party shall pledge, assign, hypothecate, or otherwise encumber the Remediation Account.

D. The Parties agree to execute any required document instructing the Escrow Agent with respect to the obligations to manage and disburse funds in accordance with this Agreement. The Parties agree that (1) MDEQ shall be a party to the escrow agreement, (2) the agreement shall provide that disbursements from the funds cannot be made without MDEQ approval, and (3) in the event of termination of this Agreement or default by the parties, MDEQ shall direct the expenditures from the fund for the remediation of the Site.

3. Term of Agreement

This Agreement will be effective upon the date a fully executed copy of this Agreement is delivered to ARCADIS or ARCADIS is authorized by Client and MDEQ to begin work. Unless terminated, this Agreement shall remain in effect until the scope of services defined in any Work Authorization has been fully performed as determined by MDEQ. Upon completion of the Services and payment, this Agreement may be terminated by either Party, with approval from MDEQ.

4. Changes in the Work

At any time after execution of this Agreement, Client and MDEQ may order changes in ARCADIS Services consisting of additions, deletions, and revisions within the general scope of services being performed by ARCADIS under this Agreement and/or any applicable Work Authorizations. Whenever a change in the scope and/or time for performance of services occurs, or if Client has notified ARCADIS of a change, ARCADIS shall submit to Client within a reasonable time an estimate of the changes in cost and/or schedule, with supporting calculations and pricing. Pricing shall be in accordance with the pricing structure of this Agreement.

Notwithstanding the above, Client may direct ARCADIS in writing to perform the change prior to approval of price and schedule adjustments by Client. If so directed, ARCADIS shall not suspend performance of this Agreement during the review and negotiation of such change, as long as the change is a reasonably foreseeable alteration of the Services originally contemplated. In the event Client and ARCADIS are unable to reach agreement regarding changes in price and/or time associated with a change order, the matter shall be submitted to mediation as provided in Paragraph 15 of this Agreement.

5. Termination of Agreement

Termination by Mutual Concurrence. The Parties may terminate this Agreement by mutual concurrence in writing, but not before giving MDEQ ten (10) days written notice. In the event that the Parties terminate this Agreement by mutual concurrence, MDEQ shall have the authority to direct expenditures from the Remediation Account to continue remediation of the site.

Termination for Cause. Either Party may terminate this Agreement for cause. Termination for cause shall be by written "Termination Notice" from the terminating Party, delivered to the defaulting Party and MDEQ at least thirty (30) days prior to the proposed "Termination Date." The defaulting Party shall have thirty (30) days from receipt of the Termination Notice within which to cure the alleged default, or the Termination Date shall be reasonably extended if the cure requires a period of time in excess of thirty days so long as the defaulting Party has undertaken such reasonably diligent efforts to cure such default. Any termination for cause shall be without prejudice to any claims that either Party may have against the other Party, its agents or subcontractors. In the event that this agreement is terminated for cause, MDEQ shall have the authority to direct expenditures from the Remediation Account to continue remediation of the site.

6. Conflict of Interest

ARCADIS shall not perform, or enter into any agreement for, services for any other person, corporation or entity, except with prior written consent of Client, if, in the sole discretion of ARCADIS, the performance of the services could result in a conflict with ARCADIS obligations under this Agreement. ARCADIS represents that it has reasonably evaluated potential conflicts and has disclosed to Client in writing any prior or existing relationships which present, or could appear to present, a conflict with the Services to be performed.

7. Use of Documents

Except for documents requested by MDEQ, documents provided by ARCADIS pursuant to this Agreement are instruments of service of ARCADIS, and ARCADIS shall retain an ownership and property interest therein (including the right of reuse) until Client has made full payment to ARCADIS for such documents pursuant to this Agreement. All documents generated by ARCADIS pursuant to this Agreement are not intended or represented to be suitable for reuse by Client or others on any other project, or other purposes other than that for which the same were created. Client agrees not to reuse said reports or materials on any other project, or for any other purpose other than that for which they were created, without the prior written consent of ARCADIS. Reuse of said reports or other material by Client for any other purpose or on other projects without written permission or adaptation by ARCADIS for the specific purposed then intended shall be at the Client's and user's sole risk, without liability on ARCADIS's part, and Client agrees to indemnify and hold harmless ARCADIS from all claims, damages and expenses, including attorneys' fees, arising out of such unauthorized reuse by Client.

8. Record Retention

Any and all files, data, records, reports and other information or work product generated in connection with or related to ARCADIS Services, shall be retained and stored by ARCADIS in hard copy and/or electronic

form for a period of three (3) years from the completion of Services or such other period as specified by the Client. If Client decides to retain said records, it must notify ARCADIS no later than thirty (30) days prior to the expiration of the period. Any additional expense of retaining documents or transfer of documents to Client at the end of such three (3) year period will be at Client's expense. This provision shall not apply to drafts of plans, specifications, drawings or reports that shall be destroyed immediately upon being superceded in the project.

9. Proprietary Rights of ARCADIS

Client acknowledges that ARCADIS has developed systems, processes, apparatus, analytical tools and methods which are proprietary to ARCADIS and which are used in its business. Such systems, processes, apparatus, analytical tools and methods, including software, patents, copyrights and other intellectual property, and all derivations, enhancements or modifications thereof made by ARCADIS, including those as a result of work performed by ARCADIS for Client hereunder ("Intellectual Property"), shall be and remain the property of ARCADIS. This Agreement shall not confer any grant of a license to any such Intellectual Property of ARCADIS, or right of use by the Client independently or other Client contractors.

10. Indemnification

ARCADIS shall indemnify, defend and hold harmless Client, its directors, officers, employees, shareholders and affiliates from and against any and all liabilities, losses, damages, costs and expenses (including attorneys' fees and court costs) which Client and its directors, officers, employees and agents hereafter may suffer in connection with any claim, demand, action or right of action (whether at law or in equity) brought or asserted by any third party because of any personal injury (including death) or property damage to the extent caused as a result of negligent acts, errors, omissions, or willful misconduct on the part of ARCADIS. ARCADIS shall not be liable to the extent that any liability, loss, damage, cost, and expense results from an act or omission, negligence or willful misconduct by Client or its directors, officers, employees or agents, or by any other person or entity not acting on ARCADIS' behalf or under ARCADIS' right of direction or control.

The Parties shall at all times remain entirely responsible for the results and consequences of their own negligence and agree to indemnify and hold harmless the other Party from and against any and all claims, losses, damages, costs and expenses, including attorney's fees, which may arise or result from such Party's negligence.

11. Limitation of Liability

The total liability, in the aggregate, of ARCADIS and its directors, officers, employees, agents, associates or subcontractors, and any of them, to Client or anyone claiming by, under or through the Client, for any and all injuries, claims, losses, expenses, including attorneys' fees, expert fees or court costs and damages whatsoever arising out of or in any way related to ARCADIS Services under this Agreement, from any cause or causes whatsoever, including but not limited to, negligent acts or omissions, professional negligence, breach of contract, strict liability, errors or omissions of ARCADIS, or the employees, directors, officers,

agents, associates or subcontractors of ARCADIS, or any of them, will be limited to the total amount of fees paid to ARCADIS under this Agreement. In no event, however, shall any such liability to Client exceed the amount of applicable insurance that ARCADIS has agreed to procure and maintain under this Agreement.

ARCADIS agrees to correct, at its own expense, any services provided under this Agreement that do not conform to the standard of care hereunder for a period of one year following the completion of services. No other guarantee or warranty, express or implied, is intended by this Agreement.

The Client and ARCADIS waive incidental, indirect, or consequential damages, loss revenues or profits from claims, disputes or other matters in question arising out of or relating to this Agreement, whether such claims arise from negligence, breach of contract, or strict liability. This mutual waiver is applicable, without limitation, to all consequential damages due to either Party's termination in accordance with Paragraph 5 above.

12. Insurance

ARCADIS shall maintain for the term of this Agreement insurance policies covering:

Worker's Compensation and Employer's Liability insurance, statutory limits.

Comprehensive General Liability insurance, a total of $5,000,000 each occurrence and $10,000,000 in aggregate.

Comprehensive Automobile Liability insurance, a total of $1,000,000 each occurrence and $2,000,000 in aggregate.

Professional errors and omissions insurance with a per claim limit of not less than $5,000,000.

Client shall be included as an additional insured with waiver of subrogation rights on the Comprehensive General Liability and Comprehensive Automobile liability insurance coverage provided above, except where Client shall decline same in advance and in writing.

13. Confidentiality

The Services are undertaken as an integral and necessary part of Client's activities at the Site. In order to protect the Client's confidential and proprietary commercial and financial information, any documents, records, data or communications provided by Client or produced by ARCADIS for Client ,except those documents provided to or requested by MDEQ, shall be treated as confidential and proprietary. Such information shall not be disclosed to any third party, unless necessary to perform the Services, hereunder. Information will not be considered confidential if: (i) the information is required to be disclosed as a part of the Services, hereunder; (ii) the information is in the public domain through no action of ARCADIS in breach of the Agreement; (iii) information is independently developed by ARCADIS; (iv) the information is acquired by ARCADIS from a third party not delivered to ARCADIS in breach of any known confidentiality agreements; or (v) disclosure is required by law, court order or subpoena. In the event ARCADIS believes that it is required by law to reveal or disclose any information, prior to disclosure or production ARCADIS shall first notify Client in writing.

14. Notices

All notices required or permitted hereunder shall be in writing and shall be served on the Parties at the following address:

ARCADIS:

ARCADIS G&M, Inc.
10352 Plaza Americana Drive
Baton Rouge, LA 70816

Attn: David Escude'

Client:

Mississippi Bluffs Industrial Park, LLC
860 Bramblewood Drive
Castle Rock, CO 80104

Attn: Paul Bunge

MDEQ:

Mississippi Department of Environmental Quality
2380 Highway 80 West
Jackson, MS 39205

Attn: Executive Director

Any such notices shall be either: (i) sent by certified mail, return receipt requested, in which case notice shall be deemed delivered three business days after deposit, postage prepaid in the U.S. Mail; (ii) sent by overnight delivery using a nationally recognized overnight courier, in which case it shall be deemed delivered one business day after deposit with such courier; or (iii) sent by personal delivery. The above addresses may be changed by written notice to the other Party; provided, however, that no notice of a change of address shall be effective until actual receipt of such notice. Copies of notices are for informational purposes only, and a failure to give or receive copies of any notice shall not be deemed a failure to give notice.

15. Mediation

If any dispute arises out of or relates to this Agreement, or the breach thereof, and the dispute cannot be settled through direct discussions by the representatives of the Parties, the Parties agree then to submit the matter to mediation under the Construction Industry Mediation Rules of the American Arbitration Association before having recourse to a judicial forum. No written or oral representation made during the course of any settlement negotiations or mediation shall be deemed a party admission.

16. General Provisions

Special Conditions. The Client and ARCADIS agree that the **SPECIAL AND TECHNICAL CONDITIONS**, attached hereto as Exhibit C and incorporated herein by reference, are expressly made a part of this Agreement and all Work Authorizations approved by the Client, MDEQ and ARCADIS.

Entire Agreement. This Agreement constitutes the entire agreement between the Parties with respect to the Services, and supersedes all prior negotiations, representations or agreements relating thereto, written or oral, except to the extent they are expressly incorporated herein. Unless otherwise provided for herein, no amendments, changes, alterations or modifications of this Agreement shall be effective unless in writing, executed by Client and ARCADIS. Except for MDEQ, there are no third party rights or benefits under this Agreement.

No Third Party Beneficiaries. MDEQ is a third party beneficiary of this Agreement. Except for MDEQ, the enforcement of the terms and conditions of this Agreement and all rights of action relating to such enforcement, shall be strictly reserved to the Client and ARCADIS, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person on such Agreement. It is the express intention of the Client and ARCADIS that sub consultants and any other person other than the Client, MDEQ or ARCADIS receiving any benefits from this Agreement shall be deemed to be incidental beneficiaries only.

Force Majeure. Except for the payment of money for Services already completed, each Party shall not be liable to the other for failure to perform its obligations hereunder if and to the extent that such failure to perform is caused by or results from causes beyond its control, including without limitation, strikes, lockouts, or other industrial disturbances, civil disturbances, fires, acts of God, acts of a public enemy, acts or omissions of subcontractors, compliance with any regulations, orders or requirements of any governmental body or agency, or inability to obtain transportation or necessary materials in the open market.

Severability and Waiver. If any portion of this Agreement is held invalid or inoperative, then so far as is reasonable and possible, the remainder of this Agreement shall be deemed valid and operative, and effect shall be given to the intent manifested by the portion held invalid or inoperative. The failure by either Party to enforce against the other Party any term or provision of this Agreement shall be deemed not to be a waiver of such Party's right to enforce against the other Party the same or any other such term or provision.

Governing Law. The laws of the State of Mississippi shall govern this Agreement and the legal relations of the Parties.

Compliance with Law. ARCADIS and Client will use reasonable care to comply with applicable laws in effect at the time the Services are performed hereunder, which to the best of their knowledge, information and belief, apply to their respective obligations under this Agreement. Client shall cooperate with ARCADIS in obtaining any permits or licenses required for the performance of the Services.

Delegation and Assignment. Either Party may at any time delegate, orally or in writing, this Agreement, or any portion thereof, with the prior written consent of the other Party and MDEQ. No such delegation shall operate to relieve the Party of its responsibilities hereunder.

Headings. Headings of particular paragraphs are inserted only for convenience and are in no way to be construed as a part of this Agreement or as a limitation of the scope of the paragraphs to which they refer.

IN WITNESS THEREOF, the Parties have caused this Agreement to be executed on the day and year first set forth above.

Client		**ARCADIS G&M, Inc.**	
By:	Mississippi Bluffs Industrial Park	By:	Eberhardt Weerth
Title:	Managing Member	Title:	Eberhardt Weerth Executive Vice President
Date:	Oct 25, 05	Date:	Oct. 25, 2005

EXHIBIT A
General Scope of Work

Client is purchasing the former Vicksburg Chemical Company site that is a former chemical manufacturing facility at 4280 Rifle Range Road in Vicksburg, Mississippi. The facility from time to time produced fertilizer products, pesticides, and other chemicals. The plant portion of the facility's soil and groundwater underneath the facility now is contaminated with various chemicals. The scope of services under this Agreement will include an initial baseline assessment of the site. This will be followed by development of a groundwater remediation plan, a soil action plan, subsequent implementation of such plans and any other work required by MDEQ that is reasonable and related to the remediation of the Site.

ARCADIS will prepare the work plans and implement the work at the direction of MDEQ and with the concurrence of Client and MDEQ. Work Authorizations will be prepared with scope and budgets. They will be prepared by ARCADIS in consultation and approval by Client and MDEQ.

Attachment 1
Work Authorization
No. _____

[FORM OF WORK AUTHORIZATION. MODIFY PER REQUIREMENTS OF PROJECT.]

This WORK AUTHORIZATION is entered into by and between ARCADIS G&M, Inc., a Delaware corporation ("Consultant") and _____ ("Client"). This Work Authorization incorporates by reference the SERVICES AGREEMENT entered into by the Parties dated _____ (the "Services Agreement"). The Services Agreement is hereby amended and supplemented as follows:

1. General Description of Basic Services

1.1 Client hereby authorizes Consultant to perform the following general scope of Basic Services:

1.1.1

A more detailed description of Basic Services, if necessary, is included as Attachment 1.1 to this Work Authorization.

1.2 Client authorizes Consultant to provide the Basic Services described in this Work Authorization in connection with the following Site(s):

1.2.1

A more detailed description of the Site(s), if necessary, is attached as Attachment 1.1 to this Work Authorization.

1.3 The above-described Basic Services shall be provided by Consultant in phases, as set forth below. (N/A indicates phase is not applicable to services to be provided under this Work Authorization).

2. Study and Report Phase

2.1 During the Study and Report Phase, Consultant shall:

2.1.1

2.2 _____ copies of the Report will be submitted to Client.

The Report shall be submitted to Client within _____ calendar days of the effective date of this Work Authorization.

3. Preliminary Design Phase

3.1 During the Preliminary Design Phase Consultant shall:

3.1.1

3.2 _____sets of Consultants Preliminary Design will be submitted.

3.3 The Preliminary Design will be submitted to Client within _____ calendar days following receipt of written authorization from client to Consultant to proceed with the Preliminary Design Phase Services.

4. Final Design Phase

4.1 During the Final Design Phase Consultant shall:

4.1.1

4.2 _____ sets of Contract Documents will be submitted to the Client.

4.3 The Contract Documents will be submitted to Client within _____ calendar days following written authorization from Client to proceed with the Final Design Phase Services.

5. Bidding or Negotiating Phase

5.1 During the Bidding or Negotiating Phase Consultant shall:

5.1.1

6. Construction Phase

6.1 During the Construction Phase Consultant shall:

6.1.1

6.2 The Construction Phase will commence within _____ calendar days following the completion of the Final Design Phase.

7. Operational Phase

7.1 During the Operational Phase, Consultant shall:

7.1.1

8. Additional Services

8.1 The Basic Services described in Paragraphs I through VII above do not include the following Additional Services which, *upon written request from* Client, will be performed by Consultant in accordance with the terms of this Work Authorization:

8.1.1

8.2 The Basic Services described in Paragraph I through VII above do not include the following services that are to be performed by Client or, upon written request from Client by Consultant, as an Additional Service by Consultant:

8.2.1

9. Compensation for Services

9.1 Lump Sum Method:

9.1.1 Client shall pay Consultant a lump sum fee of _____ for Basic Services provided under this Work Authorization, which shall be paid by Client as follows:

9.1.1.1

9.1.2 In addition to the lump sum fee, costs incurred by Consultant pursuant to this Work Authorization shall be reimbursed by Client as follows:

9.1.2.1

9.1.3 Client shall pay Consultant for Additional Services as follows:

9.1.3.1

9.1.4 Other provisions concerning payment are as follows:

9.1.4.1

9.1.5 Consultant's current fee schedule is attached.

9.2 Time and Materials Method:

9.2.1 Client shall pay Consultant for Basic Services in accordance with the Fee Schedule for Professional and Environmental Services:

9.2.1.1

9.2.2 Other costs incurred by Consultant pursuant to this Work Authorization shall be reimbursed as follows:

9.2.2.1

9.2.3 Client shall pay Consultant for Additional Services as follows:

9.2.3.1

9.2.4 Consultant's estimate of the amount that will become payable for Basic Services under this Work Authorization is _____. This amount is only an estimate for planning purposes, is not binding on the Parties, and is not the maximum amount payable to Consultant.

9.2.5 Other provisions concerning payment are as follows:

9.2.5.1

9.2.6 Consultant's current fee schedule is attached.

9.3 Percentage of Construction Cost Method:

9.3.1 Client shall pay Consultant for Basic Services an amount equal to _____% of Construction Cost for all Services of Consultant under this Work Authorization.

9.3.2 Construction Cost shall be determined as follows:

9.3.2.1

9.3.3 Upon the conclusions of each of the following phases, Client shall pay such additional amount, if any, as may be necessary to bring Consultant's total compensation paid during such phase on account of the percentage of Construction Cost to the following percentages:

Phase	Percentage
Study and Report	
Preliminary Design	
Final Design	
Bidding and Negotiating	
Construction	
Operational	
	100%

9.3.4 Other costs incurred by Consultant pursuant to this Work Authorization shall be reimbursed as follows:

9.3.4.1

9.3.5 Client shall pay Consultant for Additional Services as follows:

9.3.5.1

9.3.6 Other provisions concerning payment are as follows:

9.3.6.1

9.3.7 Consultant's current fee schedule is attached.

10. Schedule for Services

10.1 Consultant shall perform the Basic Services described above in accordance with the following schedule:

Client

By: _____

_____

Title: _____

Date: _____

ARCADIS G&M, Inc.

By: _____

_____

Title: _____

Date: _____

Mississippi Department of Environmental Quality

By: _____

_____

Title: _____

Date: _____

ATTACHMENT 1.2
Method of Charging for Professional Services/Fee Schedule

PERSONNEL AND QUALIFICATIONS	TASK DESCRIPTION
Senior Scientist / Senior Engineer 2 Requires a bachelor of science degree and 10 years of experience. Serves as senior technical leader. May supervise and direct the work activities of junior professionals and technicians. May perform very limited field services, and have limited involvement in projects. Duties typically include senior review of reports, developing strategies, and attending client/regulatory agency meetings. Responsible for approving designs, reports, plans and specifications before submittal to clients or regulatory agencies.	• Program management • Project oversight • Reviews technical reports • Reviews plans/designs • Prepares proposals
Senior Engineer / Geologist 1 Requires professional registration and 8 years of technical and managerial experience. Serves as senior technical leader for environmental investigation or remediation projects of large scope of complexity and has developed substantial expertise in the field of practice. May supervise or direct the work activities of lower level professionals and technicians. Will perform very limited fieldwork, and have limited involvement in projects. Duties typically include senior review of reports, developing strategies, and attending client/regulatory agency meetings. Responsible for approving designs, reports, plans, and specifications before submittal to clients or regulatory agencies.	• Program management • Project oversight • Reviews technical reports • Reviews plans/designs • Prepares proposals
Project Engineer/Geologist Requires professional registration and 5 years of technical experience. Leads and supervises team of lower level personnel, but would have a limited number of hours charged to each site, and only a small percentage of total field hours. Generally supervises staff engineers/geologists, environmental scientists, and technicians and oversees several projects. May prepare proposals, environmental programs, and plan specifications for site remediation activity.	• Project management • Plan preparation • Review technical reports • Report preparation • Prepare proposals • Prepare permit applications
Staff Engineer/Geologist 2 Requires a bachelor of science degree in engineering or geology and four to six years of experience. Is responsible for gathering field data and is competent at data analysis. Must be able to conduct assessment and remedial activities. May write reports. This position will normally be highest in number of hours billed to project for field work and report preparation.	• Project management • Data review and analysis • Report preparation • Field work preparation/planning • Supervises assessment activities • Remedial system installation /Prepare permit applications
Environmental Scientist 1 Requires a degree in engineering, geology, or related environmental science degree. Works under supervision to perform tasks similar to staff engineer/geologist.	• Data review and analysis • Report preparation • Onsite supervision • Site assessment planning • Remedial system installation • Prepare permit applications
Engineering Technician Requires high school diploma or GED and sufficient experience to perform required tasks. Responsible for general supervision of system installation, system operation, and maintenance (O&M). Collects system effluent samples. Purges wells and collects soil and groundwater samples.	• System O&M • Well development and sampling • Soil sampling • Waste handling • Remedial system installation • Free product removal • Monitoring • Surveying
CADD Operator/Draftsperson Responsible for generating specialized drawings and maps utilizing Computer Aided Design.	• Drafting • CAD/CADD work

ATTACHMENT 1.2
Method of Charging for Professional Services/Fee Schedule

PERSONNEL CLASSIFICATIONS AND MAXIMUM HOURLY RATES

PERSONNEL TITLE	RATE/HOUR
Senior Scientist/Engineer 2	$180.00
Senior Engineer/Geologist 1	$140.00
Project Engineer/Geologist	$100.00
Staff Engineer/Geologist 2	$80.00
Environmental Scientist 1	$62.00
Engineering Technician	$62.00
CADD Operator/Draftsperson	$59.00
Administrative/Clerical	$38.00

Note: Additional Personnel Classification, including qualifications, task description and hourly rate, must be approved by MDEQ and must be added to Individual Work Authorizations.

EXHIBIT B
Payment Terms

1. Payment Terms

Except as provided in paragraph 2, ARCADIS shall invoice Client for Services in accordance with ARCADIS standard invoicing practices. Invoices are due and payable on receipt and should be remitted by check or wire transfer of immediately available funds as follows:

Lockbox:	**Electronically (wire transfer):**
ARCADIS G&M, Inc. Dept 547 Denver, Colorado 80291-0547	Wells Fargo Bank ABA 102000076 Account #1018164751, ARCADIS G&M

If Client fails to make any payment due ARCADIS for services and expenses within thirty (30) days after receipt of invoice, the amounts due ARCADIS will be increased at the rate of 1.5% per month (or the maximum rate of interest permitted by law, if less) from accounts not paid within thirty (30) days.

If Client reasonably objects to any portion of an invoice, Client shall provide written notification to ARCADIS of Client's objection and the basis for such objection within twenty-one (21) days of the date of receipt of the invoice, and the Parties immediately shall make every effort to settle the disputed portion of the invoice. Client shall not offset amounts due ARCADIS under a Work Authorization for any credit or disputes arising under a different Work Authorization. Client shall waive any objections to ARCADIS invoice if it fails to timely provide such written notice to ARCADIS. If payment of invoices by Client is not maintained on a current basis, ARCADIS may, after giving seven (7) days' written notice to Client, suspend further performance until such payment is restored to a current basis. All suspensions shall extend the time for performance by a length of time equal to the duration of the suspension, and ARCADIS shall be paid for Services performed and charges incurred prior to the suspension date, plus suspension charges. Suspension charges shall include, without limitation, putting of documents and analyses in order, personnel and equipment rescheduling or reassignment adjustments, additional insurance/bonding coverage, extended overhead and costs, and all other related costs and charges incurred and attributable to suspension.

In the event of litigation or other proceeding to enforce performance of this Agreement or any payment obligation under this Agreement, the prevailing Party shall be entitled to recover from the other Party attorneys' fees and costs as may be reasonably incurred by reason of the litigation.

2. Compensation for Services

2.1 Lump Sum Method:

2.1.1 Client shall pay Consultant a lump sum fee of _____ for Basic Services provided under this Work Authorization, which shall be paid by Client as follows:

2.1.1.1

2.1.2 In addition to the lump sum fee, costs incurred by Consultant pursuant to this Work Authorization shall be reimbursed by Client as follows:

2.1.2.1

2.1.3 Client shall pay Consultant for Additional Services as follows:

2.1.3.1

2.1.4 Other provisions concerning payment are as follows:

2.1.4.1

2.1.5 Consultant's current fee schedule is attached.

2.2 Time and Materials Method:

2.2.1 Client shall pay Consultant for Basic Services in accordance with the Fee Schedule for Professional and Environmental Services:

2.2.1.1

2.2.2 Other costs incurred by Consultant pursuant to this Work Authorization shall be reimbursed as follows:

2.2.2.1

2.2.3 Client shall pay Consultant for Additional Services as follows:

2.2.3.1

2.2.4 Consultant's estimate of the amount that will become payable for Basic Services under this Work Authorization is _____. This amount is only an estimate for planning purposes, is not binding on the Parties, and is not the maximum amount payable to Consultant.

2.2.5 Other provisions concerning payment are as follows:

2.2.5.1

2.2.6 Consultant's current fee schedule is attached.

2.3 Percentage of Construction Cost Method:

2.3.1 Client shall pay Consultant for Basic Services an amount equal to _____% of Construction Cost for all Services of Consultant under this Work Authorization.

2.3.2 Construction Cost shall be determined as follows:

2.3.2.1

2.3.3 Upon the conclusions of each of the following phases, Client shall pay such additional amount, if any, as may be necessary to bring Consultant's total compensation paid during such phase on account of the percentage of Construction Cost to the following percentages:

Phase	Percentage
Study and Report	
Preliminary Design	
Final Design	
Bidding and Negotiating	
Construction	
Operational	
	100%

2.3.4 Other costs incurred by Consultant pursuant to this Work Authorization shall be reimbursed as follows:

2.3.4.1

2.3.5 Client shall pay Consultant for Additional Services as follows:

2.3.5.1

2.3.6 Other provisions concerning payment are as follows:

2.3.6.1

2.3.7 Consultant's current fee schedule is attached.

EXHIBIT C
Special and Technical Provisions

I. Site Conditions

ARCADIS shall not be liable for: (i) damage or injury to any subterranean structures (including, but not limited to, utilities, mains, pipes, tanks, and telephone cables) or any existing subterranean conditions; or the consequences of such damage or injury, if (with respect to this clause (i)) such structures or conditions were unknown and were not identified or shown, or were incorrectly shown, in information or on plans furnished to or obtained by ARCADIS in connection with the Services; (ii) concealed conditions encountered in the performance of the Services; (iii) concealed or unknown conditions in an existing structure at variance with the conditions indicated by the Scope of Services or Work Authorization; or (iv) unknown physical conditions below the surface of the ground that differ materially from those ordinarily encountered and are generally recognized as inherent in work of the character provided under this Agreement.

Client shall provide to ARCADIS all plans, maps, drawing and other documents identifying the location of any subterranean structures on the Site. Prior to location of any drilling or excavation below the ground surface, ARCADIS shall obtain the concurrence of the Client as to the location for such drilling or excavation.

Should: (i) concealed conditions be encountered in the performance of the Services; (ii) concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Scope of Services or Work Authorization; or (iii) unknown physical conditions below the surface of the ground differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided under this Agreement; then the amount of this Agreement and/or time for performance shall be equitably adjusted by change order upon claim by either Party made within twenty (20) days after the first observance of the conditions.

II. ENVIRONMENTAL AND HAZARDOUS MATERIAL RELATED WORK

(1) In the event the services provided hereunder by ARCADIS call for the disposal of wastes (hazardous, non-hazardous or solid under applicable laws and regulations), the work shall be performed in conformity with all applicable laws and regulations. Client shall execute all manifests for the transportation, storage and disposal of any wastes removed from the Site or Property. If directed by the Client, ARCADIS may sign such manifests solely on behalf of and for the Client, and ARCADIS assumes no liability therefore and Client releases and waives any claim against ARCADIS and shall indemnify ARCADIS from any claims or liability arising from or related thereto, in accordance with paragraph 2., below. Client shall provide to ARCADIS all plan, maps, drawing and other documents identifying the location of any hazardous materials on or suspected on the Site.

At no time will ARCADIS take title to any solid and/or hazardous wastes located on or removed from the Site or Property. ARCADIS shall provide to Client with at least two independent bids for transportation and disposal sites and any such wastes shall be transported and disposed of as directed by Client and in conformity with all applicable laws and regulations.

Nothing in this Agreement shall be construed or interpreted as requiring ARCADIS to assume the status of, and Client acknowledges that ARCADIS does not act in the capacity nor assume responsibilities of, Client or others as a 'generator,' 'operator,' 'transporter' or 'arranger' in the treatment, storage, disposal or transportation of any hazardous substance or waste as those terms are understood within the meaning of the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or any other similar federal, state or local law, regulation or ordinance. Client acknowledges further that ARCADIS has played no part in and assumes no responsibility for generation or creation of any hazardous waste, pollution condition, nuisance, or chemical or industrial disposal problem, if any, which may exist at any site that may be the subject matter of this Agreement. ARCADIS, after commencement of Services, to the extent of its actual knowledge shall notify Client upon discovery of any hazardous or toxic hazardous substance or conditions which may require handling, treatment, removal or disposal, or which pose or may pose a danger or risk to the work.

(2) Client shall defend and indemnify ARCADIS from and against any and all demands, claims, liabilities (including strict liabilities), losses, costs, expenses (including attorneys' fees), fines, penalties, forfeitures, liens, and damages on account of ARCADIS' having contracted with Client in connection with investigation, cleanup, handling, removal, treatment, storage, transportation or disposal of any regulated substances or hazardous or toxic wastes at any Site or sites, or arising from or related to any existing contamination or conditions of the Site or property; or that result from ARCADIS having arranged for the disposal or transportation of hazardous or non-hazardous wastes that were located on, removed from, or generated by Client from the Site. Client shall not be liable to the extent that any such liability, loss, damage, cost, or expense results from an act of negligence or willful misconduct by ARCADIS or its subcontractors.

Charles H. Chisolm
Mississippi Department of
Environmental Quality
2380 Highway 80 West
Jackson, Mississippi 39205

Dear Charles:

Pursuant to the Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief, Case Nos. 02-11039 (SMB) and 12-11040 (SMB) (Bankr. S.D.N.Y. Oct. 18, 2002) ("Stipulation and Order"), Mississippi Silvertip Development, LLC requests the Mississippi Department of Environmental Quality to direct the Vicksburg Chemical Company non-bankruptcy estate to convey title to the Vicksburg Facility as defined in the Stipulation and Order to the following entities:

1. Mississippi Bluffs Industrial Park, LLC : The Vicksburg Chemical Plant Site as depicted on the attached map and survey which will be provided to the Department prior to the conveyance.
2. Mississippi Bluffs Development, LLC: : The remaining property Vicksburg Chemical Property as depicted on the attached map and survey which will be provided to the Department prior to the conveyance.

We request that the Department pursue this matter as expeditiously as possible.

Sincerely,

Paul Bunge

Mississippi Silvertip Development, LLC

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

December 5, 2005

FILE COPY

Mr. James I. Palmer, Jr.
Regional Administrator, Region 4
United States Environmental Protection Agency
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-8960

Re: Vicksburg Chemical Agreed Order

Dear Jimmy:

The Mississippi Department of Environmental Quality ("MDEQ") received a letter on November 2, 2005, signed by Beverly Banister of Region 4 of the Environmental Protection Agency ("EPA") and addressed to Jerry Banks of MDEQ. The EPA letter referenced MDEQ's planned Agreed Order for the Vicksburg Chemical Company ("VCC") site. It appears that Region 4 continues to struggle with understanding the uniqueness of the situation and MDEQ's rationale in negotiating the Agreed Order in its current form. My hope is that this letter will provide you some context to understand why MDEQ decided to structure the Agreed Order in this manner.

MDEQ, Harcros Chemicals, Inc. ("Harcros"), ARCADIS G&M, Inc. ("ARCADIS"), and Silvertip Development, LLC ("Silvertip") have been negotiating the terms of the Agreed Order during the course of almost three years. Early in the process, it appeared that there would be sufficient resources from the reuse of the plant site and from the development of the remaining acreage to address all environmental concerns at the site. However, during the course of the negotiations, and after close scrutiny of data generated by VCC prior to its bankruptcy, ARCADIS and MDEQ realized that there were some key data gaps. The data gaps made it impossible to determine, without further assessment, the full extent of the contamination at the site and thus the degree of financial risk to Silvertip for undertaking responsibility for cleanup of the site. Initially, MDEQ, Harcros, ARCADIS, and Silvertip intended to establish cleanup criteria in the Agreed Order. However, with the uncertainty caused by gaps in the sampling data, it became apparent that a more flexible approach was needed to balance the risk to Silvertip, an innocent prospective purchaser which was not responsible for the contamination at the site and which will not contribute any additional contamination.

After almost three years of struggling to craft an Agreed Order that would address the unknown risks, the parties to the proposed Agreed Order met to discuss other possible approaches. During that meeting, the parties decided to employ an innovative approach which is reflected in the current version of the Agreed Order. Under the new approach, Silvertip would deposit $8,000,000 into an escrow account to be used for remediation costs. The next best offer for the site was for $4,500,000 to pay cleanup costs and that offer did not include the variety of economic development aspects that are present in Silvertip's offer. Silvertip plans to construct high end commercial and residential sites and a championship golf course on the 500 ± acres which are outside of any contaminated areas identified during the more than 12 years that Region 4 had regulatory oversight. Harcros will sustainably reuse the plant site in a manner that will not add to or exacerbate the contamination. This new approach involves a partnership where all interested parties desire what is best for the environment as well as the community. MDEQ will serve in the regulatory role ensuring that, among other things, the cleanup actions are conducted in a manner that is protective of human health and the environment. ARCADIS, a nationally recognized environmental consulting firm that has worked with EPA on a number of remediation projects, will provide the services necessary to achieve a cost effective cleanup of the site.

MDEQ disagrees with the assertion in the EPA letter that the present version of the Agreed Order is "markedly weaker" than earlier versions. In fact, the present version of the Agreed Order provides added control over costs and more flexibility to determine the best and most cost effective way to accomplish the cleanup. While existing data will be utilized, some assessment is still necessary. Once the assessment is completed, the parties will determine the most efficient and effective way to utilize the funds to clean up the site. MDEQ will oversee these efforts. The Agreed Order, together with the Professional Services Agreement, provides MDEQ control over approving the planned cleanup activities before ARCADIS begins its work. MDEQ also has control with its right to withhold approval of payments for any work that does not meet with regulatory goals. Because the next best offer for the site would only yield roughly half the amount for the cleanup costs, MDEQ believes that accepting $8,000,000 to cleanup the site is a logical transition from the original approach which did not yield an agreement after almost three years of negotiations.

The only other alternatives are to either expend federal money to remediate the site or continue to expend federal and/or state funds to simply maintain the site. The latter alternative does nothing in the near term to control migration of groundwater contamination. As acknowledged in the EPA letter, it may be possible to completely remediate the site for $8,000,000 and with MDEQ oversight of the remediation the money will be efficiently utilized to yield the most effective cleanup for the available funds. The approach envisioned in the Agreed Order can be implemented almost immediately and provides us an opportunity to act before contamination expands further and becomes even more costly to control. Further, the VCC site would be restored to a productive use for the community.

MDEQ has developed a creative approach, which is in the best interest of the State of Mississippi, to deal with this difficult situation. As MDEQ moves forward, MDEQ staff will continue to call on the technical experience of Region 4 in a continued effort to work to achieve an effective and efficient cleanup that will protect human health and the environment and will support the revitalization of the Vicksburg community.

Sincerely,

Charles H. Chisolm
Executive Director

CHC/RF:jar

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

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DEQ-OPC

Mr. Jerry B. Banks
Environmental Engineer Administrator
Groundwater Assessment and Remediation Division
Office of Pollution Control
Mississippi Department of Environmental Quality
Post Office Box 10385
Jackson, Mississippi 39289

RE: Proposed Vicksburg Chemical Agreed Order

Dear Mr. Banks:

Thank you for the opportunity to comment on the proposed Agreed Order between the Mississippi Commission on Environmental Quality (Commission) and prospective purchasers for the Vicksburg Chemical plant site. I would like to take this opportunity to acknowledge the diligent work of your staff at the Mississippi Department of Environmental Quality (MDEQ) to negotiate with prospective purchasers for the necessary cleanup work. EPA and MDEQ share the goal to remediate this property and return it to productive use for the community. Indeed, since 2002, EPA has expended over $1 million at this site providing security and oversight, so we are very interested in getting a substantial return on this investment of taxpayer dollars.

Our principal concern is that, taken as a whole, this latest version of the Order differs significantly from, and is markedly weaker than, prior versions we have reviewed. While we acknowledge that MDEQ may decide to proceed with the Order in its current form, we offer the following suggestions which would, if adopted, materially clarify and strengthen the agreement you propose to recommend to the Commission.

Initially, and very importantly, all details of environmental cleanup requirements shown in previous versions of the Order have been deleted, and this draft contains no human health or environmental protection standards for guiding and evaluating the remediation effort. Rather, the Order summarily sets an $8 million cap on remediation. Although the Order requires a baseline assessment and other remediation plans and their implementation, the purchasers' commitment to perform work is limited by the $8 million cap. Moreover, closure and maintenance of the on-site landfill is not mentioned.

There is no obligation for the purchasers to commit to assess or remediate beyond the 40 acre plant site. Assertions in the Order that the 500-acre tract is believed to be clean are in conflict with data showing that the groundwater is contaminated at the boundary of the Plant site.

As we have said in numerous prior discussions, while the majority of the larger tract might be uncontaminated based on geography and past use, a more exact determination of the plume edge beyond the Plant site is needed to confirm this assumption. In addition and also as previously discussed with MDEQ, groundwater withdrawals from beneath the 500-acre tract would have to be controlled to prevent existing contamination from being drawn away from the Plant site itself. The Order makes no provision for such controls.

Although it is possible that remediation could be completed successfully under this Order, the absence of cleanup standards, the limitation of remediation activities to the 40 acre plant site itself, and the inclusion of a cost cap create the possibility that remediation will cease prior to achieving acceptable levels of contamination reduction/containment.

There are other limitations in the Order which give us concern. First, the Order sets out very short time frames for MDEQ to review and approve plans and reports associated with remediation. Second, there are consequences for MDEQ's failure to review documents or provide timely comments which could result in automatic, mandatory payments to the remediation contractor. This is especially troublesome since a remediation cost analysis giving the basis for the $8 million cap has not been provided to EPA. In addition, the Order makes no provision for an independent audit of expenditures from the remediation account. This is a concern because the remediation contractor is a party to, and presumably a beneficiary of, the Order. Finally, because the approach adopted in this Order does not use an established regulatory framework or cleanup standards, it will be difficult for EPA to provide technical assistance to the State in its review of remediation documents, if such assistance is requested.

If remediation is undertaken at the Vicksburg Chemical site and that work is incomplete, such that EPA has to conduct additional removal or remedial activities under its Superfund authority, the purchaser(s) might be subject to liability under CERCLA Section 107(a) as the owner/operator of the facility. Alternatively, if the prospective purchaser(s) qualifies as a Bona Fide Prospective Purchaser (BFPP) under CERCLA Section 101(40), then the purchaser(s) might be subject to a windfall lien. The windfall lien amount would be limited by the lesser of the increase in fair market value of the property attributable to EPA's cleanup activities or EPA's outstanding response costs at the site. Additionally, to maintain BFPP status, the prospective purchaser(s) will be required to comply with the continuing obligations specified in CERCLA Section 101(40).

Lastly, EPA must reiterate that, because the United States is not a party to MDEQ's proposed Agreed Order, the Order does not implicate or affect the rights of the United States. The Order also has no effect on, and does not alter, the federal regulatory status and obligations of the facility. Further, and very importantly, the position taken by EPA in its October 3, 2003, letter to Kevin Mirner of Harcross Chemical, Inc., was based upon the terms and conditions of the Agreed Order then under consideration and the information provided, and representations made, to EPA at that time. Because that Order was never finalized, the information we now have has changed, and the representations

now being made to EPA concerning this facility and the prospective purchasers are substantially different than they were earlier, the position taken by EPA in its October 3, 2003, letter never became effective.

As I mentioned at the outset, EPA is acutely aware of the potential benefits to the City of Vicksburg from redeveloping the Vicksburg Chemical plant site and its surrounding acreage, so we support MDEQ's continued efforts to achieve the cleanup and reuse of this property. We encourage MDEQ and the prospective purchasers to explore other cleanup alternatives which comply with the requirements of federal law, including the Resource Conservation and Recovery Act (RCRA) and CERCLA. As we have previously offered, Region 4 remains available to negotiate a Prospective Purchaser Agreement (PPA) with MDEQ and the prospective buyers. The Region has extensive experience facilitating the purchase and redevelopment of contaminated sites and has successfully used PPAs in similar situations. PPAs are particularly useful in these situations because they address the purchaser's potential liability stemming from existing contamination, they set forth standards for cleanup, and they can be structured as a three-way agreement among EPA, the State, and the purchasers.

We will be pleased to continue, on an expedited basis, our discussions with MDEQ on how best to cleanup and redevelop the Vicksburg Chemical site. Please do not hesitate to contact me at your convenience at (404) 562-9326.

Sincerely,

for Beverly Banister, Acting Director
Waste Management Division
EPA Region 4

MEMORANDUM

TO: **Vicksburg Chemical – To File**

FROM: **Andy McCain**

DATE: **September 20, 2005**

RE: **September 20, 2005 Sampling.**

Arrived at site at 8:30. Drove to southwest corner of property and took surface water samples (VOC, SemiVOC, Pesticides, and Metals) at location where drain enters creek. GPS location is 32 17' 31.7" N 90 54' 31.8"W. Departed area at 9:20 to go to lab.

FAX TRANSMITTAL

TO: Mississippi Department of Environmental Quality
ATTN: Trey Hess
(601) 961-5654
FAX: (601) 961-5300

FROM:

Michael R. Lockwood

RANGE EVALUATION TEAM

SJMAC-ESM
Defense Ammunition Center
1 C Tree Road, Bldg 35
McAlester, OK 74501-9053

Com: (918) 420-8121
DSN: 956-8121
FAX: (918) 420-8473
e-mail: michael.r.lockwood@us.army.mil

MESSAGE: Per our Telephone Conversation: Vicksburg Rifle Range Access Request/Notification.

NUMBER OF PAGES FAXED: _2_ EACH

VICKSBURG RIFLE RANGE, VICKSBURG, MS
SITE SURVEY TEAM MEMBERS:

Michael Lockwood, Quality Assurance Specialist (Ammunition Surveillance)
Ron Thornhill, Safety Specialist

The survey team members are employees of the US Army Technical Center for Explosive Safety/Defense Ammunition Center, McAlester, OK. They are currently conducting a Historical Records Search/Preliminary Assessment on a Formerly Used Defense Site (FUDS) for the Corps of Engineers-Rock Island. The site is the Vicksburg Rifle Range, Vicksburg, MS, Site # A04MS030400. The site was a National Guard Rifle Range used for weapons firing by Jackson Army Air Corps personnel between 1942-1945. It is located approximately four miles south of Vicksburg, MS, in the vicinity of Rifle Range Road.

A Site Survey team from our organization will be in the Vicksburg area 6-9 September 2005. The team is task to conduct research and conduct a non-intrusive investigation of the site subject to approval of the current landowners. The investigation includes GPS readings and photographs of the site. The team will visit city and county offices and conduct interviews with persons having knowledge of the site.

A portion of the site lies within the Vicksburg Chemical Company boundary. The team may require access to this part of the site. The team will be greatly appreciated any cooperation and support it may receive. Please direct any questions or concerns to the team members.

Contact Info: michael.r.lockwood@us.army.mil, (918) 420-8121
ronald.thornhill@us.army.mil, (918) 420-8395

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

August 2, 2005

FILE COPY

Mr. Skipper Gizrick
Trustmark National Bank
Vicksburg, MS

RE: Cedar Chemical Trust Account
Vicksburg Chemical Co. Site

Dear Skipper:

As you are aware, Trustmark National Bank currently administers a trust fund and stores platinum at its Vicksburg Branch related to the Vicksburg Chemical Co. site on behalf of the Mississippi Department of Environmental Quality (MDEQ). In addition, access to the platinum has been restricted to two individuals, Mr. Chuck Barlow, former chief counsel for MDEQ and myself. Mr. Barlow has since left MDEQ; therefore, the purpose of this letter is to request that Mr. Barlow be removed from the list of individuals given access to the platinum and to add Ms. Lisa Ouzts of MDEQ's Legal Division. I will continue to be the MDEQ's primary point of contact, but Ms. Ouzts may also be contacted, if needed. Should you have any questions or comments, contact me at (601) 961-5654.

Sincerely,

Jere "Trey" Hess, P.E., DEE
Brownfields Program Coordinator

cc: Lisa Ouzts, MDEQ-Legal

OFFICE OF POLLUTION CONTROL
POST OFFICE BOX 10385 • JACKSON, MISSISSIPPI 39289-0385 • TEL: (601) 961-5171 • FAX: (601) 354-6612 • www.deq.state.ms.us
AN EQUAL OPPORTUNITY EMPLOYER

MEMORANDUM

TO: **Vicksburg Chemical – To File**

FROM: **Andy McCain**

DATE: **June 15, 2005**

RE: **June 13, 2005 Sampling Event**

Bryan Young and I arrived at the site at about 9:15 AM for the purpose of sampling Deep Monitoring Wells 10 and 12. We started at MW 12. We determined the water column to be approx. 90 gal. for 3 volumes. We set up the Grundfus pump and began purging while monitoring stabilization parameters. The PH meter was giving erratic results so we did not take PH readings. However; conductivity readings, water temperature, and turbidity reading were taken and recorded for both wells. After 3 well volumes and parameter stabilization, MW 12 was sampled for VOCs and Pesticides (with dinoseb) with a new bailer. Samples were labeled and placed in a cooler with ice. The pump and hose was decontaminated using Liquinox in a large wash tub. We left for lunch at approximately 11:30.

We arrived back at the site and set up at MW 10 which took a while to find due to overgrowth. We uncapped the well and determined the water column to be 48 foot and the 3 volume purge to be approximately 90 gallons. The ground water from this well was more turbid than MW10. The well ran dry at about 50 gallons. We waited 45 minutes and sampled this well at 14:15 with a new bailer. Samples were collected for VOCs, Pesticides, and Dinoseb and placed in the cooler. We deconned the pump and hose and departed the site about 14:45 for Jackson. Bryan brought the samples to the DEQ lab.

Vicksburg Chem Date 6/13/05

Project/Client Vicksburg

Sampling Well 10 & 12 (Deep)

Arrived at site ~ 9:15 AM
Set up equipment at MW 12.
Did not have Sounding tape - Used a decorated large nut & Nylon String to find dept of water Column.
Used Grundfos pump to purge started MW12 @ 10:00 AM After 3 well Volumes & parameter stabalization Sampled well with a clean bailer @ 11:15. We deconned the pump & hose and went to eat. We found MW 12 & determined purge Volume ~ 90g. started purge @ 12:40 PM. Well ran dry @ 50 gal. at 1:30 PM. Let recharge until 2:15 PM and sampled with new bailer. We decorned pump & departed for Jackson and lab 2:45 PM.

Andy McCain

6/13/05

MW 10 - 4" well

10:00 AM Begin

Total depth 54'
Height of Water 5½'
Water Column ~ 48.5'

Purge Vol. = 3 · 49 · .6 = 88.6 gal

Parameters

@ 8 gal
TBD 46 NTU
1550 µm
24.8°

@ 25 gal
46 NTU
1720 µm
25.8°

@ 40 gal
34 NTU
1650 µm
27.1°

over

Location

Date 6-13-25

MW10 (cont)

@ 60 gal
155 NTU
1680 µM
20.1°

@ 75g 105 NTU
1700 µM
27.8°

@ 90g
115 NTU
1728 µM
27.5°

Sampled @ 11:15 with Bailer
VOCs & Pesticides with Dinoseb
Water Clear - no yellow tint

MW12 Water column = 48'
Vol = 90 gal
Began Purge @ 12:40

7.5g 57 NTU
670 µM
25.5°

Visit.

6/13

MW12

20g 189 NTU
730 µM
25.7°

32g 78 NTU
780 µM
24.1°

42.5g 62 NTU
760 µM
26.4°

Well rondry @ 1:30 PM

Let recharge & sampled for VOC & Pesticid w dinoseb at 2:15 PM with bailer

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

MEMORANDUM

TO: **Vicksburg Chemical – To File**

FROM: **Andy McCain** AM

DATE: **April 6, 2005**

RE: **March 25, 28 ,29, and 30 (2005) sampling event.**

On March 24 I got a message from Trey Hess that the EPA was coming down to Vicksburg Chemical on Monday, March 28 to do some sampling and were requesting our help. I called Steve Smith from EPA who suggested that I call Shanna Davis of Teta-Tech who was contracted to do sampling at the site. I called Shanna to see what we could do to help them. She requested that we go to the site and locate all the monitoring wells and make sure that they were all intact.

Bryan Young and I went to the site Friday morning about 8:30. Using several maps and overhead photos, we were able to locate every well on the site. Most of the wells were unmarked. While we had confidence that we had correctly located and identified each well location, we could not identify which was A or C out of a well pair. This would have to be determined using the well construction logs and a well sounder. We did not try to locate MW 3 as it was across the creek and we did not have access to it. We found that a 4-WD vehicle would be necessary to reach areas behind the water treatment pond where all the soil and sediment samples were to be taken.

When we got back to the office, I located all the well construction logs. I called Shanna and told her what we had found and she requested we meet her at the site early Monday morning. They would not be bringing a 4-WD vehicle so they requested that we bring ours. She also asked about disposal of purge water into the water treatment pond. I told her there were several drainage collection areas where purge water could be drained. She said she would get to Vicksburg on Sunday afternoon and would try to look over the site and would call me at home if there were any questions.

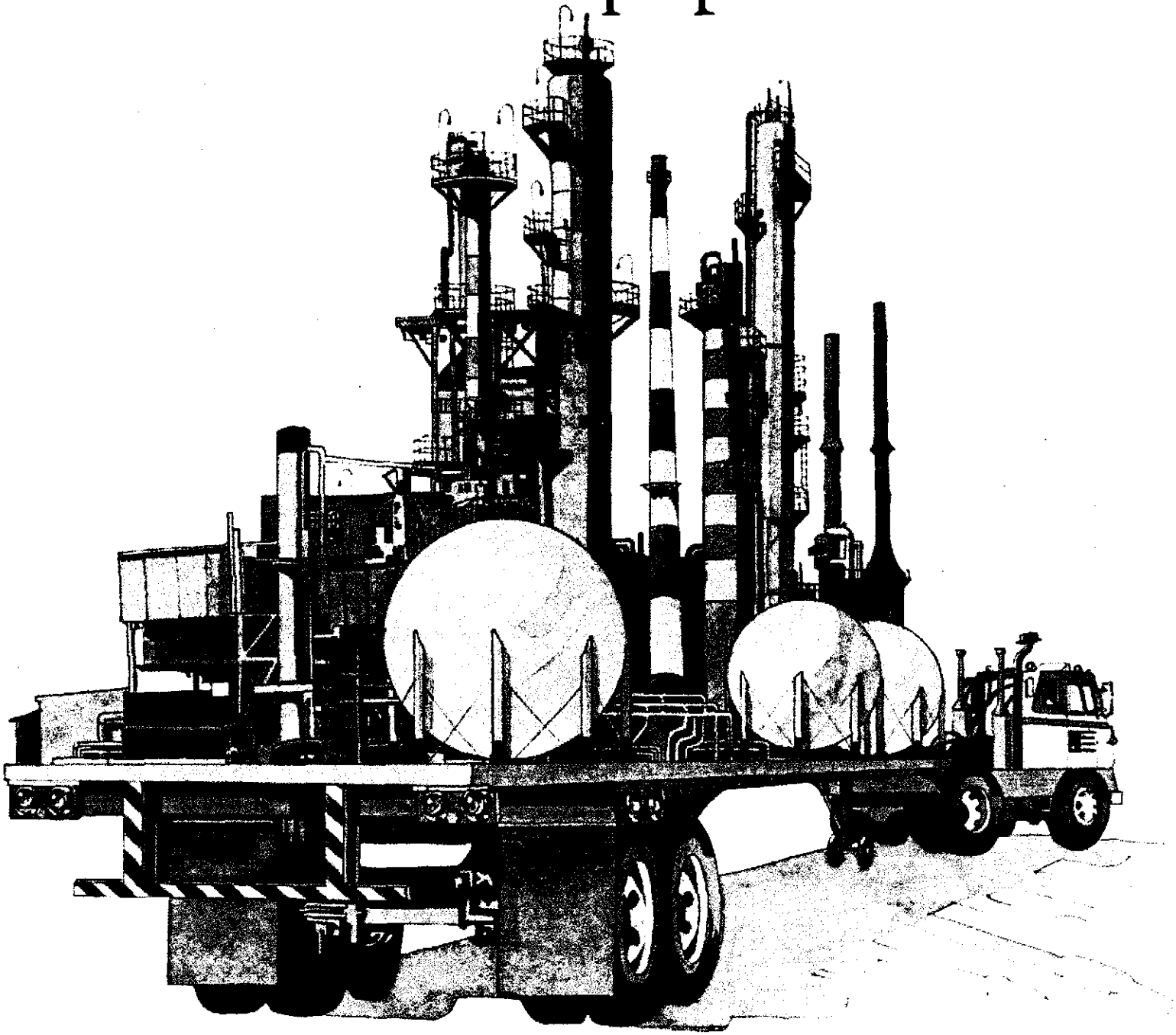
Bryan and I arrived at the site on Monday March 28 at 8:00 and met Steve, Shanna and two engineers from Tetra- Tech. While the two engineers were getting organized, I took Shanna and Steve on a tour of the plant and showed them where all the wells were located. The plan was to take soil, surface water and sediment samples first. EPA was sending 3 people to help with ground water sampling, but they would not arrive until

Tuesday. About 10:00 we took the 4-WD to the south part of the plant to begin sampling in the creek area. We started at the south end of the creek following the sampling plan and worked upstream to the north. We worked until 13:30 when they had to leave to get samples on FED-EX as they were using En-Core for soil VOCs. We agreed to meet at 7:00 the next day to try and catch up.

On Tuesday, March 29, Bryan and I arrived at the site at 7:10. There were 3 people from EPA (Athens) at the site. It took several hours to get organized. I was paired with Art from EPA to help with ground water sampling. Bryan went with the folks from Tetra-Tech to continue soil sampling. Art and I went to MW-17 which was a 4" well approx 30' deep. The well appeared to be badly silted in with almost no recovery. We spent the whole day trying to get 3 volumes out of it. Bryan and I left at 16:00. We had not pulled samples from MW-17 before I left. Bryan told me they had completed all soil, sediment, and surface water sampling planned for the event.

Bryan and I arrived at the site on Wednesday, March 30, at 8:00. Art told me he had pulled samples from MW-17 the previous night. He and I loaded up and went to MW-2 which was a 4" well to begin purging. Well recovery was slow and we drained MW-2 within two volumes with a Grundfus pump. Art decided to go to MW -10 which was a shallow 2" well and could be purged with a peristaltic pump. Water from this well had a distinct yellow color. On of the other EPA people (Maria) said that water from MW-12 was also yellow. There was a number of places in this area where there was yellow staining of the soil with dead vegetation. We went back to MW-2 about 11:00 and pulled samples with a bailer. I went to get some plastic sheeting for Art when I blew out two tires on the truck. It took the rest of the day to get out of there and get new tires for the truck. Art did tell me that MW-10 was still yellow when he had purged it enough to sample it. At about 15:00, Shanna told Bryan that they would not need us any more at the site. We left at 15:30

Recycling and Liquidating Complete Plants and Process Equipment



Louisiana Chemical Equipment Co., L.L.C.

Post Office Box 65064 Baton Rouge, LA 70896 Phone: (225) 923-3602 Web Site: www.lcec.com Fax: (225) 926-5237

VOL 6

Louisiana Chemical Equipment Co., L C. (LCEC) was founded in 1968 to bu sell used process equipment and complete plants for relocation throughout the world. Since our first job for Exxon, of Baton Rouge, we have grown into a full service company providing services worldwide. We have offices, storage facilities and complete plants located in North America, South America, Europe, Australia, and Asia to better serve your needs.

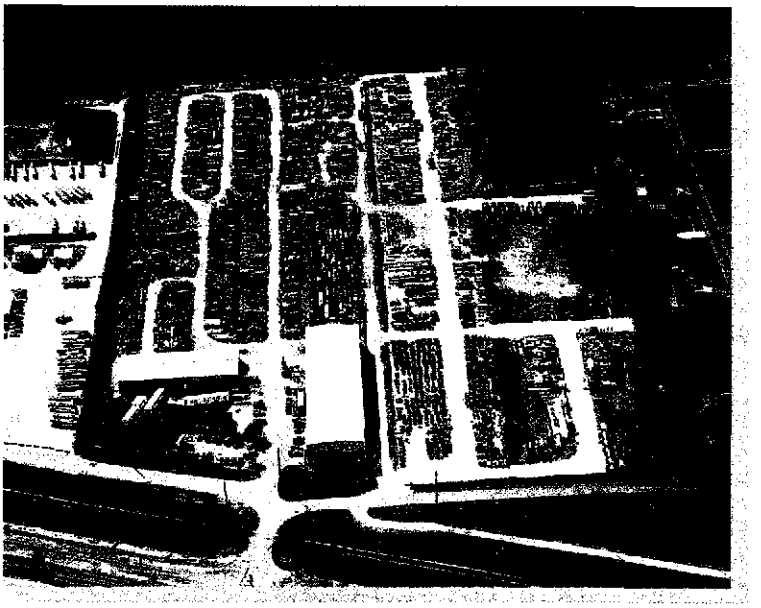
LCEC can also provide the following:

- Consulting and studies including equipment, process units and plant availability searches, pricing studies, plant re-use and modification studies.
- Appraisals for lenders, bankruptcy trustees, and owners of individual equipment or complete manufacturing facilities.
- Purchase of individual equipment or complete plants.
- Equipment Removal for scrap and for re-use, including match-marking of equipment, process units or complete plants.
- Sale of equipment or plants on a direct, joint venture or consignment basis.
- Inventory services including field inspection, vendor data review and computerized database.

- LCEC has grown into the world's largest buyers and sellers of complete plants and used process equipment. Our LaPorte, TX facility has over 25 acres of process equipment, including a thirty two thousand square foot warehouse full of compressors, pumps, plastics equipment, and other equipment.
- LCEC's executive offices are located in Baton Rouge, La; sales, computer, accounting, inventory and yard personnel are located in LaPorte, TX; storage yards or dismantlement projects are located in Baton Rouge, LA; Orange, TX; Green Springs, OH; Williamstown, NJ; LaValle, Quebec, Canada; Liberty, SC; Belfast, Northern Ireland; Johannesburg, South Africa; Seoul, South Korea; Manchester, England; Priolo, Italy; Rouen, France; Frankfurt, Germany; Oulu, Finland; Perth, Australia; and numerous other locations.
- LCEC's clientele of equipment buyers and sellers reads like Who's Who in the Chemical Industry. Our clients include Exxon, Pharmecia, Arco, Union Carbide, Air Products, Goodrich, Goodyear, Praxair, Mallinckrodt, ICI, Bayer, Enichem, Air Liquide, DSM, Borealis, Kemira, Grande Pardisse, ESSO, Hoechst, Irish Fertilizers, Linde, Sasol, Norsk Hydro, Celanese, Dow, BASF, Coastal, Kaiser, Texaco, Gulf, Shell, IMC, BP-Amoco, DuPont, Sun, Chevron, and hundreds, even thousands, of other satisfied, repeat clients.
- LCEC has purchased and sold many refineries and plants including: styrene, chlorine/caustic, acetylene, phenol, oxygen, acetic acid, methanol, ethanol, coffee, nitric acid, sulfuric acid, ammonia, fertilizer, hydrogen, urea, power, pharmaceutical, metals, glycol, vinyl acetate, butadiene, and pumping/compressor stations, to name a few.
- LCEC's equipment inventory includes more than 14,000 individual items listed by categories, including pumps, tanks, vessels, heaters, heat exchangers, centrifuges, mixers, motors, columns, silos, sifters, filters, compressors, 85 categories in all. The equipment materials of construction include chrome-moly, inconel, copper, titanium, glass-lined, fiberglass, cast iron, hastelloy, stainless, even plain old carbon steel.

You can now access our web site and receive quotes 24 hours a day. Our real time inventory can be seen at www.lcec.com.

- Our personnel are qualified, experienced and eager to assist; our track record is unequaled.
- LCEC is a premier used equipment dealer and we welcome the opportunity to serve you.

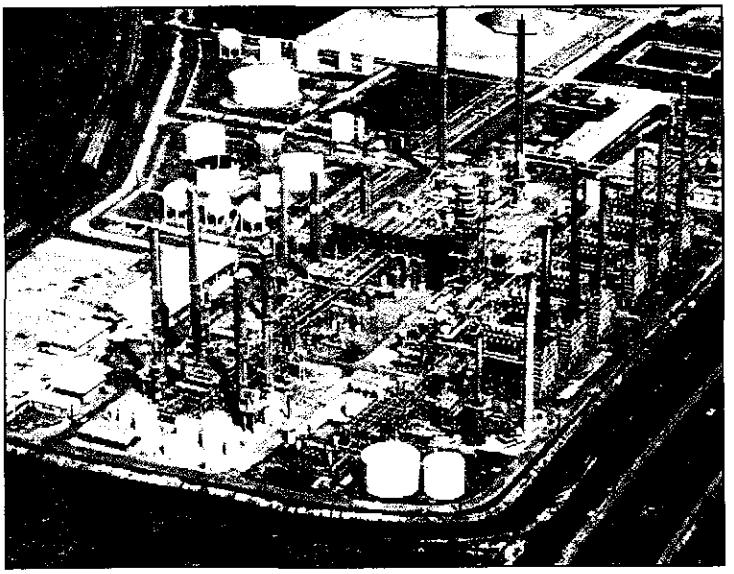


Our LaPorte, Texas Facility

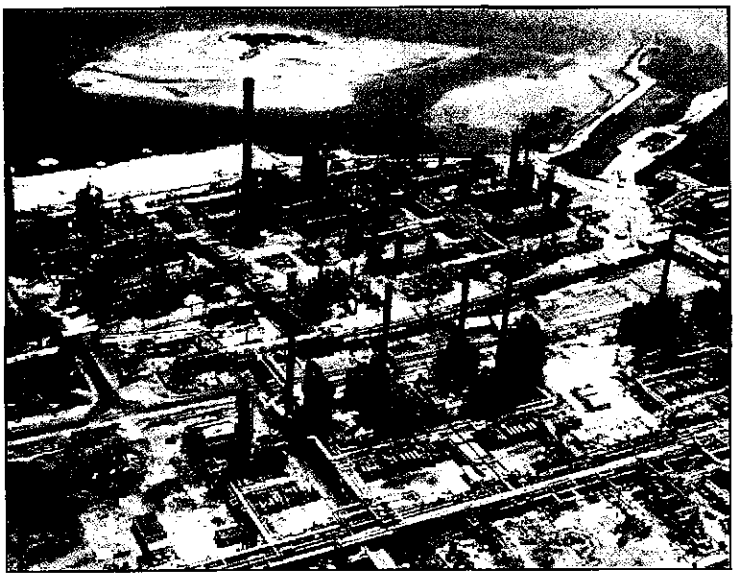
RECENT LCEC PROCESS PLANT AND UNIT SALES

CAPACITY	UNIT/PLANT TYPE	PURCHASING LOCATION	RELOCATED TO
300 MMPPY	Pxylene (3 Units)	Ponce, Puerto Rico	Canada
200 MMPPY	Phenol	Ponce, Puerto Rico	Canada
400,000 BPD	Refinery	Aruba	Aruba
350 TPD	Nitric Acid Plant	USA	USA
20,000 BPD	Hydrodesulfizer Unit	USA	China
8,050 BPD	Alkylation Unit	USA	China
5,000 BPD	Topping Unit	USA	France
3x200 TPD	Ammonia	USA	Argentina
1 MMPPY	Ethylene	Ponce, Puerto Rico	USA
500 TPD	Ammonia Nitrate	USA	USA
320 TPD	Nitric Acid	USA	USA
600 TPD	Urea	USA	USA
1x100 TPD	Ammonia	USA	Canada
20 MMCFD	Natural Gas Processing	USA	USA
80 TPD	Oxygen	USA	Australia
8,000 BPD	MTBE	USA	USA
80 MMPPY	Chlorine	Sweden	China
330 TPD	Urea	USA	China
32 MMPPY	CP Polymer	USA	India
67 TPD	Sulfur Plant	USA	USA
40 MMPPY	CP Polymer	USA	India
150 TPD	Ammonia	USA	Canada
10,000 TPD	Topping Unit	USA	Columbia
350 TPD	Nitric Acid	USA	USA
165 TPD	Nitric Acid	USA	China
200 TPD	Oxygen	USA	Turkey
100 TPD	Oxygen	USA	Peru
500 TPD	Nitric Acid	France	Poland
750 TPD	Ammonia	USA	Trinidad
400 TPD	Nitric Acid	Finland	India
1200 TPD	Ammonia	Italy	Canada
750 TPD	Ammonia	Finland	India
1000 TPD	Ammonia	France	USA
30 MW	Power Plant	Italy	India
285 TPD	Nitric Acid (98%)	USA	USA
280 TPD	Nitric Acid	USA	Canada
9,600,000 SCFD	Hydrogen	USA	India
550 TPD	Urea	Netherlands	Argentina
60 TPD	Oxygen (2)	USA	India
300 TPD	Nitric Acid	USA	China
92,000 TPY	Ethylene	Germany	USA
120,000 TPY	Petrochemical	France	India
90,000 TPY	Paraxylene	Czechoslovakia	Belgium
80,000 TPY	Polypropylene	Germany	Pakistan
165 TPD	Nitric Acid (3)	France	USA
1000 TPD	Ammonia	France	USA
575 TPD	Ammonia	USA	USA
1000 TPD	Urea	South Africa	China
10,000 BPD	Refinery	USA	Columbia
1000 BPD	Refinery	USA	USA
14,000 KW	Power Plant	Portugal	India
21 TPD	Oxygen	USA	Venezuela
300 TPD	Nitric Acid	USA	China
400 TPD	Oxygen	USA	Taiwan
1000 TPD	Ammonia (Coal Gas)	South Africa	China
4500 TPY	Sulfonation	Mexico	Uruguay
45 TPD	Oxygen	Korea	Thailand
130 TPD	Nitric Acid	USA	China
15,000 KW	Power Plant	USA	Costa Rica

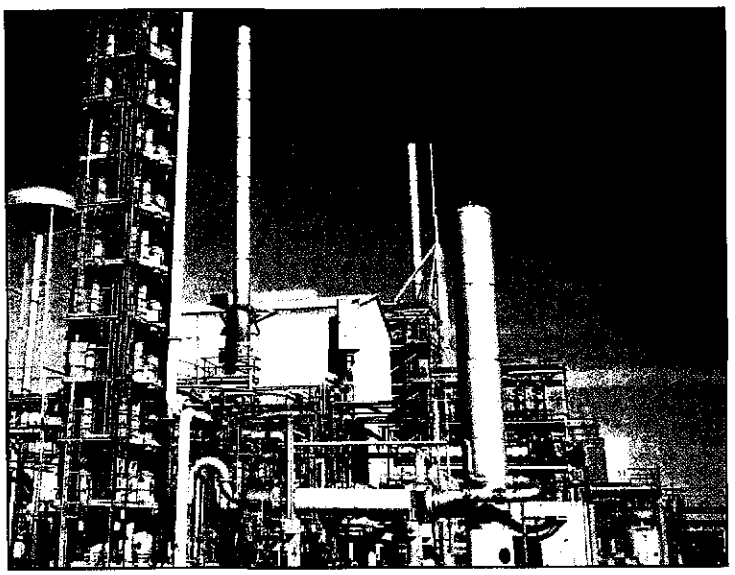
Success Stories



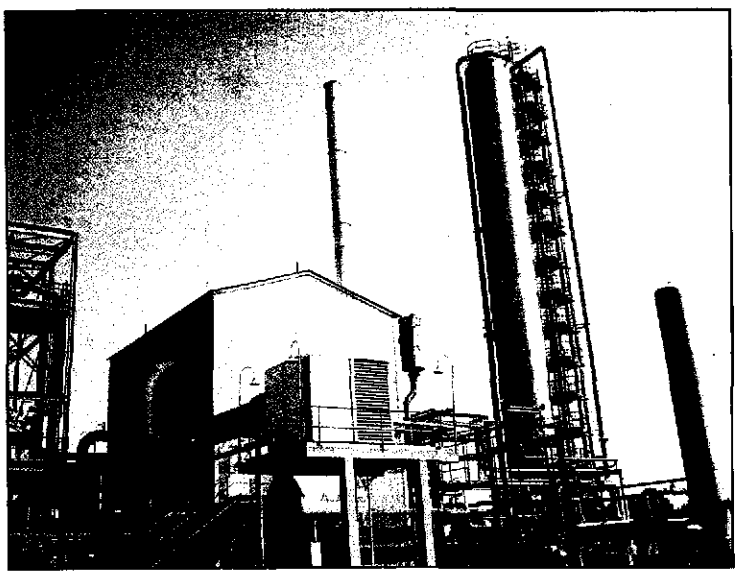
1 MMMPPY ethylene plant sold to Javelina Corp. for relocation to Texas for grass-roots refinery off gas recovery project. Built for Puerto Rico Olefins by MW Kellogg/Fluor in 1969; operated until 1979.



Fully integrated 440,000 BPSD heavy sour crude refinery built by Lago - Aruba. Sold to Coastal Corp. for restart and operation in place.



350 TPD Nitric Acid Plant relocated from USA to Canada.



450 TPD Nitric Acid Plant relocated from Belfast Northern Ireland to China.

Complete Fertilizer Plants for Sale

Capacity	Designer	StartUp	Shutdown
	Nitric Acid		
165 TPD (2)	G.P. (Dual Pressure)	1965	1999 revamp 1994
225 TPD	UHDE (Dual Pressure)	1965	1997
	Ammonia		
100 TPD	N-Ren	1976	Never Operated
265 TPD	Chemico	1964 (revamped 1981)	1998
380 TPD	Chemico	1967	1998
900 TPD	Kellogg	1977	2001
1000 TPD	Topsoe (Liquidating for parts)	1969	1994
1150 TPD	Chemico	1966 (revamped 1981)	2000
1500 TPD	Kellogg	1970	2001
1500 TPD	Kellogg (Liquidating for Parts)	1975	1999
	Urea		
600 TPD	Stamicarbon	1977	2001
850 TPD	UTI	1996 (revamped 1986)	2000
1300 TPD	Stamicarbon	1985	1991
	Urea Granulation		
850 TPD	Hydro Agri	1993	2000
	Ammonium Nitrate		
475 TPD	Chemico **Neutralizer**	1991	1992
750 TPD	UHDE	1985	1995

Other major items available:

76363: Ammonia Converter with Spare Basket 7' x 60' 10", 3485 psi
76311: Secondary Reformer, 15' 4" x 35' 6", Cafl Mfg., 512 psi
76360: Shift Converter, 13' 9" x 30' 10", 456 psi
76312: Steam W.H. Boiler, 8340 SQ FT 512/1334 psi, CS/CS/CS
76315: Heat Exchanger, CS/ CS/CS, 455/1493 psi, U-Tube Bundle, 4304 SQ FT
76341: Heat Exchanger, CS/CS/CS, 5186 SQ FT 3484/3484 psi, Mfg. by Fives Penhoet
76323: Heat Exchanger, CS/ 316L/316L, 58/426 psi,U-Tube Bundle, 5918 SQ FT
76301: Syn Gas Compressor, Model RC9B, 2785 ACFM, Mfg. by Cooper Bessemer
76302: Syn Gas Compressor, Model RB9B, 1011 ACFM, Mfg. by Cooper Bessemer
76304: Syn Gas Compressor, Model 8B, 1777 ACFM, Mfg. by Cooper Bessemer
76305: Condenser Turbine, Mfg. by Rateau, 21000 hp, 1138 psi

This is a partial list.
Contact LCEC or visit our web site at www.LCEC.com.

Louisiana Chemical Equipment Company, L.L.C.

Alvin G. Rotenberg, President or Steve O'Brien, Vice President
Phone: (225) 923-3602
Fax: (225) 926-5237
E-Mail: plants@lcec.com
Web Site: www.LCEC.com

OTHER COMPLETE PLANTS FOR SALE

CAPACITY	DESIGNER	DESCRIPTION	STARTUP	SHUTDOWN
70,000 MTPY	Mitsui	**POLYPROPYLENE**	1982	2001
70,000 MTPY	Montell	**POLYPROPYLENE**	1978	2000
72,000 MTPY	UHDE	**ACETALDEHYDE**	1970	1992
1500 TPD	Davey Power Gas	**METHANOL**	1970	1998
14,000 MTPY	Hoechst	**POLYESTER**	1968	1995
7.4 mmcfd	Air Products	**HYDROGEN**	1987	2001
40,000 TPY	Nippon	**POLYSTYRENE**	1968	1993
40,000 TPY	Nippon	**POLYSTYRENE**	1978	1997
500,000 TPY	Lummus	**ETHYLENE**	1970	1994
100,000 MTPY	Self	**ETHYLENE OXIDE/GLYCOLS**	1977	1996
Various	TGA	**BULK PHARMACEUTICAL**	1990	1996
50,000 TPY	Union Carbide	**HDPE**	1980	**Never Installed**
150,000 TPY	ICI	**PVC/Suspension**	1970's	2001
30,000 TPY	Waker Chemie	**PHTHALIC ANHYDRIDE**	1975	1995
60,000 TPY	Self	**DOP**	1969	1996
12,000 MTPY	Monsanto	**NYLON 66**	1988 Upgraded	1997
9,000 MTPY	Spinning	**NYLON6**	1987	1998
40,000 TPY	BSL	**SURFACANT**	1994 Upgraded	1997
225,000 MTPY	Self	**PTA**	1977	1999
60,000 TPY		**ACETIC ACID**	1982	1992
27,000 TPY	Bayer	**MALEIC ANHYDRIDE**	1962	1997
55 million lbs/year		**THERMO PLASTIC AROMATICS UNITS**	1999	2000
90,000 TPY	Crystalization	Paraxylene	1963	1993
60,000 TPY	Mobil	Isomerization	1963	1993
		REFINERIES		
20,000/50,000 BPD	Various		1960/1980's	1993
80,000/100,000 BPD	Various		1960's/1980's	1993
Various Sizes		**POWER PLANTS**	Gas-Steam-Coal	
38 TPD	Air Products	**OXYGEN**	1987	1998
100 TPD	Air Liquide	**LIQUID OXYGEN & N2 PLANT**	1972	2001
150 TPD	Air Liquide	**NITROGEN LIQUIFIER**	1978	1999
170 TPD	Air Liquide	**LIQUID OXYGEN**	1973	1995
260 TPD	Air Products	**GASEOUS OXYGEN**	1979	1999
350 TPD	Air Products	**GASEOUS OXYGEN**	1971	2000
450 TPD	Praxair	**GASEOUS OXYGEN**	1976	2000
500 TPD	Praxair	**GASEOUS OXYGEN**	1973	1999
1000 TPD	Air Liquide	**GASEOUS OXYGEN**	1974	1998

Louisiana Chemical Equipment Company, L.L.C.

Alvin G. Rotenberg, President or Steve O'Brien, Vice President

Phone: (225) 923-3602 Fax: (225) 926-5237

E-Mail: plants@lcec.com Web Site: www.LCEC.com

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

May 24, 2005

FILE COPY

Mr. Kevin Mirner
Harcros Chemicals, Inc.
5200 Speakers Road
Kansas City, Kansas 66110-3000

Mr. Paul Bunge
Silvertip Project Partners
860 Bramblewood Drive
Castle Rock, Colorado 80108

Re: Development of Vicksburg Chemical Company Property

Dear Kevin and Paul:

The Department agreed in correspondence dated January 13, 2005, to continue its exclusive negotiations with Harcros Chemical, Inc. and Silvertip Project Partners, LLC through April 30, 2005, as long as reasonable progress was made toward a final solution. Reasonable progress has been made. The Department will continue to negotiate exclusively with Harcros Chemical, Inc, and Silvertip Project Partners, LLC until September 30, 2005.

We appreciate your efforts to date and look forward to bringing this project to closure on or before September 30, 2005.

Sincerely,

Charles H. Chisolm
Executive Director

cc: Trudy D. Fischer, Esq.
Jere "Trey" Hess, P.E., DEE

The Vicksburg Post.
SINCE 1883 - EVERYTHING A HOMETOWN NEWSPAPER SHOULD BE

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News

Vicksburg Chemical bill moves ahead

By Mark J. Armstrong

[1/26/05] A bill that could help redevelop the idle Vicksburg Chemical plant moved a step closer to passage in the House of Representatives Tuesday as city officials took steps to encourage the rehabilitation of older commercial properties.

The Vicksburg Board of Mayor and Aldermen voted to approve creating a new citywide tax abatement district.

Separately, the House Ways and Means Committee sent a bill to create an Redevelopment Project Incentive Fund from taxes collected on contaminated property to the full House for consideration.

The new ordinance will go into effect in 30 days and will allow developers to avoid some property taxes when they invest in existing structures.

A twin program is already in place to encourage redevelopment in the downtown area.

Those who meet requirements will be able to apply for exemptions from city taxes on the value of the improvements made to existing buildings. Owners would still pay the taxes on the assessed value of any building before improvements as well as county and school taxes.

City Attorney Nancy Thomas said the new program will also include redevelopment of properties where older properties are demolished and replaced, but will not apply to new construction. The value of the improvements will have to be at least $100,000 and will have to improve the aesthetic of the property, Thomas said.

While the new city rules could exempt certain projects from city property taxes on improvements, the Redevelopment Project Incentive Fund proposed by Rep. George Flaggs, D-Vicksburg, would use state taxes to clean up contaminated properties.

The bill and a companion bill filed in the Senate by Mike Chaney, R-Vicksburg, are aimed at the former Vicksburg Chemical Property off Rifle Range Road. It has been estimated that the clean-up of the 40-acre contaminated site could cost up to $8 million.

Harcros Chemicals Inc. of Kansas City, Kan., in partnership with Arcadis, a Dutch multinational corporation with U.S. headquarters near Denver, has been in negotiations with the Mississippi Department of Environmental Quality to take over the site and reopen the chemical plant, but those talks have stalled over the cost of cleaning up the site.

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601-63
Aerial Photogra
•Commerci

Vicksburg Chemical shut down in 2002 after its parent company, Cedar Chemical, filed for bankruptcy. In the process of the bankruptcy, a judge in the U.S. Bankruptcy Court for the Southern District of New York allowed the company to abandon the site to the ownership of the MDEQ.

At various times, the plant made fertilizer, rocket fuel components and other chemicals. Much of the byproduct was disposed of on the site, as was then required by state and federal regulations.

Cleaning up of the site could open 540 acres for potential development including a proposed municipal golf course and reopening of the chemical plant.

City and county officials have been working for the past year to sweeten the deal for redevelopment of the property. Last year, a federal bankruptcy judge has ordered a tax lien in Warren County void at the request of supervisors who said they would not seek nearly $800,000 in back taxes if the property was redeveloped.

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Tetra Tech EM Inc.

Northmont Business Park ◆ 1955 Evergreen Boulevard, Suite 300 ◆ Duluth, GA 30096 ◆ (678) 775-3080 ◆ FAX (678) 775-3138

March 21, 2005

Ms. Lael Butler
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street SW, 11th Floor
Atlanta, Georgia 30303

Subject: **Site-Specific Sampling Plan, Revision 0**
Vicksburg Chemical Company
EPA ID No. MSD990714081
EPA Contract No. 68-W-00-120 (START 4)
Technical Direction Document (TDD) No. 4T-05-11-E-005

Dear Ms. Butler:

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting one electronic copy of the site-specific sampling plan (SSSP), revision 0, to provide technical support at the Vicksburg Chemical Company in Vicksburg, Warren County, Mississippi. The SSSP was prepared in accordance with revision 2 of the technical support work plan dated March 9, 2005.

As discussed with you, the SSSP consists of tables describing the sampling locations and figures depicting the proposed sampling locations (Attachment 1). All samples will be collected in accordance with the EPA Region 4, Science and Ecosystem Support Division (SESD) Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM) (November 2001) (Excerpt, Attachment 2). Specific sampling locations will be determined in the field. Geographic coordinates will be collected for all sampling locations. Because the site is in the Resource Conservation and Recovery Act (RCRA) program, investigation-derived waste including field decontamination water and purge water from ground water sample collection activities will be containerized on site and disposed of in the surface impoundments at the South Plant. This procedure is in accordance with Section 7.2.5 of the SESD EISOPQAM (Excerpt, Attachment 2).

Based on the TDD and discussions with you, Tetra Tech will collect 5 surface soil samples in the vicinity of solid waste management unit (SWMU 2 [inactive landfill]), 20 ground water samples from on-site monitoring wells, and 10 sediment and 5 surface water (collocated with sediment) samples from Stouts, Hatcher, and Hennesseys Bayous. Once collected, the samples will be packed on ice, preserved as necessary, and shipped to the EPA Region 4, SESD, Analytical Support Branch (ASB) or a Contract Laboratory Program (CLP) laboratory for analysis of the following parameters: volatile organic compounds; RCRA metals; pesticides including dinoseb, atrazine, and toxaphene; and pH. Per conversations with EPA Region 4 Sampling Management Office personnel, organic parameters will be analyzed by the SESD ASB and will follow the ASB Laboratory Operations and Quality Assurance Manual, and inorganic parameters will be analyzed under the CLP in accordance with the CLP Statement of Work for Inorganic Analysis, ILM 05.3.

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The field sampling team will consist of team members from the following organizations: two people from EPA Region 4, two people from the Mississippi Department of Environmental Quality (MDEQ), and three people from Tetra Tech. Prior to the field sampling activities, MDEQ personnel will conduct an on-site reconnaissance of the facility to determine accessibility, condition of wells, possibly flag sampling locations, and collect water level measurements from all on-site monitoring wells and piezometers. The field sampling investigation is scheduled for the week of March 28, 2005.

Please contact me at (678) 775-3109 or Sandra Harrigan at (678) 775-3088 to finalize the list of analytical parameters, and if you have any questions regarding the SSSP.

Sincerely,

Sandra Harrigan

Shanna Damken for
START II Project Manager

Hieu Q. Vu, PE CHMM
START II Program Manager

Attachment 1 Tables and Figures
Attachment 2 Excerpt from the EPA Region 4 SESD EISOPQAM

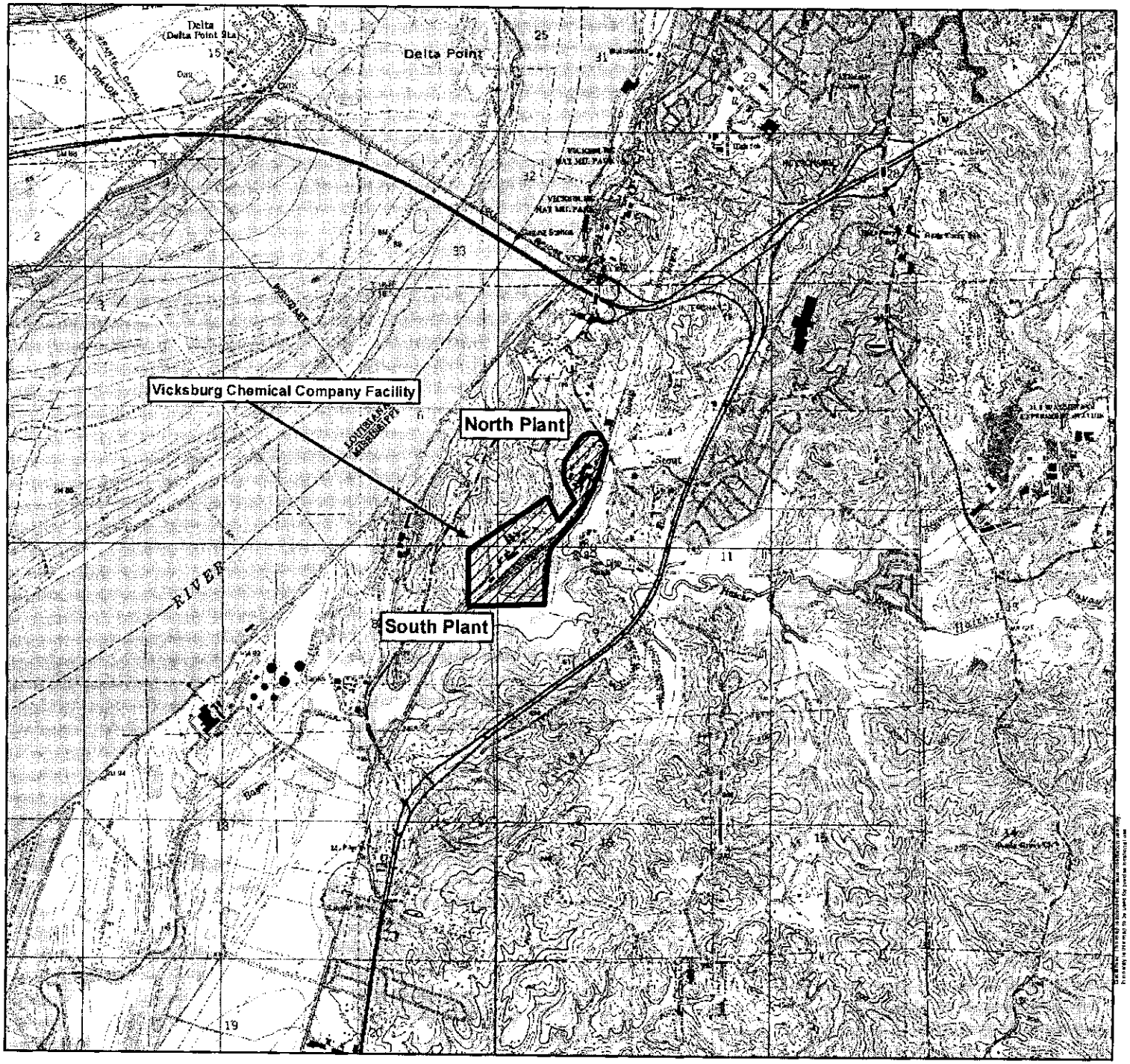
cc: Matthew Monsees, EPA Project Officer
Art Masters, EPA SESD
Sandra Harrigan, START II Site Assessment Manager (w/o attachments)
Angel Reed, START II Document Control Coordinator

ATTACHMENT 1

TABLES AND FIGURES

(11 Pages)

Figure 1	Site Location Map
Figure 2	Proposed Sample Locations (Surface Soil, Sediment, and Surface Water)
Figure 3	Proposed Ground Water Sample Locations
Table 1	Surface Soil Sampling Plan
Table 2	Ground Water Sampling Plan
Table 3	Sediment Sampling Plan
Table 4	Surface Water Sampling Plan
Table 5	Quality Assurance/Quality Control Samples
Table 6	Analytical Methodology, Required Sample Containers, and Preservatives



Legend

Site Boundary

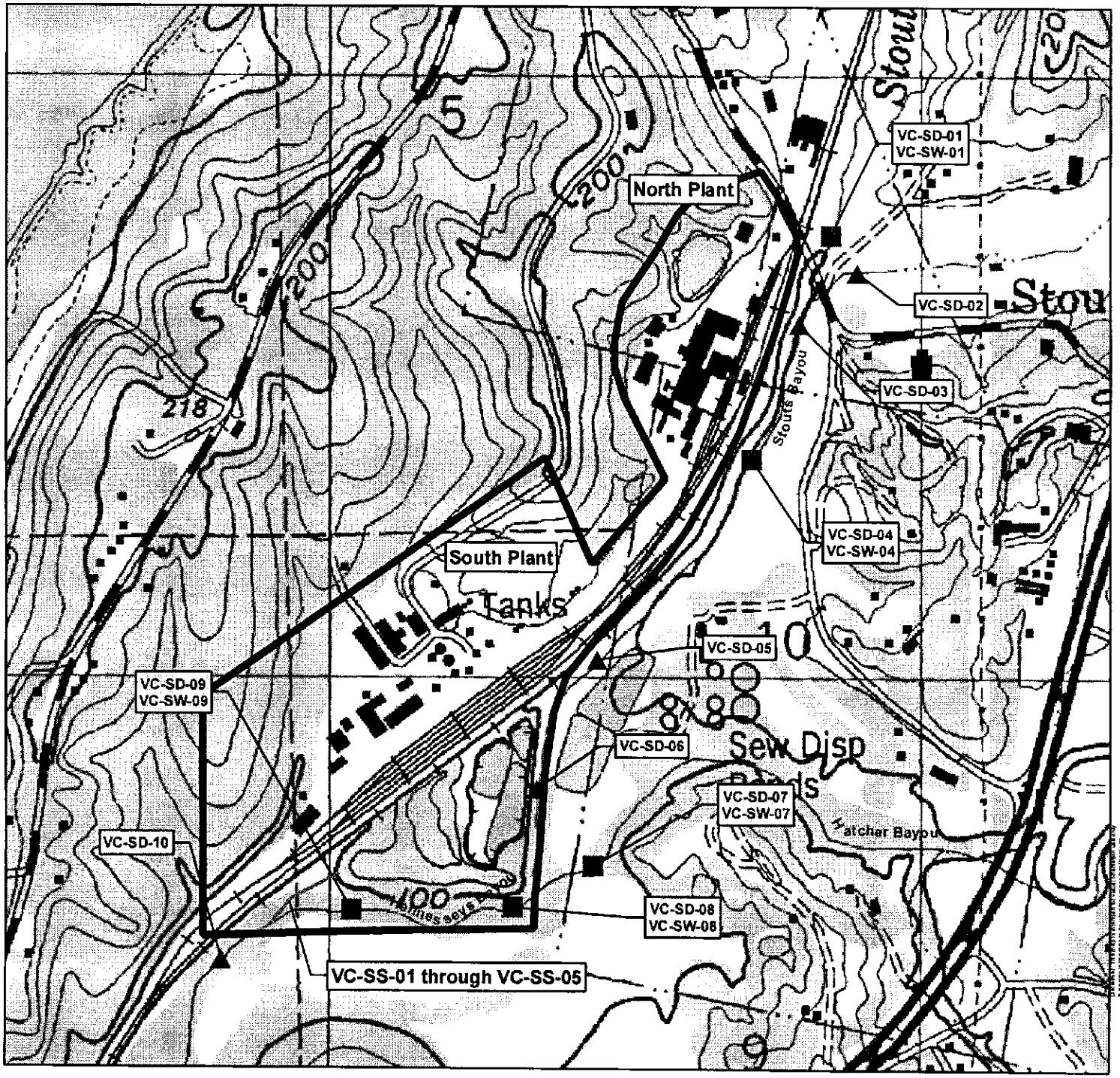
SOURCE: MODIFIED FROM USGS 7.5 MINUTE QUADRANGLES: VICKSBURG WEST, MS, 1968 AND VICKSBURG EAST, MS, 1962

United States Environmental Protection Agency

VICKSBURG CHEMICAL COMPANY
VICKSBURG, WARREN COUNTY, MISSISSIPPI
TDD No. 4T-05-11-E-005

FIGURE 1
SITE LOCATION MAP

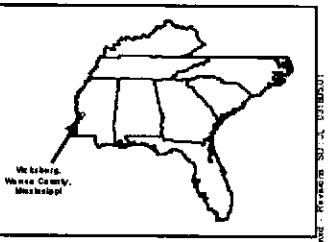
Tetra Tech EM Inc.



Legend

- Sediment Sample
- Surface Water Sample
- Site Boundary

VC = Vicksburg Chemical Company
SD = Sediment
SW = Surface Water
SS = Surface Soil



United States Environmental Protection Agency

VICKSBURG CHEMICAL COMPANY
VICKSBURG, WARREN COUNTY,
MISSISSIPPI
TDD No. 4T-05-11-E-005

FIGURE 2
PROPOSED SAMPLE LOCATIONS

Tetra Tech EM Inc.

Figure 3: Proposed Ground Water Sampling Locations
Source of Map: URS Greiner Woodward Clyde

LEGEND:

- EXISTING MONITOR WELL OR PIEZOMETER LOCATION
- 85 — POTENTIOMETRIC CONTOUR (UPPERMOST AQUIFER)
- 120 — POTENTIOMETRIC CONTOUR PERCHED WATER TABLE IN NORTH POND AREA
- CREEK
- MW-17A, MW-17B, MW-18A, MW-10C, MW-12C ARE PROPOSED LOCATIONS
- SOIL BORING LOCATION
- A —— A' CROSS-SECTION LOCATION LINE

REV	DESCRIPTION OF REVISION	BY	DATE
△			
△			
△			
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△			
△			

VICKSBURG CHEMICAL CORPORATION
VICKSBURG, MISSISSIPPI

URS Greiner Woodward Clyde
2822 O'Neal Lane
Baton Rouge, Louisiana 70816
225/751-1873

REFERENCE DRAWINGS

SCALE: 1"=300'
DESIGNED:
DRAWN: PCO
CHECKED: [illegible]
PEER REVIEWED: 11/11/99
DATE: 8/30/99

GROUNDWATER ASSESSMENT WORK PLAN

POTENTIOMETRIC CONTOURS
WITH CROSS SECTION LOCATIONS

REVISION: △
PROJECT: 350096B315
5

K:\cedar\96b315\96b315c.dwg Wed Nov 10 14:43:15 1999

TABLE 1
VICKSBURG CHEMICAL COMPANY
SURFACE SOIL SAMPLING PLAN

Sample Number	Location	Rationale
VC-SS-01	On site, from drainage ditch between the landfill (SWMU 2) and the railroad tracks; exact location of drainage ditch and sampling location will be determined in the field	Determine presence or absence of hazardous substances
VC-SS-02	On site, from drainage ditch between the landfill (SWMU 2) and the railroad tracks; exact location of drainage ditch and sampling location will be determined in the field	Determine presence or absence of hazardous substances
VC-SS-03	On site, from drainage ditch between the landfill (SWMU 2) and the railroad tracks; exact location of drainage ditch and sampling location will be determined in the field	Determine presence or absence of hazardous substances
VC-SS-04	On site, from drainage ditch between the landfill (SWMU 2) and the railroad tracks; exact location of drainage ditch and sampling location will be determined in the field	Determine presence or absence of hazardous substances
VC-SS-05	On site, from drainage ditch between the landfill (SWMU 2) and the railroad tracks; exact location of drainage ditch and sampling location will be determined in the field	Determine presence or absence of hazardous substances

Notes:

VC	Vicksburg Chemical Company
SS	Surface soil sample
SWMU	Solid waste management unit

TABLE 2
VICKSBURG CHEMICAL COMPANY
GROUND WATER SAMPLING PLAN

Sample Number	Location	Rationale
VC-PZ-21A	On site, eastern portion of North Plant	Determine presence or absence of hazardous substances
VC-PZ-22B	On site, southeastern portion of North Plant	Determine presence or absence of hazardous substances
VC-PZ-25B	On site, between the North and South Plants	Determine presence or absence of hazardous substances
VC-PZ-26A	On site, located at North Plant of facility	Determine presence or absence of hazardous substances
VC-MW-1C	On site, South Plant west of the railroad tracks and north of SWMU 3	Determine presence or absence of hazardous substances
VC-MW-2	On site, southernmost portion of South Plant along railroad tracks	Determine presence or absence of hazardous substances
VC-MW-3	On site, southern portion of South Plant, south of the confluence of Hatcher and Hennesseys Bayous	Determine presence or absence of hazardous substances
VC-MW-6	On site, south of inactive landfill (SWMU 2)	Determine presence or absence of hazardous substances
VC-MW-7	On site, southwest of inactive landfill (SWMU 2)	Determine presence or absence of hazardous substances
VC-MW-8	On site, southern portion of South Plant along railroad tracks between SWMUs 2 and 17	Determine presence or absence of hazardous substances
VC-MW-9	On site, eastern protion of South Plant in the vicinity of SWMUs 18 and 21	Determine presence or absence of hazardous substances

TABLE 2 (Continued)
VICKSBURG CHEMICAL COMPANY
GROUND WATER SAMPLING PLAN

Sample Number	Location	Rationale
VC-MW-10C	On site, eastern portion of South Plant, between SWMU 3 and railroad tracks	Determine presence or absence of hazardous substances
VC-MW-11	On site, at South Plant just north of SWMU 3	Determine presence or absence of hazardous substances
VC-MW-12C	On site, eastern portion of the South Plant between SWMU 3 and railroad tracks	Determine presence or absence of hazardous substances
VC-MW-13	On site, northern portion of South Plant near SWMU 20	Determine presence or absence of hazardous substances
VC-MW-14	On site, northern portion of South Plant	Determine presence or absence of hazardous substances
VC-MW-16	On site, central portion of South Plant along railroad tracks northwest of SWMW 3	Determine presence or absence of hazardous substances
VC-MW-17A	On site, central portion of South	Determine presence or absence of hazardous substances
VC-MW-18A	On site central portion of South Plant	Determine presence or absence of hazardous substances
VC-MW-04	On site, located at the northwestern corner of the North Plant	Background ground water sampling location for comparison to downgradient samples

Notes:

VC	Vicksburg Chemical Company
MW	Monitoring well
PZ	Piezometer
SWMU	Solid waste management unit

TABLE 3
VICKSBURG CHEMICAL COMPANY
SEDIMENT SAMPLING PLAN

Sample Number	Location	Rationale
VC-SD-01	Off site, from Stouts Bayou, upstream of facility on the north side of the Rifle Range Road bridge	Background sediment sample for comparison to downgradient sediment samples
VC-SD-02	Off site, from unnamed tributary of Stouts Bayou on the north side of the Rifle Range Road Bridge	Control sediment sample for comparison to downgradient sediment samples
VC-SD-03	Off site, from Stouts Bayou adjacent to the northeastern boundary of the North Plant, downgradient of the Rifle Range Road bridge	Determine whether site runoff or ground water discharge from the facility has impacted Stouts Bayou
VC-SD-04	Off site, in Stouts Bayou adjacent to the southeastern boundary of the North Plant	Determine whether site runoff or ground water discharge from the facility has impacted Stouts Bayou
VC-SD-05	On site, from Stouts Bayou adjacent to the northeastern boundary of the South Plant, between the railroad tracks and the northernmost pond of SWMU 3	Determine whether site runoff or ground water discharge from the facility has impacted Stouts Bayou
VC-SD-06	On site, from Stouts Bayou between the ponds that comprise SWMU 3	Determine whether site runoff or ground water discharge from the facility has impacted Stouts Bayou
VC-SD-07	Off site, from Hatcher Bayou upstream of the confluence of Stouts Bayou and Hennessy Bayou	Control sediment sample for comparison to downgradient sediment samples
VC-SD-08	Off site, from Hennessy Bayou near the southeast corner of the inactive landfill (SWMU 2)	Determine whether site runoff or ground water discharge from the facility has impacted Hennessy Bayou
VC-SD-09	Off site, from Hennessy Bayou near the southwest corner of the inactive landfill (SWMU 2)	Determine whether site runoff or ground water discharge from the facility has impacted Hennessy Bayou

TABLE 3 (Continued)
VICKSBURG CHEMICAL COMPANY
SEDIMENT SAMPLING PLAN

Sample Number	Location	Rationale
VC-SD-10	Off site, from Hennessy Bayou down gradient of the South Plant	Determine whether site runoff or ground water discharge from the facility has impacted Hennessy Bayou

Notes:

VC	Vicksburg Chemical Company
SD	Sediment sample
SWMU	Solid waste management unit

TABLE 4
VICKSBURG CHEMICAL COMPANY
SURFACE WATER SAMPLING PLAN

Sample Number	Location	Rationale
VC-SW-01	Off site, from Stouts Bayou, upstream of facility on the north side of the Rifle Range Road bridge	Off site, from Stouts Bayou, upstream of facility on the north side of the Rifle Range Road bridge
VC-SW-04	Off site, in Stouts Bayou adjacent to the southeastern boundary of the North Plant	Determine whether site runoff or ground water discharge from the facility has impacted Stouts Bayou
VC-SW-07	Off site, from Hatcher Bayou upstream of the confluence of Stouts Bayou and Hennessy Bayou	Control sediment sample for comparison to downgradient sediment samples
VC-SW-08	On site, from Hennessy Bayou near the southeastern corner of the inactive landfill (SWMU 2)	Determine whether site runoff or ground water discharge from the facility has impacted Hennessy Bayou
VC-SW-09	Off site, from Hennessy Bayou near the southwest corner of the inactive landfill (SWMU 2)	Determine whether site runoff or ground water discharge from the facility has impacted Hennessy Bayou

Notes:

VC	Vicksburg Chemical Company
SW	Surface water sample
SWMU	Solid waste management unit

TABLE 5
VICKSBURG CHEMICAL COMPANY
QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Sample Number	Sample Type	Rationale
VC-BS-01	Soil trip blank	Determine if unknown site conditions or sample handling procedures are influencing sample results
VC-TB-01	Water trip blank	Determine the existence and magnitude of contamination resulting from laboratory (or field) activities
VC-RB-01	Equipment rinsate blank	Determine if decontamination procedures adequately clean equipment
VC-PB-01	Preservative blank	Determine if preservatives or sample handling procedures are influencing sample results
Predetermined	Metals blank (provided by SESD)	Determine if unknown site conditions or sample handling procedures are influencing sample results
VC-XX-XX	MS/MSD	Provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology
VC-XX-XX	Field duplicates	Measure both field and laboratory precision

Notes:

BS	Soil blank
MS/MSD	Matrix spike/matrix spike duplicate
PB	Preservative blank
RB	Rinsate blank
SESD	Science and Ecosystem Support Division
TB	Trip blank
VC	Vicksburg Chemical Company

TABLE 6
VICKSBURG CHEMICAL COMPANY
ANALYTICAL METHODOLOGY, REQUIRED SAMPLE CONTAINERS, AND PRESERVATIVES

Matrix	Analysis	EPA Method	Sample Container	Preservative
Surface Water, Ground Water	VOA	SW846-8260B	Two, 40-ml glass vials	HCl, pH < 2, and cool to 4 °C
	Pesticides	SW846-8270C	Two, 1-liter glass amber bottles	Cool to 4 °C
	Metals Mercury	ILM05.3 (ICP-AES)	One, 1-liter polyethylene bottle	HNO_3, pH < 2, and cool to 4 °C
	Cyanide	ILM05.3 (ICP-AES)	One, 1-liter polyethylene bottle	NaOH, pH > 12, and cool to 4 °C
Soil, Sediment	VOA	SW846-5035A	Three Encore® samplers and one, 2-oz glass jar with septum lid	Cool to 4 °C
	Pesticides	SW846-8270C	One, 8-oz glass jar	Cool to 4 °C
	Metals Mercury Cyanide	ILM05.3 (ICP-AES)	One, 8-oz glass jar	Cool to 4 °C

Notes:

<	Less than
>	Greater than
BNA	Base, neutral, and acid extractables
CLP	Contract Laboratory Program
°C	Degree Celsius
EPA	U.S. Environmental Protection Agency
HCl	Hydrochloric acid
HNO_3	Nitric acid
ILM05.3 (ICP-AES)	CLP Statement of Work for Inorganic Analysis
ml	Milliliter
NaOH	Sodium hydroxide
OLM04.2	CLP Statement of Work for Organic Analysis
oz	Ounce
PCB	Polychlorinated biphenyls
SW846	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods
VOA	Volatile organic analysis

ATTACHMENT 2

**EXCERPT FROM THE U.S. ENVIRONMENTAL PROTECTION AGENCY
SCIENCE AND ECOSYSTEM SUPPORT DIVISION
ENVIRONMENTAL INVESTIGATIONS STANDARD OPERATING PROCEDURES AND
QUALITY ASSURANCE MANUAL (NOVEMBER 2001)**

(28 Pages)

SECTION 7
GROUND WATER SAMPLING

PERFORMANCE OBJECTIVES:

- To collect a sample representative of ground water residing in the formation of interest.
- To reduce the potential bias caused by the sampling equipment used to obtain the sample.

7.1 Introduction

Ground water sampling may be required for a variety of reasons, such as examining potable or industrial water supplies, checking for and/or tracking contaminant plume movement in the vicinity of a land disposal or spill site, Resource Conservation Recovery Act (RCRA) compliance monitoring, or examining a site where historical information is minimal or non-existent but where it is thought that ground water contamination may have occurred.

Ground water samples are usually obtained from either temporarily or permanently installed ground water monitoring wells. They can also be obtained, however, anywhere ground water is present, such as in a pit or a dug or drilled hole.

Occasionally, the ground water source may not be in the ideal location to meet a particular objective (e.g., to track a contaminant plume). In that case, either a temporary or permanent monitoring well should be installed. An experienced and knowledgeable person will need to locate the well and supervise its installation so that samples will be representative of the ground water.

Additional guidance is given in RCRA Ground-Water Monitoring: Technical Guidance (1) and Chapter 11 of SW-846 (2). The ground water sampling procedures described in this SOP will meet or exceed the requirements of these documents.

Ground water sampling procedures can be sub-divided into two areas, purging and sampling, each of which has different goals and objectives. Within the topic of purging, it is necessary, because of the inherently different characteristics of the two types of wells, to address permanent and temporary wells separately. The procedures and techniques which follow in this section reflect these differences.

7.2 Purging

7.2.1 Purging and Purge Adequacy

Purging is the process of removing stagnant water from a monitoring well, immediately prior to sampling, causing its replacement by ground water from the adjacent formation, which is representative of actual aquifer conditions. In order to determine when a well has been adequately purged, field investigators

should: 1) monitor the pH, specific conductance, temperature, and turbidity of the ground water removed during purging; and 2) observe and record the volume of water removed.

Prior to initiating the purge, the amount of water standing in the water column (water inside the well riser and screen) should be determined. To do this, the diameter of the well should be determined and the water level and total depth of the well are measured and recorded. Specific methodology for obtaining these measurements is found in Section 15.5 of this SOP. Once this information is obtained, the volume of water to be purged can be determined using one of several methods. One is the equation:

$$V = 0.041\ d^2h$$

Where: h = depth of water in feet
d = diameter of well in inches
V = volume of water in gallons

Alternatively, the volume may be determined using a casing volume per foot factor for the appropriate diameter well, similar to that in Table 7.2.1. The water level is subtracted from the total depth, providing the length of the water column. This length is multiplied by the factor in the Table 7.2.1 which corresponds to the appropriate well diameter, providing the amount of water, in gallons, contained in the well. Other acceptable methods include the use of nomographs or other equations or formulae.

With respect to volume, an adequate purge is normally achieved when three to five times the volume of standing water in the well has been removed. The field notes should reflect the single well volume calculations or determinations, according to one of the above methods, and a reference to the appropriate multiplication of that volume, i.e., a minimum three well volumes, clearly identified as a purge volume goal.

With respect to the ground water chemistry, an adequate purge is achieved when the pH, specific conductance, and temperature of the ground water have stabilized and the turbidity has either stabilized or is below 10 Nephelometric Turbidity Units (NTUs) (twice the Primary Drinking Water Standard of 5 NTUs). Although ten NTUs is normally considered the minimum goal for most ground water sampling objectives, 1 NTU has been shown to be easily achievable and reasonable attempts should be made to reach this level. Stabilization occurs when pH measurements remain constant within 0.1 Standard Unit (SU), specific conductance varies no more that 10 percent, and the temperature is constant for at least three consecutive readings. There are no criteria establishing how many sets of measurements are adequate for the determination of stability. If the calculated purge volume is small, the measurements should be taken frequently to provide a sufficient number of measurements to evaluate stability. If the purge volume is large, measurements taken every 15 minutes may be sufficient.

If, after three well volumes have been removed, the chemical parameters have not stabilized according to the above criteria, additional well volumes (up to five well volumes), should be removed. If the parameters have not stabilized within five volumes, it is at the discretion of the project leader whether or not to collect a sample or to continue purging. If after five well volumes, pH and conductivity have been stabilized and the turbidity is still decreasing and approaching an acceptable level, additional purging should be considered to obtain the best sample possible. The conditions of sampling should be noted in the field log.

TABLE 7.2.1
WELL CASING DIAMETER vs. VOLUME

WELL CASING DIAMETER 9 (INCHES) vs. VOLUME (GALS.)/FEET of WATER	
CASING	GALLONS/FT
1	0.041
2	0.163
3	0.367
4	0.653
5	1.02
6	1.469
7	1.999
8	2.611
9	3.305
10	4.08
11	4.934
12	5.875

In some situations, even with slow purge rates, a well may be pumped or bailed dry (evacuated). In these situations, this generally constitutes an adequate purge and the well can be sampled following sufficient recovery (enough volume to allow filling of all sample containers). It is not necessary that the well be evacuated three times before it is sampled. The pH, specific conductance, temperature, and turbidity should be measured, during collection of the sample from the recovered volume, as the measurements of record for the sampling event.

Attempts should be made to avoid purging wells to dryness. This can be accomplished, for example, by slowing the purge rate. If a well is pumped dry, it may result in the sample being comprised partially of water contained in the sand pack, which may be reflective, at least in part, of initial, stagnant conditions. In addition, as water re-enters a well that is in an evacuated condition, it may cascade down the sand pack or the well screen, stripping volatile organic constituents that may be present and/or introducing soil fines into the water column.

It is particularly important that wells be sampled as soon as possible after purging. If adequate volume is available, the well must be sampled immediately. If not, sampling should occur as soon as adequate volume has recovered.

Equipment Available

Monitoring well purging is accomplished by using in-place plumbing and dedicated pumps or, by using portable pumps/equipment when dedicated systems are not present. The equipment may consist of a variety of pumps, including peristaltic, large and small diameter turbine (electric submersible), bladder, centrifugal, gear-driven positive displacement, or other appropriate pumps. The use of any of these pumps is usually a function of the depth of the well being sampled and the amount of water that is to be removed during purging. Whenever the head difference between the sampling location and the water level is less than the limit of suction and the volume to be removed is reasonably small, a peristaltic pump should be used for purging. Appendix E of this SOP contains the operating instructions for all pumps commonly used during Branch ground water investigations.

Bailers may also be used for purging in appropriate situations, however, their use is discouraged. Bailers tend to disturb any sediment that may be present in the well, creating or increasing sample turbidity. If a bailer is used, it should be a closed-top Teflon® bailer.

7.2.2 Purging Techniques (Wells Without Plumbing or In-Place Pumps)

For permanently installed wells, the depth of water and depth of the well should be determined (if possible) before purging. Electrical water level indicators/well sounders can be used for this purpose. It is standard practice to mark the top of casing, providing a point of reference from which these measurements will be consistently made. Field investigators should look for these markings when taking these measurements. Extreme caution should be exercised during this procedure to prevent cross-contamination of the wells. This is a critical concern when samples for trace organic compounds or metals analyses are collected. At a minimum, the well sounding device should be cleaned by washing in a laboratory detergent solution, followed by rinses with tap water and analyte-free water. After cleaning, it should be placed in a clean plastic bag or wrapped in foil.

Purging with Pumps

When peristaltic pumps or centrifugal pumps are used, only the intake line is placed into the water column. The line placed into the water should be either standard-cleaned (see Appendix B) Teflon® tubing, for peristaltic pumps, or standard-cleaned stainless steel pipe attached to a hose for centrifugal pumps.

When submersible pumps (bladder, turbine, displacement, etc.) are used, the pump itself is lowered into the water column. The pump must be cleaned as specified in Appendix B.

Purging with Bailers

Standard-cleaned (Appendix B) closed-top Teflon® bailers with Teflon® leaders and new nylon rope are lowered into top of the water column, allowed to fill, and removed. It is critical that bailers be slowly and gently immersed into the top of the water column, particularly during final stages of purging, to minimize turbidity and disturbance of volatile organic constituents. The use of bailers for purging and sampling is discouraged because the correct technique is highly operator dependent.

Field Care of Purging Equipment

Regardless of which method is used for purging, new plastic sheeting should be placed on the ground surface around the well casing to prevent contamination of the pumps, hoses, ropes, etc., in the event they need to be placed on the ground during the purging or they accidentally come into contact with the ground surface. It is preferable that hoses used in purging that come into contact with the ground water be kept on a spool or contained in a plastic-lined tub, both during transporting and during field use, to further minimize contamination from the transporting vehicle or ground surface.

Purging Entire Water Column

The pump/hose assembly or bailer used in purging should be lowered into the top of the standing water column and not deep into the column. This is done so that the purging will "pull" water from the formation into the screened area of the well and up through the casing so that the entire static volume can be removed. If the pump is placed deep into the water column, the water above the pump may not be removed, and the subsequent samples, particularly if collected with a bailer, may not be representative of the ground water.

It is recommended that no more than three to five feet of hose be lowered into the water column. If the recovery rate of the well is faster than the pump rate and no observable draw down occurs, the pump should be raised until the intake is within one foot of the top of the water column for the duration of purging. If the pump rate exceeds the recovery rate of the well, the pump will have to be lowered, as needed, to accommodate the draw down. After the pump is removed from the well, all wetted portions of the hose and the pump should be cleaned as outlined in Appendix B of this SOP.

Careful consideration shall be given to using pumps to purge wells which are excessively contaminated with oily compounds, because it may be difficult to adequately decontaminate severely contaminated pumps under field conditions. When wells of this type are encountered, alternative purging methods, such as bailers, should be considered.

General Low Flow/Low Stress Method Preference

The device with the lowest pump or water removal rate and the least tendency to stress the well during purging should be selected for use. For example, if a bailer and a peristaltic pump both work in a given situation, the pump should be selected because it will greatly minimize turbidity, providing a higher quality sample (Section 7.2.4 contains a description of low flow purging and sampling with a peristaltic pump used in a temporary well). If a Fultz® pump or a Grundfos Redi-Flo2® could both be used, the Redi-Flo2® may be given preference because the speed can be controlled to provide a lower pump rate, thereby minimizing turbidity.

Low Flow/Low Volume Purging Techniques/Procedures

Alternatives to the low flow purging procedures exist and may be acceptable. The low flow/low volume purging is a procedure used to minimize purge water volumes. The pump intake is placed within the screened interval at the zone of sampling, preferably, the zone with the highest flow rate. Low flow rate purging is conducted after hydraulic conditions within the well have re-stabilized, usually within 24 to 48 hours. Flow rates should not exceed the recharge rate of the aquifer. This is monitored by measuring the top of the water column with a water level recorder or similar device while pumping. These techniques, however, are only acceptable under certain hydraulic conditions and are not considered standard procedures.

7.2.3 Purging Techniques - Wells with In-Place Plumbing

Wells with in-place plumbing are commonly found at municipal water treatment plants, industrial water supplies, private residences, etc. Many permanent monitoring wells at active facilities are also equipped with dedicated, in-place pumps. The objective of purging wells with in-place pumps is the same as with monitoring wells without in-place pumps, i.e., to ultimately collect a sample representative of the ground water. Among the types of wells identified in this section, two different approaches are necessary. The permanent monitoring wells with in-place pumps should, in all respects, be treated like the monitoring well without pumps. They generally are sampled only occasionally and require purging as described for wells without in-place pumps, i.e., 3 to 5 well volumes and stable parameters.

In the case of the other types of wells, however, not enough is generally known about the construction aspects of the wells to apply the same criteria as used for monitoring wells, i.e., 3 to 5 well volumes. The volume to be purged in these situations, therefore, depends on several factors: whether the pumps are running continuously or intermittently and whether or not any storage/pressure tanks are located between the sampling point and the pump. The following considerations and procedures should be followed when purging wells with in-place plumbing under the conditions described.

Continuously Running Pumps

If the pump runs more or less continuously, no purge (other than opening a valve and allowing it to flush for a few minutes) is necessary. If a storage tank is present, a spigot, valve or other sampling point should be located between the pump and the storage tank. If not, locate the valve closest to the tank. Measurements of pH, specific conductance, temperature, and turbidity are recorded at the time of sampling.

Intermittently Running Pumps

If the pump runs intermittently, it is necessary to determine, if possible, the volume to be purged, including storage/pressure tanks that are located prior to the sampling location. The pump should then be run continuously until the required volume has been purged. If construction characteristics are not known, best judgement should be used in establishing how long to run the pump prior to collecting the sample. Generally, under these conditions, 30 minutes will be adequate. Measurements of pH, specific conductance, temperature and turbidity should be made and recorded at intervals during the purge and the final measurements made at the time of sampling.

7.2.4 Purging Techniques - Temporary Monitoring Wells

Temporary ground water monitoring wells differ from permanent wells because temporary wells are installed in the ground water for immediate sample acquisition. Wells of this type may include standard well screen and riser placed in boreholes created by hand augering, power augering, or by drilling. They may also consist of a rigid rod and screen that is pushed, driven, or hammered into place to the desired sampling interval, such as the Direct Push Wellpoint®, the Geoprobe® and the Hydropunch®. As such, the efforts to remove several volumes of water to replace stagnant water do not necessarily apply in these situations, because generally, stagnant water is non-existent. It is important to note, however, that the longer a temporary well is in place and not sampled, the more appropriate it may be to apply, to the extent possible, standard permanent monitoring well purging criteria to it.

In cases where the temporary well is to be sampled immediately after installation, purging is conducted primarily to mitigate the impacts of installation. In most cases, temporary well installation procedures disturb the existing aquifer conditions, resulting primarily in increased turbidity. Therefore, the goal of purging is to reduce the turbidity and remove the volume of water in the area directly impacted by the installation procedure. Low turbidity samples in these types of wells are typically and routinely achieved by the use of low-flow purging and sampling techniques.

The following low-flow purging technique using peristaltic pumps has been used routinely to achieve acceptably low NTU values in a variety of temporary monitoring well applications.

In purging situations where the elevation of the top of the water column is no greater than approximately 25 feet below the pump head elevation, a peristaltic pump may be used to purge temporary wells. Enough tubing is deployed to reach the bottom of the temporary well screen. At the onset of purging, the tubing is slowly lowered to the bottom of the screen and is used to remove any formation material which may have entered the well screen during installation. This is critical to ensuring rapid achievement of low turbidity conditions. After the formation material is removed from the bottom of the screen, the tubing is slowly raised through the water column to near the top of the column. The tubing can be held at this level to determine if the pump is lowering the water level in the well. If not, secure the tubing at the surface to maintain this pumping level.

If the water column is lowered, and the pump is not variable speed, continue to lower the tubing as the water column is lowered. If a variable speed peristaltic pump is being used and draw down is observed

on initiation of pumping, reduce the pump speed and attempt to match the draw down of the well. Sustained pumping at these slow rates will usually result in a relatively clear, low turbidity sample. If the draw down stabilizes, maintain that level, however, if it continues to lower, "chase" the water column until the well is evacuated. In this case, the recovered water column may be relatively free of turbidity and can be sampled. It may take several episodes of recovery to provide enough volume for a complete sample.

With many of the direct push sampling techniques, purging is not practical or possible, therefore, no purging is conducted. The sampling device is simply pushed to the desired depth and opened and the sample is collected and retrieved.

7.2.5 Investigation Derived Waste

Purging generates quantities of purge water or investigation derived waste (IDW), the disposition of which must be considered. What is appropriate for the disposition of the water is, in part, dependent on the nature of the investigation. If the IDW is generated at a RCRA facility, it will generally be contained and disposed on site in an on-site treatment facility. IDW generated during Superfund or other investigations may, at the discretion of the field project leader or the program manager (remedial project manager), be discharged to the ground, away from the well, or be containerized for later disposal or other appropriate action.

7.3 Sampling

Sampling is the process of obtaining, containerizing, and preserving the ground water sample after the purging process is complete. Non-dedicated pumps for sample collection generally should not be used. Many pumps are made of materials, such as brass, plastic, rubber, or other elastomer products which may cause chemical interferences with the sample. Their principle of operation may also render them unacceptable as a sample collection device. The pump may be turbine driven, which may release volatile organic constituents. It is recognized that there are situations, such as industrial or municipal supply wells or private residential wells, where a well may be equipped with a dedicated pump from which a sample would not normally be collected. Discretion should always be used in obtaining a sample.

7.3.1 Equipment Available

Because of the problems with most pumps described in the preceding paragraph, only three devices should be used to collect ground water samples from most wells. These are the peristaltic pump/vacuum jug assembly, a stainless steel and Teflon® bladder pump, and a closed-top, Teflon® bailer.

Other monitoring equipment used during sampling includes water level indicators, pH meters, thermometers, conductivity bridges, and nephelometers (turbidity meters).

7.3.2 Sampling Techniques - Wells With In-Place Plumbing

Samples should be collected following purging from a valve or cold water tap as near to the well as possible, preferably prior to any storage/pressure tanks that might be present. Remove any hose that may be present before sample collection and reduce the flow to a low level to minimize sample disturbance, particularly with respect to volatile organic constituents. Samples should be collected directly into the appropriate containers (see Standard Sample Containers, Appendix A). It may be necessary to use a secondary container, such as a clean 8 oz. sample jar or a stainless steel scoop, to obtain and transfer samples from spigots with low ground clearance. Also, refer to the Potable Water Supply discussion in Section 2.2. All measurements for pH, specific conductance, temperature, and turbidity should be recorded at the time of measurement.

7.3.3 Sampling Techniques - Wells without Plumbing

Following purging, samples should be collected using a peristaltic pump/vacuum jug assembly, a Teflon®/stainless steel bladder pump, or a closed-top Teflon® bailer. These techniques are described below.

Peristaltic pump/vacuum jug

The peristaltic pump/vacuum jug can be used for sample collection because it allows for sample collection without the sample coming in contact with the pump tubing. This is accomplished by placing a Teflon® transfer cap assembly onto the neck of a standard cleaned 4-liter (1-gallon) glass container. Teflon® tubing (¼-inch O.D.) connects the container to both the pump and the sample source. The pump creates a vacuum in the container, thereby drawing the sample into the container without it coming into contact with the pump tubing.

Samples for volatile organic compound analysis should be collected using a bailer or by filling the Teflon® tube, by one of two methods, and allowing it to drain into the sample vials. The tubing can be momentarily attached to the pump to fill the tube with water. After the initial water is discharged through the pump head, the tubing is quickly removed from the pump and a gloved thumb placed on the tubing to stop the water from draining out. The tubing is then removed from the well and the water allowed to either gravity drain or be reversed, by the pump, into the sample vials. (Note: When reversing the pump, make sure the discharge tubing is not submerged in purge water. This will prevent introducing potentially cross-contaminated purge water into the sample.) Alternatively, the tubing can be lowered into the well the desired depth and a gloved thumb placed over the end of the tubing. This method will capture the water contained in the tubing. It can then be removed from the well and the water collected by draining the contents of the tubing into the sample vials. Under no circumstances should the sample for volatile organic compound analysis be collected from the content of any other previously filled container. All equipment should be cleaned using the procedures described in Appendix B. Also, refer to the Potable Water Supply discussion, Section 2.2, for additional information.

When sampling for metals only, it is also permissible to collect the sample directly from the pump discharge tubing after an adequate purge has been demonstrated. When collecting samples in this manner there are several considerations to be aware of. The pump head tubing (silastic, etc,) must be changed after each well and a rinsate blank must be collected of a representative piece of the pump head tubing (only one blank per investigation). Also, precautions must be taken to ensure that the end of the discharge tubing is not allowed to touch the ground or other surface to ensure the integrity of the sample collected in this manner.

Bladder Pumps

After purging has been accomplished with a bladder pump, the sample is obtained directly from the pump discharge. If the discharge rate of the pump, during purging, is too great, so as to make sample collection difficult, care should be taken to reduce the discharge rate at the onset of actual sample collection. This is necessary to minimize sample disturbance, particularly with respect to samples collected for volatile organic compounds analysis.

Bailers

When bailing, new plastic sheeting should be placed on the ground around each well to provide a clean working area. New nylon rope should be attached to the bailer via a Teflon® coated stainless steel wire. This coated wire is semi-permanently attached to the bailer and is decontaminated for reuse as the bailer is cleaned. The bailer should be gently immersed in the top of the water column until just filled. At this point, the bailer should be carefully removed and the contents emptied into the appropriate sample containers.

7.3.4 Sample Preservation

Immediately after collection, all samples requiring preservation must be preserved with the appropriate preservative. Consult Appendix A for the correct preservative for the particular analytes of interest. All samples preserved using a pH adjustment (except VOCs) must be checked, using pH strips, to ensure that they were adequately preserved. This is done by pouring a small volume of sample over the strip. Do not place the strip in the sample.

7.3.5 Special Sample Collection Procedures

Trace Organic Compounds and Metals

Special sample handling procedures should be instituted when trace contaminant samples are being collected. All sampling equipment, including pumps, bailers, water level measurement equipment, etc., which comes into contact with the water in the well must be cleaned in accordance with the cleaning procedures described in Appendix B. Pumps should not be used for sampling, unless the interior and exterior portions of the pump and the discharge hoses are thoroughly cleaned. Blank samples should be collected to determine the adequacy of cleaning prior to collection of any sample using a pump.

Order of Sampling with Respect to Analytes

In many situations when sampling permanent or temporary monitoring wells, an adequate purge, with respect to turbidity, is often difficult to achieve. Removal and insertion of equipment after the purge and prior to actual sampling may negate the low turbidities achieved during purging and elevate turbidity back to unacceptable levels. For this reason, it is important that special efforts be used to minimize any disturbance of the water column after purging and to collect the aliquot for metals first.

Filtering

As a standard practice, ground water samples will not be filtered for routine analysis. Filtering will usually only be performed to determine the fraction of major ions and trace metals passing the filter and used for flow system analysis and for the purpose of geochemical speciation modeling. Filtration is not allowed to correct for improperly designed or constructed monitoring wells, inappropriate sampling methods, or poor sampling technique.

When samples are collected for routine analyses and are filtered, such as under conditions of excessive turbidity, both filtered and non-filtered samples will be submitted for analyses. Samples for organic compounds analysis should not be filtered. Prior to filtration of the ground water sample for any reason other than geochemical speciation modeling, the following criteria must be demonstrated to justify the use of filtered samples for inorganic analysis:

1. The monitoring wells, whether temporary or permanent, have been constructed and developed in accordance with Section 6.

2. The ground water samples were collected using sampling techniques in accordance with this section, and the ground water samples were analyzed in accordance with US-EPA approved methods.

3. Efforts have been undertaken to minimize any persistent sample turbidity problems. These efforts may consist of the following:

   - Redevelopment or re-installation of permanent ground water monitoring wells.

- Implementation of low flow/low stress purging and sampling techniques.

4. Turbidity measurements should be taken during purging and sampling to demonstrate stabilization or lack thereof. These measurements should be documented in the field notes.

If the ground water sample appears to have either a chemically-induced elevated turbidity, such as would occur with precipitate formation, or a naturally elevated colloid or fine, particulate-related turbidity, filtration will not be allowed.

If filtration is necessary for purposes of geochemical modeling or other **pre-approved** cases, the following procedures are suggested:

1. Accomplish in-line filtration through the use of disposable, high capacity filter cartridges (barrel-type) or membrane filters in an in-line filter apparatus. The high capacity, barrel-type filter is preferred due to the higher surface area associated with this configuration. If a membrane filter is utilized, a minimum diameter of 142 mm is suggested.

2. Use a 5 µm pore-size filter for the purpose of determining the colloidal constituent concentrations. A 0.1 µm pore-size filter should be used to remove most non-dissolved particles.

3. Rinse the cartridge or barrel-type filter with 500 milliliters of the solute (ground water to be sampled) prior to collection of sample. If a membrane filter is used, rinse with 100 milliliters of solute prior to sample collection.

Potential differences could result from variations in filtration procedures used to process water samples for the determination of trace element concentrations. A number of factors associated with filtration can substantially alter "dissolved" trace element concentrations; these include filter pore size, filter type, filter diameter, filtration method, volume of sample processed, suspended sediment concentration, suspended sediment grain-size distribution, concentration of colloids and colloidally-associated trace elements, and concentration of organic matter. Therefore, consistency is critical in the comparison of short-term and long-term results. Further guidance on filtration may be obtained from the following: 1) Metals in Ground Water; Sampling Artifacts and Reproducibility (3); 2) Filtration of Ground Water Samples for Metals Analysis (4); and 3) Ground Water Sampling - A Workshop Summary (5).

Bacterial Sampling

Whenever wells (normally potable wells) are sampled for bacteriological parameters, care must be taken to ensure the sterility of all sampling equipment and all other equipment entering the well. Further information regarding bacteriological sampling is available in the following: 1) Sampling for Organic Chemicals and Microorganisms in the Subsurface (6); 2) Handbook for Evaluating Water Bacteriological Laboratories (7); and 3) Microbiological Methods for Monitoring the Environment, Water and Wastes (8).

7.3.6 *Specific Sampling* Equipment Quality Assurance Techniques

All equipment used to collect ground water samples shall be cleaned as outlined in Appendix B and repaired, if necessary, before being stored at the conclusion of field studies. Cleaning procedures utilized in the field (Appendix B), or field repairs shall be thoroughly documented in field records.

7.3.7 Auxiliary Data Collection

During ground water sample collection, it is important to record a variety of ground water related

data. Included in the category of auxiliary data are water level measurements, well volume determinations, pumping rates during purging, and occasionally, drillers or boring logs. This information should be documented in the field records. Well volume determinations are described in Section 7.2.1.

Water Level Measurements

Water table measurements from the top of the well casings (referenced to National Geodetic Vertical Datum) in permanent wells, and ground surface elevations in temporary wells should be made to assist in determining the general direction of ground water flow and gradient. The methodology to be used to determine well water levels are given in Section 15.5. Tracer dyes and radioactive and thermal detection methods can be used to determine direction and velocities of flow (9). Also, a study of the general topography and drainage patterns will generally indicate direction of ground water flow.

The ground surface elevation and top of casing elevation at the wells should be determined by standard engineering survey practices as outlined in Section 15.

Well Pumping Rate - Bucket/Stop Watch Method

The pumping rate for a pump can be determined by collecting the discharge from the pump in a bucket of known volume and timing how long it takes to fill the bucket. The pumping rate should be in gallons per minute. This method shall be used primarily with pumps with a constant pump rate, such as gasoline-powered or electric submersible pumps. Care should be taken when using this method with some battery-powered pumps. As the batteries' charge decreases, the pump rate also decreases so that pumping rate calculations using initial, high pump rates may be erroneously high. If this method is used with battery-powered pumps, the rate should be re-checked frequently to ensure accuracy of the pumping rate calculations.

7.4 References

1. US EPA., RCRA Ground-Water Monitoring: Draft Technical Guidance, November 1992, Office of Solid Waste, EPA/530-R-93-001.

2. US EPA., Test Methods for Evaluating Solid Waste, Volume II: Field Manual, Physical/Chemical Methods, November 1986, Office of Solid Waste and Emergency Response, SW-846.

3. Puls, Robert W., Don A. Clark, and Bert Bledsoe. Metals in Ground Water: Sampling Artifacts and Reproducibility. *Hazardous Waste and Hazardous Materials* 9(2): 149-162 (1992).

4. Puls, Robert W., and Michael J. Barcelona. Filtration of Ground Water Samples for Metals Analysis. *Hazardous Waste and Hazardous Materials* 6(4): 385-393 (1989).

5. Ground Water Sampling - A Workshop Summary. Proceedings from the Dallas, Texas November 30 - December 2, 1993 Workshop. US EPA Office of Research and Development Robert S. Kerr Environmental Research Laboratory. EPA/600/R-94/205, January 1995.

6. Sampling for Organic Chemicals and Microorganisms in the Subsurface, US EPA, EPA-600/2-77/176 (1977).

7. Handbook for Evaluating Water Bacteriological Laboratories, US EPA, ORD, Municipal Environmental Research Laboratory, Cincinnati, Ohio, 1975.

8. Microbiological Methods for Monitoring the Environment, Water and Wastes, US EPA, ORD, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio, 1978.

9. "Groundwater", Section 18, USDA-SCS National Engineering Handbook, United States Department of Agriculture, Soil Conservation Service, 1978.

SECTION 8
SAMPLING OF POTABLE WATER SUPPLIES

PERFORMANCE OBJECTIVES:

- To collect a sample representative of the drinking water supply.
- To reduce the bias of system related variables (pumps, piping, holding tanks, etc.).

8.1 Introduction

The same sampling techniques used for wastewater, ground water, surface water, etc., (including thorough documentation of location, date, time, etc.) are to be used during potable water supply sampling. There are certain additional procedures which apply.

8.2 Sampling Site Selection

The following should be considered when choosing the location to collect a potable water sample:

- Taps selected for sample collection should be supplied with water from a service pipe connected directly to a water main in the segment of interest.
- Whenever possible, choose the tap closest to the water source, and prior to the water lines entering the residence, office, building, etc., and also prior to any holding or pressurization tanks.
- The sampling tap must be protected from exterior contamination associated with being too close to a sink bottom or to the ground. Contaminated water or soil from the faucet exterior may enter the bottle during the collection procedure since it is difficult to place a bottle under a low tap without grazing the neck interior against the outside faucet surface. If the tap is too close to the ground for direct collection into the appropriate container, it is acceptable to use a smaller (clean) container to transfer sample to a larger container. The smaller container should be made of glass or stainless steel.
- Leaking taps that allow water to discharge from around the valve stem handle and down the outside of the faucet, or taps in which water tends to run up on the outside of the lip, are to be avoided as sampling locations.
- Disconnect any hoses, filters, or aerators attached to the tap before sampling. These devices can harbor a bacterial population if they are not routinely cleaned or replaced when worn or cracked.
- Taps where the water flow is not constant should be avoided because temporary fluctuation in line pressure may cause clumps of microbial growth that are lodged in a pipe section or faucet connection to break loose. A smooth flowing water stream at moderate pressure without splashing should be used. The sample should be collected without changing the water flow. It may be appropriate to reduce the flow for the volatile organic compounds aliquot to minimize sample agitation.

SECTION 10
SURFACE WATER SAMPLING

PERFORMANCE OBJECTIVE:

- To collect a representative sample of the surface water of interest.

10.1 Introduction

Surface water sampling techniques and equipment are designed to minimize effects on the chemical and physical integrity of the sample. If the guidance provided in this section is followed, a representative sample of the surface water should be obtained.

The physical location of the investigator when collecting a sample may dictate the equipment to be used. If surface water samples are required, direct dipping of the sample container into the stream is desirable. This is possible, however, only from a small boat, a pier, etc., or by wading in the stream. Wading, however, may cause the re-suspension of bottom deposits and bias the sample. Wading is acceptable if the stream has a noticeable current (is not impounded), and the samples are collected while facing upstream. If the stream is too deep to wade, or if the sample must be collected from more than one water depth, or the sample must be collected from a bridge, etc., supplemental sampling equipment must be used.

10.2 Surface Water Sampling Equipment

10.2.1 Dipping Using Sample Container

A sample may be collected directly into the sample container when the surface water source is accessible by wading or other means. The sampler should face upstream and collect the sample without disturbing the sediment. The surface water sample should always be collected prior to the collection of a sediment sample at the same location. The sampler should be careful not to displace the preservative from a pre-preserved sample container such as the 40-ml VOC vial.

10.2.2 Scoops

Stainless steel scoops are useful for reaching out into a body of water to collect a surface water sample. The scoop may be used directly to collect and transfer a surface water sample to the sample container, or it may be attached to an extension in order to access the selected sampling location. The scoop is one of the most versatile sampling tools available to the field investigator.

10.2.3 Peristaltic Pumps

Another device that can be effectively used to sample a water column, such as a shallow pond, is the peristaltic pump/vacuum jug system. The use of a metal conduit to which the tubing is attached, allows for the collection of a vertical sample (to about a 25 foot depth) which is representative of the water column. Commercially available pumps vary in size and capability, with some being designed specifically for the simultaneous collection of multiple water samples.

10.2.4 Discrete Depth Samplers

When discrete samples are desired from a specific depth, and the parameters to be measured do not require a Teflon® coated sampler, a standard Kemmerer or Van Dorn sampler may be used. The Kemmerer sampler is a brass cylinder with rubber stoppers that leave the ends of the sampler open while being lowered in a vertical position, thus allowing free passage of water through the cylinder. The Van Dorn sampler is plastic and is lowered in a horizontal position. In each case, a messenger is sent down a rope when the sampler is at the designated depth, to cause the stoppers to close the cylinder, which is then raised. Water is removed through a valve to fill respective sample containers. With a rubber tube attached to the valve, dissolved oxygen sample bottles can be properly filled by allowing an overflow of the water being collected. With multiple depth samples, care should be taken not to stir up the bottom sediment and thus bias the sample.

When metals and organic compounds parameters are of concern, then a double check valve, stainless steel bailer or Kemmerer sampler should be used to collect the sample.

10.2.5 Bailers

Teflon® bailers may also be used for surface water sampling, if the study objectives do not necessitate a sample from a discrete interval of the water column. A closed top bailer with a bottom check-valve is sufficient for many studies. As the bailer is lowered through the water column, water is continually displaced through the bailer until the desired depth is reached, at which point the bailer is retrieved. This technique may not be successful where strong currents are found.

10.2.6 Buckets

A plastic bucket can be used to collect samples for in-situ analyses, e.g., pH, temperature and conductivity. However, the bucket should be rinsed twice with the sample water prior to collection of the sample.

SECTION 11
SEDIMENT SAMPLING

PERFORMANCE OBJECTIVE:

- To collect a representative sample of sediment from a surface water body.

11.1 Introduction

Sampling techniques and equipment are designed to minimize effects on the chemical and physical integrity of the sample. If the guidance in this section is followed, a representative sample of the sediment should be obtained.

The physical location of the investigator when collecting a sample may dictate the equipment to be used. Wading is the preferred method for reaching the sampling location, particularly if the stream has a noticeable current (is not impounded). However, wading may disrupt bottom sediments causing biased results. If the stream is too deep to wade, the sediment sample may be collected from a boat or from a bridge.

To collect a sediment sample from a water body, a variety of methods can be used:

- Dredges (Peterson, Eckman, Ponar),
- Coring (tubes, augers)
- Scoops (BMH-60, standard scoop) and spoons
- Vibracore® (Electronic Vibratory Core Tube Driver)

Regardless of the method used, precautions should be taken to insure that the sample collected is representative of the water body. These methods are discussed in the following paragraphs.

11.2 Sediment Sampling Equipment

11.2.1 Scoops and Spoons

If the surface water body is wadeable, the easiest way to collect a sediment sample is by using a stainless steel scoop or spoon. The sampling method is accomplished by wading into the surface water body and while facing upstream (into the current), scooping the sample along the bottom of the surface water body in the upstream direction. Excess water may be removed from the scoop or spoon. However, this may result in the loss of some fine particle size material associated with the bottom of the surface water body. Care should be taken to minimize the loss of the fine particle sizes. Aliquots of the sample are then placed in a glass pan and homogenized according to the quartering method described in Section 5.13.8 of this SOP.

In surface water bodies that are too deep to wade, but less than eight feet deep, a stainless steel scoop or spoon attached to a piece of conduit can be used either from the banks if the surface water body is narrow or from a boat. Again, care should be taken to minimize the loss of the fine particle sizes. The sediment is placed into a glass pan and mixed according to Section 5.13.8 of this SOP.

If the surface water body has a significant flow and is too deep to wade, a BMH-60 sampler (scoop) may be used. The BMH-60 is not particularly efficient in mud or other soft substrates because its weight will cause penetration to deeper sediments, thus missing the most recently deposited material at the sediment water interface. It is also difficult to release secured samples in an undisturbed fashion that would readily permit subsampling. The BMH-60 may be used provided that caution is exercised by only taking subsamples that have not been in contact with the metal walls of the sampler.

11.2.2 Dredges

For routine analyses, the Peterson dredge can be used when the bottom is rocky, in very deep water, or when the stream velocity is high. The dredge should be lowered very slowly as it approaches bottom, since it can displace and miss fine particle size sediment if allowed to drop freely.

The Eckman dredge has only limited usefulness. It performs well where the bottom material is unusually soft, as when covered with organic sludge or light mud. It is unsuitable, however, for sandy, rocky, and hard bottoms and is too light for use in streams with high velocities. It should not be used from a bridge that is more than a few feet above the water, because the spring mechanism which activates the sampler can be damaged by the messenger if dropped from too great a height.

The Ponar dredge is a modification of the Peterson dredge and is similar in size and weight. It has been modified by the addition of side plates and a screen on the top of the sample compartment. The screen over the sample compartment permits water to pass through the sampler as it descends thus reducing turbulence around the dredge. The Ponar dredge is easily operated by one person in the same fashion as the Peterson dredge. The Ponar dredge is one of the most effective samplers for general use on all types of substrates.

The "mini" Ponar dredge is a smaller, much lighter version of the Ponar dredge. It is used to collect smaller sample volumes when working in industrial tanks, lagoons, ponds, and shallow water bodies. It is a good device use when collecting sludge and sediment containing hazardous constituents because the size of the dredge makes it more amenable to field cleaning.

11.2.3 Coring

Core samplers are used to sample vertical columns of sediment. They are particularly useful when a historical picture of sediment deposition is desired since they preserve the sequential layering of the deposit, and when it is desirable to minimize the loss of material at the sediment-water interface. Many types of coring devices have been developed depending on the depth of water from which the sample is to be obtained, the nature of the bottom material, and the length of core to be collected. They vary from hand push tubes to electronic vibrational core tube drivers.

Coring devices are particularly useful in pollutant monitoring because turbulence created by descent through the water is minimal, thus the fines of the sediment-water interface are only minimally disturbed; the sample is withdrawn intact permitting the removal of only those layers of interest; core liners manufactured of glass or Teflon® can be purchased, thus reducing possible sample contamination; and the samples are easily delivered to the lab for analysis in the tube in which they were collected.

The disadvantage of coring devices is that a relatively small surface area and sample size is obtained often necessitating repetitive sampling in order to obtain the required amount of material for analysis.

Because it is believed that this disadvantage is offset by the advantages, coring devices are recommended in sampling sediments for trace organic compounds or metals analyses.

In shallow, wadeable waters, the direct use of a core liner or tube manufactured of Teflon®, plastic, or glass is recommended for the collection of sediment samples. (Plastic tubes are principally used for collection of samples for physical parameters such as particle size analysis). Their use can also be extended to deep waters when SCUBA diving equipment is utilized. Teflon® or plastic are preferred to glass since they are unbreakable which reduces the possibility of sample loss. Stainless steel push tubes are also acceptable and provide a better cutting edge and higher strength than Teflon®. The use of glass or Teflon® tubes eliminates any possible metals contamination from core barrels, cutting heads, and retainers. The tube should be approximately 12 inches in length if only recently deposited sediments (8 inches or less) are to be sampled. Longer tubes should be used when the depth of the substrate exceeds 8 inches. Soft or semi--consolidated sediments such as mud and clays have a greater adherence to the inside of the tube and thus can be sampled with larger diameter tubes. Because coarse or unconsolidated sediments such as sands and gravel tend to fall out of the tube, a small diameter is required for them. A tube about two inches in diameter is usually the best size. The wall thickness of the tube should be about 1/3 inch for Teflon®, plastic, or glass. The inside wall may be filed down at the bottom of the tube to provide a cutting edge and facilitate entry of the liner into the substrate.

Caution should be exercised not to disturb the bottom sediments when the sample is obtained by wading in shallow water. The core tube is pushed into the substrate until four inches or less of the tube is above the sediment-water interface. When sampling hard or coarse substrates, a gentle rotation of the tube while it is being pushed will facilitate greater penetration and decrease core compaction. The top of the tube is then capped to provide a suction and reduce the chance of losing the sample. A Teflon® plug or a sheet of Teflon® held in place by a rubber stopper or cork may be used. After capping, the tube is slowly extracted with the suction and adherence of the sediment keeping the sample in the tube. Before pulling the bottom part of the core above the water surface, it too should be capped.

In deeper, non-wadeable water bodies, sediment cores may be collected from a bridge or a boat using different coring devices such as Ogeechee Sand Pounders®, gravity cores and vibrating coring devices. All three devices utilize a core barrel with a core liner tube system. The core liners can be removed from the core barrel and replaced with a clean core liners, as needed, after each sample. Liners are made of either stainless steel, Teflon or plastic. The type of core liner, and its composition, to collect sediment cores should be based on the contaminants to be evaluated.

Ogeechee Sand Pounders® and gravity Cores are hand held devices that use a standard size 2" core barrel. The core tube and liner are interchangeable between the two units. The Ogeechee® uses a slide hammer mechanism attached to the core head that allows the sampler to pound the core tube into the sediment. The Ogeechee® is good for sandy more consolidated sediments. The gravity core uses a guiding fin mechanism with a built in gravity type check valve. The gravity core is placed in the water and released at the surface to free fall to the bottom. The fin mechanism keeps the core tube upright and free from spinning in the water column as it descends. The core tube stabs the bottom forcing the sediment into the tube. Both coring devices are equipped with removable nose pieces on the core barrel and disposable core catchers for the liner tubes. The core catchers are designed to cap the liner tube to avoid loss of the core when retrieved from the bottom. The gravity core can be modified to attach a slide hammer mechanism, similar to the Ogeechee®, to further pound the core into the sediment further if deemed necessary.

Sediment cores collected from most hand operated coring devices can suffer from either spreading or compaction when driven into the sediment, depending on the softness of the sediment. Spreading occurs s when the sediment is pushed or moved to the side during the advancement of the core tube. Compaction

is when the sediment is being pushed downward as the core tube is advanced. Both phenomenon can effect the physical integrity of core sample. For instance, the core tube may be advanced through the sediment to a depth of 36 inches, but upon examination of the recovered core there is only 24 inches of sediment in the core tube.

Vibratory Core Tube Drivers (Vibracore®) facilitates sampling of soft or loosely sedimented saturated soil deposits with minimal compaction or spreading using lined or unlined core tubes. It is designed for use with core tubes having nominal diameters ranging from 2" to 4" OD. The Vibracore® uses an electric motor to create vibration ranges from approximately 6,000 RPM to 8,000 RPM (100 Hz to 133 Hz) depending on the resistance afforded by the soil; the greater the resistance, the higher the frequency. The actual vibrational displacement of the Vibracore® is on the order of a few tens of thousandths of an inch, so essentially no mixing of the sediment within the tube occurs. The vibrational energy tends to re-orient the soil particles at the lower end of the core tube, causing them to move out of the way of the advancing wall of the core tube and into a more efficient (i.e. denser) packing. This action advances the core tube with minimal compaction of the sediment.

When extensive core sampling is required, such as a cross-sectional examination of a streambed (with an objective of profiling both the physical and chemical contents of the sediment), a whole core must be collected. A strong coring tube such as one made from aluminum, steel or stainless steel is needed to penetrate the sediment and underlying clay or sands. A coring device can be used to collect an intact sediment core from water bodies that have soft bottoms which allows several inches of penetration. It is recommended that the corer have a check valve built into the driving head which allows water and air to escape from the cutting core, thus creating a partial vacuum which helps to hold the sediment core in the tube. The corer is attached to a standard auger extension and handle, allowing it to be corkscrewed into the sediment from a boat or while wading. The coring tube is easily detached and the intact sediment core is removed with an extraction device.

Before extracting the sediment from the coring tubes, the clear supernatant above the sediment-water interface in the core should be decanted from the tube. This is accomplished by simply turning the core tube to its side, and gently pouring the liquid out until fine sediment particles appear in the waste liquid. The loss of some of the fine sediments usually occurs with this technique.

11.3 Special Considerations for Collection of Samples for Volatile Organic Compounds

Samples collected for volatile organic compound analyses must be collected prior to any sample homogenization, as described in Section 5.13.8. Regardless of the method used for collection, the aliquot for volatile organic compound analyses must be collected directly from the sampling device, to the extent practical, using equipment and methods described in Section 12.4. The aliquot should be collected directly from the device, such as a hand auger bucket or scoop, if possible. If a device such as a dredge is used, the aliquot should be collected after the sample is placed in the mixing container prior to mixing.

In some cases, the sediment may be soft and not lend itself to collection by plunging Encore or syringe samplers into the sample matrix. In these cases, it is appropriate to open the sample device, i.e., the Encore barrel or syringe, prior to sample collection, and to carefully place the sediment in the device, filling it fully with the required volume of sample.

SECTION 12
SOIL SAMPLING

PERFORMANCE OBJECTIVES:

To collect a soil sample that is representative of conditions as they exist at the site:

- By selecting the appropriate sampling device(s);
- By taking measures to avoid introducing contamination as a result of poor sampling and/or handling technique;
- By reducing the potential of cross contamination between samples.

12.1 *Introduction*

Prior to conducting a soil sampling investigation, a sampling strategy should be developed based on the objectives of the investigation (Section 5.5 of this SOP contains a discussion of soil sampling strategies). After developing a soil sampling strategy, the appropriate equipment and techniques must be used to conduct the investigation. This section discusses the various soil sample collection methods, sample handling, and available sampling equipment which has been shown to be technically appropriate.

12.2 Equipment

Selection of equipment is usually based on the depth of the samples to be collected, but it is also controlled to a certain extent by the characteristics of the soil. Manual techniques and equipment such as hand augers are usually used for collecting surface or shallow, subsurface soil samples. Power operated equipment is usually associated with deep sampling but can also be used for shallow sampling when the bore hole begins to collapse or when the soil is so tight that manual sampling is not practical.

12.2.1 Precautions for Trace Contaminant Soil Sampling

All soil sampling equipment used for sampling trace contaminants should be constructed of inert materials such as stainless steel where possible. Pans used for mixing should be made of Pyrex® (or equivalent) glass. In no case will chromium, cadmium, galvanized, or plated equipment be used for soil sampling when trace levels of inorganic contaminants are of concern. Similarly, no painted or plastic equipment may be used where trace levels of organic contaminants are of concern. Paint, scaly or heavy rust and grease must be removed before use, most often by sandblasting the equipment. Ancillary equipment such as auger flights may be constructed of other materials since this equipment does not come in direct contact with the samples. The procedures outlined in Section 5.13.7 should be followed.

The procedures outlined in Section 5.13.7 should be followed.

12.3 Sampling Methodology

This discussion of soil sampling methods reflects both the equipment used to collect the sample as well as how the sample is handled and processed after retrieval. Selection of equipment is usually based on the depth of sampling, but it is also controlled, to a certain extent, by the characteristics of the material. Simple, manual techniques and equipment, such as hand augers, are usually selected for surface or shallow, subsurface soil sampling. As the depth of the sampling interval increases, some type of powered sampling equipment is usually needed to overcome the friction induced by soil resistance and depth. The following is an overview of the various sample collection methods employed over three general depth classifications: surface, shallow subsurface, and deep subsurface. Any of the deep collection methods described may be used to collect samples from the shallower intervals.

12.3.1 Manual Collection Techniques and Equipment

These methods are used primarily to collect surface and shallow subsurface soil samples. Surface soils are generally classified as soils between the ground surface and 6 to 12 inches below ground surface. The shallow subsurface interval may be considered to extend from approximately 12 inches below ground surface to a site-specific depth at which sample collection using manual methods becomes impractical.

Surface Soils

Surface soils may be collected with a wide variety of equipment, if constructed of appropriate materials. Spoons or hand-augers are typically used to collect surface soil samples.

If a thick, matted root zone is encountered at or near the surface, it should be removed before the sample is collected. The collected soil is placed in a pan, thoroughly mixed, (Section 5.13.8), and placed in the appropriate sample container(s). Section 12.4 contains specific procedures for collecting and handling soil samples for volatile organic compounds analysis.

Shallow Subsurface Soils

Hand augers are the most common equipment used to collect shallow subsurface samples. Typically, 4-inch auger-buckets with cutting heads are pushed and twisted into the ground, then removed as the buckets are filled. The auger holes are advanced one bucket at a time. The practical depth of investigation using a hand-auger depends upon the soil properties. In sand, augering is usually easily performed, but the depth of collection is limited to the depth at which the sand begins to flow. At this depth, the bore hole will usually collapse and cannot be advanced. Deeper sampling must be accomplished using power equipment. Hand-augering may also be of limited use in tight clays or cemented sands. Regardless of the soil type, at depths approaching 20 feet sidewall friction may become so severe that power equipment must be used.

Power augers such as the Little Beaver® may be used to advance the borehole where hand augers are impractical. Power augers are a sampling aid, not a sampling device, and can be used to advance a borehole to approximately 20 feet, depending upon soil conditions.

If power augers are used to advance the borehole, care must be taken that exhaust fumes, gasoline, and/or oil do not contaminate the borehole. The soil sample may then be collected using a hand auger. After the sample has been collected, the borehole may again be advanced (if necessary), and additional samples collected. The auger bucket must be replaced between samples with a properly decontaminated auger

bucket. When a new borehole is advanced, the entire hand auger assembly must be replaced with a properly decontaminated hand auger assembly.

If the borehole is advanced using a hand auger, upon reaching the desired sampling depth replace the bucket with a properly decontaminated bucket. The sample may then be collected. After the sample has been collected, the borehole may be advanced (if necessary) with the bucket that was used to collect the sample. Each sample must be collected using a properly decontaminated bucket.

Before the soil is placed in a pan, it is necessary to remove the top several inches of soil to minimize the possibility of cross-contamination of the sample from fall-in of material from the upper portions of the hole. Once the soil is placed in a pan, it is thoroughly mixed, (Section 5.13.8), and placed in the appropriate sample container(s). Section 12.4 contains specific procedures for collecting and handling soil samples for volatile organic compounds analysis.

12.3.2 Powered Equipment

Powered equipment may be used to acquire soil samples from any depth (surface, shallow subsurface, and deep subsurface). When power equipment is used to advance the borehole and collect the sample, care must be taken that exhaust fumes, gasoline, and\or oil do not contaminate the borehole and the sample. Among the common types of powered equipment used to collect subsurface soil samples are split-spoon samplers driven with a drill rig drive-weight assembly or pushed using drill rig hydraulics; continuous split-spoon samplers; direct-push rigs; and back-hoes. The use of each of these is described below.

Drill Rigs

Drill rigs offer the capability of collecting soil samples from greater depths. For all practical purposes, the depth of investigation achievable by this method is controlled only by the depth of soil overlying bedrock, which may be in excess of 100 feet.

Split-spoon samplers are usually driven either inside a hollow-stem auger or an open borehole after the auger(s) have been temporarily removed. The spoon is driven with a 140-pound hammer through a distance of up to 24 inches and removed.

Continuous split-spoon samplers may be used to obtain five-foot long, continuous samples approximately 3 to 5 inches in diameter. These devices are placed inside a five-foot section of hollow-stem auger and advanced with the auger during drilling. As the auger advances, the central core of soil moves into the sampler and is retained.

Before the soil is placed in a pan, it is necessary to remove the top several inches of soil to minimize the possibility of cross-contamination of the sample from fall-in of material from the upper portions of the hole. Once the soil is placed in a pan, it is thoroughly mixed, (Section 5.13.8), and placed in the appropriate sample container(s). Section 12.4 contains specific procedures for collecting and handling soil samples for volatile organic compounds analysis.

Direct Push Rigs

This method uses a standard split-spoon modified with a locking tip which keeps the spoon closed during the sampling push. Upon arrival at the desired depth, the tip is remotely released and the push

continued. During the push, the released tip moves freely inside of the spoon as the soil core displaces it. This technique is particularly beneficial at highly contaminated sites, because no cuttings are produced. The push rods are generally retrieved with very little residue resulting in minimal exposure to sampling personnel and reduced IDW.

Before the soil is placed in a pan, it is necessary to remove the top several inches of soil to minimize the possibility of cross-contamination of the sample from fall-in of material from the upper portions of the hole. Once the soil is placed in a pan, it is thoroughly mixed, (Section 5.13.8), and placed in the appropriate sample container(s). Section 12.4 contains specific procedures for collecting and handling soil samples for volatile organic compounds analysis.

Geoprobe® Large Bore Soil Sampler

Geoprobe® offers several tools for soil sample collection. Among these are the Macro-Core® Soil Sampler and the large bore and dual tube soil sampling systems. The Environmental Investigations Branch utilizes the large bore soil sampling system for collection of surface and subsurface soil samples. The selection of this system does not preclude the use of the other systems at a future time.

The Large Bore sampler is a solid barrel, piston sealed, direct push device for collecting discrete interval samples of unconsolidated materials at depth. The sampler is approximately 30-inches (762 mm) long and has a 1.5-inch (38 mm) outside diameter. The Large Bore sampler is capable of recovering a discrete sample core 22 inches x 1.0 inches (559 mm x 25 mm) contained inside a removable liner. Sample volume measures up to 283 ml. The liner is a 24-inch long by 1.15-inch OD (610 mm x 29 mm) removable/replaceable thin-walled tube that fits inside the Large Bore sample tube. Liners facilitate retrieval of the sample and may be used for storage, when applicable. The Large Bore soil sampler is pushed with 1.25-inch diameter probe rod.

The following is a step-by-step description of the components and procedures used to collect a soil sample with the Large Bore sampler.

Assembly of Large Bore Sampler

1. Select a liner tube and push on to cutting shoe (one end of liner should be slightly flared, push this end on to shoe).

2. Insert end of tube opposite cutting shoe into sample tube and screw cutting shoe firmly into sample tube.

3. Thread piston tip onto piston rod then run piston assembly through the end of the sample tube opposite the cutting shoe, seating the piston tip in the cutting shoe. There should be a short section of exposed piston rod sticking out of sample tube.

4. Place drive head over exposed end of piston rod and thread into end of sample tube.

5. Install piston stop-pin in top of drive head. This retains the piston rod assembly during the push.

6. The Large Bore sampler is now fully assembled and ready for sample collection.

Sample Collection Using Large Bore Sampler

1. Attach assembled Large Bore sampler to end of probe rod.

2. Attach drive cap to probe rod and push rod into ground.

3. Add additional rods to push Large Bore sampler to target sampling depth.

4. At the desired target sampling depth, remove the drive cap to access inside of probe rod.

5. Couple extension rods and extension rod handle together and insert into probe rod. Using handle, turn the extension rods inside probe rod. This should engage the piston-stop pin and remove it from the drive head attached to the top of the sample tube. Retrieve extension rods and attached piston-stop pin.

6. Add addition probe rod, if required, reattach drive cap to top of probe rod and push probe rod and Large Bore sampler 24 inches to fill sampler.

7. Attach pull cap and retrieve tool string.

8. When retrieved, remove the piston rod, with piston tip, and the drive head.

9. Using the Large Bore wrench, unscrew the cutting shoe from the down-hole end of the sample tube.

10. Remove the cutting shoe and attached liner and sample from sample tube.

11. Sample has now been collected and is contained in the liner. At this time, it can be sub-sampled, per analytical requirements.

Special Considerations for Large Bore Soil Sampling

Liner Use and Material Selection

Due to the mode of operation, the Large Bore soil sampler must be used with a liner. Liners are available in the following materials: stainless steel, brass, cellulose acetate butyrate (CAB) and Teflon®. For the majority of environmental investigations conducted by EIB, either CAB or Teflon® liners are used. If samples are collected for organic compound analyses, Teflon® liners are required. CAB liners may be used if metals or other inorganic constituents are the object of the investigation.

Sample Orientation

When the liners and associated sample are removed from the sample tubes, it is important to maintain the proper orientation of the sample. This is particularly important when multiple sample depths are collected from the same push. *It is also important to maintain proper orientation to define precisely what depth an* aliquot was collected from. Maintaining proper orientation is typically accomplished using vinyl end caps. Convention is to place red caps on the top of liner and black caps on the bottom to maintain the proper sample orientation. Orientation can also be indicated by marking on the exterior of the liner with a permanent marker.

Back-Hoes

Back-hoes may be utilized in the collection of shallow subsurface soil samples. Samples may be collected directly from the bucket, or the trench wall (subject to applicable safety procedures).

The bucket must be free of rust, grease, and paint. Only soil which has not been in contact with the bucket may be sampled, unless the bucket is cleaned according to the procedures described in Appendix B of this SOP.

Trenches offer the capability of collecting samples from very specific intervals and allow visual correlation with vertically and horizontally adjacent material. The sample should be collected without entering the trench itself, if possible. To collect the sample without entering the trench, use a stainless steel scoop attached to rigid electrical conduit with a scoop bracket to "dress" (remove surface layer of soil smeared on the trench wall as the bucket passed) the wall of the trench. Replace the scoop with a decontaminated scoop. Collect the soil.

The collected soil is placed in a pan, thoroughly mixed, (Section 5.13.8), and placed in the appropriate sample container(s). Section 12.4 contains specific procedures for collecting and handling soil samples for volatile organic compounds analysis

12.4 Soil/Sediment Sampling (Method 5035)

The following sampling protocol is recommended for site investigators assessing the extent of volatile organic compounds (VOCs) in soils and sediments at a project site. Because of the large number of options available, careful coordination between field and laboratory personnel is needed. The specific sampling containers and sampling tools required will depend upon the detection levels and intended data use. Once this information has been established, selection of the appropriate sampling procedure and preservation method best applicable to the investigation can be made.

12.4.1 Equipment

Soil\sediment for VOC analyses may be retrieved using the equipment specified in Sections 11 and 12 of this SOP. Once the soil\sediment has been obtained, the EnCore™ VOC sampler, syringes, stainless steel spatula, standard 2 oz soil VOC container, or pre-prepared 40 mL vials may be used/required for sub-sampling collection. The specific sample containers and the sampling tools required will depend upon the data quality objectives established for the site or sampling investigation. The various methods are described below.

12.4.2 Sampling Methodology - Low Concentrations

When total VOC concentrations in the soil/sediment are expected to be less than 200 μg/kg, the samples may be collected directly with the EnCore™ sampler or syringe. If using the syringes, the sample must be placed in the sample container (40 ml pre-prepared vial) immediately to reduce volatilization losses. The 40 ml vials should contain 10 ml of organic free water for an un-preserved sample or approximately 10 ml of organic free water and a preservative. It is recommended that the 40 ml vials be prepared and weighed by the laboratory (commercial sources are available which supply preserved and tared vials). When sampling directly with the EnCore™ sampler, the vial must be immediately capped.

A soil/sediment sample for VOC analysis may also be collected with conventional sampling equipment

(as described in Sections 11 and 12 of this SOP). A sample collected in this fashion must either be placed in the final sample container (EnCore™ or 40 ml pre-prepared vial) immediately or the sample may be immediately placed into an intermediate sample container with no head space. If an intermediate container (usually 2 oz. soil jar) is used, the sample must be transferred to the final sample container (EnCore™ or 40 ml pre-prepared vial) as soon as possible not to exceed 30 minutes.

NOTE: After collection of the sample into either the EnCore™ Sampler or other container, the sample must immediately be stored in an ice chest and cooled.

Soil\sediment samples may be prepared for shipping and analysis as follows:

EnCore™ Sampler - the sample may simply be capped, locked and secured in a plastic bag.

Syringe - Add about 3.7 cc (approximately 5 grams) of sample material to 40 ml pre-prepared containers. Secure the containers in a plastic bag. Do not use a custody seals on the container, place the custody seal on the plastic bag. Note: When using the syringes, it is important that no air is allowed to become trapped behind the sample prior to extrusion, as this will adversely affect the sample.

Stainless Steel Laboratory Spatulas - Add between 4.5 and 5.5 grams (approximate) of sample material to 40 ml containers. Secure the containers in a plastic bag. Do not use a custody seal on the container, place the custody seal on the plastic bag.

12.4.3 Sampling Methodology - High Concentrations

Based upon the data quality objectives and the detection level requirements, this high level method may also be used. Specifically, the sample may be packed into a single 2-oz. glass container with a screw cap and septum seal. The sample container must be filled quickly and completely to eliminate head space. Soils\sediments containing high total VOC concentrations may also be collected as described in Section 12.4.2, and preserved using 10 ml methanol.

12.4.4 Waste Samples

Collect an un-preserved sample into a single 2 – oz glass container. Handle waste samples in accordance with Section 14 of this SOP.

12.4.5 Special Techniques and Considerations

Effervescence

If low concentration samples effervesce from contact with the acid preservative, (see Sec. 12.4.2) then either a test for effervescence must be performed prior to sampling, or the investigators must be prepared to collect each sample both preserved or un-preserved as needed, or all samples must be collected un-preserved.

To check for effervescence, collect a test sample and add to a pre-preserved vial. If preservation (acidification) of the sample results in effervescence (rapid formation of bubbles) then preservation by acidification is not acceptable, and the sample must be collected un-preserved.

If effervescence occurs and only pre-preserved sample vials are available, the preservative solution may placed into an appropriate hazardous waste container and the vials triple rinsed with organic free water. An appropriate amount of organic free water, equal to the amount of preservative solution, should be placed into the vial. The sample may then be collected as an un-preserved sample. Note that the amount of organic free water placed into the vials will have to be accurately measured.

Sample Size

While this method is an improvement over earlier ones, field investigators must be aware of an inherent limitation. Because of the extremely small sample size, sample representativeness for VOC's may be reduced compared to samples with larger volumes collected for other constituents . The sampling design and objectives of the investigation should take this into consideration.

Holding Times

Sample holding times are specified in Appendix A. Field investigators should note that the holding time for an un-preserved VOC soil/sediment sample is 48 hours. Arrangements should be made to ship the soil/sediment VOC samples to the laboratory by overnight delivery the day they are collected so the laboratory may preserve and\or analyze the sample within 48 hours of collection.

Percent Moisture

Samplers must ensure that the laboratory has sufficient material to determine percent moisture in the VOC soil/sediment sample to correct the analytical results to dry weight. If other analyses requiring percent moisture determination are being performed upon the sample, these results may be used. If not, a separate sample (minimum of 2 oz.) for percent moisture determination will be required.

Safety

Methanol is a toxic and flammable liquid. Therefore, methanol must be handled with all required safety precautions related to toxic and flammable liquids. Inhalation of methanol vapors must be avoided. Vials should be opened and closed quickly during the sample preservation procedure. Methanol must be handled in a ventilated area. Use protective gloves when handling the methanol vials. Store methanol away from sources of ignition such as extreme heat or open flames. The vials of methanol should be stored in a cooler with ice at all times.

Shipping

Methanol and sodium bisulfate are considered dangerous goods, therefore shipment of samples preserved with these materials by common carrier is regulated by the U.S. Department of Transportation and the International Air Transport Association (IATA). The rules of shipment found in Title 49 of the Code of Federal Regulations (49 CFR parts 171 to 179) and the current edition of the IATA Dangerous Goods Regulations must be followed when shipping methanol and sodium bisulfate. Consult the above documents or the carrier for additional information. Shipment of the quantities of methanol and sodium bisulfate used for sample preservation falls under the exemption for small quantities. A summary of the requirements for shipping samples follows. Refer to the code for a complete review of the requirements.

1. The maximum volume of methanol or sodium bisulfate in a sample container is limited to thirty (30) mls.

2. The sample container must not be full of methanol.

3. The sample container must be stored upright and have the lid held securely in place. Note that the mechanism used to hold the cap in place must be able to be completely removed so weight is not added to the sample container, as specified in Method 5035.

4. Sample containers must be packed in a sorbent material capable of absorbing spills from leaks or breakage of the sample containers.
5. The maximum sample shuttle weight must not exceed 64 pounds.

6. The maximum volume of methanol or sodium bisulfate per shipping container is 500 mls.

7. The shipper must mark the sample shuttle in accordance with shipping dangerous goods in acceptable quantities.

8. The package must not be opened or altered until no longer in commerce.

12.4.6 Summary

The following summary table lists the options available for compliance with SW846 Method 5035. The advantages and disadvantages are noted for each option. SESD's goal is to minimize the use of hazardous material (methanol and sodium bisulfate) and minimize the generation of hazardous waste during sample collection.

Option	Procedure	Advantages	Disadvantages
1	Collect 2 - 40 mL vials with ~5 grams of sample and 1 - 2 oz., glass w/septum lid for screening and % moisture	Screening conducted by lab	Presently a 48 hour holding time for unpreserved samples
2	Collect 3 Encore™; and 1- 2 oz., glass w/septum lid for screening and % moisture	Lab conducts all preservation/preparation procedures	Presently a 48 hour holding time for preparation of samples
3	Collect 2 - 40 ml vials with 5 grams of sample and preserve w/methanol or sodium bisulfate and 1 - 2-oz., glass w/septum lid for screening and % moisture	High level VOC samples may be composited Longer holding time	Hazardous materials used in field
4	Collect 1 - 2-oz., glass w/septum lid for analysis and % moisture	Lab conducts all preservation/preparation procedures	May have significant VOC loss

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

MEMORANDUM

TO: File

FROM: Jere "Trey" Hess, P.E., DEE JH

DATE: January 18, 2005

RE: Vicksburg Chemical Company
Site Visit – January 12, 2005

On Tuesday, January 11, 2005, I received a telephone call from Ken Whitten, MDEQ-Emergency Response, informing me that there had been a water line break at the administrative building at Vicksburg Chemical Company site. I contacted Todd Huskey, Ferguson Harbor Contractor, to inform him that I would arrive the next day to take a look. Todd informed me that they had found the break and that they had shut off the leak that may have been leaking for a while given the fact that they have not been up to the administrative building for some time because electricity was shut off and the building was secure and locked. When I arrived, along with Andy McCain, at 1:25PM on January 12th, we were met by Todd. He took us up to the administrative building and we inspected the situation. The building was dank with high moisture content. The carpeting in approximately ½ of the building was soaked and needed to be dealt with. Along with the break, I also noticed a leak in the roof in the corner office that appeared to have been there for some time. Mold was also noticed, which was most likely attributed to leak in the roof. The next day, I contacted Tebo's Carpet Care, to have them come out and survey the situation. Tebo worked with MDEQ during the flooding situation at Southport and is already set up as a vendor with MDEQ. They arrived on the 13th and contacted me in the early afternoon. According to Tebo, mold can be found everywhere and is a significant problem that was prevalent throughout the entire building. It was even found behind the sheetrock. After consulting with upper management at MDEQ, we had Tebo remove all of the standing water in the building. The cost was $1,150.00. Tebo recommended that the mold be dealt and estimated the work to cost around $25,000. The recommendation included: (1) removing all of the carpet and chairs that are contaminated with mold, (2) tearing out the sheetrock throughout the building from the light switches down to the baseboard and remove the mold, (3) to run driers, dehumidifiers, etc. in the building to remove all excess moisture, and (4) to treat the infected areas to kill any further mold. Tebo completed the work on the 13th. I advised him that we would consider his recommendation. Also, I plan to work with Ferguson Harbor to identify a short-term, cost-effective solution to the leak in the roof.

The Vicksburg Post.
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Tourist Information
Vicksburg City Services
Churches
Shopping
Test pages
Election Q&A
Email Penpals
Letters to Santa
NIE Teacher

News

Bills could fund cleanup of abandoned plant

By Mark J. Armstrong

[1/15/05]State funding to help redevelop the abandoned Vicksburg Chemical plant off Rifle Range Road could become available through legislation being proposed this year.

Two bills, one filed in the House and one in the Senate, would create a Redevelopment Project Incentive Fund that could be used to clean a contaminated site such as the idle plant. The fund would be paid into through property and sale taxes generated from the project.

"This is something that will ultimately be able to provide jobs and help the local economy," said Rep. George Flaggs, D-Vicksburg, who filed the House bill.

City officials who have been interested in acquiring part of the land to develop a golf course off Warrenton Road say that state funding could be the difference between a development moving forward or the land sitting unused for years longer.

"We could end up with contaminated land for the next 30 years or we could end up with lots of construction and new development," said Mayor Laurence Leyens.

Harcros Chemicals Inc. of Kansas City, Kansas, in partnership with Arcadis, a Dutch multinational corporation with U.S. headquarters near Denver, has been in negotiations with the Mississippi Department of Environmental Quality to take over the site and reopen the chemical plant, but those talks have stalled over the cost of cleaning up the site.

Vicksburg Chemical shut down in 2002 after its parent company, Cedar Chemical, filed for bankruptcy. In the process of the bankruptcy, a judge in the U.S. Bankruptcy Court for the Southern District of New York allowed the company to abandon the site to the ownership of the MDEQ.

The state since has been monitoring the land to make sure that contamination from the manufacture of herbicides, pesticides and fertilizer for the past 50 or more years does not migrate from the 40-acre part of the property actually used for chemical manufacture.

Sen. Mike Chaney, R-Vicksburg, who filed a companion bill on the Senate side, said the redevelopment fund will make it possible for the site to be cleaned up by a private developer.

"This will keep the state from having to dole out $8 million to clean up this site," Chaney said. "It's a win-win for everybody."

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Cleaning up the 40-acre contaminated site could open 540 acres for potential development. Proposals have included recreation areas, new homes and the reopening of the chemical plant that once employed 100 workers.

City and county officials have been working for the past year to sweeten the deal for redevelopment of the property. Last year, a federal bankruptcy judge has ordered a tax lien in Warren County void at the request of supervisors who said they would not seek nearly $800,000 in back taxes if the property was redeveloped.

At various times, the plant made fertilizer, rocket fuel components and other chemicals. Much of the byproduct was disposed of on the site, as was then required by state and federal regulations.

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ARCADIS

Conceptual Infrastructure Needs and Costs
Cleanup, Reuse, and Redevelopment Project
Former VCC Site
Vicksburg, Mississippi

Major Assumptions

- Addresses global project infrastructure to connect development parcels (developed by others) to existing City infrastructure
- Does not include golf course development needs

Item	Cost
Entitlements	
Master Plan	$10,000
Development Analysis	$7,500
Master hydrology study	$12,500
Master potable water study	$12,500
Master sanitary study	$18,000
Master transportation study	$8,250
Master dry utility study	$7,250
Master geotechnical study	$17,500
Contingency (10%)	$9,350
Subtotal	$102,850
Infrastructure Design	
One centralized domestic water plant, two wastewater lift stations, three local intersections, two highway intersections	
Design survey	$50,000
Hydrology analysis, culvert sizing, storm routing, misc.	$25,000
Water distribution, fire-flow analysis, storage tank with booster and appurtenances	$125,000
Sanitary sewer design flows and lift station	$110,000
Pavement design for Warrenton Road, Dabney Drive and Highway 61 South	$95,000
Dry utility design/coordination with all applicable companies/agencies	$35,000
Site-specific geotechnical evaluation for lift station, water storage facility and highways	$25,000
Contingency (10%)	$46,500
Subtotal	$511,500

Infrastructure Construction	
Water distribution including storage tank, booster, etc.	$715,000
Sanitary sewer including lift station	$420,000
Pavement and drainage structures, including a 10'x10' double-box culvert under Warrenton Road for golf course, culverts	$475,000
Dry utility trenching (less fiber-optic, if required)	$50,000
Contingency ($20%)	$332,000
Subtotal	$1,992,000
Total Global Infrastructure	$2,606,350

Kelly Riley
10/31/2004 01:16 PM

To: Trey Hess/HW/OPC/DEQ
cc:
Subject: FW: Rhodia Inc inquiry of Vicksburg Chemical property

fyi - i mentioned this to you before but don't that you have the contact info. thanks.

----- Forwarded by Kelly Riley/Legal/Admin/DEQ on 10/31/2004 01:23 PM -----

"Treinen, Tim" <Tim.Treinen@us.rhodia.com>
07/19/2004 07:03 AM

To: "Riley, Kelly MS DEQ" <kelly_Riley@deq.state.ms.us>
cc:
Subject: FW: Rhodia Inc inquiry of Vicksburg Chemical property

Kelly, Has there been any progress on the sales of the Vicksburg Chemical site? If not my company, Rhodia Inc would be interested in a prospectus on these assets. Please advise of the status of this asset sale? Thanks, Tim

-----Original Message-----
From: Treinen, Tim
Sent: Wednesday, May 12, 2004 3:56 PM
To: 'Riley, Kelly MS DEQ'
Subject: Rhodia Inc inquiry of Vicksburg Chemical property

Kelly, Thank you for the information you provided to me by phone today. My company Rhodia Inc produces ammonium and potassium phosphates in Belgium and Mexico. We would be interested in a possible production site for these products in the US. If this property becomes available we would be interested in receiving a prospectus. I would also appreciate any update you can provide on the pending sale. Thanks,

Tim J Treinen
Business Director -Performance Chemicals
Rhodia Specialty Phosphates
609-860-3427

Trey Hess@DEQ

11/15/2004 09:13 AM

To: Butler.Lael@epamail.epa.gov@INETDEQ
cc: Ghosh.Mita@epamail.epa.gov, Jerry_Banks@deq.state.ms.us, Trey_Hess@deq.state.ms.us
Subject: Re: VCC Status??

Lael,

Would it be wise for us to get input on the task documents from Harcros/ARCADIS since any sampling could reduce the uncertainty that currently exists for this prospective purchaser. It could be that the sampling results in a reduction of uncertainty to a level that we can all get back to them accepting full responsibility, not just "on-site and shallow groundwater." In fact, the sampling event could serve as the "baseline" sampling event discussed in the Agreed Order and Corrective Action Requirements.

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Butler.Lael@epamail.epa.gov

Butler.Lael@epamail.epa.gov

11/15/2004 08:01 AM

To: Trey_Hess@deq.state.ms.us
cc: Jerry_Banks@deq.state.ms.us, Ghosh.Mita@epamail.epa.gov
Subject: Re: VCC Status??

Thanks, Trey, for the update.

I will keep you in the loop with respect to the sampling and analysis planned for the VCC site.

I'm meeting with the EPA contractors the week of Thanksgiving. From that meeting, the task documents (SAP, QAPP, DQO's, etc.) will be prepared and perhaps even a date set for the sampling - perhaps February 2005 - just guessing.

I'll follow up with you after the meeting. Take care,
Lael :)

Trey_Hess@deq.state.ms.us

11/11/2004 11:50 AM

Lael Butler/R4/USEPA/US@EPA

To

cc

Mita Ghosh/R4/USEPA/US@EPA,
Jerry_Banks@deq.state.ms.us

Subject

Re: VCC Status??

Lael,

In a nutshell, we're still committed to Harcros/ARCADIS (for now).

Order is on hold until the financial is figured out (i.e., if there ain't enough money, work on an order is a waste of resources/time). We had a meeting with Paul Bunge, a true economic developer who has a working relationship with ARCADIS (Paul Newman), earlier this week. He is going to (over the next several weeks) see if this project is a go or no-go from a developer's perspective. From there, we will either move forward with the current plans or begin to entertain other options, which may include passing the project back to EPA.
I get the sense that ARCADIS/Bunge will work this rabbit through the end of the holidays (past Christmas). We will probably sit tight during this period. Also, another interested party, Sherman Kendis (sp?), met with Jerry Banks yesterday and is very interested in the project. We will continue to feed him the status/information about the site and see if he continues to have interest after he sees the complexity. Other parties have expressed interest in assets minus the plant/liability.

Please give us a sense as to when you guys plan to sample the site and the objectives. Since there are so many unanswered questions out there, it may be a good idea to include in your assessment the objectives of (1) has the contamination left the property, (2) has the contamination gotten into the "deeper" groundwater/aquifer? We're not talking "extent" but rather "yes/no" hypotheses.

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(601) 961-5300 (FAX)
http://www.brownfields.ms

Butler.Lael@epamail.epa.gov

11/09/2004 10:52 AM

To: Trey_Hess@deq.state.ms.us

cc: Ghosh.Mita@epamail.epa.gov

Subject: VCC Status??

Hello, Trey,

It's been a while since we last checked in on the status of the sale of the VCC property.
Please provide EPA with a brief update, including

1) status of the MDEQ Order,

2) whether there is a new partner interest, and

3) any other updated information you have to share.

Thanks and if possible, respond to this email today or tomorrow. Our manager's are asking for status updates.

Lael :)

Trey Hess

11/11/2004 10:50 AM

To: Butler.Lael@epamail.epa.gov@INETDEQ
cc: Ghosh.Mita@epamail.epa.gov, Jerry_Banks/HW/OPC/DEQ
Subject: Re: VCC Status??

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cc: Ghosh.Mita@epamail.epa.gov
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3) any other updated information you have to share.

Thanks and if possible, respond to this email today or tomorrow. Our manager's are asking for status updates.

Lael :)

Louisiana Chemical Equipment Co., L.P.
PLANT REMOVAL — SURPLUS EQUIPMENT — LIQUIDATIONS
USED CHEMICAL PROCESS EQUIPMENT

P. O. BOX 65064 — BATON ROUGE, LOUISIANA 70896-5064
PHONE (225) 923-3602 — FAX (225) 926-5237
E-MAIL: plants@lcec.com — http://www.lcec.com

October 15, 2004

SENT VIA FEDEX
601/961-5000

RECEIVED
OCT 1 8

Mr. Jere "Trey" Hess, P.E., DEE
Mississippi Department of Environmental Quality
101 Capitol Centre
101 West Capitol Street
P. O. Box 20305, (39289-0385)
Jackson, Mississippi 39201

Dear Mr. Hess:

I visited the Vicksburg Chemical site this past Monday to see if all the assets were still at the site as well as to observe the general condition of the process plants, buildings and warehouses.

The assets are still there, however, the condition of the process structures especially the KNO_3 structure have continued to deteriorate due to the presents of chlorine in the process.

We also observed that there needs to be a general clean up effort to collect and remove the abandoned product, cardboard, trash, and packaging etc.

We have purchased several complete industrial sites over the years and have been successful in finding tenants to reuse some of the process units in place as well as lease/sell the available warehouse and offices.

The Vicksburg Chemical facility has great potential once the old process units and structures are removed and the site is cleaned up.

We are willing to maintain our offer of $1,000,000.00 as structured in our August 6, 2004 letter as well as be responsible for the general clean up of the loose materials (product, packaging and trash, etc.).

We would at once contact our customers in the chemical processing industry, shipping and storage industries to operate units in place as well as lease or purchase the warehouses and offices.

The Mississippi DEQ will receive all proceeds received for the warehouses/buildings and any premium value associated with operating any of the process units in place.

We, herewith, list some of the advantages in entering into an agreement with LCEC.

A. Avoid most of your monthly holding costs.
B. Have the site surface cleaned up and avoid further deterioration and potential further contamination of the site.
C. Have the use of LCEC's forty years experience and contacts to find users and buyers for some of the process units, offices, warehouses and rail facilities.
D. Sell the vacant land to the city of Vicksburg.

If our proposal is of interest, we suggest that you act quickly as the current market for scrap and process equipment is at an all time high, however, this situation could change dramatically overnight.

The Mississippi DEQ would still be responsible for the hazardous clean up of the site, however, a lot of your cost will be offset by our payment, the sale of the vacant land, sale/lease of the warehouses and offices, and the cost avoidance of not having to clean up the process units and trash.

We are enclosing information on a site in Corpus Christi, Texas we recently purchased from the Celanese Chemical Corporation, that we are in the process of selling/leasing the process units, buildings and warehouses.

We will be happy to meet with you in Vicksburg or Jackson to discuss our proposal in more detail.

Regards,

LOUISIANA CHEMICAL EQUIPMENT CO., L.P.

Alvin G. Rotenberg
Managing Director

AGR/lm

Enclosure

Corpus Christi Technical Center

Established 1946

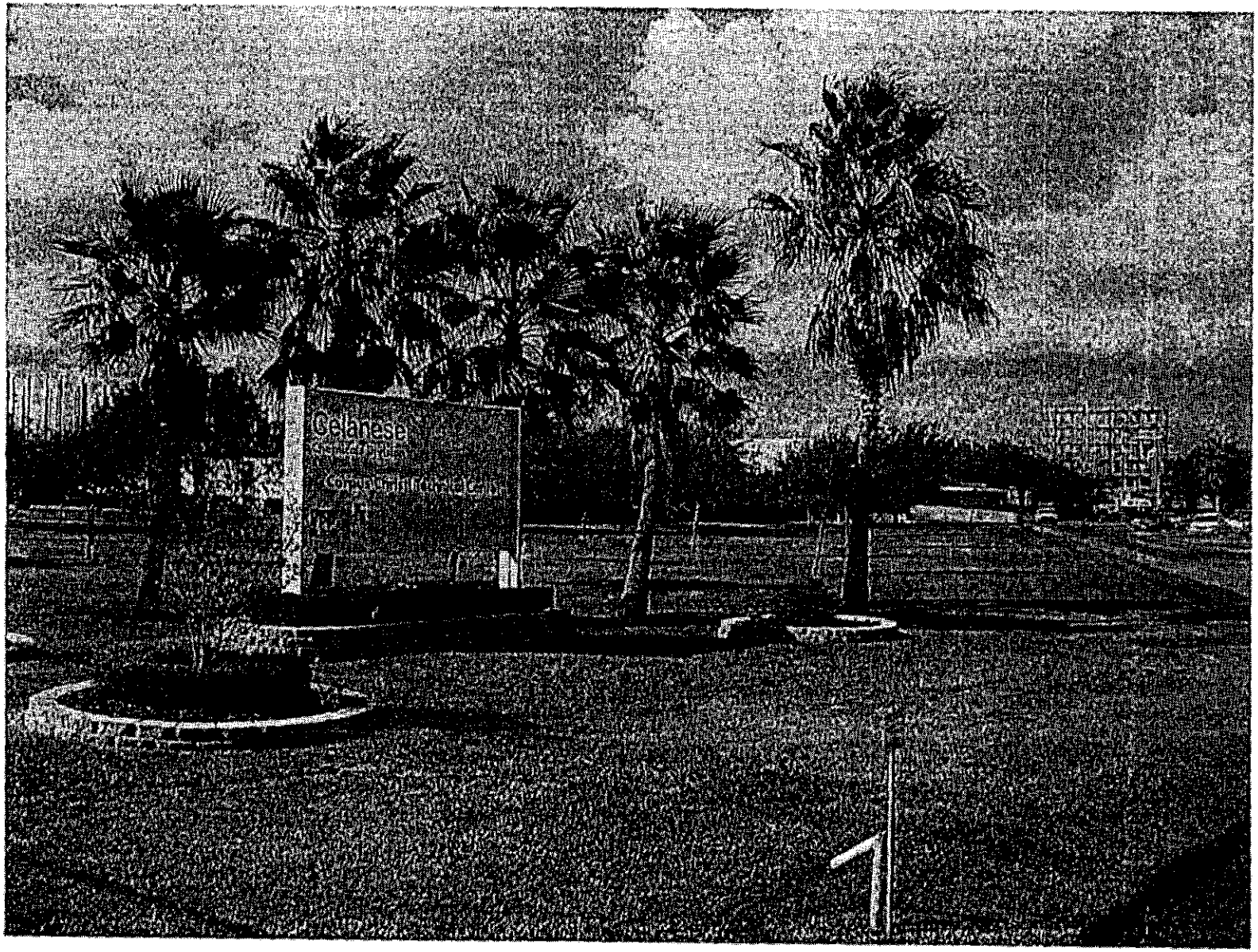
A 100 acre site which is capable of housing 170 –400 employees.

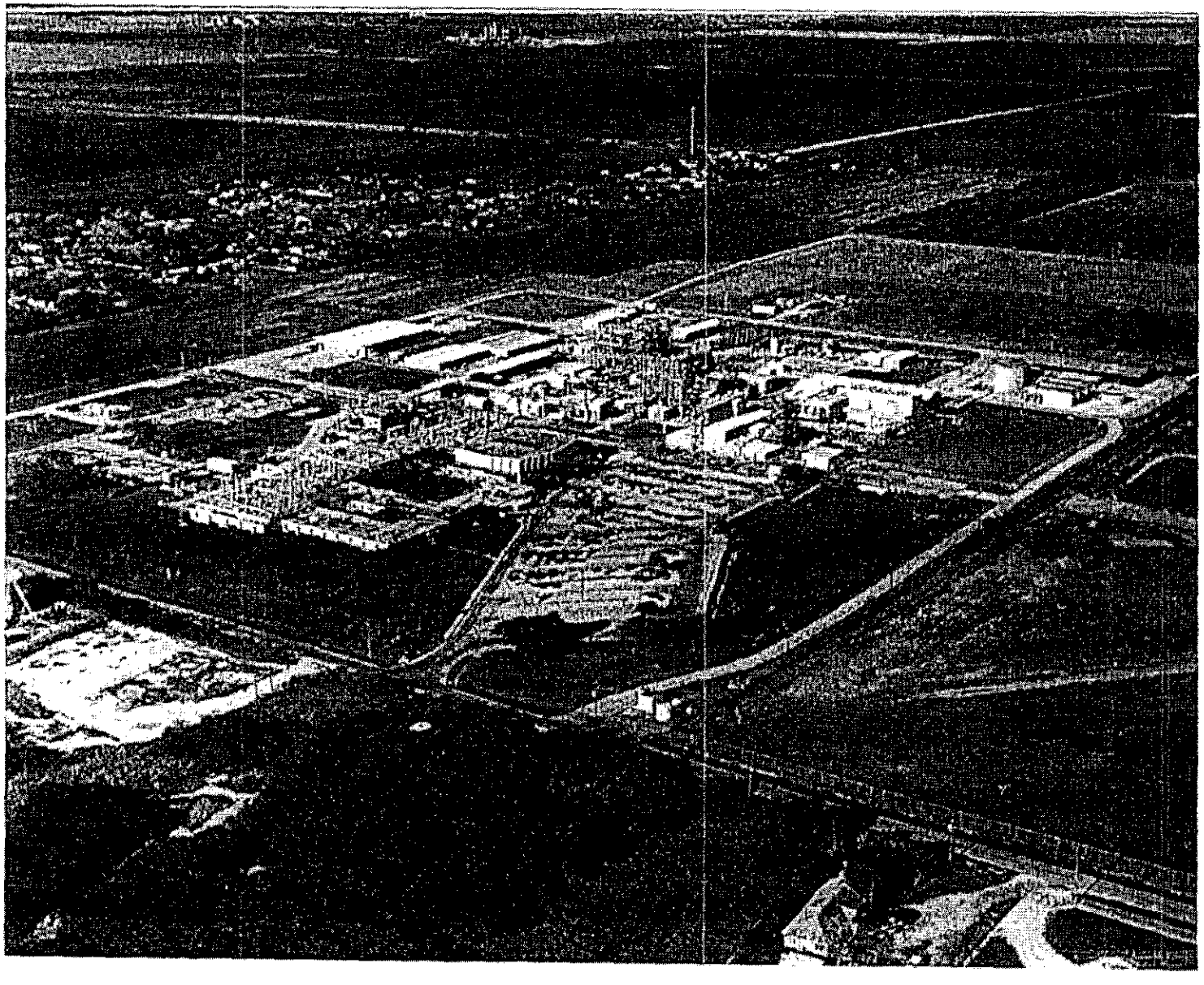
Facilities include:

- Offices
- Laboratories
- Maintenance Shops
- Pilot Plant Facilities
- Waste Water Treatment Plant

Environmental Performance:

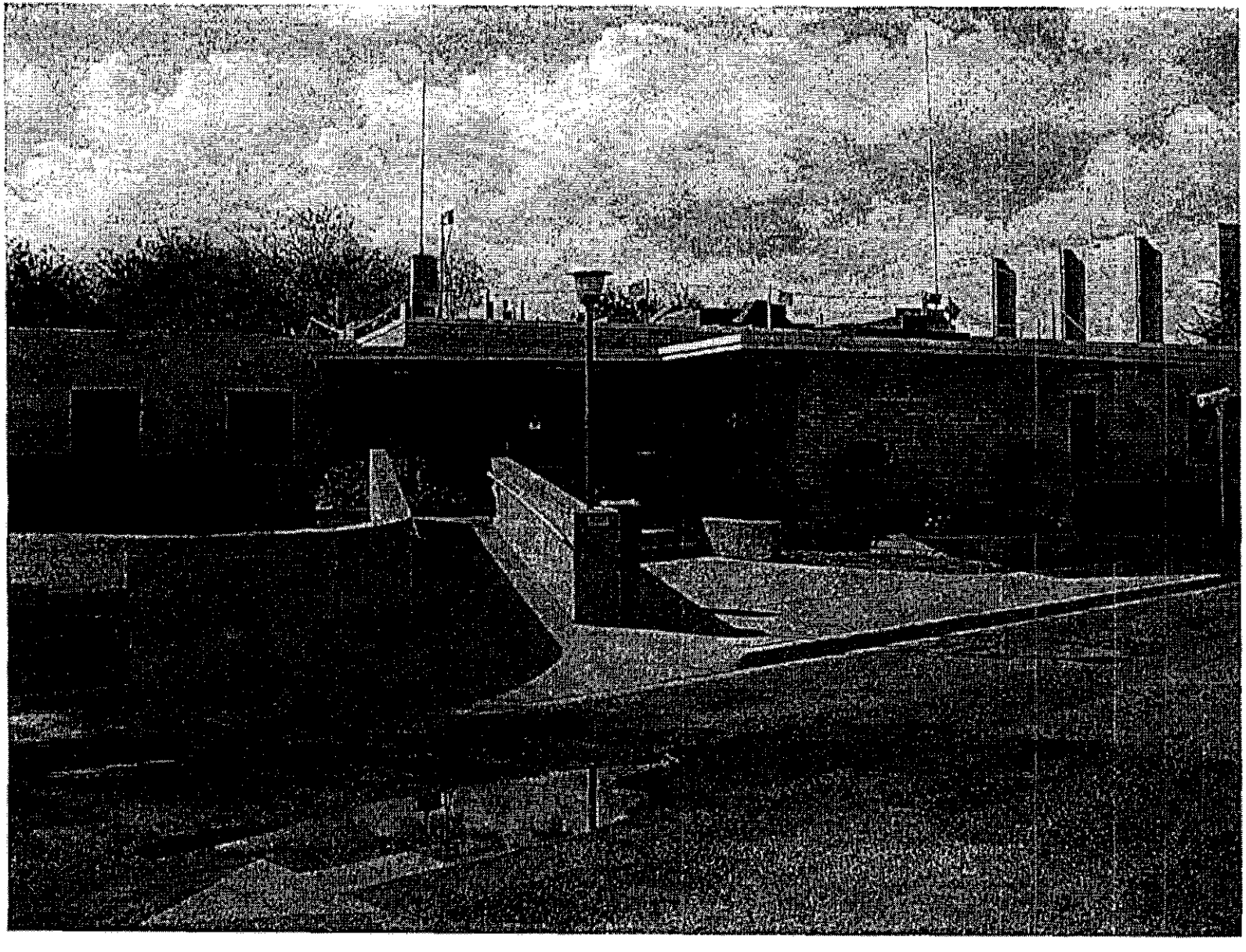
- OSHA STAR Site
- Clean Texas Star Site
- Clean Texas 2000


Gelanese



Main Office Building

Offices	**300+, 50,000 ft²**
Basement (Computer Room, CAED Dept.)	**47,000 ft²**



Entrance

Laboratories

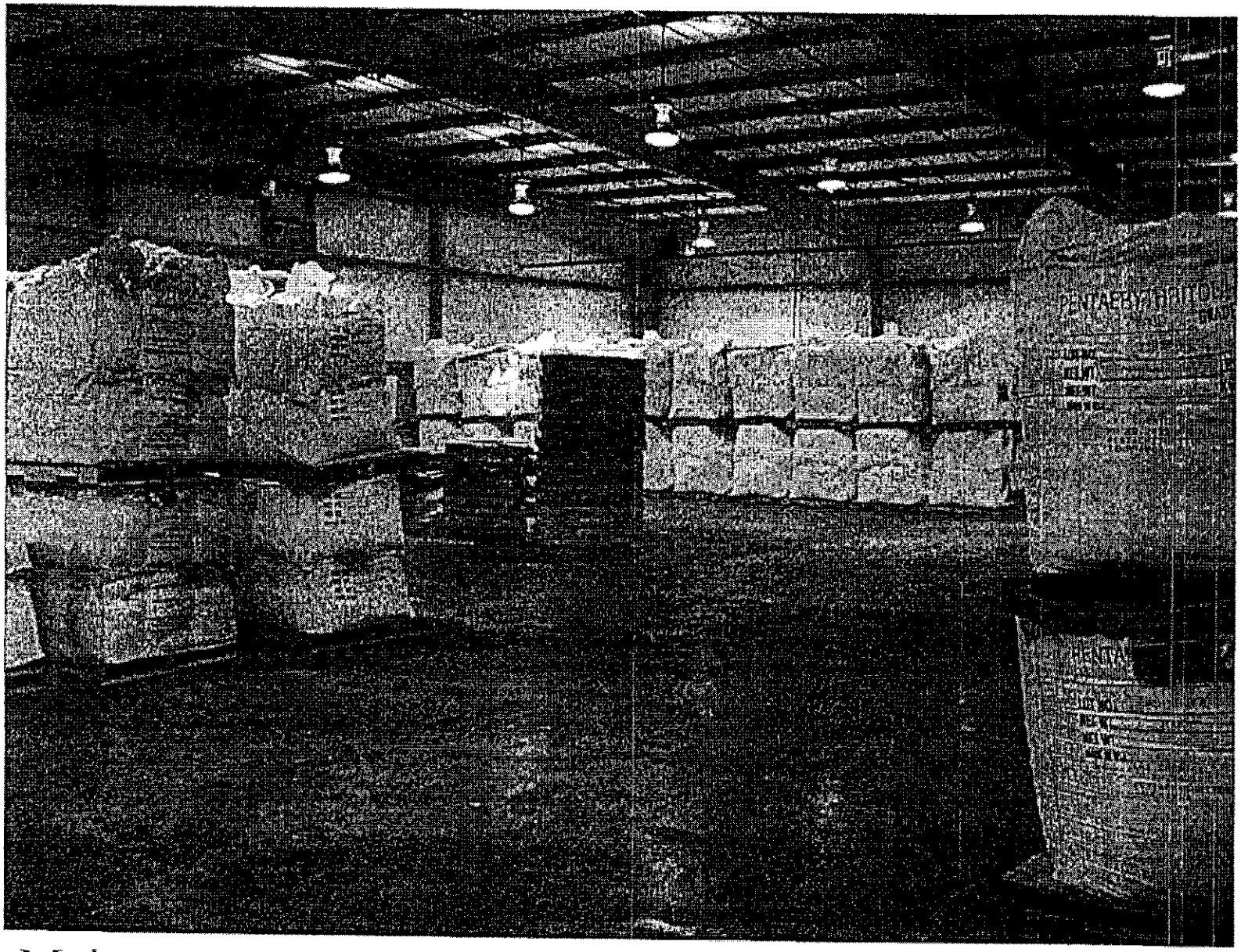
•Main Building	55+ Labs, 45,000 ft^2
•High Pressure Lab	10 Cells, 3,700 ft^2
•High Bay Labs	5 Bays, 1,700 ft^2

Warehouse

Chemical Warehouse 8500 sq. ft.

Main Warehouse 16000 sq.ft.

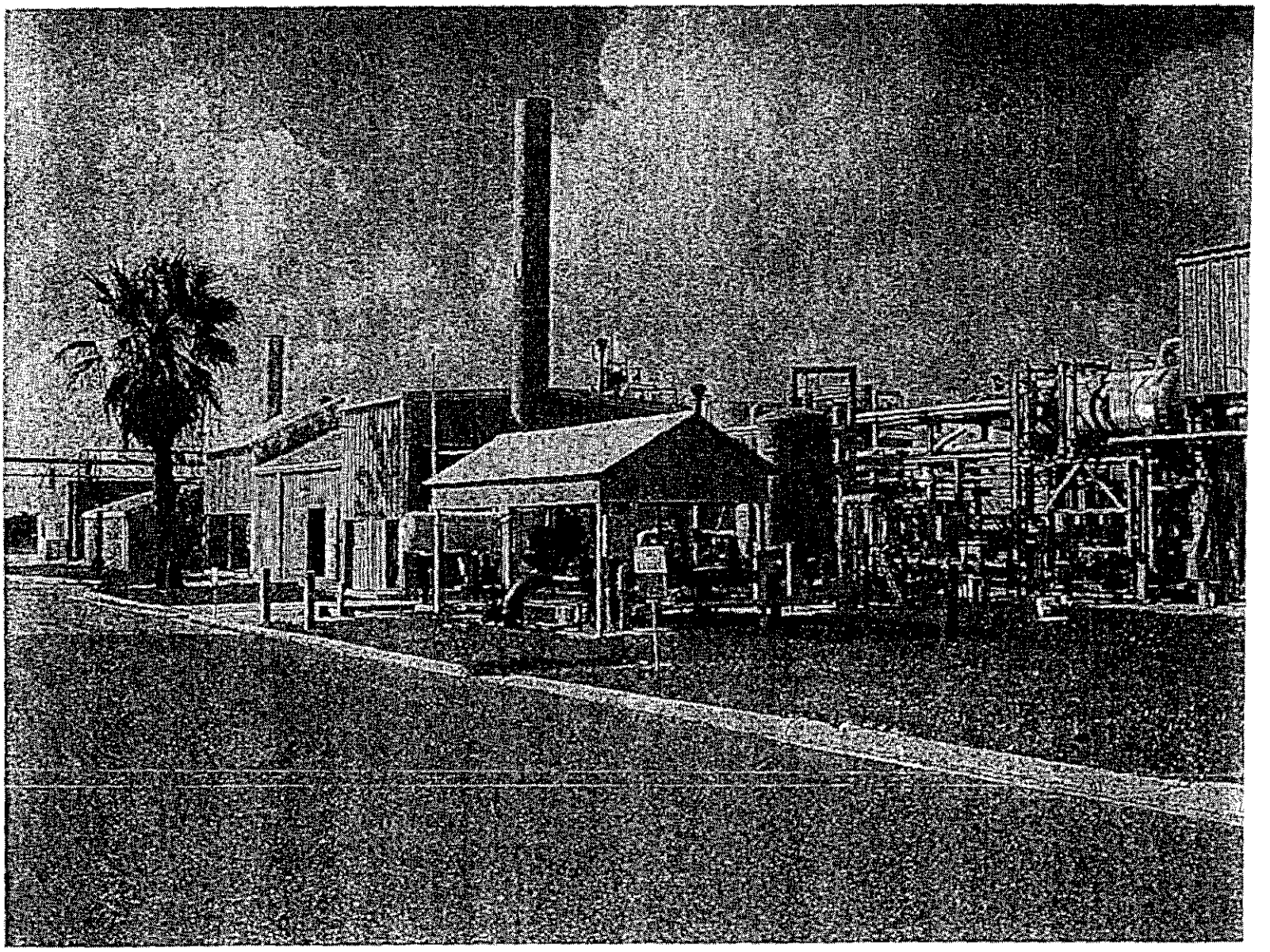
Main



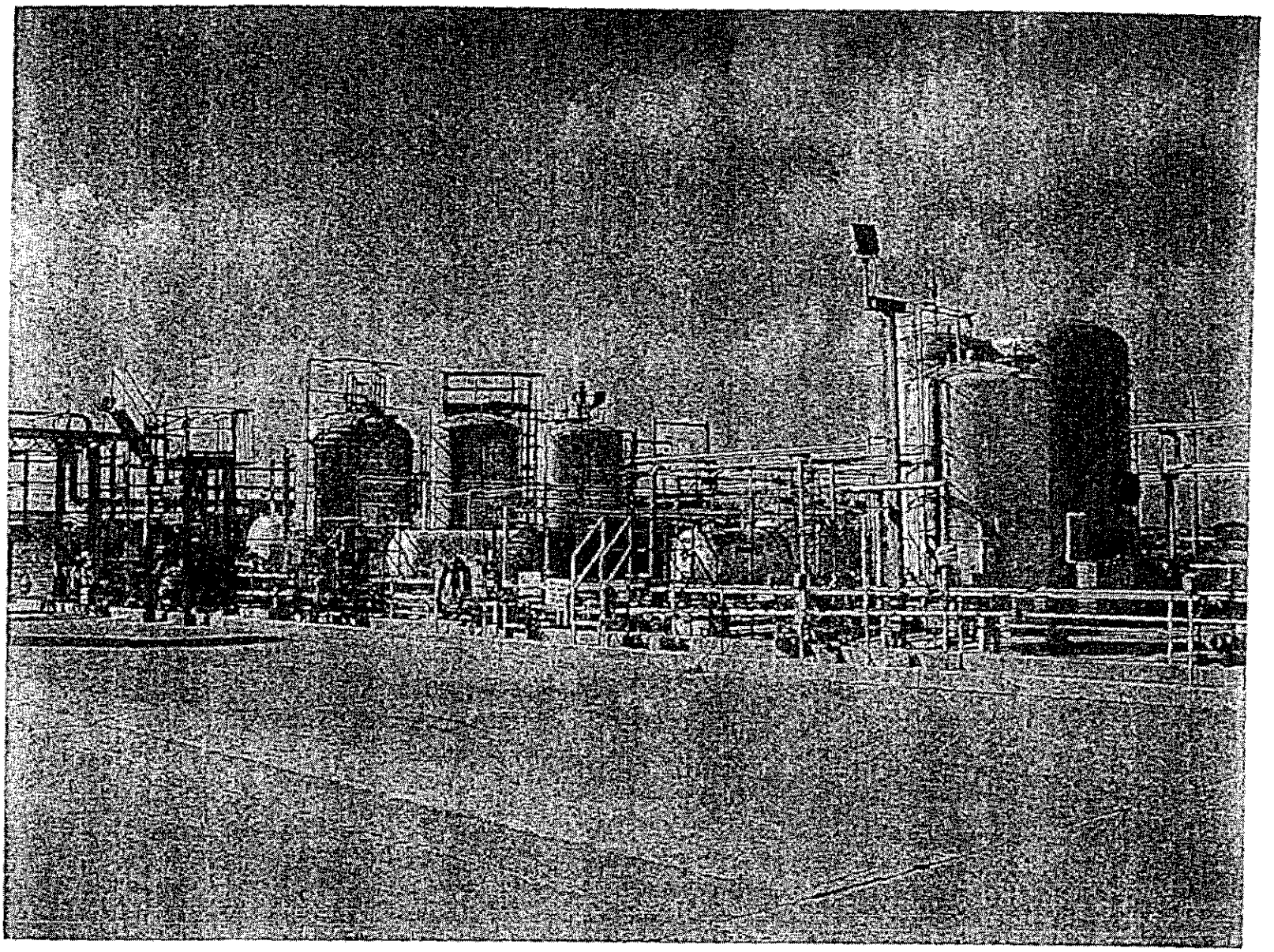
Main

Utilities

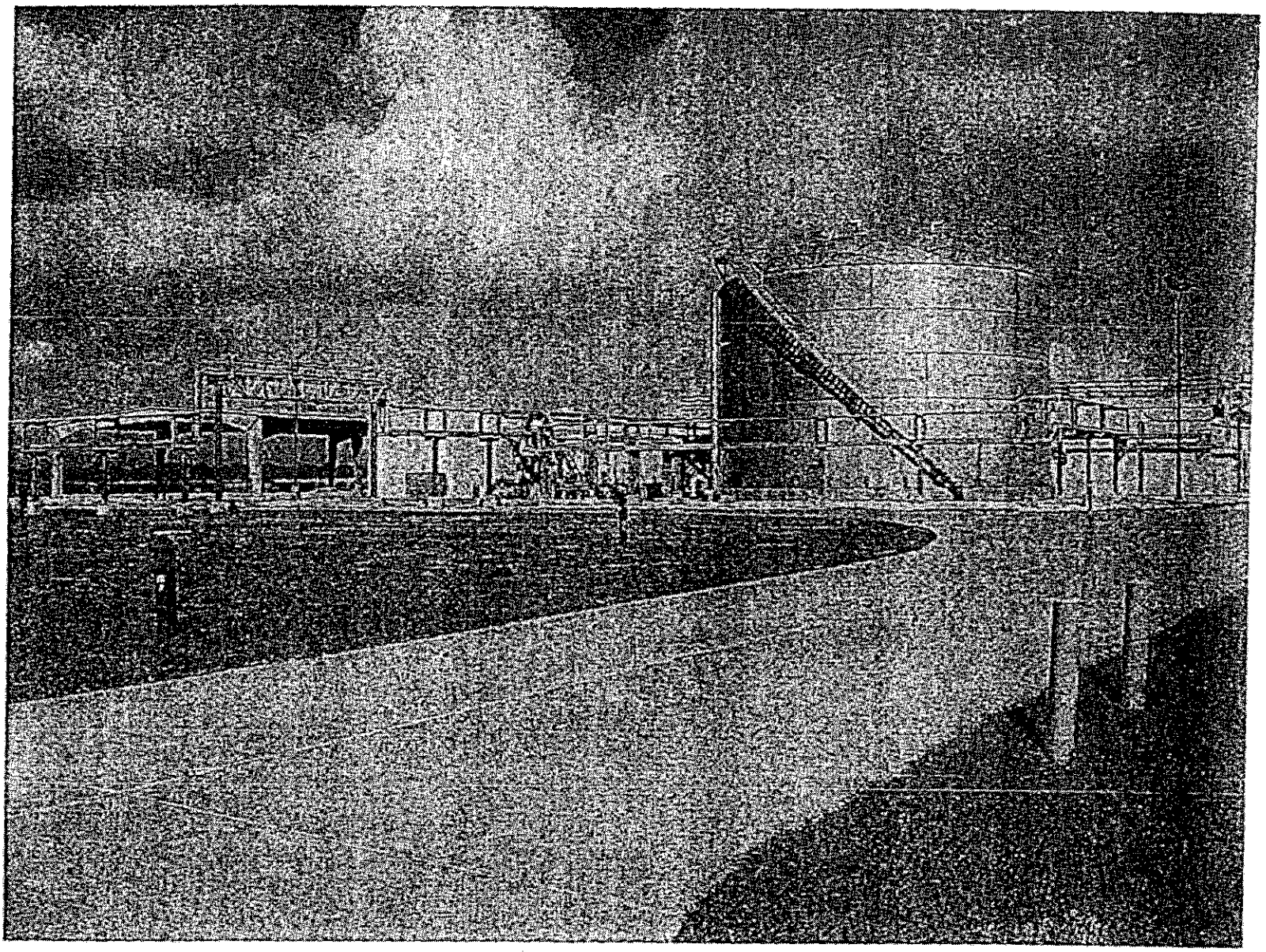
Utility Systems - 3 Boilers, 2 Air Comp's, CT's, etc.



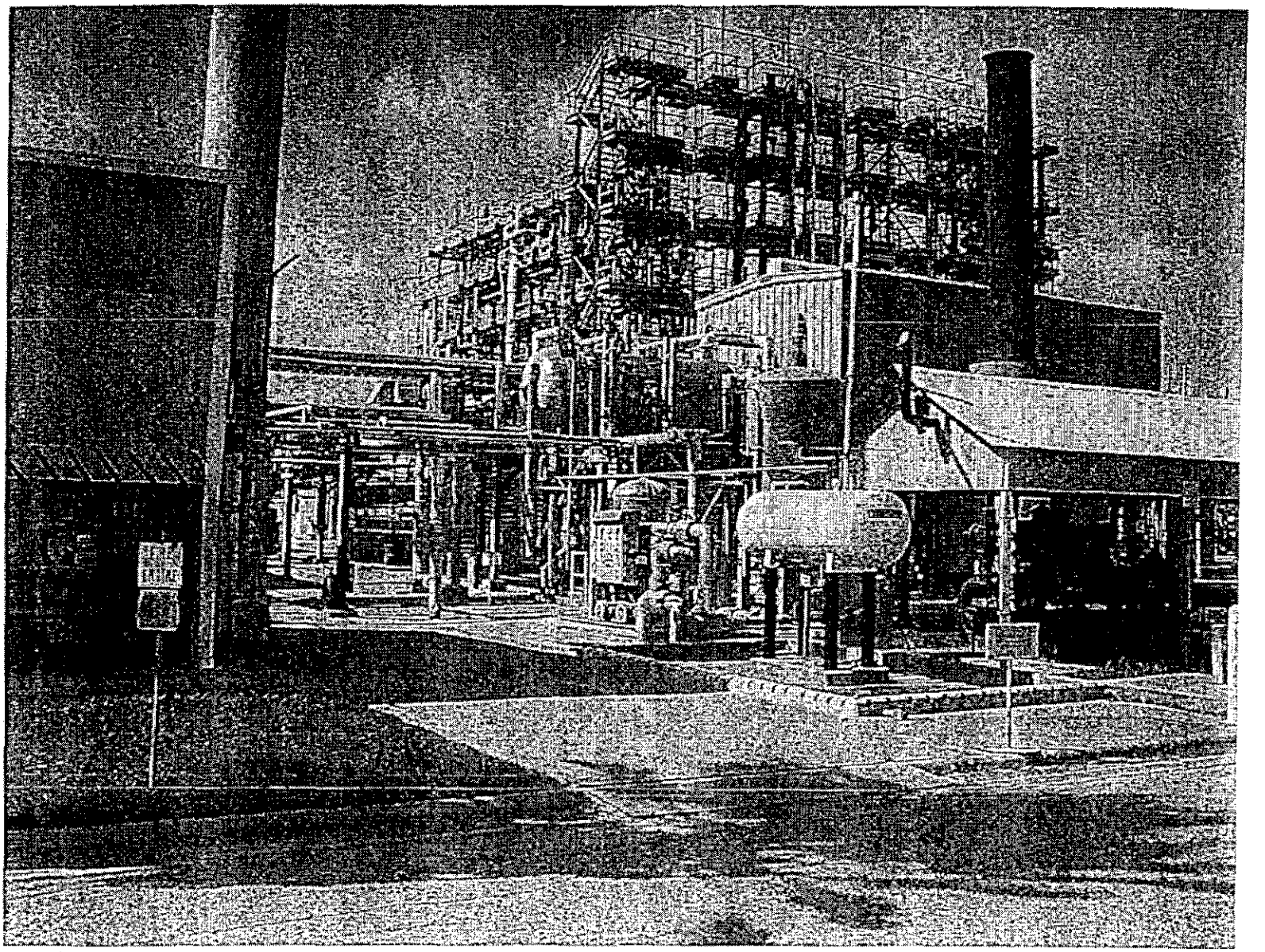
Boilers



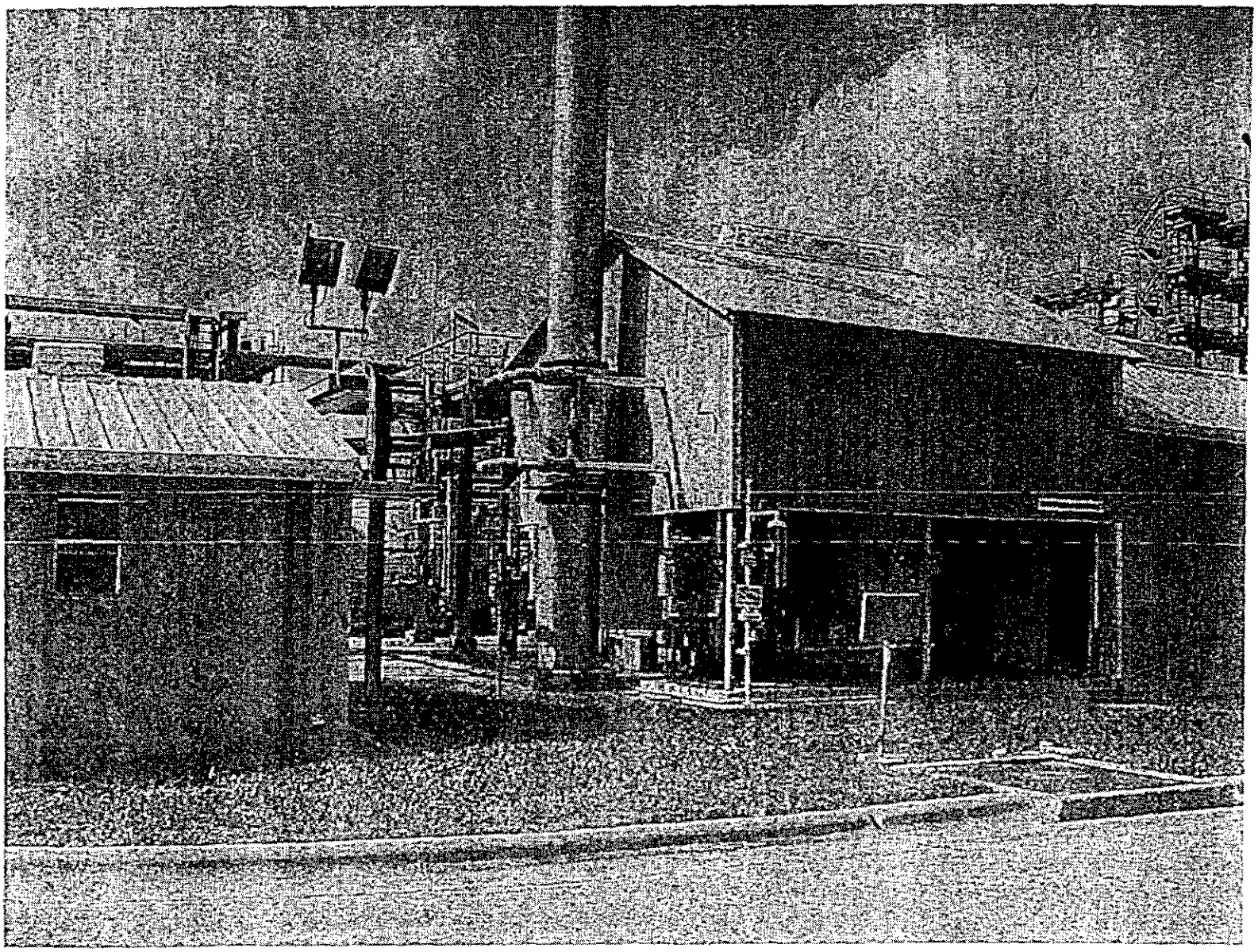
Tank Farm



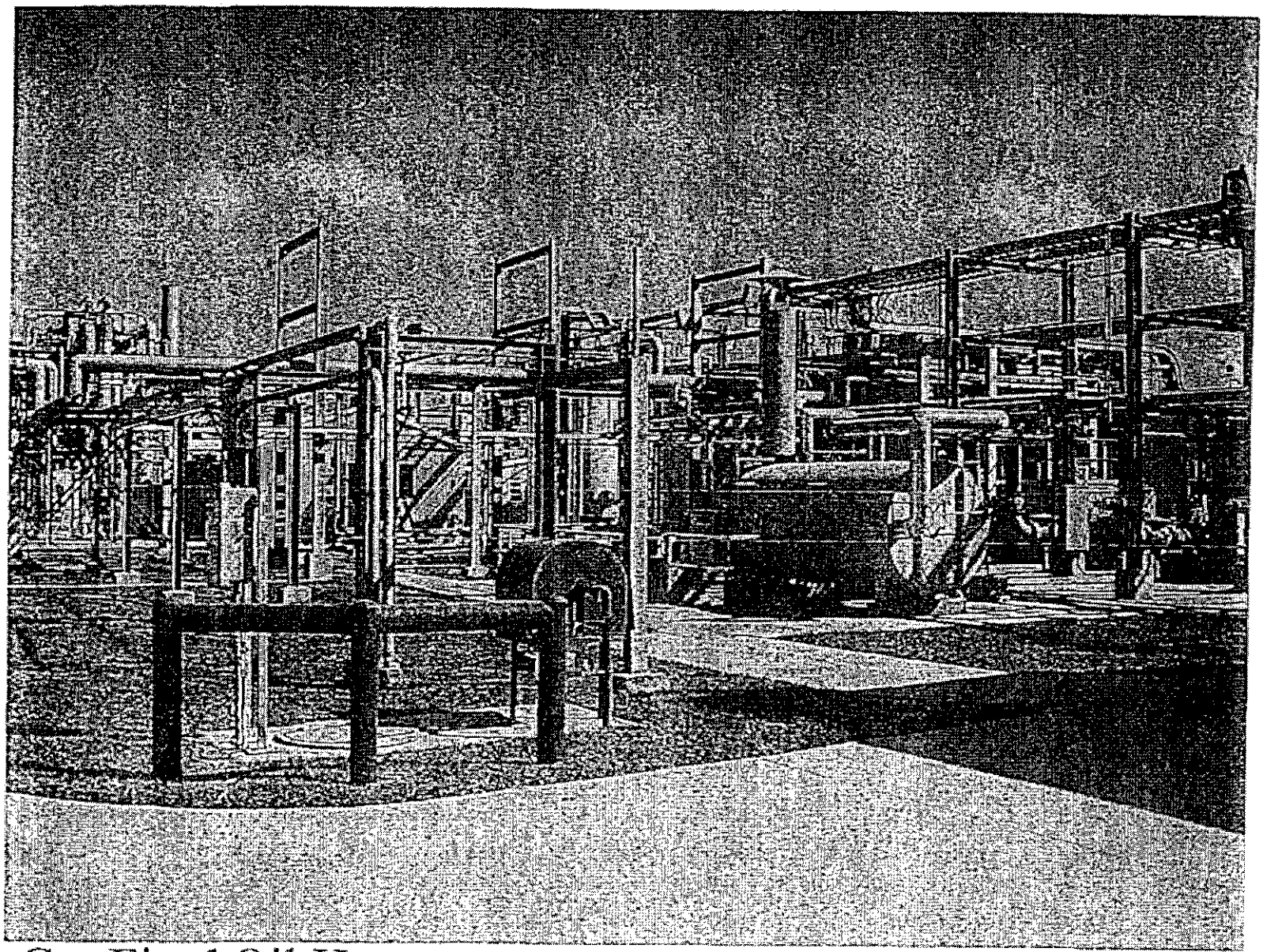
Waste Treatment Plan - 150GPM Hydraulic load



oilers

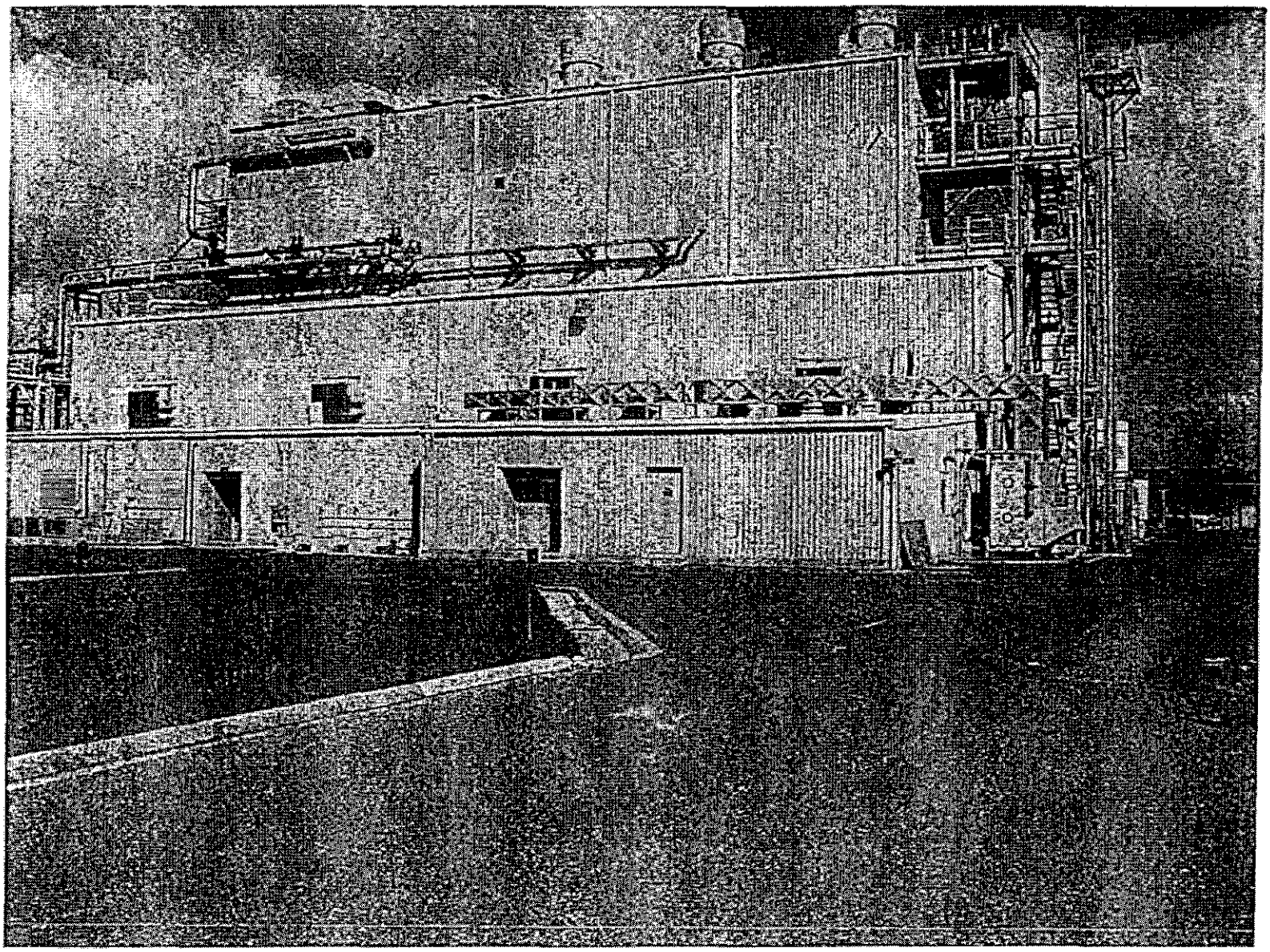


Boilers



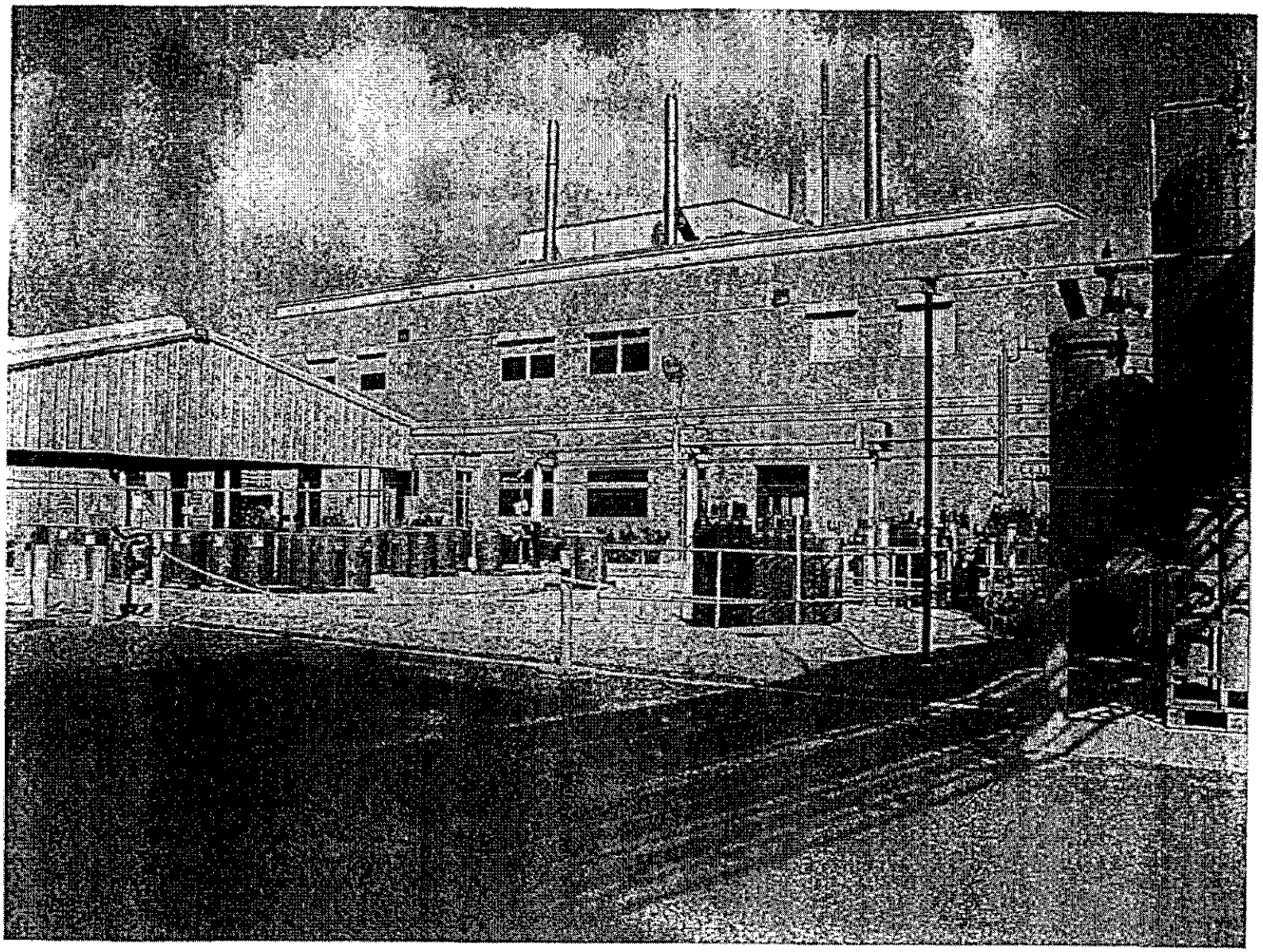
Gas Fired Oil Heater

Main Piloting Building



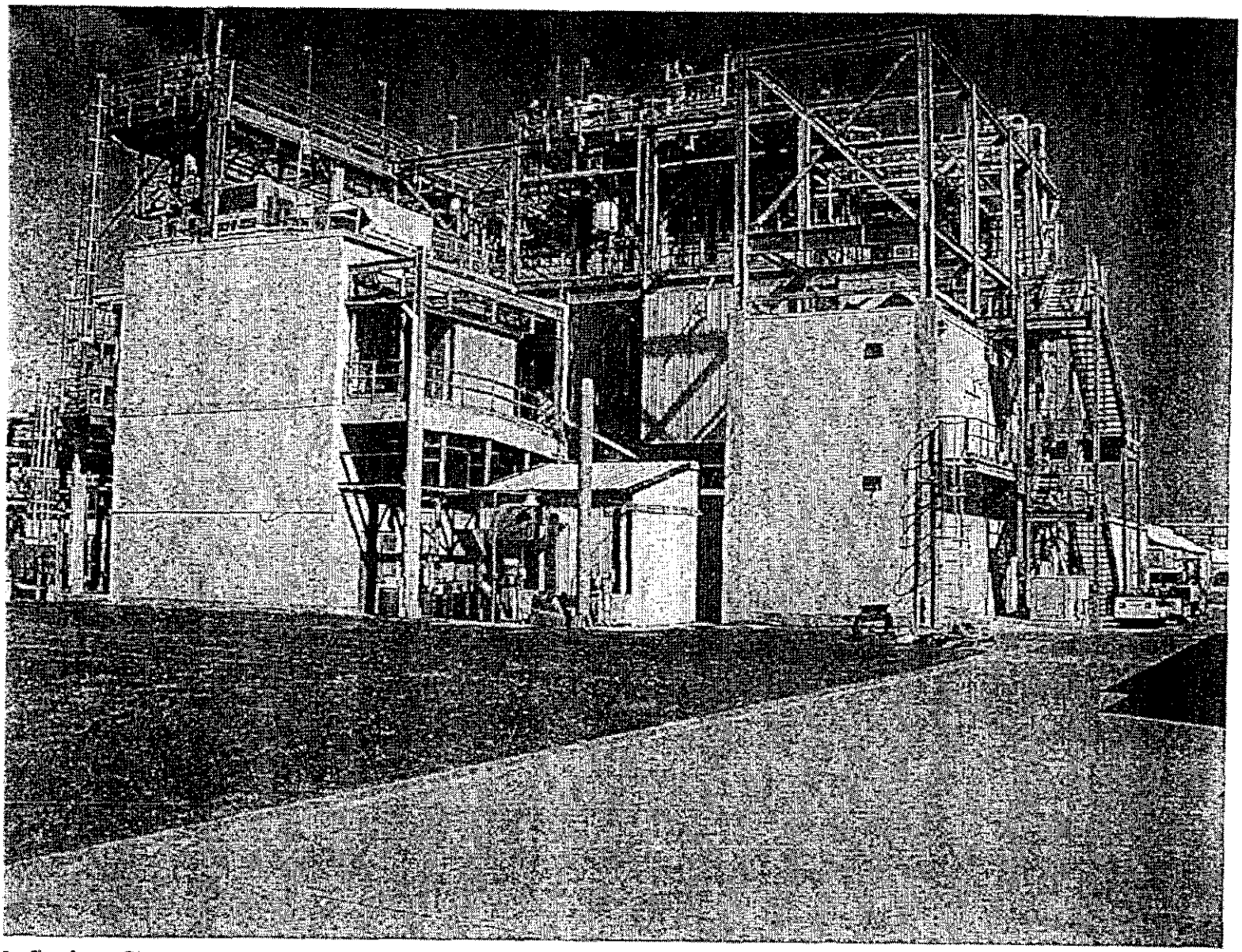
Prep Lab

- Process Development/Scale-up Lab (stand-alone).
- Process area, 4,300 ft^2, with 4 process Bays (19' x 22').
- Two Process Development Labs 350 ft^2 each with 6' Walk-in Hoods and 4' Bench Hoods
- Analytical Lab, 800 ft^2 with 2 Walk-in Hoods.
- Reactors up to 200L, with Graphite Condensers.
- Agitated Pressure Filters.
- Circulating Glycol/Water for Heat/Cooling.
- Process Water, Vacuum, and Vent Scrubbers.
- Honeywell S-9000 Control.



West Plant

- Three Story Structure with nine 17' x 18' ft Bays.
- Seven GLCS Reactors up to 1000 gal with Heating/Cooling S Overhead Condensers, Vacuum Systems, "Patch Panel" Manif
- Class 100,000 Solids Handling Building.
- Two Double Cone, GLCS Dryers ($1M^3$ & $2.7M^3$) (DeDietrich).
- Agitated Pressure Filter (Guedu).
- Centrifuge (Hienkel).
- Process Water System
- Honeywell S-9000 Control
- Control Room and Change Room



Main Structure

THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI

SOUTHERN DISTRICT OF MISSISSIPPI
FILED
APR 17 1992
J. T. NOBLIN, CLERK
BY _____ DEPUTY

UNITED STATES OF AMERICA,

Plaintiff,

v.

CEDAR CHEMICAL CORPORATION,

Defendant

Civil No.: [illegible]

CONSENT DECREE

WHEREAS, plaintiff, the United States of America, at the request of and on behalf of the Administrator of the United States Environmental Protection Agency (hereafter "EPA"), filed its Complaint in this action on January 23 1992, seeking injunctive relief under Section 3008(a), (g) and (h) of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. § 6928(a), (g) and (h), and the federal regulations and state hazardous waste management laws and regulations promulgated thereunder.

WHEREAS, plaintiff's claims arose from the operation, by past and present owners and operators, of a chemical manufacturing facility located in Vicksburg, Mississippi;

WHEREAS, plaintiff and defendant have agreed to the entry of this Consent Decree, in order to settle plaintiff's claims against defendant without further litigation;

WHEREAS, the entry of this Decree does not constitute an admission of fact or law by any party as to any issue raised in this action;

DEPARTMENT OF JUSTICE
90-7-1-463
LANDS DIVISION

WHEREAS, the entry of this Decree does not constitute a release of any claims not expressly resolved herein nor a release of any claims whatsoever against others not party to this Decree;

WHEREAS plaintiff and defendant agree, and this Court finds, that the settlement of the claims resolved herein without further litigation is in the public interest and that the entry of this Decree is the most appropriate means of resolving these matters.

NOW THEREFORE, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION

This Court has jurisdiction over the subject matter of this action and over the parties to this Decree under Section 3008(a) and (h) of RCRA, 42 U.S.C. § 6928(a) and (h), and 28 U.S.C. §§ 1331, 1345 and 1355. For purposes of entering and enforcing this Consent Decree, plaintiff's Complaint states a cause of action upon which relief can be granted.

Venue is appropriate in this judicial district pursuant to Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h)(1) and 28 U.S.C. Section 1391(b).

II. DEFINITIONS

Whenever the following terms are used in this Decree and the attachments hereto, the definitions specified hereinafter shall apply. All terms not defined herein shall have the meaning used in RCRA and the applicable regulations.

A. "C.F.R." means the Code of Federal Regulations.

B. "CMI" means Corrective Measures Implementation

C. "CMS" means Corrective Measures Studies.

D "Days" means calendar days.

E. "Defendant" means Cedar Chemical Corporation.

F. "EPA" or "Agency" means the United States Environmental Protection Agency.

G. "Facility" means all contiguous property owned by Cedar Chemical Corporation located on Rifle Range Road in Vicksburg, Mississippi, including but not limited to the North and South plants.

H "HSWA" means the Hazardous and Solid Waste Amendments of 1984, Pub. L. 98-616.

I. "MSDEQ" means the Mississippi Department of Environmental Quality.

J. "Plaintiff" means the United States of America, on behalf of EPA.

K. "RCRA" means the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., as amended.

L. "RFI" means RCRA Facility Investigation.

M. "Settling parties" means the parties to this Decree, that is, the United States of America and Cedar Chemical Corporation.

III. PARTIES BOUND

A. The provisions of this Decree shall apply to and be binding upon the United States and the defendant, its officers, directors, employees, agents, successors and assigns, and upon

all persons, firms, corporations, contractors and consultants acting under or for the defendant.

B. The defendant shall provide a copy of this Decree to all contractors, subcontractors, laboratories and consultants retained to conduct or monitor any portion of the work performed pursuant to this Decree within ten (10) calendar days after entry of the Decree by the Court or within ten (10) calendar days after the defendant enters into a contract with any such third party, whichever occurs later. The defendant shall include an express requirement in each such contract that the contractor comply with all of the terms of this Decree. For purposes of determining compliance with the terms of this Decree, any action of defendant, defendant's contractor's, subcontractor's, laboratories and consultants in carrying out any provisions of this Decree, shall be deemed an action of defendant.

C. The undersigned representative(s) of each party to this Decree certifies that he or she is fully authorized by the party whom he or she represents to enter into the terms and conditions of this Decree and to legally bind that party to all such terms and conditions, provided however, that each undersigned representative executes this Decree solely in his or her representative capacity and does not thereby assume or incur personal liability for the obligations of the party whom he or she represents.

D. The defendant shall give notice in writing of the existence and terms of this Decree to any successors in interest prior to any transfer of ownership or control of all or part of the subject Facility or of any shares of stock of defendant. The defendant shall simultaneously provide a copy of such written notice to plaintiff.

E. No change in ownership of all or part of the subject Facility or in the corporate status of defendant will in any way alter the defendant's responsibilities and obligations under this Decree.

IV. CLOSURE AND POST-CLOSURE CARE

A. Within sixty (60) calendar days following entry of this Decree by the Court, the defendant shall submit to plaintiff and to MSDEQ, a plan for clean closure of the container management area. The container management area encompasses all areas within and immediately adjacent to the returned product storage area designated in Figure A-1 in the Scope of Work for Interim Measures attached to and incorporated in this Consent Decree, in which hazardous wastes were previously managed.

B. No later than forty-five (45) days following notice of a determination by plaintiff that defendant cannot clean close the container management area, defendant shall submit a post-closure care plan.

C. Plaintiff may hereafter designate in writing additional hazardous waste management units requiring closure and post-closure care pursuant to this Paragraph. Subject to the dispute resolution provisions of Paragraph XVI below, the

defendant shall submit and implement plans or permit applications for closure and post-closure care with respect to those additional hazardous waste management units designated by plaintiff, in accordance with the requirements of this Paragraph, as if those additional hazardous waste management units were listed in Subparagraph A above.

D. The hazardous waste management unit listed in Subparagraph A above, together with those units designated by plaintiff pursuant to Subparagraph C above, shall hereafter be collectively referred to as the "Closing Units."

E. Each plan for closure or post-closure care shall meet the applicable requirements of MHWR Part 265, Subparts G, K, L, M and N and any other applicable state or federal regulations and requirements, including, with respect to any units to be closed by removal, the applicable requirements of MHWR §§ 264.228, 264.258 and 264.280(e). Each plan shall be submitted in the form required under the applicable regulations.

F. Each closure plan shall contain a detailed estimate of the cost of closing the facility, which meets the requirements of MHWR § 265.142, and each post-closure plan shall contain a detailed estimate of the cost of post-closure monitoring and maintenance of the facility, which meets the requirements of MHWR § 265.144.

G. Plaintiff shall review each of the closure and post-closure plans submitted by the defendant and may confer with each other on the adequacy of the plan. Each proposed closure and post-closure plan or permit application will be

subject to review, modification and approval under the procedures established in Paragraph XI below.

H. The defendant shall commence closure within fifteen (15) days of notification by EPA of approval of its closure plan, unless the plan, as approved, provides for a different date to commence closure; and the closure activities shall be completed and the appropriate certifications submitted within the time limits specified in each approved closure plan.

I. Following completion of closure of each Closing Unit a determination will be made by EPA of the need for post-closure care. If the Agency concludes that such care is necessary, the defendant shall undertake and continue the post-closure care required under the approved post-closure care plan, submitted pursuant to B above, until such time as a post-closure permit is issued.

J. Upon written request by plaintiff pursuant to MHWR § 270.1, the defendant shall submit to plaintiff and to MSDEQ a post-closure permit application for each subject Closing Unit. Each such application shall be submitted within the time period specified in plaintiff's request.

K. Each post-closure permit application will be subject to review, modification and approval under the procedures established in Paragraph X below.

L. Following issuance of the post-closure permit for each Closing Unit, the defendant shall undertake and continue the post-closure care required under the terms of the permit.

V. FINANCIAL ASSURANCE FOR CLOSURE

A. For the subject Facility, the defendant is required to establish financial assurance for the closure of the Closing Units.

B. The wording of the financial assurance vehicle for any closure trust fund shall be identical to the wording specified in the state regulation equivalent to 40 C.F.R. § 264.151(a)(1), and any closure financial assurance vehicle must be accompanied by a formal certification of acknowledgement, such as that set out in the state regulation equivalent to 40 C.F.R. § 264.151(a)(2). Any proposed closure financial assurance vehicle shall be subject to review, modification and approval under the procedures established in Paragraph X below.

C. Each such financial assurance vehicle shall be fully funded either by cash, by bank letter of credit, by corporate guaranty, or by some other vehicle specifically recognized under the applicable regulations for providing financial assurance for such closure, within 30 days after final approval of the financial assurance vehicle. The release of funds from each such closure financial assurance vehicle shall be governed by the provisions of the state regulation equivalent to 40 C.F.R. § 265.143.

D. The financial assurance vehicle shall be held until such time as the defendant makes a request for the release of the funds meeting the requirements of the state regulation equivalent to 40 C.F.R. § 265.143(a) and (h) or the defendant makes a request for the reimbursement of expenditures meeting the requirements of the state regulation equivalent to 40

C.F.R.§ 265.143 (a)(10). The financial assurance vehicle shall continue to be held for any Closing Unit with respect to which such a request has not been made and accepted pursuant to Subparagraph E below.

E. If plaintiff accepts the defendant's request for the release of funds or for the reimbursement of expenditures under Subparagraph D above, the Agency shall authorize the release of the funds for that Closing Unit or the reimbursement of the expenditures, as the case may be, within sixty (60) calendar days after receipt of the request.

F. If plaintiff rejects the defendant's request under Subparagraph D above, plaintiff shall so notify the defendant in writing within sixty (60) calendar days after receipt of the request. The defendant may then further pursue the release of the funds in question pursuant to the dispute resolution provisions of Paragraph XVII below, or may subsequently file an amended request.

VI. FINANCIAL ASSURANCE FOR POST-CLOSURE CARE

A. For the subject Facility, the defendant shall establish a financial assurance vehicle to provide financial assurance for post-closure care of any Closing Units for which clean closure cannot be accomplished pursuant to this Consent Decree.

B. The wording of the financial assurance vehicle for such post-closure care shall be identical to the wording specified in the state regulation equivalent to 40 C.F.R. § 264.151(a)(1), and the financial assurance vehicle must be accompanied by a formal certification of acknowledgement, such as that set out in the state regulation equivalent to 40 C.F.R. § 264.151(a)(2).

C. A proposed post-closure financial assurance vehicle for any applicable Closing Unit shall be submitted to plaintiff within forty-five (45) days following notice of a determination by plaintiff that defendant cannot clean close the Closing Unit. The post-closure financial assurance vehicle shall be subject to review, modification and approval under the procedures established in Paragraph X below.

D. The amount of financial assurance required for post-closure care with respect to the Closing Unit shall be the amount of the post-closure cost estimate specified in the closure and post-closure plans approved for the Facility under Paragraph IV above.

E. Subsequent adjustments to the fund shall be made annually in accordance with the applicable regulations.

F. Should the Agency determine that clean-closure has been accomplished prior to the entry of this Consent Decree, then defendant shall not be required to establish a financial assurance vehicle to provide financial assurance for post-closure care of the Closing Units referred to in Paragraph IV.A. of this Consent Decree. Such determination shall only pertain to this Section and shall not alter defendant's obligations under the remainder of this Decree.

VII. CORRECTIVE ACTION

A. All work undertaken pursuant to this Consent Decree shall be performed in a manner consistent with, at a minimum, all applicable, relevant and appropriate EPA Guidance Documents

and the Scopes of Work (attached hereto) and adopted and incorporated herein by reference, including the following:

The Interim Measures (IM) Scope of Work for the subject facility (Attachment A hereto) ; the RCRA Facility Investigation (RFI) Scope of Work for the subject facility (Attachment B hereto); the Corrective Measures Study (CMS) Scope of Work for the subject facility (Attachment C hereto); the Corrective Measures Implementation (CMI) Scope of Work for the subject facility (Attachment D hereto); RCRA and its federal and state implementing regulations; all applicable, relevant and appropriate EPA guidance documents such as the "RCRA Groundwater Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1, Sept. 1986); "RCRA Facility Investigation (RFI) Guidance" (EPA 530/SW-87-001), "Test Methods for Evaluating Solid Waste" (SW-846, Third Edition); "Guidance for Preparation of QA Project Plans" (OWR5-QA-1, May 1984); and EPA Region IV Engineering Support Branch's Standard Operating Procedure and Quality Assurance Manual (SOP); and, where so notified by Plaintiff, any additional, applicable, relevant and appropriate state guidance documents.

B. The defendant shall submit to plaintiff and to MSDEQ an RFI Workplan for the subject facility, pursuant to the schedules established in the attached RFI Scope of Work.

C. The RFI Workplan is subject to review, modification and approval under the procedures established in Paragraph X below. The RFI Workplan shall be developed in accordance with, at a minimum, RCRA, its implementing regulations and applicable,

relevant and appropriate EPA and state guidance documents including those described in Subparagraph A of this Paragraph. The RFI Workplan shall be developed and implemented in a manner consistent with the RFI Scope of Work.

D. In accordance with the provisions of the attached RFI Scope of Work, the RFI Workplan shall be designed to determine the presence, magnitude, extent, direction and rate of movement of any hazardous wastes or hazardous constituents within and beyond the subject Facility boundaries. The RFI Workplan shall document the procedures the defendant shall use to conduct those investigations necessary (1) to characterize the potential pathways of contaminant migration, (2) to characterize the source(s) of contamination, (3) to define the degree and extent of contamination, (4) to identify actual or potential receptors, and (5) to support the development of alternatives from which corrective measures will be selected by plaintiff. A specific schedule for implementation of all activities at the subject facility shall be included in the RFI Workplan.

E. The defendant shall submit an RFI Report to plaintiff and to MSDEQ for the subject Facility in accordance with the schedules contained in this Decree and the appropriate Scope of Work and Workplan. The RFI Report shall be subject to review, modification and approval under the procedures established in Paragraph X below.

F. Upon completion of the RFI at the subject facility and approval of the RFI report, the defendant shall conduct a Corrective Measures Study (CMS) in accordance with the CMS Scope of Work.

G. The defendant shall submit a CMS Report to plaintiff and to MSDEQ for the subject facility in accordance with the schedules contained in this Decree and the Scope of Work and Workplan. The CMS Report shall be subject to review, modification and approval under the procedures established in Paragraph X below.

H. Upon approval by plaintiff of a CMS Report for the facility, EPA shall make available to the public for review and comment for at least forty-five (45) calendar days, a summary of EPA's proposed corrective measures and EPA's justification for its selection. Included in the justification will be a copy of the RFI and CMS Report for the facility.

I. Following the public review and comment period provided for in Subparagraph H above, plaintiff shall notify defendant of the corrective measures selected by plaintiff for the subject facility. If the corrective measures recommended in the CMS Report are not the corrective measures selected by plaintiff after consideration of public comments, plaintiff shall inform defendant in writing of the reasons for the decision. Defendant shall modify the RFI and CMS based upon public comment, if directed to do so by plaintiff, within the time frame established by EPA in the notification.

J. The Administrative Record supporting the selection of the corrective measures for the subject facility will be available for public review at the following location:

RCRA and FF Branch
Waste Compliance Section
Region IV

United States Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

K. Within ninety (90) calendar days after defendant's receipt of notification of plaintiff's final selection of the corrective measures for the facility, defendant shall submit to plaintiff and to MSDEQ a Corrective Measures Implementation (CMI) Program Plan. The CMI Program Plan shall be subject to review, modification and approval under the procedures established in Paragraphs X below.

The CMI Program Plan shall be developed in accordance with, at a minimum, RCRA, its implementing regulations and applicable, relevant and appropriate EPA and state guidance documents including those described in Subparagraph A of this Paragraph. The CMI Program Plan shall be developed and performed in a manner consistent with the CMI Scope of Work.

L. The CMI Program Plan shall provide for the design, construction, operation, maintenance and monitoring of corrective measures at the subject facility. In accordance with the provisions of the attached CMI Scope of Work, the CMI Program shall include four principal tasks, as follows: (1) CMI Program Plan, (2) Corrective Measures Design, (3) Corrective Measures Construction, and (4) Reports. These tasks will include the elements outlined in the CMI Scope of Work.

M. The defendant shall commence and complete implementation of the tasks required by the approved workplan and program plan in accordance with the standards, specifications and schedules stated in the particular plan.

N. In the event that the post-closure permit for a Closing Unit is called pursuant to Paragraph IV above, the corrective action process undertaken at the Facility under this Paragraph will be coordinated with the corrective action requirements under the post-closure permit, in a manner to be determined by plaintiff.

VIII. FINANCIAL ASSURANCE FOR CORRECTIVE ACTION

A. Defendant is required to establish financial assurance for corrective action at the facility in compliance with 40 CFR 264.101(b).

B. The financial assurance vehicle shall be established and fully funded prior to defendant's implementation of the corrective measures in accordance with the CMI Program Plan.

IX. QUALITY ASSURANCE, QUALITY CONTROL AND SAMPLING

A. Throughout all sample collection and analysis activities, the defendant shall use EPA-approved quality assurance, quality control and chain-of-custody procedures, and where so notified by the MSDEQ, any additional state-approved quality assurance, quality control and chain-of-custody procedures.

B. In addition, the defendant shall:

1. Ensure that laboratories used by defendant for analyses perform such analyses according to the EPA methods included in "Test Methods for Evaluating Solid Waste" (SW-846, Third Edition, November 1986 and subsequent updates), "RCRA Groundwater Monitoring Technical Enforcement Guidance Document"

(OSWER Directive 9950.1, Sept. 1986) or other methods approved by plaintiff. If methods other than the EPA methods included in the above-referenced guidance document are to be used, defendant shall submit all protocols to be used for analyses to plaintiff for approval at least thirty (30) calendar days prior to the commencement of the analyses.

2. Ensure that laboratories used by defendant for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program, and upon request by plaintiff, such laboratories shall perform analyses of samples provided by plaintiff to demonstrate the quality of the analytical data.

3. Notify plaintiff at least ten (10) calendar days in advance of the selection of laboratories which will be used by the defendant and require by contract with each such laboratory that EPA personnel and EPA-authorized representatives have reasonable access to the laboratories and personnel used for analyses. Denial of access to EPA personnel or its representatives constitutes an independent, non-reviewable ground for rejection of that laboratory's data.

4. Use EPA guidance to evaluate all data to be used in plans and reports to be submitted under this Decree. This evaluation shall be provided to plaintiff as part of the plans and reports and shall be updated as required by plaintiff.

C. The defendant shall notify plaintiff in writing at least ten (10) calendar days before engaging in any field activities, such as well drilling, installation of equipment or sampling.

At the request of plaintiff, the defendant shall provide to plaintiff, or allow plaintiff or its authorized representative to take, split samples of all samples collected by the defendant pursuant to this Decree. Similarly, at the request of the defendant, plaintiff shall allow the defendant to take split or duplicate samples of all samples collected by plaintiff under this Decree.

X. REVIEW AND APPROVAL PROCESS

A. Except as otherwise provided in this Decree, each plan, report, permit application or other document submitted to plaintiff and MSDEQ shall be subject to review, modification and approval by plaintiff and MSDEQ.

B. Each plan, report, permit application or other document to be submitted by the defendant to plaintiff shall also be submitted to MSDEQ, and each recipient agency shall be given three copies of each such submission, unless another number of copies is requested by an agency in writing.

C. Each report, plan, or other document submitted by Defendant and approved by plaintiff hereunder shall be deemed incorporated by reference into this Decree as if fully set forth herein.

XI. MODIFICATIONS AND ADDITIONAL WORK

A. In order to protect human health or the environment, plaintiff may determine that work is required in addition to the tasks and deliverables required under this Decree and its attachments. In this event, plaintiff shall direct in writing

that the defendant perform the additional work and shall specify the basis for plaintiff's determination that the additional work is needed. Subject to the dispute resolution provisions of Paragraph XVII below, the defendant shall perform the additional work requested.

B. If defendant declines to undertake some or all of the additional work required pursuant to paragraph A above, plaintiff retains authority to undertake the work at Defendant's expense or to take any other action authorized under CERCLA, RCRA or other applicable statutes or laws.

C. If plaintiff determines that any activities undertaken pursuant to this Decree have caused or may cause a release to the environment of hazardous waste, constituents or substances or a threat to the public health or the environment, plaintiff shall notify defendant of the potential release or threat and may order the defendant (1) to stop immediately any specified activities under this Decree for such period of time as may be needed to abate any such release or threat and (2) to undertake any action which plaintiff determines is necessary to abate such release or threat. Relevant schedules affected by the work stoppage shall be extended by any period during which implementation is stopped by order of plaintiff, provided that the release or threat is not due to noncompliance by defendant with this Decree.

D. Except as provided in Subparagraphs A, B and C above, the obligations of defendant and the schedules for their performance, as set out in the Scopes of Work attached to this

Decree and in the Workplans approved pursuant to this Decree, may be modified only by agreement of the settling parties in writing, which agreement shall be incorporated herein by reference. Such an agreement to modify a Scope of Work or Workplan does not require approval by the Court but shall be effective upon its signature by the representatives of plaintiff and defendant authorized to receive submissions pursuant to Paragraph XII, Subparagraphs A and C below.

E. Except as provided in this Paragraph and in Paragraphs XII and XIII below, the terms of this Decree may be modified only by order of the Court.

XII. SUBMISSIONS

A. All documents, including reports, approvals, disapprovals, notifications and other correspondence, required to be submitted pursuant to this Decree, shall be sent by certified mail or by overnight mail to the following addressees, or to such other addressees as the settling parties hereafter may designate in writing:

1. Documents or correspondence to plaintiff shall be sent to:

John Dickinson, Chief
Waste Compliance Section
RCRA and FF Branch
U.S. EPA-Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

2. Additionally, copies of all documents or correspondence to plaintiff related to any matter with respect to which the dispute resolution provisions of Paragraph XVII

have been invoked shall be sent to the addressee designated in Subparagraph 4 below for the appropriate state regulatory agency and to:

Chief
Environmental Enforcement Section
Land and Natural Resources Division
U.S. Department Of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044

3. Documents or correspondence to the defendant shall be sent to:

Plant Manager
Cedar Chemical Corporation
Vicksburg Plant
Rifle Range Road
Vicksbug, Mississippi 39180

4. Documents or correspondence to the state regulatory agencies shall be sent to:

Mr. Sam Mabry, Chief
Hazardous Waste Division
Bureau of Pollution Control
Mississippi Department of
Environmental Quality
P.O. Box 10385
Jackson, Mississippi 39209

5. Documents or correspondence to the defendant related to any matter with respect to which the dispute resolution provisions of Paragraph XVII have been invoked shall be sent to:

Mr. Allen T. Malone, Esq.
Apperson, Crump, Duzane & Maxwell
One Commerce Square
Suite 2110
Memphis, Tennessee 38103

B. In any instance in which notification by EPA is provided for or required under the terms of this Decree, such notification may be made separately by EPA or jointly by EPA and MSDEQ.

XIII. PROJECT COORDINATORS

A. The settling parties and the MSDEQ designate the following individuals to act as Project Coordinators, to monitor the progress of the activities required under this Decree, to communicate informally concerning problems which have arisen or which are anticipated in the implementation of this Decree and to coordinate communications among defendant, plaintiff and the state regulatory agency:

As to plaintiff:

Ms. Jeaneanne Gettle
Waste Compliance Section
RCRA and FF Branch
U.S. EPA, Region IV
345 Courtland Street, NE
Atlanta, Georgia 30365

As to the defendant:

Steve Boswell, Director
Environmental Affairs
Vicksburg Plant
Rifle Range Road
Vicksburg, Mississippi 39180

As to the state MSDEQ:

Mr. Steve Spengler
Chief, RCRA TSD Branch
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, Mississippi

B. Such coordination and informal communication by the Project Coordinators shall not relieve the parties of any notice and reporting requirements set forth elsewhere in this Decree and its attachments.

C. Plaintiff, the defendant and MSDEQ shall each have the unilateral right to change their respective Project Coordinators. Such a change does not require approval of the Court and shall be accomplished by notifying the other Project Coordinators of the change in writing at least seven calendar days prior to the effective date of the change.

XIV. ADDITIONAL REPORTING REQUIREMENTS

A. Beginning with the first full month following the effective date of this Decree, the defendant shall provide plaintiff and the MSDEQ with monthly written progress reports. The reports shall be mailed by the tenth day of the month in which they are due and shall conform to the requirements in the relevant Scope of Work. These reports may be submitted in the form of a certified letter with attachments, which may include bar graphs or other graphic material.

B. In the event that a spill or other release of hazardous substances or wastes occurs at the Subject Facility, requiring the notification of state or federal emergency response personnel, the defendant shall also notify the Project Coordinators for plaintiff and MSDEQ within twenty-four (24) hours after the occurrence of the spill or release. Such

notification may be given orally and shall be in addition to any notice otherwise required to be given under federal or state law.

XV. ACCESS

A. Until termination of this Decree, plaintiff, MSDEQ, and their employees, contractors and duly designated representatives, shall have access to the subject facilities at any reasonable time. Nothing in this Decree shall be construed to limit any rights of access that plaintiff or MSDEQ have under federal, state or local laws, regulations or permits. Plaintiff's right of access under this Decree shall be in addition to, and not in substitution for, its right of entry and access under applicable federal laws. The rights of access of plaintiff and MSDEQ under this Decree shall include, but not be limited to, access for the purposes of:

1. Inspecting and verifying compliance with this Decree;

2. Monitoring the progress of activities required by this Decree;

3. Inspecting sampling data and all other records generated pursuant to this Decree; and

4. Verifying any data or information submitted to plaintiff in accordance with this Decree.

B. To the extent that work required by this Decree, or by any plan approved pursuant to this Decree, must be performed in whole or in part on property not owned or controlled by the defendant, defendant shall use its best efforts to obtain site access agreements from the present owners of such property within twenty (20) calendar days after approval of any plan for

which site access is required. "Best efforts" as used in this paragraph shall include, at a minimum, a certified letter from the defendant to the present owners of such property requesting access agreements to permit the defendant, plaintiff, the MSDEQ and their authorized representatives access to such property. If the defendant does not obtain necessary agreements for access within twenty (20) calendar days after plaintiff's approval of a plan which identifies the need for access, the defendant shall inform plaintiff in writing of both their efforts to obtain access agreements and their failure to obtain such agreements, within ten (10) calendar days after their efforts cease. Plaintiff may then assist the defendant in obtaining access or itself undertake to obtain the required access, by agreement or any other lawful means. Defendant shall bear all costs incurred by Plaintiff in gaining access.

C. In connection with any voluntary transfer of ownership or control of all or any part of the subject facilities, the defendant shall require the transferee to agree in writing to allow access to the subject facility by the defendant, plaintiff, and MSDEQ, and their employees, contractors, and duly designated representatives.

XVI. DELAY IN PERFORMANCE/STIPULATED PENALTIES

A. Unless there has been a written modification of a compliance date by agreement of the parties or there has been excusable delay as defined under the "Force Majeure" provisions contained in Paragraph XVIII below, for each day or part thereof that defendant fails to comply with any submission, requirement

or other deadline set forth in this Decree, including any deadline in a schedule set forth in a plan approved pursuant to this Decree, the defendant shall pay to plaintiff the following stipulated penalties:

1. For failure to commence work as prescribed in this Consent Decree and EPA approved plans and reports under this Decree: 4,000 dollars ($4,000) per day per violation for one to seven days of delay , 6,000 dollars ($6,000) per day per violation for eight to fifteen days of delay and 10,000 dollars ($10,000) per day per violation for each day of delay or part thereof, thereafter;

2. For failure to submit any preliminary and final reports or workplans, at the time required pursuant to this Consent Decree: 3,000 dollars ($3,000) per day per violation for one to seven days of delay, 5,000 dollars ($5,000) per day per violation for eight to fifteen days of delay and 9,000 dollars ($9,000) per day per violation for each day of delay or part thereof, thereafter;

3. For failure to submit other deliverables required by this Consent Decree: 2,000 dollars ($2,000) per day per violation for one to seven days of delay, 4,000 dollars ($4,000) per day per violation for eight to fifteen days of delay and 8,000 dollars ($8,000) per day per violation for each day of delay or part thereof, thereafter.

4. For other failure to comply with provisions of this Consent Order after notice by EPA of noncompliance and a reasonable opportunity to comply: 10,000 dollars ($10,000) per

day per violation for each day of noncompliance or part thereof, thereafter.

B. Separate stipulated penalties shall accrue with respect to each submission, requirement and deadline. Nothing herein shall preclude the simultaneous and cumulative accrual of such separate penalties for separate violations of this Consent Decree.

C. Stipulated penalties under this Paragraph shall accrue from the date of the violation and shall be due and payable 30 days after demand by plaintiff for payment. Stipulated penalties which are due and payable shall be paid by certified check delivered to:

U.S. Environmental Protection Agency

The check shall be made payable to the "United States Treasury" and shall reference United States v. Cedar Chemical Corporation, Civil No.____. The defendant shall simultaneously send a copy of the transmittal letter to the addressee specified for plaintiff in Paragraph XII, Subparagraph A above.

D. If the defendant refuses to pay stipulated penalties, plaintiff may exercise any and all legal remedies available to plaintiff. However, nothing in this Paragraph shall prohibit, alter or in any way limit plaintiff's right to seek any other remedies or sanctions available by virtue of the defendant's violation(s) of this Decree or of the statutes and regulations upon which this Decree is based.

E. The provisions of this Decree, including the provision for the payment of stipulated penalties pursuant to this Paragraph, shall not limit or affect the claims of plaintiff or defendant as against any third parties who are not parties to this Decree.

F. The defendant may dispute plaintiff's right to the stated amount of stipulated penalties by invoking the dispute resolution procedures established under Paragraph XVII below. Payment, but not accrual, of stipulated penalties with respect to any issue so disputed shall be stayed pending resolution of the dispute. If the defendant does not prevail upon resolution of the dispute, plaintiff may collect all stipulated penalties which accrued prior to and during the period of dispute. If the defendant prevails upon resolution of the dispute, no penalties shall be payable.

XVII. DISPUTE RESOLUTION

A. The settling parties agree to use their best efforts to resolve all disputes or differences of opinion informally and in good faith. If a disagreement is not resolved informally, the defendant may pursue the matter formally by invoking the dispute resolution procedures of this Paragraph. The dispute resolution provisions of this Paragraph shall be applicable to any and all disputes which may arise under this Decree.

B. If the defendant disagrees, in whole or in part, with any decision or directive of plaintiff, the defendant shall promptly notify plaintiff and MSDEQ in writing of its objection(s) and each ground therefor. The notice shall set

forth the specific points in dispute, the position that the defendant asserts should be adopted as consistent with the requirements of this Decree, the grounds for the defendant's position and any other facts which it desires plaintiff to consider.

C. The parties shall have a period of twenty (20) calendar days after plaintiff's receipt of the defendant's written objections to attempt to resolve the dispute. If agreement is reached, the resolution shall be reduced to writing, signed by representatives of each settling party and incorporated herein by reference.

D. If the parties are unable to reach an agreement within twenty (20) calendar days after plaintiff's receipt of the defendant's written objections, plaintiff shall then provide to the defendant, within ten (10) calendar days, its written decision on the dispute. Plaintiff's decision shall control unless the defendant files a petition for resolution of the dispute with the Court, pursuant to Subparagraph E below.

E. If plaintiff has issued a written decision on a dispute pursuant to Subparagraph D above, plaintiff's position shall control the issue unless the defendant files with the Court a petition which describes the nature of the dispute and includes a proposal for its resolution. The defendant's petition must be filed no later than thirty (30) calendar days after its receipt of plaintiff's written decision. Plaintiff shall then have thirty (30) calendar days to respond to the petition. In any such dispute to be resolved by the Court, the defendant shall bear the burden of proof.

XVIII. FORCE MAJEURE

A. The defendant shall perform the requirements of this Decree, its attachments and any plans approved pursuant to this Decree within the time limits set forth therein, unless the performance is prevented or delayed by events which constitute a force majeure. A force majeure is defined as any event arising from causes not foreseeable and beyond the control of defendant, which could not be overcome by due diligence and which delays or prevents performance. Increased costs of performance of the terms of this Decree, changed economic circumstances or the defendant's financial inability to carry out the provisions of this Decree shall not constitute force majeure events.

B. The defendant shall notify plaintiff in writing within ten (10) calendar days after it becomes aware of events which the defendant knows or should know may constitute a force majeure. Such written notice shall include the anticipated length and cause of the delay, the measures taken or to be taken to prevent or minimize the delay, and the timetable by which defendant intends to implement these measures. The defendant's failure to comply with the notice requirements of the two preceding sentences with respect to an event which is later claimed to constitute a force majeure shall constitute a waiver of its right to invoke the force majeure provisions of this Paragraph and to request a waiver of any of the requirements of this Decree with respect to that event.

C. If the settling parties agree that the delay or anticipated delay has been caused by a force majeure event, the time for performance hereunder will be extended for a period equal to the delay resulting from the event. This extension shall be accomplished through a modification pursuant to Paragraph XI, Subparagraph D above.

D. If plaintiff does not agree with defendant that any delay in the achievement of the requirements of this Decree has been caused by a force majeure event, plaintiff shall so notify defendant in writing. Plaintiff's decision shall control unless the defendant pursues a resolution of the dispute, pursuant to Paragraph XVII above.

E. In the event that the defendant invokes the dispute resolution provisions of Paragraph XVII of this Decree with respect to the application of this Paragraph, defendant shall have the burden of proving that the delay was caused by a force majeure event.

XIX. WAIVER OF RIGHTS OF APPEAL

Except as expressly provided herein, defendant waives any and all rights of judicial and administrative review or appeal otherwise available to them under the applicable federal and state laws and regulations. The mechanisms for dispute resolution provided herein shall constitute the sole remedy available to defendant in the event of any dispute concerning the interpretation or implementation of this Decree. However, nothing herein shall prohibit either party from appealing an adverse decision under Paragraph XVII.

XX. COVENANT NOT TO SUE

Effective upon termination of this Decree pursuant to Paragraph XXVI below, plaintiff covenants not to sue the defendant for relief pursuant to Section 3008(a), (g) and (h) of RCRA, 42 U.S.C. § 6928(a), (g) and (h), for violations of RCRA which arose prior to entry of this Decree and which are alleged in plaintiff's Complaint.

XXI. RESERVATION OF RIGHTS

A. Except as expressly provided in Paragraph XX above, plaintiff reserves any and all rights and remedies available to it, including, without limitation, the right to take enforcement action pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973, and to take enforcement or response actions pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 et seq., as amended.

B. Neither plaintiff nor the defendant waives any legal or equitable claims or defenses against persons not party to this Decree.

C. Nothing in this Decree shall constitute an admission by any of the settling parties.

D. Compliance by the defendant with the terms of this Decree shall not relieve defendant of its obligations to comply with RCRA and its implementing regulations, including any changed statutory or regulatory requirements thereunder, nor shall it relieve the defendant of its obligations to comply with other applicable local, state or federal laws or regulations.

E. This Decree is not intended to be, nor shall it be construed as, a permit under any state or federal law or regulation.

XXII. INDEMNIFICATION

Defendant agrees to indemnify and save and hold harmless the United States government, its agencies, departments, agents and employees, from any and all claims or causes of action arising from or on account of the acts or omissions of defendant or its officers, employees, agents, contractors, receivers, trustees, successors, assigns or any other person or entity acting on its behalf in carrying out activities pursuant to this Decree.

XXIII. RECORD PRESERVATION

Defendant shall preserve, during the pendency of this Decree and for a minimum of six (6) years after its termination, at least one copy of all records and documents in its possession or in the possession of its divisions, employees, agents, accountants, contractors or attorneys, which relate in any way to this Decree, notwithstanding any document retention policy of any defendant. The defendant shall notify plaintiff thirty (30) calendar days prior to the destruction of any such records or documents and shall provide plaintiff with the opportunity to inspect and take possession of any such records or documents. The defendant shall require that its employees, agents, accountants, contractors and attorneys comply with the provisions of this Paragraph.

XXIV. PUBLIC ACCESS TO INFORMATION

All data, factual information and documents submitted by the defendant to plaintiff or to MSDEQ pursuant to this Decree shall be subject to public inspection or release unless at the time of submission the defendant asserts a confidential business information or trade secret claim pursuant to applicable federal or state law. Information for which such an assertion is made shall be treated in accordance with the requirements of 40 C.F.R. Part 2 and the applicable state statutes and regulations. Defendant's failure to assert such a claim at the time the information is submitted to EPA or MSDEQ shall preclude defendant from thereafter raising any objection to the release of the information. The defendant shall not assert a claim of confidentiality regarding any hydrogeological, chemical or sampling data generated pursuant to this Decree.

XXV. ADMISSIBILITY OF DATA

Defendant shall not object to the admissibility in any subsequent proceeding of analytical data that it or anyone acting on its behalf gathered or generated pursuant to this Decree on the grounds of hearsay or failure to maintain chain of custody.

XXVI. EFFECTIVE PERIOD OF THE DECREE

A. This Decree is effective upon its entry by the Court.

B. The defendant shall notify plaintiff when it determines that it has fully complied with all the terms of this Decree. Within 120 days of receipt of said notice, plaintiff shall inform the defendant in writing whether the terms of this Decree have been fully satisfied. If plaintiff agrees with defendant,

the settling parties shall file a joint motion with the Court to terminate this Decree. If plaintiff disagrees with the defendant as to their full compliance with this Decree, then the defendant may seek to resolve the dispute pursuant to Paragraph XVII above.

XXVII. RETENTION OF JURISDICTION

This Court shall retain jurisdiction over this Decree for the purpose of ensuring compliance with its terms and conditions.

XXVIII. COSTS AND ATTORNEYS FEES

Each settling party shall bear its own costs and attorneys fees in this action.

XXIX. NOTICE REQUIREMENTS

The parties acknowledge that final approval by plaintiff and the entry of this Decree are subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

WHEREFORE, the parties enter into this Decree and respectfully submit it to the Court in order that it may be approved and entered.

DONE AND SO ORDERED this 17th day of April, 1992.

William A. Gibbons, Jr.

United States District Judge

For the Defendant Cedar Chemical Corporation:

F. L. Ahlers / Plt. Mgr — 12/11/90

NAME/TITLE — Date

CEDAR CHEMICAL CORPORATION

Allen T. Malone — 1/22/91

ALLEN T. MALONE, ESQ. — Date

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ATTACHMENT A

SCOPE OF WORK FOR INTERIM MEASURES (IM)

AT

CEDAR CHEMICAL CORPORATION, VICKSBURG, MISSISSIPPI

Post-it® Fax Note 7671	Date	# of pages ▶ 9
To JEFF RICKARD	From TREY ↓	
Co./Dept.	Co.	
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Fax #	Fax #	

ATTACHMENT A

SCOPE OF WORK FOR INTERIM MEASURES (IM)

AT

CEDAR CHEMICAL CORPORATION, VICKSBURG, MISSISSIPPI

PURPOSE

The purpose of Interim Measures (IM) is to mitigate the potential threat to human health and the environment. Interim measures must be consistent with and integrated into any long term solution at the Facility.

SCOPE

The Interim Measures program consists of the following four tasks:

Task I Interim Measures Workplan .

A. Interim Measures Objectives
B. Health and Safety Plan
C. Community Relations Plan

Task II Interim Measures Design Program

A. Design Plans and Specifications
B. Operations and Maintenance Plan
C. Project Schedule
D. Final Design Documents

Task III Interim Measures Construction Quality Assurance Plan

A. Construction Quality Assurance Objectives
B. Inspection Activities
C. Sampling Requirements
D. Documentation

Task IV Reports and Other Submissions

A. Progress Reports
B. Interim Measures Workplan
C. Final Design Documents
D. Draft Interim Measures Report
E. Final Interim Measures Report

TASK I INTERIM MEASURES WORKPLAN

The Defendant shall prepare an Interim Measures Workplan. The Workplan shall include the following:

A. Interim Measures Objectives

The Workplan shall specify the objectives of the interim measures, demonstrate how the interim measures will abate releases and threatened releases, and to the extent possible, be consistent and integrated with any long-term solution at the Facility. The Interim Measures Workplan will include a discussion of the technical approach, engineering design, engineering plans, schedules, budget, and personnel. The Workplan will also include a description of qualifications of personnel performing or directing the interim measures, including contractor personnel, and document the overall management approach to the interim measures. Specific interim measures shall include, but not be limited to:

1. Management of surface impoundments

   Defendant shall prepare a report, within thirty (30) days of the effective date of this Order, providing information on the current status of the surface impoundment, including but not limited to, engineering drawings and specifications depicting the closure or planned closure of the unit. Additionally, the report shall include a topographich site plan showing the inlet to the surface impoundment and th source of water flow into the inlet during rain events as well as dry periods and showing areas of direct run on.

2. Management of the landfill

   The landfill will be maintained so as to prevent potential releases of hazardous constituents and erosion of the existing cap. Vegetation on the cap shall be maintained and soil with a vegetative cover shall be placed in areas of visual contamination. The IM Workplan shall include details for this maintenance.

3. Management of surface water runoff and areas with contaminated soils

   The IM Workplan shall include a plan for ensuring that areas where soils have been sampled, and found to contain contaminants or areas which the defendant knows to be contaminated, shall be managed to prevent infiltration or migration of the contaminants, including but not limited to, that caused by runoff of surface water. At a minimum, this plan shall include the areas identified in Figure A-1 and Table A-1.

   The soils and sediment within inactive process areas in the South plant are contaminated with pesticides. The surface drainage from the South plant is intended to flow to the surface impoundment where contaminated sediment will settle within the surface impoundment or be filtered out by the carbon in the carbon absorption vessels. In order to accomplish that objective, the

surface water running in ditches along the railroad track south of the inactive atrazine plan must be forced to flow into the south sump from which water is pumped into the surface impoundment. The IM Workplan shall include a plan for ensuring that the surface water is managed in the above manner.

The sampling, analysis and corrective measures studies for these areas will be left to the RFI/CMS process; however, the IM Workplan shall include details for the construction and installation of a temporary device or devices to prevent further infiltration or migration of potentially contaminated sediment into the areas identified in Table A-1 and Figure A-1. The temporary devices may include, but are not limited to:

- caps, and
- infiltration fences.

The IM Workplan shall include construction details of the temporary devices, and an Operating and Maintenance Procedure which shall provide for repair and maintenance following periods of substantial rainfall, or other events which result in repair or maintenance being necessary for the continued effective operation of the devices.

This IM Workplan shall be submitted within thirty (30) days of the effective date of the consent decree.

4. Management of sumps and catch basins

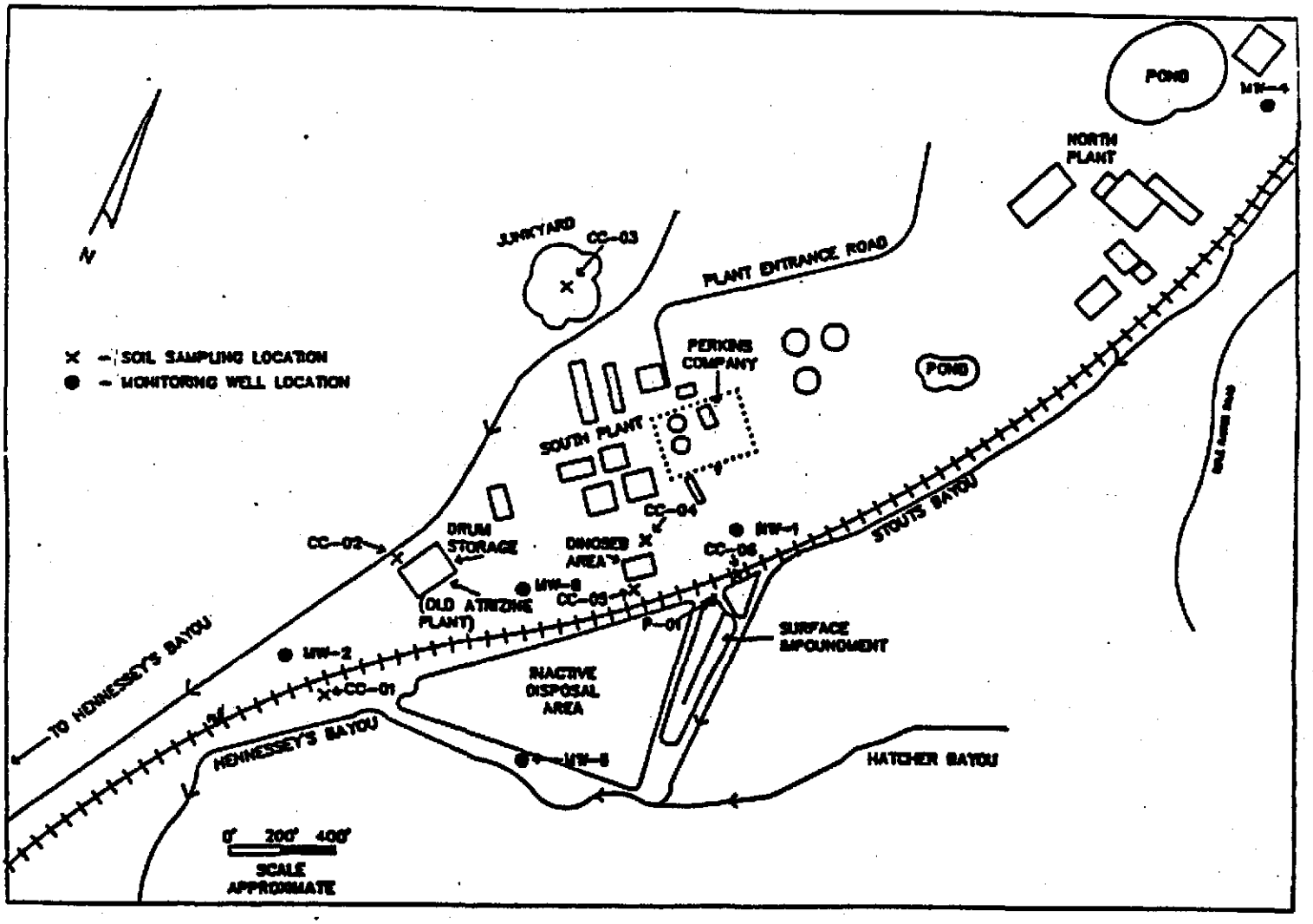
Within seven (7) calendar days of the effective date of the consent decree, the defendant shall begin removal of spilled or leaked hazardous waste constituents and accumulated precipitation from sumps and catch basins, if these units are not intended to be used for drainage of precipitation. After removal of waste, the defendant shall close or cover the sumps and catch basins so as to preclude subsequent accumulation of hazardous waste constituents or precipitation. If the collected material is a hazardous waste under 40 CFR Part 261, it is subject to management as a hazardous waste in accordance with all applicable requirements of 40 CFR Parts 260 through 270. Subsequent to the initial removal of material from the sumps, the defendant shall remove any additional material which accumulates in them, within four (4) days of its accumulation.

5. Monitoring of Ground Water

The IM Workplan shall provide for modification of the existing ground water monitoring program based upon information available at the time of the Workplan development. This plan shall ensure that all hazardous waste management units, and solid waste management units or areas of concern which have known releases, have a sufficient number of monitoring wells to immediately detect a release from the unit or to define the rate and extent of contamination.

FIGURE A-1

AREAS FOR MANAGEMENT OF CONTAMINATED SEDIMENTS



Modified from U.S. Environmental Protection Agency, February, 1987. RCRA Environmental Investigation, Cedar Chemical Company, Vicksburg, Mississippi.

TABLE A-1

AREAS OF CONTAMINATED SOILS AT VICKSBURG CHEMICAL CORPORATION

Location	Sample Reference ID Number
Small valley (mud flat) at the west corner of the landfill	CC-01a, VL-003b
Eroded area east of the landfill	VL-002
Area adjacent to the hazardous container (drum) storage area	CC-02, Fc
Junkyard north of the south plant	CC-03
Area north of the dinoseb production area	CC-04, G
Area between the dinoseb area and the Illinois Central Railroad	CC-05
Area between the surface impoundment at the south plant and the Illinois Central Railroad	CC-06

Notes:

The descriptions of the locations in this table are the best available descriptions from the source documents that were used. These documents are listed below.

a. Source of information for samples numbered CC-01 through CC-06 -- U.S. Environmental Protection Agency, February 1987. RCRA Environmental Investigation, Cedar Chemical Company, Vicksburg, Mississippi.

b. Source of information for samples numbered F and G -- Jack McCord, MDNR, September 22, 1986. Memorandum to file. Subject: September 3, 1986 Sampling Trip to Vicksburg Chemical.

c. Source of information for samples numbered VL-002 and VL-003 -- U.S. Environmental Protection Agency, January 26, 1982. Report: Hazardous Waste Site Investigation, January 22, 1982, Vertac Chemical Corporation, Vicksburg, Mississippi.

The IM Workplan shall include a Sampling and Analysis Plan which specifies procedures and techniques for sample collection, sample preservation and shipment, analytical procedures and chain of custody control.

Subsequent to the modification of the groundwater monitoring program and implementation of the sampling and analysis plan, the Defendant shall submit an annual groundwater monitoring report on or before March 1 following each calendar year. This report shall include, at a minimum, the calculated rate of migration of hazardous waste or hazardous waste constituents in the groundwater, the calculated rate of migration of the groundwater, and a summary of groundwater data previously generated.

B. Health and Safety Plan

Defendant shall prepare a facility Health and Safety Plan.

1. Major elements of the Health and Safety Plan shall include:

   a. Facility description including availability of resources such as roads, water supply, electricity, and telephone service;

   b. Description of the known hazards and an evaluation of the risks associated with each activity conducted, including, but not limited to on- and off-site exposure to contaminants during the implementation of interim measures at the Facility.

   c. A list of key personnel and alternates responsible for site safety, response operations, and for protection of public health;

   d. Delineation of the work area;

   e. Protection levels to be worn by personnel in work area;

   f. Procedures to control site access;

   g. Decontamination procedures for personnel and equipment;

   h. Site emergency procedures;

   i. Emergency medical care for injuries and toxicological problems;

   j. Description of requirements for an environmental surveillance program;

   k. Specifications for any routine and special training required for responders; and

   l. Procedures for protecting workers from weather-related problems.

2. The Facility Health and Safety Plan shall be consistent with:

   a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);

   b. United States Environmental Protection Agency (EPA) Order 1440.1 - Respiratory Protection;

   c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;

   d. Facility Contingency Plan;

   e. EPA Standard Operating Safety Guide (1984);

   f. OSHA regulations, particularly in 29 CFR 1910 and 1926;

   g. State and local regulations; and

   h. Other EPA guidance as provided.

C. Community Relations Plan

Defendant shall prepare a written plan, for the dissemination of information to the public, regarding interim measure activities and results. In the event that public meetings are scheduled, defendant shall prepare fact sheets and be present for participation in the meetings.

INTERIM MEASURES DESIGN PROGRAM

The Interim Measures Design Program shall be incorporated in the Interim Measures Workplan to implement the interim measure(s) at the Facility. The Interim Measures Design Program includes four activities: design plans and specifications, operations and maintenance plans, project schedules, and final design documents. The design program shall include measures discussed in the Interim Measures Workplan objectives.

A. Design Plans and Specifications

Defendant shall develop clear and comprehensive design plans and specifications which include but are not limited to the following:

1. Discussion of the design strategy and the design basis, including:

   a. Compliance with all applicable or relevant environmental and public health standards; and

   b. Minimization of environmental and public impacts.

2. Discussion of the technical factors of importance including:

   a. Use of currently accepted environmental control measures and technology;

   b. The constructability of the design, and

   c. Use of currently acceptable construction practices and techniques.

3. Description of assumptions made and detailed justification of these assumptions;

4. Discussion of the possible sources of error and references to possible operation and maintenance problems;

5. Detailed drawings of the proposed design including:

   a. Qualitative flow sheets;

   b. Quantitative flow sheets;

   c. Facility layout; and

   d. Utility locations.

6. Tables listing materials, equipment and specifications;

7. Tables giving material balances; and

8. Appendices including:

   a. Sample calculations (one example presented and explained clearly for significant or unique design calculations);

   b. Derivation of equations essential to understanding the report; and

   c. Results of laboratory or field tests.

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications, Respondent shall coordinate and cross-check the specifications and drawings and complete the proofing of the edited specifications and required cross-checking of all drawings and specifications.

B. Operation and Maintenance Plans

Defendant shall prepare an Operation and Maintenance Plan to cover both implementation and long-term maintenance of the interim measures. The plan shall be composed of the following elements:

1. Equipment start-up and operator training:

   Defendant shall prepare and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjust- ment, start-up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

2. Description of normal operation and maintenance (O&M):

   a. Description of tasks for operation;

   b. Description of tasks for maintenance;

   c. Description of prescribed treatment or operation conditions;

   d. Schedule showing frequency of each O&M task; and

   e. Common and/or anticipated remedies.

3. Description of routine monitoring and laboratory testing:

   a. Description of monitoring tasks;

   b. Description of required laboratory tests and their interpretation;

   c. Required QA/QC; and

   d. Schedule of monitoring frequency and date, if appropriate, when monitoring may cease.

4. Description of equipment:

   a. Equipment identification;

   b. Installation of monitoring components;

   c. Maintenance of site equipment; and

   d. Replacement schedule for equipment and installed components; and

5. Records and reporting mechanisms required:

   a. Daily operating logs;

   b. Laboratory records;

   c. Mechanism for reporting emergencies;

   d. Personnel and maintenance records; and

   e. Monthly/annual reports to Federal/State agencies.

The Operation and Maintenance Plan shall be submitted with the Final Design Documents.

C. Project Schedule

Defendant shall develop a detailed Project Schedule for construction and implementation of the interim measure(s) which identifies timing for initiation and completion of all critical path tasks. Defendant shall specifically identify dates for completion of the project and major interim milestone(s) which are enforceable terms of this Order. A Project Schedule shall be submitted simultaneously with the Final Design Documents.

D. Final Design Documents

The Final Design Documents shall consist of the Final Design Plans and Specifications (100% complete), the Final Draft Operation and Maintenance Plan, and Project Schedule. Defendant shall submit the final documents 100% complete with reproducible drawings and specifications. The quality of the design documents should be such that Defendant would be able to include them in a bid package and invite contractors to submit bids for the construction project.

INTERIM MEASURES CONSTRUCTION QUALITY ASSURANCE PLAN

The Interim Measures Construction Quality Assurance (CQA) Plan shall be incorporated in the Interim Measures Workplan to ensure, with a reasonable degree of certainty, that a completed interim measure(s) meets or exceeds all design criteria, plans, and specifications. The CQA Plan must be submitted to EPA for approval prior to the start of construction. This CQA Plan shall include the following elements: construction quality assurance objectives, inspection activities, and documentation. Upon EPA and MSDEQ review, and EPA approval of the CQA Plan, Defendant shall construct and implement the interim measures in accordance with the approved design, schedule, CQA plan, and operation and maintenance plan.

A. Construction Quality Assurance Objectives

In the CQA Plan, Defendant shall identify and document the objectives and framework for the development of a construction quality assurance program including, but not limited to, the following: responsibility and authority, personnel qualifications, inspection activities, sampling requirements, and documentation. The responsibility and authority of all organizations (i.e. technical consultants, construction firms, etc.), and key personnel involved in the construction of the interim measure shall be described fully in the CQA Plan. Defendant must identify a CQA officer and the necessary supporting inspection staff.

B. Inspection Activities

The observations and tests that will be used to monitor the construction and/or installation of the components of the interim measure(s) shall be summarized in the CQA Plan. The Plan shall include the scope and frequency of each type of inspection. Inspections shall verify compliance with all environmental requirements and include, but not be limited, to air quality and emissions monitoring records, waste disposal records (e.g., RCRA transportation manifests), etc. The inspection should also ensure compliance with all health and safety procedures. In addition to oversight inspections, Defendant shall conduct the following activities:

1. Preconstruction inspection and meeting

Defendant shall conduct a preconstruction inspection and meeting to:

a. Review methods for documenting and reporting inspection data;

b. Review methods for distributing and storing documents and reports;

c. Review work area security and safety protocol;

d. Discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and

e. Conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The preconstruction inspection and meeting shall be documented by a designated person, and minutes should be transmitted to all parties.

2. Prefinal inspection

Upon preliminary project completion, Defendant shall notify EPA and MBPC for the purposes of conducting a prefinal inspection. The prefinal inspection shall consist of a walk-through inspection of the entire project site. The inspection is to determine whether the project is complete and consistent with the contract documents and the EPA-approved interim measure. Any outstanding construction items discovered during the inspection will be identified and noted. Additionally, treatment equipment will be operationally tested by Defendant. Defendant will certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting will be completed where deficiencies are revealed. The prefinal inspection report should outline the outstanding construction items, actions required to resolve items, completion date for these items, and date for final inspection.

3. Final inspection

Upon completion of any outstanding construction items, Defendant shall notify EPA and MSDEQ for the purposes of conducting a final inspection. The final inspection shall consist of a walk-through inspection of the project site. The prefinal inspection report shall be used as a checklist, with the final inspection focusing on the outstanding construction items identified in the prefinal inspection. Confirmation shall be made that outstanding items have been resolved.

4. Sampling and testing requirements

The CQA Plan shall present sampling and testing activities, sample size, sample and test locations, frequency of testing, acceptance and rejection criteria, and plans for correcting problems.

C. Documentation

Reporting requirements for CQA activities shall be described in detail in the CQA Plan. This plan shall include such items as daily summary reports, inspection data sheets, problem identification and interim measures reports, design acceptance reports, and final documentation.

Provisions for the final storage of all records shall be presented in the CQA Plan.

REPORTS

The Interim Measures Workplan shall include reporting requirements. The reports shall include, but not be limited to the following: progress reports, the Interim Measures Workplan, design plans and specifications, operation and maintenance plan, final design documents, and the draft and final interim measures report.

A. Progress Repo[redacted]

Defendant shall, at a minimum, provide EPA and MSDEQ with signed, monthly progress reports containing:

1. A description and estimate of the percentage of the interim measures completed;

2. Summaries of all findings;

3. Summaries of all changes made in the interim measures during the reporting period;

4. Summaries of all contacts with representatives of the local community, public interest groups, or State government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;

6. Actions being taken to rectify problems;

7. Changes in personnel during the reporting period;

8. Projected work for the next reporting period; and

9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

B. Interim Measures Workplan

Defendant shall submit an Interim Measures Workplan to EPA and MSDEQ as discussed in this attachment within thirty (30) calendar days of the effective date of this Order.

C. Final Design Documents

Defendant shall submit Final Design Documents as discussed in this attachment within thirty (30) calendar days of approval of the Interim Measures Workplan.

D. Draft Interim Measures Report

At the "completion" of project construction (except for long-term operation, maintenance and monitoring), Defendant shall submit an Interim Measures Implementation Report to EPA and MSDEQ. The Report shall document that the project is consistent with the design specifications, and that the interim measures are performing adequately. The Report shall include, but not be limited to, the following elements:

1. Synopsis of the interim measures and certification of the design and construction;

2. Explanation of any modifications to the plans and why these were necessary for the project;

3. Listing of the criteria, established before the interim measures were initiated, for judging the functioning of the interim measures and also explaining any modification to these criteria;

4. Results of facility monitoring, indicating that the interim measures will meet or exceed the performance criteria; and

5. Explanation of the operation and maintenance (including monitoring) to be undertaken at the Facility.

This report shall include but not be limited to: inspection summary reports, inspection data sheets, problem identification and corrective measure reports, block evaluation reports, photographic reporting data sheets, design engineers' acceptance reports, deviation from design and material specifications (with justifying documentation), and as-built drawings.

E. Final Interim Measures Report

Defendant shall finalize the Interim Measures Workplan and the Interim Measures Implementation Report incorporating comments received on draft submissions.

FACILITY SUBMISSION SUMMARY

FACILITY SUBMISSIONS	DUE DATE *
INTERIM MEASURES Workplan - Interim Measures Objectives - Health and Safety Plan - Community Relations Plan	Within thirty (30) calendar days of the effective date of the consent decree
FINAL DESIGN DOCUMENTS - Design Plans and Specifications - Operation and Maintenance Plan - Project Schedule	Within thirty (30) calendar days of approval of the workplan
CONSTRUCTION QUALITY ASSURANCE PLAN - Construction Quality Assurance Objectives - Inspection Activities	Within thirty (30) calendar days of approval of the workplan
Draft Interim Measures Report	Within sixty (60) calendar days of completion of construction
Final Interim Measures Report	Thirty (30) days after receipt of EPA and MSDEQ comments on Draft Interim Measures Report
Progress Reports	Monthly
Ground Water Monitoring Reports	March 1, annually

ATTACHMENT B

SCOPE OF WORK FOR A RCRA FACILITY INVESTIGATION

AT

CEDAR CHEMICAL CORPORATION, VICKSBURG, MISSISSIPPI

SCOPE OF WORK FOR RCRA FACILITY INVESTIGATION (RFI)

AT

CEDAR CHEMICAL CORPORATION, VICKSBURG, MISSISSIPPI

PURPOSE

The purpose of this RCRA Facility Investigation (hereafter "RFI") is to determine the nature and extent of releases of hazardous wastes and/or hazardous constituents from regulated units, solid waste management units, and other source areas at the facility and to gather all necessary data to support the Corrective Measures Study. Defendant shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RCRA facility investigation at Cedar Chemical Corporation, in Vicksburg, Mississippi (hereafter "the Facility").

The Defendants shall prepare plans and conduct investigations that satisfy the tasks listed below, which are more specifically developed in the following pages. Such plans and investigations shall be submitted in accordance with the requirements of the Consent Decree, using the applicable guidance listed therein, or as designated by EPA and MSDEQ (hereafter "the Agencies"). All documents shall be certified by appropriate individuals, as specified in the regulations.

SCOPE

The RCRA Facility Investigation consists of seven tasks:

Task I: Description of Current Conditions

A. Facility Background
B. Nature and Extent of Contamination
C. Implementation of Interim Measures

Task II: Pre-Investigation Evaluation of Corrective Measures Technologies

Task III: RFI Workplan Requirements

A. Project Management Plan
B. Data Collection Quality Assurance Plan
C. Data Management Plan
D. Health and Safety Plan
E. Site Characterization Plan
F. Community Relations Plan

Task IV: Groundwater Assessment

Task V: Implementation of the Facility Investigation

Task VI: Investigation Analysis

A. Data Analysis
B. Protection Standards

Task VII: Laboratory and Bench-Scale Studies

Task VIII: Reports and Other Submissions

A. Preliminary and Final Workplan Submissions
B. Progress Reports
C. Draft and Final RFI Reports
D. Groundwater Assessment Workplan and Report

TASK I: DESCRIPTION OF CURRENT CONDITIONS

Defendant shall submit, within thirty (30) days of the effective date of the Consent Decree, a report summarizing the background information pertinent to the facility, contamination, and interim measures as set forth below. The data gathered during any previous investigations or inspections and other relevant data shall be included. This report shall be subject to the Agencies' review and approval procedures as established in the Consent Decree. Data gathered during any previous investigations or inspections and other relevant data shall be included.

A. Facility Background

Defendant's report shall summarize the regional location, pertinent boundary features, general facility physiography, and hydrogeology. The report shall also summarize historical use of the facility for the treatment, storage, or disposal of solid and hazardous wastes including but not limited to those areas or units designated in the RCRA Facility Assessment and the following areas or units (see Figures B-1 and B-2):

- Activated carbon treatment units
- Container (drum) storage area
- Returned product storage area
- Surface impoundment (south plant)
- Wastewater storage tank(s)
- Dinoseb drumming area
- Dinoseb loading/unloading area
- Dinoseb production area
- Landfill (inactive disposal area) and pits used inside the boundaries of the landfill including the area of the former dinoseb wastewater pond
- Equalization/neutralization pond (north plant)
- Pond (north plant)
- Drains, sumps, and catch basins and piping
- Drum storage areas

- [redacted]lus equipment storage
- Neutralization tanks (south plant)
- Chemical crypt

Defendant's report shall include:

1. A map(s) for each item listed below:

   Note: The North area must point to the top of the page

   a. General geographic location;

   b. General Cross-sectional map, including but not limited to, Cross-sections of solid and hazardous waste management units;

   c. Property lines, with the owners of all adjacent property clearly indicated;

   d. Topography and surface drainage depicting all waterways, wetlands, floodplains, water features, drainage patterns, and surface-water containment areas;

   e. A survey map showing soil classifications for the entire site;

   f. All tanks, buildings, utilities, paved areas, easements, right-of-ways, and other features; within the property boundaries;

   g. All solid or hazardous waste treatment, storage, or disposal areas active after November 19, 1980, including but not limited to the areas identified in Task I Section A or in Figures B-1 and B-2;

   h. All known past solid or hazardous waste treatment, storage, or disposal areas regardless of whether they were active on November 19, 1980, including but not limited to the areas identified in Task I Section A or in Figures B-1 and B-2;

   i. All known past and present product and waste underground tanks or piping;

   j. Surrounding land uses (residential, commercial, agricultural, recreational);

   k. The location of all production recovery, underground injection, and ground-water monitoring wells, including but not limited to, RCRA and CERCLA wells. These wells shall be clearly labeled, with ground and top of casing elevations and construction details included (these elevations and details may be included as an attachment);

FIGURE B-1

CEDAR CHEMICAL CORPORATION
LAYOUT OF THE NORTH PLANT INCLUDING PAST AND PRESENT FEATURES

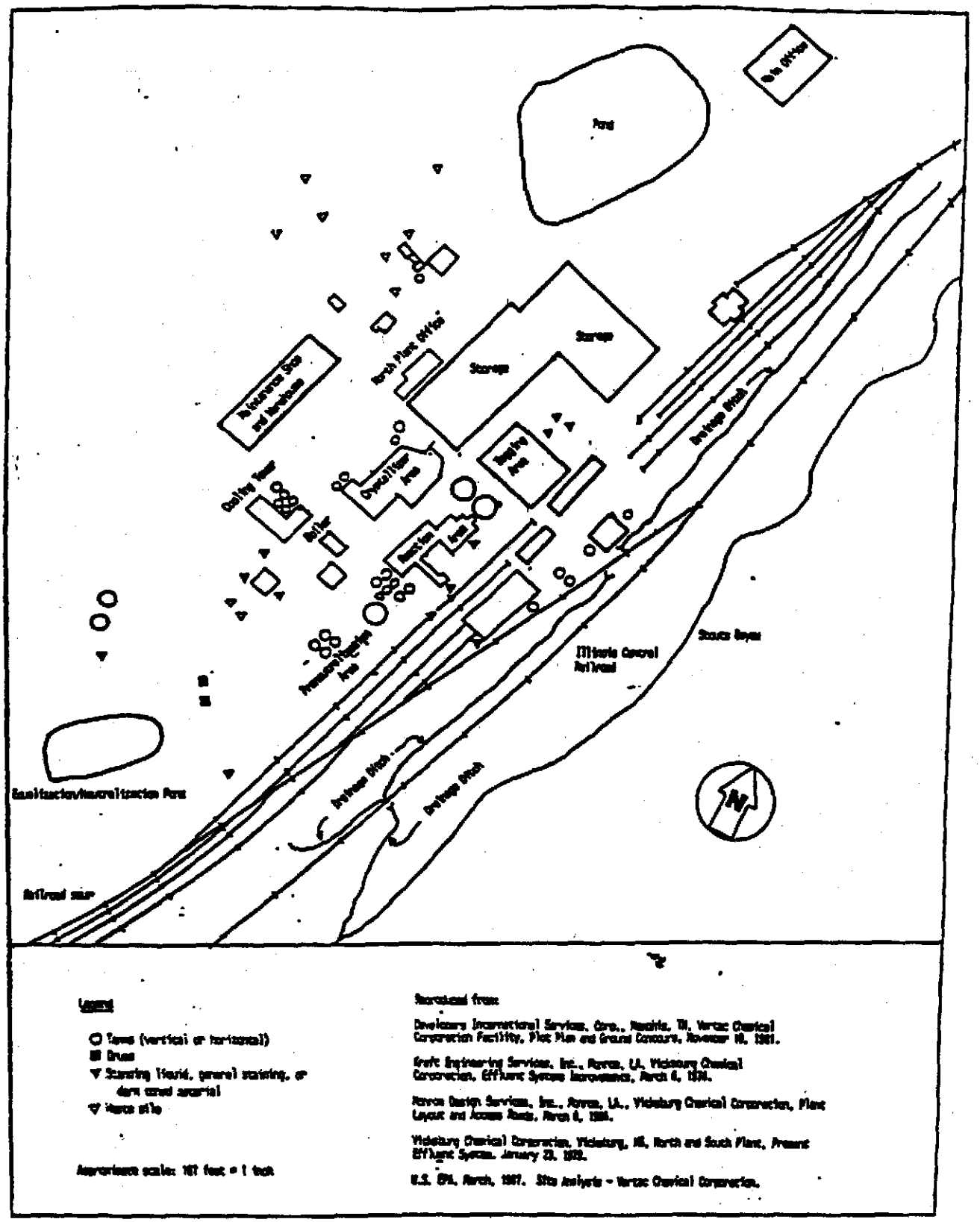
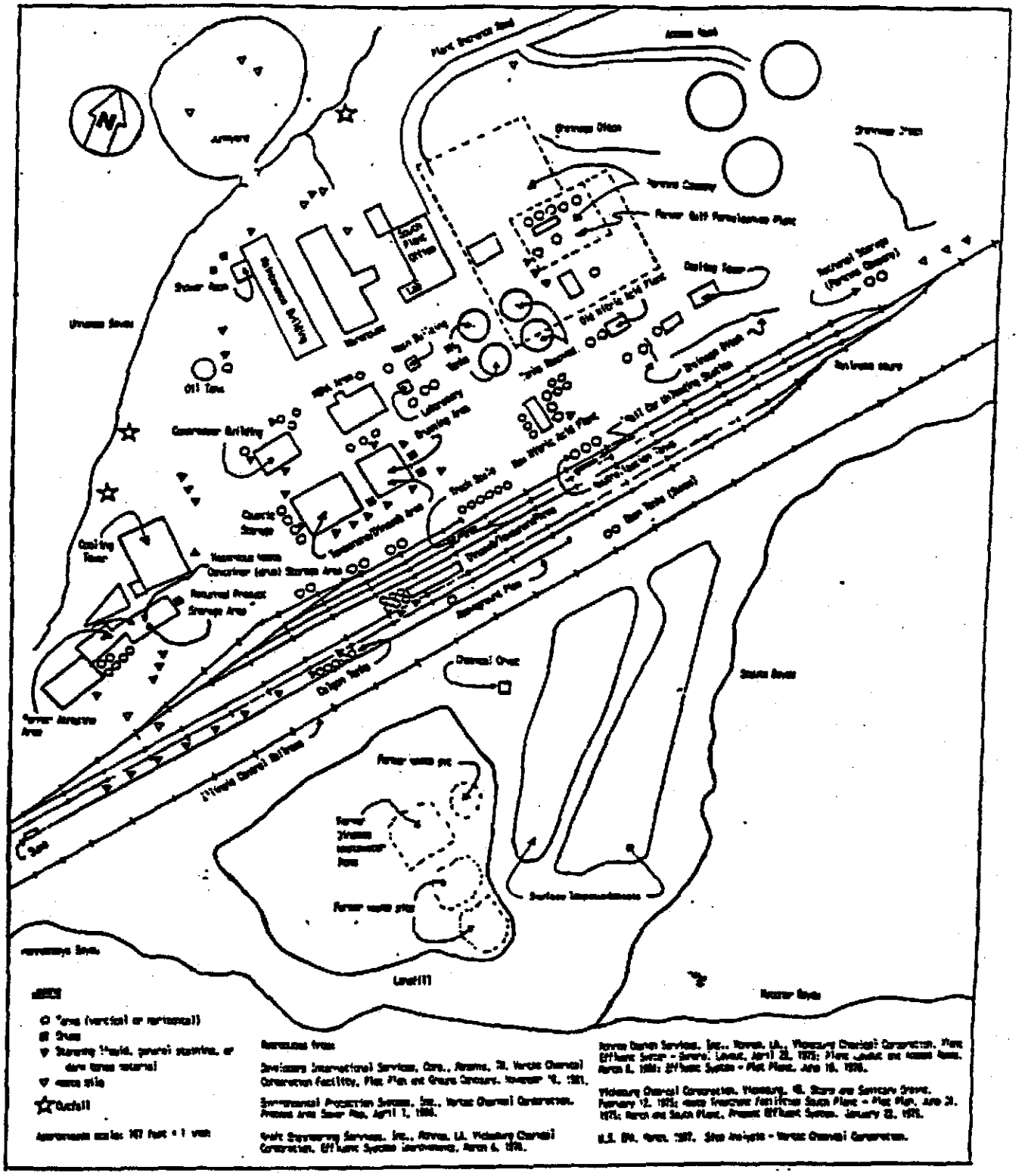


FIGURE B-2

CEDAR CHEMICAL CORPORATION
LAYOUT OF THE SOUTH PLANT INCLUDING PAST AND PRESENT FEATURES



1. Aerial photographs of the entire facility, one taken in normal light and one taken by infrared photography.

All maps shall be consistent with the requirements set forth in 40 CFR Part 270.14 and be of sufficient detail and accuracy to locate and report all current and future work performed at the site; all maps shall be aligned with the north direction arrows perpendicular to the edge of the page;

2. A history and description of facility ownership and operation, and solid and hazardous waste generation, treatment, storage, and disposal activities at the facility;

3. Dates or periods of past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, State, or Federal response units or private parties), including any inspection reports or technical reports generated as a result of the response; and

4. A summary of past permits requested and/or received, any enforcement actions and their subsequent responses, and a list of documents and studies prepared for the facility.

B. Nature and Extent of Contamination

Defendant shall prepare and submit for the Agencies' review and approval, as provided in the Consent Decree, a preliminary report describing the existing information on the nature and extent of contamination at or from the facility. This report shall be submitted in conjunction with the RFI.

1. Defendant's report shall summarize all possible source areas of contamination. This, at a minimum, shall include all regulated units, solid waste management units, spill areas, and other suspected source areas of contamination or areas of concern. For each area, Defendant shall submit to the Agencies a list identifying all waste streams and waste materials subject to storage, treatment, or disposal in each waste management unit. This list shall include all wastes whether it is hazardous or non-hazardous which are destined for the area. These source areas of contamination shall include but are not limited to those identified in Table A-1, Task I Section A or in Figures B-1 and B-2. For each area, Defendant shall, at a minimum, identify the following:

   a. Location of unit/area depicted on a facility map (see requirements of 40 CFR);

   b. Quantities of solid and hazardous wastes;

c. Hazardous wastes or constituents, to the extent known; and

d. Identification of areas where additional information is necessary.

2. Defendant shall prepare an assessment and description of the existing degree and extent of contamination at or from the facility. This shall include:

a. Available monitoring data and qualitative information on locations and levels of contamination at the facility;

b. A minimum of three cross-sectional maps with at least two transecting at right angles to each other delineating local geology, with the extent of the plume(s) superimposed (define a zero line for the plume(s)).

c. All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and

d. The potential impact(s) on human health and the environment, including demography, ground-water and surface-water use, and land use.

C. Implementation of Interim Measures

Defendant's report shall document interim measures which were or are being undertaken at the facility in accordance with the Interim Measures Workplan in Attachment A. This shall include a discussion of:

1. Objectives of the interim measures: how the measure is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long-term solution at the facility;

2. Design, construction, operation, and maintenance requirements;

3. Schedules for design, construction, and monitoring; and

4. Schedule for progress reports.

TASK II: PREINVESTIGATION EVALUATION OF CORRECTIVE MEASURE TECHNOLOGIES

In conjunction with the submittal of the RFI Workplan, the Defendant shall submit to the Agencies a report that identifies the potential corrective measures technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of contamination. This report shall also identify any field, laboratory, bench, or pilot

scale data that needs to be collected during the facility investigation to facilitate the evaluation and selection of the final corrective measure or measures (e.g., compatibility of waste and construction materials, information to evaluate effectiveness, treatability of wastes, etc.).

TASK III: RFI WORKPLAN REQUIREMENTS

Defendant shall prepare a RCRA Facility Investigation (RFI) Workplan and submit it within sixty (60) days of approval of the report due pursuant to Task I above. This RFI Workplan shall include the development of several plans, which shall be prepared concurrently. Each plan shll include a proposed site specific implementation schedule. During the RCRA FAcility Investigation, it may be necessary to revise the RFI Workplan to increase or decrease the detail of information collected to accommodate the facility specific situation. The RFI Workplan shall include the following:

A. Project Management Plan

The RFI Workplan shall contain a Project Management Plan which includes a discussion of the technical approach, schedules, budget, and personnel. The Project Management Plan shall also include a description of qualifications of personnel performing or directing the RFI, including contractor personnel. This Plan shall also document the overall management approach to the RCRA Facility Investigation.

1. Summary of Personnel Qualifications

The Summary of Personnel Qualifications section of the Project Management Plan shall include at a minimum the following:

a. Name, title and qualifications of the engineer and/or geologist directing the project.

b. Name, title and qualifications of any contractors, subcontractors and their personnel involved with the project

B. Data Collection Quality Assurance Plan

The RFI Workplan shall include a plan to document all monitoring performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented.

1. Data Collection Strategy

The strategy section of the Data Collection Quality Assurance

Plan shall include, but not be limited to, the following:

a. Description of the intended uses for the data, and the necessary level of precision and accuracy for these intended uses;

b. Description of methods and procedures to be used to assess the precision, accuracy, and completeness of the measurement data;

c. Description of the rationale used to assure that the data accurately and precisely represent any characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition. Examples of factors which shall be considered and discussed include:

   i) Environmental conditions at the time of sampling;

   ii) Number of sampling points;

   iii) Representativeness of selected media; and

   iv) Representativeness of selected analytical parameters.

d. Description of the measures to be taken to assure that the following data sets can be compared to each other:

   i) RFI data generated by Defendant over some time period;

   ii) RFI data generated by an outside laboratories or consultants versus data generated by the Defendant;

   iii) Data generated by separate consultants or laboratories, and

   iv) Data generated by an outside consultant or laboratory over some time period.

e. Details relating to the schedule and information to be provided in quality assurance reports. The reports should include but not be limited to:

   i) Periodic assessment of measurement data accuracy, precision, and completeness;

   ii) Results of performance audits;

   iii) Results of system audits;

   iv) Significant quality assurance problems and recommended solutions; and

v) Resolutions of previously stated problems.

2. Sampling Strategy and Procedures

The sampling section of the Data Collection Quality Assurance Plan shall discuss:

a. Selecting appropriate sampling locations, depths, etc.;

b. Providing a statistically sufficient number of sampling sites;

c. Measuring all necessary ancillary data;

d. Determining conditions under which sampling should be conducted;

e. Determining which media are to be sampled (e.g., ground water, air, soil, sediment, etc.);

f. Determining which parameters are to be measured and where;

g. Selecting the frequency of sampling and length of sampling period;

h. Selecting the types of samples (e.g., composite vs. grab) and number of samples to be collected;

i. Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;

j. Documenting field sampling operations and procedures, including:

i) Documentation of procedures for preparing reagents or supplies which become an integral part of the sample (e.g., filters, preservatives and absorbing reagents);

ii) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;

iii) Documentation of specific sample preservation methods;

iv) Calibration of field devices;

v) Collection of replicate samples;

vi) Submission of field-biased blanks, where

appropriate;

vii) Potential interferences present at the facility;

viii) Construction materials and techniques, associated with monitoring wells and piezometers;

ix) Field equipment listing and and type of sample containers;

x) Sampling order; and

xi) Decontamination procedures.

k. Selecting appropriate sample containers;

l. Sample Preservation; and

m. Chain-of-custody procedures, including;

i) Standardized field tracking reporting forms to establish sample custody in the field prior to and during shipment; and

ii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

3. Field Measurements

The field measurements section of the Data Collection Quality Assurance Plan shall discuss:

a. Selecting appropriate field measurement locations, depths, etc.;

b. Providing a statistically sufficient number of field measurements;

c. Measuring all necessary ancillary data;

d. Determining conditions under which field measurements should be conducted;

e. Determining which media are to be addressed by appropriate field measurements (e.g., ground water, air, soil, sediment, etc.);

f. Determining which parameters are to be measured and where;

g. Selecting the frequency of field measurements and length of each field measurement period; and

h. Documenting field measurement operations and procedures, including:

i) Procedures and forms for recording raw data and the exact location, time, and facility-specific considerations associated with the data acquisition;

ii) Calibration of field devices;

iii) Collection of replicate measurements;

iv) Submission of field-biased blanks, where appropriate;

v) Potential interferences present at the facility;

vi) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;

vii) Field equipment listing;

viii) Order in which field measurements are to be made; and

ix) Decontamination procedures.

4. Sample Analysis

The Sample Analysis section of the Data Collection Quality Assurance Plan shall specify the following:

a. Chain-of-Custody procedures, including:

i) Identification of a responsible party to act as sample custodian at the laboratory facility and authorized to sign for incoming field samples, to obtain documents of shipment, and to verify data entered onto the sample custody records;

ii) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and

iii) Specification of laboratory sample custody procedures for sample handling, storage, and dispersement for analysis.

b. Sample storage procedures and holding times;

c. Sample preparation methods;

d. Analytical procedures, including:

i) Scope and application of the procedure;

ii) Sample matrix;

iii) Potential interferences;

iv) Precision and accuracy of the methodology; and

v) Method detection limits.

e. Calibration procedures and frequency;

f. Data reduction, validation and reporting;

g. Internal quality control checks, laboratory performance and systems audits and frequency, including:

i) Method blank(s);

ii) Laboratory control sample(s);

iii) Calibration check sample(s);

iv) Replicate sample(s);

v) Matrix-spiked sample(s);

vi) "Blind" quality control sample(s);

vii) Control charts;

viii) Surrogate samples;

ix) Zero and span gases; and

x) Reagent quality control checks.

h. Preventive maintenance procedures and schedules;

i. Corrective action (for laboratory problems); and

j. Turn-around time.

EPA may conduct a performance audit of the laboratories selected by the Defendant.)

C. Data Management Plan

Defendant shall develop, within the RFI Workplan, and initiate, within the RFI, a Data Management Plan to document and track investigation data and results. This plan shall identify and establish data

documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation, including the following:

1. Data Record

   The data record shall include the following:

   a. Unique sample or field measurement code;

   b. Sampling or field measurement location and sample or measurement type;

   c. Sampling or field measurement raw data;

   d. Laboratory analysis identification number;

   e. Property or component measured; and

   f. Results of analysis (e.g., concentration).

2. Tabular Displays

   The following data shall be presented in tabular displays:

   a. Unsorted (raw) data;

   b. Results for each medium, or for each constituent monitored;

   c. Data reduction for statistical analysis;

   d. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and

   e. Summary data.

3. Graphical Displays

   The following data shall be presented in graphic format (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three-dimensional graphs, etc.):

   a. Display sampling location and sampling grid;

   b. Indicate boundaries of sampling area, and areas where more data are required;

   c. Displays levels of contamination at each sampling location;

   d. Display geographical extent of contamination;

e. Display contamination levels, averages and maxima;

f. Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and

g. Indicate features affecting intramedia transport and show potential receptors.

D. Health and Safety Plan

Defendant shall prepare a facility Health and Safety Plan which ensures the health and safety of workers and other individuals within the immediate area.

1. Major elements of the Health and Safety Plan shall include:

a. Facility description including availability of resources such as roads, water supply, electricity, and telephone service;

b. Description of the known hazards and evaluation of the risks associated with each activity conducted, including but not limited to, on-site and off-site exposure to contaminants during the implementation of interim measures at the facility;

c. List of key personnel and alternates responsible for site safety, response operations, and for protection of public health;

d. Delineation of the work area;

e. Discription of protection to be worn by personnel in work area;

f. Procedures to control work area access;

g. Discription of decontamination procedures for personnel and equipment;

h. Establish site emergency procedures;

i. Emergency medical care for injuries and toxicological problems;

j. Discription of the environmental surveillance program;

k. Discription of the safety training provided to personnel in the work area; and

l. Establish procedures for protecting workers from weather-related problems.

2. The Facility Health and Safety Plan shall be consistent with:

   a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);

   b. EPA Order 1440.1 -- Respiratory Protection;

   c. EPA Order 1440.3 -- Health and Safety Requirements for Employees Engaged in Field Activities;

   d. Facility Contingency Plan;

   e. EPA Standard Operating Safety Guide (1984);

   f. OSHA regulations particularly in 29 CFR 1910 and 1926;

   g. State and local regulations; and

   h. Other EPA guidance as provided.

E. Site Characterization Plan

The RFI Workplan shall include a Site Characterization Plan which includes provisions for investigating the following areas or, in the alternative, clearly states the technical basis for no further investigation of that area. The plan shall also include a proposed schedule for implementation.

1. Environmental Setting

The Defendants shall collect information to supplement and verify existing information on the environmental setting at the facility. The Defendants shall characterize the following:

a. Hydrogeology

The Defendants shall conduct a program to evaluate hydrogeologic conditions at the facility. This program may utilize information gathered pursuant to any other investigation conducted at the facility. However, at a minimum, the program shall provide the following information:

i) A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the facility, including:

- Regional and facility specific stratigraphy: description of strata including strike and dip, identification of stratigraphic contacts;

- Structural geology: description of local and regional structural features (e.g., folding, faulting, jointing, strike and dip);

- Depositional history;

- Identification and characterization of areas and amounts of recharge and discharge;

- Regional and facility specific groundwater flow patterns, both horizontally and vertically; and

- Characterization of seasonal variations in the groundwater flow regime.

ii) An analysis of any topographic features that might influence the groundwater flow system. Include stereographic analysis of both normal light and infrared aerial photographs;

iii) Based on field data, tests, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:

- Hydraulic conductivity and porosity (total and effective);

- Lithology, grain size, sorting, degree of cementation;

- Aquifer interconnection analysis/interpretation of hydraulic interconnection between saturated zones. Identify from field data collected, including aquifer and aquitard testing, the depths, thickness, degree of lateral continuity and hydraulic characteristics of any continuous confining units between water-bearing zones underneath the facility; and

- The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content etc.);

iv) Field studies and cores, structural geology and hydrogeology cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways, identifying:

- Sand and gravel deposits in unconsolidated deposits;

- Zones of fracturing or channeling in consolidated or unconsolidated deposits;

- Zones of higher permeability or low permeability that might direct and restrict the flow of contaminants;

- The uppermost aquifer, that is, the geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs; and

- Water-bearing zones above the first confining layer that may serve as pathways for contaminant migration, including perched zones of saturation;

v) From data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, generate a representative description of water level or fluid pressure monitoring, including:

- Water-level contour and/or potentiometric maps;

- Hydrologic cross sections showing vertical gradients;

- The flow system, including the vertical and horizontal components of flow; and

- Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences; and

vi) A description of man-made influences that may affect the hydrogeology of the site, identifying:

- Active and inactive local water supply and production wells with an appropriate schedule of pumping; and

- Manmade hydraulic structures (pipelines, french drains, ditches, unlined ponds, septic tanks, NPDES outfalls, retention areas, etc.).

b. Soils

The Defendants shall conduct a program to characterize the soil and rock units above the water table over the entire site. Such characterization may include, but should not be limited to, the following information:

i) Unified soil classification
ii) Surface soil distribution (in map form);
iii) Soil profile, including ASTM classification of soils;
iv) Transects of soil stratigraphy (include all structural features);
v) Hydraulic conductivity (saturated and unsaturated);

vi) [redacted]tive permeability;
vii) Bulk density;
viii) Porosity;
ix) Soil sorptive capacity;
x) Cation exchange capacity (CEC);
xi) Soil organic content;
xii) Soil pH;
xiii) Particle size distribution;
xiv) Depth of water table;
xv) Moisture content;
xvi) Effect of stratification on unsaturated flow;
xvii) Infiltration;
xviii) Evapotranspiration;
xix) Storage capacity;
xx) Vertical flow rate; and
xxi) Mineral content.

c. Surface Water and Sediment

The Defendants shall conduct a program to characterize the surface water bodies in the vicinity of the facility. Such characterization shall include, but not be limited to, the following information:

i) Description of the temporal and permanent surface water bodies including:

- For open water (e.g. lakes and estuaries): location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;
- For rivers, streams, creeks, springs, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, discharge points, general content and flooding tendencies (i.e., 100 year events);
- For impoundments: location, elevation, surface area, depth, volume, freeboard, and purpose of impoundment;
- Drainage patterns; and
- Evapotranspiration.

ii) Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients (NH_3, SO_3^{-}/SO_2^{-}, PO_4^{-3}), chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc.

iii) Description of sediment characteristics including:

- Deposition area (include a[redacted]p);
- Thickness profile; and
- Physical and chemical parameters (e.g., grain size, density, organic carbon content, ion exchange capacity, pH, etc.)

d. Air

The Defendants shall provide information characterizing the climate in the vicinity of the facility. Such information shall include, but not be limited to:

i) A description of the following parameters:

- Annual and monthly rainfall averages;
- Monthly temperature averages and extremes;
- Wind speed and direction;
- Relative humidity/dew point;
- Atmospheric pressure;
- Evaporation data;
- Development of inversions; and
- Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurence.

ii) A description of topographic and manmade features which affect air flow and emission patterns, including:

- Ridges, hills or mountain areas;
- Surface water bodies (e.g. rivers, streams, surface impoundments);
- Wind breaks and forests;
- Buildings; and
- Canyons or valleys.

2. Source Characterization

The Defendants shall have a program to collect analytical data to characterize completely the wastes and the areas where wastes have been placed, collected or removed, including type, quantity, physical form, disposition (containment or nature of deposits), and facility characteristics affecting release, including facility security fencing, engineered barriers, NPDES outfalls, etc. This shall include quantification of the following specific characteristics, at each source area, subsequent to November 1980 and to the extent known or ascertainable for the period prior thereto:

a. Unit/Disposal Area characteristics:

i) Location of unit/disposal area;
ii) Type of unit/disposal area;
iii) Design features;
iv) Operating practices (past and present);
v) Period of operation;
vi) Age of unit/disposal area;
vii) General physical conditions; and
viii) Method used to close the unit/disposal area.

b. Waste Characteristics:

i) Type of waste placed in the unit:

- Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent, or listed hazardous wastes);
- Quantity; and
- Chemical composition.

ii) Physical and chemical characteristics:

- Physical form (solid, liquid, gas);
- Physical description (e.g., powder, oily sludge);
- Temperature;
- pH;
- General chemical class (e.g., acid, base, solvent);
- Molecular weight;
- Boiling point;
- Viscosity
- Solubility in water;
- Cohesiveness of the waste;
- Vapor pressure;
- Flash point; and.
- Density

iii) Migration and dispersal characteristics of the waste:

- Sorption;
- Biodegradability, bioconcentration, biotransformation;
- Photodegradation rates;
- Hydrolysis rates; and
- Chemical transformations.

The Defendants shall document the procedures used in making the above determinations.

3. Contaminant Characterization

The Defendants shall have a program to collect analytical data on groundwater, soils, surface water, sediment and subsurface gas in the vicinity of the facility, in accordance with the sampling and analysis plan. This data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Defendants shall address the following types of contamination at the facility:

a. Groundwater Contamination

The Defendants shall conduct a Groundwater Quality Assessment Program (GQAP), pursuant to the requirements of the Consent Decree. This program shall, at a minimum, satisfy the requirements of 40 CFR §§ 265.93(d)(3) and 270.14(c) and the applicable portions of 40 CFR 264.

b. Soil Contamination

The Defendants shall conduct an investigation to characterize the contamination of the soil and rock units above the saturation zone in the vicinity of a contaminant release. The investigation shall include, but not be limited to, the following information:

i) A description of the vertical and horizontal extent of contamination;

ii) A description of contaminant and soil chemical properties within the contaminant source areas and plumes. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;

iii) Specific contaminant concentrations;

iv) The velocity and direction of contaminant movement; and

v) [redacted] extrapolation of future contaminant movement.

The Defendants shall document the procedures used in making the above determinations.

c. Surface Water and Sediment Contamination

The Defendants shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from contaminant releases at the facility. The investigation shall include, but not be limited to, the following information:

i) A description of the horizontal and vertical extent of any plume(s) originating from the facility, and the extent of contamination in underlying sediments;

ii) The horizontal and vertical direction of contaminant movement;

iii) The contaminant velocity;

iv) An evaluation of the physical, biological and chemical factors influencing contaminant movement;

v) An extrapolation of future contaminant movement; and

vi) A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.

The Defendants shall document the procedures used in making the above determinations.

d. Air Contamination

The Defendants shall conduct an investigation to characterize the particulate and gaseous contaminants released into the atmosphere or any structures or buildings. This investigation shall provide the following information:

i) Description of the horizontal and vertical direction and velocity of contaminant movement;

ii) The rate and amount of the release; and

iii) The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

The Defendants shall document the procedures used in making the above determinations.

e. Subsurface Gas Contamination

The Defendants shall conduct an investigation to characterize subsurface gases emitted from buried hazardous waste and hazardous constituents in the groundwater. This investigation shall include the following information:

i) A description of the horizontal and vertical extent of subsurface gases mitigation;

ii) The chemical composition of the gases being emitted;

iii) The rate, amount, and density of the gases being emitted; and

iv) Horizontal and vertical concentrations profiles of the subsurface gases emitted.

The Defendants shall document the procedures used in making the above determinations.

4. Potential Receptor Identification

The Defendants shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems may also be obtained. The following characteristics shall be identified:

a. Local uses and possible future uses of groundwater including:

i) Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial); and

ii) Location of groundwater users, including wells and discharge areas.

The above information should also indicate the aquifer or hydrogeologic unit used and/or impacted for each item.

b. Local uses and possible future uses of surface waters impacting the facility:

i) Domestic and municipal (e.g. potable and lawn/gardening watering);

ii) Recreational (e.g. swimming, fishing);

iii) Agricultural;
iv) Industrial; and
v) Environmental (e.g. fish and wildlife propagation).

c. Human use or access to the facility and adjacent lands including, but not limited to:

i) Recreation;
ii) Hunting;
iii) Residential;
iv) Commercial;
v) Zoning; and
vi) Relationship between population locations and prevailing wind direction.

d. A description of the biota in surface water bodies on, adjacent to, or affected by the facility;

e. A description of the ecology overlying and adjacent to the facility;

f. A demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups; and

g. A description of any endangered or threatened species near the facility.

F. Community Relations Plan

Defendant shall prepare and adhere to a plan for disseminating information to the public regarding investigation activities and results.

TASK IV: GROUNDWATER ASSESSMENT PROGRAM

The Defendants shall prepare and submit to EPD and MSDEQ, a Groundwater Assessment Program Workplan (GWA) and an Annual Groundwater Assessment Report. The GWA Workplan shall be due to EPA and MSDEQ within sixty (60) days of the approval of the report describing current conditions (Task I). The Annual Groundwater Assessment Report will be due no later than March 1 of each year.

A. Groundwater Assessment Workplan

The Defendant's Groundwater Assessment Program must be capable of determining: 1) Whether hazardous waste or hazardous waste constituents have entered the groundwater; 2) The rate and extent of migration of hazardous waste or hazardous waste constituents in the groundwater;

and 3) The concentrations of hazardous waste or hazardous waste constituents in the groundwater. Defendant's Groundwater Assessment Workplan shall include:

1. The number, location, depth of wells, and the rationale for the well placement;

2. Construction logs for each monitoring well;

3. A list of the monitoring parameters, this list shall include indicator parameters as well as the hazardous wastes or hazardous constituents in 40 CFR 261, Appendix IX;

4. Geologic cross-sections;

5. Sampling and analytical methods for those hazardous wastes or hazardous constituents at the facility;

6. Evaluation procedures, including any use of previously-gathered groundwater quality information; and

7. A schedule of implementation.

The Groundwater Assessment Program Workplan is subject to approval by EPA and MSDEQ.

B. Annual Groundwater Assessment Report

The Annual Groundwater Assessment Report shall evaluate the groundwater quality, monitoring system and program, as well as the abatement system at the facility. Pursuant to this Decree, wells shall be sampled according to an EPA approved sampling plan as outlined in Section IV.A.3 of the "Scope of Work". The Defendant's Annual Groundwater Assessment shall include, but not be limited to:

1. Groundwater surface elevations measured on a quarterly basis, for each well specified in the Groundwater Assessment Program Workplan;

2. Annual determination of the rate of groundwater flow and direction in the uppermost aquifer;

3. Concentrations or values of the indicator parameters obtained from quarterly analysis at each groundwater monitoring well;

4. Evaluation of the indicator parameters as outlined within the Facility's Groundwater Assessment Program Workplan.

5. Results of the analysis from each groundwater monitoring well as indicated in the Groundwater Assessment Program Workplan;

6. Calculated hydraulic conductivity and effective porosity; and

7. Summary of results.

TASK V: IMPLEMENTATION OF THE FACILITY INVESTIGATION

Upon notice of approval or modification of the RFI Workplan, the Defendant shall have fifteen (15) days to begin implementation the RFI Workplan as it is approved or modified, pursuant to the approved schedules contained therein. The Defendant shall conduct those investigations necessary to: characterize the potential pathways of contaminant migration (Environmental Setting); define the source(s) of contamination (Source Characterization); define the degree and extent of contamination (Contamination Characterization); identify actual or potential receptors; and to support the development of alternatives from which corrective measures will be selected. The implementation ("Facility Investigation") shall provide data of adequate technical quality to support the development and evaluation of the corrective measures alternative or alternatives during the Corrective Measures Study.

The RFI activities shall follow the plans set forth in Task III, RFI Workplan Requirements. All sampling and analysis shall be conducted in accordance with the Data Collection Quality Assurance Plan. All sampling locations shall be documented in a log and identified on a detailed site map.

TASK VI: INVESTIGATION ANALYSIS

Defendant shall prepare and submit to EPA and MSDEQ, for approval by EPA, an analysis and summary of all Facility investigations and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g. quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support the Corrective Measures Study.

A. Data Analysis

The Defendant shall prepare and submit to the Agencies for approval a draft RFI Report which shall contain an analysis and summary of all facility investigations implemented pursuant to Task V and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and the environment, and to support the Corrective Measures Study. The report shall include the identification of applicable protection standards including those under item B below.

B. Protection Standards

1. Ground-Water Protection Standards

For regulated units, Defendant shall provide information to support the Agencies selection/development of Groundwater Protection Standards

for all [redacted] the Appendix IX constituents f[redacted]d in the ground water during t[redacted] Facility Investigation (Task V).

a. The Ground-Water Protection Standards shall consist of:

i) For any constituents listed in Table 1 of 40 CFR 264.94, the respective value given in that table (Maximum Concentration of Constituents for Ground-Water Protection) if the background level of the constituent is below the one given in Table 1; or

ii) The background level of that constituent in the groundwater; or

iii) An EPA-approved Alternate Concentration Limit (ACL).

b. Information to support the Agencies' subsequent selection of Alternate Concentration Limits (ACLs) shall be developed by Defendant in accordance with EPA's guidance. For any proposed ACLs, Defendant shall include a justification based upon the criteria set forth in 40 CFR 264.94(b).

c. Following the receipt of any proposed ACLs, the Agencies shall notify Defendant in writing of approval, disapproval, or modifications. The Agencies shall specify in writing the reason(s) for any disapproval or modification.

d. Within sixty (60) calendar days of receipt of the notification of approval or disapproval of any proposed ACL, Defendant shall amend and submit revisions to EPA.

2. Other Relevant Protection Standards

Defendant shall identify all relevant and applicable standards for the protection of human health and the environment (e.g., National Ambient Air Quality Standards, Federally-approved State Water Quality Standards, etc.).

TASK VII: LABORATORY AND BENCH-SCALE STUDIES

Defendant shall conduct laboratory and/or bench-scale studies to determine the applicability of a corrective-measure technology or technologies to facility conditions. Defendant shall analyze the technologies, based on literature review, vendor contracts, and past experience, to determine the testing requirements.

Defendant shall develop a testing plan identifying the types(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of the testing, Defendant shall evaluate the testing results to assess the technol[redacted] or technologies with respect [redacted] the site-specific questions identified in the test plan.

Defendant shall prepare a report summarizing the testing program and its results, both positive and negative.

TASK VIII: REPORTS AND OTHER SUBMISSIONS

A. Preliminary Reports and Workplan Submissions

Defendant shall submit to the Agencies, as required herein and in the Consent Decree, reports and workplans including the Description of Current Conditions and the Pre-Investigation Evaluation.

B. Progress Reports

Defendants shall at minimum provide EPA with signed, monthly progress reports containing:

1. A description and estimate of the percentage of the RFI completed;

2. Summaries of all findings;

3. Summaries of all changes made in the RFI during the reporting period;

4. Summaries of all contacts with representatives of the local community, public interest groups, or State government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;

6. Actions being taken to rectify problems;

7. Changes in personnel involved with the RFI during the reporting period;

8. Projected work for the next reporting period; and

9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

C. Draft and Final Reports

Within forty-five (45) days of completion of the RFI, the Defendant shall prepare, for the Agencies' review, a Draft RCRA Facility Investigation Report which presents the results of studies conducted under Tasks V and VI. The RCRA Facility Investigation Report shall be subject to the review and approval process established in the Consent Decree. The results of

studies conducted under Task VII shall be submitted as a separate report when the first revised RCRA Facility Investigation Report is submitted. All reports become final upon approval by the Agencies.

D. Ground-Water Assessment Program Workplan and Report

Defendant shall submit to the Agencies, a plan for a Ground-Water Quality Assessment Program, as required in this Scope of Work.

FACILITY SUBMISSION SUMMARY

An abbreviated summary of the information reporting requirements contained in the RCRA Facility Investigation Scope of Work is presented below:

FACILITY SUBMISSION	DUE DATE *
Description of Current Situation Task I	thirty (30) days
Pre-Investigation Evaluation of Corrective Measure Technologies Task II	sixty (60) days **
Draft RFI Workplan Task III	sixty (60) days **
Groundwater Assessment Workplan Task IV	sixty (60) days **
Implementation of approved RFI Workplan Task V	Within fifteen (15) days of notice of approval of the RFI Workplan
Draft RFI Report Tasks VI and VIII	Within forty-five (45) days of the completion of the RFI
Revised RFI Report Tasks VI and VIII	Within thirty (30) days of agency comment on Draft RFI Report
Laboratory and Bench-Scale Studies Task VII	Concurrent with first revised RFI Report
Progress Reports on Tasks I through VI	Monthly

* All due dates are calculated from the effective date of the Consent Decree unless otherwise specified

** From approval or modification of the Report due under Task I

ATTACHMENT C

SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY

AT

CEDAR CHEMICAL CORPORATION, VICKSBURG, MISSISSIPPI

ATTACHMENT C

SCOPE OF WORK FOR A CORRECTIVE MEASURE STUDY

AT

CEDAR CHEMICAL CORPORATION, VICKSBURG, MISSISSIPPI

PURPOSE

The purpose of this Corrective Measures Study (hereafter "CMS") is to develop and evaluate the corrective action alternatives and to recommend the corrective measure or measures to be taken at Cedar Chemical Corporation in Vicksburg, Mississippi. The Defendant will furnish the personnel, material, and services necessary to prepare the corrective measure study, except as otherwise specified herein. The Defendant shall submit to EPA and MSDEQ (hereafter "the Agencies"), sixty (60) calendar days after final approval of the RFI Report, a Draft CMS Report. This report shall contain all information requested in the tasks outlined below. The reports and plans to be submitted will be subject to review, modification and approval pursuant to the procedures established in the Consent Decree. Upon approval of the CMS Report, the Agencies will make the Report available to the public for review and comment and, following public review and comment, will inform the Defendants of the Corrective Measures selected for the Cedar Chemical Corporation Facility.

SCOPE

The Corrective Measures Study consists of four tasks:

Task I: Identification and Development of the Corrective Measures Alternatives

- A. Description of Current Situation
- B. Establishment of Corrective Action Objectives
- C. Screening of Corrective Measures Technologies
- D. Identification of the Corrective Measures Alternatives

Task II: Evaluation of the Corrective Measures Alternative or Alternatives

- A. Technical/Environmental/Human Health/Institutional
- B. Cost Estimate

Task III: Justification and Recommendation of the Corrective Measure or Measures

A. Technical
B. Environmental
C. Human Health

Task IV: Reports and Other Submissions

A. Progress Reports
B. Draft Reports
C. Final Reports
D. Public Notice and Final Selection of Corrective Measure

TASK I: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVE OR ALTERNATIVES

Based on the results of the RCRA Facility Investigation and consideration of the potential corrective measures technologies, the Defendant shall identify, screen, and develop the alternatives for removal, containment, treatment, and/or other remediation of the contamination based on the objectives established for the corrective action.

A. Description of Current Situation

Defendant shall submit an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation Report. Defendant shall provide an update to information presented in Task I of the RFI to the Agencies regarding previous response activities and any interim measures which have been or are being implemented at the facility. The Defendant's shall include a statement of the RFI findings identifying the actual or potential exposure pathways that shall be addressed by corrective measures.

B. Establishment of Corrective Action Objectives

Defendant shall propose for the Agencies review and approval facility specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RCRA Facility Investigation, EPA guidance, and the requirements of any applicable Federal statutes. At a minimum, all corrective actions concerning ground-water releases from regulated units must be consistent with, and as stringent as, those required under 40 CFR 264.100.

C. Screening of Corrective Measures Technologies

Defendant shall review the results of the RCRA Facility Investigation, and reassess the technologies specified in Task II of the RFI, to identify additional technologies which are applicable at the facility. Defendant shall screen the preliminary corrective measures

technologies identified in Task II of the RCRA Facility Investigation and any supplemental technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measures objectives within a reasonable time. The screening process should focus on eliminating those technologies which have severe limitations for a given set of waste and site specific conditions. The screening step may also eliminate technologies based on inherent technologic limitations. Site, waste and technologic characteristics which should be used to screen inapplicable technologies are described in more detail below.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. Site Characteristics

   Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration.

2. Waste Characteristics

   Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site).

3. Technology Limitations

   During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

D. <u>Identification of the Corrective Measures Alternative or Alternatives</u>

Defendant shall develop the corrective measures alternatives based on the corrective action objectives established under B above and the screening of potential corrective measures technologies undertaken under C above. Defendant shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the site. Technologies can be combined to form the

overall corrective action alternatives, and each alternative may consist of an individual technology or combination of technologies.

The alternatives developed should represent a workable number of options that each appear to address adequately all site problems and corrective action objectives. The Defendant shall document the reasons for excluding technologies previously identified under Task II of the RFI.

TASK II: EVALUATION OF THE CORRECTIVE MEASURES ALTERNATIVE OR ALTERNATIVES

Defendant shall describe and evaluate each corrective measures alternative that passes through the Initial Screening in Task I. The evaluation shall be based on technical, environmental, human health, and institutional concerns. Defendant shall also develop cost estimates for each corrective measures alternative.

A. Technical/Environmental/Human Health/Institutional

Technical

1. The Defendant shall evaluate each corrective measures alternative based on technical concerns, including performance, reliability, implementability and safety.

   a. Defendant shall evaluate performance based on the effectiveness and useful life of the corrective measure:

      i) Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies.

      ii) Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measures technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each alternative shall be evaluated by comparing its projected service to the life of the project.

b. Defendant shall provide information on the reliability of each alternative including its operation and maintenance requirements and its demonstrated reliability:

i) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance activities. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance activities. The availability of labor and materials to meet these requirements shall also be considered.

ii) Demonstrated and expected reliability is a way of evaluating the risk and effect of failure. Defendant shall evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.

c. Defendant shall describe the implementability of each alternative including the relative ease of installation (constructability) and the time required to achieve a given level of response:

i) Constructability is determined by conditions both internal and external to the facility conditions, including such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the facility (i.e., remote location vs. a congested urban area). Defendant shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities.

ii) Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

d. Defend[redacted] shall evaluate each correcti[redacted]easure alternative with r[redacted]rd to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

2. Environmental

Defendant shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, an evaluation of the short-term and long-term beneficial and adverse effects of the response alternative, any adverse effects on environmentally sensitive areas, and an analysis of measures to mitigate adverse effects.

3. Human Health

Defendant shall assess each alternative in terms of the extent to which it mitigates short and long term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measures. The assessment will describe the concentrations and characteristics of the contaminants on-site, potential exposure routes, and potentially affected population. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. The relative reduction of impact will be determined by comparing residual levels of contaminants for each alternative with existing criteria, standards, or guidelines for levels of contaminants acceptable to EPA.

4. Institutional

Defendant shall assess relevant institutional requirements for each alternative. Specifically the effects of Federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

B. <u>Cost Estimate</u>

Defendant shall develop an estimate of the cost of each corrective measures alternative and for each phase or segment of the alternative. The cost estimate shall include both fixed capital and working capital (operation and maintenance) costs. The fixed capital cost estimate will be used to compare corrective measures alternatives.

1. Fixed capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.

   a. Direct capital costs include:

      i) Construction costs that is, costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure;

      ii) Equipment costs that is, costs of treatment, containment, disposal, and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;

      iii) Land and site-development costs that is, expenses associated with purchase of land and development of existing property; and

      iv) Building and services costs that is, costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.

   b. Indirect capital costs include:

      i) Engineering expenses that is, costs of administra- , design, construction supervision, drafting, and testing of corrective measures alternatives;

      ii) Legal fees and license or permit costs that is, administrative and technical costs necessary to obtain licenses and permits for installation and operation;

      iii) Start-up and shake-down costs that is costs incurred during corrective measures start-up; and

      iv) Contingency allowances that is, funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. Defendant shall consider the following operation and maintenance cost components:

   a. Operating labor costs that is, wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;

   b. Maintenance materials and labor costs that is, costs for labor, parts, and other resources required for routine

maintenance of facilities and equipment

c. Auxiliary materials and energy that is costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;

d. Purchased services that is, sampling costs, laboratory fees, and professional fees for which the need can be predicted;

e. Disposal and treatment costs that is, costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;

f. Administrative costs that is costs associated with administration of corrective measures operation and maintenance not included under other categories;

g. Insurance, taxes, and licensing costs that is, costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;

h. Maintenance reserve and contingency funds that is, annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and

i. Other costs that is, items that do not fit any of the above categories.

TASK III: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURES

Defendant shall justify and recommend a corrective measures alternative or alternatives using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Trade-offs among health risks, environmental effects, and other pertinent factors shall be highlighted. EPA will select the corrective measures alternative or alternatives to be implemented based on the results of Tasks I and II. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

A. Technical

1. Performance - corrective measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;

2. Reliability - corrective measures which do not require frequent or complex operation and maintenance activities and that have

proven effective under waste and facility conditions similar to those anticipated will be given preference;

3. Implementability - corrective measures which can be constructed and operated to reduce levels of contamination and to attain or exceed applicable standards in the shortest period of time will be preferred; and

4. Safety - corrective measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

B. Environmental

The corrective measures posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment will be favored.

C. Human Health

The corrective measures must comply with existing EPA and State criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time will be preferred.

TASK IV: REPORTS AND OTHER SUBMISSIONS

Defendant shall prepare a Corrective Measures Study Report presenting the results of Tasks I through III and recommending a corrective measures alternative. Copies of the draft report shall be provided by the Defendant to the Agencies for review and approval in accordance with the schedule approved in the CMS Workplan.

A. Progress Reports

Defendant shall submit to the Agencies signed, monthly progress reports which provide, at a minimum:

1. A description and estimate of the percentage of the CMS completed;

2. Summaries of all findings made during the reporting period;

3. Summaries of all changes made in the CMS during the reporting period;

4. Summaries of all contacts with representatives of the local community, and public interest groups during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;

6. Actions being taken to rectify problems;

7. Changes in personnel involved with the CMS during the reporting period;

8. Projected work for the next reporting period; and

9. Copies of daily reports, inspection reports, laboratory/ monitoring data, etc.

B. Draft Reports

The Corrective Measures Study Report shall at a minimum include:

1. A description of the facility;

   Site topographic map and preliminary layouts.

2. A summary for each corrective measures alternative, of the descriptions, assessments and evaluations made in Tasks I and II, above;

3. A summary of the recommended corrective measures;

   a. Description of the corrective measures and rationale for selection;

   b. Performance expectations;

   c. Preliminary design criteria and rationale;

   d. General operation and maintenance requirements; and

   e. Long-term monitoring requirements.

4. A summary of the RCRA Facility Investigation findings and impact on the recommended corrective measures:

   a. Field studies (ground water, surface water, soil, air); and

   b. Laboratory studies (bench scale, pilot scale).

5. Design and implementation precautions for the recommended Corrective Measures:

   a. Special technical problems;

   b. Additional engineering data required;

c. Permits and regulatory requirements;

d. Access, easements, right-of-ways;

e. Health and safety requirements; and

f. Community relations activities.

6. Cost Estimates and Schedules for the recommended Corrective Measures;

a. Fixed Capital cost estimate;

i) Study Cost Estimates for the comparisons of corrective measure technologies (±30% of projected final cost)

ii) Project Control Capital Cost Estimate for the chosen corrective measure technology (±10% of projected final cost)

b. Working Capital cost estimate (operation and maintenance); and

c. Preliminary project schedule (design, construction, opera-).

Copies of the draft shall be provided by the Defendants to the Agencies.

C. Final Reports

Defendant shall revise the Corrective Measures Study Report, incorporating comments received from the Agencies on the Draft Corrective Measures Study Report.

D. Public Review and Final Selection of Corrective Measures

Upon approval of the Corrective Measures Study Report, the Agencies will make available to the public for review and comment, as specified in the Consent Decree, a summary of the proposed corrective measures, and the justification for their selection. The Corrective Measures Study Report and RCRA Facility Investigation Report shall be included in the justification.

FACILITY SUBMISSION SUMMARY

Facility Submission	Due Date
CMS Workplan	Within sixty (60) calendar days of approval of RFI Report
Implementation of CMS Workplan	Begin within fifteen (15) calendar days of approval of CMS Workplan
Draft CMS Report	In accordance with the schedule contained in the approved workplan
Final CMS Report	Within thirty (30) calendar days of EPA and MSDEQ comment on the Draft CMS
Progress Reports	Monthly

SCOPE OF WORK FOR THE CORRECTIVE MEASURES IMPLEMENTATION

AT

CEDAR CHEMICAL CORPORATION, VICKSBURG, MISSISSIPPI

PURPOSE

The purpose of this Corrective Measures Implementation (hereafter "CMI") program is to design, construct, operate, maintain, and monitor the performance of the corrective measure or measures selected to protect human health and the environment at the Cedar Chemical Facility. The Defendant shall furnish all personnel, materials, and services necessary for the implementation of the corrective measure or measures at the Facility. Reports and plans will be submitted to EPA and MSDEQ (hereafter "the Agencies"). These reports and plans will be subject to review, modification and approval pursuant to the procedures established in the Consent Decree.

SCOPE

The Corrective Measures Implementation program consists of four tasks:

Task I: Corrective Measures Implementation Program Plan

- A. Program Management Plan
- B. Community Relations Plan

Task II: Corrective Measures Design

- A. Design Plans and Specifications
- B. Operation and Maintenance Plan
- C. Cost Estimate
- D. Project Schedule
- E. Construction Quality Assurance Objectives
- F. Health and Safety Plan
- G. Design Phases

Task III: Corrective Measures Construction

- A. Responsibility and Authority
- B. Construction Quality Assurance Personnel Qualifications
- C. Inspection Activities
- D. Sampling Requirements
- E. Documentation

Task IV: Reports and Other Submissions

- A. Progress Reports
- B. Draft Reports and Submissions
- C. Final Reports and Submissions

This program will include the development and implementation of several plans, which require concurrent preparation. It may be necessary to revise plans as the work is performed to focus efforts on a particular problem. The Program Plan includes the following:

A. Program Management Plan

The Defendant shall prepare a Program Management Plan which will document the overall management strategy for performing the design, construction, operation, maintenance, and monitoring of corrective measure(s). The plan shall document the responsibility and authority of all organizations and key personnel involved with the implementation. The Program Management Plan shall also include a description of qualifications of key personnel directing the Corrective Measures Implementation Program, including contractor personnel.

B. Community Relations Plan

The Defendants shall revise the Facility Community Relations Plan, if one has previously been developed, during design and construction activities to include any changes in the level of information needed due to the concerns of the community.

1. Specific activities which must be conducted during the design stage are as follows:

   a. Revise the facility Community Relations Plan to reflect knowledge of citizen concerns and involvement at this stage of the process; and

   b. Prepare and distribute a public notice and an updated fact sheet at the completion of engineering design.

2. Depending on citizen interest at this point in the corrective action process, specific activities to be conducted during the construction stage could range from conducting group meetings to preparing fact sheets on the technical status.

TASK II: CORRECTIVE MEASURES DESIGN

The Defendant shall prepare final construction plans and specifications to implement the corrective measures at the facility as defined in the Corrective Measures Study. These plans and specifications shall be incorporated into a Corrective Measures Design Plan, which shall also include the following:

A. Design Plans and Specifications

The Defendant shall develop clear and comprehensive design plans and specifications which include, but are not limited to, the following:

[redacted] including:

a. Compli[redacted]e with all applicable or rele[redacted]t and appropriate enviro[redacted]ntal and public health standa[redacted]; and

b. Minimization of environmental and public impacts.

2. Discussion of the technical factors of importance including:

a. Use of currently accepted environmental control measures and technology;

b. The constructability of the design; and

c. Use of currently acceptable construction practices and techniques.

3. Description of assumptions made and detailed justification of these assumptions;

4. Discussion of the possible sources of error and references to possible operation and maintenance problems;

5. Detailed drawings of the proposed design including;

a. Qualitative flow sheets; and

b. Quantitative flow sheets.

6. Tables listing equipment and specifications;

7. Tables giving material and energy balances;

8. Appendices including:

a. Sample calculations (one example presented and explained clearly for significant or unique design calculations);

b. Derivation of equations essential to understanding the report; and

c. Results of laboratory or field tests.

B. <u>Operation and Maintenance Plan</u>

The Defendant shall prepare an Operation and Maintenance Plan to cover both implementation and long-term maintenance of the corrective measures. The plan shall be composed of the following elements:

1. Description of normal operation and maintenance (O&M):

a. Description of tasks for operation;

c. Description of prescribed treatment or operation conditions; and

d. Schedule showing frequency of each O&M task.

2. Description of potential operating problems:

a. Description and analysis of potential operating problems;

b. Sources of information regarding problems; and

c. Common and/or anticipated remedies.

3. Description of routine monitoring and laboratory testing:

a. Description of monitoring tasks;

b. Description of required laboratory tests and their interpretation;

c. Required QA/QC; and

d. Schedule of monitoring frequency and date, if appropriate, when monitoring may cease.

4. Description of alternate O&M:

a. Should systems fail, alternate procedures to prevent undue hazard; and

b. Analysis of vulnerability and additional resource requirements should a failure occur.

5. Safety plan:

a. Description of precautions, necessary equipment, etc., for site personnel; and

b. Safety tasks required in the event of systems failure.

6. Description of equipment:

a. Equipment identification;

b. Installation of monitoring components;

c. Maintenance of site equipment; and

d. Replacement schedule for equipment and installed components.

a. Daily operating logs;

b. Laboratory records;

c. Records for operating costs;

d. Mechanism for reporting emergencies;

e. Personnel and maintenance records; and

f. Monthly/annual reports to state agency.

A Draft Operation and Maintenance Plan shall be submitted simultaneously with the Prefinal Design Documents submission. The Final Operation and Maintenance Plan shall be submitted with the Final Design Documents.

C. Capital and Operating and Maintenance Construction Cost Estimate

The Defendant shall develop cost estimates for the purpose of assuring that the facility has the financial resources necessary to construct and implement the corrective measure. The cost estimate developed in the Corrective Measures Study shall be refined to reflect the more detailed, accurate design plans and specifications being developed. The cost estimate shall include both capital and operation and maintenance costs. A draft Cost Estimate shall be submitted simultaneously with the Prefinal Design Documents submission, and the Final Cost Estimate shall be submitted with the Final Design Documents.

D. Project Schedule

The Defendant shall develop a Project Schedule for constructing and implementing the corrective measure or measures which identifies timing for initiation and completion of all critical path tasks. The Defendant shall specifically identify dates for completion of the project and major interim milestones. A draft Project Schedule shall be submitted simultaneously with the Prefinal Design Documents submission, and the Final Project Schedule shall be submitted with the Final Design Documents.

E. Construction Quality Assurance Objectives

The Defendant shall identify and document the objectives and framework for the development of a construction quality assurance program including, but not limited to, the following: responsibility and authority, personnel qualifications, inspection activities, sampling requirements, and documentation. The draft Construction Quality Assurance Plan shall be submitted simultaneously with the Prefinal Design Documents submission, and the Final Construction Quality Assurance Plan shall be submitted with the Final Design Documents.

Facility Investigation to address the activities to be performed at the facility to implement the corrective measure(s). The draft revised Health and Safety Plan shall be submitted simultaneously with the Prefinal Design Document submission and the final revised Health and Safety Plan shall be submitted with the Final Design Documents.

G. Design Phases

The design of the corrective measure(s) should include the phases outlined below:

1. Preliminary design

The Defendant shall submit the preliminary design when the design effort is approximately 30% complete. At this stage, the Defendant shall have field-verified the existing conditions of the facility. The preliminary design shall reflect a level of effort such that the technical requirements of the project have been addressed and outlined so that they may be reviewed to determine if the final design will provide an operable and usable corrective measure. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the program. The preliminary construction drawings by the Defendants shall reflect organization and clarity. The scope of the technical specifications shall be outlined in a manner reflecting the final specifications. The Defendant shall include, with the preliminary design submission, calculations reflecting the same percentage of completion as the design they support.

2. Intermediate design

Complex project design may necessitate review of the design documents between the preliminary and the prefinal/final design. At the discretion of the Agencies, a design review may be required at 60% completion of the project. The intermediate design submittal should include the same elements as the prefinal design.

3. Correlation of plans with specifications

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications, the Defendant shall:

a. Coordinate and cross-check the specifications and drawings, and

b. Proof the edited specifications and cross-check all drawings and specifications.

4. Equipment start-up and operator training

The Defendant shall prepare and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start-up, and operation of the treatment systems and training covering appropriate operational procedures once the start-up has been successfully accomplished.

5. Additional studies

Corrective Measures Implementation may require additional studies to supplement the available technical data, and this need for additional studies may be identified by the Agencies or the settling defendant. For any such studies required, the Defendant shall furnish all services, including field work, materials, supplies, plants, labor, equipment, investigations, studies, and superintendents. Sufficient sampling, testing, and analysis shall be performed to optimize the required treatment and/or disposal operations and systems. When additional studies are required, there shall be an initial meeting of all principal personnel involved in the development of the program. The purpose will be to discuss objectives, resources, communication channels, roles of personnel involved, and orientation of the site, etc. The interim report shall present the results of the testing with the recommended treatment or disposal system (including options). A review conference shall be scheduled after the interim report has been reviewed by all interested parties. The final report of the testing shall include all data taken during the testing and a summary of the study results.

6. Prefinal and final design

The Defendant shall submit the prefinal/final design documents in two phases. The first submission shall be at 95% completion of design (i.e., prefinal). After approval of the prefinal submission, the Defendants shall execute the required revisions and submit the final documents 100% complete with reproducible drawings and specifications.

The prefinal design submittal shall consist of the Design Plans and Specifications, Operation and Maintenance Plan, Capital and Operating and Maintenance Construction Cost Estimate, Project Schedule, Quality Assurance Plan, and the revised Health and Safety Plan.

The final design submittal shall consist of the Final Design Plans and Specifications (100% complete), the Defendant's Final Construction Cost Estimate, the Final Operation and Maintenance Plan, Final Quality Assurance Plan, Final Project Schedule, and Final Health and Safety Plan. The quality of the design documents should be such that the

TASK III: CORRECTIVE MEASURES CONSTRUCTION

Following approval of the final design documents, the Defendant shall develop, submit for approval and implement a Construction Quality Assurance Program (CQAP), in accordance with the CQA. This program shall ensure, with a reasonable degree of certainty, that a completed corrective measure(s) meets or exceeds all design criteria, plans, and specifications. The CQA plan is a facility-specific document which must be submitted to the Agencies for review and approval prior to the start of construction. At a minimum, the CQA plan should include the elements which are summarized below. Upon approval of the CQA plan, the Defendant shall construct and implement the corrective measures in accordance with the approved design, schedule, and CQA plan. The Defendant shall also implement the elements of the approved Operation and Maintenance Plan.

A. Responsibility and Authority

The responsibility and authority of all organizations (i.e. technical consultants, construction firms, etc.), and key personnel involved in the construction of the corrective measures shall be described fully in the CQA plan. The Defendant must identify a CQA officer and the necessary supporting inspection staff.

B. Construction Quality Assurance Personnel Qualifications

The qualifications of the CQA officer and supporting inspection personnel shall be presented in the CQA plan to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

C. Inspection Activities

The observations and tests that will be used to monitor the construction and/or installation of the components of the corrective measure(s) shall be summarized in the CQA plan. The plan shall include the scope and frequency of each type of inspection. Inspections shall verify compliance with all environmental requirements and include, but not be limited to, air quality and emissions monitoring records and waste disposal records (e.g., RCRA transportation manifests). The inspections should also ensure compliance with all health and safety procedures. In addition to oversight inspections, the Defendants shall conduct the following activities:

1. Preconstruction inspection and meeting

The Defendant shall conduct a preconstruction inspection and meeting to accomplish the following purposes:

b. to review methods for distributing and storing documents and reports;

c. to review work area security and safety protocol;

d. to discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and

e. to conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The preconstruction inspection and meeting shall be documented by a designated person, and minutes should be transmitted to all parties.

2. Prefinal inspection

Upon preliminary project completion, the Defendant shall notify EPA and MSDEQ so that they may conduct a prefinal inspection. The prefinal inspection will consist of a walk-through inspection of the entire project site. The inspection is to determine whether the project is complete and consistent with the contract documents and the approved corrective measures. Any outstanding construction items discovered during the inspection will be identified and noted. Additionally, treatment equipment will be operationally tested by the Defendants. The Defendant will certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting will be completed where deficiencies are revealed. The prefinal inspection report shall outline the outstanding construction items, actions required to resolve items, completion date for these items, and date for final inspection.

3. Final inspection

Upon completion of any outstanding construction items, the Defendant shall notify EPA and MSDEQ so that they may conduct a final inspection. The final inspection will consist of a walk-through inspection of the project site. The prefinal inspection report will be used as a checklist with the final inspection focusing on the outstanding construction items identified in the prefinal inspection. Confirmation shall be made that outstanding items have been resolved.

D. Sampling Requirements

The sampling activities, sample size, sample locations, frequency of testing, acceptance and rejection criteria, and plans for correcting problems as addressed in the project specifications should be presented in the CQA plan.

Reporting requirements for CQA activities shall be described in detail in the CQA plan. This should include such items as daily summary reports, inspection data sheets, problem identification and remedy reports, design acceptance reports, and final documentation. Provisions for the final storage of all records also should be presented in the CQA plan.

TASK IV: REPORTS AND OTHER SUBMISSIONS

The Defendant shall prepare plans, specifications, and reports as set forth in Task I through Task IV, to document the design, construction, operation, maintenance, and monitoring of the corrective measures. These reports shall be provided by the Defendant to EPA and MSDEQ as specified in the Consent Decree.

A. Progress Reports

The Defendants shall provide EPA and MSDEQ with monthly progress reports as specified in the Consent Decree. The reports shall contain at a minimum:

1. A description and estimate of the percentage of the CMI completed;

2. Summaries of all findings;

3. Summaries of all changes made in the CMI during the reporting period;

4. Summaries of all contacts with representatives of the local community, public interest groups or state government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;

6. Actions being taken to rectify problems;

7. Changes in personnel during the reporting period;

8. Projected work for the next reporting period; and

9. Copies of daily reports, inspection reports, and laboratory/ monitoring data.

B. Draft Reports and Submissions

1. The Defendant shall submit a draft Corrective Measures Implementation Program Plan as outlined in Task I within ninety (90) calendar days of receipt of notification of the Agencies final selection of the corrective measures;

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VICKSBURG POST 12/21/03

VICKSBURG CHEMICAL

City to seek state funds for cleanup

Proposed plans for part of property include golf course and subdivision

By Mark J. Armstrong
marmstrong@vicksburgpost.com

City officials say that state money is needed to move forward with a deal to reopen an idle chemical plant off Rifle Range Road and develop a golf course overlooking the Mississippi River.

The deal would also include the construction of about 232 homes on vacant land previously owned by Vicksburg Chemical. The company shut down last year, laying off about 100 workers and leaving 40 acres of chemically contaminated land that requires constant monitoring by the Mississippi Department of Environmental Quality.

Mayor Laurence Leyens said the city will ask the state to put up between $3.5 million and $4 million to help with the estimated $8 million clean-up.

"It'll create jobs, industry, redevelop that property and it'll clean up that mess once and for all," Leyens said.

MDEQ, which was given control of Vicksburg Chemical's 540 acres in southern Vicksburg, has been negotiating with Harcros Chemicals Inc. of Kansas City, Kan., in partnership with Arcadis, a Dutch multinational corporation with U.S. headquarters near Denver, to take over the site and reopen the chemical plant.

City officials who are interested in acquiring 220 acres of that land to develop a golf course off Warrenton Road met with Harcros and Arcadis last week to discuss the project. Leyens said the companies had asked the city for money to help pay for the cleanup, but that the city instead offered to seek funding from the state.

The carrot for the state is that MDEQ could save $50,000

See Cleanup, Page A11.

Cleanup

Continued from Page A1.

a month now being spent to monitor the site and prevent more contamination, Leyens said.

"Everybody either wins or loses here," Leyens said. "This is the last chance."

Jimmy Heidel, executive director of the Warren County Economic Development Foundation, said the funding being sought would primarily be for infrastructure improvements associated with the cleanup efforts. He said Harcros could be eligible for Community Development Block Grant funding from the state or tax increment financing with the city.

"There are several options out there," Heidel said.

Sen. Mike Chaney, R-Vicksburg, said he was contacted by Heidel about the proposal, but would not definitively say if he will support state funding for it.

"As elected officials we'll certainly explore any options to help our local officials," Chaney said.

Vicksburg Chemical and its predecessors have operated at that site for 50 years producing pesticides, herbicides and fertilizers. Contamination at the site is believed to go as deep as 40 feet underground.

The property includes 500 acres adjacent to the plant that had served as a buffers while it was in operation. That land is reportedly not contaminated.

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F A C S I M I L E

Date: January 9, 2004

To: Trey Hess

Company: MDEQ

Fax No.: 601-961-5300

From: Trudy Fisher

Pages: 2

Comments:

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Memo

To: Robert Morris, EPA WAM

From: John Belin, Booz Allen Hamilton
Date: September 22, 2004
Subject: Vicksburg Chemical Company Data Gap Assessment Report Figures

Attached are courtesy copies of the figures we referenced in the Vicksburg Chemical Company (VCC) Data Gap Assessment Report submitted on September 22, 2004. Figures 1 identifies the site location and was prepared by Booz Allen Hamilton. Figure 2 is from the VCC *Application for Corrective Action Management Unit* dated June 1997. Figure 3 is Figure 3-5 from the *Draft Groundwater Assessment Report* dated November 2001 and is a cross-sectional diagram showing the depth of Hennessey's Bayou in relation to site-specific hydrogeology; which confirms the potential for interaction between shallow groundwater and surface water. Figure 4 is from the *Corrective Measures Study* dated March 2002. This figure identifies site wide soil contamination with areas of contamination greater than MDEQ Tier 1 TRG Table Values for Restricted Use.

ATTACHMENT 1

Data Gap Assessment
For RCRA Environmental Indicator Codes (CA725 and CA750)

Vicksburg Chemical Company
Vicksburg, Mississippi
EPA I.D. No. MSD990714081

In response to Work Assignment R04808-1, Task 03, under EPA Contract No. 68-W-02-018, Booz Allen Hamilton (Booz Allen) prepared the following Data Gap Assessment (DGA) for the Vicksburg Chemical Company (VCC) facility located in Vicksburg, Mississippi. As part of the data gaps analysis process, Booz Allen reviewed all available documentation compiled during file reviews at EPA Region 4 offices on August 9, 2004, and at the Mississippi Department of Environmental Quality (MDEQ) offices on August 23 and 24, 2004. Based upon Booz Allen's initial review of the file material and discussions with the EPA Work Assignment Manager (WAM) during a meeting on August 10, 2004, it was determined that the currently available information was not sufficient to allow for positive CA725 or CA750 environmental indicator (EI) determinations at this facility. As a result, Booz Allen was directed to prepare a DGA for VCC. The following DGA is based on the available file material and supplemental information obtained during discussions with the EPA Technical Lead, Ms. Lael Butler, on August 18, 2004, and the MDEQ point of contact, Mr. Trey Hess, on August 26, 2004. Attachment 1 includes a memorandum with the figures that are referenced in the DGA.

- FACILITY DESCRIPTION

The VCC site is located south of Interstate 20 at 4280 Rifle Range Road within the southwest section of the City of Vicksburg, Warren County, Mississippi. The site is approximately 535 acres in size, of which approximately 500 acres are heavily wooded and undeveloped (Ref. 16). Figure 1 illustrates the location of the VCC facility.

The site is currently inactive. During operations, the plant was divided into two different operational areas: the North Plant and South Plant. These former plants are situated in a small valley running north/south and adjacent to the Mississippi River. Stout's Bayou and Hatcher Bayou flow through the valley and join to form Hennessey's Bayou, which flows south for about 10 miles into the Mississippi River. The site is within the 100-year flood plain of the Mississippi River. The Kansas City Southern Railroad also runs through the plants in a north/south direction, with side tracks that were utilized at loading areas and warehouses during facility operations. Current notable site features include: an inactive hazardous waste landfill (solid waste management unit [SWMU] 2), an unlined surface impoundment (SWMU 3), numerous warehouses for past storage, buildings and process areas, and areas of contaminated soil. Surrounding land use is predominately residential. Immediate adjacent land use includes a wastewater treatment facility to the east-southeast, a church to the south-southeast, and heavily wooded areas to the west. Approximately 70 acres of the western portion of the site border the Mississippi River; however, none of the plant production facilities are located along the river. The facility was formerly utilized to manufacture chemicals. The North Plant, in operation from

1961 to 2002, produced potassium nitrate, liquid chlorine, and liquid nitrogen tetroxide. The South Plant, in operation from 1953 to 2002, formerly manufactured dinitro butyl phenol (dinoseb), monosodium methane arsonate (MSMA), diethyl hexyl phosphoric acid (DEHPA), 1-hydroxy-ethylidene-1-1-diphosphonic acid (UNIHIB), toxaphene, methyl parathion, cyanazine (bladex), and atrazine. Originally, the two plants were completely separate and owned and operated by two different companies. American Metal Climax Corporation (Amax) constructed the North Plant in 1961 to produce chloride-free potassium nitrate for selected crops. The South Plant was originally constructed by Spencer Chemical in 1953 to produce agricultural chemicals. Gulf Chemical then purchased the South Plant facility in 1964 and added a formaldehyde unit in 1966.

VCC was formed in early 1972 and purchased both the Gulf Chemical and Amax chemical facilities (except the formaldehyde plant) on July 12, 1972, with production beginning in October 1972. At that time, VCC operated a nitric acid, potassium nitrate, and nitrate solutions plant for two and one-half years. By September 1974, five more facilities were built for atrazine, methyl parathion, dinoseb, toxaphene, and unsymmetrical dimethyl hydrazine (UDMH) production. The UDMH facility was shut down permanently a short time after construction.

A Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA), conducted during July 1990 (Ref. 2), identified a total of 34 SWMUs. Eight SWMUs were recommended and approved for no further action as a result of the RFA. RCRA Facility Investigations (RFIs) were recommended and required on the remaining 26 SWMUs. RFI investigations and actions took place between August 1994 and August 2001. An EPA internal memorandum discussing proposed sampling at VCC recommended an additional seven SWMUs for NFA (Ref. 15). VCC subsequently prepared a Corrective Measures Study (CMS) in March 2002 that outlined corrective measures alternatives for the following two SWMU groupings: 7, 4, 14, 20; and 11, 12, 15 (Ref. 13). A discussion of the investigation of the following SWMUs, which have not been approved for NFA, is provided in Section C (Refs. 2, 9, 10, 13, 16):

SWMU 2 - Inactive Landfill
SWMU 3 - Surface Water Impoundment
SWMU 4 - Activated Carbon Unit
SWMU 5 - South Plant Drainage System
SWMU 7 - Former Dinoseb Production Area
SWMU 11 - Former MSMA Production Area
SWMU 12 - Former MSMA Salt Unloading Area
SWMU 13 - South Plant Drainage Ditch
SWMU 14 - Former Toxaphene Production Area
SWMU 15 - Former Methyl Parathion Production Area
SWMU 20 - Railroad Area
SWMU 22 - North Plant Neutralization System
SWMU 25 - North Plant Waste Water Pipes
SWMU 26 - C-10 Scrubber

SWMU 29 - North Plant Oil Collection Unit
SWMU 30 - North Plant Waste Oil Accumulation Area
SWMU 31 - North Plant No. 6 Fuel Oil Area
SWMU 33 - North Plant Drainage Ditch
SWMU 34 - Surplus Equipment Storage

Four areas of concern (AOCs) were also identified during a review of the Corrective Action Management Unit (CAMU) Application Report (Ref. 4). Only limited information is available on these AOCs; thus, a brief discussion of the following AOCs is also provided in Section C:

AOC 1 - Fish Pond "North Plant"
AOC 2 - Drum Storage Area
AOC 3 - Booster Pumps "South Plant"
AOC 4 - Chemical Crypt

During the process of preparing the CMS in March 2002, VCC filed for bankruptcy (March 8, 2002); thus, VCC has not performed any cleanup or remediation of impacted areas since early 2002. VCC subsequently filed for abandonment of the property, which released them from any obligation to clean up the site. The courts ordered that the VCC estate title would go to an entity identified by MDEQ. MDEQ assumed responsibility for the site and cleanup subsequent to the bankruptcy filing. MDEQ currently has an Emergency Response Contractor (ERC), Ferguson Harbor, providing 24-hour security. MDEQ's ERC also currently operates the wastewater treatment system to treat storm water runoff that goes into the surface impoundment. On an as-needed basis, the level of surface water is drawn down to allow sufficient freeboard for significant rainfall event. The water is treated via carbon adsorption units and discharged to the Mississippi River in compliance with the National Pollutant Discharge Elimination System (NPDES) permit (Ref. 17).

- SITE RECONNAISSANCE VISIT SUMMARY

Booz Allen was not directed to conduct a site reconnaissance visit for the VCC site.

- SUMMARY OF SWMUs AND AOCs

The following section provides a brief summary of each SWMU and AOC identified at the VCC site. See Figure 1 from the CAMU Application Report for the SWMU and AOC locations (Ref. 4). Several additional units have been identified as potential concerns at the site, but have not been classified as SWMUs or AOCs at the site. Additionally, groundwater was historically investigated on a SWMU/AOC basis. However, groundwater investigations have recently begun to focus on identified contaminant plume areas. Thus, the identified groundwater plumes have been discussed separately as their own AOCs, as have the bayous identified at the site.

SWMU 2 - Inactive Landfill: This unit consists of a former landfill and four pits covering

approximately 500 feet by 500 feet that were constructed on a hill between the railroad tracks and Hennessey's Bayou. The disposal facility was used from 1972 to 1975. One pit stored dinoseb process wastewater, while the three other pits served as disposal locations for pallets, empty fiber, steel drums, and other solid waste material. VCC attempted to dissolve the drums with an unknown volume of hydrochloric acid. In 1977, many of the drums in the pits were removed and disposed of off site. Landfill cover erosion resulted in the liberation of hydrochloric acid fumes as runoff reacted with remaining cyanuric chloride from buried drums (Ref. 16). In 1979, all of the pits were drained, regraded to flatten the hill, and covered with a soil cap and planted grass. Additional grading and capping of the area was performed in 1983, consistent with an engineered plan approved by the Mississippi Department of Natural Resources (MSDNR). Soil samples collected during a 2000 RFI indicated that dinoseb (8,282,596 micrograms per kilogram [µg/kg]), toxaphene (19,210 µg/kg), carbon tetrachloride (6,659 µg/kg), and arsenic (4,460 µg/kg) were present in subsurface soil above the MDEQ Tier 1 target remediation goals (TRGs) for Restricted Use. In 2000, a diked area was constructed on top of SWMU 2 to settle and dewater the sludge from the wastewater impoundment (Ref. 13). It was determined that the sludge did not demonstrate a hazardous characteristic (Ref. 8). Composite sludge samples were collected in 2001 and did not detect contaminants above applicable MDEQ Tier 1 TRGs for Restricted Use. Subsurface soil sampling was performed at the surface water runoff area known as "the valley" in a Phase II RFI (May 2001), and no constituents were detected above applicable MDEQ Tier 1 TRGs for Restricted Use (Ref. 10). The RFI concluded that the valley should remain a restricted area, and that the natural vegetation that has developed in the area should prevent further erosion (Ref. 10).

SWMU 3 - Surface Water Impoundment: This unit is located in the southeast section of the South Plant, adjacent to SWMU 2, and has a capacity of 3 million gallons and approximate dimensions of 250 feet by 500 feet. The impoundment collects rainwater runoff from the South Plant and has also served as a standby retention basin to collect water diverted from the North Plant when pH guidelines for discharge to the Mississippi River were not met. In 1977, wastewater from the impoundment overflowed the berm and discharged into Stout's Bayou and Hennessey's Bayou, due to heavy rains (Ref. 16). In 1983, the impoundment was breached during a flood and discharged 700,000 gallons of water contaminated with 4,000 micrograms per liter (µg/L) dinoseb. VCC raised the top of the dikes to the 100-year flood evaluation and lined the ponds with a synthetic liner, in response to a 1983 order from MDEQ (Ref. 16). As mentioned above, the wastewater treatment system is currently operated to treat storm water runoff that goes into the surface impoundment (Ref. 17). The level is drawn down on an as-needed basis to allow sufficient freeboard for a significant rainfall event (Ref. 17). The water is drawn down through the Carbon Adsorption Unit (SWMU 4) to the Mississippi River, in compliance with the NPDES permit (Ref. 17).

SWMUs 4, 7, 14, and 20: SWMUs 4, 7, 14, and 20 were merged together for the purposes of the RFI process, as they are located in close proximity and shared a need for further investigation and/or corrective action.

SWMU 4 - Activated Carbon Unit: This unit, located on the eastern edge of SWMU

20, treats wastewater from the Surface Water Impoundment (SWMU 3) to remove organic materials before the water was pumped to the Mississippi River under the NPDES permit. The unit includes a concrete pad with curbs for secondary containment; however, the concrete containment unit was observed to be cracked and stained during the RFI, with visual evidence of carbon spillage on the east side. In October 2000, surface soil samples were collected from the perimeter of the concrete pad, and only arsenic (8,800 micrograms per kilogram [µg/kg]) was detected above the MDEQ Tier 1 TRGs for Restricted Use.

SWMU 7 - Former Dinoseb Production Area: This unit, located adjacent to the former Toxaphene Production Area (SWMU 14) and surrounded by the Railroad Area (SWMU 20), consisted of sulfonation and nitration reactors, two formulation blending tanks, and a settling tank. Acidic process wastewater was formerly neutralized with sodium hydroxide or ammonia, then discharged to the Surface Impoundment (SWMU 3) through carbon absorption beds. A butane-fired flare controlled emission from the nitrate reactor, and soil in the area surrounding the flare is suspected to be contaminated. The production area and foundation have been demolished and removed, with a portion treated in the CAMU, and some discolored soil has been removed. In October 2000, subsurface soil samples were collected from underneath the former production area, and all constituents were below the MDEQ Tier 1 TRGs for Restricted Use.

SWMU 14 - Former Toxaphene Production Area: This unit was located adjacent to the Dinoseb Production Area (SWMU 7) and was surrounded by the Railroad Area (SWMU 20). The toxaphene manufacturing process included sodium hydroxide, xylene, epichlorohydrin, chlorine, carbon tetrachloride, and camphene. Caustic scrubber water was discharged to a sump adjacent to the Former Dinoseb Production Area (SWMU 7). All processing equipment from this unit has been removed. As of the August 2001 RFI Report, the foundation was serving as a repository for soil excavated from the South Plant during construction activity, prior to planned treatment by a biological degradation composting process (Ref. 10). Subsurface soil samples were collected adjacent to the concrete foundation, and all constituents were below the MDEQ Tier 1 TRGs for Restricted Use.

SWMU 20 - Railroad Area: This unit, located at the eastern boundary of the manufacturing portion of the South Plant, surrounded the Former Dinoseb Production Area (SWMU 7) and the Former Toxaphene Production Area (SWMU 14). This unit included the Railroad Car Loading/Unloading Station, which was the primary area for material loading/unloading for the South Plant operations. The loading/unloading operations resulted in spillage to soil in the surrounding area. Additionally, the flare for the SWMU 7 nitration reactor was located directly across the tracks from the railroad, and the flare area is indistinguishable from the Railroad Area. This unit is a corridor of several hundred feet that has potentially been impacted by activities related to SWMUs 4, 7, and 14, in addition to activities associated with train traffic. Subsurface soil samples

were collected in the RFI, and all constituents were below the MDEQ Tier 1 TRGs for Restricted Use.

Following the completion of the Phase I RFI in these four SWMUs, a special sampling program called Phase I Jr. was implemented to adequately characterize the surface soil and three soil piles that were not included in the original sampling plan. The soil piles contain approximately 3,000 cubic yards of soil and likely resulted from near surface excavations related to demolition of former dinoseb and toxaphene facilities. Composite soil samples were collected from these areas and analyzed for dinoseb and toxaphene. Dinoseb (1,078,058 µg/kg) and toxaphene (110,964 µg/kg) exceeded the MDEQ Tier 1 TRGs for Restricted Use in the composite surface soil samples; toxaphene (76,683 µg/kg) was also detected above the MDEQ Tier 1 TRGs for Restricted Use in the composite soil pile samples. The Phase I Jr. sampling results indicated that immediate surface soil (0 - 6 inches) in these four SWMUs did not require further investigation. Further soil delineation was recommended for the railroad area near the former toxaphene and dinoseb manufacturing areas and the railroad area south of the atrazine warehouse; thus, a Phase II RFI soil sampling program was implemented. Toxaphene (7,617 µg/kg) and chloroform (2,186 µg/kg) were detected above the MDEQ Tier 1 TRGs for Restricted Use in a composite surface soil sample and subsurface soil sample, respectively. Conclusions from the Phase II RFI Report indicate that corrective action is recommended for the waste piles and immediate surface soil underneath the former dinoseb and toxaphene manufacturing areas (Ref. 10).

SWMU 5 - South Plant Drainage System: This unit was designed to transfer storm water and process water to the Surface Impoundment (SWMU 3), for containment prior to treatment. Sumps are present within the former MSMA, dinoseb, and toxaphene production, packaging, and shipping areas of the South Plant; some of these sumps carried water to SWMU 3 at one time. In 1977, an explosion occurred in the atrazine production area, which resulted in water from the fire monitors overflowing the dike area and flowing through the drainage ditch into Hennessey's Bayou. Sumps in the pesticide process and handling areas were blocked due to regulations that became effective in November 1985, thus preventing pesticide spills from entering SWMU 3 through the drainage system. Portions of this SWMU have been investigated concurrent with the following production/manufacturing areas: SWMUs 11, 12, and 15 (MSMA); SWMUs 7 and 20 (dinoseb); SWMUs 14 and 20 (toxaphene). Subsurface soil samples were collected from the remaining portion of the drainage system during the RFI and analyzed for atrazine, cyanazine, dinoseb, toxaphene, and arsenic; only arsenic (174,000 µg/kg) was detected above the MDEQ Tier 1 TRG for Restricted Use, and the source was determined to be the MSMA plant (Ref. 10). No further sampling of this area was recommended, and recommendations for further action in portions of this SWMU can be found under SWMU grouping 4, 7, 14, and 20 and SWMU grouping 11, 12, and 15.

SWMUS 11, 12, and 15: SWMUs 11, 12, and 15 were grouped together during RFI investigations. The SWMU descriptions are excerpted from the Interim Revised Corrective Measures Implementation Plan (IRCMIP) for SWMUs 11, 12, and 15 (Ref. 7).

SWMU 11 - Former MSMA Production Area: This unit was constructed over the

remains of SWMU 15 (Former Methyl Parathion Production Area) in 1983 and consisted of trenches, sumps, and product storage tanks. The MSMA process was subsequently shut down, equipment from the unit was removed, and the concrete foundation of the unit was cleaned with high-pressure water equipment.

SWMU 12 - Former MSMA Salt Unloading Area: This unit consisted of two concrete lined bays covered by a roof, and was an integral part of SWMU 11 (Former MSMA Production Area). MSMA byproduct salts were discharged directly from a centrifuge into sludge dumpsters for off-site disposal.

SWMU 15 - Former Methyl Parathion Production Area: This original process unit was constructed in the early 1970's to produce methyl parathion. The manufacturing facility was destroyed in an explosion and fire in March 1978. This unit is located on the same site as SWMU 11, the Former MSMA Production Area.

Generally, the surface/subsurface soil and concrete areas immediately adjacent and to the west and north of the process area are contaminated with arsenic above the proposed background concentration of 20,000 µg/kg (up to 501,000 µg/kg in surface soil and 241,000 µg/kg in subsurface soil) (Ref. 7). Arsenic (2,870,000 µg/kg) was also detected above the proposed background level and lead (1,700,000 µg/kg) was detected at the MDEQ Tier 1 TRGs for Restricted Use (1,700,000 µg/kg) in samples collected from sump and drainage systems (Refs. 7, 10). The results from the sludge samples were not included in the soil results summary (see Table 1, below) because the sample composition could not be verified (i.e., the RFI Report describes them as sludge/sediment samples, while the IRCMIP describes them as loose solid samples) (Refs. 7, 10). Sump location EE was resampled and analyzed for dioxin; the total PCDD/PCOF toxicity (0.066 µg/kg) exceeded the MDEQ Tier 1 TRG for Restricted Use value (0.0382 µg/kg). The RFI concluded that the SWMU 11, 12, and 15 area has been adequately characterized and that the contents of sump EE must be cleaned out and shipped to a permitted dioxin incinerator (Ref. 10). The IRCMIP proposes the following corrective measures: excavate 3,500 cubic yards of arsenic-contaminated material (e.g., soil, asphalt, concrete) in batches, solidify and stabilize the soil and asphalt on site, and landfill the material off site; remove arsenic-contaminated material from excavated concrete and use the concrete for erosion control within the VCC site; backfill the excavation; clean all drainage systems and sumps; and monitor for airborne arsenic (Ref. 7).

SWMU 13 - South Plant Drainage Ditch: This unit is a major drainage ditch that runs along the western border of the South Plant and empties into Hennessey's Bayou. The Drainage Ditch did not receive contaminated Drainage System (SWMU 5) water or NPDES-permitted discharge; however, some storm water runoff has discharged into the Drainage Ditch from the South Plant, and drainage from a portion of the Surplus Equipment Storage Area (SWMU 34) discharges into the Drainage Ditch. Trace amounts of toxaphene were detected in surface soil along the bottom of the Drainage Ditch (below the MDEQ Tier 1 TRGs for Restricted and Unrestricted Use), and the concentrations of toxaphene increase as the ditch approaches SWMU 34. Arsenic (8,800

µg/kg) was detected above the MDEQ Tier 1 TRGs for Restricted Use. Further surface soil sampling was conducted in the area surrounding the RFI sample location with the highest toxaphene detection, and only arsenic (4,400 µg/kg) was detected above MDEQ Tier 1 TRGs for Restricted Use (Ref. 10). The RFI recommends that access to a portion of the ditch near the Surplus Equipment Storage area (SWMU 34) continue to be restricted (Ref. 10).

SWMUs 22, 25, 29, and 31: The following four SWMUs (SWMU 22, SWMU 25, SWMU 29, and SWMU 31) were grouped together during RFI investigations. During the RFI, the areas were inspected to determine if sampling was required (Ref. 9).

SWMU 22 - North Plant Neutralization System: This unit was the neutralization sump associated with SWMU 25 that was used for collecting potentially acidic wastewater. During the RFI inspection, the in-ground sump was noted to be in poor repair with visual evidence of subsurface erosion. The remainder of the neutralization system was noted to be in good repair.

SWMU 25 - North Plant Waste Water Pipes: This unit consisted of a system of wastewater pipes that carried potentially acidic waste water from the North Plant manufacturing area to a sump from which it was pumped into the neutralization system. The piping was noted to be in good condition during the RFI inspections, with no evidence of leaks to the surrounding environment.

SWMU 29 - North Plant Oil Collection Unit: This unit originally consisted of a drum that collected oil drips from a potassium nitrate cooling cylinder. The system was subsequently modified (date unknown) so that oil drips were piped directly to the drum. During the RFI inspection, there was no evidence of stained soil surrounding the unit.

SWMU 31 - North Plant No. 6 Fuel Oil Area: This unit originally consisted of a concrete sump that contained pumps to move fuel oil from tanks to boilers. During the RFI inspection, no cracks or other avenues of potential oil release to the surrounding environment were identified.

Based upon the RFI inspections, no further investigations or actions were recommended at SWMUs 25, 29, and 31. In May 2001, two borings with temporary wells were advanced to investigate contamination associated with SWMU 22 and a potential groundwater plume emanating from SWMU 23. Soil sample results indicated that arsenic (9,400 µg/kg) was present at concentrations above the MDEQ Tier 1 TRG Restricted Use criteria; however, it is unknown whether these samples were collected in surface or subsurface soil. The RFI concluded that the area was well characterized and that no further investigative work or corrective measures studies were required (Ref. 10).

SWMU 26 - C-10 Scrubber: This unit consisted of two scrubbing columns approximately 25 feet tall and four feet in diameter. The unit was located in the central portion of the North Plant

and was used to scrub chlorine and nitrogen dioxide. This unit was identified in the RFA and recommended for an RFI based upon concern for releases of contaminants to air; however, no subsequent information is available.

SWMU 30 - North Plant Waste Oil Accumulation Area: This unit was an outdoor drum staging area located in the south section of the North Plant, downgradient of the Inactive North Plant Surface Impoundment (SWMU 23). The unit consisted of a concrete pad surrounded by concrete curbing to serve as secondary containment, and was covered by a roof. The unit was used for staging drums of new and waste lubricant oils prior to shipment off site for recycling. Soil samples were collected as part of the RFI (October 2000) for benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH). TPH contamination in surface soil was confirmed in the northwest edge of this area at concentrations up to 15,431,000 µg/kg. During the RFI, the impacted soil was visually stained, thus it was recommended that the discolored soil be excavated and removed as part of future corrective actions and that confirmatory samples be collected (Ref. 10).

SWMU 33 - North Plant Drainage Ditch: This unit is an unlined drainage ditch that was used to convey storm water from the northern non-process areas of the North Plant and the southern non-process areas of the South Plant to Stout's Bayou. This unit was identified in the RFA and an RFI was recommended based upon the fact that there was a possibility that hazardous constituents had migrated to this area through the on-site drainage ditch network; however, no subsequent information is available.

SWMU 34 - Surplus Equipment Storage: Two surplus equipment storage areas were utilized at the facility. The main storage area was located at the western edge of the South Plant at the head of the South Plant Drainage Ditch (SWMU 13), while the second storage area was located at the western edge of the North Plant. The areas were used for temporary storage of old equipment and other scrap metal. The RFI Report indicates that most items had been removed from the areas for recycling (Ref. 9). Soil samples were collected as part of the RFI (October 2000). Results indicated that arsenic (4,700 µg/kg) was present above the MDEQ Tier 1 TRG for Restricted Use; however, it is unknown whether the samples were collected in surface or subsurface soil. The RFI concluded that the area was well characterized and no further investigative work or corrective measures studies were required (Ref. 10).

AOC 1 - Fish Pond: According to the May 2004 Draft Preliminary Assessment (PA), the fish pond was located at the site prior to construction of the North Plant. The pond is located adjacent to the North Plant; thus, MDEQ indicates it was remote from all pesticide operations in the South Plant. No additional information on this AOC was found.

AOC 2 - Drum Storage Area: This AOC consisted of an 80 foot by 80 foot area that was temporarily used for drum storage in 1980. The area was located just to the northeast and immediately adjacent to the Dinoseb Drumming Area (SWMU 9). No additional information on this AOC was found.

AOC 3 - South Plant Booster Pumps: According to the PA, the South Plant Booster Pumps Head Tanks were located in the south-central portion of the South Plant, adjacent to the railroad tracks. These tanks were incorporated within SWMU 22 during the RFA. No additional information on this AOC was found, and recent descriptions of SWMU 22 do not mention the tanks.

AOC 4 - Chemical Crypt: According to the PA, sewage from the South Plant historically flowed through a septic tank and discharged to the South Impoundment (SWMU 3) via a pea gravel drainfield prior to treatment in the Activated Carbon Treatment Unit. This septic tank was located between the Inactive Landfill (SWMU 2) and the Surface Impoundment (SWMU 3) in the South Plant. No additional information on this AOC was found.

In addition to the identified SWMUs and AOCs in available documentation that are outlined above, two other units/areas are mentioned that have not been investigated but that may have had impact on surrounding environmental media. The Formaldehyde Unit is described below. In addition, the PA mentions that VCC previously pursued an operation to produce aqueous hydrochloric acid from the toxaphene operation byproduct (Ref. 16). No additional information on this operation or the unit/area involved was found.

Formaldehyde Unit - As mentioned previously, Gulf Chemical purchased the South Plant facility in 1964 and added a formaldehyde unit in 1966. The unit was later owned by Perkins Company. Operations at this unit have discontinued. According to the PA, the formaldehyde unit was owned and operated by Borden Chemical. The unit occupied a small portion of the South Plant and was not separated from the rest of the plant. There was no fencing or other barriers to prevent cross-contamination. During an MDEQ site visit in October 2002, it was observed that the unit had been removed. This unit was not investigated as part of the VCC RFI, as it was not owned or operated by VCC.

Groundwater

The uppermost water-bearing zone at VCC is encountered approximately six feet below ground surface (bgs). This shallow aquifer is approximately 40 feet thick and located almost entirely within a layer of Pleistocene loess (silt). Flow in this aquifer is generally south-southeast (SSE) toward Hennessey's Bayou at velocities ranging from 5.8 to 35.9 feet per year. A layer of clayey fill material above the loess acts as a "cap" and inhibits vertical migration of contaminants to groundwater. Byram marl of the Vicksburg Formation is located beneath the loess and serves as the bottom of the shallow water-bearing zone. The marl ranges in thickness from approximately 30 to 50 feet thick. The argillaceous, massive, and medium dense character of the marl inhibits any significant movement of water through this unit, and there is no evidence of secondary permeability (Ref. 11). Thus, the shallow aquifer (and contamination therein) appears to be hydraulically isolated from deeper aquifers in the vicinity of the site. However, no data were found in the file material to confirm that the deeper aquifers have not been impacted. Unlike the

deeper Catahoula and Forrest Hill aquifers, the shallow aquifer at VCC is characterized by low lateral flow and yield characteristics. As a result, despite its classification as a Class II B aquifer (Ref. 1), its usability as a potential domestic water supply is limited.

Groundwater investigations completed to date show that the shallow aquifer at VCC has been impacted by historic manufacturing and construction activities. Five separate plumes of contamination were identified at VCC. A brief description of each plume is presented below (Ref. 11).

- An **arsenic** plume is present in the middle of the South Plant. The downgradient edges of this plume are delineated by wells MW-9, MW-17, and MW-18. This contamination may be associated with former manufacturing of arsenical pesticides at SWMUs 11, 12, and 15. However, high background levels of arsenic in soil and groundwater have also been identified in this area and may be contributing to the observed concentrations.

- **Dinoseb** contamination has been reported in groundwater beneath the southwestern corner of the South Plant. This contamination is believed to be associated with several SWMUs, including the Inactive Landfill (SWMU 2), the Former Dinoseb Production Area (SWMU 7), and the adjacent Railroad Area (SWMU 20). In the landfill area, dinoseb contamination is present at temporary wells LS-2, LS-4, and LS-5. RFI data indicated that dinoseb contamination had not yet reached wells MW-5, MW-6, and MW-7 above applicable standards. Along the railroad tracks, the dinoseb plume is bounded by permanent wells MW-10 and MW-12, and by temporary well 20-19.

- A localized area of **toxaphene** contamination has been reported at well MW-6 in the far southwestern corner of the South Plant. Toxaphene has not been detected in surrounding wells except for a single low level detection (0.05 parts per billion) in well MW-7, which is believed to have been an analytical anomaly. Toxaphene concentrations in well MW-6 appear to be declining and were reported as nondetect in June 2001. Consequently, no toxaphene plumes were present in groundwater at VCC as of June 2001. Nevertheless, the November 2001 Draft Groundwater Assessment Report (GWAR) proposed continued monitoring of wells in the southwestern corner of the site for toxaphene contamination.

- Various volatile organic compounds (**VOCs**) have been detected in groundwater at VCC. Four localized plumes have been identified and are believed to be associated with small historical spills. The VOC plume in the vicinity of the North Plant Equalization and Neutralization Pond (SWMU 23) is situated around nested wells PZ-20 and PZ-22 and bounded by wells PZ-23 and PZ-24. At the Inactive Landfill (SWMU 2), VOC contamination is located in two plume areas around temporary wells LS-2 through LS-5. As of June 2001, the downgradient edge of this contamination had not yet reached wells MW-5, MW-6, and MW-7. In the railroad area, VOC contamination is focused around wells 20-21, 20-22, and MW-12C. This plume is bounded by MW-10 and MW-12, but has not yet reached well MW-11.

- **Atrazine and cyanazine** have been infrequently detected at trace concentrations in groundwater along the Railroad Area (SWMU 20). Atrazine has also been detected in groundwater beneath the Inactive Landfill (SWMU 2) at concentrations exceeding MDEQ Tier 1 TRG values, but surrounding wells report nondetected results. The GWAR proposed no additional monitoring for these constituents.

Although annual groundwater assessment reports were required by the Consent Decree, VCC proposed semiannual groundwater monitoring in the Draft GWAR from November 2001 (Ref. 11). However, water quality in the shallow aquifer has not been evaluated since VCC filed for bankruptcy in 2002.

Surface Water

Several bayous are located in the vicinity of VCC. Stout's Bayou flows southward along the eastern property boundary from Rifle Range Road, past the North Plant and Inactive Landfill (SWMU 2), to the southeastern corner of the site where it merges with Hatcher Bayou to form Hennessey's Bayou. Hennessey's Bayou flows westward along the southern edge of VCC past the Inactive Landfill (SWMU 2) and then to the southwest along the Illinois Central railroad tracks. Hennessey's Bayou eventually flows into the Mississippi River several miles downstream of the site. These bayous are not used for drinking water or recreational purposes, and there are no drinking water intakes on these waterways within three miles downstream of the facility. The bayous are limited to freshwater fish and wildlife habitat.

The shallow aquifer at VCC is hydraulically connected to Stout's Bayou and Hennessey's Bayou. As stated previously, the general groundwater flow direction beneath VCC is SSE toward Stout's Bayou and Hennessey's Bayou. See Figure 3-5 in the Draft GWAR (Ref. 11) for a cross-sectional diagram showing the depth of Hennessey's Bayou in relation to site-specific hydrogeology; this diagram confirms the potential for interaction between shallow groundwater and surface water. Contaminated groundwater from VCC has the potential to discharge to surface water in both Stout's Bayou and Hennessey's Bayou. Surface water drainage has also been observed flowing untreated into Stout's Bayou (Ref. 15). Surface water and sediment sampling conducted in the bayous in 1987 showed increasing organic contaminant concentrations downstream of VCC (Ref. 1).

- CORRECTIVE ACTION STATUS

As stated in the Facility Description above, RFA and RFI efforts have been completed for the VCC site under a RCRA Corrective Action Consent Decree dated January 23, 1992 (Ref. 3). Various documents on potential corrective measures were submitted by VCC prior to its bankruptcy declaration in 2002, and it appears that some corrective action activity has occurred at SWMUs 1, 9, and 17. EPA approved several interim measures at VCC including a Temporary Unit (TU) in August 1995 and a CAMU in February 1998. VCC conducted treatability studies in

the TU, which indicated that biotreatment could successfully treat pesticide-contaminated soil. VCC had been placing treated soil in the CAMU prior to declaring bankruptcy and abandoning the site. In addition, at the end of 2001, a sample of arsenic contaminated groundwater was sent off site for testing to determine whether the ladder brake fern or edenfern (known to hyperaccumulate arsenic in its stems and fronds) could be used to remove arsenic from the water. According to subsequent monthly progress reports, this testing was successful in reducing arsenic concentrations in the sample from over 200 mg/kg to 3.6 mg/kg in less than nine months (Ref. 14). No further data or reporting on this testing were available in the file material, and it is assumed that the study was never formally completed due to VCC's insolvency.

In March 2002 , a CMS was submitted by the facility, outlining plans for addressing remaining soil and groundwater contamination on the property (Ref. 13). The CMS recommended corrective action for soil at SWMUs 11, 12, and 15 due to dioxin and furan contamination, and at SWMU 20 due to dinoseb and toxaphene contamination. No corrective actions were proposed for any other soil contamination based on risk assessment considerations (Ref. 13). The CMS also recommended corrective actions for the arsenic, dinoseb, and VOC plumes in shallow groundwater. However, this document was never finalized, and all plans for corrective action were put on hold in 2002 due to bankruptcy.

SITE INVESTIGATION SUMMARY/EXPOSURE ASSESSMENT

At various times between 1984 and 2001, groundwater, soil, surface water, and sediment have been investigated at the VCC facility. A brief outline of the impacts on each media is presented below.

Groundwater: As discussed above, several plumes of contamination have been identified in shallow groundwater at VCC. Groundwater investigation efforts were conducted during the RFI (between September 1991 and May 2001) and during a separate site-specific phase of investigation intended to complete groundwater delineation in September 2001. Table 1 below presents the highest contaminant concentrations identified in groundwater at each SWMU during the RFI and supplemental investigation. Only concentrations exceeding MDEQ Tier 1 TRGs were included.

Table 1: Maximum Exceedances in Groundwater at VCC SWMUs RFI Sampling – 1993 through 2001

SWMUs	Contaminant	Well	Maximum Concentration (µg/L)	MDEQ Tier 1 TRG Value (µg/L)
2	Acetaphenone	LS5-W	18.92	0.0416
	Arsenic	MW-5	70	50

	Atrazine	LS2-W	478	3
	bis(2-ethylhexyl)phthalate	LS3-W	474	6
	Carbon tetrachloride	LS4-W	126	5
	Chloroform	LS2-W	221	0.152
	Dinoseb	LS2-W	8,714	7
	4-Nitrophenol	LS5-W	2,359	292
9	Arsenic	TP-1	378	50
	Trichloroethylene	TP-1	68	5
11/12/15	Arsenic	I-W-G	288,000	50
	Carbon tetrachloride	MW-17A	7.25	5
	Chloroform	MW-17B	1.43	0.152
	Dinoseb	Unnamed Semipermanent Well	1,387	7
	4-Nitrophenol	Unnamed Semipermanent Well	4,777	292
20	Atrazine	20-22-W	146	3
	Benzene	20-21-W	23.7	5
	Bromodichloromethane	20-21-W	296	1.08
	Carbon tetrachloride	20-21-W	357,500	5
	Chloroform	20-21-W	37,380	0.152
	Chloromethane	20-21-W	126	1.49
	1,2-dichloroethane	20-21-W	321	5
	1,1-dichloroethene	20-21-W	54.6	7
	1,2-dichloroethene (total)	20-21-W	1,758	70
	1,2-dichloropropane	20-21-W	42.3	5
	Dinoseb	20-20-W	18,821	7
	Methylene chloride	20-21-W	908	5
	1,1,2-trichloroethane	20-21-W	290	5
	Trichloroethylene	20-21-W	1,346	5

	Vinyl chloride	20-22-W	46.5	2
23	Bromodichloromethane	PZ-22-B	66	1.08
	Bromoform	PZ-22-B	160	2.33
	Chloroform	PZ-20-B	1,700	0.152
	Dibromochloromethane	PZ-22-B	78	0.126

Overall, historical shallow groundwater investigation efforts appear to be adequate in terms of coverage area and analytical scope. The existing monitoring well and piezometer network also appears to be sufficient based on results of the 2001 groundwater sampling event. Although proposed in the Draft GWAR (Ref. 11), semiannual groundwater monitoring has not yet been initiated at VCC. Consequently, current groundwater contaminant concentrations are unknown. In addition, the current areal extent of groundwater contamination is unknown.

The shallow aquifer is classified as a Class II-B aquifer; however, its usability as a potential domestic water supply is limited as described above (Ref. 1). Regardless, contamination in the shallow aquifer at the site discharges directly to the downgradient Stout's and Hennessey's Bayous. These bayous are not used for drinking water or recreational purposes, and there are no drinking water intakes on these waterways within three miles downstream of the facility. Thus, ingestion of contaminated groundwater by off-site residents is considered an incomplete exposure pathway.

Although active remediation is not occurring at the site, ERC workers are currently operating the wastewater treatment system on an as-needed basis. Shallow groundwater is encountered at less than ten feet bgs; thus, direct contact to contaminated groundwater should be considered for the ERC workers (considered to be on-site construction workers for the purpose of this data gap assessment). However, this is considered an incomplete exposure pathway because current on-site activities do not involve intrusive digging to groundwater (Ref. 17). If any intrusive activities were to occur, the potential exposure would be insignificant based upon the fact that the ERCs are assumed to wear appropriate personal protective equipment (PPE) and follow Occupational Safety and Health Administration (OSHA) guidelines.

Air: No indoor or outdoor air sampling data were identified in the available file material.

Outdoor Air

The site property is currently inactive. However, MDEQ's ERC (Ferguson Harbor) is providing 24-hour security and is operating the wastewater treatment system on an as-needed basis. Regardless of their presence at the site, on-site exposure to outdoor air is not expected to be a concern because employees of Ferguson Harbor are expected to follow OSHA guidelines,

including utilizing appropriate PPE and conducting outdoor air monitoring as necessary.

The PA report indicates that numerous complaints were filed by citizens of Vicksburg in the early 1970's due to concerns over vapor or gaseous emissions emanating from the VCC plant. MDEQ confirms that several isolated releases of vapors from individual processing areas have occurred during the plant's operational history. However, given that the site ceased operations in March 2002, releases to outdoor air of vapor or gaseous emissions associated with plant operations are no longer a concern. No recent assessment has been conducted to evaluate the potential for on-site contaminants to impact off-site outdoor air. However, limited migration of contaminants bound to airborne particulate matter is expected at the VCC site because the surface of the plant site is predominantly covered with concrete and asphalt (Ref. 17). Although VOCs are present in shallow groundwater, migration of VOCs from groundwater into outdoor air is not expected to be of concern due to the natural dispersion of contaminants once they reach the surface.

Indoor Air

The site property is currently inactive. However, MDEQ's ERC (Ferguson Harbor) is providing 24-hour security and is operating the wastewater treatment system on an as-needed basis. The actual use of on-site buildings by Ferguson Harbor employees is expected to be limited. Regardless of their presence at the site, on-site exposure to indoor air is not expected to be a concern because employees of Ferguson Harbor are expected to follow OSHA guidelines by utilizing appropriate PPE and/or conducting indoor air monitoring as necessary.

Although volatile contaminants are present in on-site shallow groundwater, migration of these volatile contaminants off site beneath residential and/or commercial structures is unlikely to be a concern. As previously mentioned, shallow groundwater at the site is hydraulically connected to surface water in downgradient Stout's and Hennessey's Bayous, which are located adjacent to the facility on the east/southeast. As of June 2001, groundwater data indicated that the downgradient edge of the volatile contamination in shallow groundwater had not yet reached the wells upgradient of the Bayous (e.g., MW-5, MW-6, MW-7, MW-10 and MW-12), indicating that volatile contamination in shallow groundwater had not migrated off site. Regardless of the lack of data from June 2001 to the present, if shallow groundwater contamination has migrated further downgradient it would discharge to the bayous. The bayous serve as a barrier to off-site migration of shallow impacted groundwater to adjacent properties; thus, migration of volatile constituents into indoor air at off-site locations is not a concern at the VCC site.

Surface/Subsurface Soil:

A discussion of the investigation of on-site soils is presented in Section C. For a map of the contaminated soil areas by SWMU, see Figure 2-1 of the CMS, Site Wide Soil Contamination with Areas of Contamination Greater Than MDEQ Tier 1 TRG Table Values for Restricted Use Shown (Ref. 13). Table 2 below presents contaminant concentrations exceeding MDEQ Tier 1

TRGs for Restricted Use in surface/subsurface soil at each SWMU during the RFI; the SWMU containing the highest concentration is bolded.

Table 2: Maximum Exceedances in Surface/Subsurface Soil at VCC				
	Contaminant	Maximum Concentration (µg/kg)	Tier 1 TRG for Restricted Use (µg/kg)	SWMUs with Exceedances
Surface Soil	Arsenic	501,000	3,820	5; 13; **11,12,15**; 20
	Dinoseb	1,078,058	204,000	**20**
	Total petroleum hydrocarbons (TPH)	15,431,000	300,000 (GRO) 350,000 (DRO)	**30**
	Toxaphene	110,964	5,200	**20**
Subsurface Soil	Arsenic	241,000	3,820	2; 5; **11,12,15**
	Carbon tetrachloride	6,659	569	**2**
	Chloroform	2,186	478	**20**
	Dinoseb	8,282,596	204,000	**2**
	Toxaphene	19,210	5,200	**2**

All soil contamination at the VCC site is maintained within property boundaries. According to MDEQ, a fence surrounds the plant site and surface impoundment with the exception of the area along the Inactive Landfill (SWMU2) that is adjacent to Hennessey's Bayou (Ref. 17). The fencing serves to effectively restrict public access to the property. Currently, only MDEQ employees and ERC personnel (Ferguson Harbor) are allowed on the site to ensure site security and maintain the rainwater collection system.

Based upon the current site status, on-site construction workers may become exposed to contaminated on-site surface soil when at the site ensuring site security and while maintaining the rainwater collection system. Regardless of their presence at the site, these on-site construction workers are not expected to experience significant exposure to on-site soil contamination as they are expected to follow OSHA guidelines and use the appropriate PPE to prevent exposure.

Given the fact that a fence surrounds the majority of the site, off-site receptor exposure to on-site soil contamination is not currently considered a concern. Access to the site via Hennessey's Bayou appears to be very difficult. Thus, exposure by off-site receptors is unlikely; however, this information should be confirmed.

As mentioned above, in addition to the identified SWMUs and AOCs that are outlined in Section

C, several other potential units/areas are present on site that have not been investigated but that may have impacted surrounding environmental media. Limited information is available on the four AOCs identified in Section C. AOC 1 does not appear to warrant further investigation, as it was located away from all pesticide operations in the South Plant. AOC 2 was only used temporarily for drum storage and is located immediately adjacent to the Dinoseb Drumming Area (SWMU 9), which has been adequately characterized and recommended for NFA. It should be verified that AOC 2 was investigated with SWMU 9 during the RFI. Available information for AOC 3 indicates that the booster pumps were incorporated with SWMU 22 during the RFA (Ref. 16); it should be verified that the pumps were investigated with SWMU 22 during the RFI, as this is not stated in the RFI Report (Ref. 10). Additional information should be gathered for AOC 4 to identify any potential environmental impacts. This area was located between SWMUs 2 and 3, and was potentially investigated during the RFI along with these SWMUs; however, this information should be verified. Potential contamination from the Borden Formaldehyde Unit should be investigated, as this plant was totally within site boundaries and no information is currently available on possible environmental impacts. Other potential areas of concern, such as the VCC aqueous hydrochloric acid operation that is mentioned in the PA, should be researched and potentially investigated further.

Surface Water/Sediment: In February 1987, surface water and sediment samples were collected from the bayous adjacent to VCC. Eight surface water and eight stream sediment samples were collected, but specific sampling locations are unknown. According to the Endangerment Assessment (Ref. 1), the samples showed an increase in organic concentrations downstream of the facility. These increases in contamination levels may be attributable to contaminated surface water runoff, contaminated groundwater discharge into the bayous, or both. However, attribution to contaminated groundwater discharges seems fairly unlikely given the documented extent of groundwater plumes in 2001 (i.e., not yet reaching the bayous). Maximum concentrations of selected contaminants detected in surface water and sediment during that effort are presented in Tables 3 and 4 below, respectively.

Table 3: Maximum Exceedances in Surface Water at VCC (February 1987)

Contaminant	Sample Location	Maximum Concentration (µg/L)	MDEQ Tier 1 TRG for Groundwater (µg/L)	PRGs for Tap Water (µg/L)
Arsenic	E-1	89	50	0.0045
Atrazine	E-1	26	3	0.3
Bromodichloromethane	B-2	11	1.08	0.18
Carbon tetrachloride	D-1	1.3	5	0.17
Chloroform	A-3	16	0.152	0.53
Cyanazine	E-1	6.8	0.0797	0.08
Dibromochloromethane	A-1	2.7	0.126	0.13

Table 3: Maximum Exceedances in Surface Water at VCC (February 1987)				
Contaminant	Sample Location	Maximum Concentration (µg/L)	MDEQ Tier 1 TRG for Groundwater (µg/L)	PRGs for Tap Water (µg/L)
Dinoseb	E-1	4.6	7	36
Trichloroethylene	E-1	11	5	0.028

Table 4: Maximum Exceedances in Stream Sediment at VCC (February 1987)				
Contaminant	Sample Location	Maximum Concentration (mg/kg)	MDEQ Tier 1 TRG Unrestricted (mg/kg)	MDEQ Tier 1 TRG Restricted (mg/kg)
Arsenic	E-1s	44	426	3,820
Atrazine	E-1s	970	2,880	25,800
Chloroform	A-3s	8.4	312	478

While several contaminants in surface water exceeded standards for groundwater and tap water, concentrations in sediment did not exceed MDEQ criteria for soil. Nevertheless, it is clear from the historic data that both media have been impacted to some degree. Sufficient information is not available in the file material to determine the exact location of these impacts.

F. DATA GAPS AND BARRIERS TO THE EI DETERMINATION PROCESS

General Data Gap(s)

The most significant general data gaps include the lack of available information on several SWMUs, AOCs, or other potential units or areas of concern, as outlined below:

1. The C-10 Scrubber (SWMU 26) and the North Plant Drainage Ditch (SWMU 23) were identified in the RFA and recommended for an RFI based on concerns for contaminant releases; however, no further information indicates that these SWMUs were ever investigated.

2. The following assumptions must be verified: AOC 2 was investigated with SWMU 9 during the RFI, the AOC 3 booster pump tanks were investigated with SWMU 22, and AOC 4 was investigated during the RFI along with SWMUs 2 and 3. If any of these assumptions are incorrect, additional information should be sought for these AOCs. Likewise, additional information is needed for AOC 4 in order to determine whether any potential contamination resulting from this area has been adequately characterized.

3. No investigations have been conducted at the Formaldehyde Unit to date, and no

information is available on the VCC aqueous hydrochloric acid operation that is mentioned in the PA. Any on-site units or areas that have not been investigated but that may impacted surrounding environmental media should be researched and further investigated based upon the findings.

CA 725 Data Gaps

Table 3 identifies potentially complete exposure pathways for the receptors of concern (i.e., off-site residents, on-site construction workers, trespassers, and recreational users) for the VCC site. On-site workers are not currently a concern for this property as the facility is inactive. MDEQ and Ferguson Harbor workers are being considered on-site construction workers, for the purpose of this DGA, given their potential to conduct intrusive activities during on-site remedial activities. Day-care occupants are not currently of concern for this industrial property, nor are food sources.

Table 5: Current Potentially Complete Exposure Pathways at VCC

"Contaminated" Media	Residents (Off site)	Construction Workers (On site)	Trespasser	Recreational Users
Groundwater	No	No	–	–
Indoor Air	No	No	–	–
Surface/Subsurface Soil	No	No	Unknown	No
Surface Water	Unknown	No	No	Unknown
Sediment	Unknown	No	No	Unknown
Outdoor Air	No	No	No	–

Groundwater

The PA indicates that the wells closest to the site are located approximately three-quarters of a mile to one mile away. In addition, no public water wells are located within a four-mile radius of the site, with the City of Vicksburg water wells located north and upgradient of the site. Thus, it is assumed that the site is served by public supply wells; however, this information should be confirmed.

Surface/Subsurface Soil

Trespasser access to the site via the unfenced portion of the Inactive Landfill (SWMU 2) along Hennessey's Bayou is presumed to be unlikely, due to the presence of site security provided by Ferguson Harbor and potential vegetation or other physical obstacles. However, this information should be confirmed.

VCC suggested an arsenic clean-up value of 20,000 µg/kg for the site, based on the wide range of values detected near the site in a U.S. Geological Survey (USGS) study and the variation of background sample concentrations found at VCC (Ref. 7). However, it is unknown whether this value has been approved; thus, the MDEQ Tier 1 TRGs for Restricted Use were used to screen the soil data. Many of VCC's cleanup recommendations are based upon the assumption that arsenic-contaminated soil below 20,000 µg/kg will not require corrective action. This issue should be clarified prior to preparation of the CA725 EI determination.

Additionally, it is unknown whether the arsenic contamination at SWMUs 22 and 34 is present in surface or subsurface soil.

Surface Water/Sediment

No current data are available for surface water and sediment in the bayous adjacent to the VCC site. Given that shallow groundwater discharges directly to the bayous, it is likely that shallow surface water impacts could adversely affect surface water quality in the bayous. Groundwater samples collected in June 2001 indicated that impacted groundwater had not reached the bayous; however, groundwater samples have not been collected since June 2001. Thus, the current extent of shallow groundwater impacts are unknown.

Surface water and sediment samples collected from the bayous in 1987 confirmed the presence of several site-related contaminants. The PA indicates that there is a large field used for recreation and/or a church playground downstream and within the flood plain of Hennessey's Bayou and also indicates that Hennessey's Bayou and the Mississippi River are utilized for recreational purposes such as fishing and swimming (Ref. 16). This area is located outside of the facility boundaries and could be accessed by residents, especially children, living in the surrounding area. Thus, the potential for recreational and residential exposure to contaminants within the bayous is being considered a potentially complete exposure pathway. However, information provided from MDEQ indicates that the bayous do not contain enough water to support fishing or boating activities; this discrepancy should be resolved. Regardless, surface water and sediment samples should be collected from the bayous to determine the current level of impact.

CA 750 Data Gaps

Groundwater sampling data from VCC were collected during the RFI and subsequent supplemental investigation, and several plumes of contamination have been identified in the shallow aquifer. No additional characterization of the groundwater has been performed since 2001. As a result, a complete characterization of groundwater quality is needed before a CA 750 environmental indicator determination can be completed for VCC. This characterization should include sampling at all existing monitoring wells for arsenic, atrazine, cyanazine, dinoseb, 4-nitrophenol, and VOCs. Additional permanent groundwater monitoring wells may need to be installed to determine the downgradient edge of contamination if findings from the initial sampling event show that significant plume migration has occurred. Additional rounds of

groundwater sampling (i.e., resumption of a groundwater monitoring program) will also be required to determine if plume migration has stabilized. Atrazine and cyanazine concentrations should continue to be monitored in the vicinity of wells 20-21, 20-22, LS-2, and MW-7 to ensure that concentrations fall below applicable standards.

Groundwater beneath VCC is known to flow toward and discharge into Stout's Bayou and Hennessey's Bayou south and east of the site. Groundwater samples collected in 2001 indicated that impacted groundwater had not reached the bayous. However, groundwater samples have not been collected since 2001, and the current extent of shallow groundwater impacts are unknown. Surface water and sediment samples collected at and adjacent to VCC in 1987 showed site-related impacts. However, specific sampling locations from that event are unknown, and it is possible that these impacts are related solely to contaminated surface runoff. No additional surface water or sediment sampling has been conducted since 1987. Surface water sampling should be conducted so that, in the event that groundwater data indicate that contaminated groundwater is now discharging to the bayous, the impact to surface water quality can be evaluated.

G. RECOMMENDED COURSE OF ACTION

CA 725 Recommendations

Groundwater

1. Confirm that the VCC site is connected to the public water supply.

Surface/Subsurface Soil

1. Confirm that access to the site via the unfenced portion of the site between the Inactive Landfill (SWMU 2) and Hennessey's Bayou would be difficult for off-site receptors. If possible, the boundary should be fenced to eliminate the potential for off-site receptors to enter the property. Also, confirm that the existing fence is sufficient (i.e., in good condition) to prevent off-site receptors from entering the property.

2. Clarify whether the arsenic sampling data should be screened against the MDEQ Tier 1 TRG value for Restricted Use (3,820 µg/kg) or an approved site-specific background concentration.

3. Clarify whether the arsenic contamination in SWMUs 22 and 34 is present in surface or subsurface soil.

Surface Water/Sediment

1. Collect surface water and sediment samples from the bayous surrounding the VCC site. Samples should be collected upgradient of and along the site boundary in Stout's Bayou,

along the site boundary and downgradient of the site in Hennessey's Bayou, and at one location in Hatcher Bayou upgradient of the confluence with Stout's Bayou. At a minimum, these samples should be analyzed for arsenic, atrazine, cyanazine, dinoseb, and VOCs. Results of this sampling program should be evaluated to determine the need for additional monitoring.

2. Confirm that Hennessey's Bayou has enough water to support fishing, boating, or other recreational activities that might result in exposure to contaminated surface water/sediment by recreators or off-site residents.

CA 750 Recommendations

Based on this data gap evaluation, the following course of action is recommended to address barriers to a positive CA 750 environmental indicator determination. Pertinent questions from the CA 750 form are identified in brackets at the end of each recommendation.

Resume groundwater monitoring on a semiannual or annual basis, with a minimum of two rounds of sampling. Samples should be collected from all existing monitoring well and piezometer locations for laboratory analysis. At a minimum, groundwater samples should be analyzed for arsenic, atrazine, cyanazine, dinoseb, 4-nitrophenol, and VOCs. Results of these two rounds should be evaluated to determine the need for additional monitoring and identify an appropriate analytical suite for future sampling events. If necessary based on new groundwater data, installation of additional monitoring wells may be needed to evaluate the current extent of groundwater contamination at VCC. [Questions 2 through 4]

Collect surface water and sediment samples from the bayous surrounding the VCC site. Samples should be collected upgradient of and along the site in Stout's Bayou, along and downgradient of the site in Hennessey's Bayou, and at one location in Hatcher Bayou upgradient of the confluence with Stout's Bayou. At a minimum, these samples should be analyzed for arsenic, atrazine, cyanazine, dinoseb, and VOCs. Results of this sampling program should be evaluated to determine the need for additional monitoring. [Questions 5 and 6]

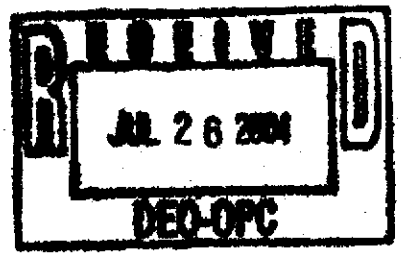
Establish a program for ongoing monitoring of groundwater and surface water quality at VCC, as deemed necessary based on new sampling data, to ensure that any changes in the nature and extent of contamination will be readily identified. [Question 7]

REFERENCES

Endangerment Assessment for Cedar Chemical Corporation. October 30, 1989.
RCRA Facility Assessment – Interim Final Report. January 17, 1992.
Consent Decree Issued to VCC by EPA. January 23, 1992.
Application for Corrective Action Management Unit. June 1997.
Corrective Action Observation, Confirmatory Sampling and Analysis. March 11, 1999.
Internal EPA Memorandum Re: Evaluation of VCC's Status Under the RCRA Corrective Action EI Codes (CA725 and CA750). July 1999.
Interim Revised Corrective Measures Implementation Plan: SWMU 12, SWMU 11, SWMU 15. November 2000.
Letter from VCC to EPA Region 4 Re: Cedar Chemical Company. November 3, 2000.
RCRA Facility Investigation – Interim Final Report and Phase II Workplan. March 16, 2001.
RCRA Facility Investigation – Draft Final Report. August 2001.
Draft Groundwater Assessment Report. November 2001.
Letter from VCC to EPA Region 4 Re: Progress Report Number 117. January 8, 2002.
Corrective Measures Study. March 2002.
E-mail correspondence from Edenspace Systems Corporation to VCC Re: Vicksburg Chemical Fern Test. July 10, 2002.
Internal EPA Memorandum Re: Proposed Sampling at VCC. 2003.
Draft Preliminary Assessment Report. May 7, 2004.
E-mail correspondence from MDEQ to Booz Allen Hamilton. August 26, 2004.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUL 21 2004



Scott L. Wilderman, President
Pacific Chlorine, Inc.
40 Loraine Court
San Francisco, CA 94118

Dear Mr. Wilderman:

Thank you for your March 30, 2004, letter to President George W. Bush concerning the status of the former Vicksburg Chemical Company facility located in Vicksburg, Mississippi. Your letter was forwarded to the U. S. Environmental Protection Agency (EPA) Region 4 office in Atlanta, Georgia for response.

Your letter requests that the United States review the selection of Harcros Chemicals, and ARCADIS (Harcros-ARCADIS) to purchase and clean up the former Vicksburg Chemical Company facility. Under the terms of an order issued by the United States Bankruptcy Court for the Southern District of New York, the Mississippi Department of Environmental Quality (MDEQ) was given authority to request transfer of the Vicksburg Chemical Company property or parts thereof to any entity identified by the MDEQ. It is my understanding that the MDEQ solicited proposals and determined to enter into negotiations with Harcros-ARCADIS. Since the selection process was conducted by MDEQ, EPA does not have jurisdiction to review that process. Your concerns may be directed to the State of Mississippi. By copy of this letter, we will notify the MDEQ of your company's continuing interest in the Vicksburg Chemical Company site.

We appreciate your interest in preserving the environment and sustaining the economic viability of the Vicksburg manufacturing facility. If EPA may be of further assistance, please feel free to contact me at 404/562-8620.

Sincerely,

Winston A. Smith
Director
Waste Management Division

cc: Jerry Banks, MDEQ

Louisiana Chemical Equipment Co., L.L.C.
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USED CHEMICAL PROCESS EQUIPMENT

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E-MAIL: plants@lcec.com **http://www.lcec.com**

August 6, 2004

Mr. Charles H. Chisolm
Mississippi Dept. of Environmental Quality
P. O. Box 20305
Jackson, Mississippi 39289-1305

Dear Mr. Chisolm:

We have been talking with Trey Hess and yourself for over a year concerning the Vicksburg Chemical assets.

We understand a new complication has developed concerning the back taxes in the amount of approximately $800,000.00.

We know you have been trying to work out an agreement with a potential buyer to purchase the plant to partially operate two of the units and remediate the site, however, you are continuing to spend money every month with no firm date to complete the transaction.

We would like to make an all cash offer of $1,000,000.00 for the moveable assets only.

Our offer does not include warehouses, rail and land.

We would pay the $1,000,000.00 immediately upon signing a purchase agreement.

Hopefully you can sell some of the land to the city of Vicksburg and sell the offices, warehouses and land in the operating area for use as a warehouse/distribution operation.

We hope our offer is acceptable and in the best interest of the Mississippi Department of Environmental Quality.

We look forward to hearing from you.

Regards,

LOUISIANA CHEMICAL EQUIPMENT CO., L.L.C.

Alvin G. Rotenberg
Managing Director

AGR/lm

CITY OF VICKSBURG

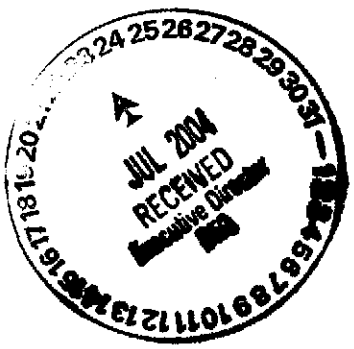
P. O. BOX 150 VICKSBURG, MS 39181-0150 (601) 634-4554

LAURENCE E. LEYENS
MAYOR

GERTRUDE A. YOUNG
ALDERWOMAN

SIDNEY H. BEAUMAN, JR.
ALDERMAN

July 21, 2004



Harcros Chemicals, Inc.
c/o Trudy Fisher, Esq.
Brunini Grantham Grower & Hughes
P.O. Drawer 119
Jackson, MS 39205-0119

Via fax & U.S. Mail

Arcadis G&M, Inc.
630 Plaza Drive
Suite 200
Highlands Ranch, Colorado 80129

Via fax & U.S. Mail

Attention: Eric G. Williams, Director, Property Development

RE: Vicksburg Chemical Company Site,
Vicksburg, Mississippi

Dear Trudy and Eric:

Since our last meeting, representatives of the City and its outside consultants have had several meetings among ourselves as well as with the Department of Environmental Quality, representatives of local casinos and others in an effort to try and determine the best and most logical way to proceed on the referenced project.

The City's first priority is to construct, or cause to be constructed, a golf course, preferably on a portion of the Vicksburg Chemical Company Site (the "VCC Site"). It's second priority, but equally as important, is to remediate the contamination at the VCC Site and hopefully turn that facility into a productive manufacturing facility or some other redeeming use.

At this time, the City is not in a position to accept or further discuss or negotiate your proposal set forth in the March 17, 2004 working draft. That approach involves expending more money than the City has available or is willing to incur through long term debt and the risk is too high with respect to the proposed economic impact to the City.

After discussing this entire matter among the Governing Body of the City, its staff and its outside consultants, we have decided to offer to design, construct and operate, or cause to be designed, constructed and operated, a first class golf course and related facilities on two hundred acres(±) owned by VCC located West of the railroad tracks and joining the Mississippi River, excluding the plant site.

We will pay $3,150.00 per acre for the property located between Warrenton Road and the river, as determined by survey, which we will pay for. We will pay $1,500 per acre for the property located west of the railroad tracks and east of Warrenton Road bounded on the north by Dabney Dr. and Rifle Range Road and on the south where the railroad track intersects with Warrenton Road, as determined by survey, which we will pay for. At such time as the golf course is designed, we will resell you all excess property to be used for development at the same price that the City bought it.

Additionally, we will authorize and approve a Tax Increment Financing Plan in an amount in which the increased taxes, both sales and ad valorem, resulting from private development on the VCC Site will justify. The proceeds of the TIF Bonds will be used to reimburse all or a portion of the cost of the infrastructure required to develop the VCC Site. It is not possible to quantify the amount of TIF Bonds that may be issued but obviously, as private investment increases, especially for retail facilities, new tax revenues increase which increases the principal amount of TIF Bonds that may be issued.

With respect to delinquent and ongoing ad valorem taxes, we will assist Harcros and MDEQ in dealing with those matters and hopefully you can have such taxes declared invalid by a court or discharged in the bankruptcy proceeding. The City's offer is conditioned upon the tax issue being resolved in order for the City to take free and clear title to the property.

In summary, we would like to participate in a plan to remediate the VCC Site as outlined above. That, of course, would require a remediation plan acceptable to MDEQ to be executed which would allow for the two hundred acres(±) to be sold to the City.

Please contact us if you have questions and an expeditious response is requested.

Sincerely,

Laurence E. Leyens, Mayor

Gertrude A. Young, Alderwoman

Sidney H. Beauman, Jr., Alderman

cc: Charles H. Chisolm, Executive Director
Mississippi Department of Environmental Quality via fax & U.S. mail

Butler.Lael@epamail.epa.gov
07/13/2004 10:01 AM

To: Trey_Hess@deq.state.ms.us
cc: Mccurry.Doug@epamail.epa.gov, Butler.Lael@epamail.epa.gov
Subject: VCC - EI Memo and GW sampling

Hi, Trey,

It's been a while since we talked. Yet, I'm sure you're keeping busy with this site and more.

EPA has selected VCC as one of the sites where contractor's will support the EI Memo, concentrating on human exposures controlled. This work will begin shortly with Booz-Allen-Hamilton staff performing a file review, creating a chronology of events, identifying data gaps, etc. We'll keep you informed on the progress of this action.

In addition, EPA is also considering what groundwater data is needed to bring our knowledge of the contaminant plume up to date. I am reviewing the RFI data and am prepared to suggest that groundwater sampling be conducted now at all existing viable wells (shallow and deep), and again in 3 months time. We're not sure if this will be EPA - SESD staff collecting the samples, or contractors collecting the samples w/EPA conducting the analyses.

Please think about the groundwater and the known sampling data, then let us know your comments and suggestions. Do not share this memo or it's contents with anyone outside of EPA or the MDEQ.

Thanks for your time, take care.

Lael :)

900 West Pine Street
Suite 1
Vicksburg, MS 39180
(601) 638-1838
FAX (601) 638-1847

July 9, 2004

Mr. Charles Chisolm
Executive Director
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, Ms 39289-1305

Dear Mr. Chisolm:

Re: Vicksburg Chemical Co. site, Vicksburg Ms

Thank you for talking with me Thursday with regard to the Vicksburg Chemical Co. property. As I mentioned, I've been successful brokering commercial and industrial real estate properties, including casinos sites. Of special note is the property now owned by the Isle of Capri @ I-20/Ms River Bridge in Vicksburg. You may recall this was the Vicksburg Terminal Company (gasoline terminal) property. I sold the site to Lady Luck Casino (the Isle of Capri has since bought all of their properties).

This site consisted of 12 acres which required extensive "cleanup". Mr.Shannon Williford, Vicksburg Terminal's president completed it at a cost of over 1.9 million dollars. Fortunately, the sale price was $4,500,000!!!

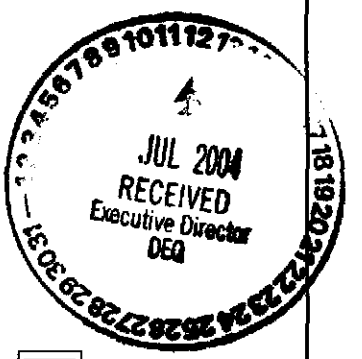
I was also the selling broker for the Ameristar Casino site and was the referring broker for the Isle of Capri Casino site (Biloxi).

In summary Mr. Chisolm, should the time come to market the Vicksburg Chemical property, I would like the opportunity to discuss a marketing plan that will yield the highest financial and economic development return to the State of Mississippi and Vicksburg and at the same time accomplish your desired goals.

I can provide my qualifications, resume and referrals if needed. Below are my phone numbers and email address if needed.

Respectfully submitted.

Wayne Thornton, Realtor
office phone: 601.638.1838
cell phone: 601.415.7779
email: wthornreal@canufly.net



Wayne Thornton Real Estate

REALTOR® MLS

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

June 7, 2004

Via Facsimile Only

Eric Williams
Director, Property Redevelopment
ARCADIS RECLAIMS Program
630 Plaza Drive, Suite 200
Highlands Ranch, CO 80129

Re: Jacobs Investments May 21, 2004 letter to MDEQ

Dear Eric:

As you requested and as approved by Dave Grunenwald with Jacobs Investments, attached please find a copy of the referenced letter. Should you have any questions, feel free to contact me at (601) 961-5369. Thank you.

Sincerely,

Kelly R. Riley
Senior Attorney

Enclosure

cc: Trey Hess

JACOBS INVESTMENTS

May 21, 2004

Jere "Trey" Hess, P.E., DEE
Mississippi Department of Environmental Quality
101 Capital Center
101 West Capital Street
Jackson, Mississippi 39201

RE: Vicksburg Chemical

Dear Dr. Hess:

As you know, in January of 2003, we submitted a proposal to you for the development of a portion of the Vicksburg Chemical plant site. We later withdrew our proposal pending the outcome of certain developments in Louisiana which had the potential to negatively affect the Vicksburg market. Now satisfied that they will not do so, we are again interested in pursuing the land as the site for a hotel and casino. This letter is designed to outline our current thoughts.

We are aware that you have an ongoing dialog with a chemical company which, if successful, would result in the re-opening of the chemical plant; and that the City of Vicksburg continues to desire to attract the development a golf course.

Bearing that in mind, we are interested in entering into an option ("Option") as follows:

1. Property:	The +/- 500 acres comprising the uncontaminated land ("Clean Land") of Vicksburg Chemical.
2. Purchase Price:	$ 7 million.
3. Option to Buy:	Two one-year periods ("Option Period"), exercisable by written notice given prior to the end of the Option Period.
4. Option Payments:	$200,000 per year, payable quarterly, the first payment due upon execution of the Option, applicable against the purchase price at closing.

5. Closing: Ninety (90) days following exercise of the Option, with the balance of the Purchase Price due in immediately available funds at Closing.

6. Other Terms: To be mutually agreed upon.

As you know, we have received our Army Corps. Of Engineers permit in D'Iberville and intend to start construction in 2005. We are currently evaluating the timing of both the D'Iberville and Vicksburg projects and the possibility of financing and constructing them at the same time. If that proves feasible, we intend to do so. If not, we would likely commence the Vicksburg project following the completion of Phase 1 of the D'Iberville project which should take about one year.

During the Option Period, if a third-party emerges with plans for a golf course serving all of the casinos in Vicksburg, we would support such a plan and would contribute to the City so much of the Clean Land as is necessary for its development.

In the event that the development of a golf course by a third-party does not come to fruition during the Option Period, we would consider developing it as part of our project, subject to market demand.

This is the essence of our proposal. We look forward to again working with you towards the development of a hotel/casino in Vicksburg.

I will call you regarding this proposal and welcome the opportunity to meet to discuss it further.

If you have any questions, please feel free to call.

Sincerely,

Dave Grunenwald
Vice-president of Development/Leasing

cc: Jeffrey P. Jacobs
Mayor Lawrence Leyens

Confirmation Report – Memory Send

Time : Jun-07-04 15:43
Tel line : 6019615349
Name : MDEQ LEGAL DIV

Job number	:	815
Date	:	Jun-07 15:41
To	:	79017203443535——8796942
Document pages	:	04
Start time	:	Jun-07 15:41
End time	:	Jun-07 15:43
Pages sent	:	04
Status	:	OK

Job number : 815 *** SEND SUCCESSFUL ***

STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FACSIMILE COVER LETTER

Date: 6/7/04 Number of pages including cover: 4

Telecopy No.: 320-344-2535

To: Eric Williams, ARCADIS

From: Kelly R. Riley
Senior Attorney
Mississippi Department of Environmental Quality
Phone: (601) 961-5369
Facsimile No. (601) 961-5349

Re: _____

* * * * *

Attachment: _____

THE INFORMATION CONTAINED IN THIS FACSIMILE MESSAGE IS PRIVILEGED AND CONFIDENTIAL INFORMATION INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY NAMED ABOVE. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE IMMEDIATELY NOTIFY US BY TELEPHONE AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA THE U. S. POSTAL SERVICE. THANK YOU.

If you do not receive the complete transmission of this document, call Sharon Smith at (601) 961-5359.

LEGAL DIVISION
POST OFFICE BOX 20305 • JACKSON, MISSISSIPPI 39289-1305 • TEL: (601) 961-5171 • FAX: (601) 961-5349 • www.deq.state.ms.us
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MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

FILE COPY

June 15, 2004

Via Facsimile and Certified Mail

Mr. William W. Rucker, Esq.
Rucker & Middleton, L.L.P.
Attorneys at Law
3801 Kirby Drive, Suite 710
Houston, TX 77098

Re: Claim of Pacific Chlorine, Inc. Against the Mississippi Department of Environmental Quality and the City of Vicksburg, dated April 15, 2004
Vicksburg Chemical Property

Dear Mr. Rucker:

On behalf of the Mississippi Department of Environmental Quality ("MDEQ"), I am responding to your letter dated April 15, 2004 addressed to Charles Chisolm, MDEQ Executive Director, and Laurence Leyens, Mayor, City of Vicksburg ("City") regarding the former Vicksburg Chemical Company ("VCC") site. This letter serves not only to clarify that MDEQ has not and is not engaged in a conspiracy to defraud Pacific Chlorine, Inc. ("PCI"), but also that there have been no misrepresentations on the part of MDEQ to PCI. For this reason, among others, which are addressed below, MDEQ is unable to use state resources to pay PCI $282,329.95 for costs spent during a voluntary RFP process.

It seems there has been a fundamental misunderstanding regarding MDEQ's role in this matter. MDEQ's function is to find a willing and suitable entity to purchase the VCC site and use any consideration received for the environmental cleanup of the site. To clarify a statement made in your letter, a decision never was made that the chemical plant would not be reopened, and has not to date. Harcros intends to re-use the plant if the acquisition takes place. MDEQ's primary concern is to protect human health and the environment through remediation of the site. MDEQ never has indicated whether or not the plant could be reopened, and that will continue to be left to the discretion of the purchaser. Therefore, the claim that PCI would not have continued its due diligence and solicitation efforts if it had known that MDEQ had no intention of allowing the plant to reopen is incorrect.

LIFE SAVER

Your letter further states that MDEQ received information from PCI that has been utilized in current remediation plans for the Vicksburg facility. PCI submitted information to MDEQ that ultimately was returned at PCI's request. I refer you to a letter sent to you from me on behalf of MDEQ dated November 17, 2003, which acknowledges your request that all documents provided by PCI be returned and states that MDEQ would return the documents. The letter goes on to state that "none of the actual documents were provided to parties outside of MDEQ". Not only was the information held confidential, but MDEQ no longer retains any of the information at our offices, and none of the information was used by MDEQ in any remediation plans.

I also would like to mention the City's role in this matter. While the City's involvement in this process is important, MDEQ has not and will not abrogate to the City its authority under the Abandonment Order as suggested in your letter.

As mentioned in your letter, a few months after Cedar Chemical Corporation and VCC filed for Chapter 11 Bankruptcy in the Southern District of New York in March 2002, the Court entered a *Stipulation and Order Authorizing Abandonment of West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief* ("Abandonment Order") on October 18, 2002. The Abandonment Order provides in part as follows:

> [U]pon written request by the MDEQ, the Vicksburg non-bankruptcy estate shall convey title to the Vicksburg Facility or parts thereof to any entity identified by the MDEQ. Any consideration received for the transfer of the respective Facilities or parts thereof shall be applied to the environmental cleanup of the respective Facilities and shall be treated as a contribution by the Debtors to such cleanup. Any entity to whom the Facilities or any parts thereof are transferred shall be given a copy of the Stipulation and Order and shall be bound by them.

See Abandonment Order, Page 8, Section 16. Under this order, MDEQ has sole authority to identify an entity to receive the VCC facility or parts thereof. After proposals were submitted by several entities, including PCI and Harcros, MDEQ selected Harcros' proposal. In a letter from Harcros to MDEQ dated November 17, 2003, Harcros presents its offer to re-use, remediate, and develop the VCC site including re-use of the plant. Further, MDEQ requested the same information from all interested parties. PCI was not burdened in any way, was not treated differently by this agency, and MDEQ did not obtain "free due diligence" as you suggest in your letter.

MDEQ's only objective in this matter is to provide protection through remediation to the citizens in this area and the environment. MDEQ previously had no reason and currently has no reason to "use" any entity, MDEQ did not engage in a conspiracy to defraud PCI, and there were no misrepresentations. There is no link between MDEQ's actions and PCI's expenditures of over $270,000 that would present causation and resulting damages. You state also that PCI relied on representations that

the plant might be reopened. As indicated above, the plant may be reopened, but that is a decision MDEQ will leave to the purchaser of the property.

I hope this letter helps clarify some of the points made in your letter, and you understand that in no way has MDEQ been unjustly enriched by PCI's remediation information, and for the reasons conveyed in this letter, MDEQ is unable to reimburse PCI the costs associated with due diligence in this matter. I would be happy to discuss any of the issues raised in further detail in an effort to clarify the events surrounding the former VCC site. Should you have any questions or comments, contact me at (601) 961-5369.

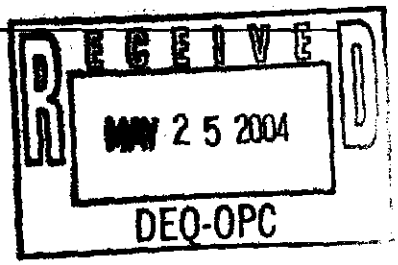
Sincerely,

Kelly R. Riley

Kelly R. Riley
Senior Attorney

cc: Charles H. Chisolm
Phil Bass
Trey Hess
J. I. Palmer, Jr.
Mayor Laurence E. Leyens
Nancy Thomas

JACOBS
INVESTMENTS



May 21, 2004

Jere "Trey" Hess, P.E., DEE
Mississippi Department of Environmental Quality
101 Capital Center
101 West Capital Street
Jackson, Mississippi 39201

RE: Vicksburg Chemical

Dear Dr. Hess:

As you know, in January of 2003, we submitted a proposal to you for the development of a portion of the Vicksburg Chemical plant site. We later withdrew our proposal pending the outcome of certain developments in Louisiana which had the potential to negatively affect the Vicksburg market. Now satisfied that they will not do so, we are again interested in pursuing the land as the site for a hotel and casino. This letter is designed to outline our current thoughts.

We are aware that you have an ongoing dialog with a chemical company which, if successful, would result in the re-opening of the chemical plant; and that the City of Vicksburg continues to desire to attract the development a golf course.

Bearing that in mind, we are interested in entering into an option ("Option") as follows:

1. Property:	The +/- 500 acres comprising the uncontaminated land ("Clean Land") of Vicksburg Chemical.
2. Purchase Price:	$ 7 million.
3. Option to Buy:	Two one-year periods ("Option Period"), exercisable by written notice given prior to the end of the Option Period.
4. Option Payments:	$200,000 per year, payable quarterly, the first payment due upon execution of the Option, applicable against the purchase price at closing.

1231 MAIN AVENUE • CLEVELAND, OHIO 44113 • 216/861-4080 • FAX: 216/861-6315

5. Closing: Ninety (90) days following exercise of the Option, with the balance of the Purchase Price due in immediately available funds at Closing.

6. Other Terms: To be mutually agreed upon.

As you know, we have received our Army Corps. Of Engineers permit in D'Iberville and intend to start construction in 2005. We are currently evaluating the timing of both the D'Iberville and Vicksburg projects and the possibility of financing and constructing them at the same time. If that proves feasible, we intend to do so. If not, we would likely commence the Vicksburg project following the completion of Phase 1 of the D'Iberville project which should take about one year.

During the Option Period, if a third-party emerges with plans for a golf course serving all of the casinos in Vicksburg, we would support such a plan and would contribute to the City so much of the Clean Land as is necessary for its development.

In the event that the development of a golf course by a third-party does not come to fruition during the Option Period, we would consider developing it as part of our project, subject to market demand.

This is the essence of our proposal. We look forward to again working with you towards the development of a hotel/casino in Vicksburg.

I will call you regarding this proposal and welcome the opportunity to meet to discuss it further.

If you have any questions, please feel free to call.

Sincerely,

Dave Grunenwald
Vice-president of Development/Leasing

cc: Jeffrey P. Jacobs
Mayor Lawrence Leyens

1231 MAIN AVENUE • CLEVELAND, OHIO 44113 • 216/861-4080 • FAX: 216/861-6315

Roy Furrh

05/10/2004 10:13 AM

To: Kelly Riley/Legal/Admin/DEQ@DEQ
cc: Trey Hess/HW/OPC/DEQ@DEQ
Subject: Vicksburg Chemical

Kelly, Tom Treinen with Rhodia, Inc. called this morning to express interest in the Vicksburg Chemical site. Please call Tom at 609.860.3427.

FAX TRANSMISSION

LEGAL DEPARTMENT

CITY OF VICKSBURG

1401 Walnut Street
Vicksburg, MS 39180
601/631-2983
Fax: 601/634-6232

To: Trey Hess - DEQ

Fax #: 961-5300

From: Nancy Thomas

Subject: Arcadis

Date: April 23, 2004

Pages: 5, including this cover sheet.

COMMENTS:

ARCADIS

Economic Summary
Cleanup, Reuse, and Redevelopment Project
Former VCC Site
Vicksburg, Mississippi

Residential	
Areas #2, #3, #4 on land plan - single family residential parcels totaling 49 acres	
Number and size of lots and estimated value/cost of each	49 lots @ $40,000 per lot
Number of dwellings to be constructed and average cost for dwelling unit	49 dwellings @ average $250,000
Estimated number of units to be constructed each year to build out	Build out average = 12 per year
Industrial	
Upgrade and reuse of existing chemical plant on approximately 50 acres	
Number of acres of industrial land	50 acres
Types of industry targeted	Chemical mfg, and distribution, other heavy mfg Private investment:
Value of land per acre	
Estimate of jobs to be created and average salary/wage	30 – 75 jobs @ avg. direct wages & benefits $60,000/yr/job
Estimate of private industrial investment	Capital $3.0M-$4.0 M, Cleanup $8M, O&M $250k/yr
Projected timeframe for developing	less than 1 yr
Commercial/Flex	
Area 5 on land plan – 65 acres of mixed commercial/flex use	
Number of acres to be devoted to each type of commercial use described herein above	Business Hotel – 8 acres Rental / Multi Family – 15 acres Office – 2 acres Retail – 40 acres
Square footage of commercial development by type (or number of rooms)	tbd
Number of full-time and part-time jobs to be created and average salary/wage	tbd
Amount of private investment for each commercial component	tbd
Estimated retail sales of each commercial component	tbd
Estimated retail sales of each commercial component	tbd

ARCADIS

Estimated timeframe for beginning and completion of each commercial component	tbd
Hospitality	
Area 1 on land plan - high-end resort hotel that includes golf club house for championship golf course on 21 acres	
Number of rooms	200
Average rate per night	$150

ARCADIS

Conceptual Infrastructure Needs and Costs
Cleanup, Reuse, and Redevelopment Project
Former VCC Site
Vicksburg, Mississippi

Major Assumptions

- Addresses global project infrastructure to connect development parcels (developed by others) to existing City infrastructure
- Does not include golf course development needs

Item	Cost
Entitlements	
Master Plan	$10,000
Development Analysis	$7,500
Master hydrology study	$12,500
Master potable water study	$12,500
Master sanitary study	$18,000
Master transportation study	$8,250
Master dry utility study	$7,250
Master geotechnical study	$17,500
Contingency (10%)	$9,350
Subtotal	**$102,850**
Infrastructure Design	
One centralized domestic water plant, two wastewater lift stations, three local intersections, two highway intersections	$50,000
Design survey	$25,000
Hydrology analysis, culvert sizing, storm routing, misc.	$125,000
Water distribution, fire-flow analysis, storage tank with booster and appurtenances	$110,000
Sanitary sewer design flows and lift station	$95,000
Pavement design for Warrenton Road, Dabney Drive and Highway 61 South	$35,000
Dry utility design/coordination with all applicable companies/agencies	$25,000
Site-specific geotechnical evaluation for lift station, water storage facility and highways	$46,500
Contingency (10%)	$511,500
Subtotal	

ARCADIS

Infrastructure Construction	
Water distribution including storage tank, booster, etc.	$715,000
Sanitary sewer including lift station	$420,000
Pavement and drainage structures, including a 10'x10' double-box culvert under Warrenton Road for golf course, culverts	$475,000
Dry utility trenching (less fiber-optic, if required)	$50,000
Contingency ($20%)	$332,000
Subtotal	**$1,992,000**
Total Global Infrastructure	**$2,606,350**

Jerry Banks
04/22/2004 12:51 PM

To: Trey Hess/HW/OPC/DEQ@DEQ
cc:
Subject: Comments on Draft MDEQ VCC Order

----- Forwarded by Jerry Banks/HW/OPC/DEQ on 04/22/2004 12:37 PM -----

Butler.Lael@epamail.epa.gov
04/22/2004 12:31 PM

To: Johnston.Jon@epamail.epa.gov, Kumar.Narindar@epamail.epa.gov, Heard.Anne@epamail.epa.gov, Ghosh.Mita@epamail.epa.gov, Lesichar.Anna@epamail.epa.gov, Mccurry.Doug@epamail.epa.gov, Jerry_Banks@deq.state.ms.us
cc:
Subject: Comments on Draft MDEQ VCC Order

Comments about the Order:

1. The only commitment to corrective action is monitoring and that's limited to 4 quarters of data collection. COMMITMENT- 9 A-E

2. Regardless of results, the limitations specified in the corrective action objectives (P9, CAR) limit any action to institutional controls.

3. Stability in the groundwater plume or lack thereof, leads to the same conclusion: no remedial action beyond Institutional Controls.

4. If the stability of the groundwater plume is determined to exist, it still does not indicate they've met protective groundwater quality goals → and there's no requirement for them to do so.

5. There's no indication of a commitment to remove contaminated soil even if it's found to be contributing to increasing groundwater concentrations. – 9.e.

6. P6, CAR, is the only paragraph which alludes to any commitment for remedial action. However, it appears to be modified by every other paragraph such that no remedial action can be required.

7. In P9.a., CAR, it's not clear whether one CoC is the trigger, or whether all CoCs are the trigger for engineering and institutional control implementation. → MODIFY "FOR EACH COC"

8. The number of POC wells and the 4 quarters of sampling data to be collected do not appear to support the "statistically significant" test as established by the Order for contaminant plume stability. Unless, perhaps, the Baseline Study referenced in P4 increases the number of sampling points which are however limited in P3.

9. There is a lack of clarity between paragraphs 5, 6, 8 and 9 as to whether they are only required to monitor or whether they're required to implement engineering and institutional controls.

10. Financial assurance - there is no financial assurance required by the Order. # 17 + #18 OF ORDER

11. The Order will turn over trust money to Harcros-Arcadis the day it's signed. # 27 OF ORDER → TRUST FUND IS NOT PART OF ESTATE

↑
BOTTOM
OF
P. 7

Ken Whitten

04/20/2004 09:18 AM

To: Phil Bass/OPC/DEQ@DEQ, Eric Dear/GW/OPC/DEQ@DEQ, Jerry Banks/HW/OPC/DEQ@DEQ, Trey Hess/HW/OPC/DEQ@DEQ, Kelly Riley/Legal/Admin/DEQ@DEQ, Roy Furrh/Legal/Admin/DEQ@DEQ, Terry Champion/HW/OPC/DEQ@DEQ
cc: Charles Chisolm/Admin/DEQ@DEQ
Subject: Vicksburg Chemical cost

FYI

For the week of 3-15-04 thru 3-21-04 ..... contracors cost $ 7,391.00
For the week of 3-22-04 thru 3-28-04 ..... contracors cost $ 8,941.00

For the week of 3-29-04 thru 4-04-04 ..... contracors cost $ 7,163.00
For the week of 4-05-04 thru 4-11-04 ..... contracors cost $ 7,163.00

Total cost for invoices (thru 4-11-04) is **$ 490,564.74**

U.S. Environmental Protection Agency
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Notice of Lodging of Settlement Agreement in Cedar Chemical Co. and In re Vicksburg Chem Corp., Under the Comprehensive Environment Response Compensation and Liability Act (Ce

[Federal Register: March 31, 2004 (Volume 69, Number 62)]
[Notices]
[Page 16957-16958]
From the Federal Register Online via GPO Access [wais.access.gpo.g
[DOCID:fr31mr04-117]

DEPARTMENT OF JUSTICE

Notice of Lodging of Settlement Agreement in In re Cedar Chemical Co. and In re Vicksburg Chemical Corp., Under the Comprehensive Environmental Response Compensation and Liability Act (Cercla)

Notice is hereby given that on March 24, 2004, a Stipulation a Order has been filed with the United States Bankruptcy Court for t Southern District of New York in In re Cedar Chemical Co., Case Nc 11039, and In re Vicksburg Chemical Corp., Case No. 02-11040 (Bank S.D.N.Y.), concerning the liabilities of the Debtors for chemical facilities in West Helena, Arkansas, and Vicksburg, Mississippi. T settlement would resolve the EPA's claims in this bankruptcy proce for a cash payment of $250,000, $125,000 for each site.

The Department of Justice will receive comments relating to th Stipulation and Order for a period of thirty (30) days from the da this publication. Comments should be addressed to the Assistant Attorney General, Environment and Natural Resources Division, P.O. 7611, U.S. Department of Justice, Washington, DC 20044-7611, and s refer to In re Cedar Chemical Co. and In re Vicksburg

[[Page 16958]]

Chemical Corp. (Bankr. S.D.N.Y.), D.J. Ref. 90-7-1-463/1.

The Stipulation and Order may be examined at the Office of the United States Attorney for the Southern District of New York, Civi Division, 86 Chambers Street, 3d Floor, New York, NY 10007, by rec to Assistant U.S. Attorney David J. Kennedy, and at the United Sta Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. During the public comment period, the Stipulation and Order also be examined on the following Department of Justice Web site, http://www.usdoj.gov/enrd/open.html. EXIT disclaimer A copy of the Sti and Order may also be obtained by mail from the Consent Decree Lib

P.O. Box 7611, U.S. Department of Justice, Washington, DC 20044-76
by faxing or e-mailing a request to Tonia Fleetwood
tonia.fleetwood@usdoj.gov), fax no. (202) 514-0097, phone confirma
number (202) 514-1547. In requesting a copy from the Consent Decre
Library, please enclose a check in the amount of $2.00 (25 cents p
page reproduction cost) payable to the U.S. Treasury.

Bruce S. Gelber,
Section Chief, Environmental Enforcement Section, Environment and
Natural Resources Division.
[FR Doc. 04-7240 Filed 3-30-04; 8:45 am]
BILLING CODE 4410-01-M

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Last updated on Wednesday, March 31st, 2004
URL: http://www.epa.gov/fedrgstr/EPA-WASTE/2004/March/Day-31/f7240.htm

UNITED STATES BANKRUPTCY COURT
SOUTHERN DISTRICT OF NEW YORK
----------x

In re:

CEDAR CHEMICAL CORPORATION, and
VICKSBURG CHEMICAL COMPANY,

Debtors.

CHAPTER 11

Case No. 02-11039 (SMB)
Case No. 02-11040 (SMB)

----------x

STIPULATION AND ORDER RESOLVING OBJECTION BY THE DEBTORS TO THE EPA'S CLAIMS (CLAIM NOS. 138, 460, AND 474)

WHEREAS on March 8, 2002 (the "Petition Date"), Cedar Chemical Corporation ("Cedar") and Vicksburg Chemical Company ("Vicksburg") (collectively the "Debtors") each filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Code (the "Bankruptcy Code") with the United States Bankruptcy Court for the Southern District of New York (the "Court"); and

WHEREAS on or about September 4, 2002, the United States Environmental Protection Agency ("EPA") filed a Proof of Administrative Expense Claim in the above-referenced case (Claim 138), which was amended on or about May 23, 2003 (Claim 460, with a duplicate numbered Claim 474), concerning the Debtors' environmental obligations at both the Cedar Chemical Corporation facility at West Helena, Arkansas, and the facility operated by Vicksburg Chemical Company at Vicksburg, Mississippi (the "Proofs of Claim"); and

WHEREAS the Debtors filed motions (the "Motions") objecting to the EPA's Proofs of Claim, to which the United States filed its responses to the Motions; and

WHEREAS the Debtors' estates include certain proceeds of liquidation of Debtors' assets

which pursuant to the terms of the Final Order (1) Authorizing Use of Cash Collateral, (2) Providing for Adequate Protection, and (3) Granting Related Relief, entered by the Bankruptcy Court on August 21, 2002, the Debtors' bank lenders agreed would be unencumbered by the bank lenders' claims and could be used to satisfy claims other than the bank lenders' claims (the "Unencumbered Proceeds"); and

WHEREAS the parties agree to compromise and resolve the amount and classification of the claim of the EPA in these proceedings;

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration receipt of which is hereby acknowledged;

IT IS HEREBY STIPULATED and agreed to by and between the parties, subject to approval by the Court, as follows, and upon approval by the Court, it is hereby ORDERED that:

1. The Court has jurisdiction to hear and consider the Motions pursuant to 28 U.S.C. § 1334 and 28 U.S.C. § 157 and to grant the relief requested therein.

2. This is a core proceeding under 28 U.S.C. § 157(b).

3. Good and sufficient notice of the Motions, and of the hearings scheduled thereon has been provided and any other requirement for notice be, and hereby is, dispensed with.

4. The EPA shall be paid the total amount of $250,000.00 (two hundred and fifty thousand dollars) in full solely from the Unencumbered Proceeds, in satisfaction of the Proofs of Claim filed in these proceedings. This total amount of $250,000.00 shall be paid to the EPA as follows:

(a) The Debtors shall pay the sum of $125,000.00 to EPA Region 4 in satisfaction of its claim for response costs pursuant to the Comprehensive Environmental Response,

Compensation & Liability Act, 42 U.S.C. § 9601, et seq. ("CERCLA"), for the Cedar/Vicksburg facility, Vicksburg, Mississippi (the "Vicksburg Site"). This payment shall be made by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice lockbox bank, referencing CERCLA Site Spill ID Number A49H and U.S.A.O. file no. 2002 V 0680, in accordance with instructions provided to the Debtors by the U.S. Attorney's Office for the Southern District of New York.

(b) The Debtors shall pay the sum of $125,000.00 to EPA Region 6 in satisfaction of its claim for response costs pursuant to CERCLA for the Cedar facility, West Helena, Arkansas (the "Cedar Site"). This payment shall be made by FedWire EFT to the U.S. Department of Justice lockbox bank, referencing CERCLA Site Spill ID Number 06NH and U.S.A.O. file no. 2002 V 0680, in accordance with instructions provided to the Debtors by the U.S. Attorney's Office for the Southern District of New York.

5. Upon payment in full of the amounts identified in paragraph 4, the EPA's Proofs of Claim shall be deemed satisfied in their entirety against the Debtors, and the EPA shall have no further claim against Debtors in these proceedings.

6. Debtors' entry into this Stipulation and Order will be subject to Bankruptcy Court approval pursuant to Bankruptcy Rule 9019. Debtors agree to exercise their best efforts to obtain the approval of the Bankruptcy Court. This Stipulation and Order will also be submitted for public comment following notice of this Stipulation and Order in the Federal Register. The United States reserves the right to withdraw or withhold its consent if the public comments regarding the Stipulation and Order disclose facts or considerations which indicate that it is inappropriate, or improper, or inadequate. If this Stipulation and Order is not authorized and approved by the

Bankruptcy Court, this Stipulation and Order shall be of no force and effect, whereupon nothing herein shall be deemed an admission of any fact or waiver of any right of either party with respect to the matters contained herein.

7. Nothing herein shall be deemed to extinguish or terminate those obligations, requirements, and rights of the parties hereto, which are set forth in the Stipulation and Order Authorizing Abandonment of the West Helena Manufacturing Facility and Vicksburg Manufacturing Facility and Granting Related Relief, entered by the Court in these proceedings on or about October 18, 2002, except that any and all monetary claims of the EPA against the Debtors shall be deemed satisfied in full by this Stipulation and Order.

8. Nothing in this Stipulation and Order shall be deemed to limit the authority of the United States to take response action or gather information under Sections 104 and 122 of CERCLA, 42 U.S.C. §§ 9604 and 9622, or any other applicable law or regulation, or to alter the applicable principles governing judicial review of any action taken by the United States pursuant to that authority, except that any and all monetary claims of the EPA against the Debtors as to the Vicksburg Site and the Cedar Site, whether now existing or arising in the future, shall be deemed satisfied in full by this Stipulation and Order.

10. Each signatory to this Stipulation and Order certifies that he or she is authorized to enter into the terms and conditions of this Stipulation and Order and to bind legally the party represented by him or her except that the execution of this Stipulation and Order by the Assistant Attorney General is required with respect to the United States.

11. This Stipulation and Order may be signed by facsimile and in counterparts.

12. This Court shall retain jurisdiction to hear and determine any matter arising from or relating to this Stipulation and Order.

Dated: New York, New York
February ___, 2004

FOR THE DEBTORS:

JOSHUA J. ANGEL (JJA-____)
ANGEL & FRANKEL, P.C.
460 Park Avenue
New York, NY 10022
Phone: (212) 752-8000
Fax: (212) 752-8393

Dated: New York, New York
February ___, 2004

FOR THE COMMITTEE OF
UNSECURED CREDITORS:

Timothy Brock, Esq. (TB-_____)
Satterlee Stephens Burke & Burke, LLP
230 Park Avenue
New York, NY 10169
Phone: (212) 404-8781
Fax: (212) 818-9606

CONSENTED TO:

Dated: New York, New York
February ___, 2004

FOR THE AGENT TO
THE SECURED LENDERS

Benjamin Kaminetzky (BK 7741)
DAVIS POLK & WARDWELL
450 Lexington Avenue
New York, New York 10017
Counsel for JPMorgan Chase Bank, as
Agent for the Secured Lenders

Subject to the approval of the Assistant Attorney General:

Dated: New York, New York
February ___, 2004

DAVID N. KELLEY
United States Attorney for the
Southern District of New York
Attorney for the United States

By: _____
DAVID J. KENNEDY (DK-8307)
Assistant United States Attorney
33 Whitehall Street, 8th Floor
New York, New York 10004
Tel. (212) 637-2733
Fax (212) 637-2730

Dated: Washington, DC
February ___, 2004

_____
THOMAS L. SANSONETTI
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611

Subject to the approval of the Assistant Attorney General:

Dated: Atlanta, Georgia
February ___, 2004

WINSTON A. SMITH
Division Director
Waste Management Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, S.E.
Atlanta, Georgia 30303
(404) 562-9674; telefax: (404) 562-9664

Dated: Atlanta, Georgia
February ___, 2004

WILDA WATSON COBB
Associate Regional Counsel
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, S.E.
Atlanta, Georgia 30303
(404) 562-9674; telefax: (404) 562-9664

Subject to the approval of the Assistant Attorney General:

Dated: Dallas, Texas
February ___, 2004

SAMUEL COLEMAN, P.E.
Director, Superfund Division
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, Texas 75202-2733
(214) 665-6701; telefax: (214) 665-6660

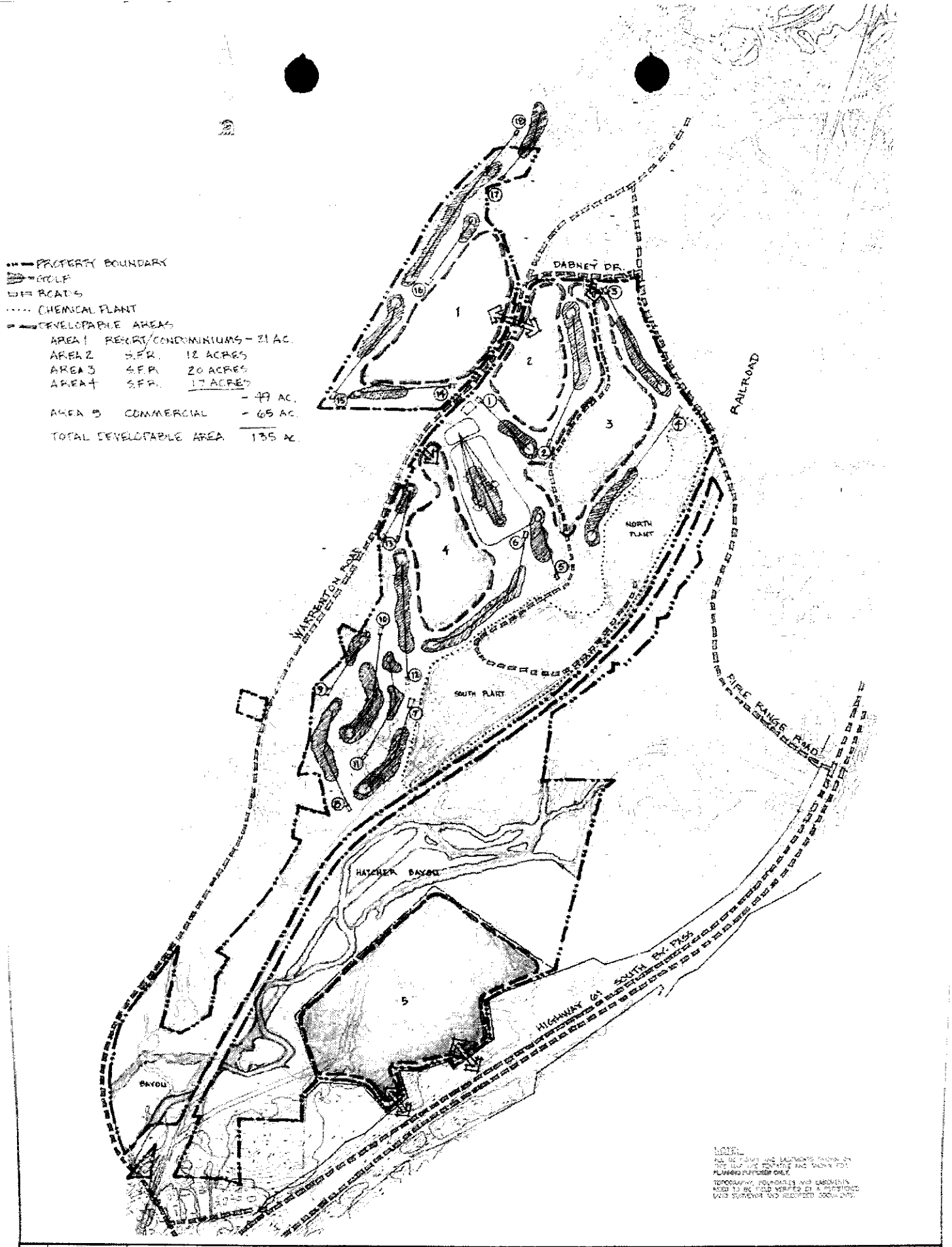
Dated: Dallas, Texas
February ___, 2004

JAMES L. TURNER
Senior Attorney, Office of Regional Counsel
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, Texas 75202-2733
(214) 665-3159; telefax: (214) 665-6460

IT IS SO ORDERED:

Dated: New York, New York
February ___, 2004

Chief United States Bankruptcy Judge



ARCADIS
3777 EAST BROADWAY SUITE 100
TUCSON ARIZONA 85716

COMPOSITE MAP FOR
VCC PROPERTY PLANNING EXHIBIT

VICKSBURG, WARREN COUNTY, MS

SHEET NO. 01 of 01

Local officials endors[redacted]sale of chemical plant site

By Fred Messina VICKSBURG POST ONLINE

[4/6/04]Both local governing boards are on record endorsing the purchase of a chemical plant site by a new owner.

Monday, Vicksburg officials hired a law firm to represent the city's interest if the deal with Harcros Chemical to acquire Vicksburg Chemical moves forward.

County supervisors, hearing a plea last week, have voted to direct the board's attorney, Randy Sherard, to assist the company.

Last week, R. Wilson Montjoy II and Trudy Fisher, attorneys with Brunini, Grantham, Grower and Hewes, told supervisors Harcros plans to buy the Rifle Range Road tract, clean up the contaminated chemical manufacturing site that is part of the tract and put it back into operation, creating 35 to 75 jobs. Also in the Harcros plans are proposals to develop part of the uncontaminated land for house sites, another for recreation and a third part for commercial development.

Vicksburg Chemical filed for bankruptcy in 2002, and in a New York bankruptcy court, the judge declared the Vicksburg Chemical land abandoned and under the control of the Mississippi Department of Environmental Quality.

Back taxes now amount to $779,560.12, and Montjoy told supervisors Harcros wants relief from that debt. The lawyer said they will need the cooperation of Warren County, the City of Vicksburg, MDEQ, the Mississippi Development Authority, the Mississippi Tax Commission, State Auditor's Office, State Attorney General's Office and the Mississippi Legislature if that quest is to succeed.

Both city and county commitments are open-ended. The supervisors' resolution says Sherard is to help Harcros' lawyers any way he can to facilitate the sale. The Mayor and Aldermen agreed to pay the Harris & Geno law firm an hourly rate to represent the city's interests as negotiations for the sale of the property move forward.

City officials have expressed interest in developing a golf course on part of the property that has not been contaminated. Another development could bring a fifth local casino to the property as well as 232 new homes.

MDEQ has control of the property and the cost of cleaning up the site has been estimated at $8 million. If the sale to Harcros does not go through this year, the property could be put up for sale at the tax sale in October for the unpaid taxes.

If no one bought the property at the tax sale, it would default to the state.

Firm seeks tax break on old Vicksburg Chemical site

By Fred Messina Vicksburg Post Online

[4/2/04]Attorneys for a company trying to acquire the old Vicksburg Chemical Co. site asked the Warren County Board of Supervisors for tax relief as part of efforts to acquire the property off Warrenton and Rifle Range Roads.

Vicksburg Chemical closed and filed for bankruptcy in 2002. Attorneys R. Wilson Montjoy II and Trudy Fisher of Jackson met with supervisors at the board's weekly informal discussion meeting Thursday.

The plant site and surrounding acreage has been abandoned and is now under the control of the Mississippi Department of Environmental Quality, which has the authority to transfer the property to a new owner.

Montjoy said Harcros Chemicals, which has made a proposal to acquire the land, guarantees a cleanup and to provide 35 to 75 new jobs in the area. But, he said, local back taxes for 2001 and 2002 amounting to $648,412.07 plus 2003 taxes of $95,148.05 are owed.

The total, $779,560.12 plus interest "could make or break any deal," he said.

Supervisors do not have the authority to directly cancel the debt, but Montjoy said he and Fisher are trying to work out some way to have the tax liens released.

In addition to the support from Warren County and the City of Vicksburg, he said they will need the cooperation and support from MDEQ, the Mississippi Development Authority, the Mississippi Tax Commission, State Auditor, the attorney general and the Mississippi Legislature.

"I'm willing to do anything I can do to help, except going to jail," said District 5 Supervisor Richard George.

In other matters discussed:

• Chuck Thornton, building and grounds manager, told the board the work on the restoration of the Old Court House Museum-Eva W. Davis Memorial is ahead of schedule and work began Wednesday on the northwest corner of the roof where some old termite damage was found. He said the contractor will proceed, making the roof repairs in sections that can be completed in one day so the building will remain waterproof.

• Fire Coordinator Kelly Worthy reported he and Vicksburg Fire Chief Keith Rogers were nearly finished with a draft of a cooperation agreement on fighting fires and should have it to the city's legal department for review in time for it to be taken up at the next joint meeting of city and county officials in mid-April.

RECEIVED
MAY 12 2004
OFFICE OF THE
EXECUTIVE SECRETARIAT

Pacific Chlorine, Inc.

40 Loraine Court
San Francisco, CA 94118
Tel: 415.221.5837
Fax: 415.221.5884

March 30, 2004

WH375877 EPA

George W. Bush
President, United State of America
The White House
1600 Pennsylvania Ave.
Washington, DC 20500

Re: Status of Former Vicksburg Chemical Company Facility, Vicksburg, MS

Dear President Bush,

The former Vicksburg Chemical Company facility was abandoned in October 2002 in bankruptcy proceedings in the Southern District of New York. Vicksburg Chemical Company ("VCC") was previously owned by Arie Genger, a dual citizen of the U.S. and Israel. Under the terms of the abandonment order, the facility is to be sold at the direction of the Mississippi Department of Environmental Quality. My firm has pursued acquiring the facility from the moment it was abandoned.

Two features indicated the facility may be an attractive investment opportunity:
1 - The plant was the only U.S. manufacturer of potassium nitrate, a specialty fertilizer.
2 - The plant was the only U.S. manufacturer of dinitrogen tetroxide (N_2O_4), a non-flammable, non-combustible component of rocket fuels and a strategic material for which the plant was sole supplier to the DOD on a $30,000,000 contract.

The facility was substantially contaminated from pesticide production which ceased in the mid 1980's. A 1992 Consent Decree held VCC responsible for cleaning up the facility, including a requirement that VCC provide financial assurance for the cleanup. This was not done. When abandoned, the facility was still contaminated and no remediation plan had been approved by any governing body. No financial assurance had been put in place by VCC.

VCC closed the facility prior to abandonment. Approximately 100 high paying jobs were lost. Creditors of VCC lost in excess of $80 million. Local businesses supporting the plant were decimated. State and national suppliers lost the facility as a customer. U.S. customers of potassium nitrate were without choice but to buy from foreign suppliers, including a similar facility owned by Mr. Genger in Haifa, Israel. Of greater national interest, the DOD supply contract was also canceled after decades of supply without an alternative supplier in place.

Since the discovery of extensive contamination in the 1980's by environmental authorities, the only marked result has been the 1992 Consent Decree. This year, state level remediation requirements were issued but the facility is regulated by federal law. No cleanup is underway. The facility remains contaminated.

Vicksburg Chemical Overview:

Pacific Chlorine, Inc. (PCI) has been engaged in the pursuit of acquiring the real property and manufacturing assets of Vicksburg Chemical Company ("VCC") in Vicksburg, MS since 2002. The property was abandoned pursuant to a court order from the Southern District of New York Bankruptcy Court in October, 2002. The prior owner of the company was Arie Genger, a dual citizen of the US and Israel and former undersecretary to Prime Minister Sharon while Mr. Sharon headed Defense. Under the terms of the abandonment order, the VCC facility will be sold or transferred at the direction of the Mississippi Department of Environmental Quality.

PCI had a business relationship with VCC at the time facility was shutdown as part of the bankruptcy. From that relationship, PCI had knowledge of, and was attracted to the business. Key features were:
1 - The plant was the only U.S. manufacturer of potassium nitrate, a specialty fertilizer.
2 - The plant was the only U.S. manufacturer of dinitrogen tetroxide (N_2O_4), a non-flammable, non-combustible component of rocket fuels and a strategic material for which the plant was sole supplier to the DOD on a $30,000,000 contract.

The property was substantially contaminated from pesticide production which occurred prior to the mid 1980's. A Consent Decree has been in place since April 1992 that held the company responsible for cleaning up the property, including a requirement that the company provide financial assurance for the cleanup.

At the time the property was abandoned, it was still un-remediated. No remediation plan had been approved by the governmental agencies with jurisdiction, and no financial assurance had been put in place by the company. The bankruptcy court's abandonment order granted the control of, and responsibility for, the property and facility to EPA and the Mississippi Department of Environmental Quality (MDEQ). Barely a month after the abandonment, PCI asked to make a proposal to the MDEQ to run the facility and remediate the property. PCI was told to wait until MDEQ was ready to address the issue.

Prior to abandonment, the facility was shut down. Approximately 100 high paying jobs were lost. Creditors had lost in excess of $80 million. Local business that supported the plant had been decimated. State and national suppliers had lost the plant as customer, and U.S. customers of potassium nitrate were without choice but to buy from foreign suppliers, including a similar facility also owned by Mr. Genger in Haifa, Israel. Also, the DOD supply contract had been canceled after decades of supply.

A new DOD contract have allowed the plant to resume operation, but fortunately it appeared that another Mississippi company could develop the ability to produce the key material, providing competition in DOD's efforts to secure supply at a fair price. Mr. Genger's management team determined that Vicksburg Chemical could resume operation within the bankruptcy proceedings as a debtor-in-possession and offered the DOD a supply contract at approximately $75 million over 5 years. In mid-2002, Mississippi Chemical Corp. in Yazoo City, MS was awarded the contract at approximately $25 million over 5 years. While MissChem had no production capacity in place at the time of the award, the contract provided for them to construct a facility so that at the time the contract would expire in 2007, they would be the only U.S. producer capable of supplying the requirement. Unfortunately, less than a year after the award, MissChem filed bankruptcy under Chapter 11. Many believe the company will not survive. Recently the CEO resigned.

Assuming MissChem remains viable, PCI is concerned that if a choice of suppliers does not exist when the contract with MissChem ends, the DOD may face cost levels approaching or even exceeding the $75 million previously offered by Vicksburg Chemical. PCI's investigations have determined that the Vicksburg facility could operate soundly with a $30 million DOD contract.

The only other entity that has expressed significant interest in the property is Harcros Chemicals of St. Louis, MO, who had a prior relationship with Vicksburg Chemical similar to PCI's. Working in conjunction with ARCADIS of Denver, CO, they have not demonstrated any serious commitment to restarting the facility. Conversely, in a joint meeting with the EPA Region 4 Executive Director's office, they advised they were really only interested in having a distribution center and being a customer of the facility. The meeting occurred about 10 days after the abandonment. The subject was cleaning up the property and returning jobs to the community.

For over 18 months, PCI has pursued its plan to remediate the property and restart the operations, returning the jobs to the community. PCI spent over $200,000 in our initial attempt and a total of nearly $300,000 including subsequent efforts. As PCI's investigation began, bankruptcy documents revealed that the company had filed bankruptcy and abandoned the property because the estate no longer had the funds to conduct the cleanup, estimated by the company to be $20-30 million. Last summer, PCI secured a contract to have the property remediated for about $3 million in compliance with guidelines established by MDEQ.

There have been other plans for the property. The Mayor of Vicksburg wants somebody to build a golf course. With the plant operating, an adequate buffer zone would be required and much of the remaining land is not suitable for golf course development. Fortunately, land surrounding the property is suitable and in combination with suitable portions of the property, would allow adequate space for golf course development. While PCI is not opposed to the presence of a golf course outside an appropriate buffer zone, PCI's investigations have been unable to support the economic feasibility of a golf course, whether contained solely on the property or in combination with surrounding land. Community leaders outside the Mayor's office have expressed disbelief in the viability of the golf course. PCI has been unable to find any support for the golf course in the community at large.

In February 2003, six months after abandonment, bids for the facility were taken by MDEQ. PCI was told their proposal did not contain sufficient guarantees that PCI would remediate the property without taxpayer expense. This means that PCI was unwilling to assume unlimited liability for remediation requirements that had not yet been defined by the authorities. At the City of Vicksburg's request, a development company's proposal was selected to build a golf course and casino resort. The proposal expressly disclaimed any responsibility for cleanup. PCI was told by MDEQ that they had no assurance that the development company would consummate a deal and "we would all have to wait and see what happens". Two months later, the discussions had collapsed. No results progressive to the property had been achieved.

In May 2003, PCI was informed by the MDEQ that they were waiting for "leadership from the Mayor of Vicksburg" and that "we would all have to wait and see what would happen". The City of Vicksburg notified PCI that they were having discussions with Harcros/Arcadis and were in support of those companies' effort to acquire the property. Subsequently, MDEQ solicited proposals. In August, at the City of Vicksburg's request, Harcros/ARCADIS was awarded the right to exclusive negotiations to acquire the property. After seven months, they have not been able to consummate any agreement. In late February, PCI was informed by MDEQ that "we will all have to wait and see what happens".

Since the discovery in the 1980's by environmental authorities that substantial contamination existed, only the following results have been achieved: In 1992, a Consent Decree was placed in effect. In 2004, state level remediation requirements have been issued for property regulated by federal law. In the meantime, property in a small community remains contaminated and its economy has lost approximately 100 jobs and the accompanying $6 million annual payroll.

My company has invested nearly $300,000 in our effort to acquire and operate the facility. More importantly, we have become dedicated to the men and women of Vicksburg who worked at the plant, and their families and others whose livelihoods have depended on this operation for the last 45 years. They are decent, hard-working Americans. I have found them largely to be people of great faith and I continue to pray daily for their welfare.

Reopening the plant is economically viable. The remediation is manageable. Our plan requires no government handout. Neither should anyone else. Regrettably, local decision makers have been unable to bring the matter to conclusion and local newspapers recently reported the need for multi-million dollar taxpayer funding to remediate the facility. This is totally unnecessary.

We appreciate fully that you have greater priorities. However, we are asking that your office investigate the matter and, if you find it appropriate, cause the necessary decisions to be made to re-open the plant and conduct the remediation under our management without further taxpayer burden. We have included additional overview information in the attached.

Sincerely and respectfully,

Scott L. Wilderman
President
Pacific Chlorine, Inc.

c: w/ attachment:

Donald H. Rumsfeld
Secretary of Defense
1000 Defense Pentagon
Washington, DC 20301-1000

Michael O. Leavitt
EPA Administrator
1101A
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Governor Haley Barbour
P.O. Box 139
Jackson, MS 39205

APR 0 5 2004

✓#155

QC✓#009

Pacific Chlorine, Inc.
40 Lorraine Court San Francisco, CA 94118

George W. Bush
President, United States of America
The White House
1600 Pennsylvania Avenue
Washington, DC 20500

RECEIVED
APR 1 4 2004
MAIL ANALYSIS

114 5 P09540517
0090 00.75 MAR 30 04
3999 MAILED FROM ZIP CODE 94118

Trey Hess

03/30/2004 10:45 AM

To: Paul Newman, Trudy Fisher, Eric Williams
cc: Jerry Banks, Kelly Riley, Tim Ratchford, Jimmy Crellin
Subject: Vicksburg - Necessary Items

Folks,

For us to put the finishing touches on the Corrective Action Requirements, we need some items that you still owe us. These were listed in the Agreed Order that we sent to Trudy/Eric on January 21st. Hopefully, you've had enough time to finalize them and can email/fax to us. You need to get them to us (in final form) by next Friday, April 9th. They are:

1. The Final GRiP Agreement (Exhibit 5);
2. Certificate of Insurance for PLL & Terms/Conditions (Exhibit 6);
3. Cost Cap Insurance Policy Terms/Conditions (Exhibit 7);

Also, I think it would be wise to get us a DRAFT Compliance Monitoring Plan ASAP. The Compliance Monitoring Plan should include the Sampling/Analysis Procedures for the Baseline Study as well as the "Additional Delineation" and the "Long-term Groundwater Monitoring" contemplated in the attached "Scope and Cost Summary" that you guys sent to us a while back.

Finally, we intend to continue to aggressively move forward and have the transfer occur by April 15th as you have proposed. Let's be sure that we see tangible progress and wrap up in the coming weeks. Pressure is mounting for wrap up.

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Vicksburg Rev 4 11-08-03a - Summary On

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

----- Forwarded by Trey Hess/HW/OPC/DEQ on 11/10/2003 12:34 PM -----

"Williams, Eric" <EWilliams@arcadis-us.com>

To: <Trey_Hess@deq.state.ms.us>
cc:
Subject:

11/10/2003 12:27 PM

Hi Trey-

Can you do me a favor and review this asap and comment on likelihood of various scenarios. Thanks-

Eric

Eric Williams

Director, Property Redevelopment Program
ARCADIS
630 Plaza Drive, Suite 200
Highlands Ranch, CO 80129
direct (720) 344-3838
mobile (303) 521-5805

Vicksburg Rev 4 11-08-03a - Summary On

Kelly Riley@DEQ
03/29/2004 09:06 AM

To: Trey Hess/HW/OPC/DEQ@DEQ@INETDEQ
cc: Ghosh.Mita@epamail.epa.gov
Subject: Re: Vicksburg Chemical

the language is fine, it should not conflict with any lang in the state agreed order.

Trey Hess@DEQ

Trey Hess@DEQ
03/29/2004 09:23 AM

To: Kelly Riley/Legal/Admin/DEQ@DEQ@INETDEQ
cc: Ghosh.Mita@epamail.epa.gov
Subject: Vicksburg Chemical

Kelly,

Being our legal counsel for this project, please take a look and let me and/or Mita know your thoughts/concerns/blessing.

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

----- Forwarded by Trey Hess/HW/OPC/DEQ on 03/29/2004 09:09 AM -----

Ghosh.Mita@epamail.epa.gov
03/29/2004 08:59 AM

To: Trey_Hess@deq.state.ms.us
cc:
Subject: Vicksburg

Trey:

in our 3008(h) we would like to put in the following paragraph. I wanted to make sure that it does not conflict with anything in the state order. I don't think it does but I am double checking. Please let me know..

2. Any report or other document submitted by Respondents pursuant to this Order which makes any representation concerning Respondents' compliance or noncompliance with any requirement of this Order shall be certified by a responsible corporate officer of Respondents or duly authorized representatives. A responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.

3. The certification required by paragraph three (3) above, shall be in the following form:

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: _____

Name: _____

Title: _____

Date: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 19 2004

RECEIVED
MAR 23 2004
DEQ-OPC

4WD-ERRB

Mr. Jerry Banks
Chief, Hazardous Waste Division
Mississippi Department of
Environmental Quality
P. O. Box 10385
Jacksonville, Mississippi 39289-0385

Dear Mr. Lee:

We are pleased to provide a copy of the Final Pollution Report documenting the removal action at the Vicksburg Chemical Company Suite, Vicksburg, Warren County, Mississippi. If you have any questions or comments concerning this document, please contact the On-Scene Coordinator at the following address:

Kevin S. Misenheimer
U. S. Environmental Protection Agency
4WD-ERRB
61 Forsyth Street, 11th Floor
Atlanta, Georgia 30303
(404) 562-8922

Sincerely,

A. Shane Hitchcock, Chief
Emergency Response & Removal Branch

cc: Matthew Taylor
Michael Norman

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

1. HEADING

Date: February 6, 2004

Subject: Vicksburg Chemical Company Site
Vicksburg, Mississippi

From: Kevin S. Misenheimer, OSC
Emergency Response and Removal Branch

To: Region 4 Response Center
Shane Hitchcock, ERRB
Don Rigger, ERRB
Matthew Taylor, ERRB
Tony Moore, ERRB
Wilda Cobb, ORC
Ken Whitten, MSDEQ
EPA HQ

POLREP 13 and FINAL

2. BACKGROUND

Site No: A49H
Location: 4280 Rifle Range Road
TO Amount: $ 650,000
Response Authority : CERCLA
NPL Status: non-NPL
Start Date: 10-15-02

EPA ID: MSD990714081
Task Order No: 68-S4-02-07
Contractor: Ferguson Harbour
Incident Category: Removal Action
State Notification: MSDEQ
Completion Date: 02-16-03

3. SITE INFORMATION

The Vicksburg Chemical Company is located within the city limits of the City of Vicksburg, Warren County, Mississippi. The Site is comprised of approximately 650 acres divided into two separate and distinct operations known as the North Plant and the South Plant. The North Plant produced potassium nitrate (fertilizer), liquid chlorine and liquid dinitrogen tetraoxide (rocket fuel). The South Plant produced chlorinated pesticides, herbicides and other agricultural products including among others: dinitro butyl phenol, monosodium methane

arsonate, toxaphene, methyl parathion, and atrazine. Currently, VCC as well as its parent company filed a voluntary petition for relief 300.415(b)(2)(i) under Chapter 11 of the Title 11 of the United States Code (Bankruptcy Code) as well as to abandon the Site.

IV. RESPONSE INFORMATION

A. Situation

1. Current Situation

EPA completed the removal action on February 16, 2003. EPA contractors (Ferguson Harbor, Inc.) were demobilized from the site on this date, however, MSDEQ continued using Ferguson Harbor, Inc. to maintain the site after the EPA action was completed. Since that time, MSDEQ has been providing site security as well as maintaining critical systems to manage contaminated storm water runoff. Due to uncertainties related to the future use or sale of the property, EPA has continued to maintain communications with MSDEQ during this period.

2. Removal Activities to Date

During the removal action, EPA maintained the facilities' environmental control systems and also mitigated numerous threats posed by leaking tanks, drums and other bulk storage containers on the Vicksburg Chemical Site. These activities are outlined in the previous Pollution Reports and are also summarized in the attached report entitled Vicksburg Chemical Project, Final Report.

B. Planned Removal Activities

EPA's removal activities as listed in the Action Memorandum were as follows:

1. Conduct personnel and site air monitoring activities and other health and safety actions as may be required;

2. Maintain site security to control access to the site;

3. Maintain and operate existing effluent control system as long as effluent requires treatment;

4. Inspect, evaluate and maintain all bulk storage containers and process equipment to prevent releases of hazardous substances, pollutants or contaminants;

5. Respond to leaks and spills from bulk storage containers and process equipment to mitigate threats to public health and the environment;

6. Modify and/or re-configure effluent control system and site storm water management system;

7. Characterize, load-out, transport and recycle or dispose of product and waste material stored on site

C. Next Steps

MSDEQ is currently maintaining the Vicksburg Chemical Site. Although no additional EPA removal activity is anticipated at this time, EPA continues to monitor MSDEQ activities at the site.

D. Key Issues

EPA's removal activities have addressed the most time-critical threats posed by the Vicksburg Chemical Company Site. Threats posed by leaking tanks containing nitric acid, sulfuric acid and nitrogen dioxide have been mitigated. Additionally, other bulk storage containers containing hazardous substances have been removed from the site. Access to the site has been restricted by placing and repairing the perimeter fence. This has reduced the threat of exposure to trespassers who might come into contact with contaminated soils which remain on the facility.

V. COST INFORMATION (as of 02-01-04)

	Total	Ceiling
ERRS	$ 548,700	$ 650,000
START-2	$ 17,000	$ 25,000
USCG	$ 62,300	$ 85,000
TOTAL	$ 628,000	$ 760,000

The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

VI. DISPOSITION OF WASTES

Waste Stream	Medium	Weight	Volume	Containment-Migration Control	Treatment	Disposal
Nitric Acid	Liquid	1615.7 tons	289,309 gal[1]	Transported Off Site	Recycled	Mississippi Chemical Company Yazoo City, MS
Sulfuric Acid	Liquid	29.03 tons	3,787 gal[2]	Transported Off Site	Recycled	Mississippi Chemical Company
Dinitrogen Tetroxide	Liquid	13 tons	N/A	Transported Off Site	Recycled	DuPont and BOC via Mississippi Chemical Company
Castor Oil	Liquid	N/A	4 drums	Transported Off Site	Recycled	Mississippi Chemical Company
Amberlite		N/A	25 drums	Transported Off Site	Recycled	Mississippi Chemical Company
Cation resin		N/A	18 drums	Transported Off Site	Recycled	Mississippi Chemical Company
Anion resin		N/A	2 drums	Transported Off Site	Recycled	Mississippi Chemical Company
Silica desicant		N/A	1 drum	Transported Off Site	Recycled	Mississippi Chemical Company
MDI			7 drums	Transported Off SIte	Disposed	Perma Fix

[1] Nitric acid volume based on 11.5 lbs/gallon density.

[2] Sulfuric acid volume based on 15.33 lbs / gallon density.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 15 2004

4WD/SPSSB

Charles Chisolm
Executive Director
Mississippi Department of
Environmental Quality
Post Office Box 20305
Jackson, Mississippi 39289-1305

Dear Mr. Chisolm:

This letter is in response to the Mississippi Department of Environmental Quality's (MDEQ) October 16, 2003, letter from Trey Hess requesting a Brownfields property-specific funding determination for the abandoned Vicksburg Chemical Company (VCC) site in Vicksburg, Mississippi.

Pursuant to the Terms and Conditions under Section 128(a) of the Comprehensive Environmental Response, Compensation and Liability Act, Mr. Hess requested a property-specific funding determination for VCC because it is subject to RCRA corrective action thereby excluding it as an eligible brownfields site. This is the reason an EPA brownfields property-specific funding determination is necessary.

EPA has reviewed the supplemental information from your Department and has determined that financial assistance at the Vicksburg site will: (1) protect human health and the environment by allowing MDEQ to provide adequate oversight of remediation activities, (2) promote economic development while reusing the abandoned facility in a productive manner, and (3) enable the preservation of the adjacent undeveloped property. Therefore, your property-specific funding determination is approved.

We appreciate your desire to protect and preserve the environment while continuing redevelopment efforts in the City of Vicksburg. Please feel free to contact me or have a member of your staff contact either Philip Vorsatz or Nicole Comick-Bates at (404) 562-8789 and (404) 562-9966, respectively, if you have any questions or concerns regarding this matter.

Sincerely,

J. I. Palmer, Jr.
Regional Administrator

Charles Chisolm
02/24/2004 06:40 PM

To: Trey Hess/HW/OPC/DEQ@DEQ
cc:
Subject: Vicksburg Chemical Property

trey look this over and call me. i have not looked at it and may not unless you tell me i should. thanks
----- Forwarded by Charles Chisolm/Admin/DEQ on 02/24/04 06:39 PM -----

"Scott Wilderman" <scott@pacificchlorine.com>
02/24/04 03:00 PM
Please respond to "Scott Wilderman"

To: "Charles Chisolm" <charles_chisolm@deq.state.ms.us>
cc:
Subject: Vicksburg Chemical Property

Dear Mr. Chisolm,

Thank you for taking my call this morning. As brief as the conversation was, I would like to confirm our mutual understanding.

From MDEQ, as of today:
Remediation requirements have been defined by MDEQ.
No agreements have been executed by Harcros/Arcadis with MDEQ or EPA.
Issues have been reduced to just a few items.
MDEQ believes a deal will be consumated in the next few weeks but cannot be assured or provide assurance of this.
MDEQ considers it useful to know that PCI still has an interest.

From PCI, as of today:
PCI still has an interest and remains committed to the terms of its offer from last August, which requires PCI to:
1 - pay for the remediation of the property,
2 - sell land suitable for golf course or other development to the City of Vicksburg on specific terms,
3 - enter into a natural gas supply contract with the City of Vicksburg on specific terms,
4 - operate the potassium nitrate and associated production facilities.
Beyond the offers made last August:
1 - PCI will make any modifications to the GFP remediation contract submitted last August required by MDEQ and EPA.
2 - PCI will not require direct or indirect taxpayer funding through federal, state, or municpal appropriations or bond offerings.
3 - PCI will reimburse MDEQ for certain of its costs of monitoring the facility dating back to the time of abandonment of the facility by Cedar.

It is our sincere hope that MDEQ will excercise it's right to reopen discussions with PCI in the event an agreement cannot be reached with the other parties within the next 2-3 weeks. Above all, if it becomes clear or even just reasonably possible that the other party will be seeking direct or indirect taxpayer funding as part of their overall plan to manage the remediation and property, we would appreciate being advised of the situation and being given the opportunity to provide our solution, which requires no such taxpayer assistance, but instead provides taxpayer relief of costs already incurred.

Please advise if I have made any errors in our understanding or if there is anything I need to further clarify for you.

Sincerely,
Scott Wilderman

President
Pacific Chlorine, Inc.
Tel: 415.221.5637
Fax: 415.221.5684
E-mail: scott@pacificchlorine.com

Louisiana Chemical Equipment Co., L.L.C.
PLANT REMOVAL SURPLUS EQUIPMENT LIQUIDATIONS
USED CHEMICAL PROCESS EQUIPMENT

P. O. BOX 65064 BATON ROUGE, LOUISIANA 70896-5064
PHONE (225) 923-3602 FAX (225) 926-5237
E-MAIL: plants@lcec.com http://www.lcec.com

February 19, 2004

SENT VIA FEDERAL EXPRESS:
601-961-5300

Mr. Jere "Trey" Hess, P.E., DEE
Mississippi Department of Environmental Quality
101 Capitol Centre
101 West Capitol Street
P. O. Box 20305, (39289-0385)
Jackson, Mississippi 39201

Dear Trey,

Per our conversation earlier today concerning our interest in showing our clients the idle plants and miscellaneous equipment that you (Mississippi Department of Environmental Quality) have available at this time at the former Cedar Chemical Corporation in Vicksburg, Mississippi.

I have enclosed a standard registration agreement that we have used many times in the past with people like yourselves when we do not own a plant but would like to bring one of our clients to look at a plant.

Please let me know if this is acceptable with you and I will telefax this to you with the names of our two clients that we would like to bring to the Vicksburg site.

If during this time period you are successful in selling the site to your other client just let me know so we do not make the trip.
Sincerely

LOUISIANA CHEMICAL EQUIPMENT CO., L.L.C.

Steve O'Brien

Steve O'Brien
Vice-President/ International Marketing

SLO/em
Enclosure

FAX

Louisiana Chemical Equipment Co., L.L.C.
P.O. Box 65064, Baton Rouge, LA 70896-5064
Phone: 225/923-3602----- FAX: 225/926-5237
E-MAIL: plants@lcec.com WEB: http://www.lcec.com

DATE: 2-19-04

TO: Mr. Trey Hess

FAX NUMBER: 601-961-5300

FROM: Steve O'Brien

Number of pages including title page: 3

COMPLETE PLANTS
Urea/Formaldehyde Generator Caprolactam Polyester Ethylene PVC Polypropylene Polyethylene (LDPE) Oxygen Aromatics units

COMPLETE FERTILIZER PLANTS
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PLANT REMOVAL SURPLUS EQUIPMENT LIQUIDATIONS
USED CHEMICAL PROCESS EQUIPMENT

P. O. BOX 65064 BATON ROUGE, LOUISIANA 70896-5064
PHONE (225) 923-3602 FAX (225) 926-5237
E-MAIL: plants@lcec.com http://www.lcec.com

February 19, 2004

Mr. Jere "Trey" Hess, P.E., DEE
Mississippi Department of Environmental Quality
101 Capitol Centre
101 West Capitol Street
P. O. Box 20305, (39289-0385)
Jackson, Mississippi 39201

Dear Mr. Hess:

We would like to register the following companies as our clients for various idle plants and equipment that Mississippi Department of Environmental Quality (MDEQ) has located at the former Cedar Chemical site in Vicksburg, Mississippi.

_____
_____
_____
_____

REGISTRATION NON-CIRCUMVENTION AGREEMENT

MDEQ acknowledges that Louisiana Chemical Equipment Co., L.L.C. has located the above customers for the various idle plants and equipment at the Cedar Chemical site located in Vicksburg, Mississippi and further agrees that neither MDEQ nor its associated companies, subsidiaries and/or clients will deal directly with the customer or its subsidiaries and/or associated companies regarding price negotiations and/or purchase of the plant and equipment, but will deal exclusively with LCEC.

Please sign and return a copy of this letter as your acknowledgment and acceptance of our registering the companies listed above. Our fax number is (225) 926-5237.

Sincerely,

LOUISIANA CHEMICAL EQUIPMENT CO., L.L.C.

Steve O'Brien
Steve O'Brien
Vice-President, International Marketing

SLO/em

ACKNOWLEDGED AND ACCEPTED

Mississippi Department of Environmental Quality

By:_____
Authorized Signature

Date:_____

Ken Whitten

02/05/2004 08:11 AM

To: Phil Bass/OPC/DEQ@DEQ, Eric Dear/GW/OPC/DEQ@DEQ, Kelly Riley/Legal/Admin/DEQ@DEQ, Jerry Banks/HW/OPC/DEQ@DEQ, Trey Hess/HW/OPC/DEQ@DEQ, Terry Champion/HW/OPC/DEQ@DEQ

Subject: Vicksburg Chemcial invoices 1-05-04 thu 1-18-04

FYI

For the week of 1-05-04 thru 1-11-04 ..... contracors cost $ 10,050.11
For the week of 1-12-04 thru 1-18-04 ..... contracors cost $ 8,334.00

Total cost for invoices (thru 1-18-04) is **$ 389,174.17**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 29 2004

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA FACSIMILE AND U.S. MAIL

Mr. Steve Blake
Chairman and Chief Executive Officer
ARCADIS G&M, Inc.
630 Plaza Drive, Suite 200
Highlands Ranch, CO 80129-2379

Mr. Kevin Mirner
Harcros Chemicals, Inc.
P. O. Box 2930
Kansas City, KS 66110-2930

SUBJECT: Agreement-in-Principle for Harcros-ARCADIS Purchase of the Vicksburg Chemical Company Property in Vicksburg, MS

Dear Messrs. Blake and Mirner:

This letter provides the terms and conditions of the Agreement-in-Principle (AIP) between the United States Environmental Protection Agency (EPA), Harcros Chemicals, Inc., and ARCADIS G&M, Inc. (Harcros-ARCADIS). Harcros-ARCADIS and EPA enter into this AIP to resolve certain environmental cleanup obligations under the Resource Conservation and Recovery Act (RCRA) 42 U.S.C. Section 6901 et. seq., that are related to the potential Harcros-ARCADIS purchase of the Vicksburg Chemical Company property and the pre-existing contamination of that property. The AIP is an expeditious way for EPA to respond to the Harcros-ARCADIS request for a no-action assurance regarding certain existing contamination related to the Vicksburg Chemical facility in Vicksburg, Mississippi. Harcros-ARCADIS are in negotiations with the Mississippi Department of Environmental Quality (MDEQ) to acquire the Vicksburg Chemical Company and perform certain cleanup activities on the property. Time is of the essence for Harcros-ARCADIS to decide whether or not it will acquire the property. That decision is contingent upon EPA committing to provide, after entrance of a RCRA 3008(h) Administrative Order on Consent as part of this AIP, a no-action assurance for certain cleanup responsibilities at the Vicksburg Chemical Company property.

The Harcros-ARCADIS no-action assurance request is to address two areas for which the scope and extent of contamination have not been fully assessed. These areas are the deeper aquifer beneath and in the vicinity of the Vicksburg Chemical Company property consisting of approximately 540 acres, and surface soil and surface water contamination beyond the 40 acre

TELECOPIER TRANSMITTAL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
OFFICE OF SITE REMEDIATION ENFORCEMENT
POLICY AND PROGRAM EVALUATION DIVISION

FAX (202)-564-0074

To:	Trudy Fischer
Organization:	Brunini, Grantham, Grower & Hewes, PLLC
Fax:	601 960-6902
Direct Dial:	601 960-6846
From:	Gregory J. Madden
Direct Dial:	202-564-4229
Date:	January 29, 2004
Total pages: (including cover)	4

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Trudy Fischer,

Attached is the document that Mita Ghosh left you the voice mail about.

Greg Madden

Vicksburg Chemical operating plant area. Harcros-ARCADIS has agreed to perform additional assessment in these areas, but will not commit to conducting cleanup of these areas.

This letter reflects the parties' common understanding of the major terms for resolving Harcros-ARCADIS' request. A final settlement is subject to agreement between EPA and Harcros-ARCADIS on the terms of a RCRA Section 3008(h) Administrative Order on Consent. If agreement on terms of the RCRA Section 3008(h) order is not reached, then this AIP shall be null and void, and no party may seek to enforce it.

Harcros-ARCADIS and EPA agree in principle that if the following conditions are satisfied, EPA will provide Harcros-ARCADIS a no-action assurance.

1) Harcros-ARCADIS will enter into an agreement with MDEQ which will require cleanup activities that are acceptable to EPA. At minimum, the agreement will provide for:

   - Cleanup of contaminated surface soils within the 40 acre boundary of the operating plant. Implementation of engineering controls (e.g., a cap) which prevent unacceptable exposures to workers at the plant and prevent further releases of contaminants from surface soils into the environment may be acceptable and sufficient cleanup measures. The Harcros-ARCADIS cleanup will assure that contaminated surface soils do not act as a continuing source of groundwater contamination.

   - Remediation of contaminated groundwater in the shallow aquifer beneath the 40 acre operating plant area to assure that contaminated groundwater above risk-based levels does not migrate from this 40 acre area, and also to assure that contaminated groundwater does not discharge to surface waters beyond the 40 acre plant area in harmful concentrations.

2) EPA and Harcros-ARCADIS will enter into a RCRA 3008(h) Administrative Order on Consent acceptable to EPA and which incorporates the MDEQ agreement, provides for financial assurance and insurance for work to be performed under the MDEQ order, and reserves EPA's right to perfect and enforce liens under CERCLA §107(r) resulting from EPA's cleanup activities on the Vicksburg Chemical Company property post-dating the acquisition of such property by Harcros-ARCADIS.

3) Harcros-ARCADIS will provide details of financial transactions relating to the property transfer of any portion of the 540 acres of property. These details will include information concerning how the property will be developed, to whom the property will be sold, and consideration exchanged for each such transaction.

4) EPA reserves its right to take action to address any imminent and substantial

endangerment at the site pursuant to RCRA § 7003 and CERCLA § 106.

After EPA and Harcros-ARCADIS enter into the RCRA 3008(h) Administrative Order on Consent, EPA will provide a no-action assurance limiting cleanup obligations for contamination pre-dating Harcros-ARCADIS' acquisition of the Vicksburg Chemical Company property to those activities required pursuant to the 3008(h) Administrative Order on Consent.

Please note that any no-action assurance only applies to existing contamination and does not apply to future contamination, if any, created by Harcros-ARCADIS.

Harcros-ARCADIS and EPA agree to utilize this AIP as the framework for negotiating a 3008(h) Administrative Order on Consent and each will use best efforts to finalize a 3008(h) Administrative Order on Consent within 90 days of executing this AIP.

For Harcros Chemicals, Inc.:

_____

For ARCADIS G&M, Inc.:

_____

For United States Environmental Protection Agency:

John Peter Suarez
Assistant Administrator

The Vicksburg Post.
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News

City to pay $15,000 to study golf course potential

By Mark J. Armstrong

[1/21/04]Taking what could be the next step toward developing a golf course overlooking the Mississippi River, Vicksburg officials entered a deal Tuesday to pay half the cost of a needs assessment of the former Vicksburg Chemical plant property.

The Vicksburg Board of Mayor and Aldermen agreed to pay $15,000 for the study despite objections raised by one citizen who said the golf course could never make money.

John Shorter, 103 Starlight Drive, encouraged board members to look at remarks concerning the Dancing Rabbit Golf Course in Philadelphia, part of the Silver Star Resort and Casino.

Shorter asked that the city obtain a copy of a PBS interview with Chief Philip Martin in which Martin said that the resort's course was not profitable. Shorter also asked that the interview be aired on the city's cable channel RCTV 23.

Officials said they will look at the interview, but added that the proposed municipal course here could not be compared to the resort course near Philadelphia because the two would cater to different customers and have different standards of maintenance.

A golf course at a casino also provides free play to high spenders.

"They don't spare any expense on the aesthetics over there," said South Ward Alderman Sid Beauman, a former golf pro.

Beauman said a study done by a third-party consultant firm for Arcadis, one of the partners in redeveloping the former Vicksburg Chemical property, showed an $8.5 million golf course here could pay for itself in less than 10 years.

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He said the proposed golf course on 220 acres off Warrenton Road could host about 50,000 rounds of golf a year, about the same number as Dancing Rabbit, and would charge $50 per round. At that rate, the golf course would generate about $2.5 million a year in revenue, enough to pay off a bond issue for the construction.

Today, there are two golf courses locally, the Vicksburg Country Club, a private course, and Clear Creek Golf Course, owned by Warren County, which has about 45,000 rounds played each year. A round of golf at Clear Creek costs $18.

Plans for the undeveloped land south of the river bridges and north of Rainbow Casino also call for the cleaning of 40 acres of chemically contaminated land, reopening the chemical plant and construction of about 232 homes on vacant land previously owned by Vicksburg Chemical.

The company shut down last year, laying off about 100 workers and leaving land that requires constant monitoring by the Mississippi Department of Environmental Quality. Mayor Laurence Leyens said the city will ask the state to put up $3.5 million to $4 million to help with the estimated $8 million cleanup.

Harcros Chemicals Inc. of Kansas City, Kan., is paying half of the cost of the needs assessment study through Arcadis. Leyens said that study is needed to identify possible funding sources.

He said if the money for the cleanup cannot be secured, deals for the golf course and reopening the plant could be dead.

"And we'll be dealing with a messy situation forever," Leyens said.

MDEQ, which was given control of Vicksburg Chemical's 540 acres in southern Vicksburg, has been negotiating with Harcros and Arcadis, a Dutch multinational corporation with U.S. headquarters near Denver, to take over the site and reopen the chemical plant.

Today, MDEQ is spending about $50,000 a month monitoring the site to prevent more contamination.

Vicksburg Chemical and its predecessors have operated at that site for 50 years, producing pesticides, herbicides and fertilizers and fuel additives. Contamination at the site is believed to go as deep as 40 feet underground.

The property includes 500 acres adjacent to the plant that had served

as buffers while it was in operation. That land is reportedly not contaminated.

In other matters the city board:

• Approved interlocal agreements with Warren County for E-911, ambulance service, assessing and collection of property taxes and the sale of property for nonpayment of taxes.

Supervisors also approved those agreements, which now have to be approved by the Attorney General's Office.

• Approved minutes.

• Recognized city employees who have been working for Vicksburg for five, 10, 20 and 25 years.

• Awarded sealed bids for towing, mosquito control chemicals and fire hydrant parts.

• Approved a $75 one-forth-page ad for the Vicksburg Theatre Guild.

• Approved advertisement for the Jackson Touchdown Club for this year's Mississippi Sports Hall of Fame banquet.

• Approved a $125 advertisement for the Vicksburg Employee Heart Fund golf tournament.

• Accepted a proposal to sell a metal building at 600 Depot St., for $101 to Jimmy Vinson and Billy Vinson.

• Approved allocation of $620 to the Human Services and Parks and Recreation departments to sponsor a Valentine's Dance for high school students from 8 until 11 p.m. Feb. 13 at the Jackson Street Community Center.

The city board will meet again at 10 a.m. Monday at City Hall Annex.

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"Scott Wilderman" <scott@pacificchlorine.com>

01/19/2004 11:24 AM
Please respond to "Scott Wilderman"

To: "Trey Hess" <trey_hess@deq.state.ms.us>
Subject: Fw: Acorn Email Course By Jim Cathcart Part 46

Trey,

I assume you're off for the holiday today. As a follow-up to our recent conversations, I plan to send something to Mr. Chisolm later this week.

With regard to some of the "what if's", like particularly, "what if contamination has reached the creek", I have reviewed our plan and capabilities and offer this:
1 - Whatever the known mess is, we will clean it up.
2 - Whatever mess turns out to be known, we will work with you to make it known, and we will clean it up.
3 - There won't be any "on-site vs. off-site" issues, or lines to draw. If a need exists at MDEQ or EPA for a definition of the "site", I suggest: "all contaminated property and groundwater". We can take responsibility for the "site" so-defined, or dispense with site definition and take responsibility for all contaminated property. It's the same to me. Take your pick or offer an alternative you like better. I can't imagine MDEQ or EPA coming up with something we can't handle. Coherence and comprehensiveness are the only keys, and can only come from you guys.
4 - All non-contaminated property will be made available to alternative uses, where prudence shall govern which portions for what uses.

As we discussed, PCI is not "back", nor "suddenly interested again now". We have been here, maintaining our interest and respecting MDEQ's process. If the questions change to "why and/or, why are we re-asserting it now", I offer you the following in addition to the forwarded e-mail:
1 - By March, we will have been working on this project for 2 years. We have spent too much time and money to simply walk away.
2 - The December newspaper article from the Vicksburg Post caused us concern over whether your selected party(ies) have materially strayed from the fundamental expectations of the selection process last August and the government goals that have been maintained throughout the course of the project. We still have a solution to the remediation issues and uses for the property that benefit the community without undue risk to the environment or the use of any taxpayer funding.

Harcros has been engaged in formal due diligence of the project for at least 19 months as is documented in Cedar bankruptcy proceedings. I understand Arcadis' discussions with MDEQ date back as far as 9 months. Jointly, they have now had nearly 5 months of exclusivity within which to design a solution. We hope that MDEQ will exercise its rights to re-open the process to other interested parties such as ourselves now that the time requested by Harcros/Arcadis in their July letter to study the situation and present a solution "...that has tremendous benefit..." has passed.

Sincerely,
Scott Wilderman
President
Pacific Chlorine, Inc.

> -----Original Message-----
> From: Jim Cathcart [mailto:execdirector@profnet.org]
> Sent: Monday, January 12, 2004 3:06 PM

> To: Jim Cathcart
> Subject: Acorn Email Course By Jim Cathcart Part 46
>
>
> Welcome to this week's tip from Jim Cathcart. If you are
> receiving this weekly mailing at the request of your company
> please contact them with any questions about this series.
>
> If you received this email from another person , find it
> valuable, and would like to receive your own weekly
> subscription, contact cathcart@profnet.org.
> ---
>
> Inspiring Others to Win
> by Jim Cathcart
>
> "It is one of the great compensations of life that no man can
> sincerely endeavor to help another without, in turn, helping
> himself." Emerson
>
> Ron was dining alone when the older couple were seated at a
> table nearby. As he finished his meal he noticed that these
> people were truly enjoying each other's company. They told
> each other stories, laughed, flirted. It was fun to watch.
> Though clearly in their eighties they seemed to give each
> other youth.
>
> On his way out Ron said to them, "Excuse me. I don't wish to
> intrude but I'd like to offer an observation. I've been
> noticing you both from across the room. And I must say that
> you are either very young lovers, very dear friends or you
> just have a truly special relationship."
>
> Upon hearing this the couple became wonderfully radiant.
> Smiles erupted on their faces as they shared a joyful glance.
>
> "What a delightful thing to say!" They told Ron. "Please
> join us."
>
> The offer was sincere but Ron politely declined and bid them
> good-bye. Both Ron and the couple were smiling warmly as he
> exited the restaurant. When Ron told me this story he said,
>
> "Jim, the beauty of this experience was my own surprise at
> how wonderful it made me feel! I never expected that."
>
> Studies have repeatedly proven that people who give of
> themselves for others live longer, stay healthier and do
> their work more effectively than those who don't reach out to
> help.
>
> Our culture is experiencing an all-time high in
> charitable giving and volunteer service, despite economic
> challenges. More and more people are discovering the joy of
> helping. One of the wonderful side benefits of helping is
> that it is contagious.
>
> N U R T U R E Y O U R N A T U R E
> ---
>
> Jim Cathcart is celebrating 28 years of helping people grow

> their businesses and expand their lives through his coaching,
> speeches, seminars, books, tapes and consulting. Mr. Cathcart
> is the author of 13 books including "The Acorn Principle"
> (ISBN 0- 312-196520) and Relationship Selling. He is also
> Co- Founder of "The Professional Speaking Institute".
>
> Cathcart Institute, Inc.
> 1650 Oakcottage Court
> Lake Sherwood, CA 91361
> United States of America
> TEL: (805)777-3477
> FAX: (805) 777-7013
> WEB: http://www.cathcart.com
> EMAIL: jim@cathcart.com
> _____
>
> This "Acorn E-Letter is part of a subscription provided to you
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"Williams, Eric" <EWilliams@arcadis-us.com>

01/09/2004 09:19 AM

To: <Trey_Hess@deq.state.ms.us>
Subject: FW: VCC Site Figures

From: Ellis, John

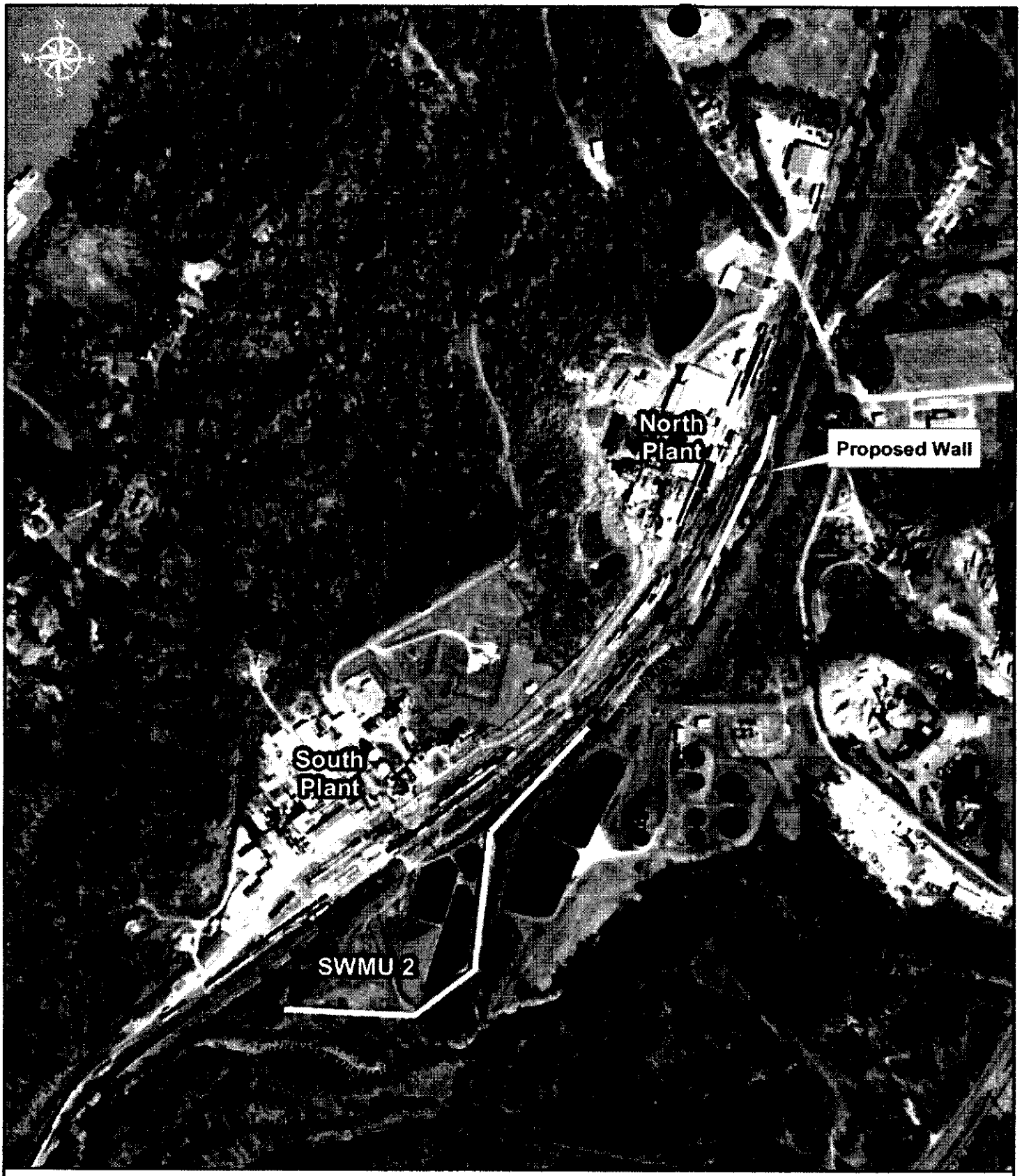
Sent: Friday, November 21, 2003 1:30 PM

To: Payne, Fred; Newman, Paul; Williams, Eric; Suthersan, Suthan; Andrews, Scott; Lawton, Dana; Guichard, Rudolfo; Ratchford, Tim; Escude, David

Subject: VCC Site Figures

Attached are two figures showing the general soil corrective action areas and the proposed barrier wall.

<<soil-corr-act.pdf>> <<prop-barrier.pdf>> soil-corr-act.pdf prop-barrier.pdf



1500 Foot Wall
3300 Foot Wall (Includes the 1500 ft Wall)

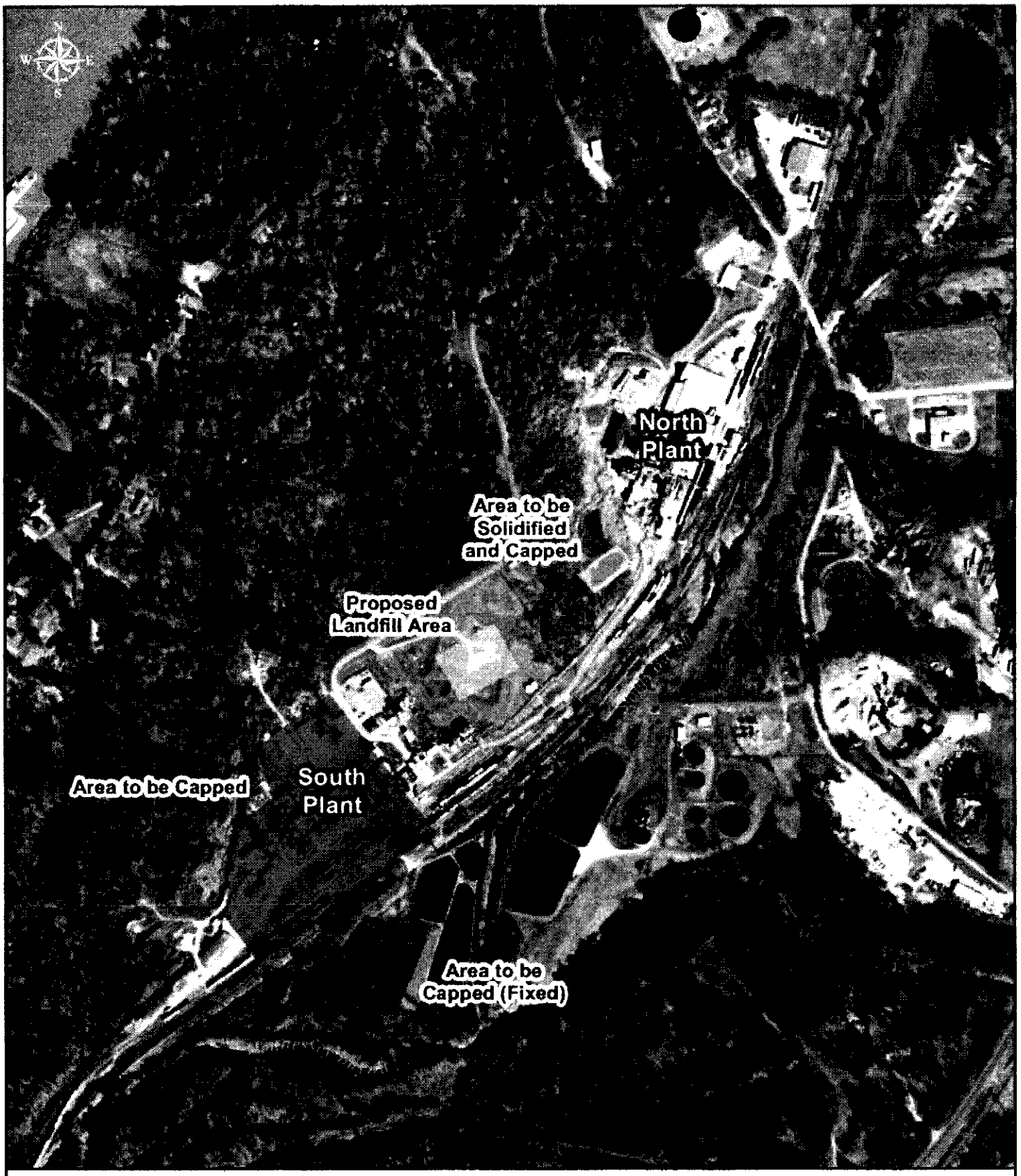
2000 USGS MISSISSIPPI DIGITAL ORTHO-QUARTER QUAD

600 0 600 Feet

VICKSBURG CHEMICAL COMPANY SITE

PROPOSED BARRIER WALL LOCATIONS

VISCKBURG, MISSISSIPPI



Area to be Capped
Area to be Solidified and Capped
Proposed Landfill Area

2000 USGS MISSISSIPPI DIGITAL ORTHO-QUARTER QUAD

600 0 600 Feet

VICKSBURG CHEMICAL COMPANY SITE

SOIL CORRECTIVE ACTION AREAS

VISCKBURG, MISSISSIPPI

Trey Hess
01/08/2004 02:06 PM

To: Kumar.Narindar@epamail.epa.gov@INETDEQ
Subject: Re: Call in Number for Vicksburg Conference Call

Kumar,

I called Jerry this morning and we talked about your questions. According to Jerry, it appears that the MS COMMISSION on Environmental Quality ruled that there were NO regulated units at VCC (i.e., I think that they ruled that the "substances" were not "hazardous waste" and therefore, there were no "regulated units"). It appears that EPA, in turn, felt that a RCRA cleanup was appropriate and issued the consent order. The consent order was issued based on designating the "CONTAINER STORAGE AREA" (SWMU 1) a regulated unit, NOT the surface impoundment or the old landfill (SWMU 2). I PRESUME that this was a calculated move on EPA's part given the struggles between MDEQ/EPA staffs' position and the MCEQ's ruling. This move allowed EPA to require an RFI that would address ALL areas based on the small CONTAINER STORAGE AREA (SWMU 1).

Section IV. A of the Consent Decree cites the "container management area" (i.e., container storage area - SWMU 1) as the area where "hazardous wastes were previously managed." Section IV.C gives EPA the authority to "designate in writing additional HAZARDOUS waste management units requiring closure and post-closure care...." Section IV.D refers to all of these units as the "closing units." From my review of the files and my limited personal history, I am not aware of any instances where EPA Region 4 "designate[d] in writing additional hazardous waste management units requiring closure and post-closure care...." This being said, the only "closing unit" (i.e., regulated unit) requiring "clean closure" under RCRA/HSWA appears to be SWMU 1. My gut tells me that the RFI was then implemented and "areas of concern" were identified, and then labeled "Solid Waste Management Units (SWMUs)." VCC then proceeded to address these SWMUs.

According to Section 2.1 of the "RCRA Facility Investigation Interim Report and Phase II Workplan (Revision 1)," dated March 16, 2001, "the floor has been cleaned through sweeping, scraping, chipping, and reacting the dinoseb with hydrogen peroxide and a ferrous iron catalyst. A closure plan for the Container (Drum) Storage Area (SWMU 1) and the Returned Production Storage Area (SWMU 17) was developed by URS for VCC. The closure plan is consistent with RCRA rules and regulations. The closure plan was originally submitted in June 1992 as a 60-day deliverable to EPA and MSDEQ by VCC." A letter dated November 8, 1994 to Jerry Banks from EPA's G. Alan Farmer states that "EPA concurs with the position of the MDEQ that, in order to be approved, the Closure Plan must include methods for demonstrating clean closure as outlined in comments by MDEQ, which were transmitted to EPA in a letter dated September 28, 1992.

HOWEVER, ARCADIS has indicated that they plan to remediate the area (SWMU 1 and other SWMUs) by implementing some removal, institutional controls and a cap to levels that are protective of industrial/construction workers. They will also take measures to ensure that the levels remaining are not going to contribute to groundwater plume expansion/migration. So, it looks like we're on the same page as the Atlantic Steel Project. I believe that for the regulated unit (SWMU 1), they will meet clean closure requirements consistent with the Atlantic Steel Project.

As to your second question, I believe that Harcros needs a comfort letter similar to the October 3, 2003 one from Winston via Kutzman that reflects the new understanding of liability (i.e., that they will accept the known contamination that appears to be on-site and in shallow groundwater only and that any contamination found that happen to be "off-site" or in "deeper groundwater" are to be addressed by the regulatory agencies. They are not to allow migration from on-site and shallow to off-site or deeper). I envision that they would accept the same letter with a more recent date.

Also, Lael left me a message as I was typing this asking the following:

1. Was the surface water impoundment ever "clean closed"?
2. Did MDEQ ever issue a post-closure permit?
3. What are the number & Types of Regulated Units?

Answers:

1. Though we have no record that the surface impoundment was ever "designate[d] in writing [as an] additional hazardous waste management unit requiring closure and post-closure care..." as per Section IV.C of the Consent Order; VCC upgraded the surface water impoundment system by removing the sediments within the impoundments, placing the sediments in a Solidified Waste Containment Area (SWCA) and retrofitting the existing impoundments with a double synthetic liner system. (Ref. - Executive Summary, "Construction Status Report: Closure/Retrofit of Surface Impoundment System," Volume 1, May 1992). The work took place from 1989-1992 and prior to issuance of the Consent Decree (1992). I do not have any information regarding further work. I think a more critical question to ask is whether EPA ever designated it as a HAZARDOUS waste management unit? If not, then moot point?
2. No (See Commission Action in opening paragraph).
3. 1 Regulated Unit (SWMU 1) - See description above.

I hope this answers your questions. In terms of timing, Harcros desperately needs to move forward this month (and we'd like to shake loose of site control at $25,000/month too). If you need anything else, I'm here until 5:30 EST today and will be in at 9AM EST tomorrow. Jerry will be in tomorrow too. His mother is doing fine after some scheduled surgery she had earlier this week.

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Kumar.Narindar@epamail.epa.gov

Kumar.Narindar@epamail.epa.gov
01/08/2004 10:04 AM

To: Trey_Hess@deq.state.ms.us
cc:
Subject: Re: Call in Number for Vicksburg Conference Call

Trey,

I sent this to Jerry before I knew that he was out until Monday. Could you please look over the questions raised in Matt Hale's message and give me your thinking on them. The conference call between the Region and HQ is tomorrow morning, hence the urgency. Thanks.

N.Kumar
404 562-8448
----- Forwarded by Narindar Kumar/R4/USEPA/US on 01/08/2004 10:59 AM

Narindar Kumar

To:

jerry_banks@deq.state.ms.us, Lael Butler/R4/USEPA/US@EPA

01/08/2004 10:23 AM

cc:

Subject: Re: Call in Number for Vicksburg Conference Call

Jerry,

We're having another intra-EPA call on Friday. Please see Matt's questions below. Lael is working on these questions and could benefit from your input, especially on whether the required cleanup will meet closure requirements. Thanks.

N.Kumar
404 562-8448
----- Forwarded by Narindar Kumar/R4/USEPA/US on 01/08/2004 10:13 AM -----

Matt Hale

To: Narindar Kumar/R4/USEPA/US@EPA

01/07/2004 05:22 PM

cc:

Subject: Re: Call in Number for Vicksburg Conference Call

(Document link: Narindar Kumar)

Thanks. For this call, it'll be important if you can find out the answer to the question of whether there are unclosed regulated units at the site. Since this site went through so much argument, and ended up in an order, I imagine there must be records somewhere about which units we thought received haz. waste.

Also, if it turns out that there are "unclosed" (or even "closed") regulated units, it sure would be easier if we could conclude (or Mississippi could conclude) that the cleanup they'll require will meet clean closure requirements for those specific units. Keep in mind that our guidance allows "industrial" clean closures, i.e., closures where contamination is left in place at levels that are safe for industrial uses. (This is what Georgia EPD used at Atlantic Steel, since contaminated soil or slag was left underground, covered by parking lots, or whatever; and a groundwater system was left in place. So if Georgia could accept a clean closure under those circumstances, I'd think Mississippi could here.)

Also, do you have much of an idea about what the company would accept? (We talked about this before the holidays, but I wonder if you've had any followup discussions.) E.g., a comfort letter, which would be easy, I assume, because the region could just do it. A letter, but something stronger than the normal comfort letter. Or something more formal -- e.g., we talked about an actual order with the region, saying that if the company did what Miss. required them and addressed the known corrective action, we'd consider their corrective action obligations to be satisfied. Obviously, if they want a covenant not to sue, or something equivalent, that's what would take a year.

We're having a HQ only call tomorrow, but I'll let you know how that goes. Thanks. Matt

Narindar Kumar
To: Matt
Hale/DC/USEPA/US@EPA
01/07/2004 12:26 PM
cc:
Subject: Re: Call in Number for Vicksburg Conference Call
(Document link: Matt Hale)

We should be done before 11.

N.Kumar
404 562-8448

Kumar.Narindar@epamail.epa.gov

01/12/2004 08:26 AM

To: Trey_Hess@deq.state.ms.us, jerry_banks@deq.state.ms.us
Subject: Vicksburg Conference Call at 1pmEST today

We've got another call scheduled with a horde of people from Washington and here. I think it would be very beneficial if one or both of you could participate for the first 30 minutes so that you can serve as a resource for information on Harcross' intentions and other facts and issues we in EPA may not be familiar with. The call in number is 202 275-0199 code 4411#. Please let me know if you can participate. Thanks.

N.Kumar
404 562-8448

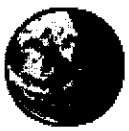
Trey Hess
09/02/2003 12:58 PM

To: "Williams, Eric" <EWilliams@arcadis-us.com>@INETDEQ
Subject: RE:

$200/acre for 18 acres. See fax.

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Williams, Eric" <EWilliams@arcadis-us.com>



"Williams, Eric" <EWilliams@arcadis-us.com>
09/02/2003 12:42 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc:
Subject: RE:

Did Bowmar make a financial offer for that property? Who has done the planning work on the site so far that resulted in the drawings you sent?

Eric

Eric Williams

Director, Property Redevelopment Program
ARCADIS
630 Plaza Drive, Suite 200
Highlands Ranch, CO 80129
direct (720) 344-3838
mobile (303) 521-5805

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Tuesday, September 02, 2003 11:31 AM
To: EWilliams@arcadis-us.com
Subject: Re:

Look in your files

Bowmar Contact - Jim Ditto - 601-634-8540 I'm faxing you some more info too. The cross hatch in magenta is what they want in the attached. Also, don't get hung up on the blue or green lines in the attached. This was my first cut at the gaming interest line when they were interested but to run the plant, the line may not provide adequate buffer.

(See attached file: Plant Property Line.pdf)

(See attached file: Bowmar.jpg)

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"Williams, Eric"
<EWilliams@arcadi s-us.com>
09/02/2003 09:37 AM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc: "'Trudy Fisher'" <tfisher@brunini.com>
Subject:

Hi Trey-

I wanted to thank you again for your part in MDEQ choosing the ARCADIS/Harcros team for the VCC site. I'll be working with Harcros over the next couple of days to develop a schedule for the next few weeks. In the meantime, I need to know about and get a copy of every environmental document available for the site. Can you get me a list of documents? What is the most expedient way to get copies? Thanks-

Eric

Eric Williams

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direct (720) 344-3838
mobile (303) 521-5805

Trey Hess
09/02/2003 10:46 AM

To: Trudy Fisher, Eric Williams
Subject: EPA & VCC

Trudy,

In the coming days, we're gonna talk with EPA about their current and future involvement at the VCC facility. Get with Eric and Kevin and decide what you'd like to see (e.g., EPA to vacate consent order?, prospective purchaser agreement?, etc.) along with timelines that you'd like for these things to happen. I'm hoping that MDEQ and EPA can talk through these things and (1) get a consensus as to the direction we, collectively as regulators, want to head and (2) establish roles/responsibilities/jurisdictions for each of us. I'm not looking for anything "formal" from you but rather conceptual ideas/plans that we can pass along to EPA as a road map.

TREY

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http://www.brownfields.ms

Trey Hess
09/02/2003 10:12 AM

To: "Williams, Eric" <EWilliams@arcadis-us.com>@INETDEQ
Subject: Re:

We're talking about several linear feet of information (10 yrs. of RFA and RFI info). I'll fax you a copy of the documents that VCC developed. The best way is to either (1) have someone come in and set up camp (call Debbie Pridgen for file review appointment at 601-961-5666 and tell her that you'll be working with me), or (2) have a firm come in and make the copies for you (call Debbie Pridgen - she has contact info).

I'll fax you a list of documents later today.

TREY

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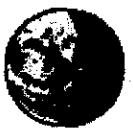

"Williams, Eric" <EWilliams@arcadis-us.com>
09/02/2003 09:37 AM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc: "'Trudy Fisher'" <tfisher@brunini.com>
Subject:

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Plant Property Line.pd

Bowmar.jpg

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Director, Property Redevelopment Program

CITY OF VICKSBURG

P. O. BOX 150 VICKSBURG, MS 39181-0150 (601) 634-4554

LAURENCE E. LEYENS
MAYOR

GERTRUDE A. YOUNG
ALDERWOMAN

SIDNEY H. BEAUMAN, JR.
ALDERMAN

August 28, 2003

Charles H. Chisolm, Executive Director 961-5349 fax
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305

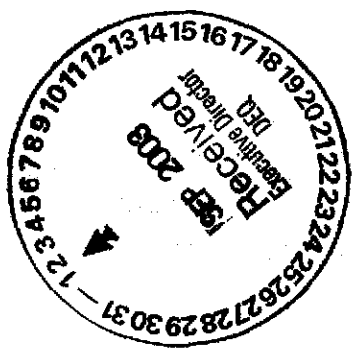
RE: Vicksburg Chemical Property

Dear Mr. Chisolm:

On behalf of our Board, I want to express our thanks to you for including us in your process for the disposition of the Vicksburg Chemical property. The ultimate outcome of the plant and development of the land will have long lasting effects on our community.

After reviewing the summary of the proposals, the City of Vicksburg believes that it would be in the City's best interest to choose the Harcros proposal. We hope that you will take this into consideration when making your decision.

Thank you for your courtesies in this matter.



Sincerely,

Laurence E. Leyens, Mayor

Calendar Entry:

Meeting

Subject:	**Vicksburg Chemical Company**		**Location:**	**CHC's Office**
Begins:	**Thu 08/28/2003**	**02:00 PM**	**Entry type:**	☒ **Meeting**
Ends:	**Thu 08/28/2003**	**04:00 PM**		
Chair:	**Trey Hess/HW/OPC/DEQ**			

Invitations already sent

To: **Charles Chisolm/Admin/DEQ@DEQ, Chuck Barlow/Legal/Admin/DEQ@DEQ, Jerry Banks/HW/OPC/DEQ@D Bass/OPC/DEQ@DEQ, Sam Mabry/Admin/DEQ@DEQ**

cc: **Joanne Rials/Admin/DEQ@DEQ, Pamela Layton/OPC/DEQ@DEQ, Sharon Smith/Legal/Admin/DEQ@DEQ**

☐ **Pencil In**	Time will appear free to others.
☐ **Mark Private**	Others cannot see any details about this event.
☐ **Notify me**	Have Notes notify you before the event.
Categorize:	

Description:

The purpose of this meeting is to discuss the responses (i.e., Harcros and PCI) that we will receive on August 22nd.

"Williams, Eric" <EWilliams@arcadis-us.com>

08/28/2003 09:14 AM

To: "Trey_Hess@deq.state.ms.us" <Trey_Hess@deq.state.ms.us>, "Williams, Eric" <EWilliams@arcadis-us.com>
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

Hi Trey-

ARCADIS' guarantee will indeed cover:

(1) "unknown" problems/contaminants;
(2) changes in cleanup standards; and
(3) additional work should corrective/remedial action fail, including if leaching from a SWMU occurs.

We price our guarantees based on a number of scenarios - including "best case" through "probable worst case" - so we will have considered every possibility during our analysis. Keep in mind, ARCADIS has over 2000 technical staff in the U.S., including some of the countries leading environmental experts. Because GRiP projects carry such importance to us, we put our strongest staff on analyzing and addressing technical risks associated with these projects. We'll share this information with you as we prepare it.

ARCADIS would not be a potentially responsible party (PRP) as it typically refers to entities responsible for the contamination, but we would be legally bound to clean up the site per our guarantee.

I will be tough to reach today between 9:30am and 3:00 pm mountain time, but try my cell if needed - 303.521.5805.

Trey- I really believe ARCADIS and Harcros provide the right solution for this site, and we're passionate about what we want to get done there. Please don't hesitate with any more questions.

Eric

Eric Williams

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630 Plaza Drive, Suite 200
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-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Thursday, August 28, 2003 8:10 AM
To: EWilliams@arcadis-us.com
Cc: tfisher@brunini.com
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

Eric,

I envision a cleanup (like you say) that doesn't last 10 years; but that cleanup may involve some risk-based approaches that involve leaving residual contamination in place and monitoring/maintaining SWMU 2 (old landfill). Given this, "cleanup" will be done, but does the guarantee involve kicking in a "contingency plan" should leaching from SWMU begin

moving it's way towards the bayou? At this point, I consider a scenario like this to be in the realm of "possibilities" but not in the realm of "probabilities." (i.e., anything is possible).

Also, would it be fair to say that Harcros is bringing an additional PRP to the table in the form of ARCADIS?

Finally, to hear it from your lips (or in this case from your fingertips via email), for this Site, ARCADIS' GRIP will cover (1) "unknown" problems/contaminants; (2) changes in cleanup standards; and (3) additional work should corrective/remedial action fail. Keep in mind that I'm just exploring the scope and magnitude of the information that you provided to me thus far and want to be sure that IF there are some "conditional" aspects of the "guarantee" that we recognize those up front and address them accordingly.

If at all possible, I'd REALLY like for you to get me an answer to these questions ASAP. Trudy (as well as Pacific Chlorine) have emphasized the importance of TIME and TIMING in this deal and I want to be sure that all of our TEAM is adequately educated before we make a decision.

THANKS!!!!

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http://www.brownfields.ms

"Williams, Eric"
<EWilliams@arcadi s-us.com>
08/26/2003 03:53 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc: "'Trudy Fisher'" <tfisher@brunini.com>
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

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There are two types of guarantees potentially applicable here -

1) cost-cap policies are for 10 years (limitation of insurance), and can be extended beyond that when you get close to the 10-year mark.
2) there's such a thing as a finite policy which can cover for 30 years,

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08/26/2003 12:19 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc:
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Hi Trey-

I've attached a 1-page summary of the terms of ARCADIS' GRiP Program vs the likely other program you're looking at. I'm also sending it hard copy with an ARCADIS annual report. Hope all this helps-

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-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Wednesday, August 13, 2003 11:15 AM
To: Chuck_Barlow@deq.state.ms.us
Subject: ARCADIS Redevelopment Process--Feasibility Analysis

Chuck,

Looks like we can't use some of my federal brownfield $$$ to pay for the ARCADIS Feasibility Analysis for VCC.

TREY

Jere "Trey" Hess, P.E., DEE

s-us.com> cc: "'Trudy Fisher'" <tfisher@brunini.com>

Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

08/26/2003 03:53 PM

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From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Tuesday, August 26, 2003 2:14 PM
To: EWilliams@arcadis-us.com
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

Eric,

The second to the last "feature" states that the guarantee is ongoing after project completion and that coverage of additional cleanup is for "many years." How "many" years?

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<EWilliams@arcadi To:
"'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>

Trey Hess
08/28/2003 09:46 AM

To: VCC Evaluation Team
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

FYI,

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----- *Forwarded by Trey Hess/HW/OPC/DEQ on 08/28/2003 09:38 AM* -----

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08/28/2003 09:14 AM

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Highlands Ranch, CO 80129

aspects of the "guarantee" that we recognize those up front and address them accordingly.

If at all possible, I'd REALLY like for you to get me an answer to these questions ASAP. Trudy (as well as Pacific Chlorine) have emphasized the importance of TIME and TIMING in this deal and I want to be sure that all of our TEAM is adequately educated before we make a decision.

THANKS!!!!

Jere "Trey" Hess, P.E., DEE
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MS Dept. of Environmental Quality
P.O. Box 10385
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(601) 961-5654
(601) 961-5300 (FAX)
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"Williams, Eric"
<EWilliams@arcadis-us.com>
08/26/2003 03:53 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc: "'Trudy Fisher'" <tfisher@brunini.com>
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

Trey-

There are two types of guarantees potentially applicable here -

1) cost-cap policies are for 10 years (limitation of insurance), and can be extended beyond that when you get close to the 10-year mark.
2) there's such a thing as a finite policy which can cover for 30 years, but this isn't attractive unless you want to sit on the site and not clean it up (it's complicated but the insurance companies count on the time value of money under a finite policy).

We'll know all there is to know, and have the site cleaned up long before 10 years. If there's any doubt, we'll extend the policy.

Hope that helps-

Eric

Eric Williams

Director, Property Redevelopment Program
ARCADIS
630 Plaza Drive, Suite 200
Highlands Ranch, CO 80129
direct (720) 344-3838
mobile (303) 521-5805

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Tuesday, August 26, 2003 2:14 PM
To: EWilliams@arcadis-us.com
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

Eric,

The second to the last "feature" states that the guarantee is ongoing after project completion and that coverage of additional cleanup is for "many years." How "many" years?

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"Williams, Eric" <EWilliams@arcadis-us.com> 08/26/2003 12:19 PM

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mobile (303) 521-5805

Trey Hess
08/27/2003 04:07 PM

To: VCC Evaluation Team
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

Here's a question I had for ARCADIS and their answer.

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---- Forwarded by Trey Hess/HW/OPC/DEQ on 08/27/2003 03:59 PM ----

"Williams, Eric" <EWilliams@arcadis-us.com>
08/26/2003 03:53 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc: "'Trudy Fisher'" <tfisher@brunini.com>
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

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Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

ARCADIS' Guaranteed Remediation Program (GRiP)
Vs.
Typical Insurance-based Cleanup Contracts

Feature	ARCADIS GRiP Program	Typical Insurance-based Cleanup Contract
Guarantee of regulatory **closure**, instead of insuring a remedial action plan	**Included**; Risk of failure of remedy is covered	No
Includes all contamination, including currently **unknown** problems	**Included**; Risk of finding new contamination is covered	No
Includes changes resulting from regulatory standards changing	**Included**; Risk of changing agencies or standards is covered	Maybe, limited
Guarantee and costs covered beyond insurance limits	**Included**; Liability does not "come back"	No
Indemnification provided by large, international remediation company, instead of small company with insurance policy	**Yes**; Risk of company viability eliminated	No
Implemented by a company with its core business in performing guaranteed closure programs	**Yes**; Not a first-time venture	No
Guarantee ongoing **after** project completion	**Yes**; Risk of additional cleanup many years later covered	No
Guarantee transferable to purchaser	**Yes**; Protects future owner of property	No

Also note that Harcros and ARCADIS have a long-standing relationship cleaning up contaminated properties. This is NOT a first-time business relationship between the two companies.

ARCADIS

Trey Hess
08/27/2003 01:49 PM

To: Nancy Thomas
Subject: VCC Proposals Summary Presentation

I'm faxing to you the summary right now.

Call me when you get it to discuss.

TREY

Jere "Trey" Hess, P.E., DEE
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Vicksburg Chemical Company Proposals

CONFIDENTIALITY

Several of these proposals were submitted *requesting confidentiality of the content.* Please consider this when reviewing and limit this information to appropriate representatives of the City of Vicksburg.

Louisiana Chemical Equipment Co., L.L.C.

- $30,000 Earnest Deposit
- $2.5M, payable at closing for:
  - *All land, buildings, process equipment, spare parts,* miscellaneous materials, drawings and documentations.
  - *Sell real estate in parcels to City of Vicksburg and/or other* parties with whom they have held discussions.
- *Contingent upon:*
  - Purchase assets are free of all liens and encumbrances, *with no license or transfer fees, royalties,* or other costs relating to the technology of the process units.
  - *MDEQ is responsible for removal of hazardous materials and* cleanup.
  - MDEQ will *indemnify* LCEC and its transferees from and against all environmental liabilities.
  - 90 day due diligence period.

National Center for Sustainable Development/Brownfield Stewardship Fund

- Under a contract with the City, BSF-Vicksburg serves as project manager for environmental *remediation and* regulatory approvals, master land use planning, golf course planning/oversight and financial advisor.
- *Contingent upon:*
  - $18,000/month contract with City;
  - City acquires site title initially and transfer to Brownfield Stewardship Fund (BSF-Vicksburg) ultimately;
  - City-backed $10 million bond issue received by BSF-Vicksburg;
- No breakdown of commitment (conceptual or dollars) *for cleanup*

Pacific Chlorine

- *Commitments/Offerings:*
  - Cleanup the property in accordance with MDEQ/EPA's requirements for Closure *set forth in the Definitive Agreement*
  - Formal Cleanup Plan has been developed
  - City gets clean land
  - City is responsible for development of clean land
- Contingent upon:
  - Permits to operate plant;
  - City purchasing clean land at price and buffer acceptable to PCI;
  - Definitive Agreement is reached

Pacific Chlorine

- *Schedule:*
  - Sixty (60) day exclusive negotiation period to:
    - » Execute a Definitive Agreement for transfer of VCC *real* property and assets.
  - December 2003 – Plant begins operating
  - October, 2003 – Begin Engineering for Cleanup
  - November, 2003 – Environmental Insurance Procurement
  - *February 2004 – Cleanup Begins*
  - October 2004 – Corrective Action Complete
  - October 2004 – Begin Cleanup O&M

Harcros Chemicals Inc.

- Commitments/Offerings:
  - A commitment to cleanup the contaminated portions of the property (the former VCC plant) to levels agreeable to the MDEQ and the EPA
  - No formal cleanup plan has yet to be developed
  - City gets a golf course
  - City is a partner in development
  - ARCADIS' EVA is funded by Harcros ($48,000)
- Contingent upon:
  - Transfer of permits to operate plant

Harcros Chemicals Inc.

- Schedule:
  - Week of Sept. 15th
    - » Golf Course Planning Session with City
  - September 19, 2003
    - » Complete Detailed Mechanical Inspection for Plant Restart
  - September 30, 2003
    - » Complete EVA
    - » Finalize MDEQ/EPA Agreement
    - » Convey Property
    - » Transfer Permits to Operate Facility
  - 1st Quarter 2004
    - » Begin Golf Course Development

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----- Forwarded by Trey Hess/HW/OPC/DEQ on 08/13/2003 12:06 PM -----

Bates.Nicole@epam
ail.epa.gov

To: trey_hess@deq.state.ms.us

cc:

08/13/2003 11:47 AM

Subject: ARCADIS Redevelopment Process--Feasibility Analysis

Hi, Trey:

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I have reviewed your request to use the TBA funds to pay for the ARCADIS feasibility analysis for the Vicksburg Chemical site in Vicksburg, Mississippi. Unfortunately, I will not be able to approve your request at this time.

Out of the six categories ARCADIS outlined under the feasibility analysis section of its interest letter, EPA's brownfields dollars are typically only used to fund one of those, the Conceptual Land Plan. I do apologize if this has caused you any inconvenience. I would recommend that you speak with Gil Patterson from the Economic Development Authority (EDA). EDA may be interested in a project of this caliber. Mr. Patterson's telephone number is 404-730-3000.

Good luck!

Nicole Comick-Bates
Brownfields Project Manager
US EPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303
404.562.9966
404.562.8628 (fax)

(See attached file: GRiP vs others.pdf)

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(See attached file: GRiP vs others.pdf)

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From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Wednesday, August 13, 2003 11:15 AM
To: Chuck_Barlow@deq.state.ms.us
Subject: ARCADIS Redevelopment Process--Feasibility Analysis

Chuck,

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TREY

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Trey Hess
08/26/2003 03:43 PM

To: Trudy Fisher
Subject: Questions for Harcros

1. Since ARCADIS plans to provide a "guarantee," I presume that we're talking about a 3 way (possibly 4 if we include EPA) Agreement between ARCADIS, HARCROS, and MDEQ. Correct?
2. The proposal didn't include any schedule for cleanup? Has that been discussed? If so, timeline?

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Trey Hess
08/26/2003 02:08 PM

To: "Williams, Eric" <EWilliams@arcadis-us.com>@INETDEQ
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

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Bates.Nicole@epam
ail.epa.gov To:
trey_hess@deq.state.ms.us

cc:

08/13/2003 11:47 Subject: ARCADIS
Redevelopment Process--Feasibility Analysis
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404.562.8628 (fax)

Trey Hess

08/26/2003 01:52 PM

To: VCC Evaluation Team
Subject: Trudy Meeting tomorrow

According to CHC, Trudy will be here at 8:30AM for a meeting with CHC on a different matter. For those of you interested in discussing Harcros/VCC, we can do so at that time.

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Trey Hess
08/26/2003 01:17 PM

To: VCC Evaluation Team
Subject: RE: ARCADIS Redevelopment Process--Feasibility Analysis

FYI,

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08/26/2003 12:19 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc:
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GRiP vs others.pdf

Trey Hess
08/25/2003 03:25 PM

To: "Trudy Fisher" <tfisher@brunini.com>@INETDEQ
Subject: Re: CHC Meeting

Do you think it would be worth the effort to have ARCADIS available at that time for a conference call?

Jere "Trey" Hess, P.E., DEE
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"Trudy Fisher" <tfisher@brunini.com>

"Trudy Fisher" <tfisher@brunini.com>
08/25/2003 02:36 PM

To: <Trey_Hess@deq.state.ms.us>
cc:
Subject: CHC Meeting

The message was that Chisolm will meet with me also on Harcros Wednesday morning. My meeting is from 8:30 - 10:00.

Trudy D. Fisher
Brunini, Grantham, Grower & Hewes
1400 Trustmark Bank Building
248 East Capitol Street
P.O. Box 119
Jackson, Ms 39201
601.960.6846

Trey Hess
08/19/2003 03:03 PM

To: Nancy Thomas
Subject: VCC - Status & Questions

Nancy,

As we prepare for the submittals from Harcros and Pacific Chlorine on Friday, I have a couple of questions that you may be able to help me with:

1. We may get two different approaches to the City's wishes for a golf course, (1) a turnkey approach, and (2) sell/give land by Harcros/PCI/ARCADIS/etc. to city and the city takes it from there. If we get these two approaches, what would be the City's preference?
2. It's my understanding that the City sat down with Pacific Chlorine late last week. Given this meeting/discussion with PCI, are the Mayor and Aldermen still planning to "work with the Harcros/Arcadis joint proposal for the Vicksburg Chemical property?" If not, does the City plan to support PCI?
3. When it comes time to carve out the acreage for the City, can you think of any reason(s) why all parties can't agree ASAP what this delineation should be? I'm thinking out loud here, but it may be a good idea for the city to "run this rabbit" since you know what you want.
4. Also, to expedite matters, IF there's agreement between all parties (regardless of who is selected) on the "delineation," is the City willing to do the survey (and preferably ASAP after all parties agree)?
5. As a show of support for the ENTIRE project and to save time/resources, would the City be willing to include in the survey described in #4, the survey of the ENTIRE 540+ acres? Before you balk, consider that this has to be done -> and it will show to the selected party (Harcros/PCI), MDEQ, EPA, and the community, that the City is "proactive in its efforts to move this project along." <- may be a good quote for the newspaper.
6. Do you, me, Vic, and Marcia want to talk "Brownfield Grants" and where VCC may fit into the picture? Again, this could show the City's effort to be "proactive....."

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ARCADIS

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Fax 720 344 3535
www.arcadis-us.com

REDEVELOPMENT PROGRAM

Ms. Nancy Thomas
City of Vicksburg, Mississippi

DELIVERED VIA EMAIL: nancyt@vicksburg.org

Subject:
Offer to Cleanup, Reuse, and Redevelop the Former VCC Property, Vicksburg, Mississippi

Date:
8 August 2003

Contact:
Eric Williams

Phone:
303.521.5805

Email:
ewilliams@arcadis-us.com

Dear Ms. Thomas:

This letter is intended to convey the interest of ARCADIS and Harcros Chemicals Inc. to jointly cleanup, reuse, and redevelop the former VCC Site in Vicksburg, Mississippi. ARCADIS and Harcros feel that a joint partnership that follows ARCADIS' Property Redevelopment Program will have tremendous benefits for the City of Vicksburg (the City) and the Mississippi Department of Environmental Quality (MDEQ). This letter has been prepared at your request and describes our plan for the initial phases of work for the subject site. Included herein is a reminder of the benefits of ARCADIS' Property Redevelopment Program, followed by the major steps and timeframes for this project.

BENEFITS OF ARCADIS' PROPERTY REDEVELOPMENT PROGRAM

ARCADIS' Redevelopment Program is unique in the industry, in large part, because it offers the following considerations relevant to the VCC site:

1. **A commitment to cleanup the contaminated portions of the property (the former VCC plant) to levels agreeable to the MDEQ.** ARCADIS' Guaranteed Remediation Program (GRiP) provides cost certainty for the remediation / resolution of all environmental issues that may plague this site. This guarantee is routinely indemnified by AAA rated financial / insurance institutions and provides our clients with the most protective manner to deal with environmental issues during a real estate transaction.

2. **Determination of future land use developed jointly with the City, MDEQ, and other stakeholders.** ARCADIS has no stake in the selected end use, as opposed to developers that would develop to their specific use. An upscale,

resort golf course, like several that ARCADIS is currently developing, is planned for the undeveloped portion of the VCC site. Reuse of the plant by Harcros, along with an associated buffer zone between the rest of the development, is also planned.

3. **Additional development that will provide for employment of local citizens, will bring visitors to the area, and increase the quality of life for area residents.**

4. **A financing program that cover the cost of cleanup and development under one, comprehensive redevelopment deal.**

5. **Positive public relations for the City, MDEQ and the Governor's office.**

As described in previous communications with the City and MDEQ, ARCADIS' Property Redevelopment Program includes the following five primary phases:

1. Discovery (internal to ARCADIS and completed)
2. Economic Value Appraisal
3. Deal Formation
4. Cleanup and Development
5. Closeout

The most critical early step in the process is the Economic Value Appraisal (EVA). During this phase, four tasks are completed:

- Best and highest use analysis
- Conceptual land plan
- Environmental data review / grip appraisal
- Pro forma financial assessment

In addition, initial partnership discussions are held that will ultimately lead to the formation of a special purpose entity, and initial financing discussions that will ultimately lead to a financing plan for the project are also held.

The EVA will provide:

- a business roadmap for the reuse, cleanup, and redevelopment of the VCC site;

- an accurate assessment of the future developed value of the property that will be used to define the business arrangement among all partners in the reuse and redevelopment deal;
- a guaranteed price for remediation of the site through ARCADIS' Guaranteed Remediation Program (GRiP).
- A defined reuse and redevelopment plan developed with the City and MDEQ.

ARCADIS and Harcros will jointly prepare the EVA for this site.

STEPS FOR MOVING FORWARD

The following steps and approximate timeframes are estimated for this project:

Prepare the EVA:	August 11 to September 19, 2003 (subject to approval by the City and MDEQ)
Negotiate reuse and redevelopment deal among stakeholders; Negotiate cleanup plan for plant area; Structure financing of cleanup and development:	September 19 to Mid-December 2003
Begin cleanup of plant site (planning Documents, agreements, etc.):	December 2003
Begin occupying plant/preparing for use:	December 2003
Begin public relations program:	December 2003
Begin development:	1st quarter 2004

The timeframes identified above are approximate and will be refined and presented in the EVA.

Ms Nancy Thomas
8 August 2003

AGREEMENT OF THE CITY

In order for ARCADIS and Harcros to bring this favorable program to the City, we require your assurance that other reuse, cleanup, and or redevelopment options are not considered for this site during the preparation of the EVA. We asked that you sign this letter as the City's commitment to honor this request.

ARCADIS and Harcros are confident that our program will meet the needs of the City, MDEQ, and other important stakeholders. Please do not hesitate to call Eric Williams at 303.521.5805 with any questions that you may have.

Sincerely,

ARCADIS G&M, Inc.

Eric G. Williams
Director, Property Redevelopment Program

cc: Trudy Fisher, Harcros

AGREEMENT TO THE TERMS OF THIS LETTER

_____
name

_____
title

_____
date

Trey Hess
07/21/2003 02:21 PM

To: Jerry Banks
Subject: VCC - Corrective Action Requirements

Jerry,

Take a look at these for VCC. I believe that Harcros and Pacific Chlorine will need this information ASAP as they begin discussing "environmental insurance" and "guaranteed fixed price contracts" with remediation firms. In order to do so, the requirements need to be laid out. These are set up as "performance based". Let's try to finalize this so we can get out to Harcros and PCI.

TREY

Vicksburg Chemical Corrective Action Requirement

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

FILE COPY

STATE OF MISSISSIPPI
DAVID RONALD MUSGROVE, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

July 21, 2003

Via Facsimile

Kevin Mirner, President and CEO
Marcros Chemical
P.O. Box 2930
Kansas City, KS 66110-2930

Scott Wilderman, President
Pacific Chlorine, Inc.
10 Loraine Court
San Francisco, CA 94118

EXHIBIT

1

Dear Mr. Mirner and Mr. Wilderman:

Your companies have shown consistent interest in the purchase of the Vicksburg Chemical Company facility over the past several months. As you know, MDEQ has not been able to reach an agreement with any company for the sale of the facility and the accompanying real estate. As you also know, MDEQ is very interested in the opinion of the City of Vicksburg with regard to proposals for the sale and subsequent use of the property.

MDEQ intends to make a decision in the near future as to the disposition of this facility and property. In order to expedite that process, please take note of the following:

1. If you remain interested in this facility and property, you should deliver a detailed offer to purchase the facility and property, provide environmental insurance, reach a guaranteed fixed price remediation contract, sell property to the City, etc., or any combination of the above that you choose to create your offer package, to Trey Hess of MDEQ no later than the close of business on August 22, 2003. You should not resubmit information already provided, but please highlight any information that you wish for MDEQ to consider that is in addition to or different from the proposal you delivered to MDEQ in response to MDEQ's previous formal request for proposals.

2. MDEQ does not intend to enter a period of "exclusive negotiations" or an option contract with any party. You should make any additional

Pacific C. 0108

investigation of the facility and property and/or have sufficient communications with those who may be partnering with you in this endeavor (such as, but not limited to, a brownfields remediation specialist or environmental insurance provider) between now and the August 22 deadline so that the additional information submitted by you, if any, by that date is a detailed offer to purchase the facility and property, provide insurance, sell property to the City, etc., or any combination of the above. Trey Hess will attempt to arrange additional access to the site for you if that is necessary.

3. Your information submitted by August 22 should include the draft of a sales contract, agreement, or other similar document(s) through which you would propose to execute a purchase.

4. You should plan to have discussions with the City concerning your proposal prior to submitting your information to MDEQ. You should contact the City as soon as possible to schedule this meeting.

5. This process is not limited to participation by your companies, but MDEQ views your companies as the two primary interested parties at this time. MDEQ, however, is not obligated to accept any proposal made to it by you or by others.

MDEQ appreciates your interest in the Vicksburg Chemical Company facility and property, and we hope that this process will bring the issue to a close in an expeditious manner. Please contact Trey Hess of my staff at 601-961-5654 if you need additional information.

Sincerely,

Charles H. Chisolm
Executive Director

July 21, 2003

Via Facsimile

Kevin Mirner, President and CEO
Harcros Chemical
P.O. Box 2930
Kansas City, KS 66110-2930

Scott Wilderman, President
Pacific Chlorine, Inc.
40 Loraine Court
San Francisco, CA 94118

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Sincerely,

Charles H. Chisolm
Executive Director

Trey Hess
07/18/2003 08:19 AM

To: Dcgnautica@cs.com@INETDEQ
Subject: Re: vicksburg-

Dave,

The City has asked for time to discuss plans with Harcros. Pacific Chlorine has provided us with a substantial proposal to re-open the plant. Development on the clean acreage appears to still be an option, even with Harcros/Pacific Chlorine plans. We intend to meet soon with the City to determine the progress they've made and to discuss Pacific Chlorine's proposal.

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Dcgnautica@cs.com

Dcgnautica@cs.com
07/18/2003 06:26 AM

To: trey_hess@deq.state.ms.us
cc:
Subject: vicksburg-

trey-

nothing new to report in vicksburg. still waiting the outcome of the indian tribe plans in louisiana.

anything developing on your end?

hope the summer is treating you well.

dave grunenwald

AGREEMENT TO ALLOW DUE DILIGENCE

This Agreement to Allow Due Diligence ("Agreement") is made on _____, 2003 between Harcros Chemicals, Inc. ("Harcros") and Mississippi Department of Environmental Quality ("MDEQ").

RECITALS

A. [recite that MDEQ may designate the purchaser of the real property more particularly described on Exhibit "A" attached hereto and incorporated herein (the "Property") by virtue of the bankruptcy order]

B. Harcros and MDEQ have agreed that Harcros will have 90 days from the date of this Agreement ("Due Diligence Period") for Harcros to perform due diligence and present a proposal for consideration by MDEQ for the purchase of the Property.

C. MDEQ has agreed that MDEQ will not solicit or entertain offers from any buyer of the Property during the Due Diligence Period, as more particularly set forth below.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Due Diligence and Proposal Expenses. Harcros will spend approximately $ _____ during the Due Diligence Period to perform due diligence regarding the Property and prepare a proposal to buy the Property.

2. Designation of Purchaser. In consideration of Harcros's investment of time and money to perform due diligence and prepare a proposal, MDEQ will not, directly or indirectly, through any representative or otherwise, solicit or entertain any offer from, negotiate with or in any manner encourage, discuss, accept or consider any proposal of any person or entity relating to the purchase of the Property, in whole or in part, during the Due Diligence Period. After the

Due Diligence Period, MDEQ may designate any purchaser of the Property which MDEQ selects.

3. Entire Agreement. This Agreement constitutes the entire agreement of the parties hereto and supersedes all prior offers, negotiations, representations and agreements. This Agreement shall not be modified unless in writing and signed by both parties.

4. Counterparts. This Agreement may be executed in counterparts, and any number of counterparts signed by the parties shall constitute a single, original instrument.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first set forth above.

HARCROS CHEMICALS, INC.

By: _____
Kevin Mirner, President and
Chief Executive Officer

MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

By: _____

Name: _____

Title: _____

"Trudy Fisher" <tfisher@brunini.com>
To: <Trey_Hess@deq.state.ms.us>
Subject: VCC- EPA
06/09/2003 05:05 PM

You probably already knew about this, but seems EPA is still taking an active role in this.
Emphasizes the need to get clear direction from EPA pretty quickly. I found this searching EPA EnviroFacts.

> Press Release 04/07/03c

EPA ANNOUNCES THE AVAILABILITY OF THE ADMINISTRATIVE RECORD FOR THE VICKSBURG CHEMICAL COMPANY REMOVAL SITE, VICKSBURG, MISSISSIPPI
The United States Environmental Protection Agency announced today that the Administrative Record for the Vicksburg Chemical Company Removal Site in Vicksburg, Warren County, Mississippi is available for public review.

The Administrative Record file includes documents that form the basis for the selection of the removal action. Documents in the record include, but not limited to, preliminary assessment, inspection reports, test results, and the Action Memorandum. All interested persons are encouraged to review and comment on the documents.

The documents will be available for public review during normal business hours at the following locations:

Warren County-Vicksburg Public Library
700 Veto Street
Vicksburg, MS 39180
Attn: Jennifer Smith

U.S. EPA Records Center - Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-3104
Attn: Debbie Jourdan

EPA will accept comments regarding the Administrative Record during the public comment period which begins on April 7, 2003 and ends on May 7, 2003. Comments should be addressed to Kevin Misenheimer, Federal On-Scene Coordinator, U.S. EPA Region 4, ERRB, 11th Floor, 61 Forsyth Street, S.W., Atlanta, GA 30303-3104. At the end of the 30-day comment period, a written response to all pertinent comments will be prepared in a responsiveness summary and placed in the file.

The Vicksburg Chemical Company Site is located at 4280 Rifle Range Road in Vicksburg. The Site is comprised of approximately 650 acres divided into two separate and distinct operations known as the North Plant and the South Plant. The site is the location of a former chemical and fertilizer production facility. The North Plant produced potassium nitrate (fertilizer), liquid chlorine and liquid dinitrogen tetraoxide, an additive for rocket fuel. The South Plant produced chlorinated pesticides, herbicides and other agricultural products.

-0- April 7, 2003

CONTACT: Kathy Armstrong, EPA Media Relations, (404)562-8225

Trudy D. Fisher
Brunini, Grantham, Grower & Hewes
1400 Trustmark Bank Building
248 East Capitol Street
P.O. Box 119
Jackson, Ms 39201
601.960.6846

City of Vicksburg

Legal Department

1401 Walnut St.
P. O. Box 150
Vicksburg, MS 39181
(601) 631-2983 phone
(601)634-6232 fax

Nancy D. Thomas
City Attorney

Walterine Langford
Bobby D. Robinson
Associate City Attorneys

June 6, 2003

Mr. Charles H. Chisolm
Executive Director
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289

via fax: 961-5794

Dear Mr. Chisolm:

The purpose of this letter is to inform MDEQ that the City of Vicksburg and Harcros Chemicals are working together on a conceptual proposal for the Vicksburg Chemical property. Harcros has proposed to sell the City the required acreage for the golf course development while retaining the plant site. Once the details of the proposal have been finalized, it will be presented to you. It is expected to take approximately 45 to 60 days to finalize the proposal. We would appreciate MDEQ allowing this additional time to the City and Harcros so that we might pursue further discussions in an attempt to finalize the proposal.

Please do not hesitate to call me if you have any questions regarding this matter.

Sincerely,

Nancy Thomas

cc: Mayor and Aldermen, separate copy to each

JUN 2003
RECEIVED
Executive Director
DEQ

Trey Hess
06/03/2003 08:00 AM

To: VCC Evaluation Team
Subject: VCC- ARCADIS proposal

You should be receiving today a proposal from ARCADIS about VCC. Here's a question from Nancy to us. Should we plan to get together in the near future to discuss along with recent discussions between Harcros/City?

Thoughts?

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

---- Forwarded by Trey Hess/HW/OPC/DEQ on 06/03/2003 07:54 AM ----

"Nancy Thomas" <nancyt@vicksburg.org>
06/02/2003 05:13 PM

To: <Trey_Hess@deq.state.ms.us>
cc:
Subject: RE: ARCADIS proposal

I received a copy of the proposal from Arcadis. Will MDEQ pay $45,000 for the feasibility study? I haven't asked my Board whether or not they would pay a portion or all of it, yet. When I go to them, I'd like to be able to tell them DEQ's position regarding this proposal. Thanks. Nancy

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Friday, May 30, 2003 8:41 AM
To: Nancy Thomas
Subject: Re: FW: old post office building

Nancy,

My brain must have been on autopilot when we talked about this site and the UST. The money that I have right now CANNOT be used for petroleum contamination, so I recommend you do the Phase I with Vicksburg funding.

Also, I HIGHLY recommend that you begin discussing with GSA about "what if the Phase I comes back with some red flags (i.e., there is no evidence that the UST was properly removed)." My impression is that you may be able to talk EPA into letting you use your assessment grant money to do Phase II.

My personal opinion is that GSA ought to pay for it (or at least factor your costs into the sale price). Note that this is my PERSONAL 2 cents (which is about what its worth).

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Nancy Thomas" <nancyt@vicksburg.org> 05/29/2003 04:17 PM

To: <Trey_Hess@deq.state.ms.us>
cc:
Subject: FW: old post office building

Trey -- This is the message I got from GSA about the timeline for conveying the old post office. Let me know if you do not think DEQ can do the phase 1 in time. Thanks. Nancy

-----Original Message-----
From: lori.dennis@gsa.gov [mailto:lori.dennis@gsa.gov]
Sent: Thursday, May 29, 2003 11:54 AM
To: Nancy Thomas
Cc: mikeh.graham@gsa.gov; johnm.dennis@gsa.gov; shea.brannen@gsa.gov; william.george@gsa.gov; David Clement
Subject:

Nancy,

Just to re-cap our telephone conversation today:

I have checked w/ my colleagues in GSA - we have no concern w/ you all conducting a phase I. But we do ask if your contractor needs access to the property that you coordinate with us for security purposes. We would appreciate a copy of the phase I just for our files.

Also, we are anxious to wrap this conveyance up as soon as possible. It will take a few wks for my attorney to prepare the deed and as I mentioned, property mgmt is in the process of replacing some equipment, however, we are moving as quickly as possible on these issues and would appreciate if you all will conduct your due diligence asap. I am estimating GSA will be in a position to convey the property w/i 30-60 days.

I have sent an e-mail message to appropriate parties w/i GSA about the UST question. As soon as I hear anything from them, I will let you

know. Thank you....

Lori P. Dennis, Project Manager
U.S. General Services Administration
PBS, Property Disposal Division, Jackson Office (4PR)
James O. Eastland U.S. Courthouse
245 East Capitol Street, Box 22
Jackson, Mississippi 39201
Phone: 601-965-6124, Fax: 601-965-6147, Cell: 601-672-6400
lori.dennis@gsa.gov http://propertydisposal.gsa.gov/Property/

STATE OF MISSISSIPPI
DAVID RONALD MUSGROVE, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

May 28, 2003

Mr. David Grunenwald
Vice President of Development/Leasing
Jacobs Entertainment, Inc.
1231 Main Avenue
Cleveland, Ohio 44113

Dear Mr. Grunenwald:

Pursuant to our most recent conversations regarding Jacobs Entertainment's interest in purchasing the Vicksburg Chemical Company property in Vicksburg, Mississippi, it is my understanding that Jacobs Entertainment is putting any plans for the purchase of the Vicksburg Chemical property on indefinite hold. As you know, this development occurred prior to the execution of any contract between Jacobs Entertainment and this Agency that would create any further obligation between the parties.

The purpose of this letter is simply to inform you formally that MDEQ is continuing to pursue other options with other parties concerning the disposition of the Vicksburg Chemical property. If Jacobs Entertainment's position changes with regard to your interest in the Vicksburg Chemical Company property, MDEQ also would be pleased to resume negotiations with you. However, as we have discussed, MDEQ cannot wait for that development to occur in its attempt to find a final resolution to the Vicksburg Chemical Company issues. Please feel free to contact me or Chuck Barlow if you would like to discuss this matter further.

With best regards, I remain,

Sincerely,

Charles H. Chisolm
Executive Director

CHC:jar
cc: Dan McDaniel, Esq.
Chuck Barlow
[redacted]

Trey Hess
05/27/2003 02:14 PM

To: Dave Grunenwald
Subject: Vicksburg - Native American Interest

Dave,

I found the following article in the Vicksburg Post, dated 5/15. It gives some useful information concerning the tribe. I find it interesting that according to the article, the tribe has a plan for Logansport, near Shreveport, not in Madison Parish across from Vicksburg. Let me know if there is anything new to report.

TREY

[5/15/03]

The company that explored buying land for a casino from bankrupt Vicksburg Chemical Company has shelved the idea, a state regulatory official said.

The decision by Jacobs Entertainment to opt out means the Mississippi Department of Environmental Quality can negotiate with other prospective purchasers, MDEQ legal division chief Chuck Barlow said.

"The casino company has told us they are putting all their plans on hold," Barlow said Tuesday of Jacobs, whose development arm is based in Cleveland, Ohio, and has gaming operations in three other states.

Nine weeks ago MDEQ officials said Jacobs' proposal had been selected from among six proposals submitted for the land, which includes Mississippi River frontage south of Interstate 20. Jacobs was the only one of the six to propose retail use of the chemical plant land, including a casino and two golf courses on 500 of the tract's non-industrial acres.

Jacobs was to have paid $50,000 to begin an option period that allowed the company to decide whether to pay the state $7 million for the land, said MDEQ Executive Director Charles Chisolm. If it sold for that price, the MDEQ planned to used the money to clean and clear contaminated sites that were used by the chemical plant.

The MDEQ got responsibility for the land after Vicksburg Chemical went into bankruptcy.

"We're back to square one," Barlow said. Jacobs told MDEQ about two weeks ago that possible competition from another casino proposed for Louisiana was its reason, Barlow added.

Chisolm said Jacobs believed a casino might be built in Madison Parish, just across the Mississippi River from Vicksburg. He said the tribe that was believed to be planning a casino there was the Jena Band of Choctaw, based in Jena, La., in central Louisiana.

Jacobs' vice president of development and leasing, David Grunenwald, was not available.

A casino plan has been in the works for about two years by the Jena Band. The tribe's chief, Christine Norris, said its plan calls for a casino near Logansport, near the Toledo Bend Reservoir south of Shreveport, not for one in Madison Parish. Brian Pogue, deputy director of the Bureau of Indian Affairs' Eastern Region, based in Nashville, also said the only proposed gaming site in the Jena Band's current request was for the Logansport area. Shreveport has several state-licensed casinos.

A previous Jena application had proposed multiple gaming sites but that application has been revised, Pogue added.

The Jena plan would need federal and state approval, and Norris said her administration, which began in October 2002, was taking a different tack from its predecessor in pursuing that approval. As a first step, the Bureau of Indian Affairs in Washington, D.C., would approve its acquisition of the site as tribal land, Norris said. The group would then seek state approval of rights to begin gaming operations at the site, she added.

When proposed, the company's plan was the second announced this year for a new casino and golf-course development in the same area of Vicksburg. If both were completed, the plans would have added three golf courses to Warren County, which currently has two.

The first golf-course/casino plan had been announced in January by Minnesota developer Jim Belisle. He said Lakes Entertainment, also of Minnesota, would build it between U.S. 61 South and the Mississippi River, just south of where Jacobs said six weeks later it was considering construction.

The Mississippi Legislature opened the door to casino development in river and coast counties in 1990 and Warren County voted yes to the idea in December 1991. Casino construction began here shortly thereafter, and the city now has four casinos that are approaching 10 years old.

"We are going to continue talking to people who are interested" in buying the Vicksburg Chemical property, Barlow said. He added that Jacobs would not be barred from returning to the bidding, but that "if we find a good opportunity for the state in the meantime," the MDEQ would pursue it. "We have no commitment to wait on Jacobs Entertainment."

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

MISSISSIPPI CHEMICAL CORPORATION
Owen Cooper Administration Bldg. Highway 49 East P.O. Box 388 Yazoo City, MS 39194 662-746-4131 FAX 662-746-9158 www.misschem.com

May 13, 2003

Mr. Chuck Barlow, Esquire
Legal Department
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, Mississippi 39289-0385

Re: Mississippi Chemical Corporation
Disposition of Waste & Estimated Costs of Assisting MDEQ with Removing and Recycling Chemicals from the Former Vicksburg Chemical Site

Dear Mr. Barlow:

As you requested, attached please find two spreadsheets. These spreadsheets describe the waste chemicals accepted by Mississippi Chemical Corporation, via MDEQ and EPA assistance, from the former Vicksburg Chemical site. Additionally, these spreadsheets list the location and ultimate use for the recycled waste. Further, a breakdown is shown of estimated chemical waste value versus our costs associated with handling the chemical waste.

We were glad to be of assistance to the MDEQ with this unfortunate situation, even though we incurred significant cost in doing so. Please do not hesitate to contact me at (662) 751-2415 should you have any questions or need further information.

Sincerely,

Ken L. Faulkner

Ken L. Faulkner, P.E.
Sr. Coordinator of Environmental Affairs
Mississippi Chemical Corporation

RECEIVED
MAY 21 2003
MS DEPT OF ENVIRONMENTAL QUALITY
LEGAL DIVISION

Disposition of Waste from Vicksburg Chemical Site

Waste Stream / Chemical Substance	Amount Received	Amount Received	Location to Recycle/Use Chemical	Ultimate Use at Location	Delivery Method to Site	Approx. Value	Comments
	Weight	Volume				$	
Nitric Acid	1045 tons of 100% Nitric Acid shipped	~ 290,000 gals	MissChem Nitrogen in Yazoo City, MS	Recycled into on-site nitric acid storage	Contract Transport Trailer (Miller)	Not valued (see comment)	85% strength NA required blending. VCC's N. Plant acid has some contaminants, but was doable. Completed Dec. 2002. No value assigned to this chemical substance since we produce this product at MissChem and actually blended the VCC material into our storage system and incurred costs of processing that could not be easily estimated.
Sulfuric Acid	29.03 tons shipped	~ 3,787 gals	MissChem Nitrogen in Yazoo City, MS	Recycled into on-site sulfuric acid storage for use in cooling tower system	MissChem Transport Trailer	$1,016	VCC S. Plant acid. Shipped January 15 & 22, 2003. Value based on $35/ton.
N_2O_4	27,184 lbs shipped.	NA	20,000 lbs to DuPont in LaPlace, LA; 7,184 lbs to BOC gases in Chattanooga, TN.	Recycled/used on-site	Contract Transport Truck (Provided by DuPont/BOC)	$40,776	Completed loading and shipment Jan. 17 - 22, 2003. Value based on actual sell to DuPont and BOC.
Castor Oil	1,562 lbs shipped	Four 55 gal drums	MissChem Nitrogen in Yazoo City, MS	Recycled/used on-site	MissChem Transport Truck	$100	Shipped on Dec. 17, 2002. Value estimated.
Resins (anion/cation) and Silica desicant	60 drums total (various weights)	60 drums total	14 drums to MissChem Nitrogen in Yazoo City, MS; 46 drums to Miss Phosphates in Pascagoula, MS	Recycled/used on-site	MissChem Transport Truck for Yazoo City delivery, Contract Transport Truck for Pascagoula.	$25,600	Shipped 14 drums to Yazoo City on 12-3-02. 46 drums shipped to Pasc on 12-17-02. Value was estimated based on quality of material.
Various Lab Chemicals and Reagents	Various amounts of different lab chemicals	Various amounts of different lab chemicals	MissChem Nitrogen in Yazoo City, MS	Recycled/used on-site	MissChem Transport Truck	$400	Shipped 1-09-03. Value estimated.
Total Est. Value						$67,892	
Estimated Cost to Sample, Coordinate, Ship and Recycle						$73,197	*See next page for cost breakdown*
Value Minus Cost						**-$5,305**	

Estimated Labor, Expenses and Trucking Costs for Assisting MDEQ/EPA with Vicksburg Chemical Site Abandonment

MCC Person	Position	Man-Hours (MH)	$/MH	Mileage	$/mile	Other Expenses	Total Expenses	Notes
K. Faulkner	Env. Proj. Manager	150	75	1440	0.36	$100	$11,868	Other expenses includes meals, copies, sampling supplies. Mileage based on 12 trips.
T. Johnson	Nitric Acid/Urea Superintendent	90	90	480	0.36	$25	$8,298	Other expenses includes meals. Mileage based on 4 trips.
K. Smith	Man. Applied Chemistry	40	90	360	0.36	$150	$3,880	Other expenses includes meals and sampling supplies. Mileage based on 3 trips.
C. Kennedy	Laboratory Supervisor	90	75	480	0.36	$150	$7,073	Other expenses includes meals and sampling supplies. Mileage based on 4 trips.
M. Street	Laboratory Personnel	90	60	480	0.36	$150	$5,723	Other expenses includes meals and sampling supplies. Mileage based on 4 trips.
P. McRaney	Man. Of Truck Transportation	40	90	120	0.36	$10	$3,653	Other expenses includes meals. Mileage based on 1 trip.
H. Williams	Maintenance/Truck Driver	20	40	360	0.36	$25	$955	Other expenses includes meals. Mileage based on 3 trips.
C. Liddon	Nitric Acid Plant Supervisor	60	75	240	0.36	$10	$4,596	Other expenses includes meals. Mileage based on 2 trips.
Nitric Acid Plant	MissChem Operators	78	31.5				$2,457	Based on 1 hr per truck load of nitric acid
Subtotal Labor & Expenses		580		3,960	0.36	$620	**$48,503**	
		$/ton of acid shipped	*tons*					
Trucking Costs	Nitric Acid (Contractor)	14	1615.7				$22,620	
	Nitric Acid (MissChem Piping Modifications)	$1,500 lump sum					$1,500	
	Sulfuric Acid, Castor Oil, Resins to YC, and Lab Chemicals	10	32.5				$325	
	Resins to Pascagoula	$250 minimum					$250	
Subtotal Trucking							**$24,695**	
Total Costs							**$73,197**	

Manhours for each person represent time spent at VCC as well as at MissChem coordinating and processing recycled chemical substance.
Lots of other Mississippi Chemical personnel were ultimately involved in planning, scheduling and administrative areas, but were not listed above.

Trey Hess
05/23/2003 12:57 PM

To: "mike piana" <mpiana@plantprod.com>@INETDEQ
Subject: Re: Vicksburg Chemical Equipment Company

We don't anticipate any major decisions regarding equipment disposition in the near term. We're probably talking at least 3-6 months. I've been taking contact information from those interested. Please send me your mailing address, fax, etc. so I will have it when we make a move (which may involve an RFP, bids, etc.)

THANKS!!

Jere "Trey" Hess, P.E., DEE
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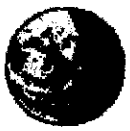
"mike piana" <mpiana@plantprod.com>



"mike piana" <mpiana@plantprod.com>
05/23/2003 12:45 PM

To: <Trey_Hess@deq.state.ms.us>
cc:
Subject: Vicksburg Chemical Equipment Company

Mr. Hess,

I received your contact information from Johnny Hanna at Cedar Chemical Corp.

Plant Products would like to be informed about and have the opportunity to bid on equipment at the VCC plantsite. We are interested in lab equipment and the slow release production facility. What do we need to do to be included in any solicitations for bids, etc.

Thanks,

Mike Piana

Trey Hess
05/21/2003 04:09 PM

To: "Werth, Erhardt" <EWerth@arcadis-us.com>@INETDEQ
Subject: RE: Vicksburg Chemical - Vicksburg Post Article

8:30 AM CDT works for me.

Also, give me your fax. I found the Bankruptcy order that outlines MDEQ's authority to require VCC to sell the property. It also refers to the "Vicksburg non-bankruptcy estate" which may be how the property has been carved out of the bankruptcy (I'm no lawyer, but that's my interpretation). I'd like to fax it to you.

Here's the cut/paste of the article.

Casino developer folds plan to buy Vicksburg Chemical

By Sam Knowlton

[5/15/03]The company that explored buying land for a casino from bankrupt Vicksburg Chemical Company has shelved the idea, a state regulatory official said.

The decision by Jacobs Entertainment to opt out means the Mississippi Department of Environmental Quality can negotiate with other prospective purchasers, MDEQ legal division chief Chuck Barlow said.

The casino company has told us they are putting all their plans on hold, Barlow said Tuesday of Jacobs, whose development arm is based in Cleveland, Ohio, and has gaming operations in three other states.

Nine weeks ago MDEQ officials said Jacobs' proposal had been selected from among six proposals submitted for the land, which includes Mississippi River frontage south of Interstate 20. Jacobs was the only one of the six to propose retail use of the chemical plant land, including a casino and two golf courses on 500 of the tract's non-industrial acres.

Jacobs was to have paid $50,000 to begin an option period that allowed the company to decide whether to pay the state $7 million for the land, said MDEQ Executive Director Charles Chisolm. If it sold for that price, the MDEQ planned to used the money to clean and clear contaminated sites that were used by the chemical plant.

The MDEQ got responsibility for the land after Vicksburg Chemical went into bankruptcy.

"We're back to square one," Barlow said. Jacobs told MDEQ about two weeks ago that possible competition from another casino proposed for Louisiana was its reason, Barlow added.

Chisolm said Jacobs believed a casino might be built in Madison Parish, just across the Mississippi River from Vicksburg. He said the tribe that was believed to be planning a casino there was the Jena Band of Choctaw, based in Jena, La., in central Louisiana.

Jacobs' vice president of development and leasing, David Grunenwald, was not available.

A casino plan has been in the works for about two years by the Jena Band. The tribe's chief, Christine Norris, said its plan calls for a casino near Logansport, near the Toledo Bend Reservoir south of Shreveport, not for one in

Madison Parish. Brian Pogue, deputy director of the Bureau of Indian Affairs' Eastern Region, based in Nashville, also said the only proposed gaming site in the Jena Band's current request was for the Logansport area. Shreveport has several state-licensed casinos.

A previous Jena application had proposed multiple gaming sites but that application has been revised, Pogue added.

The Jena plan would need federal and state approval, and Norris said her administration, which began in October 2002, was taking a different tack from its predecessor in pursuing that approval. As a first step, the Bureau of Indian Affairs in Washington, D.C., would approve its acquisition of the site as tribal land, Norris said. The group would then seek state approval of rights to begin gaming operations at the site, she added.

When proposed, the company's plan was the second announced this year for a new casino and golf-course development in the same area of Vicksburg. If both were completed, the plans would have added three golf courses to Warren County, which currently has two.

The first golf-course/casino plan had been announced in January by Minnesota developer Jim Belisle. He said Lakes Entertainment, also of Minnesota, would build it between U.S. 61 South and the Mississippi River, just south of where Jacobs said six weeks later it was considering construction.

The Mississippi Legislature opened the door to casino development in river and coast counties in 1990 and Warren County voted yes to the idea in December 1991. Casino construction began here shortly thereafter, and the city now has four casinos that are approaching 10 years old.

"We are going to continue talking to people who are interested" in buying the Vicksburg Chemical property, Barlow said. He added that Jacobs would not be barred from returning to the bidding, but that "if we find a good opportunity for the state in the meantime," the MDEQ would pursue it. "We have no commitment to wait on Jacobs Entertainment."

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"Werth, Erhardt" <EWerth@arcadis-us.com>

"Werth, Erhardt" <EWerth@arcadis-us.com>
05/21/2003 03:54 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc: "Williams, Eric" <EWilliams@arcadis-us.com>, "Niparko, Steven" <SNiparko@arcadis-us.com>
Subject: RE: Vicksburg Chemical - Vicksburg Post Article

Trey: Thanks for the info, although I can't seem to open it. We have finished our quick first review of the information that you provided and

believe that the site is a terrific opportunity (for you, the City and us)waiting to happen. We are very interested in proceeding and would like to schedule a brief call with you for tomorrow morning, if possible to clarify a few points at this time (and explain a bit of our thinking).

Is there a time in the morning that would work for you.

Erhardt Werth
Executive Vice President, Guaranteed Business Solutions
ARCADIS G&M, Inc.
630 Plaza Drive, Suite 200
Highlands Ranch, CO 80129-2379
E-mail: ewerth@arcadis-us.com
720-344-3710

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Wednesday, May 21, 2003 2:20 PM
Subject: Vicksburg Chemical - Vicksburg Post Article

We've already discussed the fact that Jacobs has "shelved their offer," but I thought that the article provided a good idea of what is going on and what led to Jacobs' decision.

TREY

Jere "Trey" Hess, P.E., DEE
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Casino developer folds plan to buy Vicksburg Chemical

By Sam Knowlton

(Embedded image moved to file: pic16687.gif)

[5/15/03]The company that explored buying land for a casino from bankrupt Vicksburg Chemical Company has shelved the idea, a state regulatory official said.

The decision by Jacobs Entertainment to opt out means the Mississippi

Department of Environmental Quality
other prospective purchasers, MDEQ
Chuck Barlow said.

has told us they are putting all
Barlow said Tuesday of Jacobs,
is based in Cleveland, Ohio,
operations in three other states.

officials said Jacobs' proposal
from among six proposals submitted
includes Mississippi River
Interstate 20. Jacobs was the only
propose retail use of the chemical
a casino and two golf courses
non-industrial acres.

paid $50,000 to begin an option
the company to decide whether to
million for the land, said MDEQ
Charles Chisolm. If it sold for
planned to used the money to
contaminated sites that were used by

responsibility for the land after
went into bankruptcy.

one," Barlow said. Jacobs told
ago that possible competition
proposed for Louisiana was its

can negotiate with
legal division chief

"The casino company
their plans on hold,"
whose development arm
and has gaming

Nine weeks ago MDEQ
had been selected
for the land, which
frontage south of
one of the six to
plant land, including
on 500 of the tract's

Jacobs was to have
period that allowed
pay the state $7
Executive Director
that price, the MDEQ
clean and clear
the chemical plant.

The MDEQ got
Vicksburg Chemical

"We're back to square
MDEQ about two weeks
from another casino
reason, Barlow added.

believed a casino might be built
just across the Mississippi River
said the tribe that was believed
casino there was the Jena Band of
Jena, La., in central Louisiana.

president of development and leasing,
not available.

been in the works for about two
Band. The tribe's chief, Christine
calls for a casino near
Toledo Bend Reservoir south of
one in Madison Parish. Brian
director of the Bureau of Indian
Region, based in Nashville, also
proposed gaming site in the Jena Band's
for the Logansport area.
several state-licensed casinos.

application had proposed multiple
application has been revised,

need federal and state approval,
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taking a different tack from its
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Indian Affairs in Washington,
its acquisition of the site as

Chisolm said Jacobs
in Madison Parish,
from Vicksburg. He
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Choctaw, based in

Jacobs' vice
David Grunenwald, was

A casino plan has
years by the Jena
Norris, said its plan
Logansport, near the
Shreveport, not for
Pogue, deputy
Affairs' Eastern
said the only
current request was
Shreveport has

A previous Jena
gaming sites but that
Pogue added.

The Jena plan would
and Norris said her
October 2002, was
predecessor in
step, the Bureau of
D.C., would approve

said. The group would then seek
rights to begin gaming operations
added.

company's plan was the second
for a new casino and golf-course
same area of Vicksburg. If both
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County, which currently has two.

golf-course/casino plan had been announced
Minnesota developer Jim Belisle. He
Entertainment, also of Minnesota, would
61 South and the Mississippi
where Jacobs said six weeks
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Legislature opened the door to casino
and coast counties in 1990 and
yes to the idea in December 1991.
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continue talking to people who are
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would pursue it. "We have no
Jacobs Entertainment."

tribal land, Norris
state approval of
at the site, she

When proposed, the
announced this year
development in the
were completed, the
courses to Warren

The first
in January by
said Lakes
build it between U.S.
River, just south of
later it was

The Mississippi
development in river
Warren County voted
Casino construction
and the city now has
approaching 10 years

"We are going to
interested" in buying
property, Barlow
be barred from
we find a good
meantime," the MDEQ
commitment to wait on

Trey Hess
05/16/2003 12:18 PM

To: bburgess@ensr.com
Subject: Guaranteed Fixed Price Contract - Vicksburg Chemical

Blair,

The Mississippi Department of Environmental Quality (MDEQ) is currently evaluating options for the cleanup of the Vicksburg Chemical Company (VCC) site in Vicksburg, Mississippi and is very interested in negotiating a "Guaranteed Fixed Price Contract" for cleanup. We would like to get the following: for a fixed price, a firm will commit to perform any and all remediation necessary to achieve regulatory closure for the contamination, including known and unknown contamination. Vicksburg Chemical Company (VCC) owns a chemical manufacturing facility and approximately 500 acres of surrounding acreage in, Vicksburg, Warren County, Mississippi. The facility acreage includes both heavily contaminated acreage and acreage that exhibits no obvious signs of contamination and includes frontage on the Mississippi River. VCC has filed for reorganization under Chapter 11 of the United States Bankruptcy Code, and the bankruptcy is being administered by the United States Bankruptcy Court for the Southern District of New York. VCC has abandoned the facility, and the facility is currently not operating except for certain waste handling and maintenance operations being carried out by the Mississippi Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (EPA).

Pursuant to order of the Bankruptcy Court, MDEQ has obtained authority to direct VCC to sell all real and personal property owned by the company in Warren County, Mississippi to a buyer or buyers chosen by MDEQ. The Company has abandoned the site physically, and the action of the federal bankruptcy court has removed this property from the bankruptcy estate, allowing it to be sold without bankruptcy court approval. Under the court's order, the proceeds from any sale of the Company's property will be used for the remediation of contamination on the Company's property.

VCC owns approximately 550 acres in Vicksburg, Warren County, Mississippi along with buildings, equipment, and other personal property. In general, the real property is divided into a larger portion that has not been involved in the production of chemical products (approximately 500 acres) and a smaller portion (approximately 50 acres) that has been involved in the production of chemical products and which includes areas of significant contamination. Portions of the land are located along the Mississippi River, and other portions include acreage that runs along Rifle Range Road and Warrenton Road. Plans to redevelop the 500 relatively clean acres into a casino and/or golf course(s) have been presented and at least two chemical companies have shown interest in ALL the acreage for restarting chemical manufacturing of KNO3 and chlorine. The chemical plant site is divided into two areas known generally as the North Plant and the South Plant. The plant, prior to abandonment, manufactured and/or handled (among other things) nitric acid, potassium nitrate, nitrogen tetroxide, chlorine, sodium hypochlorite, and potassium carbonate. Environmental contamination is present at the site in various media, and no formal remediation plan has been approved by MDEQ or EPA. A consent order for investigation and remediation of contamination at the site exists between EPA and VCC, and a purchaser of the site covered by this order will be required to negotiate the continuing affect of that order with EPA and MDEQ.

MDEQ is considering the Guaranteed Fixed Price Contract concept for the plant site using a "risk-based" approach to cleanup; but we need a "ballpark figure" for this sort of contract to determine even if it is an option worth further consideration. Therefore, we would very much appreciate it if you could, along with your standard promotional material, give us a "ballpark figure" if you can, as well as an idea of what we would be getting in return (i.e., environmental insurance policy plus restricted use cleanup, demolition, etc.). Please call me to discuss. I've also attached a map depicting where Jacobs had planned to put casino/golf courses.

Jacobs.pdf

Jere "Trey" Hess, P.E., DEE
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MS Dept. of Environmental Quality
P.O. Box 10385
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http://www.brownfields.ms

Trey Hess
05/16/2003 08:29 AM

To: cwiksten@harcroschem.com
Subject: Vicksburg Chemical - Removing Chlorine Ton Container Valves

Cliff,

I received your fax requesting access to the Vicksburg Chemical facility in Vicksburg, Mississippi to remove the remaining chlorine ton container valves that are in the chlorine filling building and are owned by Harcros Chemicals Inc. I plan to be there after 1 PM on May 22nd. Please have Kevin Talley, one of your employees, there as soon after that as possible. Also, we will need for him to sign something stating that he is removing X number of "chlorine ton container valves" and that he certifies that the valves are property of Harcros Chemicals and that he is authorized by Harcros Chemicals Inc. to do so. I'll work up a simple signature form for this.

You had also mentioned that John Miles may be there earlier to "package" them up. Please let me know if this is the case so I can plan accordingly.

If you have any questions or comments, please contact me. Also, please respond to this email so that I know that you received it.

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Trey Hess
05/09/2003 09:08 AM

To: "King, Warren" <Warren.King@shawgrp.com>@INETDEQ
Subject: RE: Guaranteed Fixed Price Contract - Vicksburg Chemical

Warren,

Try me after lunch.

Jere "Trey" Hess, P.E., DEE
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MS Dept. of Environmental Quality
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"King, Warren" <Warren.King@shawgrp.com>

"King, Warren" <Warren.King@shawgrp.com>
05/08/2003 03:40 PM

To: "'Trey_Hess@deq.state.ms.us'" <Trey_Hess@deq.state.ms.us>
cc:
Subject: RE: Guaranteed Fixed Price Contract - Vicksburg Chemical

Trey, Shaw is very much interested in discussing this project with you. I would like to get more information from you and have a conference call with our remediation manager in the near future. Will you be in the office tomorrow, Friday, 5/9 ?

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Tuesday, May 06, 2003 12:43 PM
To: warren.king@shawgrp.com
Subject: Guaranteed Fixed Price Contract - Vicksburg Chemical

Warren,

The Mississippi Department of Environmental Quality (MDEQ) is currently evaluating options for the cleanup of the Vicksburg Chemical Company (VCC) site in Vicksburg, Mississippi and is very interested in negotiating a "Guaranteed Fixed Price Contract" for cleanup. We would like to get the following: for a fixed price, a firm will commit to perform any and all remediation necessary to achieve regulatory closure for the contamination, including known and unknown contamination. Vicksburg Chemical Company (VCC) owns a chemical manufacturing facility and approximately 500 acres of surrounding acreage in, Vicksburg, Warren County, Mississippi. The facility acreage includes both heavily contaminated acreage and acreage that exhibits no obvious signs of contamination and includes frontage on

the Mississippi River. VCC has filed for reorganization under Chapter 11 of the United States Bankruptcy Code, and the bankruptcy is being administered by the United States Bankruptcy Court for the Southern District of New York. VCC has abandoned the facility, and the facility is currently not operating except for certain waste handling and maintenance operations being carried out by the Mississippi Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (EPA).

Pursuant to order of the Bankruptcy Court, MDEQ has obtained authority to direct VCC to sell all real and personal property owned by the company in Warren County, Mississippi to a buyer or buyers chosen by MDEQ. The Company has abandoned the site physically, and the action of the federal bankruptcy court has removed this property from the bankruptcy estate, allowing it to be sold without bankruptcy court approval. Under the court's order, the proceeds from any sale of the Company's property will be used for the remediation of contamination on the Company's property.

VCC owns approximately 550 acres in Vicksburg, Warren County, Mississippi along with buildings, equipment, and other personal property. In general, the real property is divided into a larger portion that has not been involved in the production of chemical products (approximately 500 acres) and a smaller portion (approximately 50 acres) that has been involved in the production of chemical products and which includes areas of significant contamination. Portions of the land are located along the Mississippi River, and other portions include acreage that runs along Rifle Range Road and Warrenton Road. Plans to redevelop the 500 relatively clean acres into a casino and/or golf course(s) have been presented and at least two chemical companies have shown interest in ALL the acreage for restarting chemical manufacturing of KNO3 and chlorine. The chemical plant site is divided into two areas known generally as the North Plant and the South Plant. The plant, prior to abandonment, manufactured and/or handled (among other things) nitric acid, potassium nitrate, nitrogen tetroxide, chlorine, sodium hypochlorite, and potassium carbonate. Environmental contamination is present at the site in various media, and no formal remediation plan has been approved by MDEQ or EPA. A consent order for investigation and remediation of contamination at the site exists between EPA and VCC, and a purchaser of the site covered by this order will be required to negotiate the continuing affect of that order with EPA and MDEQ.

MDEQ is considering the Guaranteed Fixed Price Contract concept for the plant site using a "risk-based" approach to cleanup; but we need a "ballpark figure" for this sort of contract to determine even if it is an option worth further consideration. Therefore, we would very much appreciate it if you could, along with your standard promotional material, give us a "ballpark figure" if you can, as well as an idea of what we would

be getting in return (i.e., environmental insurance policy plus restricted use cleanup, demolition, etc.). Please call me to discuss.

Jere "Trey" Hess, P.E., DEE
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http://www.brownfields.ms

Trey Hess
05/08/2003 10:52 AM

To: kearnest@enviro-sciences.com
Subject: *Guaranteed Fixed Price Contract - Vicksburg Chemical*

Kenneth,

The Mississippi Department of Environmental Quality (MDEQ) is currently evaluating options for the cleanup of the Vicksburg Chemical Company (VCC) site in Vicksburg, Mississippi and is very interested in negotiating a "Guaranteed Fixed Price Contract" for cleanup. We would like to get the following: for a fixed price, a firm will commit to perform any and all remediation necessary to achieve regulatory closure for the contamination, including known and unknown contamination. Vicksburg Chemical Company (VCC) owns a chemical manufacturing facility and approximately 500 acres of surrounding acreage in, Vicksburg, Warren County, Mississippi. The facility acreage includes both heavily contaminated acreage and acreage that exhibits no obvious signs of contamination and includes frontage on the Mississippi River. VCC has filed for reorganization under Chapter 11 of the United States Bankruptcy Code, and the bankruptcy is being administered by the United States Bankruptcy Court for the Southern District of New York. VCC has abandoned the facility, and the facility is currently not operating except for certain waste handling and maintenance operations being carried out by the Mississippi Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (EPA).

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MS Dept. of Environmental Quality
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Trey Hess
05/06/2003 12:42 PM

To: warren.king@shawgrp.com
Subject: Guaranteed Fixed Price Contract - Vicksburg Chemical

Warren,

The Mississippi Department of Environmental Quality (MDEQ) is currently evaluating options for the cleanup of the Vicksburg Chemical Company (VCC) site in Vicksburg, Mississippi and is very interested in negotiating a "Guaranteed Fixed Price Contract" for cleanup. We would like to get the following: for a fixed price, a firm will commit to perform any and all remediation necessary to achieve regulatory closure for the contamination, including known and unknown contamination. Vicksburg Chemical Company (VCC) owns a chemical manufacturing facility and approximately 500 acres of surrounding acreage in, Vicksburg, Warren County, Mississippi. The facility acreage includes both heavily contaminated acreage and acreage that exhibits no obvious signs of contamination and includes frontage on the Mississippi River. VCC has filed for reorganization under Chapter 11 of the United States Bankruptcy Code, and the bankruptcy is being administered by the United States Bankruptcy Court for the Southern District of New York. VCC has abandoned the facility, and the facility is currently not operating except for certain waste handling and maintenance operations being carried out by the Mississippi Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (EPA).

Pursuant to order of the Bankruptcy Court, MDEQ has obtained authority to direct VCC to sell all real and personal property owned by the company in Warren County, Mississippi to a buyer or buyers chosen by MDEQ. The Company has abandoned the site physically, and the action of the federal bankruptcy court has removed this property from the bankruptcy estate, allowing it to be sold without bankruptcy court approval. Under the court's order, the proceeds from any sale of the Company's property will be used for the remediation of contamination on the Company's property.

VCC owns approximately 550 acres in Vicksburg, Warren County, Mississippi along with buildings, equipment, and other personal property. In general, the real property is divided into a larger portion that has not been involved in the production of chemical products (approximately 500 acres) and a smaller portion (approximately 50 acres) that has been involved in the production of chemical products and which includes areas of significant contamination. Portions of the land are located along the Mississippi River, and other portions include acreage that runs along Rifle Range Road and Warrenton Road. Plans to redevelop the 500 relatively clean acres into a casino and/or golf course(s) have been presented and at least two chemical companies have shown interest in ALL the acreage for restarting chemical manufacturing of KNO3 and chlorine. The chemical plant site is divided into two areas known generally as the North Plant and the South Plant. The plant, prior to abandonment, manufactured and/or handled (among other things) nitric acid, potassium nitrate, nitrogen tetroxide, chlorine, sodium hypochlorite, and potassium carbonate. Environmental contamination is present at the site in various media, and no formal remediation plan has been approved by MDEQ or EPA. A consent order for investigation and remediation of contamination at the site exists between EPA and VCC, and a purchaser of the site covered by this order will be required to negotiate the continuing affect of that order with EPA and MDEQ.

MDEQ is considering the Guaranteed Fixed Price Contract concept for the plant site using a "risk-based" approach to cleanup; but we need a "ballpark figure" for this sort of contract to determine even if it is an option worth further consideration. Therefore, we would very much appreciate it if you could, along with your standard promotional material, give us a "ballpark figure" if you can, as well as an idea of what we would be getting in return (i.e., environmental insurance policy plus restricted use cleanup, demolition, etc.). Please call me to discuss.

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654

(601) 961-5300 (FAX)
http://www.brownfields.ms

Trey Hess
05/06/2003 12:39 PM

To: ewerth@arcadis-us.com
Subject: Guaranteed Fixed Price Contract - Vicksburg Chemical

Erhardt,

The Mississippi Department of Environmental Quality (MDEQ) is currently evaluating options for the cleanup of the Vicksburg Chemical Company (VCC) site in Vicksburg, Mississippi and is very interested in negotiating a "Guaranteed Fixed Price Contract" for cleanup. We would like to get the following: for a fixed price, a firm will commit to perform any and all remediation necessary to achieve regulatory closure for the contamination, including known and unknown contamination. Vicksburg Chemical Company (VCC) owns a chemical manufacturing facility and approximately 500 acres of surrounding acreage in, Vicksburg, Warren County, Mississippi. The facility acreage includes both heavily contaminated acreage and acreage that exhibits no obvious signs of contamination and includes frontage on the Mississippi River. VCC has filed for reorganization under Chapter 11 of the United States Bankruptcy Code, and the bankruptcy is being administered by the United States Bankruptcy Court for the Southern District of New York. VCC has abandoned the facility, and the facility is currently not operating except for certain waste handling and maintenance operations being carried out by the Mississippi Department of Environmental Quality (MDEQ) and the United States Environmental Protection Agency (EPA).

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Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654

(601) 961-5300 (FAX)
http://www.brownfields.ms

CITY OF VICKSBURG

P. O. BOX 150 VICKSBURG, MS 39181-0150 (601) 634-4554

LAURENCE E. LEYENS
MAYOR

GERTRUDE A. YOUNG
ALDERWOMAN

SIDNEY H. BEAUMAN, JR.
ALDERMAN

May 5, 2003

Charles H. Chisolm, Executive Director
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305

RE: Vicksburg Chemical Property

Dear Mr. Chisolm:

As you are aware, the City of Vicksburg has been planning to construct a golf course in the Warrenton Road area which overlooks the Mississippi River. We believe that a golf course would increase our tourism and benefit the overall quality of life in Vicksburg. An integral part of the planned golf course would incorporate some of the property owned by Vicksburg Chemical Corporation. We would also acquire additional property in the area.

As we understand, MDEQ has already had the Vicksburg Chemical property appraised by two (2) appraisers and the values were not within the same range. The lower appraised value was $860,500.00 while the higher value was $2.25 Million. The City of Vicksburg has recently had similar property appraised and the value was $2,000.00 per acre for the higher terrain and $500.00 per acre for the acres that are subject to flooding. We believe the $860,500.00 value is more realistic than the $2.25 Million for the Vicksburg Chemical property.

Therefore, the City of Vicksburg offers to pay to MDEQ $860,500.00 for the 500 clean acres of property owned by Vicksburg Chemical Corporation. We are not interested in acquiring the plant site, and would like to see that property demolished, cleaned and eventually used again by the private sector for a commercial or light industrial use.

We appreciate your courtesies in this matter. We would appreciate a prompt reply so that

we may proceed with the golf course plans.

Sincerely,

Laurence E. Leyens, Mayor

Gertrude A. Young, Alderwoman

Sidney H. Beauman, Jr., Alderman

BOWMAR
BAPTIST CHURCH

1825 U.S. 61 SOUTH · VICKSBURG, MISS. 39180 · 601-636-2596

April 22, 2003

Trey Hess
MS Department of Environmental Quality
P. O Box 20305
Jackson, MS 39289-0385

SUBJECT: Vicksburg Chemical Company (VCC) Property Acquisition

Dear Trey:

Reference telephone conversation between yourself and Jim Ditto on 7 April 2003. In this conversation you informed us that MDEQ was willing to discuss possible purchase of the approximately 18 acres that we had submitted a proposal on in March. You noted that in order for negotiations to proceed, BBC would either have to accept the property value established by MDEQ or obtain and submit an official appraisal of the property.

Since BBC believes the value MDEQ placed on this portion of the VCC property is excessive, we have obtained an appraisal from a local real estate appraisal firm. This letter is to transmit the appraisal.

We look forward to talking with you at your earliest convenience. Please contact the church office (601/636-2596) or Jim Ditto (601/634-5870) if you have any questions.

Thank you,

Stephen Gambrell
Chairman of Deacons

Attachment: appraisal dated April 17, 2003

CF: Mike Chaney w/appraisal
Ken Chennault w/appraisal

Trey - Please call me or Jim if you have any questions. Thanks for your work on our State!
Steph
Civil Engineer
(601) 634-5764

STATE OF MISSISSIPPI
DAVID RONALD MUSGROVE, GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

April 21, 2003

FILE COPY

Senator Thad Cochran
United States Senate
113 Dirksen Senate Office Building
Washington, DC 20510-2402

RE: Vicksburg Chemical Company

Dear Senator Cochran:

Thank you for your letter of April 7, 2003 regarding the Mississippi Department of Environmental Quality's (MDEQ) involvement in the proposed sale of land owned by Vicksburg Chemical Company (VCC) in Vicksburg, Mississippi. As you know, VCC was allowed to " abandon" its manufacturing facility in Vicksburg by the Bankruptcy Court in the Southern District of New York. The VCC site, approximately 540 acres, includes both heavily contaminated areas and a large area that exhibits no obvious signs of contamination.

MDEQ and the United States Environmental Protection Agency ("E PA") appeared in the Bankruptcy Court and fought this motion, citing the tremendous burden that would be placed on the citizens of the State if Mississippi were left with the contaminated VCC site. The Court, however, made it clear that regardless of the status of the site, VCC had no assets, and favored the idea of legal abandonment. In the Court's view, Mississippi and the federal government were just going to have to step in and conduct the remediation at the site. In the face of continuing opposition by MDEQ and EPA, however, the Court approved a compromise settlement whereby VCC was allowed legally to abandon the plant site but was made also to abandon the non-industrial (and more valuable) 500 acres. The Court gave MDEQ the authority to require VCC to sell all or part of the abandoned acreage to a buyer of MDEQ's choice on terms that MDEQ approved. All proceeds from this sale are to be applied to the remediation of the plant site.

In January 2003, MDEQ sought written proposals from prospective purchasers interested in acquiring all or part the Company's real or personal property. MDEQ received six proposals in response to our January 2003 Request For Proposals concerning the purchase of Vicksburg Chemical Company's Vicksburg, Mississippi property.

Two companies (Pacific Chlorine, Inc. and Harcros Chemicals, Inc.) generally propose purchasing the entire 540 $\pm$ acres for a nominal amount, conducting chemical production operations at the facility, and accepting liability for either a predetermined amount (Pacific Chlorine) or all (Harcros) of the necessary remediation.

Jacobs Entertainment, Inc. proposes purchasing the 500 ± non-industrial acres for a substantial sum in order to construct a casino operation on the river front property and to construct two golf courses on the remaining property. Jacobs would have no involvement in or liability for remediation of the contaminated acreage other than the purchase price of the 500 ± acres. Jacobs would begin the purchase process by paying MDEQ an amount in earnest to be held during a due diligence period.

Ryan Ma, Ph.D., proposed the purchase of a portion of the production facility that includes equipment used to process slow-release fertilizer.

American Brownfields Assurance proposed the creation of a trust to take title to the property and to perform other remediation and cost-recovery services for MDEQ.

Bowmar Baptist Church proposed the purchase of approximately eighteen acres as a buffer zone for church property.

MDEQ reviewed these proposals and, in March 2003, determined to move forward with the Jacobs Entertainment proposal (subject to further negotiation with that entity) primarily because it provides the greatest opportunity for the remediation of the plant site and the least likelihood of additional contamination. The Jacobs proposal, in our determination offered better protection of human health and the environment and less liability for cleanup costs imposed on the citizens of the State. MDEQ is now negotiating a contract with Jacobs Entertainment to begin the due diligence period required by Jacobs Entertainment prior to executing a transfer of the 500 ± non-industrial acres from Vicksburg Chemical to Jacobs Entertainment. Additionally, MDEQ is negotiating with Bowmar Baptist Church on their proposal, which probably can be accommodated at the same time.

Currently MDEQ plans that if the property transfer to Jacobs Entertainment is completed, MDEQ will move forward with (i) finding a buyer for the industrial site and/or plant equipment whose use of the 40 ± industrial acres and equipment will be compatible with the recreational use of the non-industrial acres purchased by Jacobs Entertainment and (ii) remediating the site in cooperation with EPA and the new property owner (if any). MDEQ also intends to maintain flexibility with its proposed actions concerning the industrial acreage since decisions regarding that property will continue to hinge on many variables.

A tremendous amount of MDEQ staff time and resources were used in winning the right to secure remediation funding for Mississippi through the Bankruptcy Court and in reaching the decision to accept the Jacobs proposal. MDEQ would be pleased to discuss this matter in more detail at your convenience. Should you have any questions concerning this matter, please do not hesitate to call me at (601) 961-5000.

Sincerely,

Charles H. Chisolm
Executive Director

CHC:jar

THAD COCHRAN
MISSISSIPPI

COMMITTEE ON
AGRICULTURE, NUTRITION,
AND FORESTRY
CHAIRMAN

COMMITTEE ON
APPROPRIATIONS

COMMITTEE ON
RULES AND
ADMINISTRATION

United States Senate

WASHINGTON, DC 20510–2402

April 7, 2003

Please reply to:
188 East Capitol Street
Suite 614
Jackson, Mississippi 39201-2125
(601) 965-4459
(601) 965-4919 Telefax

Mr. Charles H. Chislolm
Executive Director
Mississippi Dept. of Environmental Quality
Office of Geology
Post Office Box 20307
Jackson, Mississippi 39289-1307

Dear Mr. Chislolm:

Enclosed is correspondence sent to me by a number of my constituents regarding another casino's possibly being built in Vicksburg. As a courtesy to me, I would appreciate a written response at your earliest convenience.

Thank you for looking into this matter.

Sincerely,

THAD COCHRAN
United States Senator

TC/kc

Enclosure

March 11, 2003

03 MAR 21 AM 10:26

UNITED STATE SENATOR
THAD COCHRAN,
REPUBLICAN - MISSISSIPPI
326 Russell Senate Office Building
Washington, D.C. 20510

Dear Sir,

On March 7, 2003, the Mississippi Department of Environmental Quality awarded approximately 500 acres of land in Vicksburg, MS from the Vicksburg Chemical Plant sight to Jacobs Entertainment. Jacobs Entertainment is planning to build a casino and golf course on the sight.

Does Vicksburg really need another casino? With four current casinos in the area, the market is presently saturated. Local governments have praised the efforts of the casinos, but what have the citizens of Warren County seen as a result? The answer is simple, higher crime, higher taxes, increased government spending, and pawn shops on every corner.

Two offers to reopen the plant were rejected in favor of the casino effort. What this basically says is the MDEQ is more concerned about Las Vegas gaming than local industry. What message is this sending to our children; get an education to work for minimum wage. GAMING IS NOT THE BEST INTEREST FOR THIS LAND. Please help contact the MDEQ and let them know this is not the best solution.

Sincerely,

March 11, 2003

03 MAR 21 AM 10: 25

UNITED STATE SENATOR
THAD COCHRAN,
REPUBLICAN - MISSISSIPPI
326 Russell Senate Office Building
Washington, D.C. 20510

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Sincerely,

Pat Ryan

March 11, 2003

03 MAR 21 AM 10:24

UNITED STATE SENATOR
THAD COCHRAN,
REPUBLICAN - MISSISSIPPI
326 Russell Senate Office Building
Washington, D.C. 20510

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Sincerely,

Kay L. Keen

03 MAR 21 AM 10:24

March 14, 2003

United State Senator
Thad Cochran
Republican – Mississippi
326 Russell Senate Office Building
Washington, D.C 20510

Dear Thad:

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Sincerely,

Charles W. Thornton

March 11, 2003

03 MAR 20 AM 9:52

UNITED STATE SENATOR
THAD COCHRAN,
REPUBLICAN - MISSISSIPPI
326 Russell Senate Office Building
Washington, D.C. 20510

Dear Sir,

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Sincerely,
Bobbye Marble

03 MAR 20 AM 8:51

March 11, 2003

UNITED STATE SENATOR
THAD COCHRAN,
REPUBLICAN - MISSISSIPPI
326 Russell Senate Office Building
Washington, D.C. 20510

Dear Sir,

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Sincerely,

Minnie L Bourgogne

March 11, 2003 03 MAR 20 AM

UNITED STATE SENATOR
TRENT LOTT
REPUBLICAN - MISSISSIPPI
487 Russell Senate Office Building
Washington, D.C. 20510

Dear Sir,

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Sincerely,

Minnie D. Longoyne

Trey Hess
04/15/2003 03:56 PM

To: L50M1000@aol.com
Subject: Vicksburg Chemical Co. - Equipment Disposal

Larry,

I'm in receipt of your letter dated April 11, 2003 to Ms. Linda Vaught of MDEQ regarding your interest in the prilling and encapsulating equipment. MDEQ is currently negotiating the sale of real estate that is not associated with the plant facility. If this goes through (we will know in a little more than 120 days), then we may be engaging with used equipment dealers and others for the dismantling of the facility. However, if the real estate deal does not go through, then we may be negotiating with parties interested in restarting the plant. Therefore, it is premature for us to discuss disposition. I now have your contact information and will let you know what the next step will be after the 120 days. You may want to fire me an email soon after the 120 days to get an update. If you need to contact me, my info is below.

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Trey Hess
03/21/2003 08:49 AM

To: "Nancy Thomas" <nancyt@vicksburg.org>@INETDEQ
Subject: RE: Vicksburg Chemical Co. (VCC) Property - Lien

Tax lien. These thing may need to be addressed prior to purchase by Jacobs. I've been asked to run down any "liens" that may be on the property.

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

"Nancy Thomas" <nancyt@vicksburg.org>

"Nancy Thomas" <nancyt@vicksburg.org>
03/21/2003 08:18 AM

To: <Trey_Hess@deq.state.ms.us>
cc:
Subject: RE: Vicksburg Chemical Co. (VCC) Property - Lien

Trey -- I'm not aware of any lien that the city would have. Do you mean a tax lien? I haven't checked the title or anything. I know they owe us money for water and we have filed a claim in the bankruptcy proceeding. Do you have any more details? Thanks. Nancy

-----Original Message-----
From: Trey_Hess@deq.state.ms.us [mailto:Trey_Hess@deq.state.ms.us]
Sent: Thursday, March 20, 2003 2:59 PM
To: Nancy Thomas
Subject: Vicksburg Chemical Co. (VCC) Property - Lien

Nancy,

Does Vicksburg have a lien on the VCC property?

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

BOWMAR
BAPTIST CHURCH

1825 U.S. 61 SOUTH · VICKSBURG, MS 39180 · 601-636-2596

March 28, 2003

Charles Chisolm, Executive Director
Mississippi Department of Environmental Quality
P. O. Box 20305
Jackson, MS 39289-0385

SUBJECT: Purchase Proposal, Vicksburg Chemical Co. Property

Dear Mr. Chisolm:

We are in receipt of your letter dated March 7, 2003, whereby we were informed that MDEQ plans to proceed with an acquisition proposal submitted by the Jacobs Entertainment, a company associated with the gambling industry. You further state that "It is likely that the concerns of Bowmar Baptist Church can also be met in combination with this proposal."

This letter is to inform you that Bowmar Baptist Church (BBC) has several concerns about the action MDEQ is proposing to take, and we would like to make our position known before a final decision is made.

First, your undated Request for Proposals indicated that the property could be sold to one or more buyers. Follow-on conversations with Mr. Trey Hess indicated that if the selected proposal included purchase of all of the property, then MDEQ would recommend the winning offerer reach an equitable agreement with BBC. However, since MDEQ plans to sell the Jacobs Entertainment interest only a portion of the property, we do not understand why we have to enter into a second tier agreement for the small portion we had requested.

Second, we are not totally comfortable with the prospect of having to negotiate with a casino for this property. Our entire proposal was predicated on obtaining this buffer to prevent any development from abutting our recreation area. Since two golf courses are planned, it is quite conceivable that Jacobs Entertainment will not want to give up any of their acquisition. Then BBC could likely be faced with the one thing we were trying to avoid – development immediately adjacent to us.

Third, your Request for Proposals repeatedly mentioned remediation of the contaminated areas of the property. It was our understanding that one of the main goals of MDEQ was to clean up the contaminated soil. Neither Jacobs nor BBC proposed to perform any type of remediation. Therefore it must be assumed that your decision was based on what you consider is best for the community. We believe our impact on this community to be as important as anyone else. Therefore, we believe we should have the opportunity to negotiate with your office for the requested property rather than be at the mercy of the gambling interests.

If you have any questions, or would like to discuss further, please contact Mr. Jim Ditto at 601/634-8540 or the church office at 601/636-2596.

Sincerely,

Milton Jones
Vice-Chairman of Deacons

3/12/03

VICKSBURG CHEMICAL SITE

TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. in Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
South Plant																
Nitric Acid Plt	T1	T2001	3	S.S.	62.18% HNO3	23,400	84%	12' 6"	39' 3"	24' H	X		N	3.5" Residue	MS Chem.	
Nitric Acid Plt	T1A	T2002	4	S.S.	62.62% HNO3	23,400	84%	12' 6"	39' 3"	24' H	X		N	4" Residue	MS Chem.	
Nitric Acid Plt	T1B	T2003	5	S.S.	62.62% HNO3	23,400	84%	12' 6"	39' 3"	23' H	X		N	5.5" Residue	MS Chem.	
Nitric Acid Plt	T1C	T2004	6	S.S.	62.63% HNO3	23,400	84%	12' 6"	39' 3"	23' H	X		N	5.5" Residue	MS Chem.	
Nitric Acid Plt	T2	T2005	1	S.S.	58.73% HNO3	11,430	65%	10'	31' 4"	21' H	X		N	25" Residue	MS Chem.	
Nitric Acid Plt	T3	T2006	2	S.S.	62.33% HNO3	11,430	70%	10'	31' 6"	21' H	X		N	4" Residue	MS Chem.	
Nitric Acid Plt	T4	T2007	7	S.S.	62.75% HNO3	14,900	90%	12'	38'	19' H	X		N	Residue	MS Chem.	
Nitric Acid Plt	T5	T-2012	8	S.S.	62.81% HNO3	17,800	6.65%		27'	49' L	X		Y	Residue	MS Chem.	Insulated Jacket
Nitric Acid Plt	T6	T-2011	9	S.S.	62.81% HNO3	17,800	6.65%		27'	49' L	X		Y	Residue	MS Chem.	Insulated Jacket
Nitric Acid Plt	T7	T-2010	10	S.S.	62.84% HNO3	17,800	72.20%		27'	49' L	X		Y	Residue	MS Chem.	Insulated Jacket
Nitric Acid Plt	T8	T-2009	11	S.S.	62.0% HNO3	17,800	72.20%		27'	49' L	X		Y	Residue	MS Chem.	Insulated Jacket
Nitric Acid Plt	T9	T-2008	12	S.S.	62.91% HNO3	17,800	72.20%		27'	49' L	X		Y	Residue	MS Chem.	Insulated Jacket
Nitric Acid Plt		T-2300		C.S.	K2CO3	500	Full	3'		3.5'	X		N			UST @ South Acid Tower; Sampled by MS Chem
Neb. Blr.	T-2304			C.S.	H2SO4	11,285			25' 4"		X		N			Empty, but not washed

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. In Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
NH3 Area	E. Sphere			C.S.	Anhyd. NH3	15,000		54' 9"				X	N			Vented off, pumped out, purged w/N2, still under N2 pressure
NH3 Area	W. Sphere			C.S.	Anhyd. NH3	15,000		54' 9"				X	N			Vented off, pumped out, purged w/N2, still under N2 pressure
NH3 Area	E. Burn Tank			C.S.	Anhyd. NH3	11,285		8'		32'		X	N			Vented off, pumped out, purged w/N2, still under N2 pressure
NH3 Area	W. Burn Tank			C.S.	Anhyd. NH3	11,285		8'		32'		X	N			Vented off, pumped out, purged w/N2, still under N2 pressure
NH3 Area	Distrib. Tank			C.S.	Anhyd. NH3	11,285		8'		32'		X	N			Vented off, pumped out, purged w/N2, still under N2 pressure
Kcarb	V-503				Carbon Dioxide			9' 6"								Carbon Dioxide Storage
Kcarb	T-505				Slaked Lime Surge		11.66 ft.	15'								
Kcarb	T-507			FRP	NH4CO3	19,775	0 ft.	12'		22.8'	X		Y			Ammon. carb. feed - empty not washed
Kcarb	T-508				Pulse Water North		Residue	6'								
Kcarb	T-509				Resin Recovery		Residue	6'								
Kcarb	T-512				Displaced Water		Residue	12'								
Kcarb	T-513			FRP	K2CO3-NH4CO3	19,775	Residue	12'		22.8'	X		Y			Weak Liquor; empty w/residue
Kcarb	T-515				Lime & Water		50%	10'								Horizontal Mix Tank
K-Carb	T-516						Residue		25' 5"							
Kcarb	T-521			S.S.	K2CO3	11,614	Residue	12'		13.4'	X		Y			Empty w/residue, Concentrated surge tank
Kcarb	T-523			S.S.	K2CO3	19,704	Unknown	12'		22.7'	X		Y			No Gauge
Kcarb	T-540			FRP	NH4Cl	19,863	95%	14'		16.75'	X		Y			Ammonium Cloride & water

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. In Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
Kcarb	T-541			FRP	NH4Cl	5,483	Residue	10'		8.8'	X		Y	Residue		Empty w/residue
Kcarb	T-542				Calcium Clar.&Thick.		75%	7'								MAP or MKP
Kcarb	T-543				Wastewater		Residue	5'								
Kcarb	T-549				Water from Sump		Residue	12'								Contained treated effluent water
Kcarb	T-550				Wastewater		Residue	8'								Neutralization tank. pH-10
Kcarb	T-552				Spent Wash Water		Residue	14'								pH-6
Kcarb	T-553				Process Water		Residue	12'								Process Water Return (Condensate)
Kcarb	T-560N			C.S.	KOH	15,400			36'	21' H	X		Y			Gauge shows empty, Suspect some liquid KOH, not K2CO3
Kcarb	T-560S			C.S.	KOH	15,400			36'	21' H	X		Y			Gauge shows empty, Suspect some liquid KOH, not K2CO3
K-Carb	C-516				Amm. Carb. Absorber		Residue	2'/5'/8'								Ammonium Carbonate Absorber - Empty
K-Carb	T-508N				Pulse Water North		Residue	6'								Neutralization tank. - Empty
K-Carb	T-508S				Pulse Water South		Residue	6'								Neutralization tank. - Empty
K-Carb					K-Carb		Residue									
K-Carb					K-Carb		Residue									
K-Carb					K-Carb & Water		Residue									
East Kcarb	T-561			C.S.	NaOH	18,000	<2 ft.	14'			X		N			Effluent Treatment Chemicals
East Kcarb	T-562	16		C.S.	NaOH	15,000	64 "	14'			X		N			Effluent Treatment Chemicals

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. In Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
East Kcarb	T-563			C.S.	H2SO4	15,000	<2 ft.	10'			X		N			Effluent Treatment Chemicals
East Kcarb	T-564			PE	HCl	5,000	Residue		37' 8"		X		N			"Hydrochilic" ? Not Used
West Kcarb	T-566			C.S.	KOH	12,000	Residue		25' 2"		X		N			
West Kcarb	T-568			S.S.	K2CO3	11,905	Residue		38' 5"		X		Y			Insulated Jacket
MAP-MKP	Premix Tank			S.S.	H3PO4	10,000	N/A				X		N	N/A		Tank Removed prior to 10/18/02
MAP-MKP	T-604	H2O Storage		S.S.	water	9,306		12'			X		Y			No Gauge
MAP-MKP	T-605	Phos. Acid Tank		S.S.	H3PO4	21,878	Residue	14'			X		Y			Phosphoric Acid
MAP-MKP	T-606	AC Tank		S.S.	K2CO3-NH4CO3	21,878	Residue	14'			X		Y			Ammonium Carbonate
MAP-MKP	T-608	MKP ML Tank		S.S.	MAP-MKP	24,181	Residue	14'			X		Y			MKP Storage - No Gauge
MAP-MKP	T-609	MAP ML Tank		S.S.	MAP-MKP	24,181	70%	14'			X		Y	70%		MAP
MAP-MKP	T-613	Dump Tank		S.S.	MAP-MKP	43,616	15.20%	16'			X		Y			
MAP-MKP	T-615	Evap. Feed Tank		S.S.	MAP-MKP	31,091	95%	14'			X		Y			Weak Liquor of MAP or MKP
MAP-MKP	T-616	Polish filter feed tank		S.S.	MAP	16,074	90%	12'			X		Y			
MAP-MKP	R-611			S.S.	Wastewater	44,712		14'			X		Y			Mostly wastewater from sump - no gauge
MAP-MKP	T-617	XTAL Feed Tank						12'								Crystallizer feed tank
MAP-MKP	E-619				MAP		Residue	6' 4"								Exchanger
MAP-MKP					MKP		Full	48'		16'						Insulated tank, located outside of containment area south end of plant

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. In Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
MAP-MKP					MAP		?	40'		20'						non-insulated, located outside of containment area south end of plant
MAP/MKP	V-619				MAP/MKP		Empty	11'								Empty & water washed
Multicote Tkfm	T-1107		13	S.S.	Tall Oil	12,000	36.96%	12'		17'	X		Y			
Multicote Tkfm	T-1108		14	S.S.	Castor Oil	12,000	27.16%	12'		17'	X		Y			
Multicote Tkfm	T-1109			S.S.	MDI (PAPI)	12,000	0.06%		38' 7"		X		Y			Insulated Jacket
Multicote Tkfm	Blend Tank T-1110			S.S.	Blend		50.30%		24'		X		Y			Blend of Tall, Castor, & PAPI oils w/Insulated Jacket
RxR Crossing	-			C.S.	Diesel Fuel	564	1 ft.		11' 4"		X		Y			
B Cool Twr	-			PE	Betz CT Treatment	1,000	100 gal		16' 9"		X		N			Betz Dearborn Continuum AEC 3136
B Cool Twr	-			PE	Betz CT Treatment	560	160 gal		12' 9"		X		N			Spectrus BD 1500
B Cool Twr	-			C.S.	Betz CT Treatment	550	100 gal		12' 9"		X		N			Spectrus NX 1100
Neb. Blr.	-			C.S.	Betz Boiler Treat	560	Residue		48" OD	72" L	X		N			
Neb. Blr.	-			PE	Betz Boiler Treat	500	Residue		48" OD	60" L	X		N			
South Acid Plt.				PE	Betz Boiler Treat	500	190		48" OD	60" L	X					Optisperse CPS6478
South Acid Plt.				C.S.	Betz Boiler Treat	560	297		48" OD	72" L	X					
	T-2014				Demin. Water		83%									
Frick	V-2305				NH3		Residue		9' 5"							Held NH3, but has been purged w/N2. Frick area
Frick	V-2306				NH3		Residue		11' 7"							Held NH3, but has been purged w/N2. Frick area. Insulated Jacket

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. In Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
North Plant																
KNO3 Tnk Fm	T1N		18	S.S.	59.60% HNO3	80,000	97.9%	28'	88.75'	20'	X		N	2" Residue	MS Chem	
KNO3 Tnk Fm	T2			C.S.	50% NaOH	12,000	33.25"	12'	37.6'	16'	X		N	Approx. 3'		Used at C-10 to scrub N2O4 loading operation.
KNO3 Tnk Fm	T3			C.S.	Sulfuric Acid 98%	12,000	5' 7.5"	12'	37.6'	16'	X		N	1.1' Sludge	MS Chem	All pumpable liquid removed.
KNO3 Tnk Fm	T4N		19	S.S.	59.67% HNO3	10,000	80-90%	12'	37.6'	16'	X		N	10" Residue	MS Chem	
KNO3 Tnk Fm	T5			C.S.	45% KOH	12,000	8.7 ft.	12'	37.6'	16'	X		N			
KNO3 Tnk Fm	T6		21	C.S.	18% - 19% NaOH	20,000	8 ft.	15'	47.1'	16'	X		N	Approx. 19"		Used at C-10 to scrub N_2O_4 loading operation.
KNO3 Tnk Fm	T7			C.S.	45% KOH	6,000	81"	8'	25.1'	10'	X		N			
KNO3 Tnk Fm	T8			C.S.	50% NaOH	6,000	34"	8'	25.1'	10'	X		N	Approx. 3'		Used at C-10 to scrub N2O4 loading operation.
C-10 Area	T13E			C.S. - gunnite	16% NaOH	10,000	3 ft.	12'	37.6'	12'	X		N	Approx. 6'		Spent caustic from C-10 unit
C-10 Area	T13W			C.S. - gunnite	16% NaOH	6,000	3 ft.	10'	31.6'	12'	X		N	Approx. 6'		Spent caustic from C-10 unit
KNO3 Tnk Fm	T14		20	S.S.	85.35% HNO3	17,000	82%	11'	36.4'	14'	X		N	Residue	MS Chem	
C-10 Area	T-22			C.S. - gunnite	NaOCl	6,000	Residue				X		N			Has never been in service.
C-10 Area	T-22N			FRP	Treated spent caustic	10,000	2.5%	12'	38'	12' H	X		N	Approx. 4'		Spent caustic from C-10 unit
C-10 Area	T-22S			FRP	Treated spent caustic	10,000	2.5%	12'	38'	12' H	X		N	Approx. 4'		Spent caustic from C-10 unit
Bleach Plt	T-23C		25	FRP	4% NaOCl	30,000	91.18%	12'	38'	38' H	X		N			1%=300 gal. Approx. 4' from top
Bleach	T-24				Bleach or Caustic		Residue	3'	9' 5"	4' 6"						

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. In Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
Bleach	T-25				Bleach or Caustic		Residue		18' 8"	4' 6"						
Bleach Plt	T-26		26	FRP	4% NaOCl	30,500	88.60%	12'	38'	38' H	X		N			1%=306 gal.
Bleach Plt	T-27			FRP	NaOCl	8,200	Residue	10'	31'	15' 8" H	X		N			Appears to be empty
Crystallizers	V-5				70% Nitric Acid w/crys.		Full	15'	47.1'	12' H						70% Nitric Acid Liquid & Crystals
Crystallizers	V-6				70% Nitric Acid w/crys.		50.00%	15'	47.1'	12' H						70% Nitric Acid Liquid & Crystals
Crystallizers	V-11				70% Nitric Acid w/crys.		25.00%	15'	47.1'	19' H						70% Nitric Acid Liquid & Crystals
Crystallizers	V-12				70% Nitric Acid w/crys.		0-5%	15'	47.1'	18' H						70% Nitric Acid Liquid & Crystals (Near empty)
Crystallizers	V-13A		23	S.S.	67.71% HNO3	10,000	47.5%	12'	38'		X		N	Residue	MS Chem	
Crystallizers	V-13B		22	S.S.	72.44% HNO3	22,000	97%	12'	38'		X		N	Residue	MS Chem	
Crystallizer UST	V-76		27	S.S.	HNO3 & KNO3	20,000?	Full				X					UST under crystallizers, believed to be a railroad tank car
K-54	V-140				Freon 134A		29-30 "	5'	16'	25'						
K-54	E-61	Vacuum Tank			?		Residue									Exchangers - Empty - Vacuum pulled
K-54	E-62	Freon Vacuum			Freon		Residue									Exchangers - Empty - Vacuum pulled
KNO3 Tank Farm	V-34			C.S.	Cl2	32,000	0 ft.	9' 6"		57'	X		N			Empty & air blown
KNO3 Tank Farm	V-61				Nitric Acid		Empty	5'	16'	8'						Empty & washed
KNO3 Tank Farm	V-62				80-85% Nitric Acid		Empty	7'	22'	13'						Empty & washed
KNO3 E-side	V-131			C.S.	N2O4	5,500	0 ft.	6'		32'	X		N			Empty & air blown, not gas free

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. In Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
KNO3 E-side	V-132			C.S.	N2O4	6,200	0 ft.	6'		32'	X		N			Empty & air blown, not gas free
C12 Loadout	V-133			C.S.	N2O4	25,000	0-1 ft.	10'		44'	X		N			Not air swept or cleaned
C12 Loadout	V-134			C.S.	N2O4	20,000	0-1 ft.	10'		34'	X		N			Not air swept or cleaned
C-12 Loadout	V-135						Residue	6'		9'						Nitric Oxide Dryer
C-12 Loadout	V-136						Residue	2'		7'						N2O4 - H2O Reaction pot
C-12 Loadout	V-137		24	C.S.	N2O4		30,000#	5'		25'			N	Residue	MS Chem	Loaded out and shipped to Dupont/Dow and to BOC Gases
C12 Loadout	V-138			C.S.	N2O4	15,000	0-1 ft.	8'		42'	X		N			Not air swept or cleaned
C12 Loadout	V-152			C.S.	N2O4	14,579	0-1 ft.	8'		38'	X		N			Not air swept or cleaned
C12 Loadout	V-154						Residue	1'		5'						Heel Filter
C12 Loadout	V-162			S.S.	N2O4	8,129	0-1 ft.	6'		40'	X		N			Not air swept or cleaned
[illegible] Loadout	52.5M-250-114				Liquid Nitrogen	500	62 "				X			0 "		62" on 10/16/02, consumed itself (boiled off)
N. Plt fuel	-			C.S.	Diesel Fuel	2,000	12"				X		Y			
N. Plt fuel	-			C.S.	Unleaded Gasoline	2,000	3"				X		Y			
F-W Blr.	-			C.S.	Betz Boiler Treat	2,000	625				X		N			Optisperse - CPS6478
F-W Blr.	-			PE	Betz Boiler Treat	560	267				X		N			Steamate - NA05
N. Cool Tower	-	Boiler		PE	Betz CT Treat	550	75		12' 9"		X		N			Spectrus BD-1500
N. Cool Tower	-			PE	Betz CT Treat	1,000	100		16' 9"		X		N			Dianodic - DN 2126

VICKSBURG CHEMICAL SITE
TANK INVENTORY

Area	Old Tank Name/#	New Tank Name/#	Sample ID#	Mat. of Const.	Contents	Total Capacity	Start Level	Diameter in Feet	Circum. in Feet	Height / Length in Feet	Gallons	Tons	Sec. Cont.	Volume Remaining	Disposition	Comments
N. Cool Tower	-			PE	Betz CT Treat	500	95		12' 9"		X		N			Spectrus NX 1100
N. Cool Tower	-			PE	Betz CT Treat	500	300				X		N			Spectrus BD-1500
N. Cool Tower	-			PE	Betz CT Treat	500	395				X		N			Continuum AEC 3136
N. Cool Tower				PE	NaOCl	250	Residue		12' 6"		X		N			Bleach
C-15 Area	T-165A			S.S.	KNO3 sol.	10,000	95%			9' 8"	X		N			Liquid Fertilizer (3-0-11)
C-15 Area	T-165B			S.S.	KNO3 sol.	26,000	9.3 ft.		?	20'	X		N			Liquid Fertilizer (3-0-11); insulated jacket
C-15 Area	T-16			C.S.	Petro Ag 375		63.00%	10'	31' 5"	13' 2"						
C-15 Area	T-18			S.S.	Petro Ag		65.00%	10'	31' 5"	12'						
C-15 Area	Small T-18			S.S.	Petro Ag Reg.		8 ft.	6'	19'	10'						75% Full
C-15 Area	T-12			C.S.	50% NaOH		95.00%	6'	18.8'	6'						Phased liquid pH 14
[illegible]5 Area	C-15				5% Acid Fert. Mix		Residue									Last contained 5% Acid Fertilizer Mix
N. Dryer Area					1,1,1,2 T..F..Ethane		Full									8 1-ton Cylinders of 1,1,1,2 TetraFluoroethane (Freon)
K-55	E-171				Freon		Full									K-55 Freon System behind N. Cooling Tower. Exchangers
K-55	V-171				Freon		Full	2' 5"	7' 10"	14'						K-55 Freon System behind N. Cooling Tower
K-55	V-170				Freon		Full	3'	9' 5"	6'						K-55 Freon System behind N. Cooling Tower
Boiler	T-11				Demin. Water		Residue	15'	47'	19'						Empty
Boiler	V-147				Demin. Water		Residue									Empty - Drain open

Ken Whitten
05/01/2003 07:51 AM

To: Chuck Barlow/Legal/Admin/DEQ@DEQ, Trey Hess/HW/OPC/DEQ@DEQ
Subject: Chevy Tioga Motor Home

----- Forwarded by Ken Whitten/HW/OPC/DEQ on 05/01/2003 07:59 AM -----

"Jack Baxter" <jbaxter@americanleaseplans.com>
04/30/2003 03:55 PM

To: <ken_whitten@DEQ.state.ms.us>
cc:
Subject: Chevy Tioga Motor Home

Below is the name of the person who will be picking up the Chevy Tioga Motor Home:
Dennis Kelso
5928 New Hope Court
Hermitage, Tn. 37076
Tennessee Drivers License # 26967201
Cell# 615-405-1549

If you have any questions call me or Larry King @ 615-859-2004.

Trey Hess@DEQ
04/01/2003 09:13 AM

To: Ken Whitten/HW/OPC/DEQ@DEQ
Subject: Re: FW: FW: Vicksburg Chemical

Ken,

The subject Trackmobile is on Johnny Hannah's list of "leases" (Safeco Credit). It appears from this email that GE Capital is successor and therefore can pick it up. Have someone sign for it.

TREY

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Ken Whitten

Ken Whitten
04/01/2003 07:41 AM

To: Chuck Barlow/Legal/Admin/DEQ@DEQ, Trey Hess/HW/OPC/DEQ@DEQ
cc:
Subject: FW: FW: Vicksburg Chemical

FYI

If this is not OK

Please let me know, they want to get the trackmobile this week...

ken

----- Forwarded by Ken Whitten/HW/OPC/DEQ on 04/01/2003 07:48 AM -----

"George Salles" <gsalles@mgbd.com>
03/24/2003 04:03 PM
Please respond to gsalles

To: <ken_whitten@deq.state.ms.us>
cc: <mkye@PitneyHardin.com>
Subject: FW: FW: Vicksburg Chemical

Hi Ken,

I'm resending the Omnibus Schedule referencing the trackmobile.

George Salles
Marotta Gund Budd & Dzera, LLC
360 Lexington Avenue, Third Floor
New York, New York 10017
Tel: 1-212-818-1555

Chuck Barlow
03/18/2003 10:20 AM

To: Dcgnautica@cs.com@INETDEQ
Subject: Re: vicksburg agreement

Dave: Thanks for your reply. It would be very helpful to us if we could see a draft before you arrive. We look forward to working through the contract issues with you.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076
Dcgnautica@cs.com

Dcgnautica@cs.com
03/11/2003 11:14 AM

To: chuck_barlow@deq.state.ms.us, MCDANIED@phelps.com, srgorom@hahnlaw.com
cc:
Subject: vicksburg agreement

chuck-

i will have an acquisition agreement prepared for our meeting next week. in general, here are my thoughts on the issues you raise.

1. upon execution of a contract, one of the first orders of business will be to prepare a survey. if you want to visit the site while im in town next week, perhaps we can visually mark the boundaries in our minds if that would help. otherwise i suggest we work off of the existing tax maps for now.

2. i intend to take into account the church's objectives. my sense is that we will have no problems working that part out. i'm open minded about whether they own the fee or have an easement.

3. your last point is more fundamental to my approach. it is important that we agree on fixed terms prior to execution. i need to know what the deal is prior to spending money on due diligence. i expect to invest substantial funds in that process.
that's why i will take the time to draft an agreement that will permit us to get right to the issues.

if its ready, i will e-mail a draft agreement before i arrive. if not, i will have it with me.

dave grunenwald

Chuck Barlow
03/10/2003 11:20 AM

To: mcdanied@phelps.com
Subject: Vicksburg Chemical option contract

Danny: As we discussed, MDEQ would prefer that Jacobs take the first shot at drafting an option contract that would allow Jacobs a 120-day due diligence period during which MDEQ will not instruct Vicksburg Chemical to sell its 500 (plus or minus) non-industrial acres to any other party. As stated in Jacobs' proposal, the consideration for this option contract will be a payment of $50,000 earnest money.

I understand that you are out of the office this week, and I will be out of the office for the rest of this week and next Monday. As you suggested, hopefully Jacobs can begin drafting this contract this week, and we can work toward executing an agreement next week we you and I are back in the office.

Danny, here are a few other issues we need to think about while drafting the contract:

1. At what point does Jacobs need to have an actual survey completed to determine the exact boundary line between the property that Jacobs is and is not purchasing?

2. As stated in the memo, MDEQ is very interested in working through this situation in a way that also satisfies Bowmar Baptist Church's desire for a buffer zone between it and other interests. This could be accomplished in a number of ways (sale of property from Jacobs to the Church, sale of property directly from Vicksburg Chemical to the Church, or purchase of the property by Jacobs with Jacobs' commitment to place a permanent easement on the property). Our indication is that the Church would prefer to own the property itself, but a permanent easement may be a solution that helps satisfy both the Church and Jacobs' wetland mitigation/preservation needs. Please keep this in mind as we move forward.

3. MDEQ would prefer that this contract no go into great detail concerning the exact terms of a final transaction. In other words, we would like this contract basically to reflect the fact that we are giving you 120 days in return for $50,000 and that the purchase price after that term, if the option is exercised, will be no less than that reflected in the proposal. But, as we mentioned during our interview on February 26, we would like to maintain the flexibility to discuss with you options for Jacobs' involvement in funding an additional amount of the remediation if additional funding becomes necessary; thus, the 120-option would apply to both parties (MDEQ could walk away if no final agreement is reached). We would prefer to have these discussion during the 120 day period rather than to delay the onset of the 120 day period with those discussions.

In my absence, please contact Roy Furrh of my office if you need assistance (601-961-5260).

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

CITY OF VICKSBURG

P. O. BOX 150 VICKSBURG, MS 39181-0150 (601) 634-4554

LAURENCE E. LEYENS
MAYOR

GERTRUDE A. YOUNG
ALDERWOMAN

SIDNEY H. BEAUMAN, JR.
ALDERMAN

March 6, 2003

Received
Executive Director
DEQ

Charles H. Chisolm, Executive Director
Mississippi Department of Environmental Quality
P.O.Box 20305
Jackson, MS 39289-1305

RE: Vicksburg Chemical Property

Dear Mr. Chisolm:

As leaders of the City of Vicksburg, we appreciate the opportunity you afforded us to review the proposals received by MDEQ for the use of the Vicksburg Chemical Property and also have a voice in the decision-making process for the future use of the property.

One of our goals for Vicksburg is to grow its tourism economy. Of all of proposals submitted, only the proposal from Jacobs Entertainment offers any growth in the tourism industry. Additionally, the payroll of $16 Million with approximately 675 jobs, as opposed to the proposals by other chemical companies whose payroll would be $5 to 6 Million with approximately 85 jobs, is very attractive for Vicksburg's economy.

One additional concern has been the safety issue of having a chemical plant within such a populated area. We have always been concerned about various hazards that might affect our citizens and needless to say, without a chemical company operating on the premises, that will be one less worry for our community.

We believe the proposal from Jacobs Entertainment to be the best proposal received for the use of the property and such a use would be in the best interest of the citizens of the City of Vicksburg, Mississippi.

Thank you for your consideration in this matter.

Sincerely,

Laurence E. Leyens, Mayor

Gertrude A. Young, Alderwoman

Sidney H. Beauman, Jr., Alderman

Red Carpet City of the South

Trey Hess
03/05/2003 11:22 AM

To: jhanna@cedarchem.com
Subject: Vicksburg Chemical Company Assets

Johnny,

I'm working with Chuck Barlow and Ken Whitten on identifying assets at the Vicksburg facility. Attached you will find a list of assets that I've created in an effort to identify them. I need help in determining whether they are truly an asset of Vicksburg Chemical or owned by Harcros (i.e., maybe the Toyota forklift) or leased. VIN Numbers are included for vehicles.

I haven't had a chance to go through the offices and list the computers, laptops, copiers, etc. and may try to do so next week. Do you know, off the top of your head, whether the office equipment is leased or not? Maybe I can meet you during your visit 12th/13th to briefly walk through the offices and identify leased vs. owned.

THANKS!!

VCC Asset List (03-05-03).d

Jere "Trey" Hess, P.E., DEE
MS Brownfields Program Coordinator
MS Dept. of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385
(601) 961-5654
(601) 961-5300 (FAX)
http://www.brownfields.ms

Vicksburg Chemical Company
List of Assets

CONFIDENTIAL MEMO TO LEGAL:

The purpose of this document is to provide a listing of assets identified by the Mississippi Department of Environmental Quality (MDEQ) at the Vicksburg Chemical Company facility located at 4280 Rifle Range Road, Vicksburg, Mississippi. This list was generated after conducting a site inspection and should not construed to be a complete and exhaustive list of VCC assets at the site. In addition, some of these items may be leased.

1. White Chevy 1500 Pickup
   - VIN: 1GCDC14H5KZ135259
   - Miles – 45924.7
   - Tag – None
   - Photo No. DSCN0954
2. White Ford Ranger XL
   - VIN: 1FTCR10A9VUB14029
   - Miles – 84207
   - Tag – None
   - Photo No. DSCN0955
3. White GMC Sierra 1500
   - VIN: 1GTDC14H6RZ541903
   - Miles – 157703
   - Tag – BG3 557
   - Photo No. DSCN0956
4. White Chevy 1500 W/T
   - VIN: 1GCEC14W6VZ102388
   - Miles – 92966.9
   - Tag – BK2 374
   - Photo No. DSCN0957
5. White Chevy 2500
   - VIN: 1GCFC24K1ME209247
   - Miles – 131338.9
   - Tag – None
   - Photo No. DSCN0958
6. White Chevy
   - VIN: 1GCDC14H6K2163619
   - Miles – 98208.6
   - Tag – None
   - Photo No. DSCN0959
7. White GMC 1500 SL
   - VIN: 1GTDC14K8RZ534253
   - Miles – 89559.6
   - Tag – None
   - Photo No. DSCN0960
8. White Chevy Cheyenne
   - VIN: 1GCDC14H91Z108017
   - Miles – 116737.1
   - Tag – None
   - Photo No. DSCN0961
9. Green Ford Expedition XLT
   - VIN: 1FMEU1768VLC06176
   - Miles – 99240

- TAG – BGV 431
- Photo No. DSCN0962

10. Ford E-350 16' Box Truck/Van
    - VIN: 1FDKE37G7PHB92202
    - Miles - ?
    - Tag – 2BG 099
    - Photo No. 621-160
    - Note: Full of HAZMAT equipment
11. 1996 Holiday Rambler Endeavor LE Motor Home
    - VIN: 4UZR6DR1XT2308340
    - Miles - ?
    - Tag – BGP 881
    - Photo No. 621-159
12. 2000 Tioga Motor Home
    - VIN: 1GBJG31J3Y1224866
    - Miles - 55314
    - Tag – BHX 004
    - Photo No. 621-157
13. Hyster 50 Forklift
    - Serial No. H177B11889W
    - Hours - 4171.3
    - Needs Battery
    - Photo No. DSCN0966
14. Hyster 50 Forklist
    - Serial No. H177B26045Y
    - Hours - ?
    - Needs Battery
    - Photo No. DSCN0964
15. Hyster 50 Forklist
    - Serial No. H177B15018X
    - Hours - ?
    - Runs
    - Photo No. DSCN0976
16. Toyota Forklift Model 42
    - Serial No. 6FGU25 #63027
    - Photo No. DSCN0968
    - Note: According to Steve Mangum of Ferguson Harbor, it is his understanding that this forklift is the property of Harcros Chemical.
17. Dresser 530C Front End Loader
    - Serial No. 78393
    - Photo No. 621-180
18. Waldon 5100 Front End Loader
    - Serial No. None
    - Photo No. DSCN0973
19. 1999 Genie S-60/2WD Manlift
    - No. 2722
    - Photo No. DSCN0974
20. TM 4350 Trackmobile
    - Serial No. 981626900003
    - Model No. DF1544E200A
    - Photo No. 621-179
21. John Deere 310D Backhoe

- PIN#: T0310DA817234
- Photo No. 621-175

22. 51 Bags of MKP
    - Photo No. DSCN0984
23. 360 Celite – A Diantomite Product – 50 lbs. bags
    - 10 pallets of 36 bags per pallet
    - No Photo
24. 12 Pallets of 50 lbs. MKP "Bags"
    - 1800 bags/pallet – Note: No MKP Product in the "bags"
25. Ford F700 Vac Truck
    - Photo No. DSCN0987
26. 31 Pallets of MAP
    - Photo No. DSCN0988
    - Note: Sign reads "MAP Sold AMEREX"
27. HAZMAT Gear
    - Photo No. DSCN0990
    - Note: At least 3 are in the Escort Building

CEDAR
CHEMICAL CORPORATION
5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

RECEIVED
FEB 24 2003
Environmental Quality
Office of Pollution Control

February 20, 2003

Environmental Compliance Division
Office of Pollution Control
P.O. Box 10385
Jackson, MS 39289-0385

To Whom It May Concern:

Vicksburg Chemical Company is out of business. Please find attached the Voluntary Chapter 11 Petition, which was filed by Vicksburg Chemical Company in the state of New York on March 8, 2002.

Case # 02-11040 Vicksburg Chemical Company

Sincerely,

Brenda Dowdy

Brenda Dowdy
Executive Secretary

/bd

City of Vicksburg

Legal Department

1401 Walnut St.
P. O. Box 150
Vicksburg, MS 39181
(601) 631-2983 phone
(601)634-6232 fax

Nancy D. Thomas
City Attorney

Walterine Langford
Bobby D. Robinson
Associate City Attorneys

December 13, 2002

Via mail & fax:
961-5349

Charles H. Chisolm, Executive Director
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305

DEC 2002
RECEIVED
Executive Director
DEQ

RE: Vicksburg Chemical Property

Dear Mr. Chisolm:

Please find enclosed a draft of suggested information to be inserted into the Request for Proposals for the Vicksburg Chemical property as we discussed by telephone earlier this week. I did not include all of the contamination and environmental facts since your staff has all of that information and can determine what contamination/clean up information should be in the RFP.

I have also left blank the acreage and some other information of which I am not sure. I will check the City's official zoning map and give you that information at a later date.

Thank you for allowing us the opportunity to be a part of this process. If I can be of further service, please do not hesitate to call me.

Sincerely,

Nancy Thomas

Nancy Thomas

cc: Mayor and Aldermen, separate copy to each

DRAFT

REQUEST FOR PROPOSALS

Sealed proposals for the real property and/or equipment owned by Vicksburg Chemical Company will be received by Mississippi Department of Environmental Quality until _____a.m. on _____, 2003 in the office of _____ which is located at _____ at which time they will be publicly opened and reviewed.

Vicksburg Chemical is the owner of approximately _____ acres in Vicksburg, Mississippi, generally located in the Warrenton Road, Rifle Range Road area between the Mississippi River and Highway 61 South. Of the total acreage, the chemical plant comprises approximately _____ acres. MDEQ has jurisdiction over the property owned by Vicksburg Chemical Company by virtue of the Court Order dated _____. Vicksburg Chemical Company must convey the property to whomever MDEQ chooses.

MDEQ is seeking proposals on the sale of the real property, the equipment and any other asset located on the property. The proposals may include the purchase of all or part of the property, all or part of the equipment and combinations of real property and equipment. All proposals shall include the following:

1. Description of who proposer is (ownership, principals), history of business, other similar business ventures to the proposed project.
2. Description of the real estate and/or equipment that proposer would like to purchase and price offered.
3. A statement entitled "Business Plan" of the proposer's project which shall include the following:
    a. Intended use(s) of the property and/or equipment
    b. Timeline establishing beginning and completion of project
    c. Number of jobs, if any, created by the project and anticipated payroll
    d. Total investment in project
    e. Financial Statement and other evidence of financial capability to undertake the proposed project
    f. Anticipated Revenue, if any, to the State of Mississippi, Warren County and/or City of Vicksburg, both direct and indirect.
    g. Potential impact on quality of life for citizens of Vicksburg and Warren County.

Proposer's must include 5% of the proposed purchase price as a deposit. Deposits for proposals that are not accepted will be returned.

Proposer's attention is called to the following facts:

The property where the plant is located, approximately ____ acres, is contaminated with _____. Proposers may contact Try Hess at MDEQ at _____ to arrange a time to review information MDEQ has on file regarding the contamination and minimal clean up measures.

All property to be sold is free and clear of any liens, mortgages, Deeds of Trust or other encumbrances.

Conveyance will be by _____(Special/ Quitclaim/Warranty) Deed.

The property is zoned _____.

MDEQ reserves the right to negotiate with one (1) or more proposers regarding the proposed projects. MDEQ will consider the offered price, those items listed in the business plan and the overall proposed project and how it complies with plans of the state and community.

Chuck Barlow
12/12/2002 04:03 PM

To: Charles Chisolm
Subject: VCC

This is just FYI. EPA now has sent a letter to VCC (Yehuda Yoked) in Memphis requiring VCC to make all of the VCC files available to EPA for review. This is being done under the authority of the bankrutpcy court order and CERCLA section 104. The use of the CERCLA "information request" authority means that EPA is treating this as a CERCLA cost-recovery case.

EPA will be going to Memphis to review the documents, probably in January. Do we want to send an attorney to help and to review them at the same time? My thought is that the review of documents may shed light on aspects of how we direct the sale of the company - what the company is worth - etc. I'm really not as worried about the CERLCA lawsuit. We may want to join that eventually, if we do have significant expenditures, but we could catch up on the information later (ride on EPA's coat tails).

For instance, I learned today from Don Rigger, an EPA CERCLA section chief, that the type of fertilizer that VCC made now is not made in the U.S. at all - if you want it you must import it from - you guessed it - one of the foreign plants owned by VCC's parent, TRI. This increases the value of the VCC site, in my eyes, because owning that site could allow a company to make a product in the U.S. that is not now made in the U.S. (classic "market entry"). Of course, Harcros and Pacific Chlorine probably know all of this, and that's why they're interested. We might learn other similar facts from the documents.

The downside is that it would take maybe 3-4 days of a lawyers time. Let me know what you think.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

United States Bankruptcy Court
Southern District of New York

Notice of Bankruptcy Case Filing

A bankruptcy case concerning the debtor(s) listed below was filed under Chapter 11 of the United States Bankruptcy Code, entered on 03/08/2002 at 05:34 AM and filed on 03/08/2002.

Vicksburg Chemical Company
c/o Trans-Resources Inc.
375 Park Avenue
New York, NY 10152
Tax id: 64-0821426

The case was filed by the debtor's attorney:

Joshua Joseph Angel
Angel & Frankel, P.C.
460 Park Avenue
New York, NY 10022-1906
(212) 752-8000

The case was assigned case number 02-11040 to Judge Stuart M. Bernstein.

The filing of a bankruptcy case automatically stays certain actions against the debtor and the debtor's property. If you attempt to collect a debt or take other action in violation of the Bankruptcy Code, you may be penalized.

If you would like to view the bankruptcy petition and other documents filed by the debtor, they are available at our *Internet* home page http://ecf.nysb.uscourts.gov/index.html or at the Clerk's Office in Manhattan, White Plains or Poughkeepsie.

You may be a creditor of the debtor. If so, you will receive an additional notice from the court setting forth important deadlines.

Kathleen Farrell
Clerk, U.S.
Bankruptcy Court

PACER Service Center

Plans sought for chemical site

The Mississippi Department of Environmental Quality is requesting proposals from anyone interested in purchasing the abandoned site of the former Vicksburg Chemical Co. manufacturing plant.

The final usage of the 550-acre tract, which includes frontage on the Mississippi River, will likely have a major impact on the surrounding area.

The agency has been given the task of finding a buyer for the property, and using the proceeds to pay for cleanup of arsenic and dioxin contamination on part of the land.

Several chemical companies have expressed an interest in buying the property and reopening the plant.

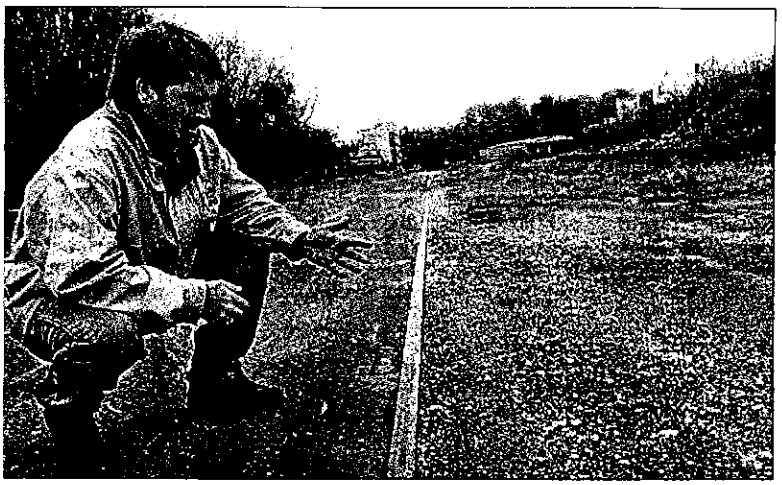
A golf course, casino or other recreational use has been proposed for the uncontaminated portion of the 550-acre site.

All bids are due by Feb. 18, after which time the agency will review the proposals and determine how to proceed.

Metro/State

LOCAL NEWS — 2
STATE NEWS — 3
DEATHS — 4
B

ON, MISSISSIPPI ● MONDAY, DECEMBER 16, 2002 CLARIONLEDGER.COM



Vickie D. King/The Clarion-Ledger

"You can see the places where it is — it's some type of pesticide and the yellowish coloring makes it obvious," said Chuck Barlow, Mississippi Department of Environmental Quality's general counsel, regarding ground contamination at the Vicksburg Chemical plant site where railroad tracks run through the property.

EPA oversees plant cleanup

■ Cost of work at Vicksburg Chemical could reach $50M

By James V. Walker
jvwalker@clarionledger.com

VICKSBURG — Down a dirt road off U.S. 61, the sprawling Vicksburg Chemical plant churned out bug killers, fertilizer and even rocket fuel additives for nearly 50 years.

Now the company is bankrupt, the employees laid off, and the machinery mostly silent. Patches of unnatural yellow dot the ground from numerous chemical spills over the years, and the groundwater has been described as a witch's brew of poisons.

The handful of people here are working around the clock to prevent an environmental catastrophe, while public officials and private companies barter over the site's future.

Officials are focused on preventing the chemicals from washing off the site and killing fish in the bayou, or winding up on the ballfields of neighbor Bowmar Baptist Church, Barlow said.

The soil is so contaminated that rain washing off the ground must be collected in

See CHEMICAL, 4B

Chemical: Uncontaminated land eyed for new golf course

From 1B

three large ponds and treated in a carbon filtration system before it can leave the site.

The eventual cleanup cost has been estimated at anywhere from $3 million to as high as $50 million.

Officials from the Mississippi Department of Environmental Quality, private contractors, and a U.S. Coast Guard strike team from Mobile have drained 250,000 gallons of nitric acid from tanks they feared might leak. Mississippi Chemical Co. has agreed to take the acid to its Yazoo City plant.

They are winterizing the plant to keep equipment from being damaged during freezes.

And they're keeping a close eye on a wooden-framed cooling tower that has been soaked with unstable nitrates, hosing it down occasionally. If the wood gets too warm on a hot day, "it could start smoking and possibly catch fire," said Ken Whitten, who oversees the site for DEQ.

One thing officials have not done is try to clean up any of the toxic chemicals soaked into the soil. The bright yellow splotches, identified as Dinoseb, a pesticide made here before it was banned in 1986, have not been disturbed.

"We're afraid that what's 6 inches below that in the ground might be even worse," said Chuck Barlow, an attorney for DEQ.

Among other toxins found at the site are arsenic and another banned pesticide, Toxaphene.

The Environmental Protection Agency is spending about $6,000 a day at the site, more than $275,000 since October, EPA spokesman Carl Terry said.

EPA is paying for the work at Mississippi's request because the state doesn't have the money. But the federal government has allotted $875,000 for Vicksburg Chemical, a sum that is dwindling rapidly.

Funds for cleanup — or responsibility for cleanup — will eventually have to come from sale of the property.

Vicksburg Chemical Co.'s property, which stretches from the highway to the river and includes 500 uncontaminated acres, has been eyed for a new chemical plant a golf course and even a casino.

DEQ, which got control of the property in the company's bankruptcy, will make the final decision which could come early next year.

Several chemical companies have expressed an interest in buying the plant and reopening it, Barlow said. Those interested in the uncontaminated portion include the Richard E. Jacobs Group, a Cleveland, Ohio-based developer of mainly shopping malls and the former owner of the Cleveland Indians.

Jim Belisle, a Minnesota businessman, has also shown an interest, Barlow said.

Belisle is well known in Warren County and casino circles for his failed plan to build a NASCAR style racetrack and casino complex on the Big Black River in the mid 1990s.

Sid Beaumann, Vicksburg's South Ward alderman, said the city is determined to attract a golf course development for the river front area north of Rainbow Casino.

"We'd rather somebody else come in and do it, but we're willing to put it in ourselves," said Beaumann, the city's former recreation director. "There's going to be a golf course in that area somewhere. That's been decided."

Beaumann said he was eager for DEQ to move forward with getting the property sold as quickly as possible.

Barlow said the agency will ask for proposals from anyone interested in the property within the next several weeks. Then officials will meet with interested parties including Vicksburg officials and the governor's office, to decide on how to proceed.

Whoever ends up taking over the property will have to accept a certain amount of financial responsibility for cleaning up the toxic chemicals, he said.

"We'll negotiate that amount of responsibility up front," he said. "That may end up being the purchase price."

CITY OF VICKSBURG

P. O. BOX 150 VICKSBURG, MS 39181-0150 (601) 634-4554

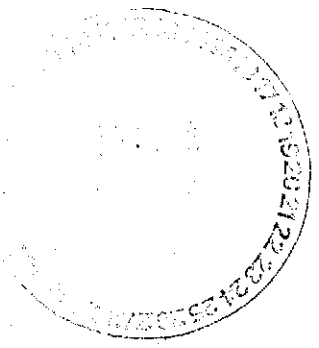
LAURENCE E. LEYENS
MAYOR

GERTRUDE A. YOUNG
ALDERWOMAN

SIDNEY H. BEAUMAN, JR.
ALDERMAN

December 9, 2002

Charles H. Chisolm, Executive Director
Mississippi Department of Environmental Quality
Post Office Box 20305
Jackson, Mississippi 39285-1305



RE: Vicksburg Chemical Plant

Dear Mr. Chisolm:

Since our meeting in October, we have been contacted by several parties interested in acquiring the property owned by Vicksburg Chemical Company. Some parties are interested in running and operating the plant; others are interested in only the vacant, uncontaminated land. We feel compelled to notify you of the information that has been brought to our attention about the property and our concerns regarding the future of the property and plant known as the Vicksburg Chemical Plant.

The problem that has arisen is that we have been advised by several of the private companies that the plant and its assets are quickly depreciating. For example, some of the plant's equipment requires winterization which has not been done. Without the winterization, the equipment may be lost. The plant and its assets are viewed as valuable commodities to the private sector; however, if the proper care is not taken to winterize the equipment, it will have very little value to those who have expressed an interest.

We understand that you are currently having the real estate appraised and that the appraisals should be concluded by the end of this month. We are requesting that MDEQ notify us as soon as possible what process will be taken in order to make a decision regarding the plant and vacant property. Will there be a due date for all proposals to be submitted to MDEQ? How quickly will this process take place? Is there anything that can be done while we wait on the appraisals? It is not our intention to rush a decision, but we have been informed that the clean up costs will be minimal for an operating plant as opposed to a vacant plant, which could be up to $50,000,000.00. Should all potential buyers leave the table, we are concerned about the possible $50,000,000.00 cleanup to the taxpayers and the economic impact such a delay could have on the

City of Vicksburg.

Please let us know if there is anything further we can do to assist MDEQ. We definitely want the most money possible for the clean up, what is in the best interest of the City of Vicksburg and what is in the best interest of the State of Mississippi. We appreciate your prompt response to this matter.

Sincerely,

LAURENCE E. LEYENS, MAYOR

GERTRUDE A. YOUNG, ALDERWOMAN

SIDNEY H. BEAUMAN, JR., ALDERMAN

cc: Governor Ronnie Musgrove
Jimmy Palmer, EPA

Chuck Barlow
11/20/2002 09:49 AM

To: barnes.allen@epa.gov
Subject: Vicksburg Chemical

Allen: I am curious as to EPA's stance on the continuing operations at VCC. My understanding is that we (MDEQ and EPA) currently have two priorities at the site:

1. Removal of product/chemicals such as the nitric acid; and

2. Winterization.

I am concerned that the current level of expenditure authorized by EPA for these activities will last only through mid-December, and that neither the product removal nor the winterization will be accomplished by that time. As you know, MDEQ has worked to have Mississippi Chemical take and transport the bulk of the products on site, thus saving disposal and transportation costs. I have also received the signed agreement from VCC transferring title in these products to whomever MDEQ designates.

Also, MDEQ will have appraisers on site tomorrow to begin the process of making proposals for the appraisal work. We expect to have the appraisal(s) completed by December 31 so that we can move forward with transferring the real property to a third party (issuing a request for proposals, reviewing proposals, etc).

MDEQ is truly appreciative of Region IV's cooperation in this matter. The purpose of this e-mail is to see whether we need to have further management discussions about the near-term future of the site. Thanks.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

Chuck Barlow
11/19/2002 08:54 AM

To: Yehuda Yoked <Yehudayoked@trans-resources.com>@INETDEQ
Subject: RE: Request to Convey Title

Yehuda: I spoke with Ed Klimerman this morning and have made one change to the Request to Convey Title that he suggested. When you and Ed are comfortable with the document, please sign the document and have it notarized, fax a copy to me at 601-961-5076, and Fed Ex the original signed and notarized document to me at:

MDEQ
2380 Highway 80 West
Jackson, Mississippi 39204

This will allow us to begin the transfer of product tomorrow. Please let me know if any of this poses a problem. Thank you for your cooperation.

Here is the revised document and the attachment:

REQUEST TO CONVEY TITLE.w| ATTACHMENT A TO REQUEST TO CONVEY.V

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

Chuck Barlow
11/14/2002 12:45 PM

To: Yehuda Yoked <Yehudayoked@trans-resources.com>@INETDEQ
Subject: RE: onsite chemicals

MDEQ and EPA have determined that most, if not all, of the chemicals remaining on site at the Vicksburg Chemical Company facility are of negligible value when compared to the continuing risk posed by the presence of the chemicals in the current on-site containment. MDEQ is preparing to instruct VCC to transfer any title or property interest in those chemicals to Mississippi Chemical Company, which is in the process of telling MDEQ and EPA exactly which of the chemicals it can accept for use in its processes. Other chemicals, which Mississippi Chemical cannot accept, will need to be transferred to other chemical operators.

It would be easiest if VCC would agree to execute one document that states that VCC agrees that any other party, with MDEQ's approval, make accept and take possession of these chemicals, to the complete exclusion of any property right currently held by VCC in the chemicals. This approach also makes sense because the on-scene coordinators still do not believe they have an accurate and exhaustive list of the chemicals remaining on site.

If VCC will agree to this approach, I will draft a document for your review. This needs to be completed as quickly as possible, because the integrity of some of the tanks is highly questionable. Please respond as soon as possible. Thank you.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

RDK70816@aol.com
11/12/2002 06:41 PM

To: Trey_Hess@deq.state.ms.us
Subject: Vicksburg Chemical

If there is merit, I could travel to Jackson and go over the RFI Report, GWA Report, and CMS with you during one 8 hour day. I would not charge for travel time. You could copy any part of the CMS while I am there.

My charges would be as follows:

. auto	$550
. meals	50
. motel	100
. time	800
Total	**$1500.00**

I have 22 years invested in the Vicksburg site. My resume is attached.

Dick Karkkainen rdk.doc

My charges would be as follows:

- auto $550
- meals 50
- motel 100
- time 800

Total $1500.00

I have 22 years invested in the Vicksburg site. My resume is attached.

Dick Karkkainen rdk.doc

Chuck Barlow
11/06/2002 11:10 AM

To: cobb.wilda@epa.gov
Subject: VCC - UCC filings

Wilda: Please find below a list of UCC lien filings on VCC property in Mississippi. The Chase Manhatten lien, which appears to be the only one attaching to the real property, will be cancelled pursuant to the court order. The other liens, mostly on equipment, will need to be dealth with as and if we try to sell any of the property listed. You may want to forward a copy of this to your OSC's just so that they know to be aware of this issue if the equipment listed is to be sold.

Of course, we are hoping that all of the equipment actually owned by VCC is sold at one time to one purchaser, per MDEQ's direction to VCC under the court order. This is just a heads-up.

Thanks.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

---- Forwarded by Chuck Barlow/Legal/Admin/DEQ on 11/06/2002 11:11 AM ----

Kelli Dowell
11/06/2002 10:49 AM

To: Chuck Barlow
cc:
Subject: VCC - UCC filings

Secured parties must renew their UCC filings every 5 years, otherwise they lose perfection and are dropped from the system. If the lien is satsified before the 5 year lapse date, the secured party should file termination papers. The following is a list of UCC filings pertaining to VCC:

Secured Party	Property
Chase Manhatten	Land and everything attached to it. They also have a filing for all accounts, rents, etc....everything.
Engelhard	500 Troy Ounces of Platinum
Hyster Credit Co.	6 different Hyster Lift trucks
GE Capital Corp. and BSFS Equipment master lease	Komatsu Loader, 1996 Holiday Rambler, John Deere Backhoe, Dresser Frontend Loader
SafeCo Credit filings	Equipment and Software - hard to tell from filing which refers to Again, refers to lease transaction. I think these are precautionary
Republic Leasing	1997 Trackmobile Fleetwood Motorhome

I have printed all the filings listed on the Secretary of State's website if you need additional information about the secured parties.

Kelli M. Dowell
Attorney
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289
601-961-5340

Chuck Barlow
11/06/2002 11:18 AM

To: Yehudayoked@trans-resources.com, lgerson@angelfrankel.com
Subject: VCC - UCC filings

Yehuda: Please find below a list of liens filed with the Mississippi Secretary of State's Office against VCC property and equipment. The Chase Manhattan lien will be taken care of through the court order, but it would be very helpful if you or someone connected with VCC could tell me what the status of the other liens are - whether they have been satisfied or are still active.

For example, the court order lists only three Hyster Forklift leases that are being rejected for the Vicksburg facility, but six are listed in the lien mentioned below. None of the other leased equipment mentioned below seems to be listed for "rejection" in the court order. That makes me think that perhaps the leases already had expired or the equipment already had been returned (?).

Any information would be appreciated.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076
---- Forwarded by Chuck Barlow/Legal/Admin/DEQ on 11/06/2002 11:15 AM ----

Kelli Dowell
11/06/2002 10:49 AM

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cc:
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Mississippi Department of Environmental Quality
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601-961-5340

Yehuda Yoked <Yehudayoked@trans-resources.com>

11/06/2002 01:20 PM

To: "'Chuck_Barlow@deq.state.ms.us'" <Chuck_Barlow@deq.state.ms.us>, lgerson@angelfrankel.com
Subject: RE: VCC - UCC filings

Chuck - I am hereby asking Johnny Hanna our VP finance to check into it, also I am forwarding a copy to Bonnie Pollack our bankruptcy counsel to review rejections of these leases.

Regards,

Yehuda

-----Original Message-----
From: Chuck_Barlow@deq.state.ms.us [mailto:Chuck_Barlow@deq.state.ms.us]
Sent: Wednesday, November 06, 2002 12:18 PM
To: Yehudayoked@trans-resources.com; lgerson@angelfrankel.com
Cc: Kelli_Dowell@deq.state.ms.us; cobb.wilda@epa.gov; Trey_Hess@deq.state.ms.us
Subject: VCC - UCC filings

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Kelli M. Dowell
Attorney
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289
601-961-5340

Chuck Barlow
11/05/2002 09:16 AM

To: cobb.wilda@epa.gov
Subject: VCC on-site product

Wilda: The EPA and MDEQ OSC's are actively trying to place the product (mostly fertilizer or fertilizer precursors) still on the VCC site. It sounds like Miss. Chemical in Yazoo City may agree to take much of the product on an even-swap basis (our product for their time and effort). As you can see from the figures below, it's probably not worth the effort to try to market the products.

I have instructed our OSC to keep me in the loop and get my approval before any product moves offsite. I think we need to get anyone accepting the product to sign a liability release, taking the product "as is," etc.

Also, Trey Hess of our Haz. Waste Division is becoming the technical staff point person over here for this site. Feel free to contact him if you cannot get me.

Let me know if you have other thoughts. Thanks.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076
----- Forwarded by Chuck Barlow/Legal/Admin/DEQ on 11/05/2002 09:17 AM -----

Yehuda Yoked <Yehudayoked@trans-resources.com>
10/31/2002 09:19 PM

To: "'Chuck_Barlow@deq.state.ms.us'" <Chuck_Barlow@deq.state.ms.us>
cc: "Len Gerson (E-mail)" <lgerson@angelfrankel.com>
Subject: RE: VCC "Facility Books and Records"

Chuck - I will provide you herein with normal trade pricing we got for these products, but since you will be selling it "as is" without any continuity you should assume liquidation prices which I will also suggest herein for your consideration.

product	regular price	liquidation
3-0-11	$150.00/ton	$75.00/ton
MAP	$475.00/ton	
$75.00/ton		
MKP	$550.00/ton	
$100.00/ton		

Also, you can get current market prices if you subscribe to the Green Market weekly, available on-line also.

Regards,

Yehuda

-----Original Message-----
From: Chuck_Barlow@deq.state.ms.us [mailto:Chuck_Barlow@deq.state.ms.us]
Sent: Thursday, October 31, 2002 3:12 PM
To: Yehudayoked@trans-resources.com
Cc: Len Gerson (E-mail); cobb.wilda@epa.gov
Subject: RE: VCC "Facility Books and Records"

Do you have an inventory or other list of prices that VCC recently would have charged for materials or products still on the site. For example, I have a person interested in buying or accepting the 3011 (liquid potassium nitrate), MAP (mono-amonium phosphate) and MKP (mono-potassium phosphate) that is on the site. Any information you could give me on market prices would be appreciated, or if the information is in the VCC records and files, I'll try to find it there.

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Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

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Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

Chuck Barlow
11/04/2002 10:32 AM

To: cobb.wilda@epa.gov, Trey Hess/HW/OPC/DEQ@DEQ
Subject: RE: VCC "Facility Books and Records"

FYI

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

----- Forwarded by Chuck Barlow/Legal/Admin/DEQ on 11/04/2002 10:36 AM -----

Yehuda Yoked <Yehudayoked@trans-resources.com>
10/31/2002 09:19 PM

To: "'Chuck_Barlow@deq.state.ms.us'" <Chuck_Barlow@deq.state.ms.us>
cc: "Len Gerson (E-mail)" <lgerson@angelfrankel.com>
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Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality

Chuck Barlow
10/31/2002 08:59 AM

To: Yehuda Yoked <Yehudayoked@trans-resources.com>@INETDEQ
Subject: RE: VCC "Facility Books and Records"

Lennie and Yehuda:

I anticipate that some entities interested in purchasing all or part of the Vicksburg Chemical property will want to look and the "Facility Books and Records," as defined in paragraph 23 of the Stipulation and Order. I interpret this term to include at least day-to-day operating, financial, and environmental information and records.

1. Where are these records currently located?

2. If pertinent records, including those concerning the cost of operating the facility, production capacity, equipment age and maintenance records, products on-site, and similar information, currently exists at a location other than the Vicksburg Facility, what is the most efficient method for potential purchasers or MDEQ to gain access to those records?

I look forward to working on a simple solution to this issue pursuant to the Stipulation and Order. Thank you.

Chuck D. Barlow
General Counsel
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
tel: 601-961-5076

cc: JAMES PERICONI - JPERICONI @ WINDELSMARX.COM → MDEQ LOCAL COUNSEL
LEN GERSON - lgerson@ANGELFRANKEL.COM → BANKRUPTCY LAWYER

WILDA COBB - EPA ATTORNEY