MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

MEMORANDUM

TO: DNR-E

FROM: DNR-PC CHC

SUBJECT: Commission Agenda for November 10, 1982

DATE: November 3, 1982

We have the following items for consideration at the Commission meeting scheduled for Wednesday, November 10, 1982:

1. Vertac Chemical, Warren County - Vertac has an active hazardous waste treatment lagoon and an inactive landfill site containing some hazardous waste. Soil sampling has shown significant contamination around the landfill. The firm has proposed remedial work at the site, but to date has submitted only minimal information pertaining to such a plan and has made no attempt at an organized, comprehensive site management plan. Six months have passed since the firm's first notice of intent for cleanup work. We feel an Order is needed to give management officials the incentive to devote adequate resources to this project. We propose to issue an Order requiring submittal of the plan by February 1, 1983, and installation of additional monitoring wells by March 1, 1983.

2. State Hazardous Waste Laws - The 1982 legislature modified the State Hazardous Waste laws to require that we promulgate Hazardous Waste Regulations regarding (1) geological criteria, (2) liability insurance, and (3) history of performance of applicant. We need Commission approval to advertise for a public hearing on proposed regulations.

3. Discussion of Federal Pretreatment Program - Due to a recent court decision, the implementation of the Federal Pretreatment Program must now proceed at an accelerated pace. A briefing of this program and how it affects Mississippi is planned.

4. Approval of State Loans - The following Towns recently received EPA grants for construction of wastewater facilities. In accordance with the FY-83 State Loan Regulations, the Commission needs to approve these State loans:

a.	Jackson (WWTP)	$300,000
b.	Jackson (Airport)	$ 12,793
c.	Whitfield	$ 87,506
d.	Escatawpa	$ 10,500

5. Construction Grants Deadline - In order to insure that the remaining FY-82 carryover projects on the FY-83 priority list move forward expeditiously, we recommended that the Commission establish January 1, 1983 as the deadline for certification of these grants and that if the deadline is not met, the projects may be bypassed.

6. Town of Marks Order Amendment - Earlier this year the Commission issued an Order to the Town of Marks establishing a compliance schedule that required a 201 Addendum to be submitted by July 30, 1982 with completion of construction by August 31, 1983. The Town of Marks met the July 30 Order requirement; however, additional wastewater monitoring was required in order to more accurately size the waste treatment facilities. In order to incorporate these required changes into the planning and review process, it is necessary that the future requirements of the Order be amended by moving the dates back approximately 40 days.

7. Bay St. Louis Wastewater Noncompliance - We need Commission consideration of a proposed letter to Bay St. Louis regarding the Town's lack of compliance with Commission Order No. 585-82.

If you have any questions, please advise.

CHC:els

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
P. O. Box 20305
Jackson, Mississippi 39209
(601) 961-5099

November 11, 1982

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. A. Guidi, Vice President
Vertac Chemical Corporation
24th Floor - 5100 Poplar
Memphis, Tennessee 38137

FILE COPY

Dear Mr. Guidi:

At its regular meeting held on Wednesday, November 10, 1982, the Mississippi Commission on Natural Resources considered certain evidence regarding your Vicksburg facility. Enclosed is Commission Order No. 599-82, which has been issued as a result of that consideration.

Your cooperation in carrying out the provisions of the enclosed order is encouraged. As you know, appeals can be taken in accordance with the law.

If you have questions regarding this matter, please advise.

Sincerely,

Charlie L. Blalock
Executive Director

CLB:CHC:mh

Enclosure

cc: Mr. Dick Karkkainen, Vertac Chemical Corporation, Memphis

BEFORE THE MISSISSIPPI COMMISSION ON NATURAL RESOURCES

BUREAU OF POLLUTION CONTROL

IN THE MATTER OF:

MISSISSIPPI COMMISSION ON NATURAL RESOURCES — COMPLAINANT

VS. — NO. 599 82

VERTAC CHEMICAL CORPORATION — RESPONDENT

ORDER

The above styled cause came on this date for consideration and the Commission, having heard and considered same, finds as follows:

1.

The Respondent, Vertac Chemical Corporation, manufactures industrial chemicals, which process has resulted in the generation of hazardous waste, and, as a generator of hazardous waste, Vertac Chemical Corporation is subject to the provisions of laws of this State governing the disposal of hazardous waste material, the same appearing as Section 17-17-1 through 17-17-41, and the rules and regulations of the Mississippi Commission on Natural Resources.

2.

Respondent owns a closed-out landfill and reclaimed pit area which were used for disposal and storage of various hazardous wastes.

3.

A field investigation by the U. S. Environmental Protection Agency on October 29, 1981, found high concentrations of organic compounds in sediment samples adjacent to the landfill and pit area.

SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN [illegible]pace on reverse.

[illegible] Waste Division

1. The following service is requested (check one.)

- ☐ Show to whom and date delivered..... ___¢
- ☐ Show to whom, date and address of delivery... ___¢
- ☐ RESTRICTED DELIVERY
  Show to whom and date delivered..... ___¢
- ☐ RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery.$ ___

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

[illegible], Vice President
[illegible] Corp.
[illegible] Popular
[illegible], TN 38137

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	[illegible]	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY

NOV 15 1982

POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆GPO : 1979-300-459

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, and 3 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

RETURN TO

DEPARTMENT OF [illegible]
BUREAU OF [illegible]
PO BOX [illegible]
JACKSON [illegible]

(City, State, and ZIP Code)

1. On or before January 1, 1983, the Respondent shall complete a sampling program to analyze all soils on site which could be contaminated and submit results to the Bureau of Pollution Control.

2. On or before [redacted] the Respondent shall submit a detailed plan for the final disposition of contaminated soils and sediments from the site.

3. On or before [redacted], the Respondent shall submit detailed topographic maps describing the site before and after the above mentioned plan has been executed.

4. On or before April 1, 1983, the Respondent shall install additional groundwater monitoring wells to comply with the requirements of the hazardous waste regulations and to monitor the closed-out landfill. The location and installation of said wells shall be approved by the Bureau of Pollution Control.

Premises considered, the Commission finds that Respondent must take steps to reduce the release of contaminants from the landfill and pit area, to adequately monitor the groundwater at the site, and to develop an acceptable waste disposal plan for the site.

IT IS, THEREFORE, ORDERED AND ADJUDGED that the Respondent, Vertac Chemical Corporation, shall carry out the following activities on or before the date specified:

1. On or before January 1, 1983, the Respondent shall complete a sampling program to analyze all soils on site which could be contaminated and submit results to the Bureau of Pollution Control.

2. On or before February 1, 1983, the Respondent shall submit a detailed plan for the final disposition of contaminated soils and sediments from the site.

3. On or before February 1, 1983, the Resondent shall submit detailed topographic maps describing the site before and after the above mentioned plan has been executed.

4. On or before April 1, 1983, the Respondent shall install additional groundwater monitoring wells to comply with the requirements of the hazardous waste regulations and to monitor the closed-out landfill. The location and installation of said wells shall be approved by the Bureau of Pollution Control.

IT IS FURTHER ORDERED AND ADJUDGED that this Order shall become final thirty (30) days after the date of rendition hereof, unless Vertac Chemical Corporation, before the said thirty (30) days have elapsed, files a sworn petition with this Commission as provided by Section 49-17-41, Mississippi Code Annotated (1972) setting forth the grounds and reasons for said complaint and asking for a hearing thereon.

ORDERED AND ADJUDGED, this the 10th day of November, 1982, by the Mississippi Commission on Natural Resources.

MISSISSIPPI DEPARTMENT OF
NATURAL RESOURCES

BY: _____
CHARLIE L. BLALOCK
EXECUTIVE DIRECTOR

BEFORE THE MISSISSIPPI COMMISSION ON NATURAL RESOURCES

BUREAU OF POLLUTION CONTROL

IN THE MATTER OF:

MISSISSIPPI COMMISSION ON NATURAL RESOURCES — COMPLAINANT

VS. — NO. _____

VERTAC CHEMICAL CORPORATION — RESPONDENT

ORDER

The above styled cause came on this date for consideration and the Commission, having heard and considered same, finds as follows:

1.

The Respondent, Vertac Chemical Corporation, manufactures industrial chemicals, which process has resulted in the generation of hazardous waste, and, as a generator of hazardous waste, Vertac Chemical Corporation is subject to the provisions of laws of this State governing the disposal of hazardous waste material, the same appearing as Section 17-17-1 through 17-17-41, and the rules and regulations of the Mississippi Commission on Natural Resources.

2.

Respondent owns a closed-out landfill and reclaimed pit area which were used for disposal and storage of various hazardous wastes.

3.

A field investigation by the U. S. Environmental Protection Agency on October 29, 1981, found high concentrations of organic compounds in sediment samples adjacent to the landfill and pit area.

Premises considered, the Commission finds that Respondent must take steps to reduce the release of contaminants from the landfill and pit area, to adequately monitor the groundwater at the site, and to develop an acceptable waste disposal plan for the site.

IT IS, THEREFORE, ORDERED AND ADJUDGED that the Respondent, Vertac Chemical Corporation, shall carry out the following activities on or before the date specified:

1. On or before January 1, 1983, the Respondent shall complete a sampling program to analyze all soils on site which could be contaminated and submit results to the Bureau of Pollution Control.

2. On or before February 1, 1983, the Respondent shall submit a detailed plan for the final disposition of contaminated soils and sediments from the site.

3. On or before February 1, 1983, the Resondent shall submit detailed topographic maps describing the site before and after the above mentioned plan has been executed.

4. On or before April 1, 1983, the Respondent shall install additional groundwater monitoring wells to comply with the requirements of the hazardous waste regulations and to monitor the closed-out landfill. The location and installation of said wells shall be approved by the Bureau of Pollution Control.

IT IS FURTHER ORDERED AND ADJUDGED that this Order shall become final thirty (30) days after the date of rendition hereof, unless Vertac Chemical Corporation, before the said thirty (30) days have elapsed, files a sworn petition with this Commission as provided by Section 49-17-41, Mississippi Code Annotated (1972) setting forth the grounds and reasons for said complaint and asking for a hearing thereon.

ORDERED AND ADJUDGED, this the 10th day of November, 1982, by the Mississippi Commission on Natural Resources.

MISSISSIPPI DEPARTMENT OF
NATURAL RESOURCES

BY: _____
CHARLIE L. BLALOCK
EXECUTIVE DIRECTOR

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851
TELEX 53927

June 30, 1983

RECEIVED
JUL 05 REC'D
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Steve Spengler
Industrial Wastewater Control Section

[redacted]
Division of Solid Waste Management
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Spengler and Mr. Estes:

Attached is a copy of our addition to our contingency plan, as well as a copy of the present contingency plan. This submittal is responsive to and in compliance with requirement 2 of Commission Order No. 611-83.

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

Enc.

cc: R. F. Maraman

CONTINGENCY PLAN AMENDED 6-22-83

IDENTIFICATION OF POTENTIAL RELEASES OF WASTEWATER FROM THE IMPOUNDMENT, PREVENTION OF RELEASES, AND CONTINGENCY PLANS IN CASE OF RELEASE.

This amendment expands the definition and explanation of the Dike Inspection Section of the Hazardous Waste Inspection Sheet.

Its purpose is to identify potential releases of wastewater from the impoundment and the responce required should the preventitive measures fail and a release occur.

There are three areas of concern that could result in a release of water from the impoundment area.

1. A Leak in the Dike.

At first the leaks will probably be small and should be watched for while walking the dike during the weekly dike inspection. They may be caused from digging by animals or insects, rotting tree roots, felled trees, accumulated trash, prior washing during periods of high water or too high a level in the impoundment side of the dike.

Other conditions may lead to leaks but are not as serious because by their nature they allow time for repairs. These are deep cracks, minor washing especially on the side nearest the bayou, sagging areas, etc.

The conditions will be reported on the Hazardous Waste Inspection Sheet as usual.

If a leak is observed the inspector will report the fact to his supervisor immediately, and then increase the pumping rate to maximum in order to reduce the pond level as rapidly as possible.

The supervisor will determine if the leak can be plugged or slowed by adding dirt. If so he will have a payloader or suitable vehicle obtain dirt from the West bank behind the Atrazine Plant and use it to plug the leak.

If dirt will not stop the leak the supervisor should use other reasonable means to stop the leak. Plugging the leak is essential.

The supervisor will report his actions to R.F. Maraman, B.J. Gunn, and F.X. Bleyer in that order. These three will assemble at the plant to determine further action.

Further action may consist of pumping the pond down, sealing off sections of the pond to isolate the leak for repair, etc. Other action may be to excavate the leak and back fill with dirt.

Whatever the course of action the immediate priorities are: stopping the leak if that has not been completed, preventing additional leakage, complete repair

of the leak.

The Emergency Coordinator (R.F. Maraman or an alternate) will report the incident in the manner given in the General Contingency plan to which this amendment is attached.

2. Rupture of the Dike.

Rupture can probably be prevented if the inspector closely watches the areas indicated under Section 1, Leaks.

Other causes of rupture are washout or weakning of the dike during periods of high water in the bayou. One point to watch is South of the spillway where the bayou comes out of a bend. The washing effect at this point could undercut the bank and the dike causing a rupture.

If the water level in the pond is too high the water pressure on a weak dike could cause a rupture. This is not likely except during heavy rains. For this reason the pumps should be run at maximum rates during heavy rains.

If preventive measures fail the dike may still rupture. A rupture may be assumed if there is a sudden loss of level in the pond.

If this is detected the inspector will immediately notify his supervisor, make sure all pumps are at maximum rate, then go find the rupture and prepare to direct the payloader or other vehicle to the area.

The supervisor will immediately dispatch a payloader or suitable vehicle to the West hill behind the Atrazine Plant to obtain dirt and start repairing the rupture.

The supervisor will report his actions to R.F. Maraman (the Emergency Coordinator) B.J. Gunn and F.X. Bleyer in that order. These three will assemble at the plant to direct further action.

The Emergency Coordinator will report the incident as outlined under Section 1, Leaks.

3. Flow Over the Spillway.

Flow over the spillway is prevented by keeping the pond level a minimum of two (2) feet below the spillway. The pond level is reported by the inspector on the Hazardous Waste Inspection Sheet.

A sustained heavy rain or heavy thunderstorm will alert the inspector to the possibility of overflow, and he will increase the pumps to maximum.

Should leaks or ruptures develop at the spillway they should be attended to under the instructions given in Sections 1 and 2.

The normal inspection schedule will indicate the presence of a flow either into the pond from the bayou or from the pond into the bayou.

When the inspector observes this condition he will immediately notify his supervisor.

The supervisor will immediately assemble whatever help is required to sandbag the spillway.

He will then notify R.F. Maraman, B.J. Gunn and F.X. Bleyer, in that order. These three will assemble at the plant and direct operations until the flow has been stopped.

The Emergency Coordinator will report the incident as outlined in Section 1, Leaks.

VERTAC CHEMICAL CORPORATION

ENVIRONMENTAL MANUAL

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

VERTAC CHEMICAL CORPORATION

ENVIRONMENTAL MANUAL

Emergency response contingency plan and additions.

Treatment, storage or disposal of hazardous waste and additions.

Ground water monitoring, and additions.

DISTRIBUTION

Vertac; Memphis: R.A. Guidi
D. Karkkainen
G.L. Pratt

Vertac; Vicksburg: F. Ahlers
D. Madsen
B.J. Gunn
R. Holdiness
S. Keen
R. Maraman
P. Ryan
File

VERTAC CHEMICAL CORPORATION

FACILITY

EMERGENCY RESPONSE CONTINGENCY PLAN

1981-1982

EMERGENCY USE INDEX

Emergency Reporting and Coordination

National Response Center (NRC	(800)424-8802
Fire Department	*
Sheriff	*
Office of Emergency Services (OES)	*
County Coordinator	*
County Judge	*
Mayor	*
Local Police Department	*
Bureau/Department of Pollution Control	*
Department of Health	*

Emergency Pollutant Hazards Information

Chemical Transport Emergency Center (Chemtrec)	(800)424-9300
EPA Oil and Hazardous Materials Technical Assistance Data Systems (OHMTADS)*	(214)767-2666

TABLE OF CONTENTS

EMERGENCY USE INDEX ii

TABLE OF CONTENTS iii

PART 1 - INTRODUCTION

1.1 Authority
1.2 Purpose and Objectives

PART 2 - POLICY AND RESPONSIBILITY

2.1 Regulatory Policy

PART 3 - PLANNING AND RESPONSE ORGANIZATION

3.1 Emergency Response Activities and Coordination
3.2 Local Fire Department
3.3 Local Law Enforcement Agency
3.4 Local Hospital Notification
4.5 Outside Responsibility

PART 4 - COORDINATING INSTRUCTIONS

4.1 Delegation of Authority
4.2 Notification
4.3 Multi-Incident Responses
4.4 Mutual Aid Agreement(s)
4.5 Termination of Response Activities

PART 5 - PROCEDURES FOR REVIEWING AND UPDATING THE EMERGENCY RESPONSE CONTINGENCY PLAN

5.1 Responsibility
5.2 Procedures for Review

ANNEXES

I - DISTRIBUTION

II - LIST OF EMERGENCY EQUIPMENT AVAILABLE ONSITE

III - PLANT MAP SHOWING LOCATION OF EMERGENCY EQUIPMENT

IV - LIST OF OUTSIDE CONTRACTORS AVAILABLE FOR EMERGENCY PURPOSES

PART 1

INTRODUCTION

1.1 Authority

This contingency plan was developed in compliance with 40 CFR, Part 265, Subpart D, which provides for the preparation, publication, revision, and amendment of an Emergency Response Plan.

1.2 Purpose and Objectives

a. This plan provides for a pattern of coordinated and integrated response by plant personnel to respond to any emergency, and a system of prompt notification of local and state government concerning any in-plant emergency.

b. The objectives of this plan are to provide for efficient, coordinated, and effective action to minimize damage and injuries from fire, explosion, spills or inadvertent discharges of chemicals, including containment and removal.

This plan provides for:

(1) Assignment of duties and responsibilities.

(2) Establishment and identification of emergency, task forces.

(3) A system of notification, surveillance and reporting.

(4) The establishment of a Plant Emergency Coordinator to direct operations in carrying out this plan.

(5) A list of resources to combat fires and spills.

(6) Investigative procedures to determine the cause of fire, spill or discharge.

(7) Directions on public information releases.

(8) Instructions covering emergency coordination

PART 2

POLICY AND RESPONSIBILITY

2.1 Regulatory Policy - (Federal Clean Water Act - Sec. 311)

a. Congress has declared that it is the policy of the United States that there should be no discharge of oil or hazardous substance into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the U.S. (including resources under the Fishery Conservation and Management Act of 1976).

b. Any person in-charge of a vessel or an onshore or offshore facility of any kind shall, as soon as he has knowledge of any discharge of oil or hazardous substance from such vessel or facility, immediately notify the National Response Center at their toll-free number 1-800-424-8802. If for some reason reporting to this number is impractical, spills affecting inland waters of the U.S. can be reported to EPA Region VI at (214)767-2666 or on FTS 729-2666.

c. Plant Policies - The primary thrust of this plan is to provide a coordinated plant response capability in the event of an unplanned or sudden, and usually accidental, unusual event, i.e., fire, explosion, spill or discharge of oil or hazardous waste that poses a threat, or the potential of a threat to personal health, safety and welfare. Environmental pollution control techniques shall be employed in accordance with applicable regulations and guidelines.

PART 3

PLANNING AND RESPONSE

3.1 Emergency Response Activities and Coordination

a. For emergency response activities (plant specify) response management is accomplished through a single predesignated agent, the Emergency Coordinator (EC).

b. The predesignated ECs for all emergencies occurring within the boundaries of _____ are:

(1) EC-1 Primary

(2) EC-2 Alternate

(3) Etc.

3.2 Local Fire Department Notification

(Who, When, How, Where)

3.3 Local Law Enforcement Notification

(Who, When, How, Where)

3.4 Local Hospital Notification

(Who, When, How, Where)

3.5 Outside Responsibility

a. Chemtrec

b. U.S.C.G. (U.S. Coast Guard)

c. C.O.E. (Corps of Engineers)

d. Bureau/Department of Pollution Control - The Bureau of Pollution Control is responsible for coordinating, monitoring and cleanup of any large-scale release of chemicals which threatens the environment.

e. Department of Health - The Health Department is the primary agency dealing with chemical hazards involved in pipeline breaks, train wrecks, truck wrecks, industrial accidents, etc., when health of people are involved; and will assist the Bureau/Department of Pollution Control in containing and removing hazardous material.

PART 4

COORDINATING INSTRUCTIONS

4.1 Delegation of Authority

Local delegation of authority for emergency response and subsequent cleanup activities initially may be oral or written at the discretion of the designated EC.

4.2 Notification

All emergencies*, regardless of severity, must be reported in accordance with federal and state laws immediately to:

Office of Emergency Services County Coordinator . . .

County Sheriff or Local or Police Department . . .

National Response Center . . .

*Routine, minor spills that can be immediately cleaned up, or do not leave plant property and does not disrupt the normal routine operations are exempt from the reporting requirement.

4.3 Multi-Incident Responses

Coordination of simultaneous responses for different emergencies, e.g., a fire/explosion and a chemical spill shall be carried out by the designated EC; however, he may delegate authority, but he will still maintain responsibility overall.

If an incident transcends plant boundaries, the designated EC will closely coordinate all activities with the local authorities.

4.4 Mutual Aid Agreement(s)

All three Vertac plants will mutually assist one another in emergencies.

4.5 Termination of Response Activities

The Emergency Coordinator (EC) has been granted the authority to determine the appropriate termination of response activities after considering the recommendation of the appropriate state and local officials.

Part 4 (Continued)

Termination should be effected when it is apparent that further effort will be non-productive or counter-productive in returning the environment to its former state.

PART 5

PROCEDURES FOR REVIEWING AND UPDATING THE EMERGENCY RESPONSE CONTINGENCY PLAN

5.1 Responsibility

a. This plan was developed in accordance with the State, Regional, and National Contingency Plan.

b. The Emergency Coordinator is responsible for revising and maintaining this plan.

5.2 Procedures for Review

a. This plan will be reviewed and updated periodically and when major changes occur. Participating offices are requested to keep the Emergency Coordinator informed of all necessary or recommended changes.

b. The predesignated Emergency Coordinator is responsible for periodically reviewing and updating this plan. He will insure that the person responsible for distribution will have sufficient copies of changes and amendments to effect appropriate distribution.

ADDITION TO SECTION 265.50

CONTINGENCY PLAN AND EMERGENCY PROCEDURES

FOR HAZARDOUS WASTE

The designated emergency coordinator is Robert F. Maraman.

The alternate emergency coordinators are

1. Sonny Keen
2. B.J. Gunn

PHONE NUMBERS

National Response Center (NRC)	800-424-8802
Fire Department	911 or 636-1121
Sheriff	636-1761
Office of Emergency Services (OES)	1-961-5340
County Coordinator	
County Judge	638-8026
Mayor	636-3411
Vicksburg Police Department	636-2511
Ambulance	911
Department of Health	636-4356
F. Ahlers	636-6786
R.F. Maraman	636-7711
G.D. Madsen	638-2847
S. Keen	636-0777
B.J. Gunn	636-5604
Corporate Offices (Memphis)	901-767-6851

EMERGENCY POLLUTANT HAZARDS INFORMATION

Chemical Transport Emergency Center	800-424-9300

EPA Oil and Hazardous Materials Technical

Assistance Data Systems (OHMTADS) 214-767-2666

SPECIFIC DUTIES

1. Areas:

DNBP Waste, Hill Storage Tank, Holding Pond, South Plant, Calgon Carbon System, Solid Waste Storage Area.

2. Action: Minor Spills or Leaks

Notify R. Maraman, D. Madsen, S. Keen and the shift supervisor. Take immediate steps to contain and repair the leak. Initiate clean up measures.

3. Action: Major Spill, Fire or Explosion

Duties: Emergency Coordinator or Designee

(a) Whenever there is an imminent or acutal emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

(1) Activate internal facility alarms or communications, to notify all facility personnel: and

(2) Notify appropriate State or local agencies with designated response rols if their help is needed.

(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount and a real extent of any released materials. He may do this by obersvation or review of facility records or namifests and, if necessary, by chemical analysis.

(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire or explosion. This assessment must consider both direct and indirect effects of the release, fire or explosion (e.g., the effects of any toxic, irrtating or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

(d) If the emergency coordinator determines that the facility has had a release, fire or explosion which could threaten human health or the environment, outside the facility, he must report his findings as follows:

(1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated: and

(2) He must immediately notify either the government official designated for that geographical area (in the applicable regional contingency plan under Part 1510 of this Title), or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:

(i) Name and telephone number of reporter.

(ii) Name and address of facility.

(iii) Time and type of incident (e.g., release, fire).

(iv) Name and quantity of material(s) involved, to the extent known.

(v) The extent of injuries, if any; and

(vi) The possible hazards to human health, or the environment outside the facility.

(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions and releases do not occur, recur or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

(f) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure build-up, gas generation, or ruptures in valves, pipes or other equipment wherever this is appropriate.

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire or explosion at the facility.

COMMENT: Unless the owner or operator can demonstrate, in accordance with P 261.3 (c) or (d) of this Chapter, that the recovered material is not a hazardous waste, the owner or operator becomes a generator or hazardous waste and must manage it in accordance with all applicable requirements of Parts 262, 263 and 265 of this Chapter.

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(1) No waste that may be incompatible with the released material is treated, stored or disposed of until cleanup procedures are completed: and

(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

Duties: Owner or Operator

(i) The owner or operator must notify the Regional Administrator and appropriate State and local authorities, that the facility is in compliance with paragraph (h) of this Section before operations are resumed in the affected area(s) of the facility.

(j) The owner or operator must note in the operating record the time, date and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:

(1) Name, address and telephone number of the owner or operator.

(2) Name, address and telephone number of the facility.

(3) Date, time and type of incident (e.g., fire, explosion).

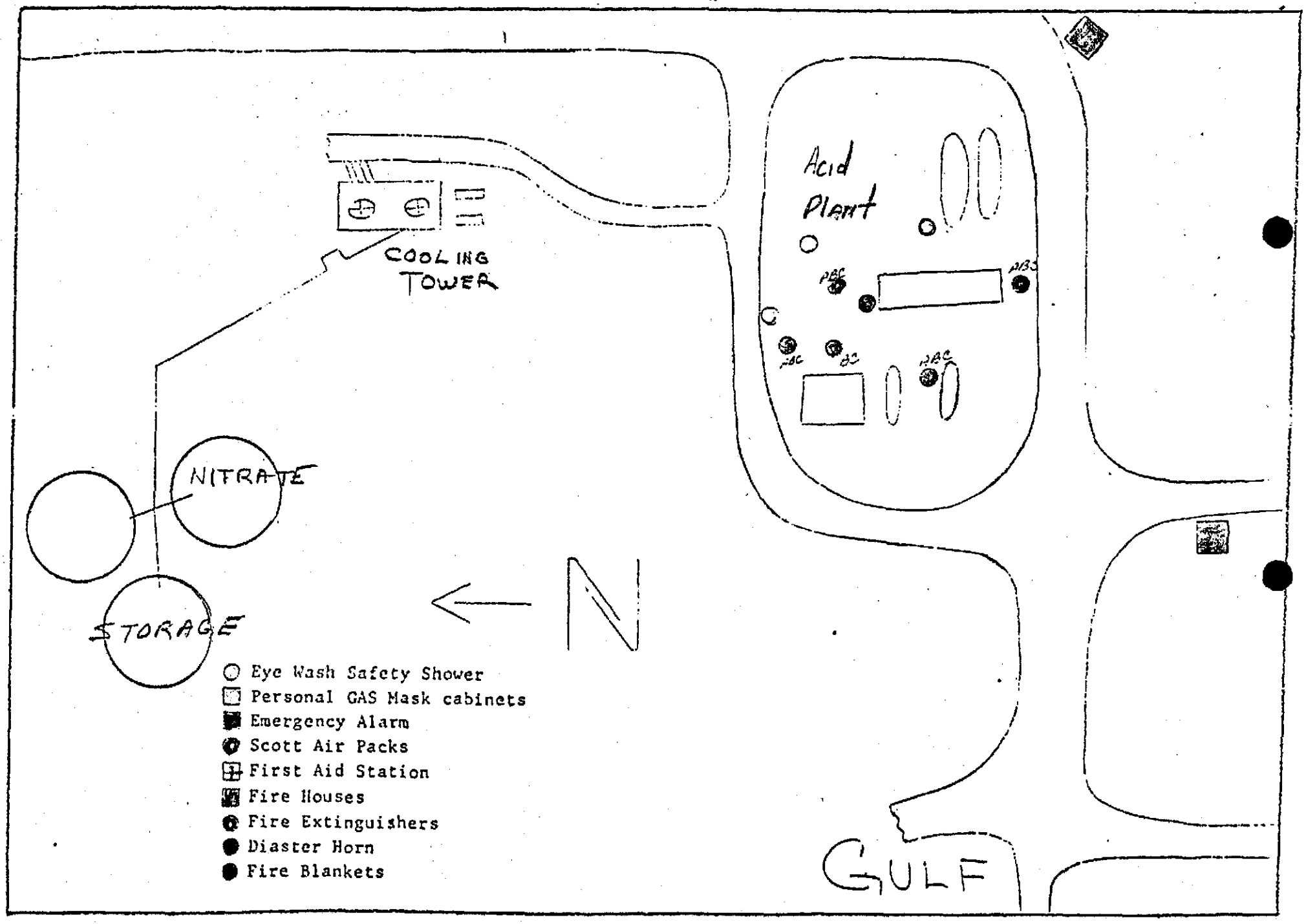
(4) Name and quantity of material(s) involved.

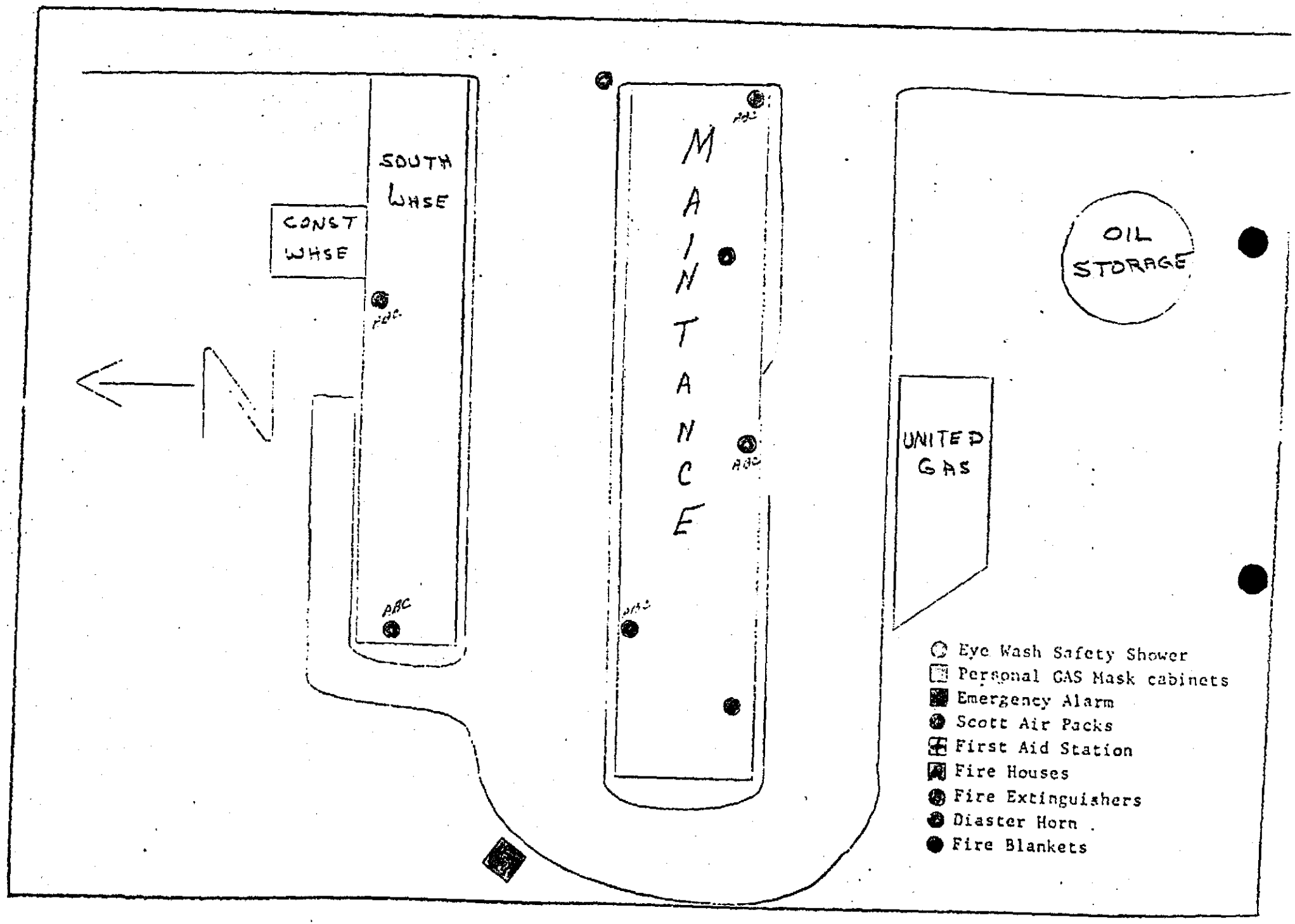
(5) The extent of injuries, if any.

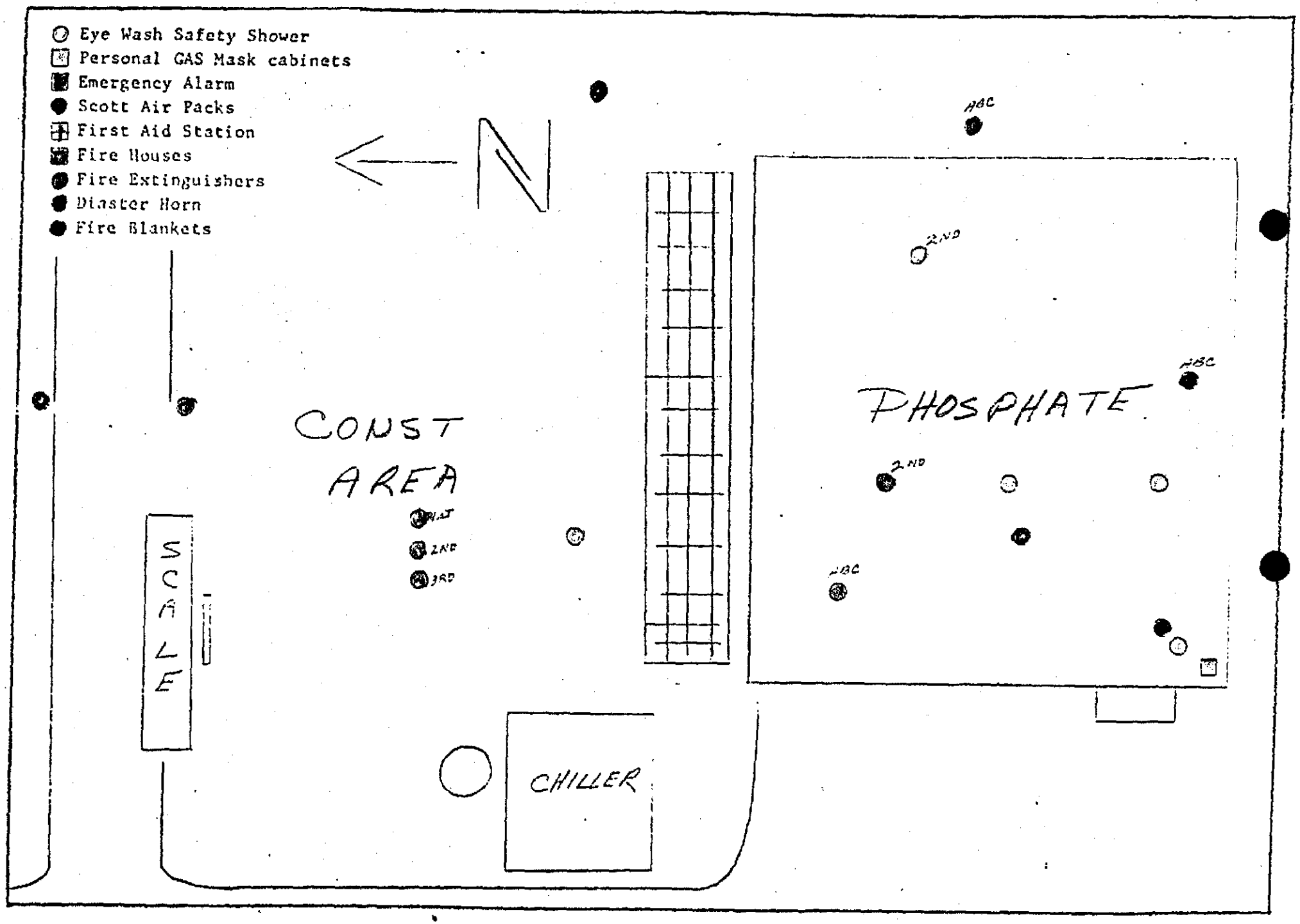
(6) An assessment of actual or potential hazards to human health or the environment, where this applicable: and

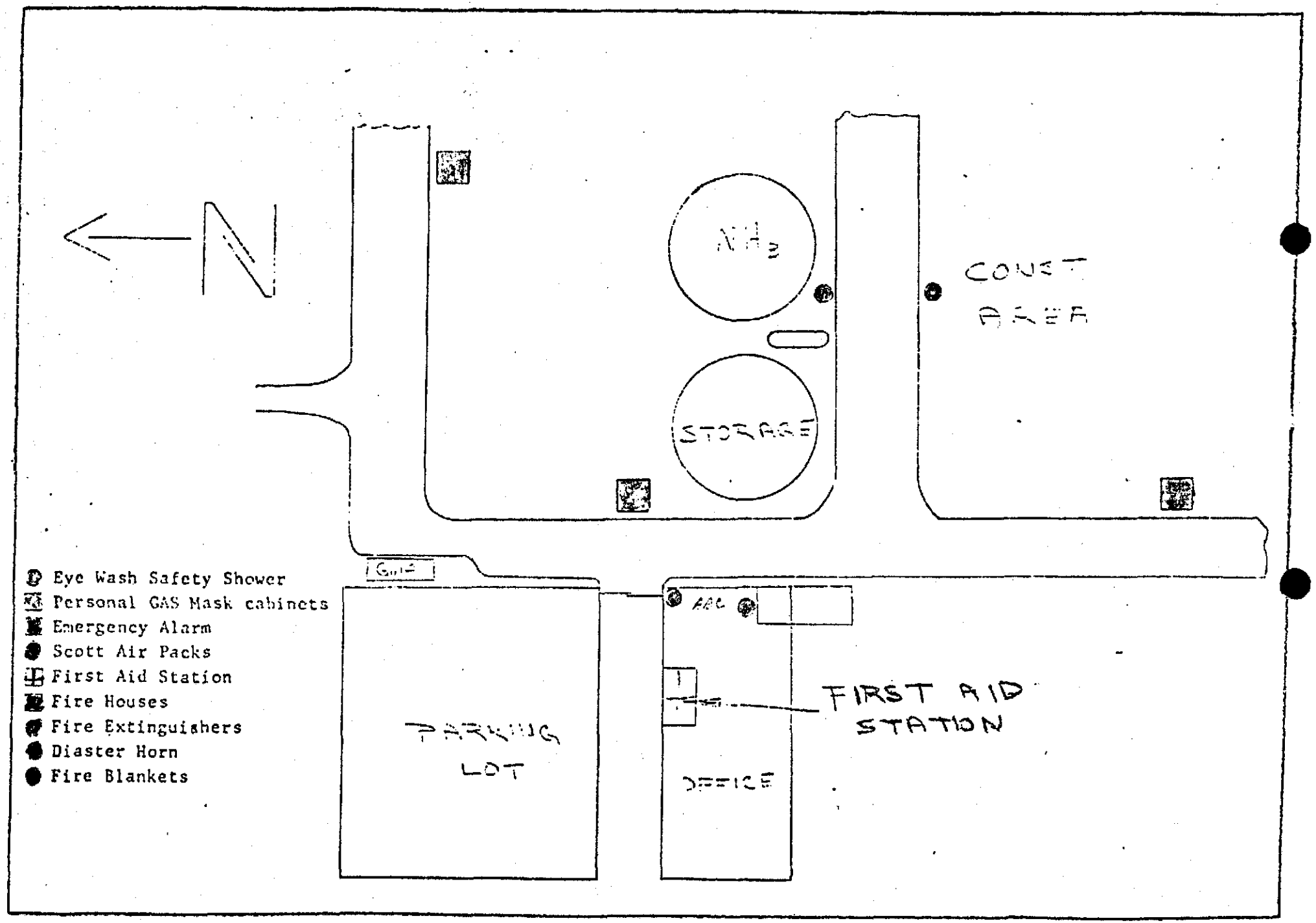
(7) Estimated quantity and disposition of recovered material that resulted from the incident.

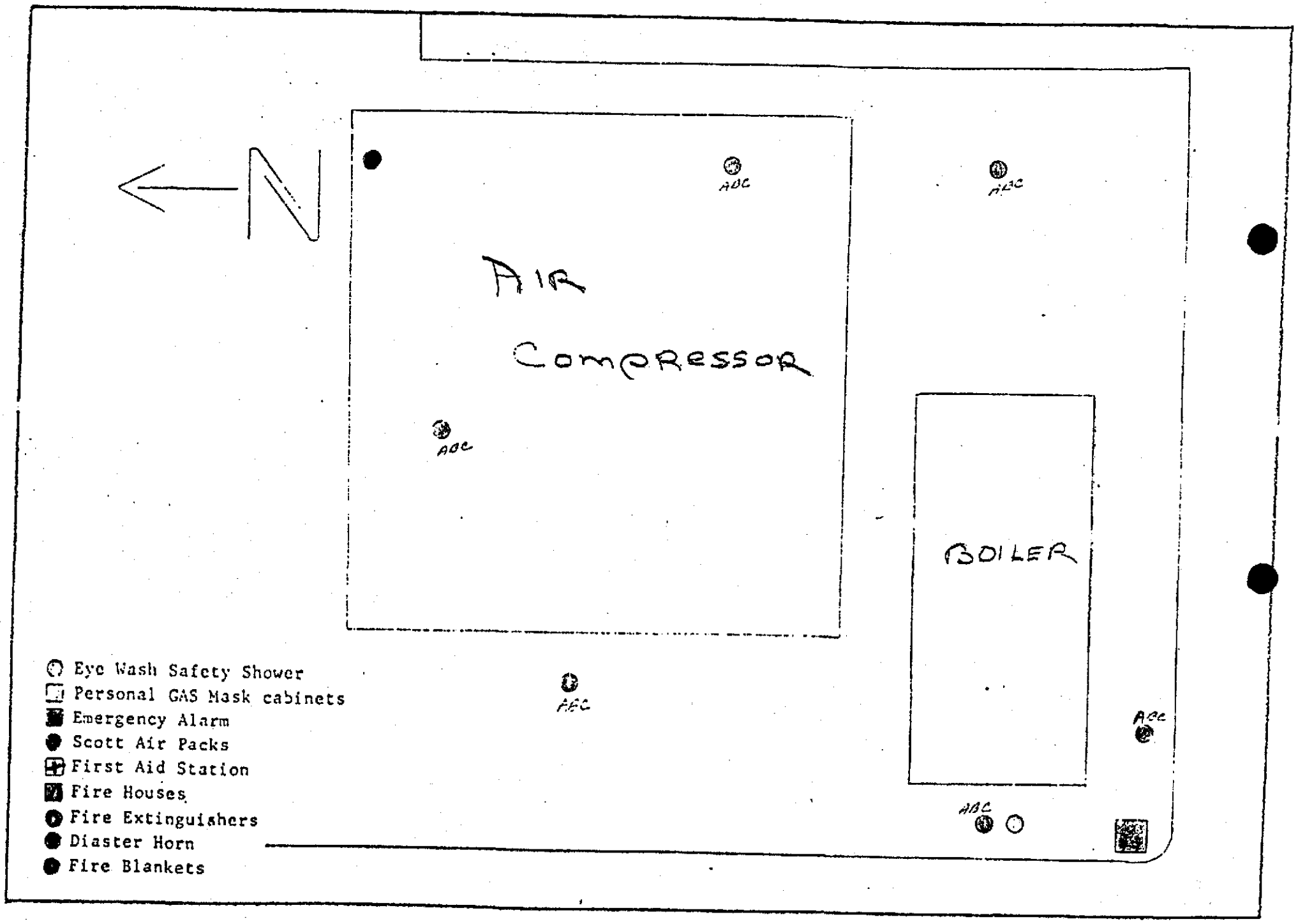
LOCATION OF EMERGENCY EQUIPMENT

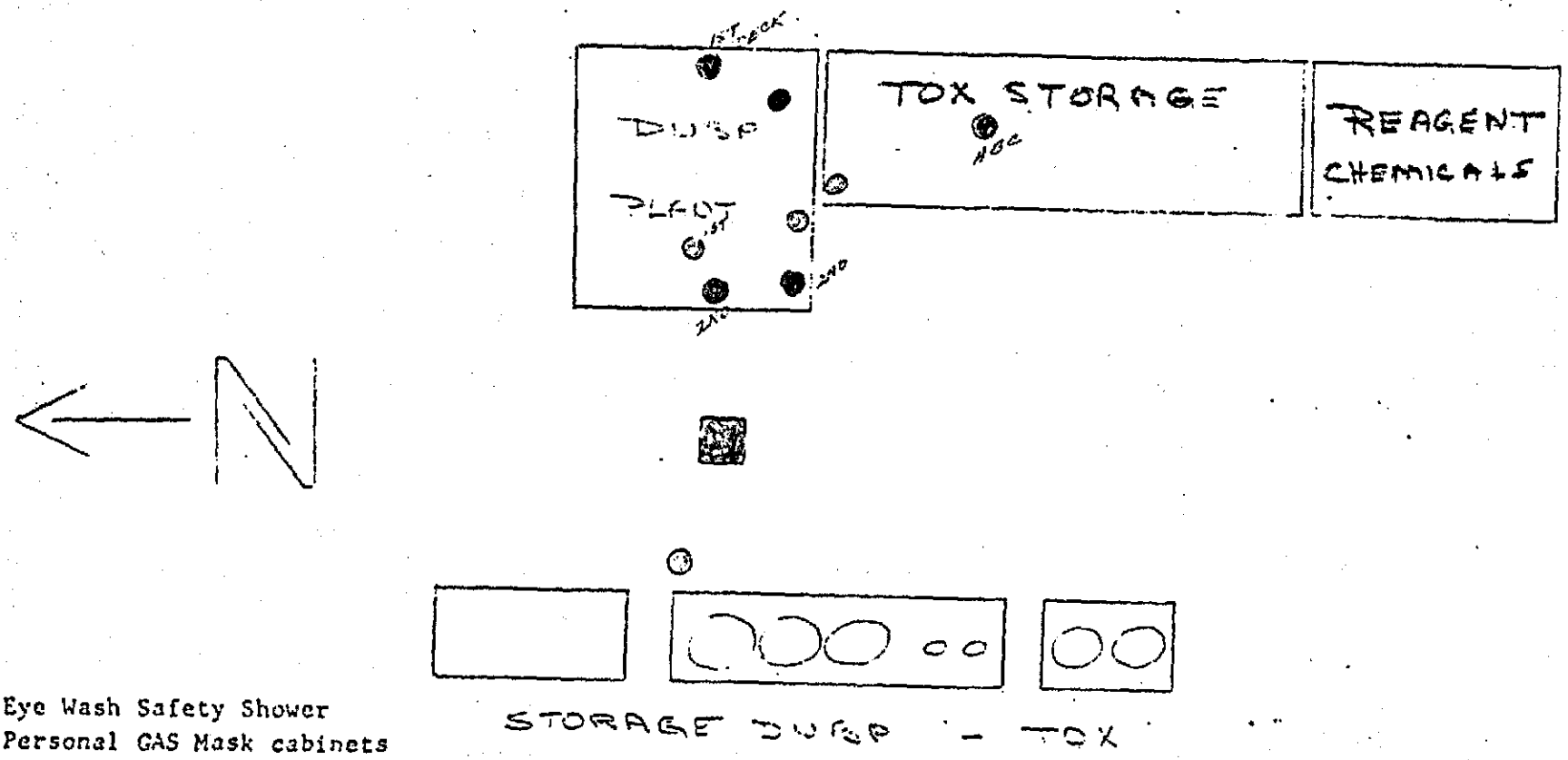



SOUTH WHSE
CONST WHSE
MAINTANCE
OIL STORAGE
UNITED GAS
ABC
Eye Wash Safety Shower
Personal GAS Mask cabinets
Emergency Alarm
Scott Air Packs
First Aid Station
Fire Houses
Fire Extinguishers
Diaster Horn
Fire Blankets

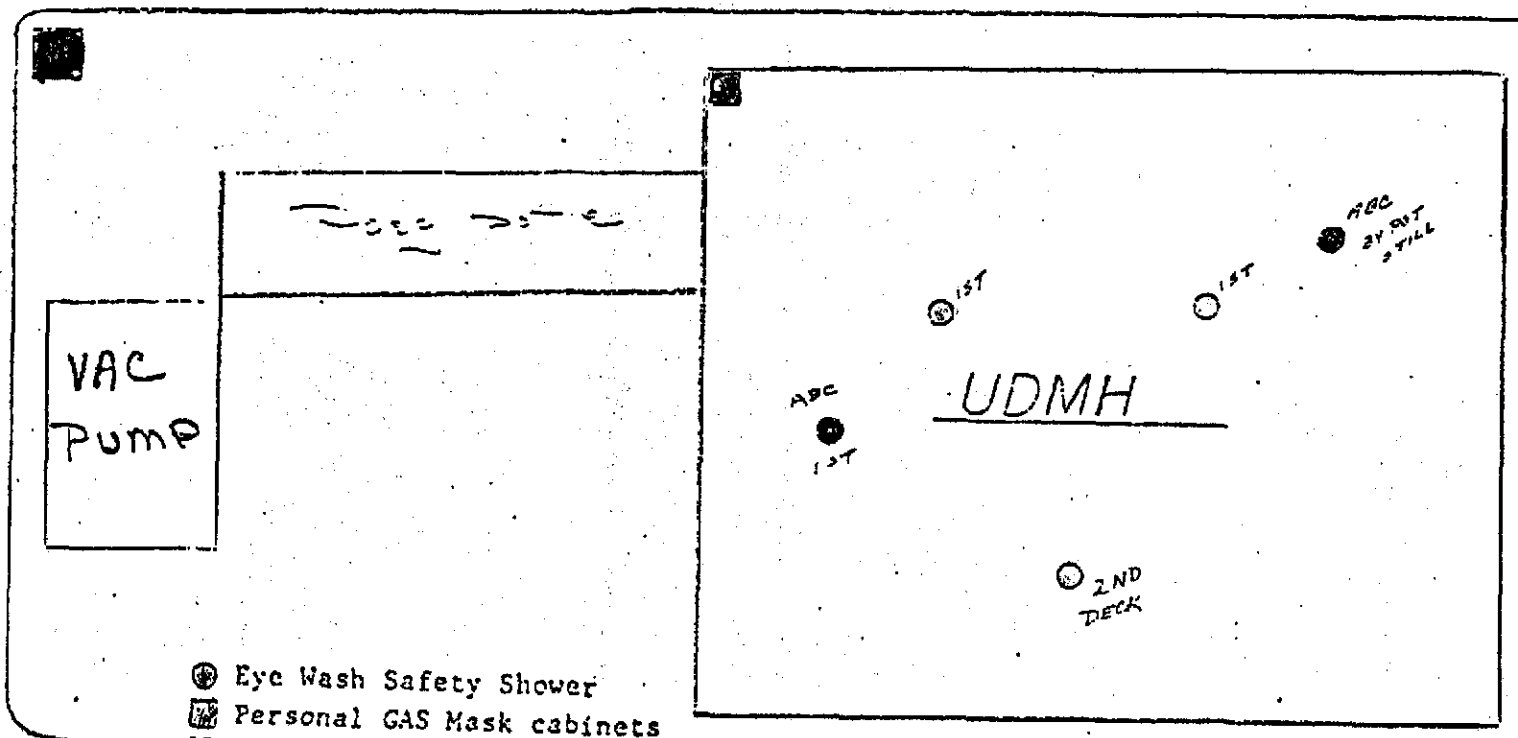

Eye Wash Safety Shower
Personal GAS Mask cabinets
Emergency Alarm
Scott Air Packs
First Aid Station
Fire Houses
Fire Extinguishers
Disaster Horn
Fire Blankets
N
CONST AREA
1ST
2ND
3RD
SCALE
CHILLER
PHOSPHATE
ABC
2ND
ABC
2ND
ABC


N
NH_3
STORAGE
CONST AREA
PARKING LOT
OFFICE
FIRST AID STATION
Eye Wash Safety Shower
Personal GAS Mask cabinets
Emergency Alarm
Scott Air Packs
First Aid Station
Fire Houses
Fire Extinguishers
Diaster Horn
Fire Blankets

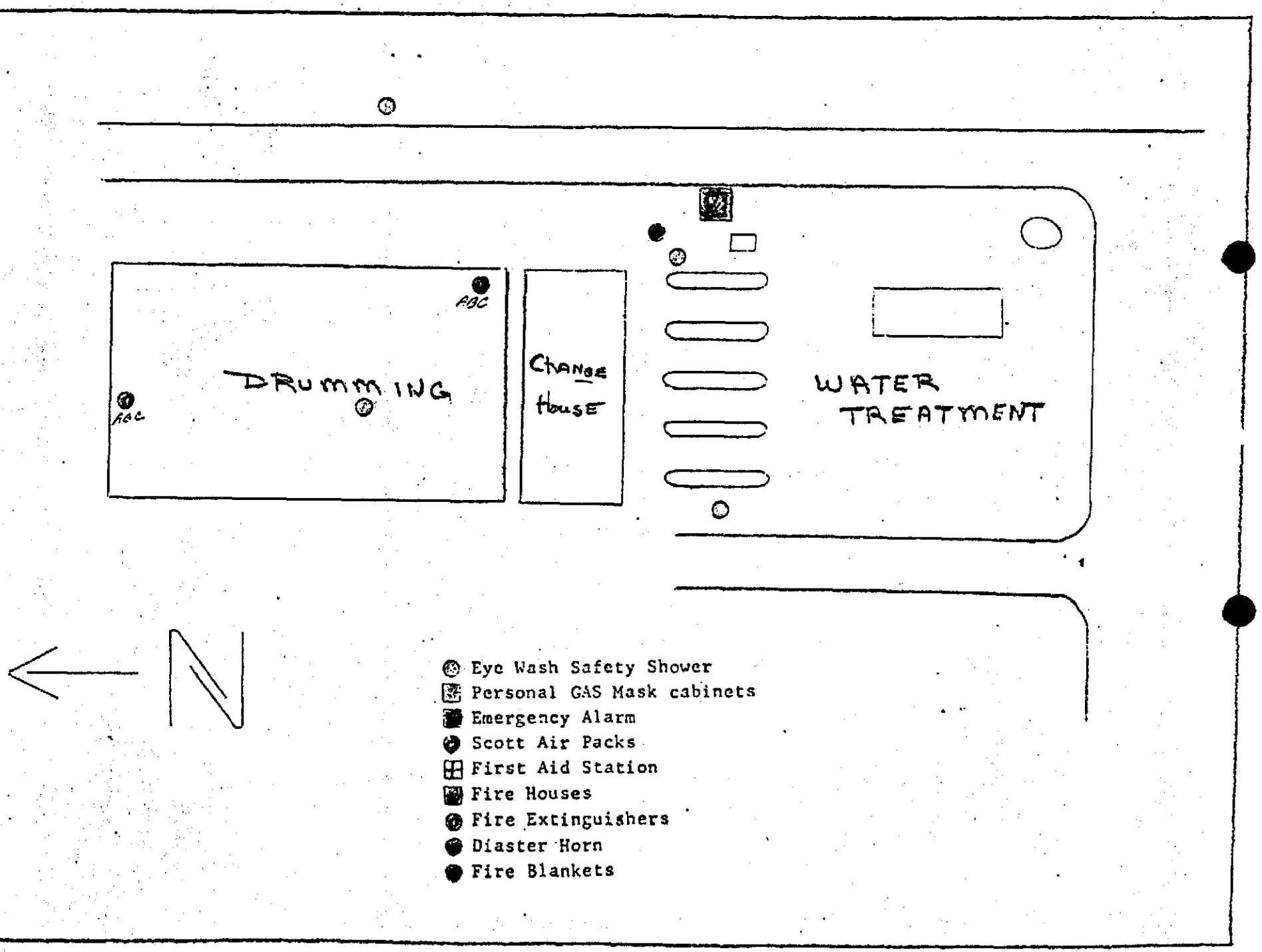

N
AIR
COMPRESSOR
BOILER
ABC
ABC
ABC
ABC
ABC
ABC
Eye Wash Safety Shower
Personal GAS Mask cabinets
Emergency Alarm
Scott Air Packs
First Aid Station
Fire Houses
Fire Extinguishers
Diaster Horn
Fire Blankets



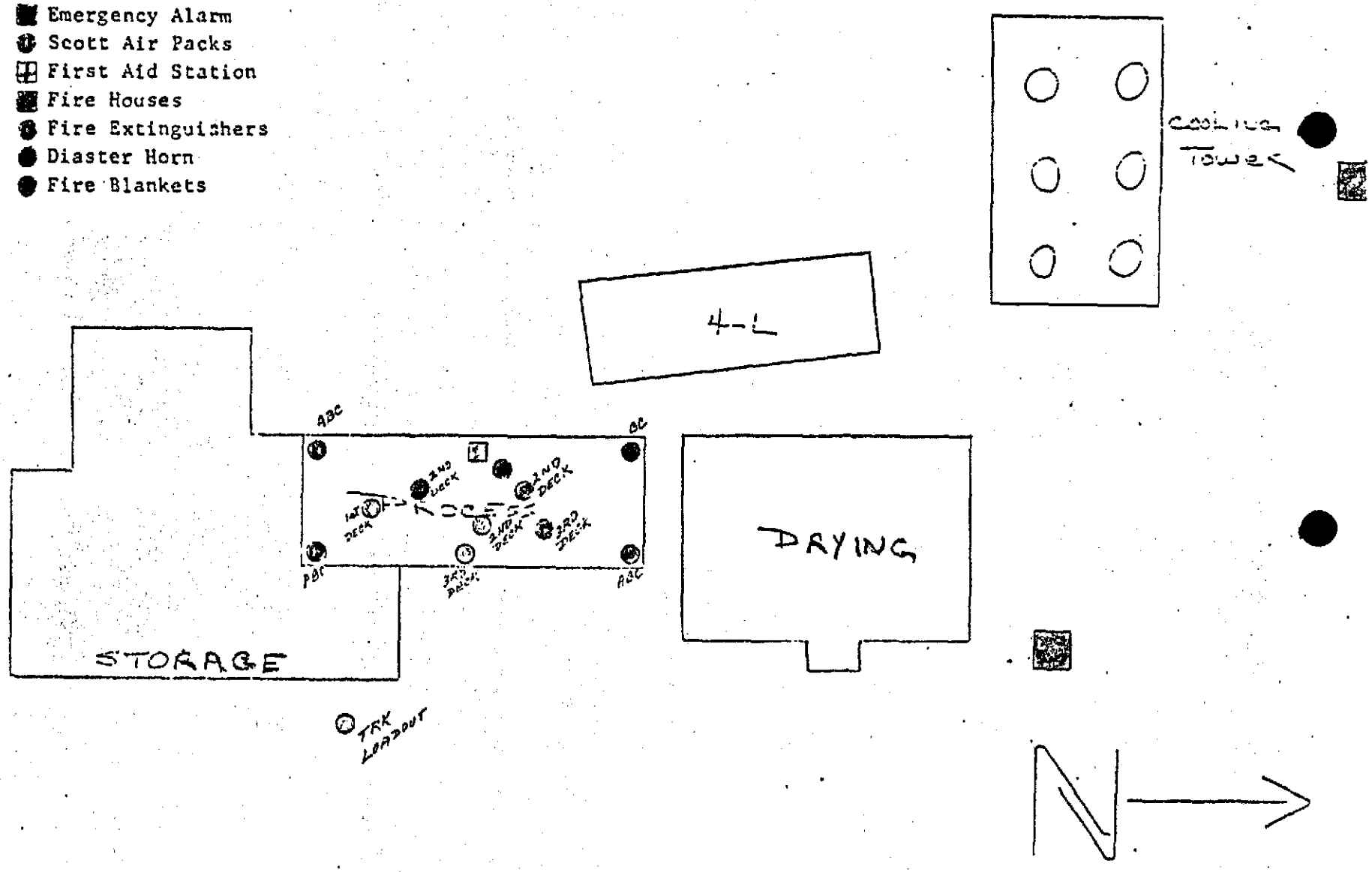
- Eye Wash Safety Shower
- Personal GAS Mask cabinets
- Emergency Alarm
- Scott Air Packs
- First Aid Station
- Fire Houses
- Fire Extinguishers
- Diaster Horn
- Fire Blankets



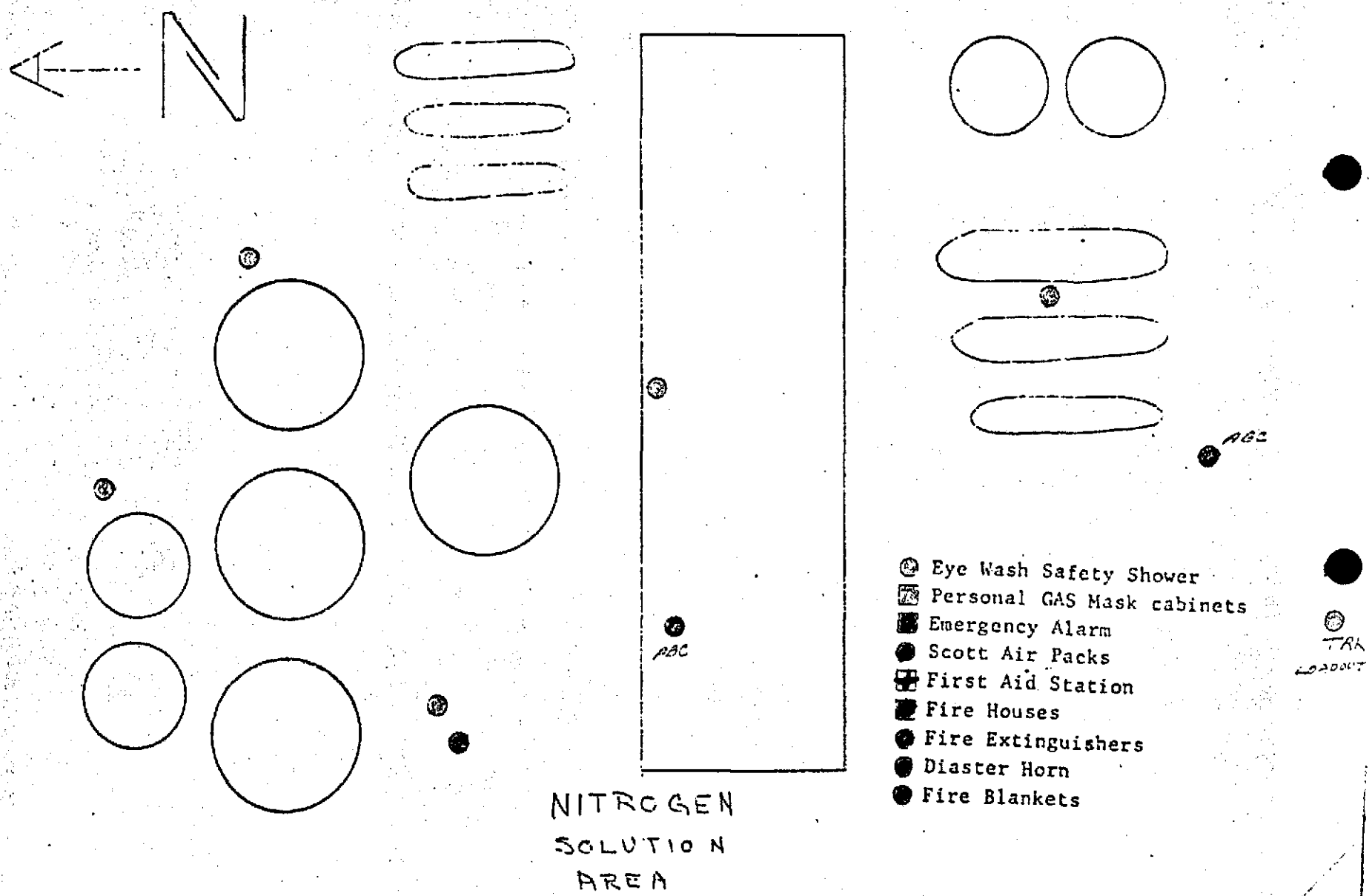
- Eye Wash Safety Shower
- Personal GAS Mask cabinets
- Emergency Alarm
- Scott Air Packs
- First Aid Station
- Fire Houses
- Fire Extinguishers
- Diaster Horn
- Fire Blankets


DRUMMING
ABC
ABC
CHANGE HOUSE
WATER TREATMENT
N
Eye Wash Safety Shower
Personal GAS Mask cabinets
Emergency Alarm
Scott Air Packs
First Aid Station
Fire Houses
Fire Extinguishers
Diaster Horn
Fire Blankets

- Eye Wash Safety Shower
- Personal GAS Mask cabinets
- Emergency Alarm
- Scott Air Packs
- First Aid Station
- Fire Houses
- Fire Extinguishers
- Diaster Horn
- Fire Blankets



ATRAZINE


N
PAC
PAC
TRK
LOADOUT
Eye Wash Safety Shower
Personal GAS Mask cabinets
Emergency Alarm
Scott Air Packs
First Aid Station
Fire Houses
Fire Extinguishers
Diaster Horn
Fire Blankets
NITROGEN
SOLUTION
AREA

CHEMICAL TOXICOLOGY AND EMERGENCY CONTROL PLAN FOR VERTAC CHEMICAL CORPORATION

The Vicksburg Fire Department has been issued a copy of the Chemical Toxicology and Emergency Control Plan for Vertac Chemical Corporation, Vicksburg Plant.

Signature: Asst. Chief Spence

Signature: Roger Goldman

10-13-81

CHEMICAL TOXICOLOGY AND EMERGENCY CONTROL PLAN FOR VERTAC CHEMICAL CORPORATION

The Mercy Regional Medical Center Emergency Room has been issued a copy of the Chemical Toxicology and Emergency Control Plan for Vertac Chemical Corporation Vicksburg Plant.

Signature: Betsy Folsom RN

Signature: Roger Holdiness

10-13-81

CHEMICAL TOXICOLOGY AND EMERGENCY CONTROL PLAN FOR VERTAC CHEMICAL CORPORATION

The Vicksburg Hospital Emergency Room has been issued a copy of the Chemical Toxicology and Emergency Control Plan for Vertac Chemical Corporation, Vicksburg Plant.

Signature: C. King RN.

Signature: Roger Holdiness

10-13-81

CHEMICAL TOXICOLOGY AND EMERGENCY CONTROL PLAN FOR VERTAC CHEMICAL CORPORATION

The Vicksburg Police Department has been issued a copy of the Chemical Toxicology and Emergency Control Plan for Vertac Chemical Corporation, Vicksburg Plant.

Signature: Herman Redick

Signature: Roger Holdman

10-13-81

CHEMICAL TOXICOLOGY AND EMERGENCY CONTROL PLAN FOR VERTAC CHEMICAL CORPORATION

The Warren County Sheriff's Department has been issued a copy of the Chemical Toxicology and Emergency Control Plan for Vertac Chemical Corporation, Vicksburg Plant.

Signature: Larry Ashley

Signature: Roger Pickett

10-13-81

40 CFR PART 265

(INTERIM STATUS STANDARDS REQUIRED FOR FACILITIES ENGAGED IN TREATMENT, STORAGE, OR DISPOSAL OF HAZARDOUS WASTES)

THE STANDARDS AND PLANS FOR COMPLIANCE

AS THEY APPLY TO THE VICKSBURG PLANT OF VERTAC CHEMICAL CORPORATION

I. SECTION 265.13 - GENERAL WASTE ANALYSIS

A. Requirement

A detailed chemical and physical analysis of a representative sample of all hazardous wastes to be treated, stored or disposed of must be obtained. A written waste analysis plan must be developed and implemented. The plan must be kept at the facility. The plan must detail sampling and analysis methods and frequencies.

B. The Plan

For wastes discharged to an NPDES permitted privately-owned treatment facility or discharged to an NPDES permitted publicly-owned treatment works, the plan is to sample and analyze as per standard in place practice or at six-month intervals, whichever is most frequent. The method of analysis is in each case the EPA method and/or that specified in "Standard Methods of Wastewater Analysis", or if not found in either of the above, by methods developed in-house by Vertac or that company for which custom chemical manufacture is in progress.

II. SECTION 265.14 - SECURITY

A. Requirement

Alternative security devices including surveillance, fencing or barriers and controlled access must be instituted to prevent unauthorized entry to the active portion of the hazardous waste facility by humans or livestock unless physical contact with the wastes by such humans or animals will not cause injury or disturb the operations of said facility.

A. The Plan

Fences or combinations of fences and natural or artificial barriers, in conjunction with controlled roadways, are used to control entry to the active portion of the hazardous

waste facility. Signs with the legend "Danger - Unauthorized Personnel Keep Out" are posted in sufficient numbers so as to be seen from any approach to this active portion.

III. SECTION 265.15 - INSPECTIONS

A. Requirement

Inspections must be performed on a schedule sufficient to detect and correct problems which may cause a release of hazardous waste to the environment. Inspections and their results must be detailed in an inspection log which must be retained for a period of three years.

B. The Plan

1. Drums - Will be inspected weekly for leaks if the drums will be stored ninety (90) days or longer.

2. Tanks - Automatic shutdown systems, by-pass systems, and drainage systems will be inspected daily. Monitoring gauges and instruments will be inspected daily. The level will be inspected daily. The structural and functional integrity of the tank itself and surrounding dikes and/or other means of secondary containment will be inspected weekly.

3. Surface Impoundments - There will be a daily check that a minimum freeboard level of two feet exists and a weekly inspection for structural and functional integrity.

IV. SECTION 265.16 - PERSONNEL TRAINING

A. Requirement

There must be a job title and written job description for each position related to hazardous waste management. The written description must describe the training required to function in the job and ensure ability to respond to Preparedness and Prevention Plans, and Contingency and Emergency Procedure Plans. Training must be completed by May 19, 1981. Records that document initial training and annual reviews must be maintained until site closure.

B. The Plan

Personnel are trained in classrooms and on the job in:

1. Procedures for Using Emergency and Monitoring Equipment

2. Operating Waste Feed Cut-Off Systems

3. Communications Systems

4. Response to Emergencies

Job descriptions are attached.

V. SECTION 265.30 - PREPAREDNESS AND PREVENTION

A. Requirement

Hazardous waste facilities must be maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste. As appropriate for the type of wastes handled, facilities must make emergency response arrangements with local services such as fire, police and hospital.

B. The Plan

Telephones are available to summon help; portable fire extinguishers are available or water at adequate volume and pressure to supply water hose streams is available. The nature of our hazardous waste is such that emergency response plans or familiarization of local authorities with facts specific and exclusive to hazardous wastes is not necessary or desirable. There does exist instead coordination of information and emergency responses pursuant to the entire manufacturing facility, raw materials and products, as well as wastes. The potential hazardous waste emergencies at Vicksburg is not severe. Hazardous waste spills will flow to the effluent pond. The contents of the effluent pond is treated by carbon adsorption prior to discharge.

VI. SECTION 265.50 - CONTINGENCY PLAN AND EMERGENCY PROCEDURES

A. Requirement

Designate an employee as the "emergency coordinator" to be on the premises on or call at all times; designate alternatives and list them in the order in which they should be contacted. An emergency contingency plan must be prepared; copies of the plan must be maintained at the facility and submitted to all local service organizations which may be requested to respond.

B. The Plan

The designated emergency coordinator is Richard Randolph. A list of alternatives is attached. The duties of the emergency coordinator is to carry out requirements of 40 CFR Section 265.56, 45 Federal Register 33237; a copy is attached.

VII. SECTION 265.70 - MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

A. Requirement

All hazardous waste treatment, storage and disposal facilites, including those which treat wastes generated on-site, must maintain an operating record at the facility which describes the quantity and quality of all hazardous wastes received, the location of each hazardous waste within the facility, the results of waste analyses, reports of all incidents requiring implementation of the contingency plan, records of all inspections, required monitoring, testing or analytical data, and all closure and post-closure cost estimates. In addition, all hazardous waste treatment, storage and disposal facilities must submit an annual report summarizing the above-cited information.

B. The Plan

Do as required.

VIII. SECTION 265.90 - GROUNDWATER MONITORING

A. Requirement

By November 19, 1981, those operating surface impoundments or active landfills as part of hazardous waste treatment storage or disposal facilities must install and operate an extensive groundwater monitoring system.

B. The Plan

Groundwater monitoring systems capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility will be installed.

IX. SECTION 265.110 - CLOSURE AND POST-CLOSURE

A. Requirement

Each facility must have a written closure plan which identifies the steps necessary to completely close the facility at any point during its intended life and at the planned closure time. Each facility must also have a post-closure plan which provides for thirty (30) years of post-closure care.

B. The Plan

Upon closure, the contents of the hill storage tank and the effluent pond will be un through the carbon columns at a rate such that the effluent remains within NPDES permit limitations. Upon closure, all above-ground drums of hazardous waste are to be brought to a permitted landfill.

Upon closure, all surface impoundments are to be drained and filled with absorbent clays. After a period of drying, a clay cap is added to the top. Groundwater monitoring will be continued for a period of thirty (30) years.

X. SECTION 265.140 - FINANCIAL REQUIREMENTS

A. Requirement

Each facility must have a written estimate of both the cost of closing the facility at the point at which closure would be the most expensive and the annual cost of post-closure care. These estimates must be updated as necessary to keep them current with the closure and post-closure plans. In addition, both estimates must be updated annually to adjust for inflation.

B. The Plan

Drums will be disposed at an estimated cost of $50 per drum (1981 costs). Surface impoundments will be closed at an estimated cost of $3 per cubic yard of volume (1981 costs). Groundwater monitoring will be maintained at an estimated cost of $500 per well, per year (1981 costs).

Hill tank water and effluent pond water will be treated at a cost of approximately $0.13 per gallon (1981 costs).

RDK:ew

Attachments

RCRA SECTION 265.16

JOB DESCRIPTION

VICKSBURG PLANT

I. JOB TITLE

Effluent Operator - (4) - One per shift.

II. JOB DESCRIPTION

The effluent operators have the following duties that are related to hazardous wastes:

1. Operate the Calgon carbon adsorption units.

2. Monitor and control the pH of the outlet of the effluent pond.

3. Make observations and entries on the log sheet forms, including the following:

   a. Week inspection of hazardous waste drums being stored. Note any leakers, report the problem and note when remedial action is taken.

   b. Daily inspection of sampling equipment, metering equipment, tank levels and freeboard level of the effluent pond.

   c. Weekly inspection of the hill tank and the Calgon unit tanks plus dikes for structural and functional integrity.

III. TRAINING

The effluent operators receive both on the job and classroom training. The most recent classroom training was coordinated by Calgon personnel. Specific training was conducted on:

1. Basic theory or absorption.

2. Optimization of operation by periodic sampling and analysis.

3. Loading and unloading of carbon.

4. Function and purpose of instrumentation and gauges.

Effluent operators receive the same safety training as chemical operators. As such, they are trained to use emergency equipment such as fire extinguishers.

RDK:ew

1. Richard Rodolfo 2. Stan Wallace

CALGON CORPORATION

SUBSIDIARY OF MERCK & CO., INC.

ACTIVATED CARBON DIVISION CALGON CORPORATION 4800 WEST 34TH ST. SUITE B-8 HOUSTON, TEXAS 77092 (713) 682-1301

January 25, 1980

Mr. Earl Mahaffey
Vertac Chemical Company
P. O. Box 3
Vicksburg, Mississippi 39180

Dear Earl:

I certainly appreciate your accommodation of my need to revise the date of the upcoming operator/supervisor training session. As we discussed, Joe Allen and I will plan to be in your plant on Tuesday, February 19 to conduct training sessions at 8:00 AM and 2:30 PM.

Very truly yours,

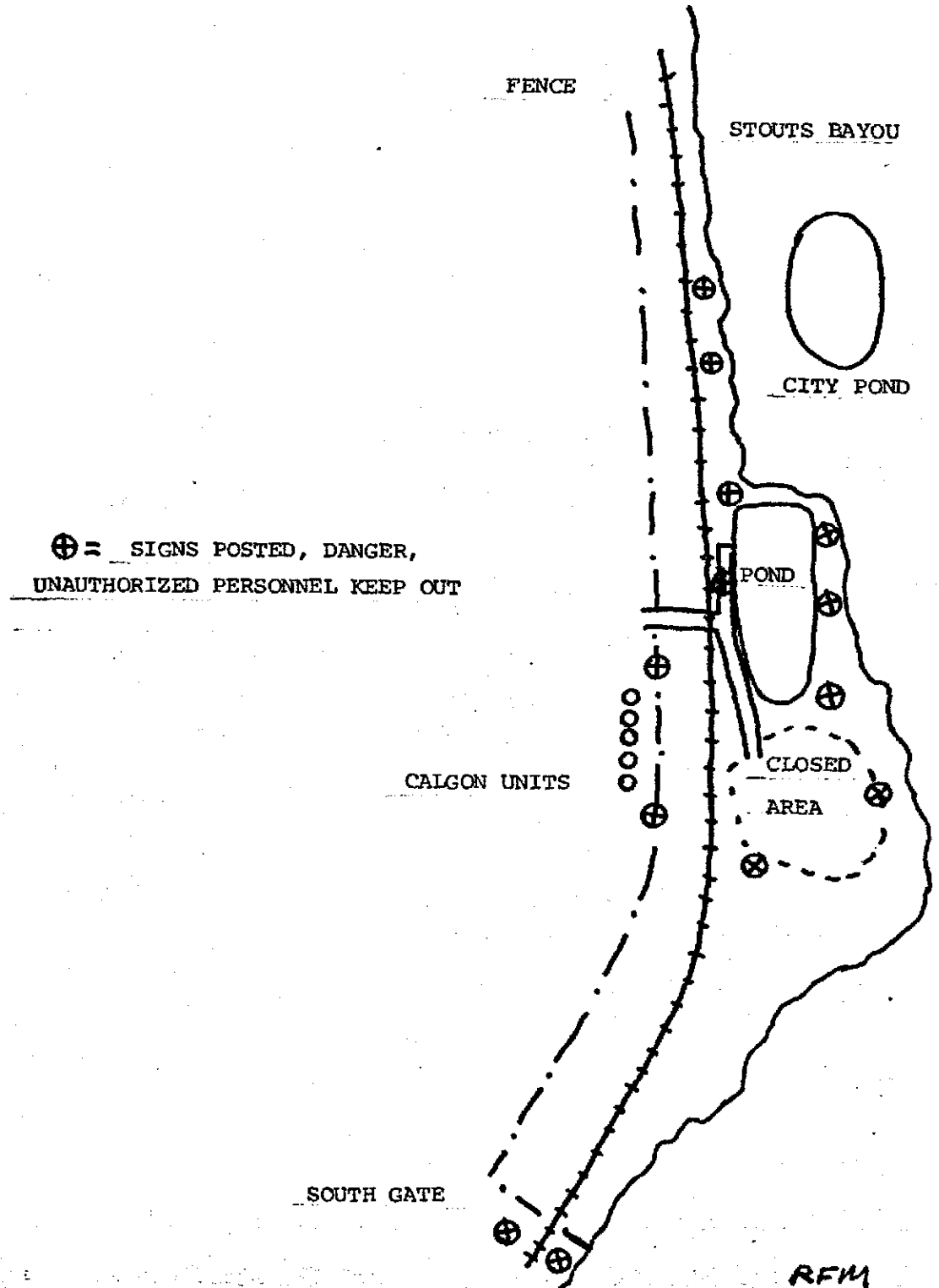
Bob

Robert L. Bright, P.E.
Customer Services

RLB/ljh

cc: Mr. George Foehringer, Director of Operations
Mr. F. L. Ahlers, Plant Manager

LOCATION OF WARNING SIGNS



ADMENDMENT TO SECTION 265.13

GENERAL WASTE ANALYSIS

METHODS OF SAMPLING:

The waste water in the holding pond is sampled after passing through activated carbon beds. Automatic samplers collect 24 hour composite samples of the flow from the carbon beds, and the combined North and South flow to the Mississippi River.

The sampling frequency is twice per week.

The D.N.B.P. waste water is stored in a holding tank and the D.N.B.P. and some C.O.D. and B.O.D. are removed by passing it through activated carbon as it is fed into the holding pond.

The sample is a grab sample taken at the carbon bed exit flow.

The standard frequency is twice a year. Vertac does not limit itself to this frequencency and does perform additional analyses, copies of which are on file in the environmental workbooks.

ANALYTICAL METHODS:

The following methods are currently used:

Analysis	Method
C.O.D.	Std. Methods, #508
B.O.D.	Std. Methods, #507, and 422F
Toxaphene	E.P.A. Methods, Fed. Reg. 38 NO 75 Pt. II
DNBP	In House Chromatographic and Colorimetric Methods, As Applicable

ATTACHED:

Typical analysis of D.N.B.P. Stored Waste.

Typical Analysis of Impounded Waste after activated Carbon Treatment.

Typical Hazardous Waste Inspection Sheets (Drums, Hill Tank (D.N.B.P. Waste) and Waste Pond (Impoundment)).

INTERNAL CORRESPONDENCE

DATE: June 16, 1982

TO: Dave Madsen

FROM: R.F. Maraman

CC: See Distribution

SUBJECT: DNBP Waste, Di Sulfonated and Mono Sulfonated

Component	7-31-81 Di Sulfonated Waste	5-12-82 Mono Sulfonated Waste	% Change
pH	8.8	9.2	-
C.O.D.	1.344	1.453	+8%
Lbs/Gal	9.39	9.1	-3%
Total NH_3 Nitrogen	5.6	3.0	-46%
Total Nitrate Nitrogen	0.5	0.5	-
Total Nitrogen	6.1	3.5	-43%
NH_4 NO_3	2.9	2.4	-17%
SO_4 As $(NH_4)_2$ SO_4	24	11.1	-54%
D.N.B.P.	300	320	+7%
Sp. Gr	1.127	1.092	-

The above reflects the changes in D.N.B.P. waste since going to the mono sulfonated process. There are significant reductions in NH_3-Nitrogen, total nitrogen and SO_4 as $(NH_4)_2$ SO_4 concentrations.

RFM/tsd

cc: F. Ahlers
S. Keen
R. Maraman
File

HAZARDOUS WASTE INSPECTION SHEET

For the Week of _____ to _____

1. Drums at UDMH - Inspect weekly for leaks.

   Rework Leakers

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

2. Hill Tank - Record level daily and inspect tank structure and dike weekly.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

3. Waste Pond - Record level daily, keep a minimum of two (2) feet freeboard, and inspect the pond dike weekly.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

DATE	HILL TK LEVEL	POND LEVEL	INITIALS

4. Calgon Units - Report major leaks or misfunctions and inspect the units daily.

Date Inspected _____ Inspected By _____

Results of Inspection _____

_____

Action Initiated to Correct Deficiencies

GROUND WATER MONITORING

Typical Analytical Reports.

Location of Monitoring Wells.

Typical Chain of Custody Record.

ADDITION TO SECTION 265.90, GROUND-WATER MONITORING.

Ground water is currently monitored from four wells located as follows:

Well #1. West of Vertac holding pond.

Well #2. Approximately 1/8 mile South of Atrazine Plant.

Well #3. Across Hatcher Bayou, East of the South Plant.

Well #4. North of the KNO_3 Plant and South of the Administration Building.

The ground water analyses are currently performed quarterly by the Environmental Laboratories, Inc., P.O. Drawer 2309, Gulfport, MS 39503.

Sample containers and insulated shippers are supplied quarterly by Environmental Labs Inc. The sample containers will arrive containing the proper preservations.

Vertac personnel sample each well after purging of at least three times the casing volume. The samples are stored in the refrigerator overnight and then packed in ice in the insulated shippers. The shipper is bussed to Gulfport.

Environmental Labs Inc. mails the analytical results to the Vicksburg Plant. The plant mails the original to the Environmental Manager and keeps a copy on file at Vicksburg.

Copies of the hydrogeological report and well locations are on file at the Vicksburg Plant.

ENVIRONMENTAL LABORATORIES, Inc.

P.O. Drawer 2309 / Gulfport, Mississippi 39503 / (601) 863-3036

GROUNDWATER MONITORING

CLIENT Vertac, Inc.
Memphis, Tenn.

FACILITY Vicksburg Plant

WELL I.D. #1

SAMPLE NO. 4746-A
SAMPLE BY Client
CLIENT NO. RCRA22-001
DATE April 15, 1982
UPSTREAM ☐
DOWNSTREAM ☒

GROUP 1

Inorganics

Arsenic	0.0028	mg/l
Barium	0.103	mg/l
Cadmium	< 0.0001	mg/l
Chromium	0.61	mg/l
Flouride	0.42	mg/l
Lead	0.0241	mg/l
Mercury	< 0.0008	mg/l
Nitrate	0.18	mg/l
Selenium	0.0064	mg/l
Silver	0.00576	mg/l

Organics

Endrin	< 0.00016	mg/l
Lindane	0.001	mg/l
Methoxychlor	< 0.001	mg/l
Toxaphene	< 0.002	mg/l
2, 4-D	< 0.002	mg/l
2, 4, 5-TP Silvex	< 0.002	mg/l

Radiochemistry

Gross Alpha	< 2	±	pCi/l
Gross Beta	6.2	± 3.0	pCi/l
Total Radium	< 2	±	pCi/l

Others

Turbidity	5.0	NTU
Total Coliform	2	ct/100ml

GROUP 2

Chloride	76.0	mg/l
Iron	0.30	mg/l
Manganese	0.73	mg/l
Sodium	92.3	mg/l
Sulfate	82.4	mg/l
Phenols	0.05	mg/l

ENVIRONMENTAL LABORATORIES, Inc.
P.O. Drawer 2309 / Gulfport, Mississippi 39503 / (601) 863-3036

GROUNDWATER MONITORING PAGE 2

WELL I.D. #1

UPSTREAM ☐
DOWNSTREAM ☒

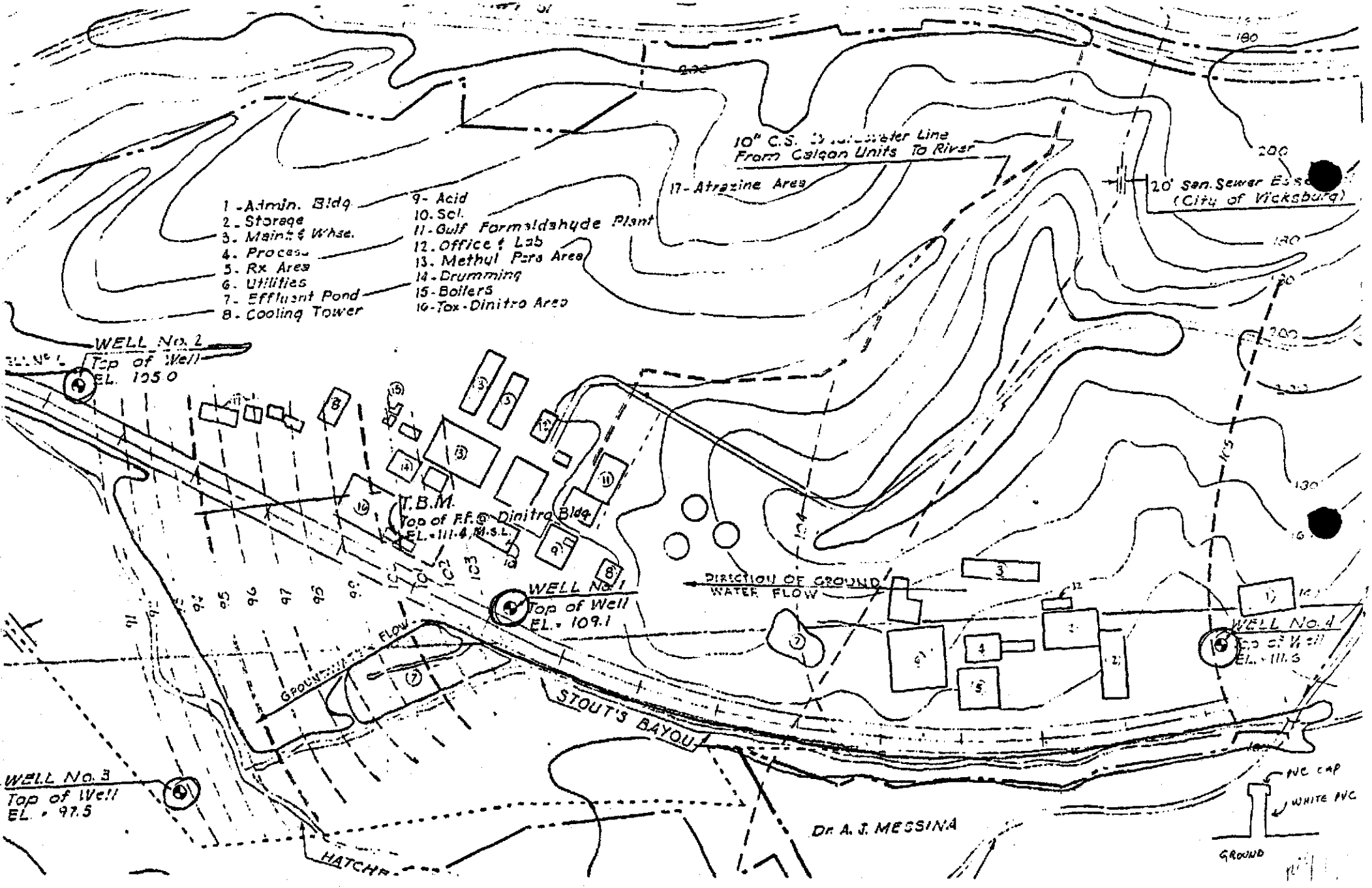
GROUP 3	1	2	3	4	
pH	7.14				s.u.
Specific Conductance	3350				umhos/cm
Total Organic Carbon	63.49				mg/l
Total Organic Halogen	0.195				mg/l

Copies:

ENVIRONMENTAL LABORATORIES, INC.

Karen H. Brown

KAREN H. BROWN
Lab Director
Environmental Division


1 - Admin. Bldg
2 - Storage
3 - Maint & Whse.
4 - Process
5 - Rx Area
6 - Utilities
7 - Effluent Pond
8 - Cooling Tower
9 - Acid
10 - Sol.
11 - Gulf Formaldehyde Plant
12 - Office & Lab
13 - Methyl Para Area
14 - Drumming
15 - Boilers
16 - Tox - Dinitro Area
17 - Atrazine Area
10" C.S. Discharge Line
From Calgon Units To River
20' San. Sewer Easement
(City of Vicksburg)
WELL No. 2
Top of Well
EL. 105.0
T.B.M.
Top of F.F. @ Dinitro Bldg.
EL. = 111.4, M.S.L.
WELL No. 1
Top of Well
EL. = 109.1
DIRECTION OF GROUND WATER FLOW
WELL No. 4
Top of Well
EL. = 111.5
GROUND WATER FLOW
STOUT'S BAYOU
WELL No. 3
Top of Well
EL. = 97.5
HATCHE
Dr. A. J. MESSINA
PVC CAP
WHITE PVC
GROUND

CHAIN OF CUSTODY RECORD

Field Section

Well # 1

Location of Sampling: Beside the waste pond

Shipper's Name: VERTAC Chemical

Shipper's Address: Rifle Range Rd. Vicksburg, MS, 39090

Collector's Name: David Green (Signature) Telephone # 601-636-1231

Date Sampled: 4-13-82

Time Sampled: 3:00 PM

Field Information:

Special Handling/Storage:

Sample stored in refrigerator overnight

Laboratory Section

Received by: K Brown

Date: 4/15/82 @ 9:00 am

Analysis Required: RCRA

Comments: All samples cold - None broken

INTERIM STATUS COMPLIANCE CHECKLIST

FACILITY Varbar Chemical
LOCATION Vicksburg
DATE 7/8/92
INSPECTORS Charles Estes
John Hartmann
Jim Cook (EPA)

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
SUBPART B - GENERAL FACILITY STANDARDS				
265.12 Required Notices				
a) The facility owner or operator must notify the Director at least four weeks in advance of receipt of wastes from a foreign source.			✓	The facility does not receive waste from any foreign source
b) Before transferring ownership or operation of a facility, the facility's owner or operator must notify the new owner or operator of the requirements of 40 CFR 265 and 122.			✓	The facility has not transferred ownership.
265.13 General Waste Analysis				
Before treating, storing, or disposing of haardous waste, the facility owner or operator must obtain a detailed chemical and physical analysis of wastes. The analysis must contain all the information which must be known to treat, store, or dispose the waste in accordance with the federal requirements.	✓			Have a general description of all hazardous waste that is sent to BFI. A copy is added to our file.
265.14 Security to Prevent Unknowing and Unauthorized Access to the Facility				
a) The owner or operator must prevent the unknowing entry and minimize the possibility for unauthorized entry unless:	✓			Guards are at gate.
1) physical contact with the waste, structures, or equipment will not be injurious			✓	Physical contact could be injurious.
2) disturbance of the waste or equipment will not violate the requirements of Part 265.			✓	"

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.14 - Continued				
b) Unless exempt under 265.14 (a)(1) or 265.14(a)(2), a facility must have.				
1) a 24-hour surveillance system	✓			Guards on duty.
2) (i) an artificial or natural barrier which completely surrounds the active portion of the facility	✓			Fence and creek surround facility.
(ii) a means to control entry	✓			
c) A sign warning of the danger of intruding into the facility.	✓			Signs around impoundment and around landfill.
265.15 Inspection and Monitoring				
a) The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, or discharges which may be causing or lead to release of hazardous waste constituents to the environment or a threat to human health.	✓			Inspection plan is to check once weekly on storage area, tanks and pond.
b) The owner or operator must develop and follow a schedule and plan for inspections.	✓			"
c) The owner or operator must take remedial action upon the detection of malfunction or the deterioration of equipment and structures when a hazard is imminent.	✓			There have been no remedial acts necessary.
d) The owner or operator must record inspections in an inspection log and must keep the records for at least three years from the date of inspection.	✓			Inspections are done once weekly. Indicate that grass needs cutting on levee and area needs cleaning around storage drums.

REQUIREMENT	Not in compliance - No Not applicable - NA Yes	No	N/A	COMMENTS
265.16 Facility Personnel Training				
a) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of Part 265.	✓			Personnel are trained in classroom and by on-the-job training.
b) The training program must be completed within six months of the effective date of Part 265.	✓			"
c) There must be an annual review of the initial training in (a) above.	✓			Annual review done at annual performance review. Colgan does a training workshop.
d) The owner or operator must maintain records of training.	✓			Annual performance review kept in personnel file.
e) Training records on current personnel must be kept until closure of the facility.	✓			Annual performance review is kept in personnel files.
265.17 General Requirements for Ignitable, Reactive or Incompatible Wastes				
a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste.	✓			Drums are stored in an area designated for them and are isolated.
b) Treatment, storage, or disposal of ignitable or reactive waste and the mixture or commingling of incompatible wastes must be conducted so that it does not:			✓	There are no incompatible wastes which are stored.
1) Generate extreme heat or pressure, fire or explosion, or violent reaction;			✓	"
2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient			✓	"

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.17 - Continued--				
quantities to threaten human health;				
3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;			✓	Same as above
4) Damage the structural integrity of the device or facility containing waste; or			✓	"
5) Through other like means threaten human health or the environment.			✓	"
SUBPART C - PREPAREDNESS AND PREVENTION				
Pursuant to 265.30 through 265.37, facilities must be maintained and operated for and prevention of releases of hazardous wastes controlled by the State.	✓			Insufficient aisle space between stored drums. Documentation of contingency plan has been completed and all emergency facilities have received copies.
SUBPART D - CONTINGENCY PLANS				
Pursuant to 265.56, facilities must have contingency plans and emergency procedures to be followed in the event of a release of hazardous waste.	✓			"
SUBPART E - MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING				
265.71(a)(1-5) If a facility receives hazardous waste accompanied by a manifest, the owner or operator must meet the requirements of 265.71(a)(1-5)			✓	Facility does not receive any hazardous waste.
265.71(b)(1-5) If a facility receives, from a rail or water transporter, hazardous waste which is accompanied by a shipping paper, the owner or operator must meet the requirements of 265.71.			✓	"

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.72(a) Upon discovery of significant manifest discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter.			✓	There have been no recent manifest discrepancies.
(b) If a significant manifest discrepancy is not resolved, the owner or operator must notify the Director.			✓	"
265.73(b) The owner or operator must keep a written operating record at the facility which meets the requirements of 265.73(b).		✓		The general operating record has to be put together better. Record of number of drums, type of waste and inspection record for the drums.
265.74(a) All records must be furnished upon request and available at all times for inspection by the Director or EPA.			✓	
(c) A copy of records of waste disposal locations and quantities must be submitted to the Director and the local land authority upon closure of the facility.			✓	Facility has not closed.
265.75 The owner or operator must submit an annual report to the Director in compliance with the requirements of 265.75.			✓	Informed that an annual report will be required by Miss.
265.76 The receipt of any unmanifested waste must be reported to the Director.			✓	The facility does not receive waste from any other source.
265.77 The owner or operator must submit a report to the Director if any of the following occur: a) releases, fires, explosions b) groundwater contamination c) facility closure.			✓	There have been no releases.

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
SUBPART F - GROUNDWATER MONITORING				
265.90 Owner or operator must implement a groundwater monitoring program capable of determining the facility's impact on the quality of the upper aquifer within one year of the effective date of 265.90.	✓			Facility has installed a groundwater monitoring system but a review of this has found it lacking. Plans are being made to up-grade the system.
265.91 - 265.94 The owner and operator must install, operate, and maintain a groundwater monitoring system which meets the requirements of 265.91 - 265.94.		✓		The system does not have the required 3 downgradient monitoring wells.
265.90(c) All of the groundwater monitoring requirements may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste constituents from the facility via the uppermost aquifer below the facility to water supply wells or to surface water.			✓	The facility has installed a monitoring system.
SUBPART G - CLOSURE AND POST-CLOSURE				
265.111 The owner or operator must close his facility in a manner that:			✓	The facility has not closed.
1) minimizes the need for future maintenance, and			✓	"
2) controls, minimizes, or eliminates post-closure escape of hazardous waste.			✓	"
265.112(a) The owner or operator must have a written closure plan on the effective date of Part 265.	✓			Have two documentes. Should be consolidated and put in environmental manual.

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT.	Yes	No	N/A	COMMENTS
265.112(a) Continued--				
The closure plan must include:				
1) A description of how and when the facility will be partially closed, if applicable, and ultimately closed.	✓		●	Closure plan is in the file.
2) An estimate of the maximum inventory of wastes in storage or treatment at any given time.		✓		Will add maximum inventory of drums, & impoundments to closure plan
3) Steps to decontaminate facility equipment.		✓		Will add statement about cleaning pumps, vessels or dirt moving equipment.
4) A schedule for final closure which must include, as a minimum, anticipated dates when wastes will no longer be received, anticipated date for completion of final closure, and intervening milestone dates.		✓	●	There is no idea when the facility will close. An approximated date of closure must be chosen.
265.113(a) Closure must be initiated within 90 days after receiving the final volume of hazardous wastes.			✓	"
(b) The owner or operator must complete closure activities within six months after receiving the final volume of wastes.			✓	"
265.114 Upon completion of closure, all equipment and structures must be properly disposed of or decontaminated.			✓	"
265.115 The owner or operator and an independent registered professional engineer must certify that the facility has been closed in accordance with the approved closure plan.			✓	"

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.117(a) Post closure care must consist of at least:				
1) Groundwater monitoring			✓	
2) Maintenance of the contaminant system.			✓	
The owner or operator must have a post-closure plan on the effective date of Part 265 and it must include:				
1) Groundwater monitoring activities and frequency.			✓	
2) Maintenance activities and frequencies to ensure the integrity of the cap, final cover, or other containment structures, and functions of the facilities monitoring equipment.			✓	
265.119 Within 90 days after closure, the owner or operator must submit a survey plat of the facility.			✓	Facility has not closed
265.120 The owner or operator must record a notice on the deed that the land has been used to manage hazardous waste.			✓	"
SUBPART H - FINANCIAL REQUIREMENTS				
265.142(a) The owner or operator must develop and maintain a current estimate of closure and post-closure costs.			✓	Informed that requirements are effective on NOV 1, 1982.
SUBPART I - OTHER FACILITY STANDARDS				
265.170 - 265.172 The container must be compatible with the waste to be stored.	✓			55 gal. drums are used to store waste.

Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.173 Containers holding hazardous waste must be kept closed and must not be opened, handled, or stored in a manner which may cause a rupture or leak.		✓		Some open drums, but not sure if hazardous.
265.174 Areas where containers are stored must be inspected weekly.	✓			Inspection log was complete
265.176 Containers holding ignitable or reactive waste must be located at least 15 meters from the facility's property line.	✓			Containers were stored well within the facility's property line.
265.177(a) Incompatible wastes must not be placed in the same container.	✓			Incompatible wastes were not mixed.
(b) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby must be separated or protected from the other materials.	✓			"
SUBPART J - TANKS				
265.192(b) Hazardous waste must not be placed in a tank if they could cause the tank or its liner to leak.	✓			
(c) Uncovered tanks must have a least two feet of freeboard unless other containment structures, a drainage control system, or other diversion structures with a capacity that equals or exceeds the volume of the top two feet of the tank.	✓			No uncovered ~~tanks~~ tanks.
(d) Tanks which have a continuous feed system must be equipped with a means to stop the inflow.	✓			

Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.193 Waste analysis must be conducted pursuant to 265.13, and 265.193(a).	✓			Waste analyses were available.
265.194 Tanks must be inspected in accordance with 265.194.	✓			An inspection log for tanks was complete.
265.197 At closure, all hazardous waste and hazardous waste residues must be removed from the tanks.			✓	Facility has not closed.
265.198 Ignitable or reactive waste should not be placed in a tank unless 265.198 is complied with.			✓	Ignitable or incompatible waste are not placed in the tanks.
265.199 Incompatible wastes must not be placed in the same tank unless 265.176 is complied with.			✓	
SUBPART K - SURFACE IMPOUNDMENTS				
265.222 Must maintain at least two feet of freeboard.		✓		Inspection logs indicate that during the wet periods of the year the impoundment did not have a 2' freeboard.
265.223 Earthen dikes must have protective cover.	✓			
265.225 Must conduct waste analyses and trial tests in accordance with 265.225.	✓			Waste analyses were available.
265.226(1) Must inspect the freeboard level at least once each operating day.	✓			Inspection log indicated a daily inspection.
(2) Must inspect the surface impoundment at least once a week to detect any leaks, deterioration, or failure.	✓			The log indicated a weekly inspection.
265.228 The surface impoundment must close in accordance with 265.228.			✓	The facility has not closed.

REQUIREMENT	Not in compliance - No Not applicable - NA Yes	No	N/A	COMMENTS
265.229 Ignitable or reactive waste must not be placed in a surface impoundment unless 265.229 is complied with.			✓	Ignitable or incompatible wastes are not placed in the impoundment.
265.230 Incompatible wastes must not be placed in the same surface impoundment unless 265.17(b) is complied with.			✓	"
SUBPART L - WASTE PILES				
265.251 A waste pile must be protected and managed to control wind dispersal.				
265.252 An owner or operator must conduct waste analyses unless the facility meets the exemptions of 265.252.				
265.253 Within one year after the effective date of the regulations, leachate or run-off from a pile must be controlled pursuant to 265.253.				
265.256 Ignitable or reactive waste must not be placed in a waste site unless 265.256 is complied with.				
265.257 The requirements of 265.257 for incompatible wastes must be complied with.				
SUBPART M - LAND TREATMENT				
265.272(a) Hazardous waste must not be placed at a land treatment facility unless it can be made less hazardous or non-hazardous.				
(b) Run-on must be diverted away from other active portions as of one year after the effective date of Part 265.				

Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.272 -- Continued				
(c) Run-off from active portions must be collected as of one year after the effective date of Part 265 . . .				
265.273 Waste analyses must be conducted pursuant to 265.273.				
265.276(a) An owner or operator must notify the State Director within 60 days after the effective date of Part 265 if food chain crops are grown on the land treatment facility.				
(b) Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless 265.276(b) is complied with.				
(c) Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless 265.276(c) is complied with.				
265.278 The owner or operator must have in writing and must implement an unsaturated zone monitoring plan pursuant to 265.278.				
265.279 The owner or operator must keep records of the application dates, application rates, quantities, and location of each hazardous waste placed in a facility.				
265.280 A land treatment facility must meet the closure and post-closure requirements of 265.280.				

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.281 Ignitable or reactive waste must not be placed in a land treatment facility unless 265.281 is complied with.				
265.282 Incompatible wastes must not be placed in the same land treatment area unless 265.17(b) is complied with.				
SUBPART N - LANDFILLS				
265.302(a) Run-on must be diverted away from the active portions within one year after the effective date of Part 265.				
(b) Run-off from active portions must be collected within one year after the effective date of Part 265.				
(d) Must control wind dispersal.				
265.309 The owner or operator must meet the surveying and recordkeeping requirements of 265.309.				
265.310 A landfill must comply with closure and post-closure requirements of 265.310.				
265.312 Ignitable or reactive waste must not be placed in a landfill unless 265.312 is complied with.				
265.313 Incompatible wastes must not be placed in a landfill unless 265.17(b) is complied with.				
265.314 Bulk or non-containerized liquid waste, waste containing free-liquids, or containers holding liquid waste should not be placed in a landfill unless the requirements of 265.314				

REQUIREMENT	Not applicable - NA			COMMENTS
	Yes	No	N/A	
265.315 (i) Empty containers must be reduced in volume as of one year after the effective date of Part 265.				
SUBPART O - INCINERATORS				
265.343 Must be at steady state conditions before adding hazardous waste.				
265.345 Waste analyses must be conducted pursuant to 265.345.				
265.347 Monitoring and inspections must be conducted as delineated in 265.347.				
265.351 At closure, the owner or operator must remove all hazardous waste and hazardous waste residues.				
SUBPART P - THERMAL TREATMENT				
265.373 Must be at steady state conditions before adding hazardous wastes.				
265.375 Waste analyses must be conducted pursuant to 265.375.				
265.377 Monitoring and inspections must be conducted as delineated in 265.377.				
265.301 At closure, the owner or operator must remove all hazardous waste residues.				
265.382 Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives				

Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
SUBPART Q - CHEMICAL, PHYSICAL, AND BIOLOGICAL TREATMENT				
265.401(a) Must comply with 265. 17(b)				
(b) Hazardous waste must not be placed in the treatment process or equipment if any failure of equipment or the process would occur.				
(c) A continuously-fed process must be equipped with a means to stop the inflow.				
265.402 Waste analyses and trial tests must be conducted pursuant to 265. 402.				
265.403 Inspections must be made pursuant to 265.403.				
265.404 At closure, all hazardous waste and hazardous waste residues must be removed.				
265.405 Ignitable or reactive waste must not be placed in a treatment process unless 265.405 is complied with.				
265.406 Incompatible wastes must not be placed in the same treatment process unless 265.17(b) is complied with.				
SUBPART R - UNDERGROUND INJECTION				
265.430(a) underground injection of hazardous waste is not subject to the closure and post-closure or financial requirements of Part 265. Underground injection is subject to the other requirements of Part 265.				

REQUIREMENT	Not in compliance - No Not applicable - NA Yes	No	N/A	COMMENTS
Other questions or standards.				
Are there any other generators transporting their waste to this hazardous waste management facility?				

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

4E-CB

OCT 19 1981

RECEIVED
OCT 22 1981
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. David Lee, Engineer
Mississippi Department of
Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

Dear David:

This is to follow-up on our October 6, 1981 discussion concerning Vertac Chemical Corporation in Vicksburg, Mississippi. The following additional Interim Status Standards violations were noted in my inspection report:

1. There was no written general waste analysis plan available for inspection (Part 265.13).

2. Unauthorized entry through the landfill may be possible and "Danger - Unauthorized Personnel Keep Out" signs were not posted in sufficient numbers to be seen from any approach to the active portion of the facility (Part 265.14).

3. There was no inspection schedule or inspection log for inspecting malfunctions, leaks, etc., available for inspection (Part 265.15).

4. The facility did not appear to be maintained in a manner so as to minimize the release of hazardous wastes (Part 265.31).

5. There was no contingency plan available for inspection (Part 265.54).

6. There was no operating record available for inspection (Part 265.73).

7. Several of the containers (drums) were open (Part 265.173).

It is my understanding that Vertac was to be reinspected on October 6, 1981, and that the violations cited in your August 10, 1981 letter to the company and those above listed violations, which we discussed, would be checked for compliance. I would appreciate copies of material obtained from Vertac during the inspection and a copy of the follow-up inspection report for our records.

If you have any questions, feel free to call me at (404) 881-4901.

Sincerely yours,

Andrew G. Kromis

Andrew G. Kromis
Environmental Engineer
FL/MS Compliance Section
Compliance Branch
Enforcement Division

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

MEMO

Ocotber 12, 1981

TO: Sam Mabry

FROM: David E. Lee DL

SUBJECT: Follow-up Inspection At Vertac Chemical

On October 6, 1981, Jim Hardage and I conducted a follow-up inspection for the purpose of determining RCRA compliance at Vertac. Mr. Karkkainen and Mr. Bob Maraman of Vertac represented the firm. Items of non-compliance mentioned in our letter of August 10, as well as additional non-compliance items referred to us by Andy Kromis of EPA, were reviewed. Below is a list of each item and its status.

No Training Records	Have record of Calgon course; will begin records of company sponsored training; format suggested to Mr. Maraman; No training conducted since last inspection
No Documental Arrangements With Emergency Officials	Plant layout, product and waste type, and emergency procedures manuals have been distributed to hospital, fire & police departments
No Waste Analysis Plan	Plan submitted 8/11/81, deemed inadequate. Mr. Maraman indicated he would revise plan to reflect sampling parameters, frequency, etc.
No Fence Or Signs Around Impoundment	We walked around most of facility and concluded that sufficient natural barrier exists in the form of creeks, cliffs, and/or vegetation. Signs will be placed on both ends of railroad track; the only accessible entrance that cannot be fenced.
No Inspection Schedule	Schedule submitted 8/11/81 adequate
No Operating Record	Records of inspections begun 8/17/81; Records of inspections on impoundment, hill tank, and drum storage area; Adequate.

No Contingency Plan	Nature of waste requires only minimal contingencies. All spills, if not contained, flow to impoundment. Small spills are absorbed with clay absorbent. Contingency plan on hand refers to production facility. Arrangements with emergency officials should be adequate to cover contingencies.
No Closure Plan Or Cost Estimate	Plan and estimate submitted 8/11/81. Both are inadequate, however, to determine a total closure cost, both will be revised in more detail by Mr. Maraman and Mr. Karkkainen.
Leaking Drums	The two areas containing many leaking and deteriorated drums had been cleaned up. Old drums had been disposed by BFI and material still on hand which was previously in bad drums had been recontainerized. Drums were spaced about three feet apart so that all drums were visible. There was evidence of one small leak which had been absorbed with a clay absorbent. This drum had been recontainerized. One additional drum was slightly wet on the outside around a corroded area, indicating a deteriorated condition. Officials indicated it would be re-drummed. Drummed waste appeared to be contained well enough to avoid any hazards, provided inspections are maintained. Remainder of drums are scheduled to be removed in one to two months, according to Mr. Karkkainen.

A new item of non-compliance was found during this inspection. Of a total of fourteen or fifteen manifested shipments made off-site since January, only three or four manifests had been returned. There were eleven outstanding manifests, all of which were past the thirty five day turnaround time. Below is a list of the manifests by destination and date of shipment.

Spent Carbon Calgon Texas	Drummed Waste & Empty Drums BFI Livingston, LA
1/3	8/13
1/21	8/17
2/23	8/26
2/27	
3/12	
5/26	
6/30	
8/5	

Mr. Maraman indicated he would send an exception report covering all manifests and would begin trying to locate the original copies.

The revised paperwork items will be sent to this office when completed. A follow-up inspection will be scheduled in the near future to review the items in question.

cc: Mr. Andy Kromis, EPA, Region IV

SOLID WASTE MANAGEMENT BRANCH ACTIVITIES FORM

FACILITY NAME: Vertac

FACILITY ADDRESS:

FACILITY LOCATION: Vicksburg

FACILITY CONTACT: PHONE NO:

Chuck Estes and I accompanied EPA sampling team. The purpose of the trip was to collect sediment and water samples on and around the inactive landfill, which is adjacent to their "interim status" surface impoundment. We also looked at the ~~new~~ recently installed monitoring wells. Dick Karkeinen briefed us concerning preliminary data, such as location and depth of monitoring wells. He is to forward more detailed monitoring information to this office as information is developed.

Jim Hardage
Signature of Inspector

FACILITY ID NUMBER

DATE: 10 28 81

INSPECTOR (Single letter code)

TYPE ACTIVITY (Enter code(s)): MO

CI - compliance inspection
FO - follow-up inspection
CO - complaint investigation
IS - interim status inspection
SI - site investigation
GB - geological boring
TO - training operator
MO - monitoring
TA - technical assistance
SR - special request
OR - other (specify)

TYPE FACILITY (Enter code(s)): GN TR SL LO

GN - generator
TR - treater
TP - transporter
SS - storage (short-term)
SL - storage (long-term)
LF - landfill
SF - sanitary landfill
OD - open dump
LM - landfarm
LO - lagoon (impoundment)
UI - UIC
IN - incinerator
PF - processing facility
TS - transfer station
OR - other (specify)

VIOLATIONS

Section No.	Subsection

Manifests
monitoring wells

10/28/51 Vertac, Vicksburg (Washington St. Exit)

Sampling - Carol Haugh + Bo Bruner, EPA Lab, Athens Ga.
Chuck Estes + Jim Hardage, DSWM

Facility contacts - Bob Maraman
Dick Karkeinan
Fred Ahlers (Plant Manager)

North Plant produces
N_2O_4
Cl
KNO_3

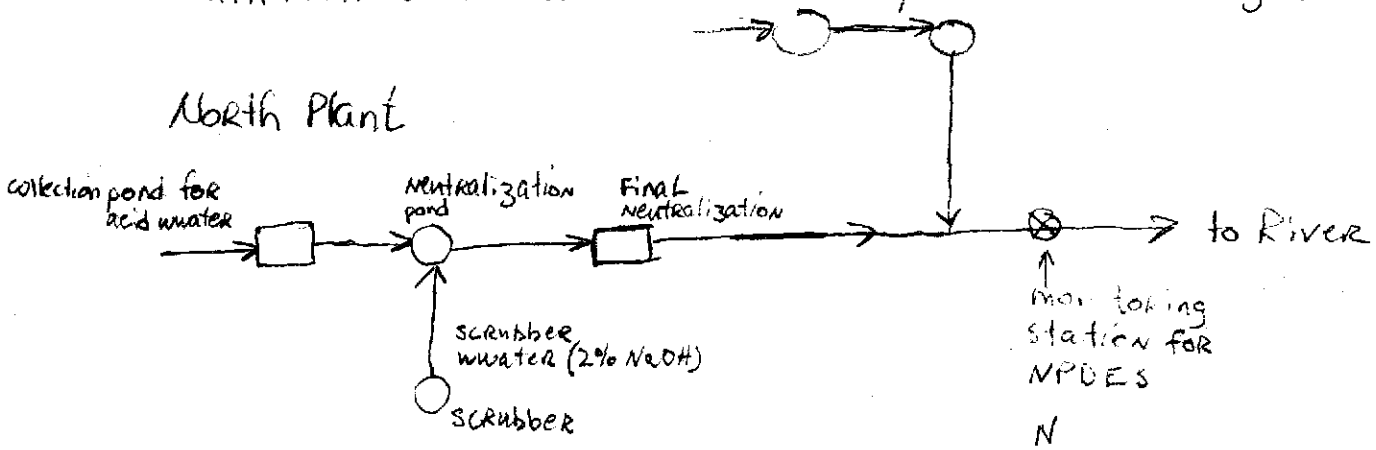
Gulf owned North Plant until 1972
Produced HNO_3, NH_4NO_3, urea, NH_3

South Plant produces
DNBP
Toxaphene
HNO_3

In the past, atrazine + methyl parathion were produced.
(PCl_3 involved in parathion production)

South Plant water flows to collection pond then to Calgon Unit.

North Plant



NPDES PARAMETERS (South Plant): BOD, COD, pH, Solids

Total N (North Plant)
pH

Calgon - Judy Jackson (713) 682-1301 Houston

Warren

FORM NO. MHW-101-A

☒

HAZARDOUS WASTE INSPECTION FORM
(Complete Legibly)

INSPECTION BY D. Lee
DATE OF INSPECTION 12-16 19 80 TIME 9:30 a.m./p.m.

PART I - INSTALLATION DATA

1-INSTALLATION E.P.A. I.D. NO. M/S/D/9/9/0/7/1/1/4/0/8/1/1

2-NAME OF INSTALLATION Vertac, Inc.

3-IF SUBSIDIARY, NAME OF PARENT CO.

4-INSTALLATION MAILING ADDRESS PO Box 3

Vicksburg (City) State 39180 (Zip Code) 636-1231 (Phone Number)

5-LOCATION OF INSTALLATION Rifle Range Road (Street)

City State Zip Code Phone Number

6-INSTALLATION CONTACT PERSON Richard Randolph

TITLE

Phone #/Extention

7-SIC CODE FOR PRINCIPLE PRODUCTS (4-DIGIT NO.)

a. 2819 KNO3
b. 2812 Chlorine
c. 2819 NO4
d. 2873 HNO3
e. 2879 Dinoseb, Toxaphene
f. methyl parathion

8-IN-HOUSE WASTE TREATMENT CAPABILITIES

On-Site Waste Treatment ✓ Yes ___ No
POTW Discharge ___ Yes ✓ No
NPDES No. MS0027995 To Be Built By __/__/__

9-AIR POLLUTION CONTROL DEVICES ___ Yes ___ No

Permit No. Type(s)

To Be Built ___ Yes ___ No By __/__/__ Application submitted

10-HAZARDOUS WASTE PRODUCED OR EXPECTED TO BE PRODUCED (Include wastes reclaimed, recycled, treated, stored, or disposed of)

WASTE DESCRIPTION	EPA CODE NO.	AMOUNT OF WASTE GENERATED/MONTH
a. Dinoseb	P020	127,000 Tons
b. 4,6, Dinitro-o-cresol	P047 no longer produced (drummed)	~1.5 MGD
c. methyl parathion	P071 down - no longer produced (drummed)	
d. chloroform	U044 drummed	
e. toxaphene	U224	
f. xylene	U239 drummed	
g.		
h.		

11-IS ANY PORTION OF THE WASTE TREATED BEFORE DISPOSAL? ✓ Yes ____ No

12-IS ANY PORTION OF THE WASTE SALVAGED OR RECYCLED? ____ Yes ✓ No

Waste	% Recycled

13-IS ANY PORTION OF THE WASTE STORED? ✓ Yes ____ No

14-ATTACH FLOW DIAGRAMS OF CHEMICAL PROCESSES INCLUDING WASTE FLOW OUTPUTS (IF AVAILABLE).

15-IS THERE A CURRENTLY USED OR ABANDONED LANDFILL, DUMP, OR LAGOON ON THE PLANT PROPERTY? ✓ Yes ____ No

16-IF YES, WHERE IS IT LOCATED? Across tracks from process area.

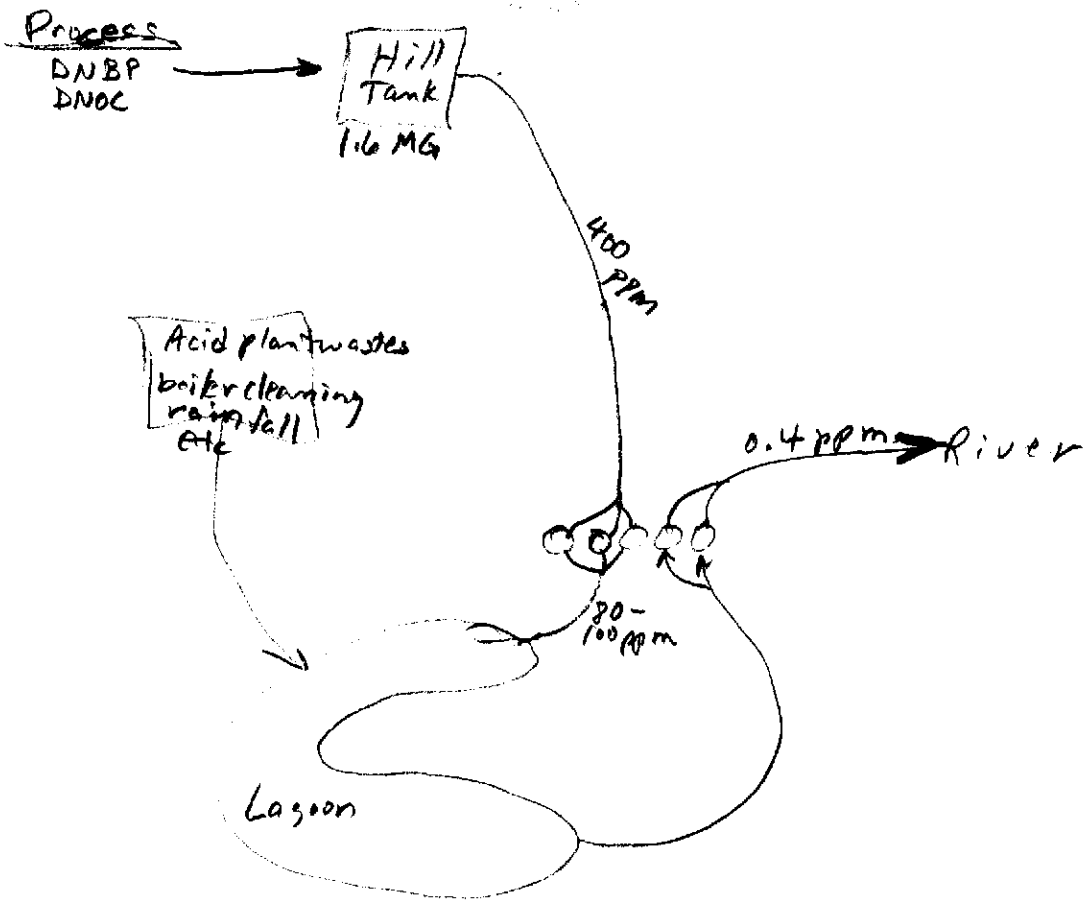
17-INDUSTRIAL WASTES DISPOSED OF AT THE SITE:*

WASTE	VOLUME/MONTH	TYPE OF DISPOSAL
None		

*Attach additional sheet if necessary.

remaining wastes from old production to be landfilled (200-300 drums)
Filters (spent) (DNOC)
rags (DNBP)
scraps DNOC
Will go to BFI, Livingston, La or Waste Mgt of Alabama
Will not be producing solid DNOC in future.

See reverse for treatment schematic.


Process
DNBP
DNOC
Hill Tank
1.6 MG
400 PPM
Acid plant wastes
boiler cleaning
rainfall
etc
0.4 ppm
River
80-100 ppm
Lagoon

PART II - WASTE DATA

1-GENERATOR Vertac SPECIFIC WASTE

2-DESCRIBE PROCESS PRODUCING WASTE Pesticide wastes come from mfg. & drumming
xylene & chloroform results from blending

3-MONTHLY WASTE PRODUCTION

4-WASTE COMPOSITION:

SPECIFIC GRAVITY

Ph RANGE MAX. MIN.

COMPONENT	AVERAGE CONCENTRATION WT % or ppm
a.	
b.	
c.	
d.	

ON-SITE WASTE: ✓ LAGOON ___ LANDFILL ✓ STORAGE ✓ TREATMENT ___ DISPOSAL
___ RECYCLING ___ INCINERATION ___ DEEP WELL INJECTION ___ SEWER
___ LAND SPREADING

WASTE IS: ✓ LIQUID ✓ SOLID ___ SLUDGE
% LIQUID ___ % SOLID ___

5-ON-SITE STORAGE (CHECK ONE).

a. Method used: ✓ Drums ✓ Tank ✓ Lagoon ___ Other
b. Typical length of time waste stored: ___ day ___ week ___ month / year
c. Typical volume of waste stored: ___ monthly

6-ANALYSIS OF COMPOSITION IS: ___ theoretical ✓ laboratory ___ estimate (if available, attach copy of analysis)

7-HAZARDOUS PROPERTIES OF WASTE: ___ ignitable ___ corrosive ✓ toxic ___ reactive
___ other (explain)

8-PROJECTED ___ INCREASE ✓ DECREASE IN VOLUME, USING 1974 AS BASE.

9.WASTE IS SENT OFF-SITE TO BE:

___ Incinerated ___ Treated ___ Landspread/Filled ___ Stored ___ UIC Calgon - act. carbon regeneration

10-HAZARDOUS WASTE TRANSPORTER

NAME Calgon Corp. EPA I.D. NO. PIATT414010111010144 91
ADDRESS
Street City State Zip Code

11-TYPE OF TRANSPORT VEHICLE(S) Tank truck PHONE NO.

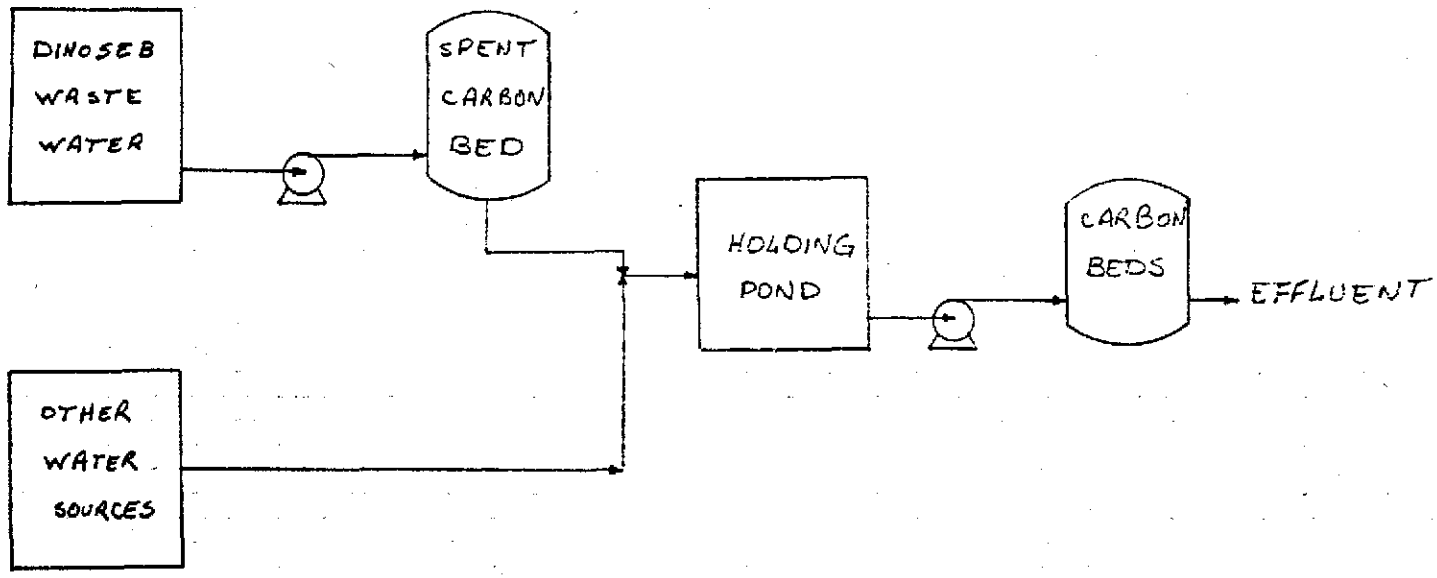
12-WASTE WILL BE TRANSPORTED IN Drums (old waste mainly)

13-HAZARDOUS WASTE WILL BE DELIVERED TO: Calgon Corp.
9640 Bayport Pasadena, TX 77507
Address Phone No.

14-WASTE WILL BE: ___ STORED ? ✓ TREATED ___ DISPOSED ? ✓ INCINERATED ___ UIC

15-DISPOSER E.P.A. I.D. NO. TIDX101816441716181570

16-COMMENTS:


DINOSEB WASTE WATER
SPENT CARBON BED
OTHER WATER SOURCES
HOLDING POND
CARBON BEDS
EFFLUENT

VKW - S - 7

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION: 4

SITE NUMBER (to be assigned by Hq):

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Tack Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: VERTAC Chemical Company

B. STREET (or other identifier): Rifle Range Road

C. CITY: Vicksburg

D. STATE: Miss.

E. ZIP CODE: —

F. COUNTY NAME: Warren

G. SITE OPERATOR INFORMATION

1. NAME: Same

2. TELEPHONE NUMBER: (601) 636-1231

3. STREET:

4. CITY:

5. STATE:

6. ZIP CODE:

H. REALTY OWNER INFORMATION (if different from operator of site)

1. NAME: Same

2. TELEPHONE NUMBER:

3. CITY:

4. STATE:

5. ZIP CODE:

I. SITE DESCRIPTION: Large chemical manufacturing facility. Plant area securely fenced and gated. Waste activities include drum storage, sludge ponds, lagoons and landfill.

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION (complete this section last)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.):

B. APPARENT SERIOUSNESS OF PROBLEM

☒ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME: Jeff Hundley (E&E, Inc. Region IV FIT)

2. TELEPHONE NUMBER: (404) 288-7711

3. DATE (mo., day, & yr.): 6/2/81

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: Jeff Hundley

2. TITLE: Civil Engineer

3. ORGANIZATION: E&E, Inc. - Region IV FIT

4. TELEPHONE NO. (area code & no.): (404) 288-7711

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Gene Oliver	E&E, Inc. - Region IV FIT	(404) 288-7711

C. SITE REPRESENTATIVES INTERVIEWED (corporate officials, workers, residents)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
NONE BY	THIS INVESTIGATION	TEAM

Continued From Front

II. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
VERTAC	same	same	Pesticides and other organic chemicals. (Exact processes are confidential)

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
4-14-81	4:15 PM	☐ 1. PERMISSION ☐ 2. WARRANT Access not achieved.

J. WEATHER (describe)

Clear & Cool

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE	NONE		
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS
NONE		

VKW-5-7

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: NONE
   - [ ] a. GROUND
   - [ ] b. AERIAL
2. PHOTOS IN CUSTODY OF: ____

D. SITE MAPPED?

[X] YES. SPECIFY LOCATION OF MAPS: EPA Region IV has ongoing, detailed file on VERTAC activities.

E. COORDINATES

1. LATITUDE (deg.-min.-sec.): 32° 17' 44" N
2. LONGITUDE (deg.-min.-sec.): -90° 54' 28" W

V. SITE INFORMATION

A. SITE STATUS

- [X] 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)
- [ ] 2. INACTIVE (Those sites which no longer receive wastes.)
- [ ] 3. OTHER (specify): ____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

- [ ] 1. NO
- [X] 2. YES (specify generator's four-digit SIC Code): ____

C. AREA OF SITE (in acres): 30 acres (±)

D. ARE THERE BUILDINGS ON THE SITE?

- [ ] 1. NO
- [X] 2. YES (specify): offices, warehouses, above ground tanks, process buildings, etc.

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP	X	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE	X	3. DRUMS		3. VOLUME REDUCTION	X	3. OPEN DUMP
	4. TRUCK	X	4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY	X	4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this form.

- [ ] 1. STORAGE
- [ ] 2. INCINERATION
- [ ] 3. LANDFILL
- [ ] 4. SURFACE IMPOUNDMENT
- [ ] 5. DEEP WELL
- [ ] 6. CHEM/BIO/PHYS TREATMENT
- [ ] 7. LANDFARM
- [ ] 8. OPEN DUMP
- [ ] 9. TRANSPORTER
- [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

- [X] 1. LIQUID
- [X] 2. SOLID
- [X] 3. SLUDGE
- [X] 4. GAS

B. WASTE CHARACTERISTICS Pesticides and other organic chemicals.

- [ ] 1. CORROSIVE
- [ ] 2. IGNITABLE
- [ ] 3. RADIOACTIVE
- [ ] 4. HIGHLY VOLATILE
- [ ] 5. TOXIC
- [ ] 6. REACTIVE
- [ ] 7. INERT
- [ ] 8. FLAMMABLE
- [ ] 9. OTHER (specify): Exact waste types & specifics are confidential

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

yes

Continued From Front

VII. WASTE RELATED INFORMATION *(continued)*

2. Estimate the amount *(specify unit of measure)* of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	X' (1) FLYASH	'X' (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER *(specify)*:	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER *(specify)*:	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER *(specify)*:			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER *(specify)*:
			(6) CYANIDE	(6) OTHER *(specify)*:	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER *(specify)*:		

CONFIDENTIAL INFORMATION

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE *(place in descending order of hazard)*

1. SUBSTANCE	2. FORM *(mark 'X')*			3. TOXICITY *(mark 'X')*				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

☐ A. HUMAN HEALTH HAZARDS

VKW-S-7

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

[X] B. NON-WORKER INJURY/EXPOSURE

Reports of at least 3 significant chlorine gas releases and suspected NO_x emission violations.

[X] C. WORKER INJURY/EXPOSURE

handling, storage and disposal of various hazardous materials. Plus reasons outlined in "B" above

[X] D. CONTAMINATION OF WATER SUPPLY

Possible from buried waste, lagoons, runoff, etc.

[ ] E. CONTAMINATION OF FOOD CHAIN

[X] F. CONTAMINATION OF GROUND WATER

Possible from buried waste & lagoons.

[X] G. CONTAMINATION OF SURFACE WATER

Possible from runoff carrying waste

Continue On Reverse

Continued From Front

VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☒ J. CONTAMINATION OF AIR

Same as part "B".

☒ K. NOTICEABLE ODORS

Same as part "B".

☒ L. CONTAMINATION OF SOIL

Buried wastes, spillages.

☐ M. PROPERTY DAMAGE

Continue On Page 7

VKW-S-7

Continued From Page 6

VIII. HAZARD DESCRIPTION (continued)

[X] N. FIRE OR EXPLOSION

Storage of flammable & volatile matls.

[X] O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

High probability

[ ] P. SEWER, STORM DRAIN PROBLEMS

[ ] Q. EROSION PROBLEMS

[ ] R. INADEQUATE SECURITY

[ ] S. INCOMPATIBLE WASTES

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

Note: Vertac has requested confidential treatment of all information relating to its processes and wastes generated. EPA-Region IV and the Miss. Board of Health have current, confidential files on VERTAC. VERTAC is essentially under an ongoing investigation by Federal and State agencies for their waste related activities.

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS				—
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS *(parks, schools, etc.)*				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
D. POTENTIAL YIELD OF AQUIFER	E. DISTANCE TO DRINKING WATER SUPPLY *(specify unit of measure)*	F. DIRECTION TO DRINKING WATER SUPPLY

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS ☐ 2. COMMUNITY *(specify town)*: > 15 CONNECTIONS _____

☐ 3. SURFACE WATER ☐ 4. WELL

Continue On Page 9

VKW-S-7

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')

I. RECEIVING WATER

1. NAME Miss. River

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND				
	2. CLAY				
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.

J. OTHER GEOLOGICAL DATA

Continue On Reverse

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X')		
					1. YES	2. NO	3. UNKNOWN
NPDES						X	

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☐ NONE ☒ YES (summarize in this space)

- VERTAC has been fined in the past for NPDES permit violations.
- VERTAC is under current investigation by the EPA/ and the State of Mississippi for their hazardous waste handling practices.

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition *(Section II)* information on the first page of this form.

See a full file on them.

VKW-S-7

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: 4

SITE NUMBER (to be assigned by Hq):

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Vertac Chemical Corp.

B. STREET (or other identifier): Rifle Range Road

C. CITY: Vicksburg

D. STATE: Miss.

E. ZIP CODE: —

F. COUNTY NAME: Warren

G. OWNER/OPERATOR (If known)

1. NAME: —

2. TELEPHONE NUMBER: (601) 636-1231

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION: Large Chemical plant, securely fenced and gated. Entry into area by permission only. [redacted]

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.): EPA's EPIC Study: Description: "Open trash heap in woods, originates from adjacent industrial complex."

K. DATE IDENTIFIED (mo., day, & yr.): March, 81

L. PRINCIPAL STATE CONTACT

1. NAME: David Lee - Chief of Hazardous Waste, Mississippi Board of Health - Jackson, Ms.

2. TELEPHONE NUMBER: 601-982-6317

II. PRELIMINARY ASSESSMENT (Complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☒ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (no hazard)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☒ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: Summer, 1981
b. WILL BE PERFORMED BY: E&E Inc/EPA

☐ 4. SITE INSPECTION NEEDED (low priority)

* Vertac is already under investigation by EPA so we did not inspect.

C. PREPARER INFORMATION

1. NAME: Jeff Hundley / Gene Oliver

E&E, Inc. Decatur, Ga.

2. TELEPHONE NUMBER: (404) 288-7711

3. DATE (mo., day, & yr.): 4/14/81

III. SITE INFORMATION

A. SITE STATUS

☒ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☐ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres): Several Acres, Maybe 50

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.-min.-sec.): 32° 17' 44" N

2. LONGITUDE (deg.-min.-sec.): -90° 54' 28" W

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (specify): offices, warehouses, manufacturing, storage tanks

T2070-2 (10-79)

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL	X	1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

EPA is already investigating the Vertac facility and a sampling mission is being planned this summer. EPA has a very detailed file on them. We tried to see the trash EPIC spotted, but we couldn't see it from public access and we did not want to try to gain access into the plant since Vertac is already under investigati

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[X] 1. UNKNOWN [ ] 2. LIQUID [ ] 3. SOLID [ ] 4. SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[X] 1. UNKNOWN [ ] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4. RADIOACTIVE [ ] 5. HIGHLY VOLATILE
[ ] 6. TOXIC [ ] 7. REACTIVE [ ] 8. INERT [ ] 9. FLAMMABLE

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continue On Page 3

Continued From Page 2

VKW-S-7

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

EPA has a full file with details.

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

None

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify): UNKNOWN				

Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT (specify): _____
- [ ] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER (specify): _____

B. IN COMPLIANCE?

- [ ] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

- [ ] A. NONE
- [x] B. YES (summarize below)

Presently being investigated by EPA.

IX. INSPECTION ACTIVITY (past or on-going)

- [ ] A. NONE
- [ ] B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

- [ ] A. NONE
- [ ] B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

SITE INVESTIGATION REPORT

Mississippi EPIC Site Investigations
Ecology & Environment, Inc.
TDD No. F4-8103-1

Site I.D. Code: VKW-S-7 Priority No.: A-1

EPIC Description: Open trash heap in woods, originates from adjacent industrial complex.

Facility Name and Location: Vertac Chemical Corporation
Rifle Range Road
Vicksburg, Mississippi

Site Investigators: Jeff Hundley and Gene Oliver

Site Inspection Date and Time: April 14, 1981, 4:15 PM (Perimeter survey only, no on-site investigation conducted.)

Site Description and Observations: The Vertac Chemical Corporation site was not actually entered and inspected during this survey. EPIC originally identified the entire Vertac facility as VKW-L-10, but the EPA eliminated that site from the investigation. VKW-S-7 was not eliminated by the EPA even though it was adjacent to VKW-L-10 and obviously part of the Vertac facility. The following description and observations are based upon existing file information. Due to the sensitive nature of the current EPA and State investigations at this facility, the field investigation team did not feel that it would be prudent to attempt to gain access into the Vertac plant in order to investigate an "open trash heap in woods . . ." behind the Vertac plant.

Vertac Chemical Company, formerly Vicksburg Chemical Company, was located on Rifle Range Road, south of Vicksburg, Mississippi, approximately one-half mile from the Mississippi River. The site occupied thirty acres. On the site there were drums stored in the open, four waste lagoons, sludge ponds and at least one landfill. Two of the four lagoons were said to have been drained. No monitoring wells were reported in place or were known to be planned for the site.

Vertac Chemical Company was the source of at least three reported chlorine gas releases and was suspected of violating visible NOx emission standards. Vicksburg Chemical Company, previous owner of the site, was fined by the Bureau of Pollution Control for NPDES permit violations. Site inspections by EPA have not revealed evidence of leachate, therefore it appears the waste is contained.

Vertac manufactured pesticides and other organic chemicals. Vertac had requested confidential treatment of all information relating to its processes and wastes generated. The EPA in Region IV and the Mississippi Division of Solid Waste Management have current files relating to Vertac's activities, and Vertac is under an ongoing investigation.

Neither the State nor EPA has yet sampled the site or the surrounding environment. The State of Mississippi has given existing TSD facilities at the site a high priority in the administration of their hazardous waste program.

Preliminary Sampling and Coordinating Recommendations: Complete, detailed sampling and groundwater surveys are recommended for this site as well as a complete RCRA interim status inspection.

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
IV	MS000000340

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Vertac Chemical	P.O. Box 3	
C. CITY	**D. STATE**	**E. ZIP CODE**
Vicksburg	Miss.	

II. TENTATIVE DISPOSITION

Indicate the recommended action*(s)* and agency*(ies)* that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*	X				X
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION

Groundwater monitoring wells needed to determine extent of problem (if problem exists).

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Ron W. Joyner	257-2234	10/16/80

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION (mo, day, & yr)	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1)				
(2)				
(3)				
b. TYPE OF MONITORING				
(1)				
(2)				
c. TYPE OF SAMPLING				
(1)				
(2)				

Continued From Front

III. INVESTIGATIVE ACTIVITY NEEDED and PART B - PROPOSED INVESTIGATIVE ACTIVITY *(Continued)*

d. TYPE OF LAB ANALYSIS				
(1)				
(2)				
e. OTHER *(specify)*				
(1)				
(2)				

C. ELABORATE ON ANY OF THE INFORMATION PROVIDED IN PART B *(on front & above)* AS NEEDED TO IDENTIFY ADDITIONAL INVESTIGATIVE WORK.

D. ESTIMATED MANHOURS BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES	1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES
a. EPA		b. STATE	
c. EPA CONTRACTOR		d. OTHER *(specify)*	

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY STRATEGY *(On Site & Off-Site)*: List all emergency actions needed to bring site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the space below.

1. ACTION	2. EST. START DATE *(mo,day,&yr)*	3. EST. END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State, Private Party)*	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site & Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. EST. START DATE *(mo,day,&yr)*	3. EST. END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State Private Party)*	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
GW. monitoring				$	
				$	
				$	
				$	
				$	
				$	

C. ESTIMATED MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES	1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES
a. EPA			b. STATE		
c. PRIVATE PARTIES			d. OTHER *(specify)*		

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by Hq)
IV	MS000000340

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition *(Section II)*. File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Tack Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET (or other identifier)		
Vertac Chemical	P.O. Box 3		
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
Vicksburg	Miss.	39180	Warren

G. SITE OPERATOR INFORMATION

1. NAME	2. TELEPHONE NUMBER		
same as listed above			
3. STREET	**4. CITY**	**5. STATE**	**6. ZIP CODE**

H. REALTY OWNER INFORMATION *(if different from operator of site)*

1. NAME	2. TELEPHONE NUMBER	
N/A		
3. CITY	**4. STATE**	**5. ZIP CODE**

I. SITE DESCRIPTION (unlined)
four holding ponds which held di-nitrophenol, two

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION *(complete this section last)*

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.)	B. APPARENT SERIOUSNESS OF PROBLEM
	☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
Ron W. Joyner	404/881-2234	8/12/80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME	2. TITLE	
Ron W. Joyner	Hydrogeologist	
3. ORGANIZATION		**4. TELEPHONE NO. (area code & no.)**
U.S. EPA Uncontrolled Sites Section		404/881-2234

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Jim Hardage	Miss. Div. of Solid Waste Mgm.	601/982-6317
David Lee	" " " " " "	" " "

C. SITE REPRESENTATIVES INTERVIEWED *(corporate officials, workers, residents)*

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
Stan Wallace	Dir. of Engineering	Vicksburg, Mississippi

Continued From Front

INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION *(sources of waste)*

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
Vertac Chemical	601/636-1231	P.O. Box 3, Vicksburg, Miss.	various acids insecticides

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: *(credentials must be shown in all cases)*
8/1/80	2:20 pm	☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER *(describe)*
clear - p.c. ambient temp ≈ 95°F

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER *(specify)*			

B. FIELD MEASUREMENTS TAKEN *(e.g., radioactivity, explosivity, PH, etc.)*

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

 Continue On Page 3

RECEIVED

AUG 20 '80

DIV. SOLID WASTE

BY

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS

☐ a. GROUND ☐ b. AERIAL

2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

☐ YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

V. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☐ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code): 2819, 2873

C. AREA OF SITE (in acres)

total area ≈30 acres

D. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (specify):

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

☐ 1. STORAGE ☐ 2. INCINERATION ☐ 3. LANDFILL ☐ 4. SURFACE IMPOUNDMENT ☐ 5. DEEP WELL

☐ 6. CHEM/BIO/PHYS TREATMENT ☐ 7. LANDFARM ☐ 8. OPEN DUMP ☐ 9. TRANSPORTER ☐ 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

☒ 1. LIQUID ☒ 2. SOLID ☒ 3. SLUDGE ☐ 4. GAS

B. WASTE CHARACTERISTICS

☐ 1. CORROSIVE ☐ 2. IGNITABLE ☐ 3. RADIOACTIVE ☐ 4. HIGHLY VOLATILE

☒ 5. TOXIC ☐ 6. REACTIVE ☒ 7. INERT ☒ 8. FLAMMABLE

☐ 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

 Continue On Reverse

Continued From Front

VII. WASTE RELATED INFORMATION *(contin)*

2. Estimate the amount *(specify unit of measure)* of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT 3000-4000	AMOUNT	AMOUNT	AMOUNT ≈200,000	AMOUNT 325-330	AMOUNT
UNIT OF MEASURE cubic yds	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE gal.	UNIT OF MEASURE drums	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER(specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER(specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
X (5) OTHER(specify): dredge material with trace contaminants (DNBP + atrazine)			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER(specify):
			(6) CYANIDE	(6) OTHER(specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER(specify):		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE *(place in descending order of hazard)*

1. SUBSTANCE	2. FORM (mark 'X')			3. TOXICITY (mark 'X')				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			
di-nitrophenol (DNBP)										

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

☐ A. HUMAN HEALTH HAZARDS

Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ G. CONTAMINATION OF SURFACE WATER

Continue On Reverse

Continued From Front

VIII. HAZARD DESCRIPTION *(continued)*

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☐ K. NOTICEABLE ODORS

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

Continue On Page 7

Continued From Page 6

VIII. HAZARD DESCRIPTION *(continued)*

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS				
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS *(parks, schools, etc.)*				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
D. POTENTIAL YIELD OF AQUIFER	E. DISTANCE TO DRINKING WATER SUPPLY *(specify unit of measure)*	F. DIRECTION TO DRINKING WATER SUPPLY

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS* ☐ 2. COMMUNITY *(specify town)*: > 15 CONNECTIONS _____

☐ 3. SURFACE WATER ☐ 4. WELL

Continue On Page 9

RECEIVED
AUG 20 '80
DIV SUBM & VC
BY

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')

I. RECEIVING WATER

1. NAME: Miss. River

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☒ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND				
	2. CLAY				
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☒ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☒ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☒ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE: 5-10%

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.

J. OTHER GEOLOGICAL DATA

 Continue On Reverse

RECEIVED
AUG 20 '80
DIV SWM PVC

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X')		
					1. YES	2. NO	3. UNKNOWN

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☐ NONE ☒ YES (summarize in this space)

Fined by Bureau of Pollution Control for permit violation.

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (Section II) information on the first page of this form.

RECEIVED
AUG 20 '80
DIV SIMMONS

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT
4 lagoons, two of which drained.

2. STABILITY/CONDITION OF EMBANKMENTS
good

3. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc.)*
☐ YES ☑ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE
☐ YES ☑ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT
☑ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT
☐ YES ☐ NO

7. IMPOUNDMENT HAS LINER SYSTEM
☐ YES ☑ NO

7a. INTEGRITY OF LINER SYSTEM CHECKED
☐ YES ☐ NO

7b. FINDINGS

8. SOIL STRUCTURE AND SUBSTRUCTURE

9. MONITORING WELLS
☐ YES ☑ NO

10. LENGTH, WIDTH, AND DEPTH
LENGTH WIDTH DEPTH

11. CALCULATED VOLUMETRIC CAPACITY

12. PERCENT OF CAPACITY REMAINING

13. ESTIMATE FREEBOARD
6' – 8'

14. SOLIDS DEPOSITION
☐ YES ☐ NO

15. DREDGING DISPOSAL METHOD

16. OTHER EQUIPMENT

CONFIDENTIAL

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION: IV

SITE NUMBER (to be assigned by Hq):

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (*Section II*). File this form in its entirety in the regional Hazardous Waste Log File. *Be sure to include all appropriate Supplemental Reports in the file.* Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Vertac, Inc. – Vicksburg Plant

B. STREET (or other identifier):

C. CITY: Vicksburg

D. STATE: MS

E. ZIP CODE:

F. COUNTY NAME:

G. SITE OPERATOR INFORMATION

1. NAME:

2. TELEPHONE NUMBER:

3. STREET:

4. CITY:

5. STATE:

6. ZIP CODE:

H. REALTY OWNER INFORMATION (*if different from operator of site*)

1. NAME:

2. TELEPHONE NUMBER:

3. CITY:

4. STATE:

5. ZIP CODE:

I. SITE DESCRIPTION: Landfill – sludge pond – waste pond containing drums (landfill) liquid & cyanuric acid organic chemicals

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE

II. TENTATIVE DISPOSITION (*complete this section last*)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (*mo., day, & yr.*):

B. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME: R. Shane Hitchcock

2. TELEPHONE NUMBER: 404/881-2234

3. DATE (*mo., day, & yr.*): 2/18/80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: Fred Wolf

2. TITLE: Env. Sci Engineer

3. ORGANIZATION: EPA – AHMP

4. TELEPHONE NO. (*area code & no.*): 404/881-2234

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Fred Wolf	EPA	404/881-2234

C. SITE REPRESENTATIVES INTERVIEWED (*corporate officials, workers, residents*)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS

Continued From Front

INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
Vertul Inc		Empty DNBP drums	
		~~Kerosene Debris methyl Parathion~~	Gas
		PCl_3, $PSCl_3$, $PS(CH_3)_2Cl$	DMU
		Cyanuric Acid, SNPL mix	MIPA
		~~Bromine bottles~~	

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
7/26/79		☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

Continue On Page 3

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS

☐ a. GROUND ☐ b. AERIAL

2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

☐ YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

V. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☐ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres)

~ 30 acres

D. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (specify):

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

☐ 1. STORAGE ☐ 2. INCINERATION ☐ 3. LANDFILL ☐ 4. SURFACE IMPOUNDMENT ☐ 5. DEEP WELL

☐ 6. CHEM/BIO/PHYS TREATMENT ☐ 7. LANDFARM ☐ 8. OPEN DUMP ☐ 9. TRANSPORTER ☐ 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. LIQUID ☒ 2. SOLID ☒ 3. SLUDGE ☐ 4. GAS

B. WASTE CHARACTERISTICS

☐ 1. CORROSIVE ☐ 2. IGNITABLE ☐ 3. RADIOACTIVE ☐ 4. HIGHLY VOLATILE

☒ 5. TOXIC ☐ 6. REACTIVE ☒ 7. INERT ☒ 8. FLAMMABLE

☐ 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

 Continue On Reverse

Continued From Page 4

VIII. HAZARD DESCRIPTION *(continued)*

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☒ F. CONTAMINATION OF GROUND WATER

Possible - water soluble chemicals

☐ G. CONTAMINATION OF SURFACE WATER

Continue On Reverse

Continued From Page 6

VIII. HAZARD DESCRIPTION *(continued)*

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☒ Q. EROSION PROBLEMS

High potential

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS				
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS *(parks, schools, etc.)*				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
D. POTENTIAL YIELD OF AQUIFER	E. DISTANCE TO DRINKING WATER SUPPLY *(specify unit of measure)* >1000 ft	F. DIRECTION TO DRINKING WATER SUPPLY SW

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS* ☐ 2. COMMUNITY *(specify town)*: > 15 CONNECTIONS _____

☒ 3. SURFACE WATER ☐ 4. WELL

 Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA *(continued)*

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH *(specify unit)*	3. LOCATION *(proximity to population/buildings)*	4. NON-COMMUNITY *(mark 'X')*	5. COMMUNITY *(mark 'X')*

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER *(specify)*:

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK *(specify below)*	'X'	C. OTHER *(specify below)*
	1. SAND				
	2. CLAY				
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH *(100,000 to 1000 cm/sec.)* ☐ C. HIGH *(1000 to 10 cm/sec.)*

☐ D. MODERATE *(10 to .1 cm/sec.)* ☐ E. LOW *(.1 to .001 cm/sec.)* ☐ F. VERY LOW *(.001 to .00001 cm/sec.)*

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE

20 %

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.

J. OTHER GEOLOGICAL DATA

Continue On Reverse

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

December 22, 1983

CERTIFIED MAIL

RECEIVED
DEC 27 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles Estes, P.E.
Hazardous Waste Section
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

RE: RCRA Part B for MSD990714081
Additional and/or Clarified Information

Dear Mr. Estes:

Attached are three copies of the information required by your review of our application as specified in your letter of November 1, 1983.

We believe we have been responsive to all the items, nevertheless, many items are open to interpretation. After you and others at the Bureau of Pollution Control have had an opportunity to review this, Bob Maraman and I would be glad to meet with you and review any detail

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

cc: R. J. Maraman

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

November 21, 1983

RECEIVED
NOV 22 RECD
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles H. Estes, III., P.E.
Mississippi Department of Natural Resources
Bureau of Pollution Control
Division of Solid Waste Management
P.O. Box 10385
Jackson, MS 39209

SUBJECT: Dike Improvements - Vertac Chemical Corporation, Vicksburg, MS

Dear Mr. Estes:

Enclosed herewith is a copy of Gee & Strickland letter dated November 16, 1983 by Philip C. Gee, P.E. certifying substantial compliance by the Contractor with the plans and specifications of the contract dated September 14, 1983. This contract was based in part on drawings prepared by MCI/Consulting Engineers (Project 83-560 sheets 1 thru 5 of 5) which are on file in your office, except for the riprap to Elevation 102.0.

The site visit by Mr. Estes and Mr. Spengler on November 17, 1983 confirm the project status on which this letter was based.

Grass was planted on November 15, 1983 on the Dike Improvement Project and the Inactive Disposal Area was reseeded at the same time.

Very truly yours,

Robert W. James, Jr., P.E.
Project Engineer

RWJ/ksh

Enclosure

cc F. Ahlers (w/encl)
F. Bleyer (w/encl)
P. Buford (Buford Const.) (w/encl)
P. Gee (G&S)
D. Karkkainen (w/encl)
D. Madsen (w/encl)
F. Wilson (MCI) (w/encl)

FILE COPY

November 18, 1983

Mr. Dick Karkkainen
Vertac Chemical Company Corporation
24th Floor, 5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

Re: MSD990714081

On November 17, 1983, Steve Spengler and I visited the Vicksburg facility to review the construction improvements at the inactive landfill and surface impoundment dike.

The inactive landfill had been capped with clean borrow material as required by the approved plans. The grading and capping did not extend as far to the Southwest as indicated on the plans we approved which were prepared by MCI/Consulting Engineers. This area constitutes the ditch and the low areas between the railroad track and the inactive landfill which has filled with sediment.

Because these sediments have shown contamination by organics, we will continue to monitor this area. Should runoff from the area become a problem, capping of the area, as shown in the approved plans, or another method may be required in the future.

The dike appeared to be constructed according to the approved plans prepared by MCI. The plans and engineering report by MCI demonstrated an adequate structural integrity of the dike and an elevation in excess of the 100 year flood.

At the time of the inspection, the dike and capped landfill had just recently been seeded. Should there be insufficient rainfall, watering by sprinkler trucks will be necessary. A good cap on the landfill and integrity of the dike can only be maintained through minimizing erosion. We encourage Vertac Chemical to take all appropriate actions to establish and maintain a vegetation cover to avoid requirements for additional earthwork in the future to repair erosional damage.

Please contact our office, should you have any questions.

Sincerely,

Charles Estes, P. E.
Division of Solid Waste Management

CE:els
cc: Mr. Steve Spengler, BPC

GEE & STRICKLAND, INC.
CONSULTING ENGINEERS & SURVEYORS
1 Openwood Plaza
1104 Openwood St.
Vicksburg, Miss. 39180

Philip C. Gee, P.E.
Joseph G. Strickland, R.L.S.

Phone: 601-636-7831

November 16, 1983

Mr. Bob James, Jr., P.E.
VERTAC CHEMICAL COMPANY
P.O. Box 3
Vicksburg, MS 39180

Re: Dike Improvements

Dear Mr. James:

This letter is to serve as certification that Buford Construction Company has completed the Dike Improvements in substantial compliance with the plans and specifications of the contract dated September 14, 1983. The only major exception is a mowable stand of grass has not been achieved. The grass has been planted and fertilized. A good grass cover should be established within the next several weeks.

Very Truly Yours,

Philip C. Gee, P.E.

PCG/jh

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

November 4, 1983

RECEIVED
NOV - 8 REC'D
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles H. Estes, III., P.E.
Mississippi Department of Natural Resources
Bureau of Pollution Control
Division of Solid Waste Management
P.O. Box 10385
Jackson, MS 39209

SUBJECT: Inactive Disposal Area - Vertac Chemical Corporation, Vicksburg, MS

Dear Mr. Estes:

Enclosed herewith is one certified copy of Gee & Strickland drawing dated October 25, 1983 showing As Built conditions for final capping on the Inactive Disposal Area. Also enclosed is Gee & Strickland letter dated October 25, 1983 by Philip C. Gee, P.E. certifying substantial compliance by the contractor with the plans and specifications of the contract dated September 14, 1983. This contract was based in part on drawings prepared by MCI/Consulting Engineers (Project 82-529 Sheets 1 thru 4 of 4).

The As Built drawing compares well to MCI Sheet 3 of 4 showing the final capping plan. In addition, these Gee & Strickland documents represent the condition found on the Ms/DNR Inspection on the afternoon of Monday, October 31, 1983 conducted by Mr. Estes and Mr. Spengler.

The contractor is aware of the seriousness of the vegetation cover requirements and his contract is written such that neither progress payment will be made nor performance retention released until such time as a mowable stand of grass is attained. Seeding operations for the Dike Improvements are scheduled within the next week and it is anticipated that such reseeding as is necessary for the Disposal Area will be accomplished at that time. In addition, it is expected that watering will be accomplished by a sprinkler system.

Very truly yours,

Robert W. James, Jr., P.E.
Project Engineer

RWJ/ksh

Enclosures

cc F. Ahlers
F. Bleyer (w/encl)
P. Buford (Buford Const.) (w/encl)
P. Gee (G&S)
D. Karkkainen (w/encl)
D. Madsen (w/encl)
F. Wilson (MCI) (w/encl & dwg)

GEE & STRICKLAND, INC.
CONSULTING ENGINEERS & SURVEYORS
1 Openwood Plaza
1104 Openwood St.
Vicksburg, Miss. 39180

Philip C. Gee, P.E.
Joseph G. Strickland, R.L.S.

Phone: 601-636-7831

October 25, 1983

Mr. Bob James, Jr., P.E.
Vertac Chemical Company
P.O. Box 3
Vicksburg, MS 39180

Re: Grading & Capping
Inactive Disposal Area

Dear Mr. James,

This letter is to serve as certification that Buford Construction Company has completed the Grading and Capping of the inactive disposal area in substantial compliance with plans and specifications of the contract dated September 14, 1983. The only major exception is a mowable stand of grass has not been achieved. The grass has been planted and fertilized and is beginning to emerge. A good grass cover should be established within the next few weeks. A copy of the As Built topographic survey is attached.

The grading does not extend as far to the South or West as shown on the plans. When grading began, the cut material was extremely wet and as it dried out during processing much higher than normal shrinkage factors were encountered. Accordingly, the inplace yardage of soil was reduced.

The end product complies with the intent of a minimum 18 inch cap of clean material and a final uniform grade providing drainage. All cap material was compacted to 95% ASTM D-698. Testing was done in accordance with ASTM D-2922.

Very Truly Yours,

Philip C. Gee, P.E.

PCG/jh

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

MEMORANDUM

TO: Vertac Chemical Corp. File - Vicksburg, MS

FROM: Steve Spengler

SUBJECT: Inspection at Vertac on October 31, 1983

DATE: November 2, 1983

On October 31, 1983 Chuck Estes and myself made an inspection at Vertac to inspect the dike improvements which have been made to the surface impoundment as required by the Commission Order which had been issued to them. The only remaining work to be done was: (1) completing the rip-rapping along the entire length of the dike and (2) placing 3-4 ft. of fill material along the top slope of the dike. We were told that this work will be completed by Friday, November 4, 1983. Those present representing Vertac included:

1. Dick Karkkainen - Vertac
2. Bob Maraman - Vertac
3. Bob James - Vertac
4. Phil Gee - Consulting Engineer

SS:ls

cc: Jerry Cain
Chuck Estes

FILE COPY

November 1, 1983

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor, 5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

Re: Part B Application Review
for MSD990714081

After reviewing your facility's Part B application, specific items listed on the attached pages were found to need clarification or additions. The application should be submitted with appropriate page numbers.

Please organize the new material so that it may be inserted into the original application or send us an entirely revised application. All corrections and/or additions to the application must be submitted to this office no later than December 23, 1983. Please contact us should you have any questions on any of these items.

Sincerely,

Charles Estes, P. E.
Hazardous Waste Section

CE:hdb
Attachments
cc: Ms. Beverly Spagg, Environmental Protection Agency, Region IV

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

October 28, 1983

RECEIVED
OCT 31 REC'D
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles Estes, P.E.
Division of Solid Waste Management
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

RE: MSD990714081
Your letter of September 29, 1983

Dear Mr. Estes:

1. We have raised the dike 0.3 to 0.5 feet as you have suggested.

2. We have have raised the height of the rip rap on the creek side of the dike to 102 feet elevation to provide more ample protection for our considerable investment.

3. The recalculation has been made by MCI as you suggested and the pond volume has been found to be adequate. The letter from MCI is attached.

4. The technical specifications were changed as requested and construction was implemented so as to avoid slip planes.

5. The technical specifications were changed as requested and construction was implemented so as to prevent run off.

6. Excavated material was placed on the inside.

7. As noted in the attached letter from MCI "The slope stability analyses contained in our report of August 8, 1983, considers failure on both the interior and the exterior of the dike. As you will note, the critical failure surface is on the outside of the dike."

Construction of the landfill remediation and dike improvements has now been completed and awaits your inspection. After your inspection and approval, I would appreciate,

and in fact need for both our present non-sudden liability insurance carrier and a firm willing to offer a competitive bid, some statement that is:

a. Documentation certifying that the on-site disposal area has been closed to the Mississippi Department of Natural Resources specifications.

b. Documentation that the surface impoundment has had improvements made to it such that river flooding will not breach the ponds containment walls.

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

cc: S. Spengler

To: Roger Spangler

MCI/CONSULTING ENGINEERS, INC.

P. O. Box 23010
10628 Dutchtown Road
Knoxville, Tennessee 37933-1010
Telephone (615) 966-9788

Corporate Headquarters:
Nashville, Tennessee

Branch Offices:
Knoxville, Tennessee
Denver, Colorado
Huntsville, Alabama

October 17, 1983

Mr. R. D. Karkkainen
Vertac Chemical Corporation
5100 Poplar
Suite 2414
Memphis, TN 38137

RE: Vicksburg, Mississippi Surface Impoundment Dike; MCI-83-560

Dear Dick:

In accordance with your request, we offer the following comments regarding the September 29, 1983, correspondence from Mr. Charles Estes of the Mississippi Department of Natural Resources the subject project.

(1) Item No. 1: Dike freeboard - We suggest that the dike be raised 0.3 to 0.5 feet by shortening the width of the top of the dike and raising the dike, if this is feasible for maintenance.

(2) Item No. 2: Stream velocity - We recommend either erosion protection such as riprap or Enkamat be placed to elevation 100 or additional dike inspection procedures be implemented to check for erosion.

(3) Item No. 3: Surface Run-on - We have recalculated the amount of runoff into the surface impoundments based on a curve number of 95 for the plant site. Calculations are attached.

(4) Item No. 4: Slip planes - We recommend the specifications be worded to reflect Mr. Estes' comments.

(5) Item No. 5 - Dike operation during construction - We suggest the specifications be worded to reflect Mr. Estes' comments.

(6) Item No. 6: Dike spoil - We recommend the specifications be worded to reflect Mr. Estes' comments.

(7) Item No. 7 - Failure on the inside of the dike - The slope stability analyses contained in our report of August 8, 1983, considers failure on both the interior and the exterior of the dike. As you will note, the critical failure surface is on the outside of the dike.

Please give me a call if you have comments or questions on this information.

Yours truly,

MCI/CONSULTING ENGINEERS, INC.

Felon R. Wilson

Felon R. Wilson, P.E.
Manager of Industrial Operations

FRW:jll

Enclosure

cc: Bob James
Bill Rosen

25-Year, 24-Hour Storm Volume Calculations

Bottomland - Adler Soil - C

Composite Curve Number:

	Area	CN
Inactive Disposal Area	3.0	87
Plant Site	20.7	95
Pond Area	4.6	100
	28.3	94

$$CN = \frac{1000}{10 + S}$$

$$94 = \frac{1000}{10 + S}$$

$$10 + S = \frac{1000}{94}$$

$$S = 0.64$$

25 Yr. - 24 Hr. Precip. = 7.74 in.

$$Q = \frac{(p - 0.2S)^2}{p + 0.8S}$$

$$Q = \frac{(7.74 - (0.2)0.64)^2}{7.74 + (0.8)(0.64)} = 7.02''$$

Storage Volume Required

$$V = (7.02'') \ \frac{1 \text{ ft}}{12''} \ (28.3 \text{ acres}) \ (43{,}560 \text{ ft}^2/\text{acre})$$

$$= 721{,}157 \text{ ft}^3 = 16.6 \text{ ac. ft.}$$

Composite Volumes

El	ft^3	Cumulative ft^3	Ac-ft
98	5360	5360	0.12
99	24912	30272	0.69
100	41320	71592	1.64
101	66424	138016	3.17
103	220160	358176	8.2
105	292992	651168	14.9
109	687040	1,338,208	30.7

Water Elevation:

January 5, 1983	101.68
May 9, 1983	101.67
June 15, 1983	102.5
Average =	101.95

Assume water surface at EL 102.0 MSL

Available volume at EL 107.3 = 24.0 Ac-ft - 5.27 = 18.7 Ac-ft
25 yr-24 hr storm volume = 16.6 Ac-ft

Assuming an outflow of 600 gpm, available volume at EL 107 = 21.35 Ac-ft

DK 10/28/83

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

MEMORANDUM

TO: File

FROM: Chuck Estes

SUBJECT: Remedial Actions at Vertac Chemical

DATE: October 26, 1983

On Monday, October 11, 1983, an inspection was made of the remedial action taking place at Vertac Chemical's Vicksburg facility.

The inactive landfill was completely capped. The operation had been completed several days before. As required by the plan approved by the Commission on Natural Resources, the high hill area had been lowered and clean soil brought in to cap the area. Grass seed had been broad cast but there had been no rain to cause germination. A water truck will be used if the area does not get a rain soon. The ditch to the west of the inactive landfill was not capped. This area must continue to be monitored.

The work on the surface impoundment dike is on-going. It appeared that work was centering on completing the rock toe to create a stable base on which to build. The liquid in the impoundment bordering the dike has been lowered to prevent a breech during construction. The completion date is expected to be the end of October. Construction of the dike is as described by the construction plans reviewed by our office.

CE:cbl
cc: Steve Spengler

FILE COPY

September 29, 1983

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor, 5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

Re: MSD990714081

Your plans, specifications and engineering report for the improvements to the surface impoundment dike at the Vicksburg facility have been reviewed. We have the following comments and recommendations:

1. Section 122.25 a. 11. iii. states that special flooding factors (e.g. wave action) must be considered in designing and constructing the facility to withstand washout from a 100-year flood. Since the top of the proposed dike is at the same elevation as the 100-year flood level, an increase of .3 to .5 feet in the dike height is necessary to protect against washout. As discussed in our telecon on September 23, 1983, EPA's recommendation was for a two-foot increase. Should a basis for a two foot freeboard become evident in the future, this design criterion may have to be re-evaluated.

2. The engineering report indicated that the velocity of the stream increases to elevation 100. However, the rock fill extends to only elevation 95. We are very concerned about possible erosion problems which could affect the dike stability in the future. This concern is based on the past history of the existing dike. Should Vertac Chemical choose not to increase the height of the rock fill, we will attach permit conditions to the final permit to require additional dike inspections during times of high rainfall or stream fluctuations. We will also include a standard for judging erosion problems which will initiate remedial action.

3. Appendix III of the engineering report indicates a curve number for the plant site which is identical to the inactive disposal area. Given that the plant site contains much area which is roofed or concreted it would appear that the curve number should be higher. Please justify this curve number or recalculate 25 years - 24 hours storm volume.

4. Section III. 7. of the Technical Specifications should state that the areas to be filled must be disced or scarified to reduce the formation of slip planes with the fill material.

5. The Technical Specifications document should state that the impoundments must be operated and maintained during construction to prevent runoff into the creek. This is stated in Section 6.0 of the engineering report, but must be restated for the benefit of the contractor.

6. All excavated material from the existing dike must be placed on the inside slope of the new dike. This will reduce the possibility of having contaminated soils on the finished exterior slope of the new dike.

7. A stability analysis for a failure arc from the dike top to the inside slope of the impoundment should be made.

Please respond in writing to these comments and recommendations and/or send us a copy of the contractor's technical specifications addressing the points which are applicable by no later than October 31, 1983.

Should you have any further questions, please contact our office.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste Management

CE:cl

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

SEP 16 1983

4AW-RM

Mr. Chuck Estes
Division of Solid/Hazardous Waste Management
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, Mississippi 39209

RECEIVED
1983 SEP 20 AM 9:20

Re: Vertac Chemical Corporation, Vicksburg
Surface Impoundment Dike Design

Dear Mr. Estes:

EPA has received the design drawings, the Engineering Report, and the technical specifications for the above project. We have reviewed these drawings and offer the following comments:

1. If soil is removed from the existing impoundment, which has contained a hazardous waste, it must be analyzed in accordance with 40 CFR 261 Appendix II or another approved method to determine if it is a hazardous material. If it is a hazardous waste, it must be disposed of in accordance with state hazardous waste disposal regulations.

2. It was not clear in the report whether the stability analysis for the proposed dike included the condition of having an empty impoundment at the time the flood level is at elevation 109.0. If this condition is possible, such an analysis should be made.

3. The 100 year flood elevation is given as 109.0. This is also the top elevation of the new dike. 40 CFR §270.14(b)(11)(iii) requires any facility located in the 100 year floodplain to be capable of withstanding washout. 40 CFR 264.221(a)(2) requires an amount of freeboard capable of preventing overtopping. Overtopping from a 100 year flood from the outside of a dike due to flooding of the surrounding area could be as disastrous as overtopping from the inside of the dike. Both could result in washout of the dike and loss of the contents of the impoundment. Therefore, we recommend a top of dike elevation at least two feet above the 100 year flood level.

These comments are not intended to imply that EPA has reviewed or approved the stability of the new dike. It is our opinion that responsibility for the structural integrity of the new dike lies with the design engineer and the contractor, who builds the dike.

I hope these comments are helpful in your review of this project. Please contact Hal Emmett at 404/881-3966 if you have any questions.

Sincerely yours,

Douglas C. McCurry, Chief
Waste Engineering Section

August 24, 1983

Mr. Jim Scarbrough, Chief
Residuals Management Branch
U. S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, GA 30365

Dear Mr. Scarbrough:

Enclosed are copies of two land disposal Part B applications, per the MOA. Our responses to the facilities must be mailed by October 11 to comply with the 60-day completeness review requirement. Any EPA-supplied comments to be included in these responses must be received by this office no later than October 5.

Thank you for your attention to these items.

Sincerely,

Charles Estes, PE
Division of Solid Waste Management

CE:cbl
Enclocure
cc: Doug McCurry

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

August 10, 1983

Mr. Chuck Estes
Division of Solid Waste Management
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Estes:

Attached are three copies of the RCRA Part B permit application for our Vicksburg facility. I understand that Mississippi has primacy on the entire RCRA program and that I need not send a copy to EPA-Region IV. The State will do all the necessary coordination with the EPA.

A separate copy of surface impoundment construction details is being sent to both you and Mr. Spengler directly by MCI. Hopefully, this will help expedite future reviews of those particulars with EPA-Region IV.

I certify under pernalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Very truly yours,

Richard D. Karkkainen
Director of Environment and Safety

RDK/bh

cc: F. L. Ahlers
Vicksburg Facility

Outline for planning purposes only

RPK 5/31/83

Legend: K = Karkkainen
M = Maraman
MCI = MCI Consulting Engineers, Inc.
E = Write up exists in draft form
NA = not applicable
NA* = not applicable to date, applicability would trigger additional level of effort and need for outside help.

Requirement:	Status Code:
Part A - Resubmit and modify by:	
1. Removing application for storage of drums of hazardous waste longer than 90 days	K
2. Removing from the list of hazardous waste those items that were listed to cover potential contaminants in 1000 unknown drums on hand at the time of original application.	K
Part B - Paragraph 122.25 "Contents"	
a. General information	
1. Facility description	K/E
2. Hazardous waste analyses	M/E
3. Waste Analysis plan	M
4. Security procedures	K/E
5. Hazardous waste facility inspection schedule	K/E
6. Waiver	NA
7. Contingency plan	K/E
8. Description of procedures, structures or equipment for hazardous waste management facilities	K
i Prevent unloading hazards	
ii Prevent runoff	
iii Prevent contamination of waste supplies	
iv Mitigate effects of equipment failure	
v Prevent personal exposure	
9. Precautions to prevent reaction or ignition of wastes	NA
10. Traffic pattern	K
11. Facility location information	
i Political jurisdiction	K
ii Seismic standards	NA

iii Floodplain standards	MCI
A. Hydrodynamic and hydrostatic forces	
B. Structure will not wash out	
12. Personel training procedures	M
13. Closure and post closure plan	K/E
14. Notification in deed	K
15. Closure cost estimate	K/E
16. Post closure cost estimate	K/E
17. Copies of insurance policies	K
18. State financial mechanism	NA
19. Topographic map (1" = 800') showing	K/E
i scale and date	
ii 100 year flood plain area	
iii surface waters	
iv surrounding land use	
v wind rose	
vi orientation	
vii legal boundaries	
viii access control	
ix water wells	
x structures	
xi barriers	
xii operational units	

b. Specific information

1. Container storage (drums)	NA
2. Tank storage	K
i design standards	
ii design specifications	
iii tank dimensions	
iv piping, instrumentation	
v feed systems	
vi reactive wastes	
3. Surface impoundments	
i list of hazardous wastes	M
ii plans and engineering report	MCI
A. migration prevention	
B. overtopping prevention	
C. structural integrity	
iii groundwater monitoring exemption	NA
iv inspection	MCI
v certification attesting to structural integrity of dike or statement that certification will be supplied upon completion of construction	MCI
vi procedure to remove from service	K
vii closure plan	K/E
viii ignitable or reaction waste	NA
ix incompatible waste	K
4. Waste Piles	NA
5. Incinerators	NA

6.	Land treatment	NA

C. Additional Information - groundwater protection for operators of hazardous waste surface impoundments

1.	Summary of data to date	K
2.	Identification of upper most aquifier	K/E
3.	Proposed point of compliance	K
4.	Description of plume	NA*
5.	Proposed further groundwater monitoring program	KE
6.	If no hazardous constituents detected i list of indicator parameters ii groundwater monitoring system description iii background values iv sampling, analysis and statistical comparison procedures	K
7.	If hazardous constituents have been detected supply details	NA*
8.	If hazardous constituents have been detected establish evidence of absence of health hazard or establish corrective action	NA*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

JUL 18 1983

4AW-RM

RECEIVED
1983 JUL 20 AM 9:07
AIR & WATER MANAGEMENT DIVISION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mr. Chuck Estes
Division of Solid/Hazardous Waste
Management
Mississippi Department of Natural Resources
P.O. Box 10385
Jackson, Mississippi 39209

Re: Vertac Chemical Corporation, Vicksburg
Surface Impoundment Dike Stability Analysis

Dear Mr. Estes:

In accordance with your request to Don Hunter of my office, EPA has reviewed the dike stability analysis report for Vertac, prepared by MCI/Consulting Engineers.

We are in agreement that the dike should be modified. The report showed it to be unstable as was proven by the dike failure in February 1983. The consulting engineer has suggested three options for providing a more stable dike. Our preference on the options is Option 1, followed by Option 3. Option 1 provides more resistance to a sliding failure due to slip at the base of the dike. We recommend that Vertac consider at least a 2-1/2:1 slope on both slopes and preferably a 3:1 slope. We also recommend protective material such as rip rap on the creek side of the slope. Any option selected should include a provision for stripping the existing surface to a solid base and a key trench.

The idea of providing toe drains for the dike will help to reduce pore pressure and neutral stress in the dike material. This will increase shear strength and lower the likelihood of failure.

It is our opinion that the applicant may select any of the three options for his Part B application; however, final design calculations for the selected proposal must be approved by the permitting agency before construction can begin. These calculations must be based on the actual characteristics of the soil to be used in dike construction and on construction specifications used.

We hope this information proves helpful. Please contact Hal Emmett at 404/881-3966 if you have additional questions.

Sincerely yours,

James H. Scarbrough, Chief
Residuals Management Branch

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

June 9, 1983

RECEIVED
1983 JUN 13 AM 9: 2
AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mississippi Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

Attention: Mr. Charles Estes, P.E.
Division of Solid Waste

Dick Karkkainen advised me that you needed a copy of the revised Hazardous Waste Inspection Sheet showing the details of dike inspection.

I am attaching a copy for you and am mailing a copy to Steve Spengler. The sheets were revised and have been in use since March 1983.

If you need additional information, please let me know.

Sincerely,

R. F. Maraman

R.F. MARAMAN
Chief Chemist

RFM/tsd

Attachment

cc: F. Ahlers
D. Karkkainen
D. Madsen
S. Spengler
R. Maraman
File

HAZARDOUS WASTE INSPECTION SHEET

For the Week of _____ to _____

1. Drums at UDMH - Inspect weekly for leaks.

   Rework Leakers

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

2. Hill Tank - Record level daily and inspect tank structure and dike weekly.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

3. Waste Pond - Record level daily, keep a minimum of two (2) feet freeboard, daily and weekly dike inspection instructions are on the back.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

DATE	HILL TK LEVEL	POND LEVEL	INITIALS

4. Calgon Units - Report major leaks or misfunctions and inspect the units daily.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

5. Dike inspection, daily. Observe dike from the pump area for washing, sagging, sloughing, etc. Report any faster than normal loss of pond level immediately as it may indicate a leak.

6. Dike inspection, weekly. Walk main dike and finger dike weekly. Observe the above items in addition to trash, trees, debris, etc., in the creek. Check the condition of the warning signs and report if the grass needs mowing. Be alert for any indication of dike failure. Record results under 3, Waste Pond on the front page.

CORRECTIVE ACTION TAKEN:

_____

_____

_____

_____

GENERAL INFORMATION

PERSON TO CONTACT FOR IMMEDIATE REPAIRS:

F.X. Bleyer
(601)636-1231; Ext. 219

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

May 31, 1983

RECEIVED
JUN 2 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Chuck Estes
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Estes:

Attached is a copy of a draft revised RCRA Part A and copy of draft paragraph 122.25 (a) General Information (1) Facility Description.

In addressing RCRA Part B paragraph 122.25 (b) Specific Information (1) Container Storage (2) Tank Storage and (3) Surface Impoundments, I had planned the following:

1. Eliminate greater than 90 day drum storage in order to keep the inventory of drums to a minimum; therefore, omit (b) Specific Information (1) Container Storage from the application.

2. Include (b) Specific Information (3) Surface Impoundments for the 3 million gallon surface impoundment and (b) Specific Information (2) Tank Stoage for the 1.6 million gallon storage vessel for neutralized water from the DNBP process, and two 15,000 gallon storage vessel for acidic water from the DNBP process.

It is possible that only the 3 million gallon surface impoundment should be included in the (b) Specific Information section of Part B. The neutralized DNBP wastewater stored in the 1.6 million gallon storage tank is not, I believe, a RCRA hazardous waste at that point. The acidic DNBP wastewater stored in the two 15,000 gallon storage tank is only stored for a few days, in any case, complete turnover of tank contents is significantly less than 90 days.

I have no objection to including specific information on the tanks within the Part B application but request your decision on whether I should or should not.

Similarly, I assume the way to handle salt cake from MSMA (RCRA Hazardous Waste Number K031) is to include (a) General Information. There is nothing that I can think of that would be covered by (b) Specific Information.

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

Enc.

cc: R. J. Maraman

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

April 25, 1983

RECEIVED
APR 27 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Steve Spengler
Industrial Wastewater Control Section

[redacted]
Division of Solid Waste Management
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, Mississippi 39209

RE: Your letter of March 31, 1983
My Letter of April 7, 1983

Dear Mr. Spengler and Estes:

Attached is a copy of a Purchase Requisition (prices deleted by me) to document our progress on the referenced subject.

Please note that the effort directed toward meeting the July 1, 1983 deadline will proceed as follows:

1. Phase I - testing, calculating, establishing design rationale and conceptual design.

2. Submit to DNR and EPA the report. Meet with DNR to obtain agreement or modification.

3. Phase II - Detailed engineering drawing to be submitted to DNR and EPA prior to July 1, 1983.

4. Await approval from the DNR and EPA prior to commencing construction activity.

I have some considerable concern that a sufficiently timely review by the EPA will be possible such that the November 1, 1983 deadline can be met. Should it not be possible to meet that deadline, the DNR can be assured that continued maintenance and monitoring of the embankment will have high priority.

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

PURCHASE REQUISITION

VERTAC, INC.

SUITE 2414 • 5100 POPLAR AVE.
MEMPHIS, TN 38137 • 901/757-6851

DATE April 22, 1983

REQUIRED DELIVERY DATE _____

PURPOSE _____ ACCOUNT NO. _____ PURCHASE ORDER NO. _____

ITEM	QUANTITY	UNIT	DESCRIPTION AND CODE	PRICE/UNIT
			Purchase engineering services to accomplish the RCRA	
			Part B informational needs as described in the attached	
			Request for Proposal and as addressed in your communication	
			of February 14, 1983 and modified on April 8, 1983.	
			The services are to include:	
			1. Analysis of hydrodynamic and hydrostatic forces.	
			2. Contract with a driller.	
			3. Sufficient testing of the present embankment to allow	
			for analysis of structural integrity.	
			4. Certification that the present embankment is adequate	
			or conceptual design of remedial measures plus an	
			estimate of engineering cost for remedial design.	
			5. Presentation of the above in report form. (Vertac will	
			submit the report to the Mississippi Bureau of Pollution	
			Control and EPA Region IV.)	
			6. Review meeting with Mississippi Bureau of Pollution	
			Control to discuss commencement of remedial design	
			(to be funded by separate Phase II contract) or	
			certification of adequacy of present embankment.	
			Time constraints are such that Vertac must present the	
			Mississippi Bureau of Pollution Control with detailed	
			engineering plans of remediation or certification that none	
			is necessary on or about July 1, 1983; hence the work	
			described by this purchase should be completed in sufficient	
			time to allow completion of a presently undefined Phase II	
			contract, if needed, or in sufficient time to demonstrate	

SUPPLIER

MCI Consulting Engineers
P.O. Box 23154
McBride Lane
Knoxville TN 37922

TERMS _____

FOB _____

FREIGHT FOR ACCOUNT OF ☐ BUYER ☐ SELLER

SHIP VIA _____

DELIVER TO _____

ISSUED BY

APPROVED BY

REQUISITIONER'S COPY

PURCHASE REQUISITION

VERTAC, INC.

SUITE 2414 • 5100 POPLAR AVE.
MEMPHIS, TN 38137 • 901/767-6851

DATE April 22, 1983

Page 2

REQUIRED DELIVERY DATE _____

PURPOSE _____ ACCOUNT NO. _____ PURCHASE ORDER NO. _____

ITEM	QUANTITY	UNIT	DESCRIPTION AND CODE	PRICE/UN
			progress toward completion of the Phase II contract	
			without undo delay.	
			Vertac will proceed with the execution of the Phase II	
			contract, if needed, upon approval of the Phase I plans by	
			the Mississippi Bureau of Pollution Control and will not	
			await U.S. EPA Region IV approval. Upon completion of the	
			Phase II plans, Vertac will submit the plans to the	
			Mississippi Bureau of Pollution Control and U.S. EPA Region	
			IV.	
			Vertac will not, however, undertake any remediation	
			construction without approval of both the Mississippi	
			Bureau of Pollution Control and U.S. EPA Region IV in as	
			much as both regulatory agencies, through the RCRA Part B	
			permit process, can act separately or in concert to deny	
			the adequacy of the remediation if indeed any is needed.	
			Vertac will proceed with diligence and without delay to	
			attempt to complete remedial construction, if needed, by	
			November 1, 1983 as demanded by the Mississippi Bureau of	
			Pollution Control, but at present has no reasonable	
			anticipation that review by the U.S. EPA Region IV will be	
			sufficiently timely to avoid imposed delay.	
			The amount authorized for Phase I is	

SUPPLIER

NCI Consulting Engineers
PO Box 23159
McPride Lane
Knoxville, TN 37922

TERMS _____

FOB _____

FREIGHT FOR ACCOUNT OF ☐ BUYER ☐ SELLER

SHIP VIA _____

DELIVER TO _____

ISSUED BY

APPROVED BY

REQUISITIONER'S COPY

MCI/ CONSULTING ENGINEERS, INC.
P. O. Box 23154
McBride Lane
Knoxville, Tennessee 37922
Telephone (615) 966-9788

April 8, 1983

Mr. R. D. Karkkainen
Vertac Chemical Corp.
5100 Poplar, Suite 2414
Memphis, TN 38137

RE: Request for Proposal dated March 22, 1983; Surface Impoundment Dike, Vicksburg, MS Facility

Dear Dick:

In response to your Request for Proposal, we offer the following cost estimate for engineering services to accomplish the dike analysis portions of the Part B application for the Vicksburg plant.

In order to meet the stability requirements for dikes as specified in the Final EPA regulations, some degree of redesign of the dike at Vicksburg will probably be necessary. This may be as minor as designing a small replacement section, or as major as strengthening the subsurface, replacing the entire dike and raising the top of the dike. Costs for the two extremes can be expected to vary significantly, corresponding to the degree of construction activities required. Similarly, the costs for design can be expected to vary significantly. In our February 14, 1983 proposal to you concerning the dike, we assumed minor design requirements. More effort will likely be required to satisfy the Part B requirements and to provide the design of a structure which will satisfy the criteria established by 40CFR264 for hazardous waste surface impoundments.

Based on the rationale provided, we feel this project must be conducted in two phases. Phase I involves the collection of field and laboratory data as outlined in our proposal of February 14, 1983. Costs for this phase will increase slightly since remobilization of equipment and personnel will be required. The total engineering costs for this phase will be $ ($ for professional services and $ for laboratory testing by Geologic Associates, Inc.). It is assumed that Vertac will contract directly with a driller, at an approximate drilling cost of $ A proposal will be submitted at the end of Phase I, when a workable method of solving the problem is proposed. Phase II costs will probably vary between and depending upon the results of Phase I.

Within this budget and project, we offer a one-time cost to analyze and secure the dike. With proper testing and associated design, a structure will be provided which will be reliable and future costs associated with

the dike should be minimal. We hope you agree with this philosophy of solving the problem.

MCI/Consulting Engineers, Inc. appreciates this opportunity to offer our services to Vertac again. Please give me a call if you wish to discuss this information.

Yours truly,

MCI/CONSULTING ENGINEERS, INC.

Felon R. Wilson

Felon R. Wilson, P. E.
Manager of Industrial Operations

FRW:kd

MCI/CONSULTING ENGINEERS, INC.
P. O. Box 23154
McBride Lane
Knoxville, Tennessee 37922
Telephone (615) 966-9788

February 14, 1983

Mr. R. D. Karkkainen
Vertac Chemical Corporation
5100 Poplar, Suite 2414
Memphis, TN 38137

RE: Proposed investigation and Remedial design of Existing Surface Impoundment Dike; Vicksburg, MS

Dear Dick:

Based on our previous discussions, we herewith submit our estimate of costs for the investigation and redesign (if necessary) of the subject dike. We propose to investigate the dike bordering Stout's Bayou by conducting test borings in the dike, installing piezometers, and conducting laboratory soil tests. Ultimately, we will provide you with an engineering evaluation of the stability of the existing dike, and redesign or remedial design as necessary.

The following cost estimates have been developed based on our present knowledge of the condition of the dike.

I. Professional Services:

Senior Soils Engineer - hours @ $ /hr	$
Senior Environmental Engineer - hours @ /hr	$
Hydrogeologist hours @ $ /hr	$
Surveyor hours @ $ /hr(Dike Cross-sections)	$
Drafting hours @ $ /hr	$

Expenses:

2 man-trips to Vicksburg, including 2 man-days per diem	$ 940.00
Total Professional Services	$

II. Field and Laboratory Services

1. Field Drilling and Soil Sampling

Mobilization	$
Shelby Tube Samples (30 @ $35/ea)	$
Drilling (120' @ $4.50/ft.)	$
*SUBTOTAL	$

*Direct Contract with Vertac

2. Laboratory Services (Geologic Associates, Inc.)

Triaxial Shear (3 @ $300/ea)	$ 900.00
Permeability (3 @ $140/ea)	$ 420.00
Moisture Content, Density, Unit Weight (10 @ $22/ea)	$ 220.00
Grain Size Analysis (3 @$45/ea)	$ 135.00
Atterburg Limits (3 @ $50/ea)	$ 150.00
SUBTOTAL	$
Total Field & Laboratory Services	$

All field costs are based on the assumption that the subsurface investigations can be conducted by Hall, Brazile. and Assoc. during the week of February 21, 1983. William J. Rosen, Senior Soils Engineer with Geologic Associates, Inc. (GA), will work with MCI on this project. Accordingly we suggest that his laboratory perform the engineering and soil tests. Vitae for Mr. Rosen are attached.

The acquisition of existing published data on Stout's Bayou will be obtained from the Corps of Engineers and U. S. Department of Agriculture while MCI personnel are on-site.

We have prepared this estimate in a manner which we believe will accomplish long term and immediate stability of the subject dike. Field conditions, however, may dictate alterations in the scope of the work proposed, particularly with regard to access. We will need monitoring assistance from the Vicksburg plant with monitoring ground waster levels after piezometer installation.

We are prepared to proceed immediately upon your authorization.

Yours truly,

MCI/CONSULTING ENGINEERS, INC.

Felon R. Wilson, P.E.
Manager of Industrial Operations

FRW:kd

MCI/CONSULTING ENGINEERS, INC.
P. O. Box 23154
McBride Lane
Knoxville, Tennessee 37922
Telephone (615) 966-9788

EXPERIENCE AND QUALIFICATIONS OF WILLIAM J. ROSEN

Position with Geologic Associates, Inc. - Senior Engineer
Knoxville, Tennessee

Position with MCI/Consulting Engineers - Senior Soils Engineer

EDUCATION

B. S. C. E., 1973, University of Tennessee, Knoxville, Tennessee
Major Area of Specialization: Construction

M. S., 1974, University of Tennessee, Knoxville, Tennessee
Major Area of Specialization: Soil Mechanics and Foundation
Minor Area of Specialization: Materials
Thesis Title: "Development of Design Criteria for Filter Fabrics"

CONTINUING EDUCATION

Hydrology and Sedimentation, Surface Mining Control and Reclamation Law, Ohio River Valley Soils Seminars VI, VII, VIII, Surface Mining Control and Reclamation Act of 1977, Stability Analysis of Mine Refuse

EXPERIENCE

1981 - Present	Senior Engineer Geologic Associates, Inc. Knoxville, Tennessee
1980 - 1981	Branch Manager Soil and Material Engineers, Inc. Knoxville, Tennessee
1974 - 1980	Part-owner, President Marks-Rosen, Inc. Knoxville, Tennessee
1978 - 1980	Chief Engineer Conrich-Tennessee, Inc.

1976 - 1980	Part-time instructor in Civil Engineering University of Tennessee Knoxville, Tennessee
1976 - 1978	Part-time instructor in Civil Engineering Roane State Community College Harriman, Tennessee

REGISTRATION

Professional Engineer - Tennessee and Kentucky
Registered Land Surveyor - Tennessee

AFFILIATIONS

Tennessee Society of Professional Engineers
National Society of Professional Engineers
American Society of Civil Engineers

PUBLICATIONS AND TECHNICAL PAPERS

Co-author, "Geological Studies of Selected or Marginal Sites for Sanitary Landfills", Report 73-7, submitted to Tennessee Department of Public Health, September 1973.

Co-author, "Cold Weather Lime Stabilization", presented at 53rd Annual Meeting, Highway Research Board, National Academy of Science, January, 1974.

Author, "Geotechnical Oversight Nullifies Proper Procedures", Proceedings of the Seventh Ohio River Valley Soils Seminar, Lexington, Kentucky, October, 1976.

Co-author, "Design and Construction of the Abner Fork Slurry Impoundment: A Case History", presented at the 8th Annual Kentucky Coal Seminar, Pineville, Kentucky, May 4, 1982.

REPRESENTATIVE PROJECTS

Project Engineer for comprehensive field study of the use of a geotextile for erosion control and filter applications.

Project Geotechnical Engineer for extensive embankment fills associated with airport construction in mountainous western North Carolina.

Project Engineer for coal reserve evaluation of 1100 acre tract in southeastern Ohio and 45,000 acre tract in eastern Tennessee.

Project Engineer for corrective procedures involving massive slope stability problems for condominium development in Knoxville.

Project Geotechnical Engineer for Nissan Motor Manufacturing Plant, Smyrna, Tennessee.

Project Engineer for construction services for the A. E. Staley Plant, Loudon, Tennessee.

Biographical Sketch - WILLIAM J. ROSEN

Mr. Rosen, a native of Memphis, Tennessee, graduated from the University of Tennessee at Knoxville in 1973 with a degree in Civil Engineering after participation in the cooperative engineering program. Mr. Rosen furthered his formal education by completion of a Masters Degree from the University of Tennessee in 1974 with specialization in soils and materials. Upon graduation Mr. Rosen formed a partnership in a consulting firm specializing in geotechnical engineering in Knoxville, Tennessee, where he served as chief administrator and consultant. In 1981, he joined Geologic Associates, Inc., in Knoxville as a senior engineer. Mr. Rosen has acted as a geotechnical consultant for a number of projects of substantial scope throughout the United Stated and is a registered engineer in Tennessee and Kentucky. These projects include landslide investigations, remedial treatment of sinkholes, foundation design, post-construction failure analysis, and specialized applications of geotextiles. He is a member of the American Society of Civil Engineers and the National Society of Professional Engineers.

Please propose a cost for engineering services as needed to provide RCRA Part B informational needs and any remedial redesign for a surface impoundment at the Vicksburg facility of Vertac Chemical Corporation.

The spcific regulatory requirements to be addressed are:

40 CFR Part 264 paragraph 122.25 Contents of Part B:

(a) (11) Facility location information.

(iii) "Owners and operators of all facilities shall provide an identification of whether the facility is located within a 100-year flood plain. ...include a copy of the relevant Federal Insurance Administration flood map..".

The appropriate flood plain map (Community-Panel number 280198-0200B) has been examined. The surface impoundment is within the 100 year flood plain.

(iv) "...facilities located in the 100-year flood plain must provide the following information:

(A) Engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as a consequence of a 100-year flood.

(B) Structural or other engineering studies showing the design of ...flood protection devices (...dikes) at the facility and know these will prevent washout."

(b) (3) Specific information requirements...facilities that store, treat, or dispose of hazardous waste in surface impoundments...

(v) A certification by a qualified engineer which attests to the structural integrity of each dike..."

A sketch of the surface impoundment is attached. Additional details to consider are:

1. Embankments are constructed of loess, the soil typically found in the Vicksburg area.

2. A creek flows directly along one side of the surface impoundment.

3. A section of the embankment failed approximately one month ago. The mechanism of failure is not precisely known to us, however, these are facts:

REQUEST FOR PROPOSAL (cont'd)

a. the creek bottom has cut downward through the years

b. the embankment sloughed off on the creek side

c. the embankment was probably saturated

d. creek side erosional flood velocity effects are apparent

e. the embankment was not overtopped

f. the failure occurred during heavy rains. Typically during such rains the creek will rise 8 feet within a few hours. After cessation of the rains the creek will drop the same 8 feet within a matter of a few hours.

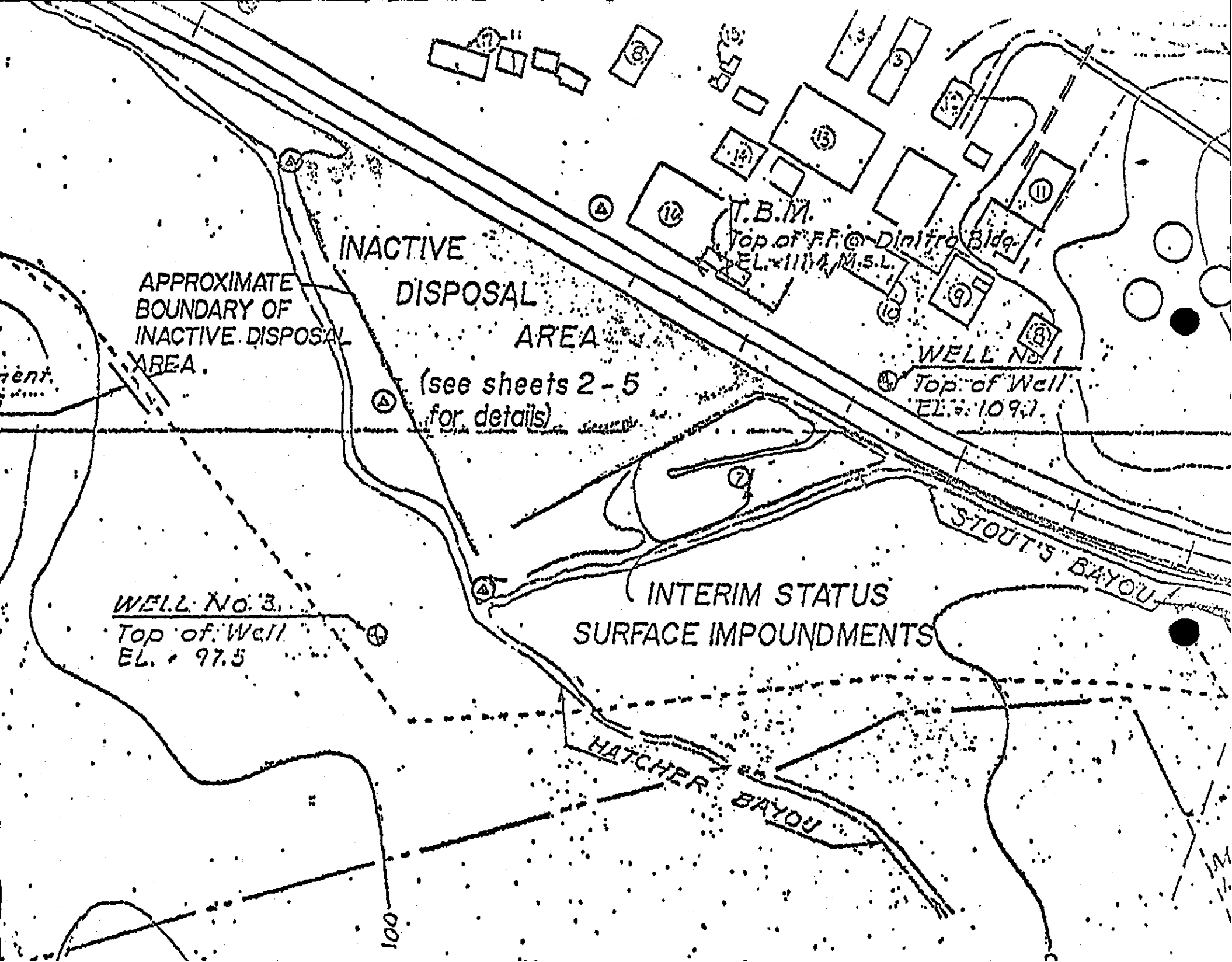
g. After the failure approximately 13,000 cubic yards of dirt were used to strengthen the entire embankment.

With regard to the 100 year flood plain elevation:

a. During such a flood the entire surface impoundment would be 2 to 4 feet under flood waters.

b. Prior to such an occurance, treated process wastewater would be shut off from discharge to the pond.

c. The pond would contain only rainwater run-off contaminated by traces of pesticides. Discharge to the flood waters would be environmentally inconsequential because of the huge volume of flood water. Sediment on the bottom of the pond would fall within the hazardous classification; however, the sediment would remain in the pond. We need to assure that the pond embankment would remain structurally in tact after such an occurance.


INACTIVE
DISPOSAL
AREA
APPROXIMATE
BOUNDARY OF
INACTIVE DISPOSAL
AREA.
(see sheets 2 - 5
for details)
T.B.M.
Top of F.F. @ Dinitro Bldg.
EL. = 111.4 M.S.L.
WELL No. 1
Top of Well
EL. = 109.1
STOUT'S BAYOU
INTERIM STATUS
SURFACE IMPOUNDMENTS
WELL No. 3
Top of Well
EL. = 97.5
HATCHER BAYOU
100

April 20, 1984

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

FILE COPY

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor
5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

Re: MSD990714081

On April 10, 1984, a review of your liability insurance for the Vicksburg, Mississippi facility was conducted. The certificate of liability insurance for non-sudden occurrences had expired. A current effective certificate must be provided to this office by May 18, 1984. The wording of the certificate must be identical to the enclosed certificate form. If an effective certificate is not received by the above date, the Bureau intends to recommend to the Commission on Natural Resources that an enforcement action be taken, which may include the imposition of a penalty not to exceed $25,000 per day per violation.

If you have any questions, please contact Charles Estes of my staff at 961-5171.

Sincerely,

Jack McMillan, Director
Division of Solid Waste Management

JM:CE:cm
Enclosure

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

April 7, 1983

RECEIVED
1983 APR 11 AM 9 1
AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mr. Steve Spengler
Industrial Wastewater Control Section

[redacted]
Division of Solid Waste Management
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, Mississippi 39209

RE: Your Letter of March 31, 1983

Dear Mr. Spengler and Mr. Estes:

Attached is a copy of a Request for Proposal I have sent to many engineering firms. The RFQ deals with the referenced subject matter and I believe addresses all pertinent questions. The feed back I have to date is the study required is non-trivial. I should have additional details within one or two weeks.

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

Attch.

cc: F. L. Ahlers
G. D. Madsen
R. F. Maraman

Please propose a cost for engineering services as needed to provide RCRA Part B informational needs and any remedial redesign for a surface impoundment at the Vicksburg facility of Vertac Chemical Corporation.

The spcific regulatory requirements to be addressed are:

40 CFR Part 264 paragraph 122.25 Contents of Part B:

(a) (11) Facility location information.

(iii) "Owners and operators of all facilities shall provide an identification of whether the facility is located within a 100-year flood plain. ...include a copy of the relevant Federal Insurance Administration flood map..".

The appropriate flood plain map (Community-Panel number 280198-0200B) has been examined. The surface impoundment is within the 100 year flood plain.

(iv) "...facilities located in the 100-year flood plain must provide the following information:

(A) Engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as a consequence of a 100-year flood.

(B) Structural or other engineering studies showing the design of ...flood protection devices (...dikes) at the facility and know these will prevent washout."

(b)(3) Specific information requirements...facilities that store, treat, or dispose of hazardous waste in surface impoundments...

(v) A certification by a qualified engineer which attests to the structural integrity of each dike..."

A sketch of the surface impoundment is attached. Additional details to consider are:

1. Embankments are constructed of loess, the soil typically found in the Vicksburg area.

2. A creek flows directly along one side of the surface impoundment.

3. A section of the embankment failed approximately one month ago. The mechanism of failure is not precisely known to us, however, these are facts:

REQUEST FOR PROPOSAL (cont'd)

a. the creek bottom has cut downward through the years

b. the embankment sloughed off on the creek side

c. the embankment was probably saturated

d. creek side erosional flood velocity effects are apparent

e. the embankment was not overtopped

f. the failure occurred during heavy rains. Typically during such rains the creek will rise 8 feet within a few hours. After cessation of the rains the creek will drop the same 8 feet within a matter of a few hours.

g. After the failure approximately 13,000 cubic yards of dirt were used to strengthen the entire embankment.

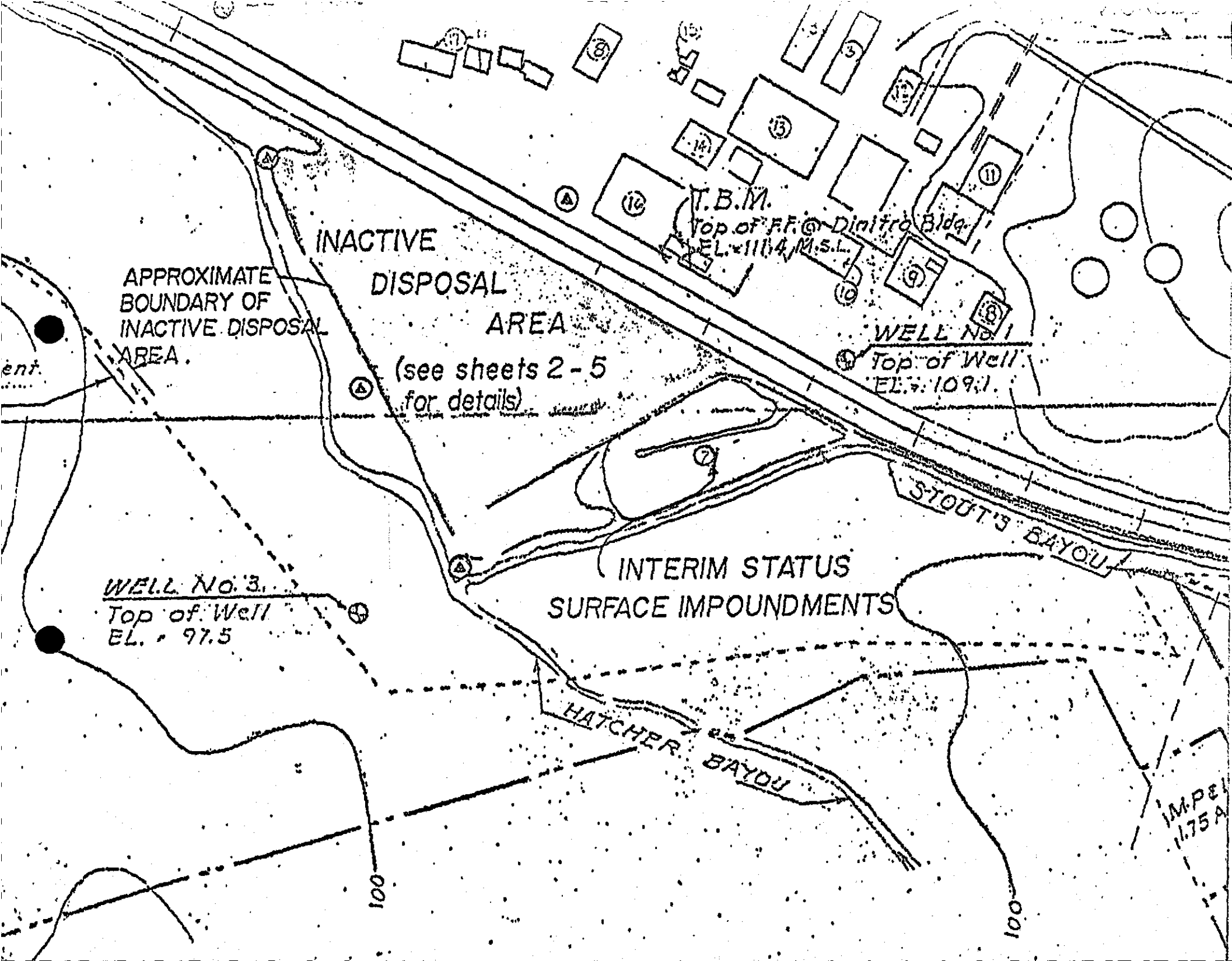
With regard to the 100 year flood plain elevation:

a. During such a flood the entire surface impoundment would be 2 to 4 feet under flood waters.

b. Prior to such an occurance, treated process wastewater would be shut off from discharge to the pond.

c. The pond would contain only rainwater run-off contaminated by traces of pesticides. Discharge to the flood waters would be environmentally inconsequential because of the huge volume of flood water. Sediment on the bottom of the pond would fall within the hazardous classification; however, the sediment would remain in the pond. We need to assure that the pond embankment would remain structurally in tact after such an occurance.

RJK 7-1-83


INACTIVE
DISPOSAL
AREA
APPROXIMATE
BOUNDARY OF
INACTIVE DISPOSAL
AREA.
(see sheets 2 - 5
for details)
T.B.M.
Top of F.F. @ Dinitro Bldg.
EL. = 111.4 M.S.L.
WELL No. 1
Top of Well
EL. = 109.1
STOUT'S BAYOU
INTERIM STATUS
SURFACE IMPOUNDMENTS
WELL No. 3
Top of Well
EL. = 97.5
HATCHER BAYOU
100
100

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

April 6, 1983

RECEIVED
1983 APR -7 AM 9:02
AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mississippi Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

Attention: Mr. Chuck Estes
Div. of Waste Management

Subject: Hazardous Waste Inspection Sheet

A copy of the sheet is attached for your copy of our Environmental Manual.

It has been revised in the area of daily and weekly dike inspections, and is in use at present.

These revisions should help prevent a sudden loss of a portion of the dike.

Sincerely,

R.F. Maraman

R.F. MARAMAN
Chief Chemist

RFM/tsd

cc: F. Ahlers
D. Madsen
Steve Spengler
R. Maraman
File

HAZARDOUS WASTE INSPECTION SHEET

For the Week of _____ to _____

1. Drums at UDMH - Inspect weekly for leaks.

   Rework Leakers

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

2. Hill Tank - Record level daily and inspect tank structure and dike weekly.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

3. Waste Pond - Record level daily, keep a minimum of two (2) feet freeboard, daily and weekly dike inspection instructions are on the back.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

DATE	HILL TK LEVEL	POND LEVEL	INITIALS

4. Calgon Units - Report major leaks or misfunctions and inspect the units daily.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

5. Dike inspection, daily. Observe dike from the pump area for washing, sagging, sloughing, etc. Report any faster than normal loss of pond level immediately as it may indicate a leak.

6. Dike inspection, weekly. Walk main dike and finger dike weekly. Observe the above items in addition to trash, trees, debris, etc., in the creek. Check the condition of the warning signs and report if the grass needs mowing. Be alert for any indication of dike failure. Record results under 3, Waste Pond on the front page.

CORRECTIVE ACTION TAKEN:

_____

_____

_____

_____

GENERAL INFORMATION

PERSON TO CONTACT FOR IMMEDIATE REPAIRS:

F.X. Bleyer
(601)636-1231; Ext. 219

FILE COPY

March 31, 1983

Mr. Dick Karkkainen
Vertac Chemical Corporation
5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

Re: Vertac Chemical Corporation
Vicksburg Facility

In this letter we will summarize our meeting with yourself and Mr. Heraman on March 14, 1983. As you are aware, the dike on the east side of the surface impoundment at the Vicksburg facility is inadequate. While the improvements made to the structure after the dike failure are providing some integrity, we consider the improvements as strictly emergency or temporary measures to prevent further discharges to Hatcher Bayou until such time as permanent measures are taken. Therefore, we are going to require that Vertac address this problem in a timely manner.

We want to ensure that any plan which Vertac proposes is well engineered and properly addresses the effects of Hatcher Bayou on the structure. Additionally, the proposal should meet the requirements of Section 264.221(c) and (d), as well as 122.25(a)(11)(iv) of the Mississippi Hazardous Waste Regulations. These items deal with overtopping, structural integrity, and the effects of a 100-year flood on the facility.

We request that Vertac submit to our office a proposal for correcting this problem by July 1, 1983. In addition to those items listed above, this proposal should include a design rationale, engineering drawings, and a time frame for completion of this project. This time frame should not exceed November 1, 1983.

If you have any questions do not hesitate to contact us.

Sincerely,

Steve Spengler
Industrial Wastewater Control Section

Chuck Yates
Division of Solid Waste Management

SS:CY:eds
cc: Mr. Fred Ahlers
Mr. Bob Herman

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

MEMORANDUM TO FILE

COMPANY: Vertac Chemical Corporation

MEETING OF: March 14, 1983

ATTENDING: Dick Karkkainen and Bob Mariman, Vertac Chemical Corporation
Steve Spengler and Chuck Estes, Bureau of Pollution Control

DETAILS:

We discussed the Part B Application for hazardous waste storage which is currently being assembled. There was some discussion about the details and time between the detection of the breach in the impoundment and the notification to our office. Mr. Karkkainen and Mr. Mariman agreeded to send an amendment to their written report which will give the events and time during this period in more detail.

Steve and I stressed that the Bureau would like to see Vertac rapidly pursue a permanent solution to the problems at the impoundment. The Part B Application is due in August. The impoundment and its problems must be addressed and resolved before a permit can be issued. Everyone agreed that a study must be undertaken by Vertac before construction can get underway. Steve and I indicated that we would send Vertac a letter requiring them to begin a study very soon which will address the impoundment.

We also discussed the inadequacies of the contingency plan since there appeared to be a longer than necessary amount of time before our office was notified. The contingency plan and inspection form will be modified to minimize the chance of the same kind of event reoccurring. The operators at the impoundments will now be trained to inspect the integrity of the impoundment immediately upon noticing a rapid drop in the impoundment level.

Charles Estes, P.E.

CE:cbl

FILE COPY

March 1, 1983

Mr. Dick Karkkainen
Vertac Chemical Corp
24th Floor, 5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

During a visit of the Vicksburg facility on February 28, 1983, the location of the groundwater monitoring wells to be installed were inspected. Our office concurs with the selection of these locations. A sampling description and schedule for the monitoring wells must be developed. We will review this upon completion.

Care should be taken to grade and slope the access road to the monitoring wells such that contamination draingage from the landfill will not flow into the borrow area.

Should you have any questions, please contact our office.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste Management

CE:cbl
cc: Mr. R. F. Maraman

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851
TELEX 53927

March 1, 1983

CERTIFIED MAIL

RECEIVED
1983 MAR -4 AM 9:17
AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mr. Jack McMillan, Director
Division of Solid Waste Management
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

Re: Your letter of 1-18-83

Dear Mr. McMillan:

Attached is a resubmittal of our "Closure Cost Estimate and Post Closure Plans".

Our attorney, Mr. Allen Malone, is making the necessary changes to our Trust Fund. It may not be generally understood that one Trust Fund was set up by Vertac and funded for our plants in Arkansas and Mississipi on a timely basis in complete accord with Federal Regulations. Unfortunately when States have primacy there is no longer a mechanism for one Trust Fund to cover more than one state.

Very truly yours,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

cc: F. Ahlers
[redacted]

Closure and Post Closure Plan
EPA I.D. Number MSD 990714081

Vertac Chemical Corporation
Vicksburg Plant
P. O. Box 3
Vicksburg, Mississippi 39180

Modification of Plan Submitted 10-13-81
(10-13-81 plan attached for completeness of record)

Closure Cost Estimate and Post-Closure Plans
(40 CFR 122-25 (a)(15) and 264-142 and 40 CFR 122-25(a)(13).

This cost estimate will be kept on file at the Vicksburg facility of Vertac Chemical Corporation. It will be revised yearly for inflation and revised as changes in the facilities affect costs.

The plan is based on the following rationale:

1. Inventory of drummed wastes and liquid waste storage will be kept to a minimum, significantly below the 90 day requirement in order to exclude the site as a storage facility. Any such wastes on hand prior to closure would be disposed to hazardous waste landfill or to deepwell disposal as a routine cost of process operation.

2. The closure option to be undertaken with the surface impoundment consists of the following:

   a. eliminate free liquids
   b. stabilize residuals to bear weight of final cover
   c. final cover
   d. post-closure care

   The liquids in the surface impoundment are those which are routinely disposed by pumping through a carbon treatment system to the Mississippi River.

   All free liquids on hand prior to closure would be similarly disposed as a routine cost of process operation.

Closure steps:

A sketch of the pond is attached (there have been minor changes since the 10-13-81 sketch). The sediment on the bottom of the pond is not chemical sludge but is erosional dirt that has swept in by rainwater and has become contaminated by trace pesticides.

The pond closure would begin by hauling in fill from borrow sites on the Vertac property after supernatant waters are drained and pumped from the pond. The work will be done during hot and dry weather to facilitate drying. To improve the structural stability of the sediment it may be necessary to add lime (one percent by weight) as a cementing agent. Dirt will be added sequentially to the sections of the pond, first section 1, then section 2, then section 3 and supernatant water will be pumped off as needed.

After adequate drying and solidification the dirt emplaced with the pond would be leveled. Then the embankments would be folded over a final cover, supplemented with dirt hauled in as needed.

Finally the entire area would be seeded.

Monitoring and maintenance would continue post closure.

The costs are as follows:

Closure

10,000 yd^3 ($2.00/$yd^3$)	=	$20,000
Lime		2,500
Bulldozer at $500/day		2,500
Final cover and grass seed		2,500
Certification of plan adequacy		2,500
		$30,000*

Post Closure

8 monitoring wells ($200/yr)= $1600/yr.

Establish grass, mow grass and fill erosional areas at $900/yr.

Total = ($1,600 + $900) 30 yrs.	75,000
	$105,000

*costs are contingent on ideal weather conditions

VERTAC CHEMICAL CORPORATION

SUITE [redacted]14 · 5100 POPLAR · MEMPHIS, T[redacted]8137

CHECK NUMBER 02314

FIRST TENNESSEE BANK, N.A.
KINGSPORT/BRISTOL
KINGSPORT, TENNESSEE

87-804/642

November 3 19 82

VERTAC CHEMICAL CORP. 27054 DOLS 40 CTS

PAY DOLLARS $ 27,054.40******

TO THE ORDER OF First National Bank

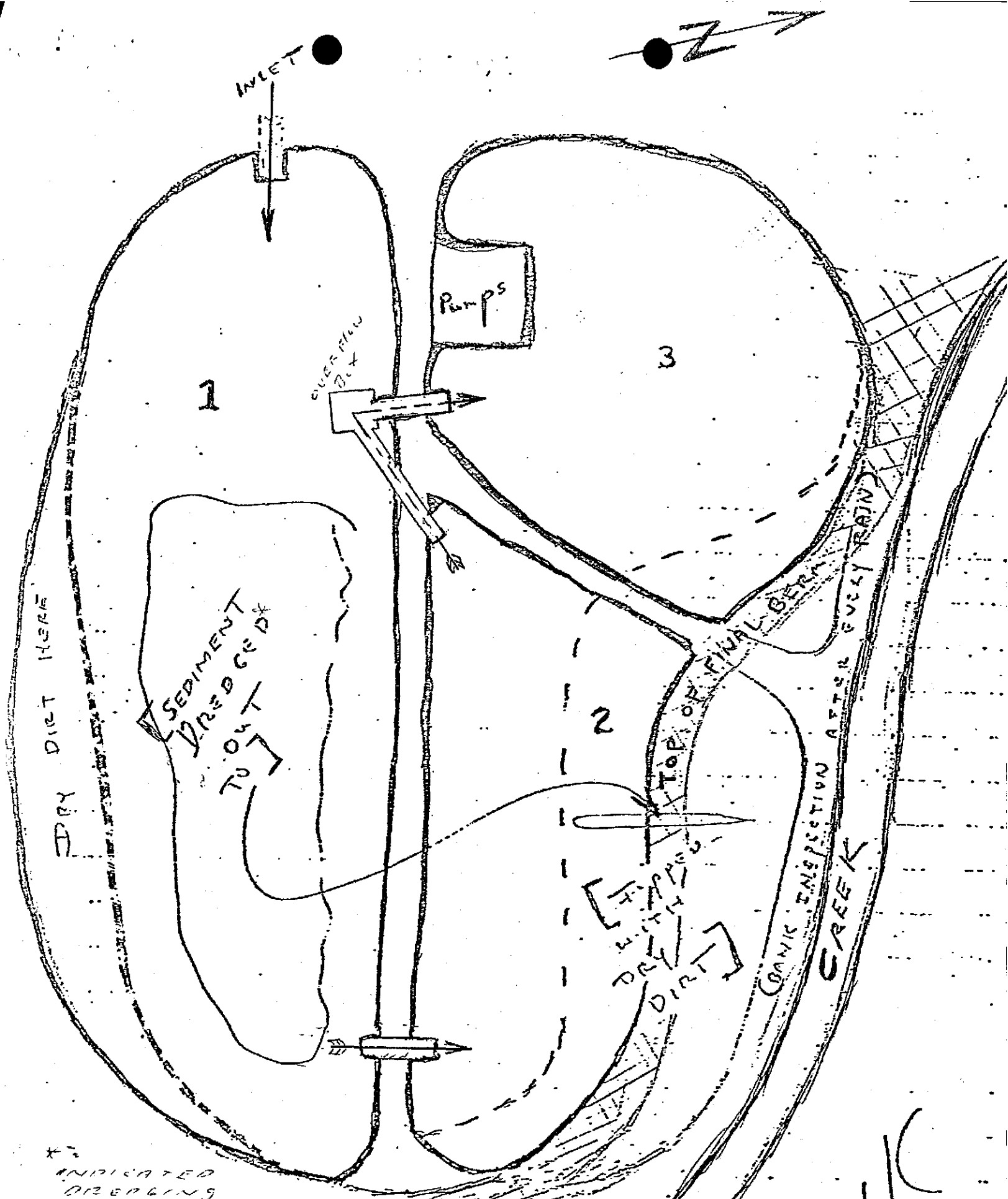
"002314" ⑆064208042⑆ 1005626"

VERTAC CHEMICAL CORPORATION
MEMPHIS, TENN. 38137

CHECK NUMBER 02314

INVOICE NUMBER	DESCRIPTION	AMOUNT	DISCOUNT OR CREDIT	NET AMOUNT
02314	Initial Deposit to Vertac Environmental Trust Account as per Trust Agreement dated October 6, 1982 by and Between Vertac Chemical Corporation and First National Bank, Vicksburg, Ms.	27,054.40	-0-	27,054.40

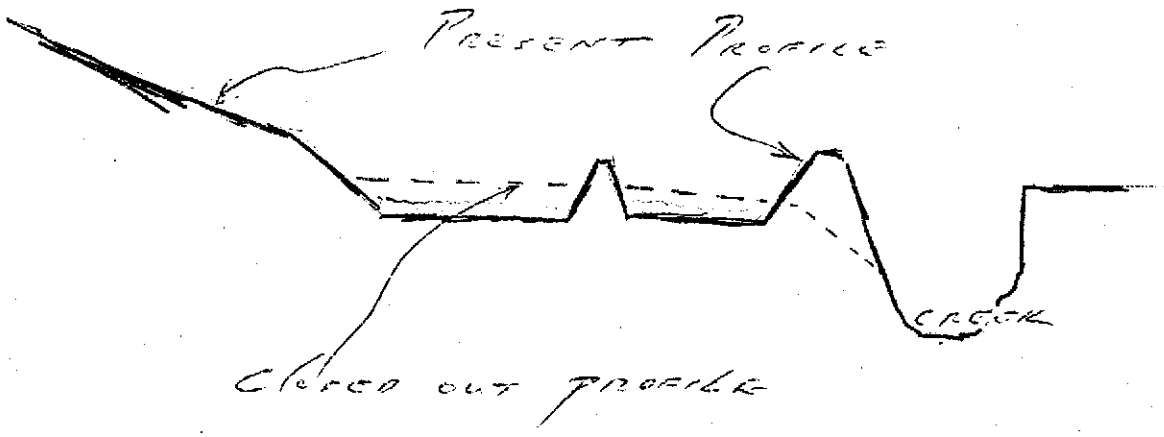
RDK
3/1/83



*: INDICATED DREDGING HAS NOT TAKEN PLACE AS of 3-1-03. & IS NOT A NECESSARY PART OF THIS PLAN AND DREDGING IN FAST MAY NOT TAKE PLACE.

NOT TO SCALE

RJK 3-17-03



Not To
Scale
RDK 3/1/03

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

October 13, 1981

Mr. David E. Lee, P.E.
Environmental Engineer
Division of Solid Waste Management
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O.Box 10385
Jackson, Mississippi 39209

Re: Modification of our Effluent Pond Closure and Post Closure Plans - Additional Detail and Costs Included

Dear Mr. Lee:

Upon closure, the liquid contents of the effluent pond would be pumped through the Calgon-activated carbon columns as per normal operating procedures at a typical operating expense of $0.13 per gallon. This expense is part of the cost of the products we make and as such is not an extraordinary expense.

The sludge or sediment within the pond would be solidified by adding dirt and then allowing the dirt to dry. The hill to the south of the pond would provide a source of some of the dirt. Additional dirt would be obtained elsewhere from the 600-acre plant site and dumped within the pond area. After adequate drying, the dirt emplaced within the pond would be leveled such that the average depth would be one and one-half feet after compaction. Next, the embankments around the north and south sides of the dried out pond area would be knocked down. Grade would be sloped slightly toward the east end of the area. The final step would be the addition of one foot of clay atop the entire area followed by one-half foot of topsoil, then grass seed.

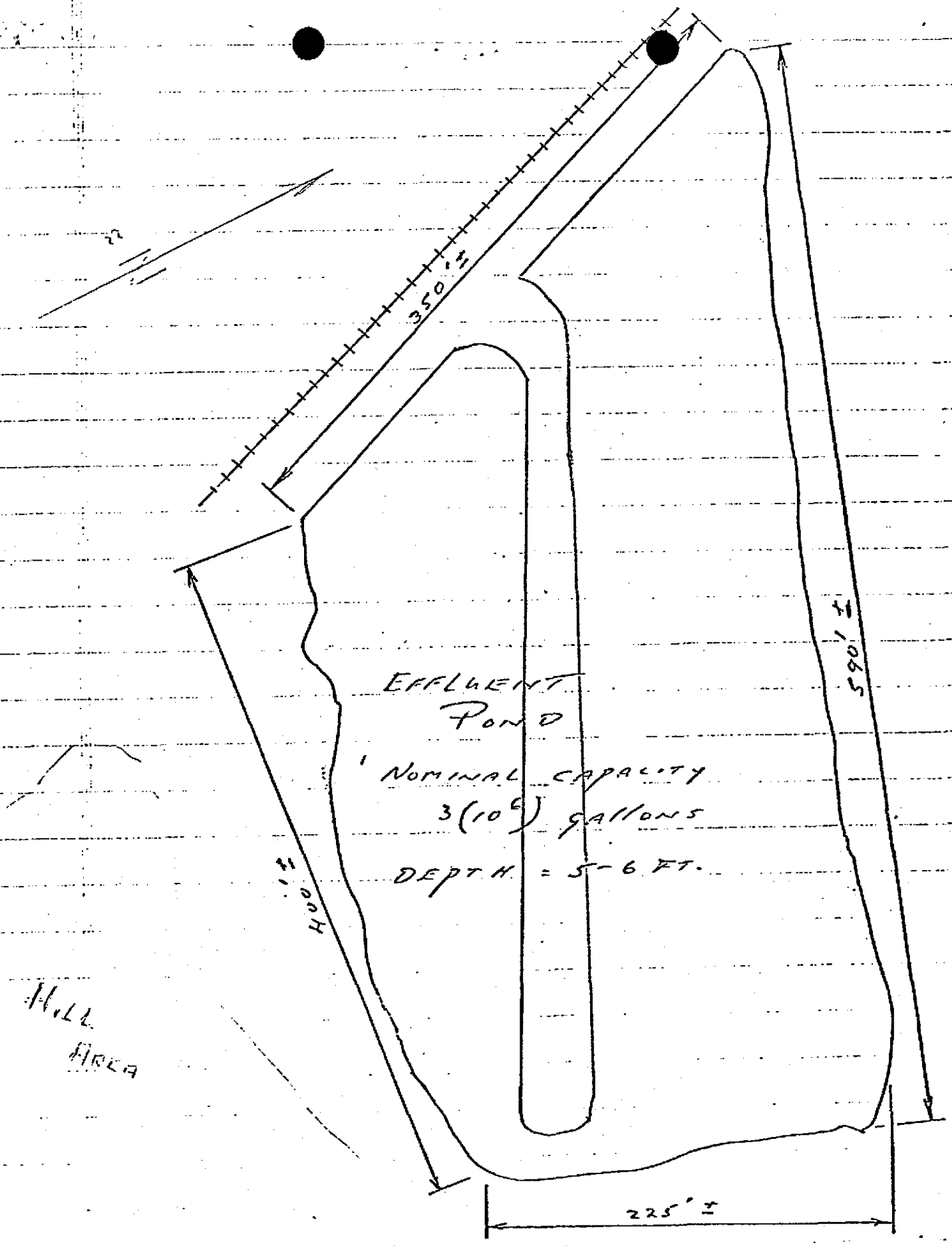
A sketch of the area is attached. The above could be accomplished at an approximate cost of $3.00 per ~~year~~ yard of dirt moved, with 10,000 yards needed. Additionally, we would continue groundwater monitoring for a period of 30 years post closure, utilizing the four (4) groundwater monitoring wells now in place, at a cost of approximately $2,000.00 per year. Groundcover remedial maintenance would cost an additional $500.00 per year. Hence, total costs are estimated at 10,000 ($3) + 30 ($2,500) = $105,000.

Very truly yours,

Richard D. Karkkainen
Director of Environment & Safety

CC: Mr. F. Ahlers
Mr. R. Guidi
Mr. R. Maraman

RDK:ew
Attachment


350' ±
590' ±
400' ±
225' ±
EFFLUENT
POND
NOMINAL CAPACITY
3(10^6) GALLONS
DEPTH = 5-6 FT.
HILL
AREA

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

RECEIVED
1983 FEB 22 PM
AIR & WATER POLLUTION CONTROL COMMISSION STATE OF MISSISSIPPI

RECEIVED
1983 FEB 22 PM 9 48
AIR & WATER POLLUTION CONTROL COMMISSION STATE OF MISSISSIPPI

February 18, 1983

Bureau of Pollution Control
Hazardous Waste Division
P.O. Box 10385
Jackson, MS 39209

Attention: Mr. Charles Estes

Subject: Report on Holding Pond Incident

In compliance with existing regulations the following report is submitted.

OWNER OF THE FACILITY:

Vertac Chemical Corporation
24th Floor, 5100 Poplar
Memphis, TN 38137
901-767-6851

NAME, ADDRESS AND TELEPHONE NUMBER OF THE FACILITY:

Vertac Chemical Corporation
Vicksburg, MS Plant
P.O. Box 3
Rifle Range Road
Vicksburg, MS 39180
601-636-1231

DATE, TIME AND TYPE OF INCIDENT:

February 5, 1983
Between midnight and 0800.
Fracture in the dike on the East side of the holding pond causing approximately 60% of same to empty into Stouts Bayou.

NAME AND QUANTITY OF MATERIALS INVOLVED:

Approximately 700,000 gallons of waste water containing an estimated 4 ppm Dinitro Butyl Phenol as the major toxic constituent.

EXTENT OF INJURIES:

None to personnel.

No apparent injury to fish, wildlife, or the environment as estimated from subsequent chemical analysis and inspection.

POTENTIAL HAZARDS:

A potential hazard existed to fish and wildlife, but was estimated to be minimal due to the immense volume of rain water run-off in the bayou.

It rained heavily before the fracture and continued to rain through 2-5-83 and until approximately noon on 2-6-83.

ESTIMATION - QUANTITY AND DISPOSITION OF RECOVERED MATERIAL:

Recovered material, estimated at two (2) yards of contaminated mud from the pond, was removed from the fracture repair area and placed back into the pond impoundment area.

In addition to the above, the following is a running account of events from February 5, 1983 through February 14, 1983:

1. 2-5-83 - Approximately 0830:

   Plant officials met at the fracture to assess the situation and determine possible hazards to human health and the environment.

   No hazards were apparent in the immediate vicinity nor did it appear that any evacuation would be necessary.

   Attention was turned to stopping the rain water run-off flowing to the creek. The pond consists of a settling section and a holding section separated by a finger dike except for a 6 foot section to allow effluent passage. Plans were made to first close the settling section, thus stopping the flow to the creek, then repair the fracture in the main dike.

   A contractor, Miller Construction, was called in to start the closing operation.

   The fracture was caused by the heavy rains in the area.

   Approximately 0900:

   The emergency response center was contacted. The situation was reported to Rick Sherrard and he contacted Steve Spengler.

   Approximately 1000:

   The bayou was inspected approximately two (2) miles South of the plant near MP&L. The bayou was muddy and approximately 10 foot deep.

   No fish kills or environmental damage was observed there or in the near by area.

   Meanwhile, Miller Construction had arrived at the plant and closed the finger dike, thus stopping any discharge to the fracture and into the creek.

   The DNBP Plant was shutdown, the Toxaphene Plant was not in operation, and the hill tank flow was stopped. At this time the plant effluent

consisted of rain water run-off.

Approximately 1300:

A return trip was made to the bayou near MP&L. The water had risen to near bank level but again no dead fish or apparent environmental damage was observed.

A creek sample was taken. The analysis was 0.4 ppm DNBP and 30 ppb Toxaphene.

Approximately 1600:

Heavy rain had set in.

Steve Spengler visited to inspect the fracture, and obtained samples of the pond bottom. Steve discussed several courses of action and outlined precautions to be taken.

Vertac also sampled the pond bottom. The analysis was 31.6 mg/Kilo DNBP and 132 mg/Kilo.

An emergency watch was set up to prevent leaks from the finger dike dam during the night.

2. 2-6-83:

Since the dike surrounding the pond was saturated from recent rains, it would not support heavy equipment. Therefore, Miller Construction started constructing a road across the "dry" mid section of the pond to reach the fracture. They worked 24 hours per day to reach the fracture.

Steve Spengler visited to review progress and meet with Vertac officials and Dick Karkkainen, the Environmental Manager.

At 1130 the bayou near MP&L was sampled. The analysis was less than 0.1 ppm DNBP and 5 ppb Toxaphene.

The bayou was bank full with water. No dead fish or environmental damage was observed.

3. 2-7-83:

Miller Construction reached and filled the fracture. Reinforcing dirt was placed for almost 15 feet North and South of the closed fracture.

Plans were formulated to extend the existing dike by extending the width to approximately 20 feet, the length of the pond on the East side.

A consultant, Gee-Strickland, arrived to observe repairs and make recommendations.

A 36 inch concrete pipe was placed in the new road allowing the dammed up water to flow to the effluent pumps.

Steve Spengler and Charles Estes collected additional samples and advised moving the contaminated mud that had oozed out from under the dirt fill. The mud was removed by Miller Construction and placed in the "dry" pond area.

During the night water started to breach the access road, but the emergency crew repaired the leak and prevented major damage.

Approximately 1130:

The bayou at MP&L was inspected and sampled. It was about 15 feet deep. No dead fish or environmental damage was observed.

The analysis was nil DNBP and less than 1 ppb Toxaphene.

4. 2-8-83:

A storm front was expected to arrive. It was anticipated that rain water would run from the South hill area into the "dry" portion. A diesel pump was brought in to pump the water into the containment section.

A nearby source of good dirt was located to be used to extend the East dike.

The rain started in the afternoon.

5. 2-9-83:

The rain became a 2 1/2 inch downpour. Run-off water broke through the access road, but the diesel pump kept the situation under control.

The rest of the evening was a holding action.

Stouts Bayou rose to within inches of the top of the fracture repair and sandbags were placed to prevent the bayou from running into the pond.

The repair held with only minor washing on the bayou side.

6. 2-10-83:

Access road and fracture repair brought up to proper elevation.

7. 2-11-83:

Progress continued in a North-South direction on the East dike extention and it was completed on 2-14-83.

Steve Spengler and Charles Estes visited to inspect the progress.

Approximately 1/2 the pond is operational with the remainder to be placed in service as soon as possible.

To this point Vertac has spent approximately $63,000 to repair the fracture.

The strategy to protect Vertac's repair investment is currently being discussed at the corporate level.

R. F. Maraman

R.F. MARAMAN
Chief Chemist

RFM/tsd

cc: Steve Spengler
R.F. Maraman
Effluent File
File

February 14, 1983

Mr. Dick Karkkainen
Vertac Chemical Corp.
24th Floor
5100 Poplar
Memphis, TN 38137

Dear Mr. Karkkainen:

After reviewing the grading and capping plans for the inactive disposal area at the Vicksburg facility, we find that the plans are acceptable as submitted. The capping and grading project may begin whenever the weather conditions become favorable.

The proposed locations and depths for the four groundwater monitoring wells to be installed are also acceptable. Our office will be available to assist in the final location of the wells.

Should you have any further questions, please contact our office.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste Management

CE:cb

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

February 3, 1983

RECEIVED
1983 FEB -4 AM 9:21
AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Illinois Gulf Central Railroad
P.O. Box 191
Vicksburg, MS 39180

Attention: Mr. A.E. Chance
Superintendent of Engineering
Southern District

Dear Sir:

This letter confirms delivery to Mr. Joe Farrar of one set of drawings prepared by MCI/Consulting Engineers, Sheets 1 through 5 of 5 showing proposed work on the inactive chemical waste landfill, all as described in my letter of January 26, 1983 (copy enclosed).

Subsequent to discussion with your Mr. Farrar, minor revisions have been made on Sheets 2 and 3 along with Sheet 5 added to clarify the proposed work on or near the IGC right-of-way.

Your approval and/or comments will be appreciated.

Sincerely,

R.W. JAMES, JR.
Project Engineer

RWJ/tsd

Attachment

cc: F. Ahlers
[redacted]
Mr. Joe Farrar w/set of drawings
D. Madsen
D. Karkkainen
Mr. Felon Wilson, MCI

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

January 26, 1983

Illinois Gulf Central Railroad
P.O. Box 191
Vicksburg, MS 39180

Attention: Mr. A.E. Chance
Superintendent of Engineering
Southern District

Dear Sir:

Vertac Chemical Corporation presently has an inactive chemical waste landfill located on Vertac property East of the IGC 100' right-of-way between Milepost 224-3 (private road crossing) and Milepost 224-4, Vicksburg District.

In cooperation with the Mississippi Department of Natural Resources, Vertac proposes to perform some regrading in this area to seal the area, to provide better storm water run-off and to establish a good cover of grass to prevent errosion.

Vertac has retained MCI/Consulting Engineers of Knoxville, TN, to provide, among other things, a proper grading plan which will involve filling the low area East of the IGC Railroad between Mileposts 224-4 and 224-5. To complete the proposed contours properly some of this fill will occur on the IGC right-of-way, but in no way should the roadbed be adversely affected.

Vertac is submitting drawings to the Mississippi Department of Natural Resources for formal approval prior to proceeding with this project.

After an informal meeting on January 24, 1983, with Mr. Joe Weaver, the IGC Track Supervisor of the Vicksburg District, it was suggested that we make a formal request to IGC through your office for approval of this portion of the project prior to proceeding.

Vertac requests your approval and/or comments on this proposal. Should additional information be required, please do not hesitate to call upon us.

Sincerely,

R.W. James Jr. (Hand Carried)

R.W. JAMES
Project Engineer

RWJ/tsd

cc: F. Ahlers
[redacted]
D. Madsen
D. Karkkainen
Mr. Felon Wilson, MCI

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

January 25, 1983

Mr. Charles Estes
Mississippi Department of Natural Resources
Bureau of Pollution Control
Division of Solid Waste Management
P. O. Box 10385
Jackson, Mississippi 39209

Re: Mississippi Commission on Natural Resources Order 599-82

Dear Mr. Estes:

Attached is our report in compliance with activities 2 and 3 of the referenced order.

A summary of our progress on the activities is as follows:

Item 1. - Soils analysis submitted by Vertac on December 20, 1982. Analysis of split samples by State sent to Vertac December 22, 1982 showed State had reached conclusions identical to that reached by Vertac.

Item 2. - Detailed plan herein submitted. We are prepared to implement the plan upon your approval.

Item 3. - Topographic maps completely describing the plan are attached.

Item 4. - The location of additional groundwater monitoring wells are attached. If you approve, we plan to have them installed by April 1, 1983. Due to difficulty of access with the proposed locations preparatory work will have to be completed during reasonably dry weather. We anticipate that we will be able to meet this deadline, however, if weather causes delay we will request an extension of time.

I believe all is moving favorably forward.

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

Attch.

MCI/CONSULTING ENGINEERS, INC.
P. O. Box 23154
McBride Lane
Knoxville, Tennessee 37922
Telephone (615) 966-9788

January 4, 1983

Mr. Charles Estes
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

RE: Vertac Chemical Corp.;
MCI-82-529

Dear Chuck:

As discussed by phone Monday, a new topographic map of the disposal area at the Vicksburg facility is being prepared and is expected to be completed by the end of this week. On a preliminary basis, we are examining the option of placing a sediment pond on the southwestern side of the disposal area. This will contain sediments which have washed or may wash down from the disposal site.

Our soils laboratory reports that virgin soils near the disposal area have a remolded permeability on the order of 10^{-5} cm/sec. Therefore, with proper compaction, this material should adequately serve as final cover.

Please call if you have comments.

RECEIVED
1983 JAN 10 AM 9 43
AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Yours truly,

MCI/CONSULTING ENGINEERS, INC.

Felon R. Wilson

Felon R. Wilson, P.E.
Manager of Industrial Operations

FRW:kd

cc: Dick Karkkainen
Bob James

GEOLOGIC ASSOCIATES, INC.
LABORATORY DIVISION
Franklin, Tennessee 615 794-3596
Knoxville, Tennessee 615 966-9761

Report No. _____

REPORT OF PERMEABILITY TESTING

Client M.C.I. Consulting Engineers Date December 30, 1982

Project No. 82-824 Project Name & Location Vertac Chemical Corporation
Vicksburg, Mississippi

MCI 82-529

The soil sample which was delivered to our office was remolded to 97.7% of the soils maximum dry density as determined by the Standard Proctor Method (ASTM D-698-78). After remolding, the sample was tested for permeability. The test results are as follows:

$$K = \frac{(H)(F)(Kc)}{(T)(P_B)(D^2)} \quad \text{where;}$$

K = Permeability
H = Height of Sample (in inches)
F = Flow (in cubic centimeters)
K_c = Permeability Constant
T = Time (seconds)
P_B = Back Pressure (in P.S.I.)
D = Diameter of the Sample

$$K = \frac{(5.6)(35)(.00713)}{(960)(8)(2.8^2)} = \frac{1.3975}{60211} = 2.3 \times 10^{-5} \text{ cm/sec}$$

CLIENT M.C.I. Consulting Engineers

PROJECT Vertac Chemical Corporation

PROJECT NO. 82-824

SAMPLE LOCATION Delivered by Client

TEST METHOD: ASTM D-698, Method A

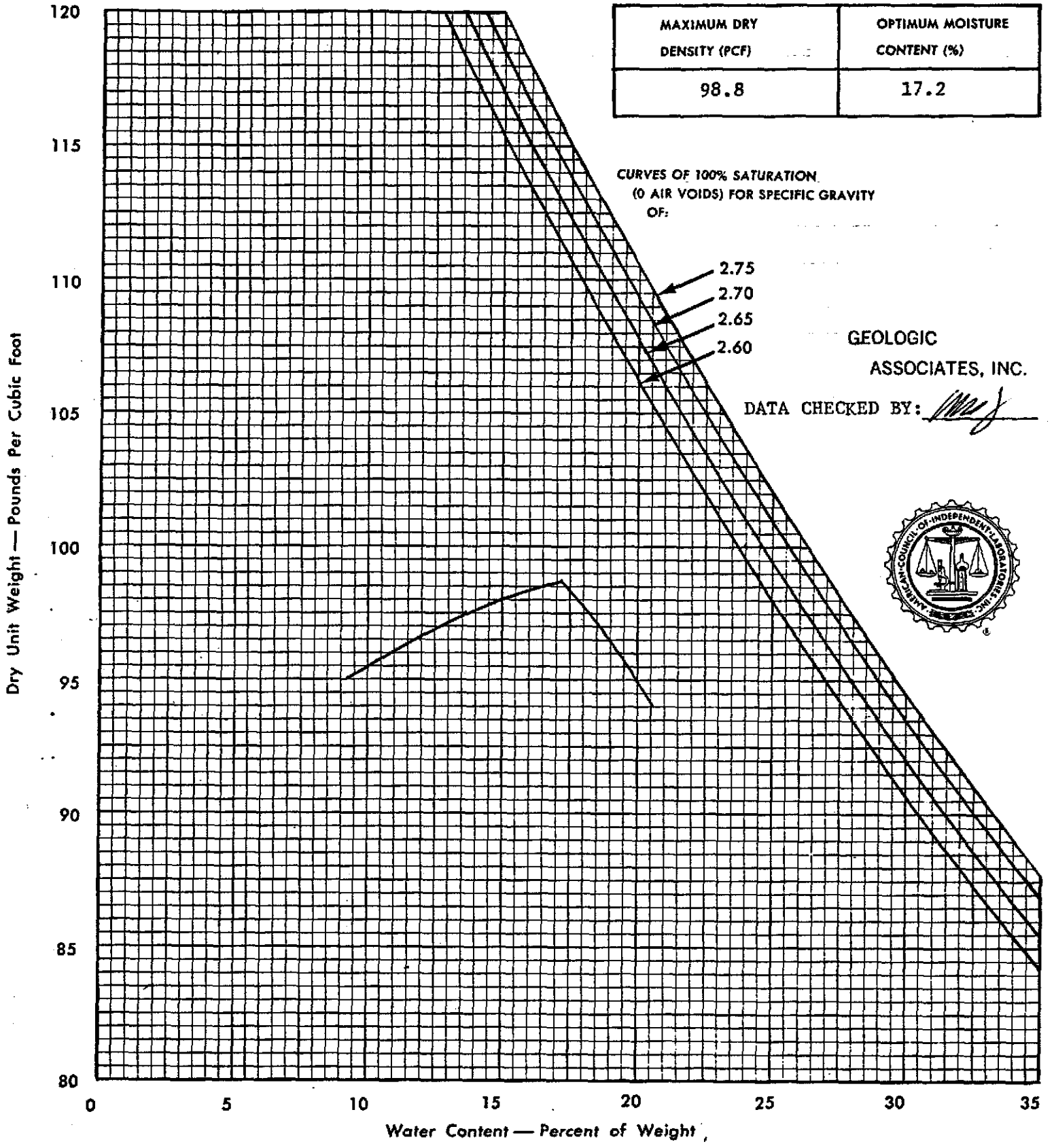
DATE December 15, 1982

SOIL PROPERTIES:

NATURAL MOISTURE (%) 22.8

SOIL DESCRIPTION Silt, (loess) Brown

MAXIMUM DRY DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)
98.8	17.2



GEOLOGIC ASSOCIATES, INC.

DATA CHECKED BY:

Decem

1982

Mr. Dick Karkkainen
Director of Environment and Safety
Vertac Chemical Corporation
24th Floor 5100 Poplar
Memphis, TN 38137

Dear Mr. Karkkainen:

I am in receipt of your letter of November 17, 1982 concerning the press release of the Commission's Order.

I want to state that our intentions were purely constructive and I am sorry for any negative comments or innunedoes that were made regarding the order.

It was felt, as you stated, that a order would define the scope of work, identify the time schedule to complete the work, and assist you in identifying and obtaining the needed resources to complete the scope of work and would establish an enforceable compliance schedule.

I hope these objectives can be obtained in a timely manner and if I can be of any assistance, please let me know.

Sincerely,

Jack M. McMillan, Director
Division of Solid Waste Management

JMM:cb

December 23, 1982

FILE COPY

Mr. Dick Karkkainen
Vertac Chemical Corporation
29th Floor, 5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

Enclosed is a copy of our analyses of the soil samples collected October 28, 1982, and October 29, 1982, from the inactive landfill at the Vicksburg facility. As you can see, there are some significant numbers for all the tested parameters. However, we feel that these numbers verify the condition that we have assumed existed at the landfill: That the side slopes and drainways are the areas of highest contamination. The ridge area of the landfill appears to have the lowest concentration of organics. Therefore, the use of the ridge material as a low-grade backfill will be acceptable.

Conversations with experts at the Environmental Protection Agency confirm that the plan to backfill and recontour with clean soil is the most adequate method available considering the contamination level. After reviewing these analyses, we see no reason why planning as has been proposed should not continue. When we receive a copy of your sample analyses, we will compare them to our results.

Should you have any further questions, please contact our office.

Sincerely,

Charles Estes, P. E.
Division of Solid Waste Management

CE:hdb
Enclosure

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

November 17, 1982

RECEIVED
NOV 19 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Sam Mabry
Division of Solid Waste
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

Dear Mr. Mabry:

We at Vertac were somewhat puzzled at the tone of press reports of the action of the Natural Resources Commission on November 10, 1982. The report prompted the attached communication to Mr. Estes. On reflection of events I think it probable the press accounts correctly implied a frustration within the Division of Solid Waste on the pace of events with regard to our closed out landfill/surface impoundment area in as much as there were statements made that this action would get Vertac's attention. Several people have asked me why the Division of Solid Waste made such a press release; I had assumed it was independent reporting.

We have known since the latter part of August, 1982 of the Division's intent to have a Commission Order issued which would set forth a series of specific actions and planning by Vertac, dates by which they must be submitted to the Division, review and approval by the Division and execution of the plan by Vertac. We welcomed this formalization of events and were prepared for it to issue as a routine matter of business not a matter of implied punishment.

A review of additional facts are:

1. The area of note became inactive in 1975.

2. We initiated these first remedial steps beginning in 1979 (well in advance of any regulatory interest):

   a. Dug trenches causing impoundments to drain to the treatment pond followed by discharge to the activated carbon system.

b. Allowed the area to dry.

c. Removed the impoundments by grading to avoid rainwater entrapment.

3. It was obvious that additional remediation would be necessary when we submitted results of EPA analyses of erosional (not leachate) areas in late April, 1982.

We had no perception of haste in 1982:

1. Internal Vertac planning as to ultimate end use beyond remediation of the area was not and still is not complete.

2. The Division of Solid Waste had grown strong and correctly demanded review of remediation and end use planning.

3. Groundwater maonitoring, a brief hydrogeolic assessment, soil testing and knowledge that buried wastes were "high and dry" as long as an integral cap could be maintained and erosion controlled caused us to believe we could establish final remediation.

4. Additional groundwater monitoring between the closed out landfill/surface impoundment area and the creek was deemed necessary to prove the absence of groundwater contamination, however, the area is inaccessible. In order to perform temporary remediation and create a road for drilling accessibility, I proposed a temporary plan in late August. That plan was turned down for insufficiency of engineering drawings and detail as to final efforts <u>irrelevant to the temporary plan.</u>

We will with vigor comply with the dates outlined in the Commission order in complete cooperation with the Division. That plan involves:

1. Partial environmental assessment by extensive grid soil sampling and analysis.

2. Complete remedial plan details.

3. Partial remediation sufficient to allow drill rig access.

4. Completion of environmental assessment by drilling additional wells.

I would have preferred and still insist it is the more logical plan to proceed stepwise as I have been wanting to do. This plan would have involved:

1. Partial environmental assessment by grid sampling.

2. Partial remediation sufficient to allow drilling access.

3. Completion of environmental assessment by drilling additional wells and additional grid sampling.

4. Complete remedial details.

My method of problem solving has always been and always will be, unless there is regulatory instructions to the contrary, to do those things which allow problem definition then problem solution. I sought in August to do immediate temporary remediation to alleviate problem potential and allow further assessment. I hardly think Vertac's attention to the problem was lacking. I think instead Vertac was exhibiting cooperation with the review and oversight process. Had I known this matter would be presented to the Commission and the press in other than a professional and business like manner, I would have appeared at the meeting to present our point of view but additionally to reassure that we would defer to the judgement as expressed in the final order.

We have solicited the help of an engineering consultant, independent of previous work, with expertise in the required areas to allow us to move forward with vigor. We will gladly meet with all who would have concern or doubt on our intent and ability to comply with all Federal and State regulations and all concerns of the Division of Solid Waste as those concerns are logically and clearly made known. Clearly something has gone awry but we intend to make this entire issue a learning experience after which we can improve our total efforts. May I reaffirm that we are very, very sensitive to releases to the press.

Best regards,

Dick Karkkainen

Dick Karkkainen
Director of Environment and Safety

RDK/bh

Attch.

c.c. S. T. MABRY

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

November 12, 1982

Mr. Chuck Estes
Division of Solid Waste
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

Dear Mr. Estes:

We are pleased that the ~~National~~ Natural Resources Commission adopted the compliance order setting forth a series of specific actions and dates by which they must be submitted by Vertac reviewed by the Bureau of Pollution Control and then executed by Vertac with regard to the closed out landfill/surface impoundment area of our Vicksburg facility. The action by the Commission was a logical step in a sequence of events to effect an end result obvious to all as necessary.

We were somewhat dismayed and embarrassed at the press reports and publicity arising from the Commission meeting. Such reports convey a counterproductive tone in as much as they then force a defensive posture rather than action on the task at hand, that of accomplishing good. Therefore, I have written this letter and simply ask that it be placed in our public file. Should that file be perused by the press they could then become informed. I do not intend to reply to the press directly, but I will review a few of the facts in this letter as to our compliance with regard to the regulations that are under the purview and concern of the Division of Solid Waste and our intent to comply with vigor as needs are clearly made known. The financial conditions of the company mandates that plans and actions be carefully established and goals achieved with a judicious use of funds.

We established the minimum RCRA groundwater monitoring program on a timely basis and are performing analyses as required. We went beyond minimum in that we performed a hydrogeologic investigation.

There was concern by the Bureau of Pollution Control as to whether we were monitoring the correct groundwater elevation since the water yield was low. I have found no disagreement among hydrogeologists that monitoring and protecting the uppermost water will then protect important lower aquifers.

It is obviously desireable to monitor groundwater between the closed out landfill and creek and we intend to do so once we have received permission to do remedial work on the hill, one part of which will be to build the road that will allow access to the area presently inaccessible to a drill rig.

We submitted in late April, 1982 the results of EPA sampling in the area. It is important to note that pesticides have not been detected in Stout's Bayou, Hatcher Bayou or the groundwater. It is a property of most pesticides that they will adhere strongly to sediment or soil and migrate as that soil moves. The EPA report showed that effect, the evidence of pesticides in two areas of high erosion that need remediation. The pesticides are not in any danger of leaving our 600 acre site; however, we do need remedial effort or perpetual care. The detection of pesticides in the erosional areas is under no circumstance indicative of properties of the soil in the hill in general.

We perhaps confused the issue by establishing the area as the site of biological facility for the future. The location we claim is logical and sound but it is an irrelevant issue and we will not bring it up until the RCRA and CERCLA issues have been fully resolved. Original plans included the biological facility which could not be funded. There were delays involved in internal Vertac planning.

In June we reported we would sample the soil on the "high hill" and analyze for pesticides prior to doing any construction. We did as we said and reported that soil to be clean in August.

In August we also reported that our plans to build the biological facility were deferred. On that basis we requested permission to perform temporary remedial work on the only aspect of this entire issue that has been defined as a problem, the high levels of pesticide found in the erosional area. We were denied permission based on insufficiency of number of samples and perhaps lack of trust. We agreed to perform extensive grid sampling and splitting of samples with the State. The program was carried out as a joint effort with the State on October 28, 1982.

We viewed the establishment of a firm plan by the Commission on November 10, 1982 as the next step in a cooperative effort.

If there is any confusion as to our intent then I think it is an absolute necessity that we set up informational meetings with whomever will cast aspersions on our intent to comply with vigor on all Federal and State regulations.

Best regards,

Dick Karkkainen

Dick Karkkainen
Director of Environment and Safety

RDK/bh

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

November 17, 1982

Mr. Charlie L. Blalock
Executive Director
Mississippi Department of Natural Resources
P. O. Box 20305
Jackson, Mississippi 39209

Dear Mr. Blalock:

We have your letter of November 11, 1982 and the enclosed Commission Order No. 599-82.

This matter has been reviewed by the Vertac Chemical Corporation management. We wish to inform the Department that the soil sampling program was completed on October 28, 1982 in cooperation with the Division of Solid Waste. These samples are currently being analyzed in the Vertac laboratories, these results will be forwarded in compliance with the date set forth in your Order. Split samples of those taken, currently being analyzed, have been delivered to your laboratories. Our personnel as well as consultants are confident that they can meet the required dates in your items 2,3 and 4. If there are any changes or any interruptions, we will be advising you.

Mr. Dick Karkkainen, Vertac's Director of Environment and Safety Affairs is responsible for this corporate function and will keep you posted on developments.

Very truly yours,

R. A. Guidi
Vice President Operations

RAG/bh

CC: C. P. Bomar, Jr.
R. D. Karkkainen

RECEIVED
NOV 1 9 1982
Department of Natural Resources

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

November 12, 1982

RECEIVED
NOV 15 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Chuck Estes
Division of Solid Waste
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

Dear Mr. Estes:

We are pleased that the National Resources Commission adopted the compliance order setting forth a series of specific actions and dates by which they must be submitted by Vertac reviewed by the Bureau of Pollution Control and then executed by Vertac with regard to the closed out landfill/surface impoundment area of our Vicksburg facility. The action by the Commission was a logical step in a sequence of events to effect an end result obvious to all as necessary.

We were somewhat dismayed and embarrassed at the press reports and publicity arising from the Commission meeting. Such reports convey a counterproductive tone in as much as they then force a defensive posture rather than action on the task at hand, that of accomplishing good. Therefore, I have written this letter and simply ask that it be placed in our public file. Should that file be perused by the press they could then become informed. I do not intend to reply to the press directly, but I will review a few of the facts in this letter as to our compliance with regard to the regulations that are under the purview and concern of the Division of Solid Waste and our intent to comply with vigor as needs are clearly made known. The financial conditions of the company mandates that plans and actions be carefully established and goals achieved with a judicious use of funds.

We established the minimum RCRA groundwater monitoring program on a timely basis and are performing analyses as required. We went beyond minimum in that we performed a hydrogeologic investigation.

There was concern by the Bureau of Pollution Control as to whether we were monitoring the correct groundwater elevation since the water yield was low. I have found no disagreement among hydrogeologists that monitoring and protecting the uppermost water will then protect important lower aquifers.

It is obviously desireable to monitor groundwater between the closed out landfill and creek and we intend to do so once we have received permission to do remedial work on the hill, one part of which will be to build the road that will allow access to the area presently inaccessible to a drill rig.

We submitted in late April, 1982 the results of EPA sampling in the area. It is important to note that pesticides have not been detected in Stout's Bayou, Hatcher Bayou or the groundwater. It is a property of most pesticides that they will adhere strongly to sediment or soil and migrate as that soil moves. The EPA report showed that effect, the evidence of pesticides in two areas of high erosion that need remediation. The pesticides are not in any danger of leaving our 600 acre site; however, we do need remedial effort or perpetual care. The detection of pesticides in the erosional areas is under no circumstance indicative of properties of the soil in the hill in general.

We perhaps confused the issue by establishing the area as the site of biological facility for the future. The location we claim is logical and sound but it is an irrelevant issue and we will not bring it up until the RCRA and CERCLA issues have been fully resolved. Original plans included the biological facility which could not be funded. There were delays involved in internal Vertac planning.

In June we reported we would sample the soil on the "high hill" and analyze for pesticides prior to doing any construction. We did as we said and reported that soil to be clean in August.

In August we also reported that our plans to build the biological facility were deferred. On that basis we requested permission to perform temporary remedial work on the only aspect of this entire issue that has been defined as a problem, the high levels of pesticide found in the erosional area. We were denied permission based on insufficiency of number of samples and perhaps lack of trust. We agreed to perform extensive grid sampling and splitting of samples with the State. The program was carried out as a joint effort with the State on October 28, 1982.

We viewed the establishment of a firm plan by the Commission on November 10, 1982 as the next step in a cooperative effort.

If there is any confusion as to our intent then I think it is an absolute necessity that we set up informational meetings with whomever will cast aspersions on our intent to comply with vigor on all Federal and State regulations.

Best regards,

Dick Karkkainen

Dick Karkkainen
Director of Environment and Safety

RDK/bh

s new trial, an 6 others

ition review by the U.S. Su-
Court."
ourt noted there is no petition for
ring on the original appeal and
e for such a request has expired.
tices said the court requires a pe-
r review of the case as a prereq-
bail pending appeal to the U.S.
e Court.
han's attorney in the case,
McTeer of Greenville, said a pe-
or a rehearing wasn't filed be-
constitutional issues that would
en addressed in the petition wer-
sed during the trial or in original
briefs to the court. McTeer said
n't Carthan's attorney during the
when the original appeal briefs
led.
eer the Supreme Court has
his est to raise the constitu-
questions since the first briefs
led.
endant Dave McLaurin had re-
a $1,000 fine in the case and de-
ts Samuel Callahan, John Dale,
pmmon, R. James Matthews and
t Johnson received $500 fines.
ad accompanied Carthan to the
station where the incident oc-

Firm ordered to hasten cleanup

By MARK SCHLEIFSTEIN
Clarion-Ledger Staff Writer

The Natural Resources Commission Wednesday ordered Vertac Inc., a Vicksburg chemical manufacturing company, to hasten the cleanup of hazardous-waste facilities at the plant.

The company, which makes agricultural chemicals and pesticides, has a hazardous-waste treatment lagoon and an inactive landfill on its property.

Bureau of Pollution Control officials told the commission that soil samples had shown "significant contamination" around the landfill.

"The firm has proposed remedial work at the site, but to date has submitted only minimal information pertaining to such a plan and has made no attempt at an organized, comprehensive site management plan," said a report to the commission. "Six months have passed since the firm's first notice of intent for cleanup work."

According to documents obtained last year by The Clarion-Ledger from the U.S. Environmental Protection Agency under the federal Freedom of Information Act, in 1979 the landfill and treatment lagoons contained about 200,000 gallons of dinitrobutyl phenol wastewater, between 3,000 and 4,000 cubic yards of sludge material contaminated with the same chemical, and a large quantity of drums containing a number of hazardous chemicals.

Dinitrobutyl phenol is described in the EPA documents as "highly toxic."

Vertac officials went to court in 1980 in an unsuccessful attempt to block the release of the EPA documents to The Clarion-Ledger and others interested in learning what hazardous wastes were stored at the site.

The commission agreed to order the company to finish its analysis of soil samples from the hazardous waste areas by Jan. 1, 1983, to prepare a site management plan by Feb. 1, and to install additional wells to monitor possible contamination of groundwater by April 1.

"We hope this will get their attention," said J.I. Palmer, an assistant attorney general assigned to the commission, "because we haven't gotten their attention on this yet."

If the commission order is violated, company officials will be required to appear before the commission to explain the violation. The commission can fine the company up to $25,000 a day for violation of the state's hazardous waste disposal law.

Civil War-era house is free for the taking

GRETNA, La. (AP) — Want a Civil War-era house? All you have to do is haul it away by Dec. 3.

But the Rev. Francis J. Carabello said that he doubts he'll find any takers for the two-story Creole cottage, which was built shortly after the Civil War.

"My thought is that it's possible to move it but highly improbable becau... of the great cost involved," he said.

Carabello, known as "Father Frank" to his parishoners at St. Joseph's Church, said he has had a number of calls in response to news reports about the house.

"There was one call which seems rather serious. They sent an appraiser down. But the gentleman told me that when he gets back with his client, he doesn't think it will be good news," Carabello said.

Suzanne Salkin, a member of the Gretna Historical Society committee formed to save the house, said she has received an estimate of $27,000 for moving it.

The trouble, said Carabello, is that the real cost of making it liveable would be far more than that.

"These homes are built off the ground — they are not built on a slab. So in moving you have to destroy the chimneys. When you get there, you have to rebuild the chimneys, rebuild the pilings.

"They'd have to take off the roof and put a whole new roof on."

"We intended to use it ourselves as offices until we found out that just to make minor repairs it would cost about $30,000. That's without even touching the roof."

Carabello said the church now plans to build a parking lot on the site, and had planned to tear down the house until the historical society asked him not to.

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

October 29, 1982

RECEIVED
NOV 2 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mississippi Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

Attention: Charles Estes, P.E. Division of Solid Waste Management

Subject: Check List, Your Letter of August 30, 1982

1. Operating Record:

   Attached are three hazardous waste operating records: The Hazardous Waste Inventory, Hazardous Waste Added to Inventory and Hazardous Waste Removed from Inventory.

   The attached Hazardous Waste Inspection Sheet has been revised to include inspection of the calgon units and to record action taken to correct deficiencies.

2. Closure Plan:

   Attached is the closure plan which was revised to include the estimation of Hazardous Waste Inventory, steps to decontaminate the facility equipment in the DNBP Hill Storage Tank, surface impoundment, DNBP Plant facility, the Toxaphene Plant facility, the Parathion facility, and the Atrazine facility.

3. The anticipated date of closure is included in the above.

4. We wish to go beyond your suggestion on containers.

   A complete inventory of the hazardous waste drums was completed in September 1982.

   It was found that some of the identification did not agree with the original inventory and contents of some other drums were unknown.

   The container contents are being rechecked and application will be made to an Alabama firm for disposal of all of the waste drums.

   The above is in progress and should enable us to dispose of waste more rapidly and efficiently than in the past.

5. A 2 foot freeboard is being maintained in the surface impoundment.

Sincerely,

R.F. Maraman

R.F. MARAMAN

RFM/tsd

cc: F. Ahlers
R. Guidi
B.J. Gunn
D. Karkkainen
S. Keen
G. Pratt
R. Maraman
File

EFFECTIVE OCT 1982
PAGE NO. _____

VERTAC CHEMICAL CORP.
VICKSBURG MS PLANT
HAZARDOUS WASTE INVENTORY

DATE	NUMBER OF DRUMS	IDENTIFICATION

EFFECTIVE OCT 1982
PAGE NO. _____

VERTAC CHEMICAL CORP
VICKSBURG MS PLANT
HAZARDOUS WASTE REMOVED FROM INVENTORY

DATE	NUMBER OF DRUMS	IDENTIFICATION

EFFECTIVE OCT 1982
PAGE NO. _____

VERTAC CHEMICAL CORP
VICKSBURG MS PLANT
HAZARDOUS WASTE ADDED TO INVENTORY

DATE	NUMBER OF DRUMS	IDENTIFICATION

HAZARDOUS WASTE INSPECTION SHEET

For the Week of _____ to _____

1. Drums at UDMH - Inspect weekly for leaks.

   Rework Leakers

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

2. Hill Tank - Record level daily and inspect tank structure and dike weekly.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

3. Waste Pond - Record level daily, keep a minimum of two (2) feet freeboard, and inspect the pond dike weekly.

   Date Inspected _____ Inspected By _____

   Results of Inspection _____

   _____

DATE	HILL TK LEVEL	POND LEVEL	INITIALS

4. Calgon Units - Report major leaks or misfunctions and inspect the units daily.

Date Inspected _____ Inspected By _____

Results of Inspection _____

_____

Action Initiated to Correct Deficiencies

40 CFR PART 265

(INTERIM STATUS STANDARDS REQUIRED FOR FACILITIES ENGAGED IN TREATMENT, STORAGE, OR DISPOSAL OF HAZARDOUS WASTES)

THE STANDARDS AND PLANS FOR COMPLIANCE

AS THEY APPLY TO THE VICKSBURG PLANT OF VERTAC CHEMICAL CORPORATION

I. SECTION 265.13 - GENERAL WASTE ANALYSIS

A. Requirement

A detailed chemical and physical analysis of a representative sample of all hazardous wastes to be treated, stored or disposed of must be obtained. A written waste analysis plan must be developed and implemented. The plan must be kept at the facility. The plan must detail sampling and analysis methods and frequencies.

B. The Plan

For wastes discharged to an NPDES permitted privately-owned treatment facility or discharged to an NPDES permitted publicly-owned treatment works, the plan is to sample and analyze as per standard in place practice or at six-month intervals, whichever is most frequent. The method of analysis is in each case the EPA method and/or that specified in "Standard Methods of Wastewater Analysis", or if not found in either of the above, by methods developed in-house by Vertac or that company for which custom chemical manufacture is in progress.

II. SECTION 265.14 - SECURITY

A. Requirement

Alternative security devices including surveillance, fencing or barriers and controlled access must be instituted to prevent unauthorized entry to the active portion of the hazardous waste facility by humans or livestock unless physical contact with the wastes by such humans or animals will not cause injury or disturb the operations of said facility.

A. The Plan

Fences or combinations of fences and natural or artificial barriers, in conjunction with controlled roadways, are used to control entry to the active portion of the hazardous

waste facility. Signs with the legend "Danger - Unauthorized Personnel Keep Out" are posted in sufficient numbers so as to be seen from any approach to this active portion.

III. SECTION 265.15 - INSPECTIONS

A. Requirement

Inspections must be performed on a schedule sufficient to detect and correct problems which may cause a release of hazardous waste to the environment. Inspections and their results must be detailed in an inspection log which must be retained for a period of three years.

B. The Plan

1. Drums - Will be inspected weekly for leaks if the drums will be stored ninety (90) days or longer.

2. Tanks - Automatic shutdown systems, by-pass systems, and drainage systems will be inspected daily. Monitoring gauges and instruments will be inspected daily. The level will be inspected daily. The structural and functional integrity of the tank itself and surrounding dikes and/or other means of secondary containment will be inspected weekly.

3. Surface Impoundments - There will be a daily check that a minimum freeboard level of two feet exists and a weekly inspection for structural and functional integrity.

IV. SECTION 265.16 - PERSONNEL TRAINING

A. Requirement

There must be a job title and written job description for each position related to hazardous waste management. The written description must describe the training required to function in the job and ensure ability to respond to Preparedness and Prevention Plans, and Contingency and Emergency Procedure Plans. Training must be completed by May 19, 1981. Records that document initial training and annual reviews must be maintained until site closure.

B. The Plan

Personnel are trained in classrooms and on the job in:

1. Procedures for Using Emergency and Monitoring Equipment

2. Operating Waste Feed Cut-Off Systems

3. Communications Systems

4. Response to Emergencies

Job descriptions are attached.

V. SECTION 265.30 - PREPAREDNESS AND PREVENTION

A. Requirement

Hazardous waste facilities must be maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste. As appropriate for the type of wastes handled, facilities must make emergency response arrangements with local services such as fire, police and hospital.

B. The Plan

Telephones are available to summon help; portable fire extinguishers are available or water at adequate volume and pressure to supply water hose streams is available. The nature of our hazardous waste is such that emergency response plans or familiarization of local authorities with facts specific and exclusive to hazardous wastes is not necessary or desirable. There does exist instead coordination of information and emergency responses pursuant to the entire manufacturing facility, raw materials and products, as well as wastes. The potential hazardous waste emergencies at Vicksburg is not severe. Hazardous waste spills will flow to the effluent pond. The contents of the effluent pond is treated by carbon adsorption prior to discharge.

VI. SECTION 265.50 - CONTINGENCY PLAN AND EMERGENCY PROCEDURES

A. Requirement

Designate an employee as the "emergency coordinator" to be on the premises on or call at all times; designate alternatives and list them in the order in which they should be contacted. An emergency contingency plan must be prepared; copies of the plan must be maintained at the facility and submitted to all local service organizations which may be requested to respond.

B. The Plan

The designated emergency coordinator is Richard Randolph. A list of alternatives is attached. The duties of the emergency coordinator is to carry out requirements of 40 CFR Section 265.56, 45 Federal Register 33237; a copy is attached.

SECTION 265.70 - MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

A. Requirement

All hazardous waste treatment, storage and disposal facilities including those which treat wastes generated on-site, must maintain an operating record at the facility which describes the quantity and quality of all hazardous wastes received, the location of each hazardous waste within the facility, the results of waste analyses, reports of all incidents requiring implementation of the contingency plan, records of all inspections, required monitoring, testing or analytical data, and all closure and post-closure cost estimates. In addition, all hazardous waste treatment, storage and disposal facilities must submit an annual report summarizing the above-cited information.

B. The Plan

Do as required.

SECTION 265.90 - GROUNDWATER MONITORING

A. Requirement

By November 19, 1981, those operating surface impoundments or active landfills as part of hazardous waste treatment storage or disposal facilities must install and operate an extensive groundwater monitoring system.

B. The Plan

Groundwater monitoring systems capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility will be installed.

SECTION 265.110 - CLOSURE AND POST-CLOSURE

Maximum Inventory of Wastes in Storage

A. DNBP Hill Storage, 1,000,000 gallons.

B. Impoundment, 3,000,000 gallons.

C. Hazardous Waste Storage, 90-55 gallon drums.

Disposal of the Waste Inventory

Upon closure, the contents of the DNBP Hill Storage Tank and The Impoundment will be run through the carbon columns at a rate such that the effluent remains within the NPDES permit limitations.

Upon closure, all surface impoundments are to be drained and filled with absorbent clays. After a drying period, a clay cap will be added.

Groundwater monitoring will be continued for a period of thirty (30) years.

The estimated cost of effluent waste disposal is estimated at $0.15 per gallon (1982 costs adjusted for inflation).

Surface impoundment closure cost is estimated at $3.30 per cubic yard. (1982 costs adjusted for inflation.)

Groundwater monitoring will be maintained at an estimated cost of $550 per well, per year. (1982 cost adjusted for inflation.)

Hazardous waste storage drums will be disposed of at an estimated cost of $55 per drum. (1982 estimated costs adjusted for inflation.)

Steps To Decontaminate Facility Equipment

DNBP Plant Facility

Reactors, wash with dilute NaOH solution, neutralize and send to the impoundment pond. Wash twice with water and sent to the impoundment pond.

Pumps and Process Lines will receive the same treatment.

The contents of The Storage and Blending Tanks will be sold and the tanks, pumps and process lines will be cleaned per above.

The cost is estimated at $300 per process vessel and storage tank and $2000 for labor. (1982 estimated costs)

The estimated closure date is 2002.

Toxaphene Plant Facility

Reactors, Storage Tanks, Blending Vessels, and Pumps and Process Lines will be washed with a minimum amount of xylene, followed by alcohol, then water. The wash water will be sent to the impoundment.

The cost is estimated at $600 per vessel or storage tank and $2000 for labor. (1982 estimated cost)

The anticipated closure date is 2002. Sumps and Basins in the DNBP and Toxaphene areas will be cleaned with dilute caustic or xylene-alcohol-water, as applicable, and filled and capped with clay.

The cost is estimated at $600 per unit.

The Parathion Facility is being converted to a MSMA facility and closure plans and costs will be given within a reasonable time after its completion.

The Atrazine Facility is closed at present but plans are to start it as soon as possible.

If the unit is started there will probably be changes made within the facility.

When it becomes clear what the future if for this plant a closure plan will be presented.

The estimated closure date is 2002.

Date

ROUTING AND TRANSMITTAL SLIP

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Tal McMillan		
2.		
3.		
4.		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Beverly Mosely	Phone No.

5041-102

☆ U.S. GPO: 1980—341-529/20

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE OCT 29 1982

Untley
cc Stater

SUBJECT Industry Studies Information

FROM George A. Garland, Chief
Analysis Branch, OSW (WH-562)

TO Regional Contacts for OSW Data Collection Activities

The attached memo from David Friedman gives the status of industry studies data collection efforts as of October 19.

Attachment

~~David~~
~~Sam~~
Chuck
file

RECEIVED
NOV 8 REC'D
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

EPA Form 1320-6 (Rev. 3-76)

*Storage RIA	Agrico Chemical Co., OK	Site visit completed 10/1/82.
	AMCHEM Products, Inc., PA	Site visit completed 7/9/82.
	*Cardion Electronics, NY	Site visit scheduled for 10/26/82.
	Cecos International, NY	Site visit completed 9/2/82.
	Chemical Waste Management of Corpus Christi, TX	Initial 3007 letter sent 7/30/82.
	Containers Specialties, MI	Site visit completed 8/4/82.
	Continental Can Co., NJ	Site visit completed 7/8/82.
	*Crosby and Overton, CA	Site visit scheduled for 11/3/82.
	*Curtis Processing Co., MI	Site visit scheduled for 10/21/82.
	General Electric, NY	Site visit completed 9/23/82.
	*Grumman Aerospace Corp., FL	Site visit scheduled for 10/28/82.
	General Mills, Inc., NY	Site visit completed 9/22/82.
	GTE Products, CA	Initial 3007 letter sent 7/30/82.
	Hayes-Albion Corp., OH	Site visit completed 7/27/82.
	International Metals Reclamation Co., PA	Site visit completed 9/3/82.
	J.H. Baxter & Co., OR	Initial 3007 letter sent 7/30/82.
	*Kiddle Walter & Co., CT	Site visit scheduled for 10/25/82.
	KMCO, Inc., TX	Initial 3007 letter sent 9/10/82.
	Lifetime Doors, Inc., SC	Site visit completed 9/21/82.
	*National Training Center Ft. Irwin, CA	Site visit scheduled for 11/2/82.
	*Naval Air Station, TX	Site visit to be rescheduled.
	Pierce Waste Oil Services, IL	Site visit completed 7/21/82.
	Union Oil Co. of Calif., CA	Initial 3007 letter sent 9/10/82.
	Union ROTO Graving Inc., CT	Site visit completed 7/1/82.
	U.S. Pollution Control, OK	Initial 3007 letter sent 9/10/82.
	Westinghouse Electric Corp, AZ	Initial 3007 letter sent 7/30/82.
	Westinghouse Electric Corp, IN	Site visit completed 8/3/82.
Location Standards RIA	Avon Refinery, CA Dow Chemical, CA IT Corp., CA Kerr-McGee Chemical, NV Texaco, CA United Technologies, CA	Initial draft report of first phase of study received and being reviewed.

Addressees

J. Skinner
M. Cook
J. Lehman
A. Lindsey
A. Corson
S. Lingle
M. Straus
W. LeBleu-Biswas
J. Poppiti
C. Jenkins
Y. Garbe
L. Buc
F. Jacoff
M. Shannon
B. Kline
A. Wolfe
J. Bellin
R. Horner
R. Jenkins

Dr. Eugene Berkau, IPCD, IERL - CIN
William Cawley, IERL - CIN
Everett L. Plyler, IERL - RTP
Barbara Elkus (WH-527)
Mike Carter (WH-552)
Robert Olexsey, IPCD, IERL - CIN
Michael Slimak (WH-553)
Richard Stern, IERL (MD-63) - RTP
Edmund Notzon (WH-586)
Dr. Eugene Meier, EMSL - LV
Dr. Theodore Meiggs, NEIC
Anne Allen (WH-527)
Sam Napolitano (PM-220)
Solid Waste Branch Chiefs, Regions I-X
Environmental Services Division Directors
Regions I-X

DATE OCT 19 1982

OFFICE OF SOLID WASTE

SUBJECT Status of RCRA Information Gathering Activities

FROM David Friedman, Manager David Friedman
Waste Analysis Program, WH-565

TO See below

The following table summarizes the status of the Agency's RCRA information gathering activities being conducted by or for the Office of Solid Waste as of October 15 1982. If you have any questions relative to the scope or status of any of these activities, or if you have additional information needs that one or more of these studies can help with, please contact Wanda LeBleu-Biswas at 755-9187.

Study	Status
Lead-Acid Battery Production Residues	Questionnaire on hold.
Coking Production Wastes	Sampling plan under development.
Textile Finishing and Dyeing	Study in initial planning.
Petroleum Refining Waste	Study in initial planning.

Study	Status	
Methyl Methacrylate Production Residues	Cyro Ind., LA	Final engineering analysis being developed.
	duPont, WV	Final engineering analysis being developed.
	duPont, TN	Final engineering analysis being developed.
	Rohm & Haas, TX	Final engineering analysis being developed.
Toluene Diisocyanate Production Residues	Allied, WV	Engineering analysis reviewed and approved.
	BASF, LA	Presampling visit completed 7/22/82.
	Dow, TX	Engineering analysis reviewed and approved.
	Mobay, TX	Engineering analysis reviewed and approved.
	Mobay, WV	Engineering analysis reviewed and approved.
	Olin, LA	Engineering analysis reviewed and approved.
	Olin, OH	Engineering analysis reviewed and approved.
	Rubicon, LA	Presampling visit completed 7/23/82.
Methylene Diphenyl Diisocyanate Production Residues	BASF, LA	Presampling visit completed 7/22/82.
	Rubicon, LA	Presampling visit completed 7/23/82.

* Indicates this action has undergone a change since previous update.

Study	Status	
*Chlorinated Organics	Denka Chemical, TX	Sampling plant final report received 5/27/82.
	Diamond Shamrock, TX	Sampling plant interim report received.
	Dow Chemical, LA	Sampling plant interim report received.
	duPont, LA	Sampling plant final report received 5/20/82.
	Ethyl Corp., LA	Sampling plant final report received 7/6/82.
	FMC Corp., MD	Sampling plant interim report received.
	*Linden Chemicals and Plastics, Inc., WV	Sampling plant final report received.
	PPG Industries, WV	Sampling plant final report received 4/16/82.
	Publicker Chemical, PA	Sampling plant interim report received.
	Stauffer, NJ	Sampling plant final report received 5/17/82.
	Union Carbide, WV	Sampling plant final report received 7/16/82.
	Vulcan Materials, LA	Sampling plant final report received.
Arylphosphate Ester Production Residues	FMC, WV	Sampling draft final analytical report will b completed upon analysis of corresponding questionnaires (see next 3 entries).
	Stauffer, WV	
	Eastman Kodak, NY	Questionnaire being analyzed.
	Mobil Chemical, VA	Questionnaire being analyzed.
	Monsanto, MO	Questionnaire being analyzed.
Carbamate Pesticide Production Residues	FMC, NY	Analytical report received.
	Monsanto Co., LA	Sampling completed.
	Rohm & Haas, PA	Analytical report received.
	Stauffer Chemical, AL	Analytical report received.
	Stauffer Chemical, LA	Sampling completed.
	Union Carbide, GA	Data being analyzed.
	Union Carbide, WV	Sampling completed 5/12/82.
	Alco Standard, TN	Questionnaire being analyzed.
	Goodyear Tire & Rubber, OH	Questionnaire being analyzed.
	PPG Industries, OH	Questionnaire being analyzed.
	Troy Chemical, NJ	Questionnaire being analyzed.
	Uniroyal, CT	Questionnaire being analyzed.
	Vanderbilt Chemical, KY	Questionnaire being analyzed.
	Vinings Chemical, GA	Questionnaire being analyzed.
*Pesticide Production Residues	American Cyanamid, NJ	Sampling to be scheduled.
	American Cyanamid, MO	Presampling completed; sampling to be schedule
	Buckman Laboratories, TN	Presampling completed; sampling to be schedule
	Chevron Chemical, CA	Presampling visit completed 7/27/82.
	*Ciba-Geigy Corp., AL	Presampling visit scheduled for 11/21/82.
	*Ciba-Geigy Corp., LA	Presampling visit scheduled for 11/21/82.
	*Diamond Shamrock, TX	Presampling visit scheduled for 10/22/82.
	*Dow Chemical USA, MI	Coordination package sent 10/8/82.
	duPont, TX	Final draft report received.
	Eli Lilly & Co., IN	Initial 3007 letter sent 6/28/81.
	*Mobay Chemical, MO	Eliminated from study.
	*Monsanto, AL	Presampling scheduled for 10/82.
	Monsanto, MO	Sampling completed 5/82.
	Rhone-Poulenc, OR	Presampling completed; sampling to be schedule
	Rhone-Poulenc, TN	Sampling draft analytical report received.

*Pesticide Production Residues (cont.)	Shell Chemical, AL	Initial 3007 letter sent 6/28/81.
	Stauffer Chemical, OH	Initial 3007 letter sent 6/28/81.
	Velsicol Chemical, TN	Presampling completed; sampling to be schedu
	[redacted]	[redacted]
Paint Formulating Production Residues		Presampling completed 8/26/82; sampling to be scheduled.
Organobromines Production Residues	Ethyl Corp., AR	Sampling completed.
	Great Lakes Chemical, AR	Sampling completed.
Lime Sludge from Stainless Steel Finishing Operations	Federal Register notice of proposed listing in internal review.	
*Organometallics	duPont, NJ	Presampling completed; sampling to be schedu
	*M & T Chemical Co., KY	Presampling to be rescheduled.
Stabilized Waste		Study underway.
*Industrial Organic Chemicals	Allied Chemical Co, VA	Presampling visit completed 8/11/82.
	American Hoechst Corp, LA	Presampling postponed.
	Amoco Chemicals, AL	Questionnaire being analyzed.
	Cos-Mar, LA	Presampling postponed.
	duPont, Orange, TX	Questionnaire sent 5/7/82.
	duPont, Victoria, TX	Questionnaire being analyzed.
	duPont, Victoria, TX	Questionnaire sent 5/7/82.
	*Eastman Kodak, TN	Questionnaire being analyzed.
	*Kalama Chemical, WA	Engineering analysis reviewed and approved.
	Monsanto Co, MO	Initial 3007 letter sent 7/2/82.
	Nipro, Inc., GA	Initial 3007 letter sent 7/2/82.
	Oxirane, International, TX	Plant shut down until end of 1982.
	Rohm & Haas, TX	Initial 3007 letter sent 3/10/82.
	Uniroyal Chemical, LA	Final engineering analysis being developed.
*Dyes & Pigments Production Residues	*Atlantic Chemical, NJ	Preliminary site visit scheduled for 10/82.
	American Cyanamid Co., OH	Preliminary site visit completed 7/27/82.
	*BASF Wyandotte, NJ	Preliminary site visit scheduled for 10/82.
	*Borden Chemicals, OH	Preliminary site visit scheduled for 10/82.
	*Carey Industries, CT	Preliminary site visit scheduled for 10/82.
	*Ciba-Geigy Corp., NJ	Preliminary site visit scheduled for 10/82.
	Fabricolor, Inc., NJ	Preliminary site visit completed 7/20/82.
	*Harshaw Chemical, KY	Preliminary site visit completed 8/24/82.
	*Hilton Davis, OH	Preliminary site visit completed 8/23/82.
	Martin Marietta Corp., NC	Preliminary site visit completed 6/15/82.
	Morton Chemical Co., NJ	Preliminary site visit completed 8/3/82.
	*Warner Jenkinson, MO	Preliminary site visit scheduled for 10/82.
	Initial 3007 letters and/or surveys sent 6/10/82 to 48 manufacturers. Contact Rick Horner (382-4686) for additional information.	

FILE COPY

October 7, 1982

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor, 5100 Poplar
Memphis, Tennessee 38137

Dear Mr. Karkkainen:

During our meeting of September 24, 1982, we discussed moving soil from the upper hill area to be used as cover for major erosional areas on the east and west side of the old landfill and reclaimed pit areas. We are in agreement in principal with this plan as a temporary measure; but we must have a more complete analysis of existing conditions before we can accept the plan. We also want to insure that this measure fits into the final plan for the entire area.

To make a determination a soil sampling project for the entire area must be conducted. This will determine the extent of contamination of on-site soils and the potential for leaching of contaminants. Our office will assist in taking soil samples to be analyzed by your lab. We must have details on the temporary and final construction work for the entire area. This includes topo maps, a timetable, a description of the final cover and vegetation. A description of the final disposition of the contaminated sediments in the ditches bordering the hill area must be addressed. Also, a description and location of additional groundwater monitoring wells needed to meet RCRA requirements must be addressed.

The soil sampling program should begin immediately. Please contact our office to set a time which is convenient for you. Should you have any questions, please contact our office.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste Management

CE:cl

INTERNAL CORRESPONDENCE

RECEIVED

OCT 1 REC'D

DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

DATE: September 27, 1982

TO: R.D. Karkkainen

FROM: L.D. Greganti

SUBJECT: Chemical Sump for MSMA Bldg.

The attached information was provided to R.F. Maraman to send to the state EPA. I hope this is adequate, if not please let me know.

LDG/tsd

To

Mr. Charles Estes
Mississippi Department of
Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

I assume you got this from the plant, but just in case the mail was delayed.
DLK
9/29/82

Dudick TECH DATA SHEET

PROTECTO-COAT 10A/10P MONOLITHIC FLOOR TOPPING 1/4" THICK UNREINFORCED

Protecto-Coat 10A/10P are unreinforced epoxy/polyester toppings for horizontal floor areas subjected to chemical attacked and heavy mechanical use. Several times stronger than concrete, these materials excel in areas such as plating room floors, truck loading platforms, isleways and areas subjected to occasional spills.

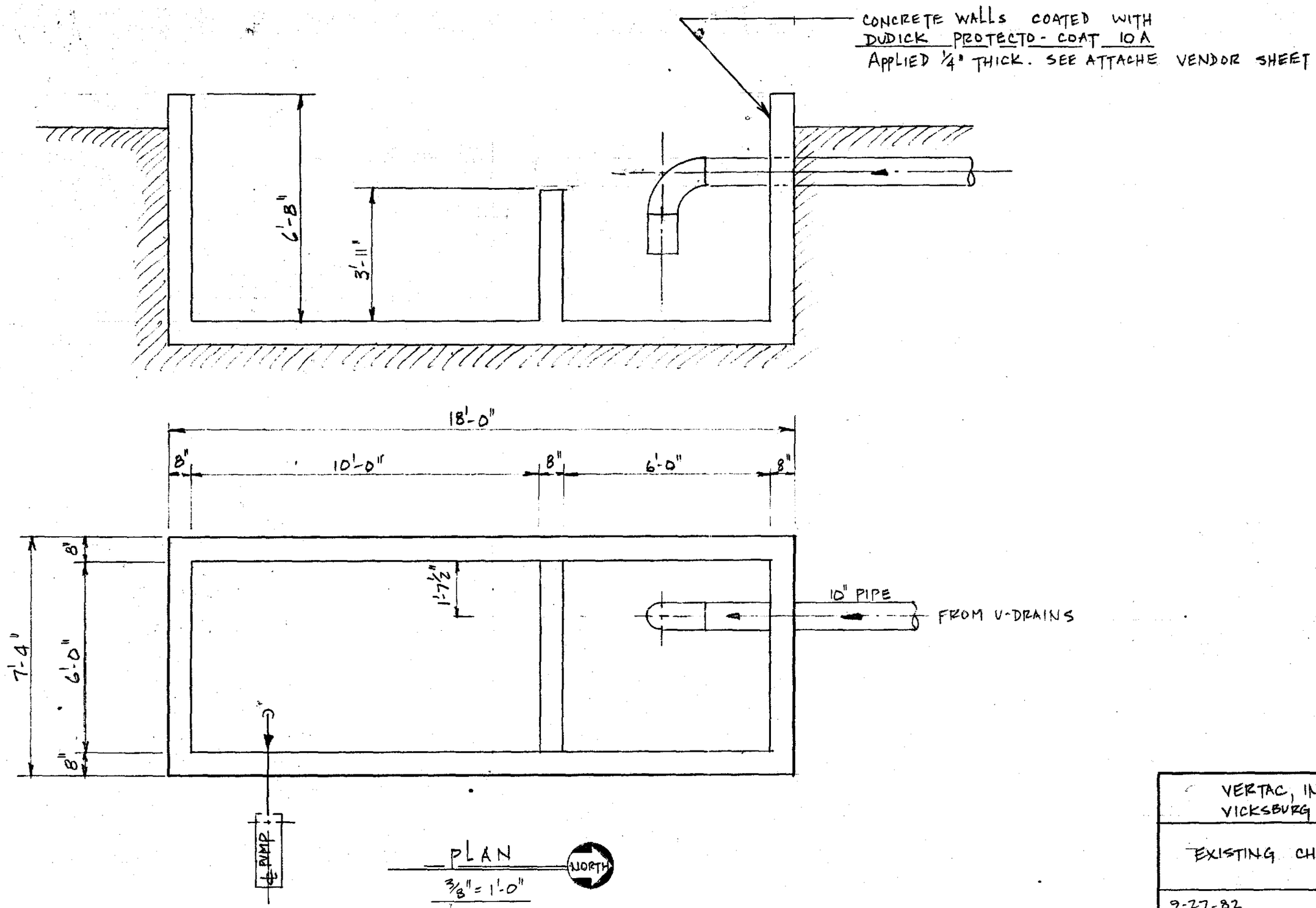
CHEMICAL RESISTANCE:

Protecto-Coat 10A consists of a modified high molecular weight epoxy cured with a polyamine curing agent. Used for caustic, solvents, salts and mild acidic exposures.

Protecto-Coat 10P consists of a modified polyester resin that exhibits exceptional acid resistance and mild caustic resistance. Used only as a 2nd choice over P-Coat 10A due to high cure shrinkage.

PHYSICAL PROPERTIES:

Protecto-Coat	10A	10P
Compressive Strength	9,000 PSI	12,000 PSI
Tensile Strength	2,000 PSI	20,000 PSI
Density	140 lbs./ft.^{3}	140 lbs./ft.^{3}
Flexural Strength	4,000 PSI	4,000 PSI
Flexural Modulus	720,000	1,100,000
Impact Resistance	3x to 4x greater than concrete	



VERTAC, INC.
VICKSBURG PLANT

EXISTING CHEMICAL SUMP

9-27-82

§ 261.31 Hazardous waste from nonspecific sources.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Generic:		
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from the recovery of these solvents in degreasing operations.	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoromethane; and the still bottoms from the recovery of these solvents.	(T)
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents.	(I)
F004	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.	(T)
F005	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, and pyridine; and the still bottoms from the recovery of these solvents.	(I, T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum.	(T)
F007	Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions).	(R, T)
F008	Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating plating bath sludges).	(R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electroplating spent stripping and cleaning bath solutions).	(R, T)
F010	Quenching bath sludge from oil baths from metal heat treating operations where cyanides are used in the process (except for precious metals heat-treating quenching bath sludges).	(R, T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning).	(R, T)
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges).	(T)

[261.31 revised at 46 FR 4614, 1-16-81; revised at 46 FR 27473, 5-20-81.]

§ 261.32 Hazardous waste from specific sources.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Wood Preservation:		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol	(T)
Inorganic Pigments:		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments	(T)
K008	Oven residue from the production of chrome oxide green pigments	(T)
Organic Chemicals:		
K009	Distillation bottoms from the production of acetaldehyde from ethylene	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile	(R, T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile	(T)
K015	Still bottoms from the distillation of benzyl chloride	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride	(T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene	(T)
K026	Stripping still tails from the production of methyl ethyl pyridines	(T)
K027	Centrifuge and distillation residues from toluene diocyanate production	(R, T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane	(T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane	(T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene	(T)
K083	Distillation bottoms from aniline production	(T)
K103	Process residues from aniline extraction from the production of aniline	(T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production	(T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes	(T)
Inorganic Chemicals:		
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used	(T)
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production	(T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production	(T)
Pesticides:		
K031	By-product salts generated in the production of MSMA and cacodylic acid	(T)
K032	Wastewater treatment sludge from the production of chlordane	(T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane	(T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane	(T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane	(T)
K035	Wastewater treatment sludges generated in the production of creosote	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton	(T)
K037	Wastewater treatment sludges from the production of disulfoton	(T)
K038	Wastewater from the washing and stripping of phorate production	(T)
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate	(T)
K040	Wastewater treatment sludge from the production of phorate	(T)

SALT CAKE IS HAZARDOUS

9/25/En

© 1981, Commerce Clearing House, Inc.

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

September 28, 1982

RECEIVED
SEP 30 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles Estes
Mississippi Department of Natural Resources
Bureau of Pollution Control
Division of Solid Waste Management
P. O. Box 10385
Jackson, Ms. 39209

Dear Mr. Estes:

As a follow up to my letter of August 24, 1982 and our subsequent conversations, I have attached a sketch and herewith propose additional "high hill" locations for purposes of sampling and analyzing to additionally confirm our assertion that that the "high hill" dirt is sufficiently clean to use for remedial work in the two erosional areas identified by the EPA as sampling points VL-002 and VL-003.

The immediate objective of this initial effort would be to move approximately 2,000 cubic yards of dirt for remedial work. With reference to the sketch the top of the "high hill" would be removed to the 125 feet elevation. This is not to be confused with a long range objective of bringing the high hill elevation to 110 feet which effort would involve movement of approximately 80,000 cubic yards of dirt.

I propose that while we are sampling that we can expand the sampling grid over the entire "high hill" area for purposes of ascertaining whether the entire hill of dirt is sufficiently clean to allow eventual progress toward the long range objective.

I propose seven grid samples each grid consisting of four sampling points. At each of the sampling points a hand augered composite sample to a depth of four feet would be taken. The four samples within a grid would then be composited and a split sample given to the State. Our Vicksburg laboratory would analyze the seven grid samples for atrazine, DNBP and toxaphene.

With reference to the sketch the grid samples are defined as follows:

Grid Sample	Sampling Point
1	A,B,C,D
2	E,F,G,H
3	I,J,K,L
4	M,N,O,P
5	Q,R,S,T
6	U,V,W,X
7	Y,Z, α,β

Our efforts would not be intended as an academic exercise in sampling and analyzing. If samples 1 and 2 turned out to be comparable to the results obtained for the "high hill" sampling at a depth of 35 feet then we would anticipate the lack of objection in using the dirt within those grids to a depth not to exceed 4 feet. The dirt would be bulldozed to the two erosional areas on a best effort,best field judgement basis which effort is intended as immediate remedial maintenance probably but not necessarily part of the final plan for the area.

With regard to the long range plan we acknowledge that the information provided by analyses alone may not be sufficient for the State to make final judgement on the adequacy or adviseability of the long range plan, that details may not have been adequately presented, and that a timetable of accomplishment does not exist.

Evidence of gross contamination would cause a mutual decision to create an alternative plan. The long range plan is of course based on the assumption that "high hill" dirt from an elevation of 110 feet upward is clean, which assumption is based on examination of the factual history of the site without preconcieved notion and also the remedial efforts to date.

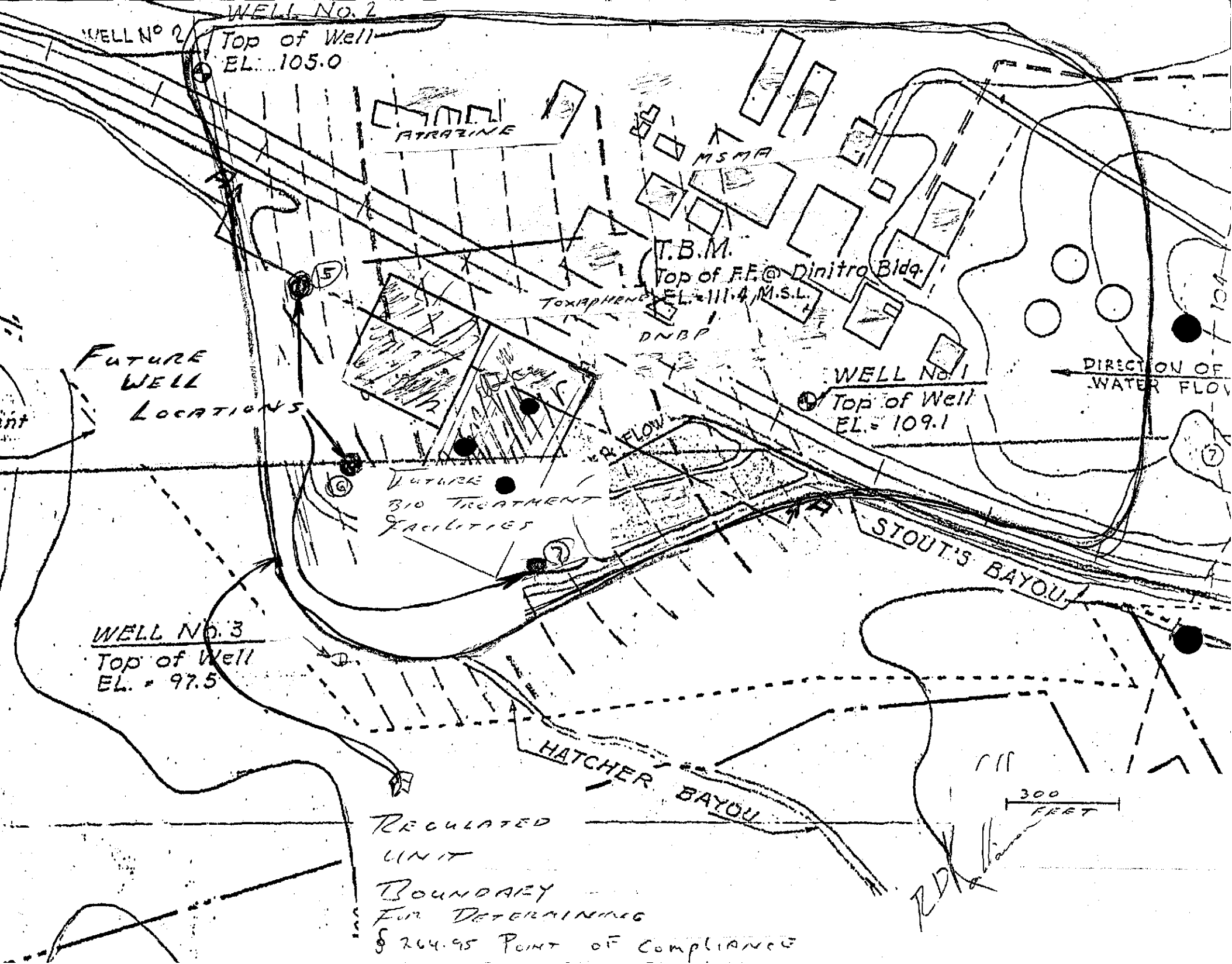
I would like to be present for at least the initial part of this effort. If you are in agreement the last week of October is good.

Best regards,

Dick Karkkainen
Director of Environment and Safety

RDK/bh

Attch.


WELL No. 2
WELL No 2
Top of Well
EL. 105.0
ATRAZINE
MSMA
T.B.M.
Top of F.F. @ Dinitro Bldg.
EL. = 111.4 M.S.L.
TOXAPHENE
DNBP
FUTURE WELL LOCATIONS
WELL No. 1
Top of Well
EL. = 109.1
DIRECTION OF WATER FLOW
FLOW
FUTURE BIO TREATMENT FACILITIES
STOUT'S BAYOU
WELL No. 3
Top of Well
EL. = 97.5
HATCHER BAYOU
300 FEET
REGULATED UNIT BOUNDARY FOR DETERMINING § 264.95 POINT OF COMPLIANCE

Vertac

1) comprehensive site management plan including:

~~a) complete topographic map of the entire site~~

a) A sampling program to analyze all the soils which could possibly be contaminated. Our office will assist in collecting samples to be analyzed by Vertac's lab. The sampling program will include A grid system with A sample collection system similar to that proposed by Vertac in the Sept. 28, 1982 letter except that it will be expanded to cover the old landfill area.

b) A plan for the desposition of contaminated sediments, soils and old landfill area;

c) installation of additional ground-water monitoring wells to comply with RCRA requirements; and

d) A complete before and after topographic map of the entire site including the above items.

2) A compliance schedule as follows:

a) Results from the sampling program by December 1, 1982;

b) A plan for the desposition of contaminated sediments, soils and old landfill area by January 1, 1982;

c) A ~~complete before and after~~ topographic map as described above by January 1, 1982; and

d) installation of additional ground-water monitoring wells by February 1, 1982.

FILE COPY

August 30, 1982

Mr. Bob Maraman
Vertac Chemical Corporation
P. O. Box 3
Vicksburg, Mississippi 39180

Dear Mr. Maraman:

Enclosed is a copy of the compliance checklist from the inspection of July 7, 1982. The following items were found to be out of compliance:

1. Section 265.73 (b) - Operating Record

   A general operating record must be developed to record the number of drums, type of waste and inspection records for the drums and tanks;

2. Section 265.91-265.94 - Groundwater Monitoring

   This item will be addressed in a separate letter;

3. Section 265.112 (a)(2) - Closure Plan

   The closure plan must include an estimte of the maximum inventory of wastes in storage;

4. Section 265.112 (a)(3) - Closure Plan

   The closure must include steps to decontaminate facility equipment;

5. Section 265.112 (a)(4) - Closure Plan

   The closure plan must include an anticipated date of closure for the facility;

6. Section 265.173 - Containers

   Open drums were found within the hazardous waste storage area. There was some questions as to whether the drums actually stored hazardous waste. These drums must be checked to determine their content and closed if they are found to contain hazardous waste;

7. Section 265.222 - Surface Impoundments

   The surface impoundment must maintain at least a 2 foot freeboard. Inspection logs indicate that during the wet season of the year the impoundment did not maintain 2 feet of freeboard.

These items must be corrected by no later than October 31, 1982. The paperwork items may be sent to our office for review. Should you have any questions, please contact our office.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste Management

CE:cl
Enclosure
cc: Mr. Dick Karkkainen

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

August 9, 1982

RECEIVED
AUG 11 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mississippi Bureau of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

Attention: Mr. Charles Estes, P.E.

Subject: Request for Calgon and Hazardous Waste Information

Reference above request, I am enclosing the following:

Louisiana Hazardous Waste Numbers

Calgon Absorption System Operating Manual.

Sincerely,

R. F. Maraman

R.F. MARAMAN
Chief Chemist

RFM/tsd

cc: F. Ahlers
F. Bleyer
D. Karkkainen
D. Madsen
R. Maraman
File

THIS FORM FOR GENERATORS ONLY

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-01	Metal drums contaminated with trace dinitro-butyl-phenol	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9	2	Variable

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-02	Water.20% Tenneco 500, trace toxaphene	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	10 40	4	2	2200 gallons

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-03	Empty Atrizine fiber drums sealed in cyanuric chloride drums	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9	2	30 drums/week

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-04	Plastic liner from cyanuric chloride drums packed in 55 gallon drums	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9	2	3 drums/day

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-05	Toxaphene contaminated rags and refuse	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III				Variable

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-06	Tri-butyl-amine in 55 gallon drums	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	2		

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-07	Methanol	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	10 40	2		

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-08	Tri-isopropanol-amine	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9		

THIS FORM FOR GENERATORS ONLY

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-09	Bromine	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	30 40	2		50 gallons

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-10	Toxaphene in cyanuric chloride drums	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	2		5 drums

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-11	Metal drums contaminated with trace toxaphene	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	2		35 drums

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-12	Drums contaminated with dinitro-ortho-cresol	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9		Variable

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-13	OLEP ADSORBED ON ACTIVATED CARBON	Yes [x] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	8	2	? 30 GAL DRUMS

A. Waste Number	B. Hazardous Waste Name	C. Confidential
		Yes [ ] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	

A. Waste Number	B. Hazardous Waste Name	C. Confidential
		Yes [ ] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	

A. Waste Number	B. Hazardous Waste Name	C. Confidential
		Yes [ ] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	

OPERATING MANUAL

CALGON ADSORPTION SYSTEM

WASTEWATER TREATMENT PLANT

for

VICKSBURG CHEMICAL CO.

VICKSBURG, MISSISSIPPI

by

CALGON CORPORATION

PITTSBURGH, PENNSYLVANIA

DRAFT

1.0 INTRODUCTION

This manual covers a general description of facilities and operating procedures for a system to treat effluent waste streams from the Vicksburg Chemical Company plant in Vicksburg, Mississippi. The system uses granular activated carbon in fixed bed adsorbers in which the waste stream flows downward through the beds.

The procedures set forth herein represent the best information currently available for this system. In event improved operating techniques are developed in the future by Calgon, such information will be issued for incorporation in this manual.

2.0 DESCRIPTION OF FACILITIES

2.1 GENERAL DESCRIPTION

The equipment for the adsorption system located at the Vicksburg Chemical Company plant consists of five fixed bed adsorbers, a carbon transfer tank process and utility piping and all instruments and controls.

The adsorption system is broken into two units. One unit consists of two adsorbers piped for either series or parallel operation. The second unit consists of three adsorbers piped for parallel operation only.

Fresh activated carbon will be delivered to the plant in Calgon trailers and will be unloaded directly into an empty adsorber. Spent carbon will be transferred from an adsorber directly to the Calgon trailer for return to Calgon for reactivation. The fresh carbon will be transferred from the transfer tank to the empty adsorber and the adsorber returned to service.

2.2 PROCESS DESCRIPTION

This process description is a general description of the operation of the granular activated carbon treatment facility located in the Client's plant. The flow diagrams should be consulted in conjunction with the description of the facilities.

Waste water is pumped continuously to the adsorbers. Organic chemical impurities present in the stream are adsorbed on the activated carbon as the water is passed through the beds. The flow is regulated by the Client's control system for the feed to the adsorption system.

The adsorbers are each filled with approximately 20,000 pounds of granular activated carbon. Waste water enters the top of the vessels, flows downward through the carbon beds, and leaves through pipe lateral systems in the bottom of the vessels. The treated water leaving the adsorbers is discharged to the Client's disposal system.

When the carbon in an adsorber becomes saturated with the impurities adsorbed from the waste water, the adsorber must be taken out of service to remove the spent carbon and replace it with fresh carbon. Prior to replacing the spent carbon it must be washed with plant water to displace the intersticial wastewater.

The fresh activated carbon will be delivered in a Calgon trailer. The fresh carbon will be transferred from the trailer to the carbon transfer vessel. This is accomplsihed by filling the trailer with plant water, pressurizing the trailer with compressed air and transferring the fresh carbon as a water slurry to the transfer tank. Spent carbon must then be transferred from an adsorber to the empty Calgon trailer by pressurizing the adsorber. The empty adsorber will be flushed with plant water to insure that all of the spent carbon has been removed. The fresh carbon will then be transferred to the empty adsorber by pressurizing the transfer vessel with compressed air. When all of the carbon has been transferred the transfer tank will be flushed with plant water. Prior to leaving the site the Calgon trailer must be drained of all free wastewater.

2.3 OPERATING CONDITIONS

2.3.1 The Adsorption System was designed to allow treatment of two separate wastewater streams. The following are the design operating conditions for each system.

SYSTEM A (Two adsorbers operated in series)

Wastewater Flow Rate Maximum	500 GPM
Temperature	150°F Maximum
Pressure Vessel Rating	75 psig @ 150°F Full vacuum
Normal Pressure Readings at maximum flow	
Inlet to Adsorbers	15-25 psig
Discharge from Adsorbers	5-15 psig
Adsorber Capacity	Approx. 20,000 lbs. of granular activated carbon
Wastewater Influent Condition	
pH	6.0 - 9.0
Suspended Solids	Less than 50 mg/l

SYSTEM B (Three Adsorbers Operated in Parallel)

Wastewater Flow Rate	
Maximum System Flow	2000 gpm
Maximum Flow per vessel	670 gpm
Temperature	150°F Maximum
Pressure vessel ratings	75 psig @ 150°F Full vacuum
Normal pressure readings at maximum flow	
Inlet to Adsorbers	25-35 psig
Discharge from Adsorbers	5-15 psig

Adsorber Capacity	Approx. 20,000 pounds of granular activated carbon
Wastewater Influent Conditions	

3.0 START-UP

3.1 PRELIMINARY STEPS

Calgon construction personnel will be responsible for insuring the leak tightness of the piping and vessels prior to start-up. The system will also be flushed with clean water to assure that no flow obstructions exist. All instruments will also be callibrated.

3.2 FILLING THE ADSORBERS

When the hydraulic integrity of the system is assured, Calgon personnel will supervise the installation of the activated carbon in the adsorber vessels. At the completion of the filling operation each adsorber will be water filled and ready to receive process flow.

3.3 PLACING THE SYSTEM IN OPERATION

3.3.1 ADSORPTION SYSTEM A

Adsorption System A was designed for series operation however, the valve and piping will allow either series or parallel operation.

The feed to the adsorption system will be provided by the Client's feed system. The feed system should be at full operating conditions prior to placing the adsorbers in service. When this has been accomplished, the start-up and operation will be as described below.

a. Adsorber Start-Up - Series Operation

Initially all valves in the adsorption system shall be closed. The normal start-up sequence is as follows:

Slowly Open influent valve #1
Slowly Open staging valve #2
Slowly open effluent valve #4

This will direct the wastewater flow through adsorber A-1 then adsorber A-2. The treated water will be discharged to the Client's disposal system.

b. Adsorber Start-Up - Parallel Operation

Initially all valves in the adsorption system shall be closed. The normal start-up sequence is as follows:

Slowly open influent valve #1
Slowly open effluent vale #3
Slowly open influent valve #6
Slowly open effluent valve #4

This will direct the wastewater flow through both adsorbers A-1 and A-2 with the combined treated effluent discharging to the Client's disposal system.

3.3.2 ADSORPTION SYSTEM B - ADSORBER START-UP

Adsorption System B was designed for parallel operation only and each adsorber is equipped with a flow control system which will provide for equal distribution of flow over the three adsorbers at the maximum flow. Prior to start-up, the flow controller on each adsorber should be set at one-third (1/3) of the design flow.

The feed to the adsorption system will be provided by the Client's feed system. The feed system should be at full operating conditions prior to placing the adsorbers in service. When this has been accomplished, the start-up and operation will be as described below.

Initially all valves in the adsorption system shall be closed. The normal start-up sequence is as follows:

Open effluent valves #26, #29 and #32
Slowly open influent valves 21, 22 and 23
Slowly open effluent valves 24, 27 and 30

The adsorption system will then be on stream discharging treated water to the Client's disposal system.

DRAFT

4.0 OPERATING MODES

4.2 FRESH CARBON TRANSFER FROM TRAILER TO TRANSFER TANK

4.2.1 DESCRIPTION

The fresh activated carbon will be transferred to the transfer vessel where it will be held until the spent carbon is transferred to the Calgon trailer. The trailer containing activated carbon is filled with plant water. The carbon slurry hose is connected between the trailer carbon outlet line and the transfer tank fill line. The trailer is then pressurized to 15 psig using plant compressed air and the carbon slurry is transferred into the transfer tank. The trailer volume and adsorber volume are identical so that minimal, if any, overflow of water through the vent is expected. A drain is provided in the transfer tank so that the water level in the transfer tank can be lowered should that be required if overflow occurs.

Prior to disconnecting any lines, the plant air supply must be shut off and the trailer, transfer tank and all transfer lines must be vented.

Under no circumstances should the trailer be connected to a pressure source exceeding 15 psig.

4.2.2 FILL TRAILER WITH WATER

(A) Filling Operation

At the beginning of this operation all process valves and carbon slurry valves on the trailer must be closed.

(1) Connect plant water line to trailer fill line #1 using 4" flexible hose.
(2) Open trailer manways to vent trailer during filling
(3) Open trailer fill line valve #T-5
(4) Open water line valve #18 slowly and fill trailer.

The trailer is filled with 4500 gallons of water. The trailer filling shall be determined by observing the water level through the manways.

(B) End Filling Operation

(1) Close water line valve #18
(2) Close trailer fill line valve #T-5
(3) Close and seal all manways
(4) Bleed the line through the water line drain at valve #18 and then disconnect the hose.

4.2.3 TRANSFER CARBON TO TRANSFER TANK

(A) Prepare for Transfer

The adsorber shall be removed from service. The recharging operation shall then be performed as follows.

(1) Connect transfer tank fill line 4C5-1 to trailer carbon outlet line #2 using 4" flexible hose.
(2) Connect plant air line to trailer fill line #1 using the plant air line hose.
(3) Connect 3/4" water hose to carbon slurry line #2 at valve #T-9

4.2.3 TRANSFER CARBON TO TRANSFER TANK

(4) Open valve #T-5 in fill line #1.
(5) Close all other Valves on the trailer and on the transfer tank.
(6) Open transfer tank vent valve #17

(B) Transfer Fresh Carbon Slurry
(1) Pressurize the trailer to 15 psig by slowly opening plant air line valve #46.
(2) Open transfer tank fill line valve #47
(3) Open the valve in water line 3/4PW and then open trailer slurry line valve #T-9.
(4) Open the trailer carbon outlet valves T-1, T-2 and T-3 individually to empty the respective hoppers.

Be certain to open one valve at a time, with the other two closed. Open the center section first, then the front and then the back (back is where the hoses are connected). Keep each open for about two minutes to empty the trailer in an even manner.

If water begins to overflow the transfer tank vent line close all trailer outlet valves, T-1, T-2, and T-3. Open the transfer tank drain line valve, and allow the tank to drain for several minutes. Continue the transfer until the trailer is empty.

(C) End Transfer
(1) Open all carbon outlet valves, T-1, T-2 and T-3
(2) Close air line valve #46
(3) Allow trailer to vent through the carbon slurry line until the sight glass is clear.
(4) Close water hose valve and slurry vale T-9 and open the bleed valve.
(5) Disconnect the 3/4" hose from trailer line #2.
(6) Disconnect the air hose from trailer line #1.
(7) Close transfer tank fill line valve #47
(8) Open bleed valve in transfer tank fill line and drain the line.
(9) Disconnect the carbon slurry hose
(10) Close transfer tank vent valve #17.

4.3 SPENT CARBON TRANSFER FROM ADSORBER TO TRAILER

4.3.1 DESCRIPTION

The adsorber contains spent carbon and wastewater when removed from service. The carbon must be washed with plant water to displace untreated wastewater prior to transfer to the Calgon trailer. This is accomplished by the addition of plant water through the spray nozzle at the top of the adsorber and draining the rinse water to the system drain. This procedure should be completed prior to the arrival of the Calgon trailer.

When the spent carbon has been rinsed and the fresh carbon has been transferred from the trailer to the transfer tank, the spent carbon is then transferred to the empty trailer. The carbon slurry hose is connected between the spent carbon slurry manifold and the trailer fill line. The adsorber is pressurized with plant compressed air and the carbon slurry is transferred to the empty trailer. At the conclusion of the transfer, the carbon heel in the adsorber will be flushed out. When the transfer is complete, the spent carbon in the trailer will be drained by pressurizing the trailer and opening the trailer drain to the adsorption system drain trench.

4.3.2 RINSING THE SPENT CARBON

(A) Remove the spent adsorber from service
- (1) Open influent valve #1 or #6 (Applies to system A only and only if operated in series).
- (2) Close staging valve #2 or #5 (Applies to System A only and only if operated in series).
- (3) Close influent valve to the spent adsorber (#1,#6, #21, #22 or #23).
- (4) Close the effluent valve to the spent adsorber (#3, #4, #24, #27, or #30).

(B) Rinse the Spent Carbon
- (1) Read the initial water meter indication.
- (2) Open the plant water valve to the adsorber spray nozzle (#11, #12, #13, #14, or #15).
- (3) Open the adsorber drain valve (#7, #9, #37, #33, or #35).
- (4) Meter 10,000 gallons of rinse water.
- (5) Close the adsorber drain valve (#7, #9, #37, #33, or #35).
- (6) Close the plant water valve (#11, #12, #13, #14, or #15)

4.3.3 TRANSFER SPENT CARBON TO TRAILER

(A) Transfer Spent Carbon
- (1) Connect adsorber carbon slurry outlet line 4C5-7 to trailer fill line #1 using 4" flexible hose.
- (2) Connect a 4" flexible hose from trailer slurry line #2 to the adsorption system drain.
- (3) Open trailer vent valve #T-10
- (4) Open trailer fill valve #T-4
- (5) Open slurry line flush valve #44 to fill the carbon slurry line with water.
- (6) Close valve #44 when the line is full.
- (7) Pressurize adsorber to 15 psig by opening the air line valve #45.
- (8) Open carbon slurry outlet valve #42 and tranfer spent carbon.

4.3.3 TRANSFER SPENT CARBON TO TRAILER

(9) Open trailer drain septa valves T-7 and T-8.
(10) When transfer is complete as indicated by a clear sight glass, close valve #42.

(B) Flush Out Carbon Heel
(1) Read the initial water meter indication.
(2) Open the water spray nozzle valve (#11, #12, #13, #14, or #15).
(3) When 300 gallons of water have been added, open carbon slurry outlet valve #42.
(4) When air appears in the sight glass, close the carbon slurry valve #42.
(5) When another 300 gallons of water have been added repeat steps 3 and 4. Continue this procedure until the carbon slurry line is clear. (Four times should be sufficient).

(C) End Transfer
(1) When the carbon slurry line is clear allow the adsorber to vent through the slurry line.
(2) Open the slurry line flush valve #44.
(3) Close the plant on valve (#11, #12, #13, #14, or #15).
(4) Close adsorber carbon slurry valve #42.
(5) Open adsorber vent valve (#8, #10, #38, #39, or #40)
(6) Bleed the carbon slurry hose and disconnect.
(7) Close trailer fill valve #T-5.

(D) Drain Water from Trailer
(1) Connect plant air line trailer fill line #1 using the air line hose.
(2) Close trailer vent valve #T-4.
(3) Pressurize trailer to 10 to 15 psig by opening plant air line valve #46 and trailer fill line valve #T-5.
(4) Open all trailer drain septa valves #T-6, #T-7, and #T-8.

(E) End Draining
(1) When carbon is completely drained, close plant air line valve #46.
(2) Close trailer drain septa valves #T-6, #T-7, and #T-8.
(3) Vent trailer slowly through vent valve #T-4.
(4) Close trailer fill line valve #T-5.
(5) Bleed and disconnect the air line hose.
(6) When venting is complete close all valves, disconnect all hoses, and cap all hose connections.

The trailer is now full of drained spent carbon and is ready for return to Calgon for carbon reactivation.

4.4 FRESH CARBON TRANSFER FROM TRANSFER TANK TO EMPTY ADSORBER

4.4.1 DESCRIPTION

The fresh activated carbon will be transferred to the empty adsorber from the transfer tank to complete the bed replacement. The valves in the carbon slurry manifold are positioned to direct the carbon to the proper adsorber. The transfer tank is pressurized with compressed air and the carbon slurry is transferred to the empty adsorber. At the conclusion of the transfer, the carbon heel in the transfer tank is flushed out to the adsorber. The adsorber is then returned to service.

4.4.2 TRANSFER FRESH CARBON TO EMPTY ADSORBER

(A) Transfer Fresh Carbon
- (1) Open adsorber vent valve (#8, #10, #38, #39 or #40).
- (2) Close carbon slurry block valve #45.
- (3) Open all carbon slurry block valves between the adsorber and the transfer tank.
- (4) Open adsorber fill line valve #41.
- (5) Using a 3/4 inch plant water hose at the transfer tank, fill the carbon slurry line with water.
- (6) Pressurize the transfer tank to 15 psig by opening the air line valve #49.
- (7) Open carbon slurry valve #48.
- (8) When transfer is complete, as indicated by a clear sight glass, close valve #48.

(B) Flush Out Carbon Heel
- (1) Open the adsorber drain valve (#7, #9, #37, #33 or #35).
- (2) Read the initial water meter indication.
- (3) Open the transfer tank spray nozzle valve #16.
- (4) When 300 gallons of water have been added, open the carbon slurry valve #48.
- (5) When air appears in the sight glass, close the carbon slurry valve #48.
- (6) When another 300 gallons of water have been added repeat steps 4 and 5. Continue this procedure until no carbon appears in the water (Four times should be sufficient).
- (7) CLOSE THE ADSORBER DRAIN IMMEDIATELY.

(C) End Transfer
- (1) When the carbon slurry line is clear, allow the transfer tank to vent thru the slurry line.
- (2) Close the plant air valve #49.
- (3) Close the transfer tank slurry valve #48.
- (4) Close the adsorber fill line valve #41.

After completion of the transfer all block valves along the carbon slurry manifold should be opened and any free carbon flushed from the lines using plant water.

4.4.2 TRANSFER FRESH CARBON TO EMPTY ADSORBER

(D) Return Adsorber to Service

(1) Open the plant water valve to the adsorber (#11, #12, #13, #14, or #15).

(2) When water flows over the vent line, close the plant water valve.

(3) Close the adsorber vent valve (#8, #10, #33, #39 or #40).

(4) Open staging valve (#2 or #5) on the one line adsorber (Applies to System A only and only if operated in series).

(5) Open the adsorber influent valve (#1, #6, #21, #22, or #23) (Applies to any vessel to be operated in the parallel mode).

(6) Open adsorber effluent valve (#3, #4, #24, #27, or #30).

(7) Close on line adsorber effluent valve (#3 or #4) (Applies only to System A and only if operated in series).

5.0 MONITORING

5.1 Sampling

5.1.1 An automatic sampling system is provided for taking samples of the influent to an effluent from each adsorber.

5.1.2 During normal operation, the samples will be taken once every twenty-four hours. More frequent sampling may be conducted if required to monitor system performance. (24 HR. COMPOSITE FOR EPA)

5.2 Monitoring Services Provided by Calgon

5.2.1 Vicksburg Chemical shall record total flow to the adsorption on a weekly basis.

5.2.2 Vicksburg Chemical shall record the operating temperature and the pressure of the influent to an effluent from each adsorber at a frequency of once every eight hours.

5.2.3 Vicksburg shall collect daily composite samples from the influent sampling system and analyze for pH. The daily samples shall be combined on a weekly basis and analyzed for pH, Total Toxaphene and total Suspended Solids.

5.2.4 Vicksburg Chemical shall collect periodic samples of influent to and effluent from the Adsorption System and run such analyses as required for system control.

5.2.5 Vicksburg shall record the required information and report same to Calgon on a monthly basis.

6.0 GENERAL INFORMATION

6.1 SHUTDOWNS

6.1.1 SHORT DURATION SHUTDOWNS

For shutdowns of periods not longer than one week, little need be done except to shut down the feed system, close the valves coming into the system and open the adsorber vents.

6.1.2 EXTENDED SHUTDOWNS

For extended shutdown periods, the adsorption system shall be flushed our with clean treated water and the adsorbers shall be left full of carbon and water. All piping systems must be completely flushed and drained.

6.2 EMERGENCY PROCEDURES

If a major leak or failure occurs which would cause the adsorption system to be inoperative, then the feed to the system should be shut down immediately. If repairs are beyond the scope of the Vicksburg operators, the Operations Department at Calgon should be contacted immediately.

6.3 CALGON CONTACTS

Normal contact concerning the day-to-day operation of the system should be with the Customer Services Department. The telephone number is: A.C. 713-682-1301

6.4 SAFETY

Wet granular activated carbon adsorbs oxygen from the air. In a confined space, this can reduce oxygen level below that required to sustain human life. Therefore, the adsorber should not be entered without testing oxygen levels and following all other appropriate safety measures for working in confined spaces.

6.5 CARBON REPLACEMENT SCHEDULE

Normally, replenishment of the carbon will be on a prescheduled basis. If there is any alteration in the carbon delivery schedule, Vicksburg Chemical will be notified immediately. If Vicksburg desires to alter the delivery schedule, Calgon should be notified at least two weeks in advance of any affected shipments. Calgon's contact for carbon scheduling is the Customer Services Department. The telephone number is A.C. 713-682-1301.

DRAFT

7.0 PERFORMANCE REPORTS

Calgon will issue reports on the performance and operation of the adsorption system on a routine basis. The report will include operational data and any other information pertinent to the Calgon Adsorption Service Agreements.

8.0 APPENDIX

8.1 OPERATING & MAINTENANCE INSTRUCTIONS

8.1.1 MINOR MAINTENANCE

Minor maintenance is the frequent maintenance to be performed by Vicksburg Chemical to insure continuous operation, namely, a visual check of pressure gages and corrective adjustments of valves, etc., as may be required. Routine maintenance to be performed by Vicksburg Chemical shall also include: rupture disc replacement, and flange tightening in the event of a leak.

Gage readings and all minor maintenance performed shall be entered in a daily log and a copy of this log shall be submitted to Calgon monthly.

8.1.2 MAJOR MAINTENANCE

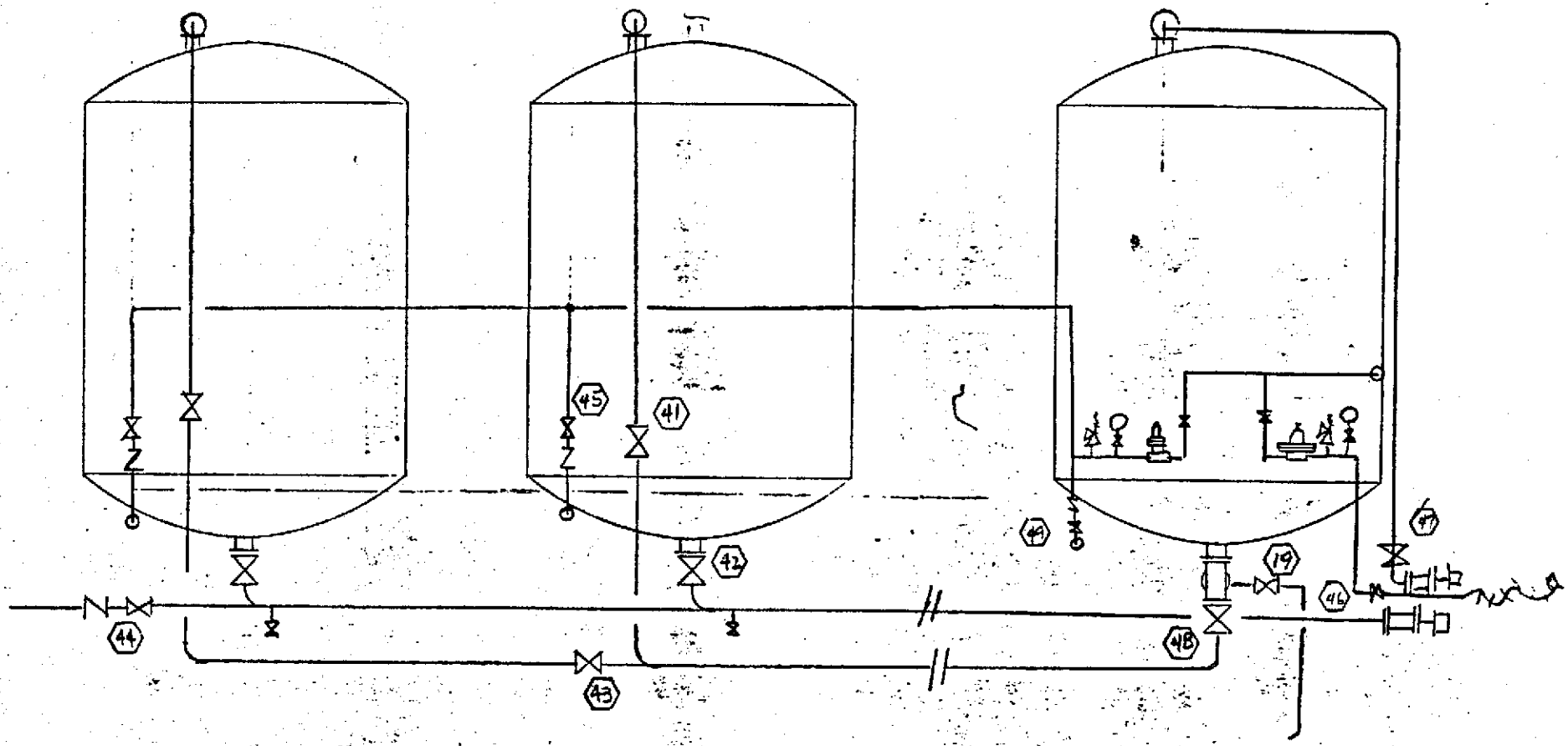
Major maintenance is that maintenance needed to repair equipment in order to continue system operation in the event of a major malfunction causing the system to be inoperative, and/or major system changes of maintenance scheduled by Calgon.

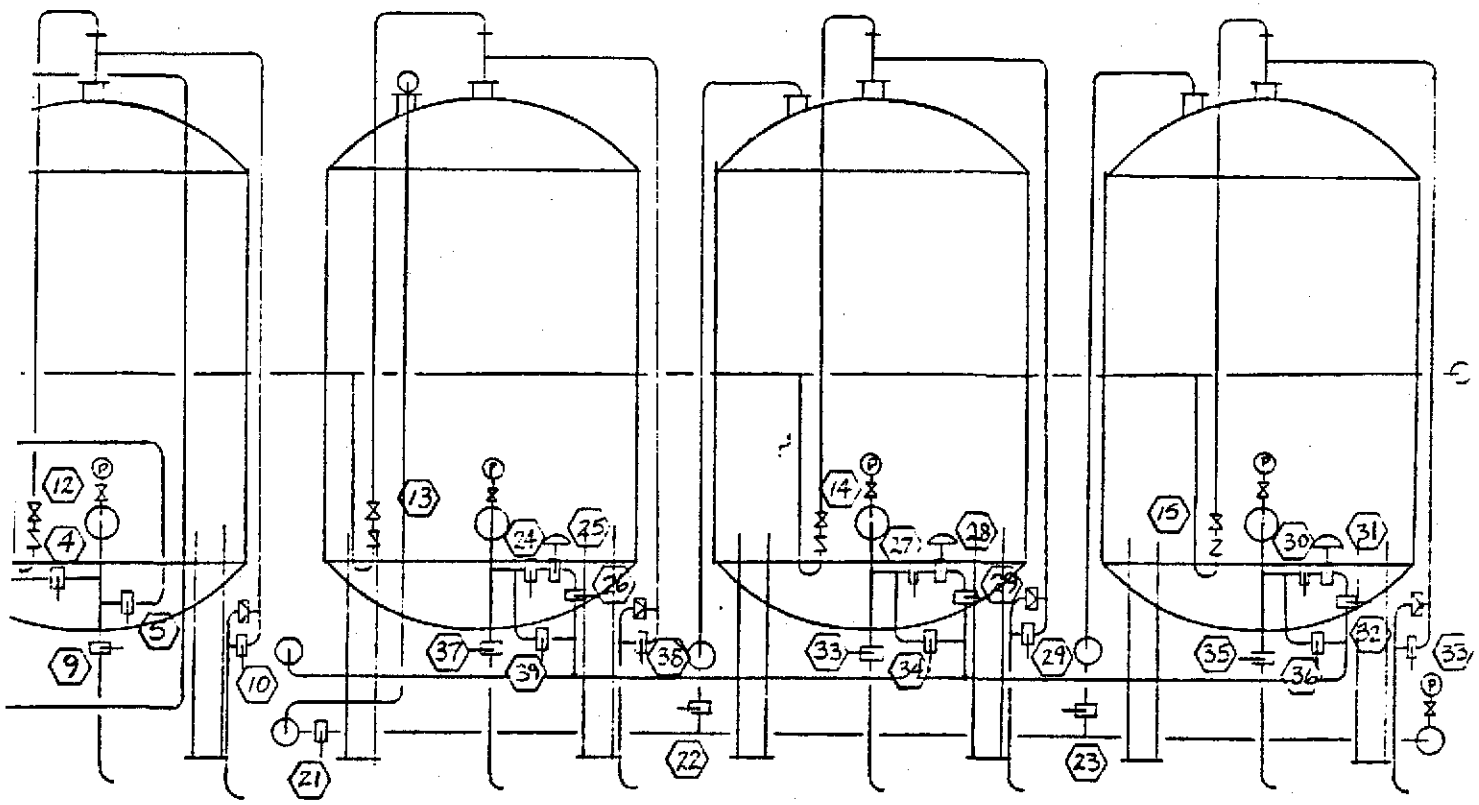
Calgon's Customer Services Department should be contacted when any major maintanance is required. The telephone number is: A.C. 713-682-1301.

8.2 BILLS OF MATERIALS

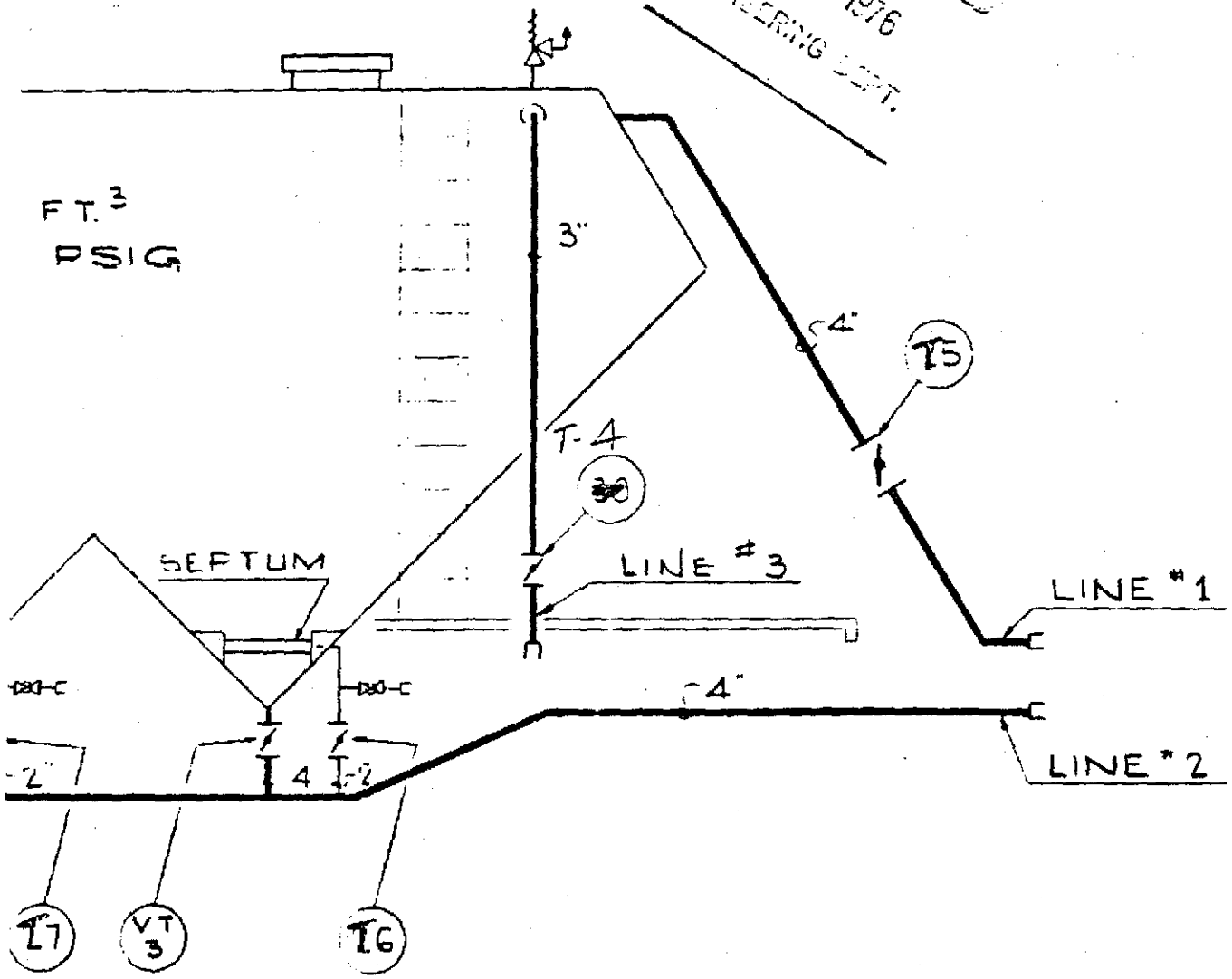
8.3 SPECIFICATIONS

8.4 DRAWINGS


45
41
42
44
43
49
19
46
48
47


12
4
5
9
10
21
13
24
25
26
37
39
38
22
14
27
28
33
34
29
23
15
30
31
35
36
32
33

PRINTED
DEC 9 - 1976
ENGINEERING DEPT.
BY



CALGON
ADSORPTION SYSTEMS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF SOLID WASTE

DATE: JUL 9 1982

SUBJECT: Status of RCRA Information Gathering Activities

FROM: David Friedman, Manager
Waste Analysis Program, WH-565

TO: See below

Gallagher for dist. to States. Orig to Dunn

see p.3 Re: vertac info.

The following table summarizes the status of the Agency's RCRA information gathering activities being conducted by or for the Office of Solid Waste as of July 1, 1982. If you have any questions relative to the scope or status of any of these activities, or if you have additional information needs that one or more of these studies can help with, please contact Wanda LeBleu-Biswas at 755-9187.

Study	Status
Lead-Acid Battery Production Residues	Questionnaire on hold.
Pesticide Production Residues	Questionnaire package approved by OMB.
Coking Production Wastes	Study in initial planning.
Ethyl Benzene/Styrene Production Residues	Engineering analysis in review.
Maleic Anhydride Production Residues	Engineering analysis in review.
Textile Finishing and Dyeing	Study in initial planning.

Study	Status	
Methyl Methacrylate Production Residues	Cyro Ind., LA	Final engineering analysis being developed.
	duPont, WV	Final engineering analysis being developed.
	duPont, TN	Final engineering analysis being developed.
	Rohm & Haas, TX	Additional information received.
*Toluene Diisocyanate Production Residues	Allied, WV	Engineering analysis reviewed and approved.
	*BASF, LA	Presampling visit scheduled for 7/22/82.
	Dow, TX	Engineering analysis reviewed and approved.
	Mobay, TX	Engineering analysis reviewed and approved.
	Mobay, WV	Engineering analysis reviewed and approved.
	Olin, LA	Engineering analysis reviewed and approved.
	Olin, OH	Engineering analysis reviewed and approved.
	*Rubicon, LA	Presampling visit scheduled for 7/23/82.

* Indicates this action has undergone a change since previous update.

EPA Form 1320-6 (Rev. 3-76)

Study	Status	
*Methylene Diphenyl Diisocyanate Production Residues	*BASF, LA	Presampling visit scheduled week of 7/22/82.
	*Rubicon, LA	Presampling visit scheduled week of 7/23/82.
*Chlorinated Organics	Denka Chemical, TX	Sampling plant final report received 5/27/82.
	Diamond Shamrock, TX	Sampling plant interim report received.
	*Dow Chemical, LA	Sampling plant interim report received.
	duPont, LA	Sampling plant final report received 5/20/82.
	Ethyl Corp., LA	Sampling plant interim report received.
	*FMC Corp., MD	Sampling plant interim report received.
	*Linden Chemicals and Plastics, Inc., WV	Sampling plant interim report received.
	PPG Industries, WV	Sampling plant final report received 4/16/82.
	*Publicker Chemical, PA	Sampling plant interim report received.
	Stauffer, NJ	Sampling plant final report received 5/17/82.
	Union Carbide, WV	Sampling completed 11/18/81.
	Vulcan Materials, LA	Sampling plant final report received.
Arylphosphate Ester Production Residues	FMC, WV	Sampling draft final analytical report will be completed upon analysis of corresponding tionnaires (see next 3 entries).
	Stauffer, WV	
	Eastman Kodak, NY	Questionnaire being analyzed.
	Mobil Chemical, VA	Questionnaire being analyzed.
	Monsanto, MO	Questionnaire being analyzed.
Carbamate Pesticide Production Residues	FMC, NY	Analytical report received.
	Monsanto Co., LA	Sampling completed.
	Rohm & Haas, PA	Analytical report received.
	Stauffer Chemical, AL	Analytical report received.
	Stauffer Chemical, LA	Sampling completed.
	Union Carbide, GA	Data being analyzed.
	Union Carbide, WV	Sampling completed 5/12/82.
	Alco Standard, TN	Questionnaire being analyzed.
	Goodyear Tire & Rubber, OH	Questionnaire being analyzed.
	PPG Industries, OH	Questionnaire being analyzed.
	Troy Chemical, NJ	Questionnaire being analyzed.
	Uniroyal, CT	Questionnaire being analyzed.
	Vanderbilt Chemical, KY	Questionnaire being analyzed.
	Vinings Chemical, GA	Questionnaire being analyzed.
Pesticide Production Residues	American Cyanamid, NJ	Sampling scheduled for 7/82.
	American Cyanamid, MO	Presampling completed; sampling to be scheduled
	Buckman Laboratories, TN	Presampling completed; sampling to be scheduled
	Chevron Chemical, CA	Initial 3007 letter sent 6/28/81.
	Ciba-Geigy Corp., AL	Initial 3007 letter sent 6/28/81.
	Ciba-Geigy Corp., LA	Initial 3007 letter sent 6/28/81.
	Diamond Shamrock, TX	Initial 3007 letter sent 6/28/81.
	Dow Chemical USA, MI	Initial 3007 letter sent 6/28/81.
	duPont, TX	Final draft report received.
	Eli Lilly & Co., IN	Initial 3007 letter sent 6/28/81.

Pesticide Production Residues (cont.)	Mobay Chemical, MO	Initial 3007 letter sent 6/28/81.
	Monsanto, AL	Initial 3007 letter sent 6/28/81.
	Monsanto, MO	Sampling completed 5/82.
	Rhone-Poulenc, OR	Presampling completed; sampling to be scheduled
	Rhone-Poulenc, TN	Sampling draft analytical report received.
	Shell Chemical, AL	Initial 3007 letter sent 6/28/81.
	Stauffer Chemical, OH	Initial 3007 letter sent 6/28/81.
	Velsicol Chemical, TN	Presampling completed; sampling to be scheduled
	[redacted]	
*Paint Formulating Production Residues		Draft report received.
Organobromines Production Residues	Ethyl Corp., AR	Sampling completed.
	Great Lakes Chemical, AR	Sampling completed.
Lime Sludge from Stainless Steel Finishing Operations	Allegheny Ludlum Steel, PA	Final analytical report completed.
	ARMCO, Inc., FL	Final analytical report completed.
	Crucible, Inc., PA	Final analytical report completed.
	Firestone Steel Prod., SC	Final analytical report completed.
	Gulf & Western Taylor Forge, TN	Final analytical report completed.
Organometallics	duPont, NJ	Presampling completed; sampling to be scheduled
	M & T Chemical Co., KY	Initial 3007 letter sent 1/28/82.
Stabilized Waste		Samples now being analyzed.
*Industrial Organic Chemicals	*Allied Chemical Co, VA	Initial 3007 letter sent 7/2/82.
	Amoco Chemicals, AL	Questionnaire sent 5/7/82.
	*Celanese, TX	Eliminated from study.
	duPont, TX	Questionnaire sent 5/7/82.
	duPont, TX	Questionnaire sent 5/7/82.
	duPont, TX	Questionnaire sent 5/7/82.
	Eastman Kodak, TN	Questionnaire sent 5/7/82.
	Kalama Chemical, WA	Questionnaire sent 5/7/82.
	*Monsanto Co, MO	Initial 3007 letter sent 7/2/82.
	*Nipro, Inc., GA	Initial 3007 letter sent 7/2/82.
	Oxirane, International, TX	Plant shut down until end of 1982.
	Rohm & Haas, TX	Initial 3007 letter sent 3/10/82.
	Uniroyal Chemical, LA	Questionnaire sent 4/27/82.
*Dyes & Pigments Production Residues	American Cyanamid Co., OH	Preliminary site visit scheduled week of 7/27/8
	*Fabricolor, Inc., NJ	Preliminary site visit scheduled week of 7/20/8
	Martin Marietta Corp., NC	Preliminary site visit completed 6/15/82.
	*Morton Chemical Co., NJ	Preliminary site visit scheduled 8/3/82.
	Initial 3007 letters and/or surveys sent 6/10/82 to 48 manufacturers. Contact Yvonne Garbe (755-9206) for additional information.	
*Storage RIA	*AMCHEM Products, Inc., PA	Site visit scheduled for 7/9/82.
	Anchor Hocking, PA	Initial 3007 letter sent 5/14/82.
	Cecos International, NY	Initial 3007 letter sent 5/14/82.

*Storage RIA (cont.)	Containers Specialties, MI	Initial 3007 letter sent 5/14/82.
	*Continental Can Co., NJ	Site visit scheduled for 7/8/82.
	Hayes-Albion Corp., OH	Initial 3007 letter sent 5/14/82.
	International Metals Reclamation Co., PA	Initial 3007 letter sent 5/14/82.
	*Jet Line Services, Inc., ME	Eliminated from study.
	Pierce Waste Oil Services, IL	Initial 3007 letter sent 5/14/82.
	*Union ROTO Graving Inc., CT	Site visit completed 7/1/82.
	Westinghouse Electric Corp, IN	Initial 3007 letter sent 5/14/82.
*Delisting Verification	*EWR, CN	Plant visit completed 6/23/82.
*Location Standards RIA	*Avon Refinery, CA	Initial 3007 letter sent 7/1/82.
	*Boeing Co, WA	Initial 3007 letter sent 7/1/82.
	*Dow Chemical, CA	Initial 3007 letter sent 7/1/82.
	*IT Corp., CA	Initial 3007 letter sent 7/1/82.
	*Kaynar, A Microdot Co., CA	Initial 3007 letter sent 7/1/82.
	*Kerr-McGee Chemical, NV	Initial 3007 letter sent 7/1/82.
	*Texaco, CA	Initial 3007 letter sent 7/1/82.
	*United Technologies, CA	Initial 3007 letter sent 7/1/82.

Addressees

M. Cook
J. Lehman
A. Lindsey
A. Corson
S. Lingle
M. Straus
W. LeBleu-Biswas
J. Poppiti
C. Jenkins
Y. Garbe
L. Buc
F. Jacoff
M. Shannon
J. Heffelfinger
J. Sales
R. Jenkins
Solid Waste Branch Chiefs, Regions I-X
Environmental Services Division Directors, Regions I-X

Dr. Eugene Berkau, IPCD, IERL - CIN
William Cawley, IERL - CIN
Everett L. Plyler, IERL - RTP
Paul Farenthold (WH-552)
Mike Carter (WH-552)
Robert Olexsey, IPCD, IERL - CIN
Michael Slimak (WH-553)
Richard Stern, IERL (MD-63) - RTP
Edmund Notzon (WH-586)
Dr. Eugene Meier, EMSL - LV
Dr. Theodore Meiggs, NEIC
Anne Allen (WH-527)
Barbara Elkus (WH-527)

THIS FORM FOR GENERATORS ONLY

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-01	Metal drums contaminated with trace dinitro-butyl-phenol	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9	2	Variable

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-02	Water, 20% Tenneco 500, trace toxaphene	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	10 40	4	2	2200 gallons

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-03	Empty Atrizine fiber drums sealed in cyanuric chloride drums	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9	2	30 drums/week

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-04	Plastic liner from cyanuric chloride drums packed in 55 gallon drums	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9	2	3 drums/day

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-05	Toxaphene contaminated rags and refuse	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III				Variable

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-06	Tri-butyl-amine in 55 gallon drums	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	2		

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-07	Methanol	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	10 40	2		

A. Waste Number	B. Hazardous Waste Name	C. Confidential
981-08	Tri-isopropanol-amine	Yes [X] No [ ]

D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9		

THIS FORM FOR GENERATORS ONLY

A. Waste Number	B. Hazardous Waste Name			C. Confidential
981-09	Bromine			Yes [x] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	30 40	2		50 gallons

A. Waste Number	B. Hazardous Waste Name			C. Confidential
981-10	Toxaphene in cyanuric chloride drums			Yes [x] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	2		5 drums

A. Waste Number	B. Hazardous Waste Name			C. Confidential
981-11	Metal drums contaminated with trace toxaphene			Yes [x] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	2		35 drums

A. Waste Number	B. Hazardous Waste Name			C. Confidential
981-12	Drums contaminated with dinitro-ortho-cresol			Yes [x] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
III	40	9		Variable

A. Waste Number	B. Hazardous Waste Name			C. Confidential
981-13	DYES ADSORBED ON ACTIVATED CARBON			Yes [x] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	
II	40	8	2	? 30 GAL DRUMS

A. Waste Number	B. Hazardous Waste Name			C. Confidential
				Yes [ ] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	

A. Waste Number	B. Hazardous Waste Name			C. Confidential
				Yes [ ] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	

A. Waste Number	B. Hazardous Waste Name			C. Confidential
				Yes [ ] No [ ]
D. Hazard Class				E Amount (tons)
Waste Category	EPA Designation	Physical State	Degree of Care	

RECORD OF COMMUNICATION	☑ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE ☐ OTHER (SPECIFY) (Record of item checked above)	
TO: John Dickinson	FROM: Larry Rexroat 8-729-4075 superfund Reg VI	DATE 7/2/82 TIME

SUBJECT: Vertac Chemical Co.

SUMMARY OF COMMUNICATION

Crystal Chem. Co. in Houston TX. went bankrupt recently. Larry was calling to tell us that part of settlement was that Vertac Chem. Co. in Vicksburg purchased the process equipment (tanks etc) for use in their plant. Equipment is not decontaminated (used for herbicides with arsenic) but it is not a hazardous waste since Vertac is reusing the equipment.

Larry said 30 railroad cars of equipment are being shipped to Vertac.

CONCLUSIONS, ACTION TAKEN OR REQUIRED No action required except:

- Notify McMillan of MS
- " Mathis of EPA

RECEIVED
JUL 6 REC'D
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

INFORMATION COPIES TO: 1. McMillan 2. Wayne Mathis 3. Holdaway

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 5300-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

June 28, 1982

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor, 5100 Poplar
Memphis, TN 38137

Dear Mr. Karkkainen:

As we discussed by telephone on June 25, 1982, our office would like a written scope of operations for the remedial action planned at the inactive landfill at the Vicksburg facility. This should include a time schedule for the completion of all phases of the operation. In light of the high surface contamination indicated by the EPA sampling report, we expect to see steady progress towards the resolution of the problem.

As I mentioned in our telephone conversation we will be at the Vicksburg facility on the morning of July 7, 1982 for a joint State-EPA inspection. Should you have any questions, please contact our office.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste Management

CE:cb

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

June 18, 1982

RECEIVED
JUN 21 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles Estes, P.E.
Mississippi DNR
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

RE: Your May 28, 1982 Letter

Dear Mr. Estes:

I agree that we should perform soil sampling and analyses prior to initiating construction in the vicinity of our closed out landfill and closed out ponds.

We have performed the soil sampling including auger drilling. The drilling was performed as part of the activity pursuant to dirt moving companies preparing beds to cut the hill area down to an elevation approximately 10 feet higher than the track elevation. The soil has been retained for analysis by us.

When we have completed the analyses, I will forward the results and sketch of where samples were taken.

It is important to emphasize that the cutting back of the hill will be done in the area of the closed out ponds rather then closed out landfill. Our intent is to make the closed out areas more secure rather than compound the problem.

On another matter, I have attached the internal announcement of Vertac entering the MSMA business. We have obtained the engineering package of a similar plant that was going to be built elsewhere which will be valuable in our being able to rapidly put together a package specific for our facility.

Best regards,

Dick Karkkainen
Director of Environment & Safety

RDK/bh

Attch.

INTERNAL CORRESPONDENCE

DATE: June 14, 1982

TO: All Vertac Employees

FROM: C. P. Bomar, Jr.

CC:

SUBJECT: Progress Versus Recession

In my last correspondence to you I indicated that the recession gripping American industry is also taking its toll on Vertac; and we, like most other companies, must take steps to prevent the deterioration of our hard-earned progress. At that time we escalated our efforts to find new business opportunities which would strengthen our company in the face of such adversity. I am pleased to announce today that we have found a new product opportunity which we feel fits well within the scope of Vertac's marketing and manufacturing capabilities and can generate substantial future earnings. We have arranged a financing package and are immediately initiating construction of a MSMA herbicide unit at our Vicksburg plant which will be scheduled for startup in early January. This venture will be similar in scope to the Dinoseb acquisition from Dow Chemical last fall.

However, in order to secure financing for this project and to keep our present lending agreements in place, we have had to assure our investor and lenders that we will not incur major losses in the second half of 1982. Given our current inventory levels and depressed market conditions, this represents a significant challenge for us all; but I have assured our investor and lenders that we can do it!

This will require very careful control of expenditures in the second half and a maximum selling effort. Even with this extra effort, we expect the second half to be particularly severe for our business, and we need to take further measures. Accordingly, I am announcing a temporary reduction in salaries effective July 1, 1982. We will reduce the salaries of all executive personnel (plant managers and above) by 8 percent. All other salaries will be reduced by 4 percent. I want to emphasize that this is a temporary defensive measure necessitated by poor performance in the first half and a bleak outlook for the second half. Just as

soon as we can assure ourselves that our operating profits will be above the minimum required level, these reductions will be lifted. You will note that in keeping with this management's belief that the largest number of our employees should be protected to the greatest extent possible, we are at this time requiring that the management group take the most severe cut. If conditions do not worsen, we should be able to restore salaries to their original level by the end of this year. If every employee makes a maximum effort to reduce costs, increase sales, and increase productivity, this could happen sooner.

Our new MSMA plant will insure employment for approximately 30 people, some of which are existing employees and some of which will be new personnel. Other projects currently under investigation could add additional new jobs and further increase profits in the not too distant future.

This is a most difficult economic period for the entire world, and a great many companies (both domestic and international) are closing plants and making salary reductions. However, few are announcing dramatic new plants such as our MSMA facility. I hope that you will agree with our belief that the opportunity for long-term progress and increased job security created by our present actions is worth the temporary sacrifice. I will certainly keep you posted on our progress in the second half.

C. P. Bonner Jr.
President

CPB:ap

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 354-2550

TO: File

FROM: David Lee

SUBJECT: Conversation regarding Vertac Chemical

DATE: June 15, 1982

On June 14, 1982, I talked by phone with Bill Staton of Gibralter Wastewaters of Tyler, Texas. He called inquiring about Vertac's wastewater. His firm is going to make a proposal to inject Vertac's wastewater in their Texas facility. The waste would be trucked to Texas on a routine basis.

Vertac is probably considering this option because of various cost increases in connection with RCRA and NPDES regulations concerning their wastewater treatment.

May 28, 1982

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor - 5100 Poplar
Memphis, TN 38137

Dear Mr. Karkkainen:

After studying the EPA sampling report on your Vicksburg facility, we believe that a thorough sampling program must be completed before beginning the planned dirt work at the closed-out landfill. Soil contamination levels should be determined before the planned dirt work begins so as not to compound the existing problems.

Any reports or results from a study of the contaminated landfill must be reviewed by our office before beginning the planned dirt work. Advance notice should be given to our office prior to moving any of the contaminated soil. We would like to discuss this matter with you further at your convenience.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste

CE:cb

MISSISSIPPI | TMENT OF NATURAL RESOURCES
ı of Pollution Control
P. O. Box 10385
..son, Mississippi 39209
(601) 354-2550

TO: File

FROM: David Lee

SUBJECT: Meeting with Dick Karkkainen, Vertac Chemical Corp

DATE: April 15, 1982

Present at the meeting were Chuck Estes, David Lee, and Dick Karkkainen. The purpose of the meeting was to discuss inadequate aspects of the hydrogeological investigation at the Vicksburg facility. There was some question concerning the data and methods used to derive the data used to construct the groundwater contours at the landfill area. Mr. Karkkainen indicated he would contact his consultant for more information and would check the static water levels as well as conduct pumping tests.

The preliminary groundwater contours indicated that the stream south of the landfill may be intercepting groundwater. If this is the case Well #3 may not receive groundwater moving immediately under the landfill. This would leave only one well which could conceivably be down gradient from the landfill; whereas RCRA requires at least 3 wells down gradient. Mr. Karkkainen indicated that more wells would be installed after the landfill has been reshaped.

We expressed concern about the installation of well screens in firm silt and clay. There may be a problem in yielding sufficient water for sampling. Mr. Karkkainen will run pump test on the wells and contact his consultant. When plans are completed on the dirt work at the landfill we will be contacted to get our comments and recommendations.

ARSENIC AND CERTAIN ARSENIC COMPOUNDS

Information on the carcinogenicity of arsenic compounds in experimental animals was considered inadequate for evaluation.[1]

Skin cancer in humans is causally associated with exposure to inorganic arsenic compounds in drugs, drinking water and the occupational environment. The risk of lung cancer was increased 4 to 12 times in certain smelter workers who inhaled high levels of arsenic trioxide.[1-3] However, the influence of other constituents of the working environment cannot be excluded in these studies. Case reports have suggested an association between exposure to arsenic compounds and blood dyscrasias and liver tumours.[4-8]

---

[1] IARC Monographs 2:48-73, 1973.
[2] M. Kuratsune, S. Tokudome, T. Shirakusa, M. Yoshida, Y. Tokumitsu, T. Hayano and M. Seita. Occupational Lung Cancer Among Copper Smelters. Int. J. Cancer 13:552-58, 1974.
[3] S. Tokudome and M. Kuratsune. A Cohort Study on Mortality from Cancer and Other Causes Among Workers at a Metal Refinery. Int. J. Cancer 17:310-17, 1976.
[4] C.R. Kjeldsberg and H.P. Ward. Leukemia in Arsenic Poisoning. Ann. Intern. Med. 77:935-37, 1972.
[5] R.A. Kyle and G.L. Pease. Hematologic Aspects of Arsenic Intoxication. N. Engl. J. Med. 273:18-23, 1965.
[6] J. Brady, F. Liberatore, P. Harper, P. Greenwald, W. Burnett, J.N.P. Davies, M. Bishop, A. Polan and N. Vianna. Angiosarcoma of the Liver: An Epidemiologic Survey. J. Natl. Cancer Inst. 59:1383-85, 1977.
[7] J.J. Lander, R.J. Stanley, H.W. Sumner, D.C. Boswell and R.D. Aach. Angiosarcoma of the Liver Associated with Fowler's Solution (Potassium Arsenite). Gastroenterology 68:1582-85, 1975.
[8] IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans, Supplement I. IARC, Lyon, France, pp. 22-23, 1979.

Arsenic is an element that is used as many compounds including arsenic trioxide, arsenic pentoxide, sodium arsenate, and sodium arsenite; all of these forms are soluble in water. Arsenic trioxide is the source for 97 percent of all arsenic products. Pentavalent organic arsenicals are used for animal drugs. It is important to note that the toxicity of arsenicals depends not only on its valence but also on its chemical form.

Elemental arsenic and arsenic compounds are used in pesticides, glass, ceramics, paints, dyes, and the preservation of hides. Arsenic occurs naturally in a number of ores and in food. The chemical form of arsenic in food has not been clearly established. Metabolically it behaves as a pentavalent organic arsenical.

Approximately 70 million lb of arsenic and inorganic arsenic compounds are produced in the United States. About 13.5 million lb of arsenic are imported, primarily as arsenic trioxide.

Industrial workers may be exposed to arsenic and its compounds during manufacturing and processing operations. An estimated 545,000 workers are potentially exposed. Higher than average worker exposure occurs during the smelting of arsenic-containing ores and during pesticide application.

Direct consumer exposure to arsenic and arsenic compounds may occur in the consumption of foods. The FDA estimates that food provides an intake of approximately 0.02 mg/day per person. Trace levels of arsenic have been reported in the tissues of livestock that were administered arsenic drugs and feed additives. Consumer exposure to arsenic may occur through the consumption of contaminated drinking water. EPA has established interim regulations to minimize exposure risks.

The general population may be exposed to arsenic compounds through air emissions from pesticide manufacturing facilities, cotton gins, glass manufacturing operations, and other sources. EPA estimated total environmental emissions to be 9,000 tons.

The Consumer Product Safety Commission reports that a small number of arsenic compounds are used extensively as wood preservatives. In 1978, approximately 63.5 million cubic feet of wood products, which include lumber, timber, playground equipment, and fence posts, were treated with arsenicals. A large portion of the total products treated was lumber used for residential construction, such as decks, patios, greenhouses, and housing foundations.

EPA, FDA, and OSHA regulate the use of arsenic and its compounds. The EPA limits arsenic in drinking water to a maximum level of 0.05 mg/l. The Agency established effluent guidelines controlling the environmental release of such compounds for certain industrial categories. A water quality criteria document for the protection of human health prepared by EPA estimates that a concentration of 2.2 ng/l limits a cancer risk to one in a million. EPA issued a Rebuttable Presumption Against Registration for 11 inorganic arsenic pesticide products and regulates arsenic under the Resource Conservation and Recovery Act. FDA has set tolerances for residues of arsenic-containing pesticides in fruit and vegetables (0.35-7 mg/kg), field crop (cotton 0.7-2.8 mg/kg), and livestock (cattle and horses 0.7-2.7 mg/kg). OSHA promulgated a final standard in 1978 limiting occupational exposure to inorganic arsenic compounds to 10 $\mu g/m^3$. The PEL of 0.5 mg/m^3 for organic arsenic as an 8-hour time-weighted average was adopted by OSHA in 1971. In addition, this standard requires personal protective equipment, training, medical surveillance, signs and labeling, and engineering controls.

REGULATIONS

Regulations and Other Actions	Effect of Regulations and Other Comments	Citation of Regulation
Arsenic: Staff coordinating efforts with EPA TSCA/FIFRA staff to assess need for controls for consumer uses of wood-treated lumber. (CPSC)		
CWA, 301: Effluent guidelines for certain industrial categories address arsenic.	Control established through conditions in NPDES permits. Carcinogenicity was a direct factor in establishing guidelines.	40 CFR 415, 421, 429, 430 (portions)
CWA, 304(a): Water quality criteria document published in final 11/28/80.	A concentration of 2.2 ng/l is estimated to limit cancer risk to one in a million.	45 FR 231, p. 79318
CAA: Under assessment to determine if regulation may be appropriate. Source and exposure assessment anticipated to be completed late 1981. Economic assessments expected to be completed 1981-82.		
RCRA, 3001-3004: Designated as a toxic waste. Requires testing to determine presence of arsenic. Wastes containing arsenic are subject to handling and report/recordkeeping requirements. Promulgated 5/19/80.	Concentration triggering compliance requirements, 5.0 mg/l.	40 CFR 261.24
SDWA, 1412: Primary drinking water regulation. Promulgated 12/24/75.	Establishes maximum contaminant level of 0.05 mg/l. Does not address carcinogenicity. Under review for possible revision. (EPA)	40 CFR 141.11 (EPA)
TSCA: Under continuing assessment to determine if other controls may be needed.		
See Carcinogen Assessment Group statement under 2-acetylaminofluorene. (EPA)		
FDA Bureau of Foods and Bureau of Veterinary Medicine, FD&CA: None of the regulated arsenic compounds are those that have been associated with occupational cancer. There are extensive toxicity studies on arsenicals used as vet drugs. None have shown any carcinogenic potential. (FDA)	Withdrawal requirements for meat-producing animals exposed to arsenicals should ensure that the levels are similar to normal background levels for arsenicals. (FDA)	Both organic and inorganic arsenics are regulated under CFR 21 558.60, 588.62, 588.120, 588.530, 180.334, 180.335 (FDA)
PEL: 0.5 mg/m^3 8-hr TWA as arsenic (organic); 10 μg/m^3 8-hr TWA (inorganic). No skin or eye contact with arsenic trichloride or liquid or particulate inorganic arsenic that is likely to cause skin or eye irritation.	Regulatory History: 1952: Walsh-Healy, 0.5 mg/m^3 maximum allowable concentration. 8/27/71: OSHA Takeover Standard--current limit effective.	29 CFR 1910.1000 (organic arsenic)
Protective clothing, respirator, hygiene training, and medical surveillance requirements for workers, monitoring requirements, housekeeping requirements, sign requirements for regulated areas, labeling requirements for containers. (OSHA)	6/30/78: Final Standard--current limit effective. (OSHA)	29 CFR 1910.1018 (inorganic arsenic) (OSHA)

(Continued)

REGULATIONS

Regulations and Other Actions	Effect of Regulations and Other Comments	Citation of Regulation
Arsenic Trioxide:		
Economic research studies being conducted by CPSC. (CPSC)		
CWA, 311: Hazardous spill regulation establishing reportable quantity (5,000 lb, 2270 kg) and imposing reporting requirements. Promulgated 8/29/79.	Not based on carcinogenicity. Encourages greater care in handling and shipment of chemicals and should result in reduction of accidental exposures.	40 CFR 117.3,, 117.13
FIFRA: Ban on use of formulations containing more than 1.5 percent arsenic trioxide in households and grazing areas, 8/68.	Some reduction in use.	Written notice to registrants
FIFRA, 6: Voluntary cancellation by producers of three products, 9/13/77.	Minimal reduction in use.	42 FR 177, p. 45944
RPAR: Issued regarding 11 inorganic arsenical pesticides, 10/18/78.	Proposed determination in development will address wood preservative uses. Anticipated publication, early 1981. (EPA)	43 FR 202, p. 48267
RCRA, 3001-3004: Subjects waste products, off-specification batches, and spill residues in excess of 1000 kg to handling and report/recordkeeping requirements. Also, designated as a hazardous constituent of waste. Wastes known to contain arsenic trioxide are subject to the same requirements. Promulgated 5/19/80.		40 CFR 261.11, 261.33 (EPA)
See Carcinogen Assessment Group statement under 2-acetylaminofluorene. (EPA)		
See regulations under arsenic. (OSHA)		29 CFR 1910.1018 (OSHA)
Potassium Arsenate:		
CWA, 311: Hazardous spill regulation establishing reportable quantity (1,000 lb, 454 kg) and imposing reporting requirements. Promulgated 3/29/79.	Not based on carcinogenicity. Encourages greater care in handling and shipment of chemicals and should result in reduction of accidental exposures. (EPA)	40 CFR 117.13
RCRA, 3001-3004: Arsenical compounds, N.O.S., are listed as hazardous constituents of waste. Wastes known to contain any of these are subject to handling and report/recordkeeping requirements. Promulgated 5/19/80.		40 CFR 261.11 (EPA)
See Carcinogen Assessment Group statement under 2-acetylaminofluorene. (EPA)		
See regulations under arsenic. (OSHA)		29 CFR 1910.1018 (OSHA)

(Continued)

REGULATIONS

Regulations and Other Actions	Effect of Regulations and Other Comments	Citation of Regulation
Sodium Arsenate:		
CWA, 311: Hazardous spill regulations establishing reportable quantity (1,000 lb, 454 kg) and imposing reporting requirements. Promulgated 8/29/79.	Not based on carcinogenicity. Encourages greater care in handling and shipment of chemicals and should result in reduction of accidental exposures.	40 CFR 117.3, 117.13
FIFRA, 6: RPAR issued regarding 11 inorganic arsenical pesticides, 10/18/78.	Proposed determination in development will address wood preservative uses. Anticipated publication, early 1981. (EPA)	43 FR 202, p. 48267
RCRA, 3001-3004: Arsenical compounds, N.O.S., are listed as hazardous constituents of wastes. Wastes known to contain any of these are subject to handling and report/recordkeeping requirements. Promulgated 5/19/80.		40 CFR 261.11 (EPA)
See Carcinogen Assessment Group statement under 2-acetylaminofluorene. (EPA)		
See regulations under arsenic. (OSHA)		29 CFR 1910.1018 (OSHA)
Sodium Arsenite:		
CWA, 311: Hazardous spill regulations establishing reportable quantity (1,000 lb, 454 kg) and imposing reporting requirements. Promulgated 8/29/79.	Not based on carcinogenicity.	40 CFR 117.3, 117.13
FIFRA: Ban on use of formulations containing more than 2 percent of sodium arsenite in households or on grazing areas, 8/68.	Some reduction in use.	Written notice to all affected registrants
FIFRA, 6: Registrations of two products voluntarily canceled by producers, 3/8/77.	Some reduction in use.	42 FR 48, p. 13579
FIFRA, 6: RPAR issued regarding 11 inorganic arsenical pesticides, 10/18/78.	Proposed determination in development will address wood preservative uses. Anticipated publication, early 1981. (EPA)	43 FR 202, p. 48267
RCRA, 3001-3004: Arsenical compounds, N.O.S., are listed as hazardous constituents of waste. Wastes known to contain any of these are subject to handling, and report/recordkeeping requirements. Promulgated 5/19/80.		40 CFR 261.11
TSCA, 8(a): Reporting rule requiring process and use data. Proposed 2/29/80.		45 FR 42, p. 13646 (EPA)
See Carcinogen Assessment Group statement under 2-acetylaminofluorene. (EPA)		
See regulations under arsenic. (OSHA)		29 CFR 1910.1018 (OSHA)

(Continued)

REGULATIONS

Regulations and Other Actions	Effect of Regulations and Other Comments	Citation of Regulation
Arsenic Pentoxide:		
CWA, 311: Hazardous spill regulation establishing reportable quantity (5,000 lb, 2270 kg) and imposing reporting requirements. Promulgated 8/29/79.	Not based on carcinogenicity.	40 CFR 117.3, 117.13
RCRA, 3001-3004: Subjects waste product, off-specification batches, and spill residues in excess of 1000 kg to handling and report/recordkeeping requirements. Also designated as a hazardous constituent of waste. Wastes known to contain arsenic pentoxide are subject to the same requirements. Promulgated 5/19/80.		40 CFR 261.11, 261.33
FIFRA, 6: RPAR issued regarding 11 inorganic arsenical pesticides, 10/18/78.	Proposed determination in development will address wood preservative uses. Anticipated publication, early 1981. (EPA)	43 FR 202, p. 48267 (EPA)
See Carcinogen Assessment Group statement under 2-acetylaminofluorene. (EPA)		
See regulations under arsenic. (OSHA)		29 CFR 1910.1018 (OSHA)
Calcium Arsenate, Calcium Arsenite, Disodiumhydrogen Arsenate, Lead Arsenate, and Potassium Arsenite:		
RCRA, 3001-3004: Arsenic compounds, N.O.S., are listed as hazardous constituents of waste. Wastes known to contain any of these are subject to handling and report/recordkeeping requirements. Promulgated 5/19/80.		40 CFR 261.11 (EPA)
See Carcinogen Assessment Group statement under 2-acetylaminofluorene. (EPA)		

Appendix D

Chemical Methods for the *Detoxification* of Inorganic and Metallo-Organic Pesticides

1 GENERAL REVIEW OF APPLICABLE DISPOSAL METHODS

The two pesticides selected, arsenic acid and MSMA (monosodium methane-sonate), characterize the inorganic and organometallic arsenicals, respectively. sposal problems of the arsenicals reflect problems experienced with other tal and metalloid pesticides (2). The element, arsenic, is ubiquitous in the vironment and exists in a wide variety of inorganic and organic compounds 51). Its environmental behavior parallels that of mercury (152).

Although arsenic will remain a toxic metal, its hazard can be mitigated. ghly toxic arsenic compounds can be degraded to compounds of lower toxicity. aching problems can be reduced by preparing precipitates which are either ixed or slowly release the arsenic. The reactions most important for disposal re oxidation-reduction and ion exchange.

Table 7. Soil Persistence, Soil Mobility and Water Solubility of the Selected Pesticides.

Pesticide	Soil+ Persistence (months)	Mobility+	Water Solubility‡
MSMA			soluble
Arsenic acid			167 g/ℓ
Monocrotophos			miscible
Phosphamidon			miscible
Fensulfothion			1.6 g/ℓ
Ronnel			44 ppm
PennCap-M (Methyl Parathion)			55-60 ppm
Dimethoate			25-39 g/ℓ
Disulfotan			25 ppm
Dyfonate			13 ppm
Phorate	1-3	slightly mobile	50 ppm
Monitor			90 g/ℓ
Def			insoluble
Aldicarb			6 g/ℓ
Carbofuran			700 ppm
Methomyl			58/ℓ
EPTC	1-3	slightly mobile	365 ppm
Molinate			800 ppm
Thiram			30 ppm
Propanil			225 ppm
Captafol			1.4 ppm
Diphenamid			260 ppm
Chloroxuron			3.7 ppm
Cyanazine			171 ppm
Simazine	3-12	slightly mobile	5 ppm
Amitrol			280 g/ℓ
Dinoseb			50 ppm
PCNB			0.44 ppm
Paraquat			soluble
Chloropicrin			2.3 g/ℓ
Chlorobenzilate			insoluble
2,4,5-T	3-12	mobile	278 ppm (free-acid) soluble (amine salts)
Endrin	>12	immobile	insoluble
BHC	>12		0.5-1.0 ppm
D-D			2 g/ℓ
DBCP			1 g/ℓ
Dicamba			4.5 g/ℓ
Creosote			very slightly soluble
Warfarin			40 ppm (free acid) soluble (Warfarin sodium)
Sodium fluoroacetate			very soluble

+ Reference 2
‡ See Appendices A-G for references.

Table 6. Consumption Volume and Hazard Properties of the Selected Pesticides. Part 2. Hazard Properties and Ratings (Cont'd).

Pesticide	Acute Oral LD_{50}** (mg/kg)	Acute Dermal LD_{50}** (mg/kg)	Inhalation Toxicity**	Aquatic Toxicity** LC_{50} (mg/ℓ)	Other Hazards**	Hazard Rating (r_f)	Priority Ranking Value (r_f + Q)
MSMA	50[b]					2	3
Arsenic acid	48					2	3
Monocrotophos	21	112		4.5–100 (96 hr)[k]		2	3
Phosphamidon	17	125				3	4
Fensulfothion	2	3		0.305 (96 hr)[k]		3	4
Ronnel	906	2,000				3	4
PennCap-M (Methyl Parathion)	>60	1,200[f]					
Dimethioate	(9)	(67)		<1 (96 hr)[k]		3	4
Disulfotan	147,30[c]	353		0.063-3.7 (96 hr)[k]		3	4
Dyfonate	2[d], 3.2[e]	6				3	4
Phorate	3	147		0.0006 (96 hr)[l]		3	4
Monitor	1	3				2	2
Dcl	7.5	118[f]		0.1 (96 hr)[l]		3	4
Aldicarb	150	168				3	4
Carbofuran	1.0	1,400[f]				3	4
Methomyl	11[e], 5.3	1,100[g], 120	8.5 mg/cu m			2	3
EPTC	17	1,500				2	3
Molinate	112[g], 1,630	1,460[f]	200 mg/cu m (3 hr)[d]	2.3 (96 hr)[l]		3	4
Thiram	501	>2,000		0.3–4.5 (96 hr)[l]	Teratogenic[h]	3	3
Propanil	560					1	2
Captafol	560			16.0 (96 hr)[l]		3	4
Diphenamid	2,500			0.8 (96 hr)[l]	Teratogenic[i]	1	2
Chloroxuron	293			50–58 (48 hr)[l]		2	3
Cyanazine	10[j], 3,700	10,000		25 (48 hr)[k]		1	2
	340						

D.2 CHEMICAL METHODS FOR DETOXIFICATION OF ARSENIC ACID

Arsenic acid which is applied as a cotton desicant and herbicide is marketed as a 75% (by weight) liquid concentrate (14, 153). Its solubility is 16.7 g/100 ml in cold water and 50 g/100 ml in hot water (154).

Arsenic acid is weakly amphoteric. Heavy metals will react with it to yield insoluble precipitates, some of which are used for quantitative analysis of As(V) oxides. Metals which quantitatively precipitate arsenic acid include magnesium, lead, calcium, and iron (III) (155, 156). Arsenate precipitation with ferric hydroxide has been suggested to reduce its phytoxicity (151). Its precipitation will also reduce its potential for leaching. Arsenate could be suitably precipitated with a slight excess of lime, ferric hydroxide, or magnesia. The best procedure is to stir ferric chloride, or a hydroxide of ferric, calcium, or magnesium into the waste arsenic acid and allow the mixture to stand 24 hours. Then, the supernatant water should be siphoned or decanted (2).

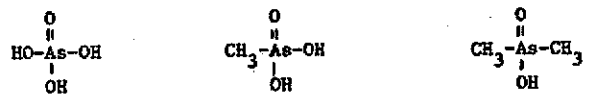
An alternative procedure would be to precipitate arsenic with sulfide. Since the method requires more sophisticated handling, the precipitation with heavy metals is preferred. The sulfide precipitation requires decreasing the solution acidity to less than pH 1 with 6N HCl, then saturating the solution with sodium sulfide or hydrogen sulfide (155). The precipitate and supernatant should be handled just as described for the ferric or other metal arsenate precipitates.

The EPA recommended procedures should be used for disposal of arsenic acid and its containers (7a). Empty containers should be triple-rinsed by the NACA recommended procedures (Section 3). Although the precipitation of arsenic acid could reduce its mobility in the environment and its toxicity, insufficient environmental testing is available to verify this conclusion. The precipitates should be considered hazardous. Any use of precipitation should only be in strict accordance with the EPA recommended procedures (7a).

CHEMICAL METHODS FOR DETOXIFICATION OF MSMA (Monosodium Methanearsonate)

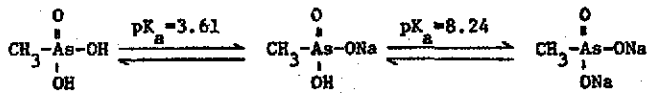
MSMA is a selective post-emergence contact herbicide. It is soluble in (570 g/ℓ at 25°C) and in methanol. MSMA is formulated as 6 and 8 lbs/gal ds (14, 15).

MSMA is a member of a group of methylated arsenic acid analogs. It is the odium salt of methanearsonic acid,



Arsenic Acid | Methanearsonic Acid | Cacodylic Acid

is in equilibrium with the free acid and the disodium salt, DMSA (151).



Arsenic Acid | MSMA | DSMA

The methyl group of methanearsonic acid is stable to hydrolysis. It can idized by heating it at 315°C in sulfuric acid or at lower temperatures in c acid-sulfuric acid mixtures (157-159). Methanearsonic acid can also be ed to yield derivatives of trivalent arsenic. Its reaction with SO_2 in an ous halogen acid (HCl or HBr) yields the corresponding methylarsine dihalide AsX_2). When it is reacted with a sodium sulfite-hypophosphorous acid mix-, it forms a polymeric sulfide, $[CH_3AsS]_n$. Methanearsonic acid reacts with o yield the pentavalent arsenic disulfide, CH_3AsS_2 (158, 159).

Methanearsonic acid quantititively precipitates with a wide variety of line earth and transition metals. The metal salts exhibit amphoteric

behavior; precipitation is pH dependent. For example, the quantitative precipitation occurs at pH 3 for Al(III), at pH 4 for Cu(II), pH 5 for Mn(II) or Fe(II), at pH 6 for Zn(II), at pH 7 for Fe(III), and at pH 8 for Mg(II) (158, 159).

The EPA recommended procedures should be used for disposal of MSMA and its containers (7a). Empty containers should be triple-rinsed by the NACA recommended procedures (Section 3). The precipitation of MSMA might reduce hazard if land burial is used for disposal. Since environmental fate of precipitated MSMA is not known, if used, it should be considered potentially hazardous and in accordance with the EPA recommended procedures (7a).

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

April 13, 1982

RECEIVED
APR 15 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles Estes, P.E.
Division of Solid Waste
Mississippi Department of
Natural Resources
Bureau of Pollution Control
Post Office Box 10385
Jackson, Mississippi 39209

Dear Mr. Estes:

I will shortly be in contact with you to make an appointment to discuss the hydrogeological investigation at our Vicksburg facility.

Apart from that but certainly related, I would like at that time to discuss continued remedial effort at the closed-out landfill/pit area. Plans to move ahead with the combined bio-pond remedial effort will not proceed at expedited speed as previously hoped. We will prepare a detailed topography and initially make a dirt moving plan with the intent of tapering the hill in the direction of the existing pond and cut the total hill elevation to perhaps 15 feet above the railroad grade.

Best regards,

Dick Karkkainen
Director of Environment & Safety

DK:ew

CC: Mr. R. Maraman

ALLEN & HOSHALL, INC.
ENGINEERS ARCHITECTS CONSULTANTS
612 NORTH STATE STREET JACKSON, MS. 39201 (601) 355-3675

to Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39209

date 8 April 1982
project Vertac Chemcial Corporation

job no.

we are sending you

[X] enclosed herewith [ ] under separate cover

the following

spec. section	drawing no. model no.	designation	no. of copies	description	disposition
		0	1	Correspondence File	F.F.

designation

drawing — D
specification — Spec
shop drawing — S.D.
manf. data — M.D.
samples — Samp
other — O

disposition

for your file or use — F.F.
for approval — F.A.
accepted — A
accepted as corrected — A.C.
for correction & resubmittal — C.R.
not accepted — N.A.

remarks

by Terry L. Anderson

form 1000

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

April 8, 1982

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor
5100 Poplar
Memphis, TN 38137

Dear Mr. Karkkainen:

After reviewing the hydrogeological investigation conducted at your facility, our staff has found several RCRA requirements which were not adequately addressed by the report. To help us gain a better understanding of the investigation and the groundwater monitoring program, we would appreciate your meeting with us to discuss the facility at your convenience.

Please contact our office to set a meeting date.

Sincerely,

Charles Estes, P.E.
Division of Solid Waste

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 354-2550

TO: Files

FROM: Chuck Estes

SUBJECT: Vertac Chemical Corporation

DATE: March 23, 1982

The Vertac Chemical Corporation File was checked out by John Malenchak on March 23, 1982. The letters of December 15, 1981 and February 16, 1982 was removed from the file.

Mr. Malenchak will return the file item in good condition as soon as possible.

John E. Malenchak

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851
TELEX 53927

RECEIVED
MAR 26 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

March 22, 1982

Mr. Chuck Estes
Division of Solid Waste Management
Mississippi Department of Natural Resources
Post Office Box 10385
Jackson, Mississippi 39209

Dear Mr. Estes:

This is an authorization to allow representatives of the firm, Allen & Hoshall, Inc. to review material in the files of the Bureau of Pollution Control pertaining to our facility in Vicksburg.

We anticipate hiring that firm, but have not yet done so, to design a biological waste water system. The tentative placement of the basin and tentative system sketch are attached. With the placement of the basin, we hope to complete the remedial effort on the "closed out reclaimed pit area" and "closed out landfill area" initiated some two years ago.

I assume you and Mr. Steve Spangler of the Water Division will cross communicate as we make progress on the design. I still owe Mr. Spangler a report confirming the reasons why we thought we could manage the present discharge of COD/BOD by temporary but costly use of activated carbon as we increased pesticide production from sporadic campaign production to full-time production, present wastewater management difficulties, and progress on steps being taken to reduce, eliminate, and prevent recurrence of present levels of COD/BOD.

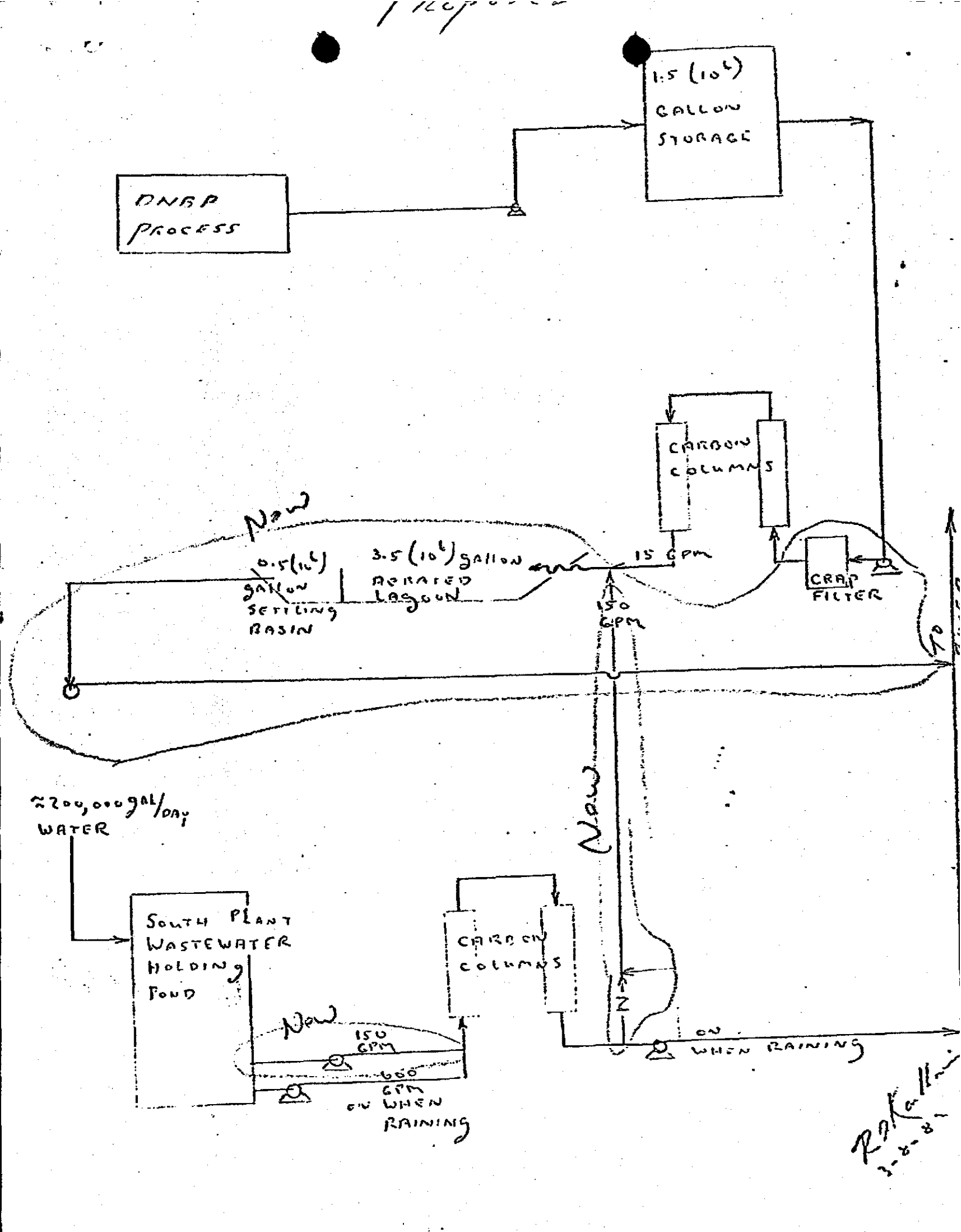
Best regards,

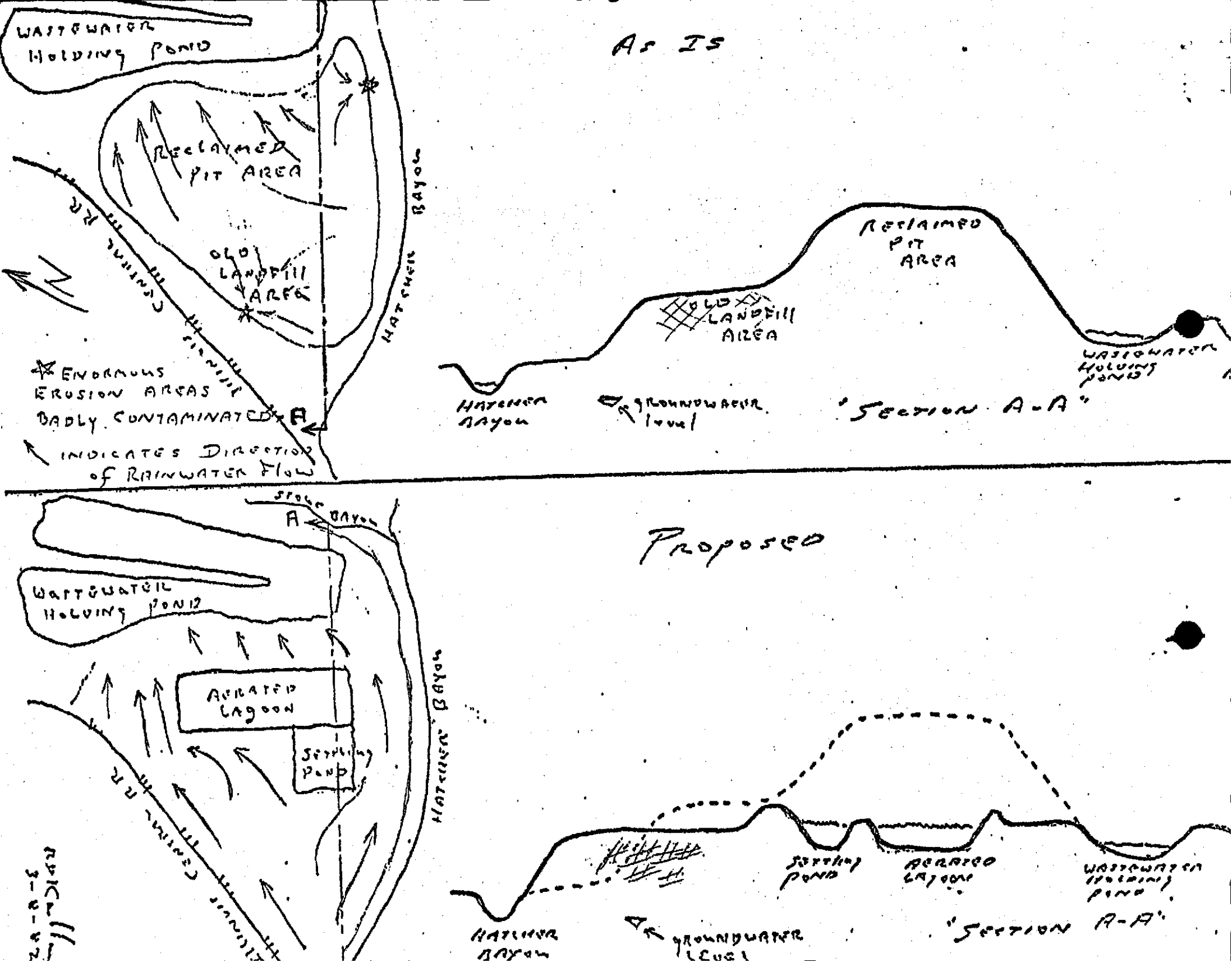
Dick Karkkainen
Director of Environment & Safety

DK:ew

Attachment

CC: Mr. Steven Spangler


1.5 (10^6) GALLON STORAGE
DNBP PROCESS
CARBON COLUMNS
New
0.5(10^6) GALLON SETTLING BASIN
3.5 (10^6) GALLON AERATED LAGOON
15 GPM
150 GPM
CRAP FILTER
New
≈200,000 GAL/DAY WATER
SOUTH PLANT WASTEWATER HOLDING POND
CARBON COLUMNS
New
150 GPM
600 GPM ON WHEN RAINING
Z
ON WHEN RAINING


As Is
Wastewater Holding Pond
Reclaimed Pit Area
Old Landfill Area
Hatcher Bayou
Enormous Erosion Areas Badly Contaminated
A
Indicates Direction of Rainwater Flow
Reclaimed Pit Area
Old Landfill Area
Wastewater Holding Pond
Hatcher Bayou
Groundwater level
"Section A-A"
Proposed
Stone Bayou
A
Wastewater Holding Pond
Aerated Lagoon
Settling Pond
Hatcher Bayou
Settling Pond
Aerated Lagoon
Wastewater Holding Pond
Hatcher Bayou
Groundwater level
"Section A-A"

REPORT
HAZARDOUS WASTE SITE INVESTIGATION
VERTAC CHEMICAL CORPORATION
VICKSBURG, MISSISSIPPI
JANUARY 26, 1982

INTRODUCTION

A hazardous waste site field investigation was conducted at the Vertac Chemical Corporation, Vicksburg, Mississippi, by R. J. Bruner III and Carol Hough, U.S. Environmental Protection Agency (EPA), Region IV, Environmental Services Division (ESD), on October 28, 1981. Jim Hardage and Charles Estes, Mississippi Division of Solid Waste Management, also participated in the investigation. Robert Maraman, Chief Chemist, and R. D. Karkkainen, Director, Environment and Safety, represented the company during the investigation. This investigation was requested by the EPA, Region IV, Air and Waste Management Division.

STUDY AREA

The Vertac Chemical Corporation facility (formerly Vicksburg Chemical Company) is located on Business Route 61 south of Vicksburg, Mississippi. The facility is separated into two plants referred to as the North Plant and the South Plant (see figure 1). The North Plant produces nitrogen tetroxide, chlorine, and potassium nitrate, and the South Plant produces nitric acid, dinitrobutylphenol (DNBP), and toxaphene. The DNBP and toxaphene processes were not in operation at the time of this investigation. Methyl parathion and atrazine have been produced at the South Plant in the past, but are no longer being produced (1).

Process wastewater and rainfall runoff from process areas at the South Plant are collected in a waste holding pond. Wastewater from the pond passes through activated carbon columns then combines with wastewater from the North Plant and is discharged to the Mississippi River (NPDES permit number MS0027995). The pH of the process wastewater from the North Plant is neutralized prior to combining with wastewater from the South Plant. Cooling water from both plants and rainfall runoff from the North Plant go directly to the river without treatment (1). Since the organic chemical processes and the activated carbon units at the South Plant were not operating during this investigation, no attempt was made to collect a sample of the wastewater effluent.

The primary emphasis of this investigation involved a reclaimed pit area southwest of the facility's wastewater pond (see figures 2 and 3). The pit area covered approximately 30 acres and was used for the disposal and storage of various waste materials including cyanuric chloride from the atrazine process, dimethyl urea, isopropyl amine, DNBP, sodium nitrophenol, and spent activated carbon (2). All pits had been covered and an attempt had been made at seeding the site at the time of this investigation. The attempted seeding was partially successful at the western end of the site, but was unsuccessful on the remainder of the site (see figures 3(a) through 3(f)). Yellow ground stains were visible at many locations around the reclaimed pit area. Similar stains were observed in the South Plant process area.

The majority of the surface runoff from the reclaimed pit area drained to the east into the facility's wastewater holding pond; however, two areas were observed where runoff drained from the site without entering the wastewater pond. One of these areas was located at the east corner of the site. Surface runoff from this area drained to the south into Hatcher Bayou. Heavy erosion damage was visible at this site (see figure 3(h) and 3(i)). The other site where surface runoff drained from the reclaimed pit area without entering the wastewater pond was located along the western edge of the pit area in a small valley (see figure 3(j)). This site was also marked by severe erosion. A large area of sediment deposition was oberved between the western edge of the pit area and the Illinois Central Gulf Railroad tracks (see figures 3(k) and 3(l)). A small amount of water was flowing through the area of deposition at the time of this investigation; however, the water soaked into the ground prior to reaching Hatcher Bayou.

The Vertac Chemical Corporation was in the process of installing a groundwater monitoring system around the wastewater pond and the reclaimed pit area at the time of this investigation.

The Vicksburg Wastewater Treatment Plant is located across Stouts Bayou from the Vertac facility; the WWTP discharges to the Mississippi River.

RESULTS AND DISCUSSION

Sediment samples were collected from the two erosion channels observed at the eastern and western corners of the pit area. Water and sediment samples were collected from Stouts Bayou upstream from the Vertac facility and from Hatcher Bayou downstream from the Vertac facility (see figures 1 and 2). All water and sediment samples were analyzed for purgeable and extractable organic compounds including pesticides, metals, and cyanide. Water samples were also analyzed for total phosphorus; pH and temperature were measured in the field on the water samples. A data summary is presented in table 1; complete analytical results are presented in appendix A.

The sediment sample collected from the erosional area east of the reclaimed pit area (VL-002) contained the highest concentrations of organic compounds detected during this investigation. Depositional material collected from the erosion channel contained elevated concentrations of cyanazine (21,000 ug/kg), atrazine (84,000 ug/kg), toxaphene (13,000 ug/kg), and PCB-1254 (7,000 ug/kg). Metal concentrations in this sample were similar to the concentrations detected in the sediment sample from Stouts Bayou upstream from the Vertac facility (SBU-001). Cyanide (0.86 mg/kg) was detected in this sample but was not detected in the Stouts Bayou sediment sample (see table 1).

The sediment sample from the mud flat west of the reclaimed pit area (VL-003) contained elevated concentrations of toxaphene (65,000 ug/kg), atrazine (18,000 ug/kg), dinoseb (<15,000 ug/kg), and cyanazine (<7,600 ug/kg). Four purgeable organic compounds were also detected (maximum concentration 10 ug/kg chloroform). Again, metal concentrations were not significantly higher than the control sediment sample (SBU-001); cyanide (0.58 mg/kg) was detected.

Dinoseb is a generic name for 2,4-dinitro-6-sec-butylphenol, a yellow crystalline substance used as a herbicide (5). Cyanazine is an s-trazine herbicide with a structure very similar to atrazine (6).

The water and sediment sample from Stouts Bayou was collected upstream from the Vertac facility and was considered a control sample. A small bridge had collapsed into Stouts Bayou just upstream from the sampling location, and concrete and asphalt from the bridge and roadway were present in the bayou. Three polynuclear aromatic hydrocarbons, alpha and gamma chlordane, and a petroleum type product were detected in the Stouts Bayou sediment sample. The water sample from Stouts Bayou contained traces (<12 ug/kg) of two fatty acids (see table 1).

The water sample from Hatcher Bayou collected downstream from the Vertac facility (HBD-004) contained the same fatty acids that were detected in the Stouts Bayou water sample, but also contained traces (<5 ug/kg) of two puregable organic compounds (chloroform and carbon tetrachloride). No other organic compounds were detected in either the water or sediment sample from Hatcher Bayou. Sodium (127,000 ug/l) and cyanide (46 ug/l) concentrations were significantly higher in the Hatcher Bayou water sample than in the Stouts Bayou water sample. Chromium (170 mg/kg) and magnesium (116,000 mg/kg) concentrations were higher in the Hatcher Bayou sediment sample than in the Stouts Bayou sediment sample. A large number of old tires and other trash were observed in Hatcher Bayou near the sampling location (see figure 3(g)).

METHODOLOGY

All water and soil/sediment samples collected during this investigation were collected in accordance with standard operationg procedures of the Water Surveillance Branch, ESD/EPA (3). All laboratory analyses were conducted by the Laboratory Services Branch (LSB), ESD/EPA in accordance with standard procedures and protocols of the LSB (4).

REFERENCES

1. Personal conversation between R. J. Bruner III, U.S. Environmental Protection Agency, Region IV, Environmental Services Division, and Robert Maraman and R. D. Karkkainen, Vertac Chemical Corporation, on October 28, 1981.

2. "Confidential Report - Estimated Sampling Requirements - Vertac Chemical Corporation" (TDD # F4-8012-2), Ecology and Environment, Inc.

3. Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); U.S. Environmental Protection Agency, Region IV, Surveillance and Analysis Division; August 29, 1980.

4. Laboratory Services Branch Operations and Quality Assurance Manual, U.S. Environmental Protection Agency, Region IV, Surveillance and Analysis Division; March, 1980.

5. Melnikov, N. N.; Chemistry of Pesticides; Springer-Verlag, Inc. (New York); 1971.

6. Kearney, P. C. and D. D. Kantman (editors); Herbicides - Chemistry, Degradation, and Mode of Action; Marcel Dekker Inc. (New York); 1975.

TABLE 1
DATA SUMMARY
VERTAC CHEMICAL COMPANY
VICKSBURG, MISSISSIPPI

	SOIL/SEDIMENT				WATER	
	SBU-001 Stouts Bayou Upstream	HDB-004 Hatcher Bayou Downstream	VL-002 Erosion Channel East Corner	VL-003 Mud Flat West Corner	SBU-001 Stouts Bayou Upstream	HDB-004 Hatcher Bayou Downstream
PURGEABLE ORGANIC COMPOUNDS	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/l)	(µg/l)
Chloroform[1]	ND	ND	ND	10	ND	<5
Carbon tetrachloride[1]	ND	ND	ND	<7[c]	ND	<5
Trichloroethylene[1]	ND	ND	ND	<7	ND	ND
Tetrachloroethylene[1]	ND	ND	ND	<7	ND	ND
EXTRACTABLE ORGANIC COMPOUNDS (GC/MS)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/l)	(µg/l)
Benzo (B) flouranthene and/or Benzo (K) flouranthene[1]	<36,000	ND	ND	ND	ND	ND
Benzo-A-pyrene[1]	<36,000	ND	ND	ND	ND	ND
Benzo (GHI) perylene[1]	<36,000	ND	ND	ND	ND	ND
Hexadecanoic acid[2]	—	—	—	—	<12	<12
Octadecanoic acid[2]	—	—	—	—	<12	<12
Dinoseb[2]	ND	ND	ND	<15,000	ND	ND
Cyanazine[2]	—	—	21,000	<7,600	—	—
Petroleum type product	P	—	—	—	—	—
PESTICIDES, PCB'S, AND OTHER CHLORINATED ORGANIC COMPOUNDS (GC/EC)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/l)	(µg/l)
PCB-1254[1]	ND	ND	7,000	ND	ND	ND
Toxaphene[1]	ND	ND	13,000	65,000	ND	ND
Atrazine	ND	ND	84,000[b]	18,000[b]	ND	ND
Alpha chlordane	6.5	ND	ND	ND	ND	ND
Gamma chlordane	7.6	ND	ND	ND	ND	ND
INORGANIC ELEMENTS AND COMPOUNDS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(µg/l)	(µg/l)
Barium	156	195	213	211	64	112
Chromium[1]	12	170	30	22	ND	ND
Copper[1]	8.8	7.8	17	15	ND	17
Nickel[1]	12	14	23	23	ND	ND
Lead[1]	14	21	20	20	ND	ND
Strontium	61	92	42	30	88	122
Titanium	240	213	441	561	21	36
Vanadium	22	22	41	46	ND	ND
Yttrium	12	19	14	14	ND	ND
Zinc[1]	50	50	67	64	ND	17
Mercury[1]	0.12	ND	0.12	ND	ND	ND
Aluminum	7,690	6,378	14,765	15,843	875	1,500
Manganese	3,050	3,150	1,265	1,589	173	228
Calcium	71,200	116,000	38,850	15,453	32,000	34,000
Magnesium	5,680	8,466	10,134	6,340	8,900	14,000
Iron	19,900	26,043	22,988	24,327	1,100	1,800
Sodium	160	400	210	660	6,300	127,000
Cyanide[1]	ND	ND	0.86	0.58	ND	46
CONVENTIONAL PARAMETERS (Units as specified for each parameter)						
Temperature (°C)	NA	NA	NA	NA	6.5	15.9
pH (SU)	NA	NA	NA	NA	7.1	6.9
Total phosphorus (mg/l)	NA	NA	NA	NA	0.40	0.98

All soil/sediment concentrations were calculated on a dry weight basis.

P - Indicates presence.

NA - Not analyzed.

ND - None detected at or above the minimum quantifiable level (MQL). The MQL's vary from sample to sample and from parameter to parameter; see analytical data sheets (appendix A) for exact values.

1 - Compound/element is on the NRDC list of priority pollutants.

2 - Tentative identification, estimated concentration.

3 - The value indicates the highest estimated concentration for a compound in this classification. The number in parentheses indicated the number of compounds detected in this classification.

a - Presumptive evidence of presence of material; not confirmed on GC/MS or second GC column. See footnote b.

b - *Confirmed on GC/MS. The lack of a footnote indicates that the compound was confirmed on two different GC columns.*

c - The less than symbol indicates that the compound was detected by GC/MS at a concentration less than the minimum quantifiable level (MQL); the number indicates the MQL.

FIGURE 1
MAP
SOUTHEAST VICKSBURG, MS

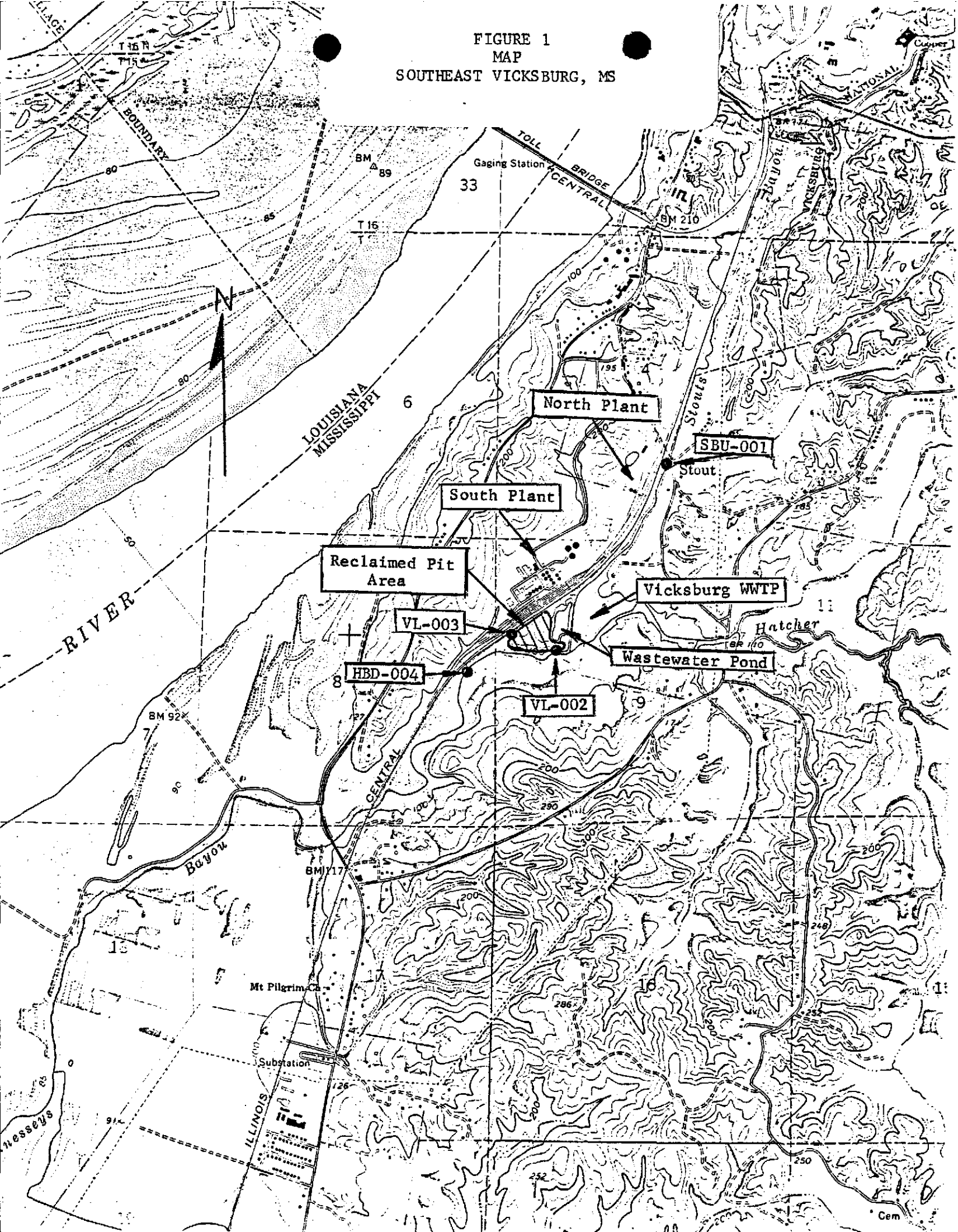


FIGURE 2
SCHEMATIC DIAGRAM
VERTAC CHEMICAL CO.
VICKSBURG, MS

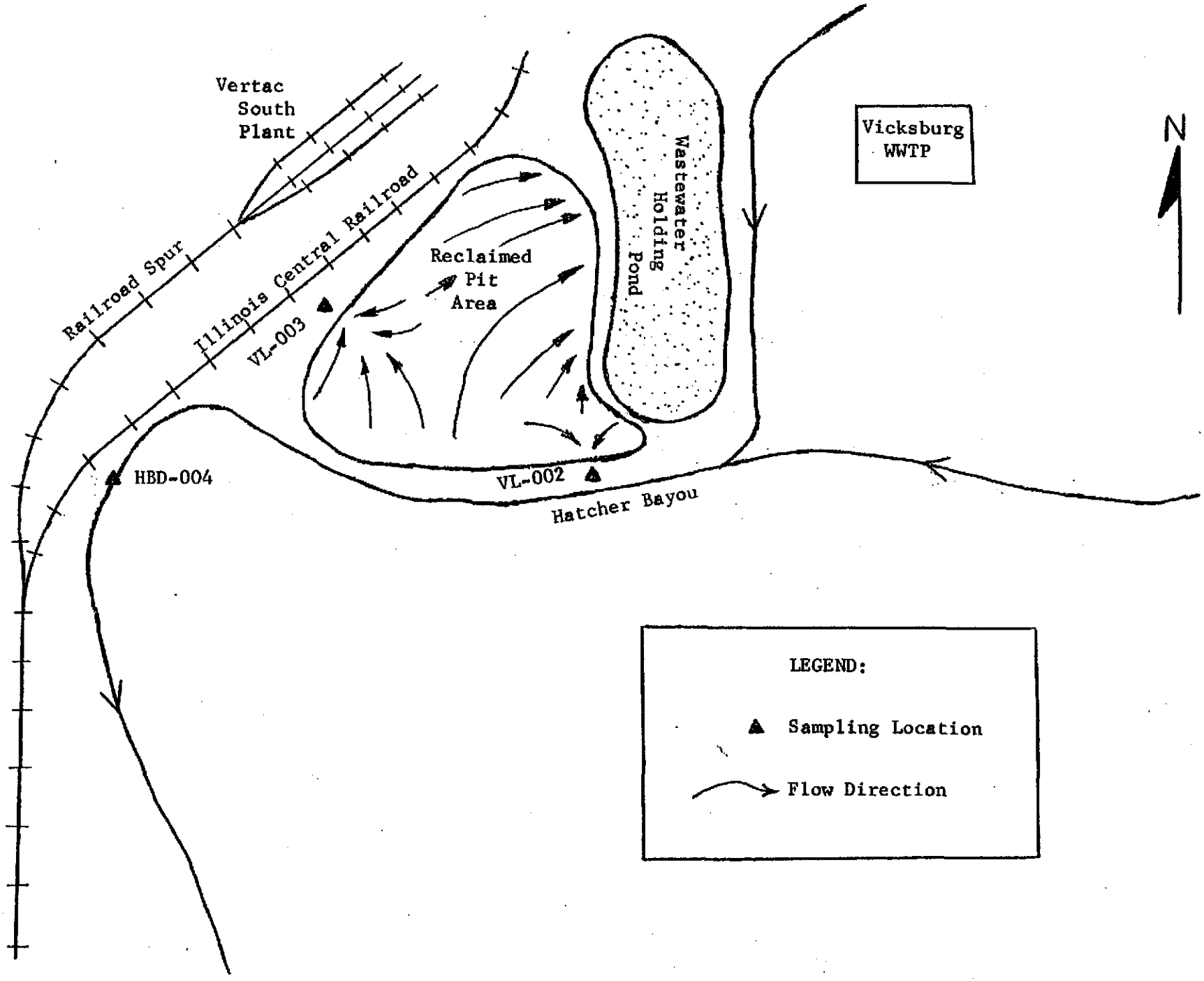
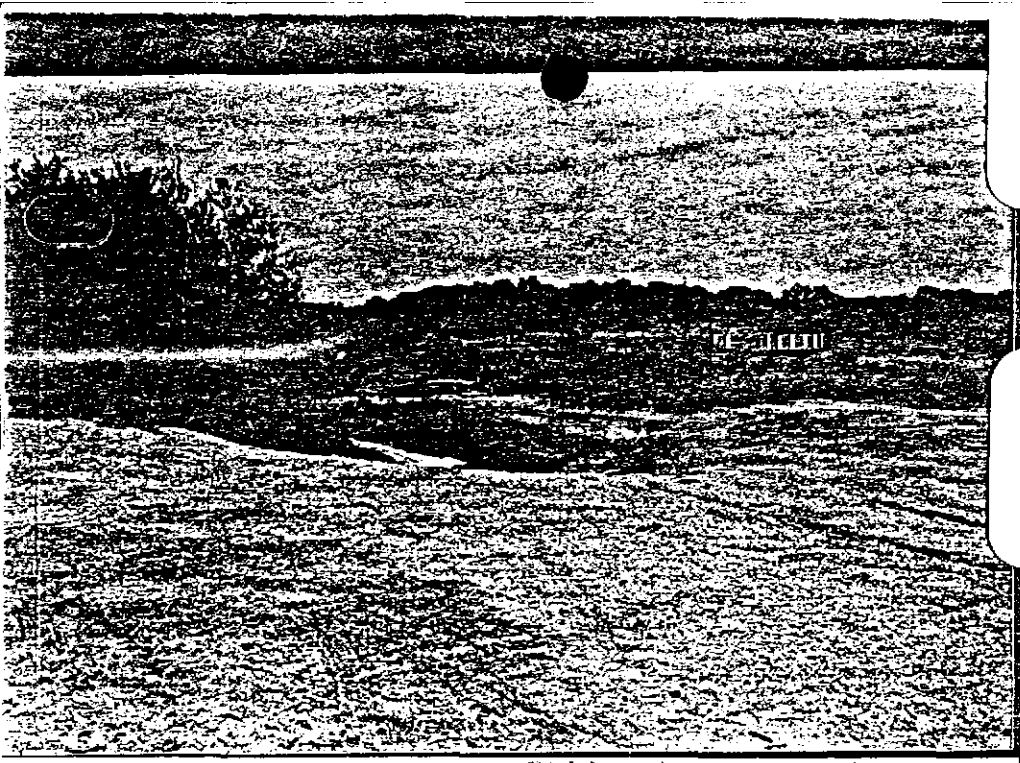
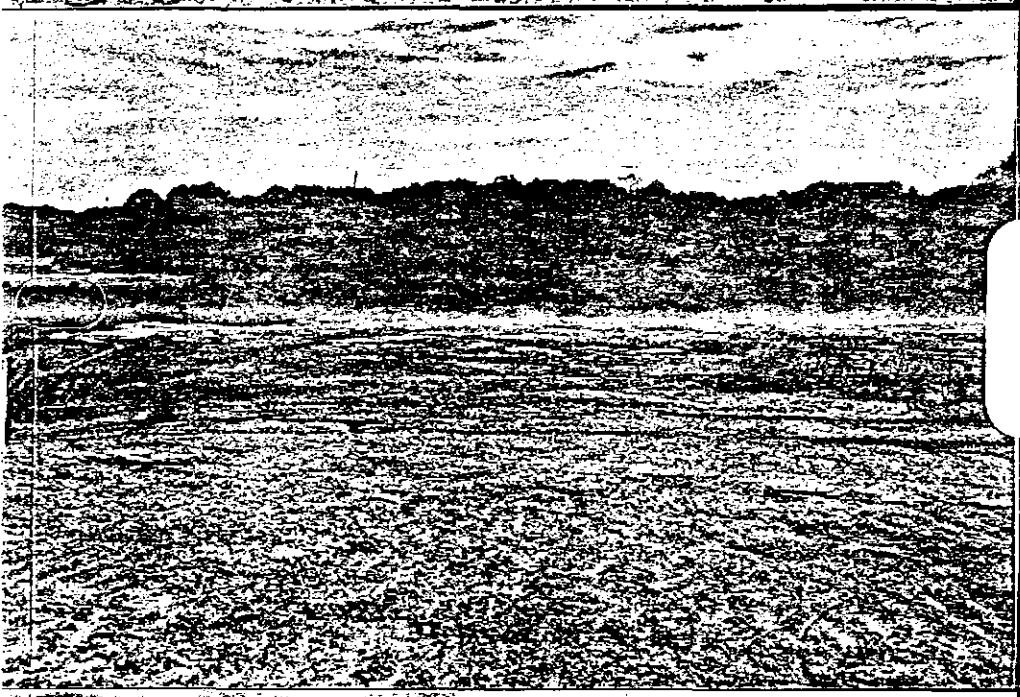


FIGURE 3
PHOTOGRAPHS
VERTAC CHEMICAL CO.
VICKSBURG, MS



a-f) Sequential panoramic view of reclaimed pit area.

a) View northeast.



b) View east.

c) View southeast.

FIGURE 3 (cont.)
PHOTOGRAPHS
VERTAC CHEMICAL CO.
VICKSBURG, MS

d) View south.

e) View southwest.

f) View west.

FIGURE 3 (cont.)
PHOTOGRAPHS
VERTAC CHEMICAL CO.
VICKSBURG, MS

g) Hatcher Bayou downstream from Vertac (HBD-004).

h) Erosion channel near the east corner of the pit area (VL-002).

i) Slope and sampling location near the east corner of the pit area (VL-002).

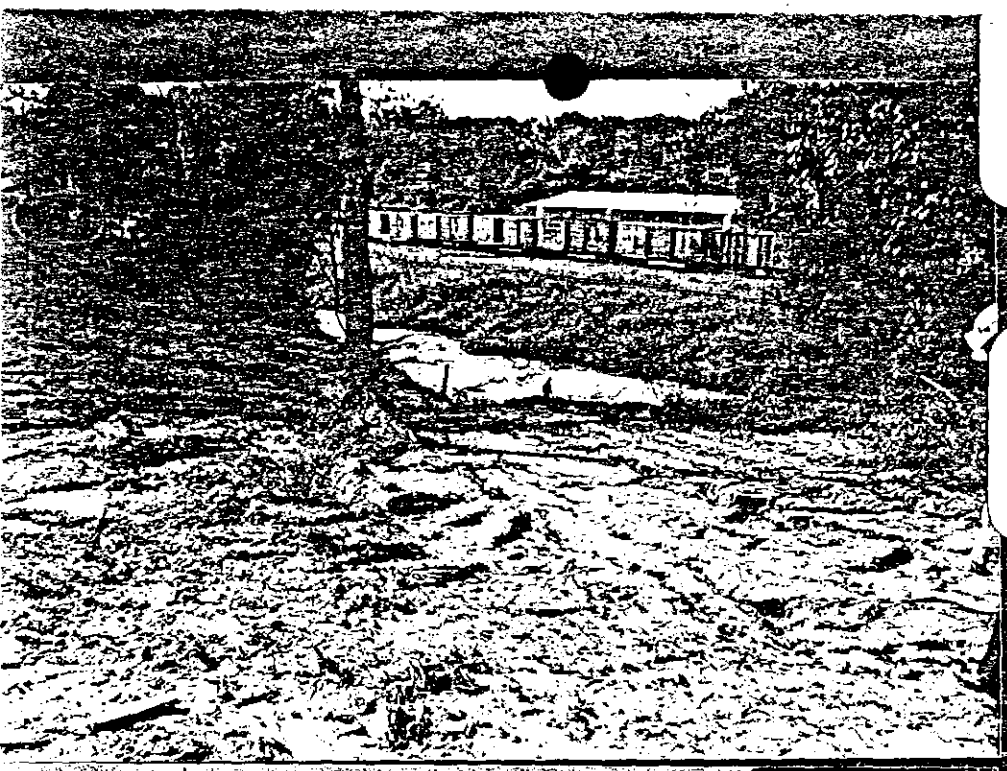
APPENDIX A

ANALYTICAL DATA SHEETS

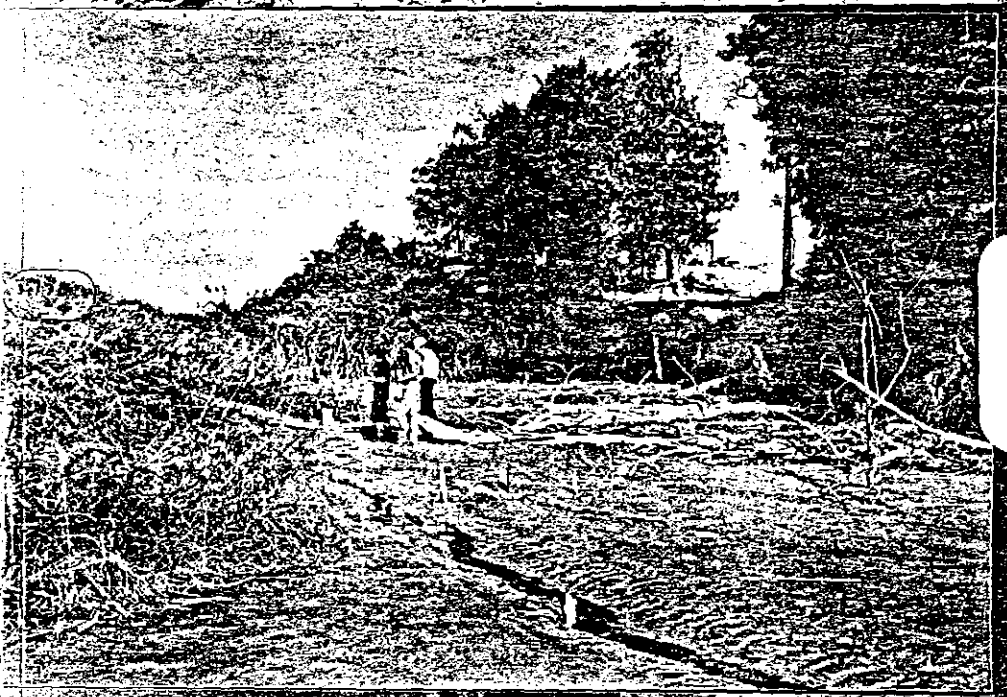
AND

CHAIN-OF-CUSTODY RECORDS

FIGURE 3 (cont.)
PHOTOGRAPHS
VERTAC CHEMICAL CO.
VICKSBURG, MS



j) Erosion channel along western edge of pit area.



k) Mud flat along the western edge of the pit area (VL-003).

l) Mud flat along the western edge of the pit area, view northeast.

DATE: 10/30/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 52-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME): 12/28/81 1430

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VI-003 DRAINAGE TO DITCH AT W CORNER OF LANDFILL SAD NO.: 02C0233

CHEMIST: E.W. Loy, Jr. COMPLETED 11/18/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34421	7U	UG/KG	*			UG/KG
METHYL BROMIDE	34416	7U	UG/KG	*			UG/KG
DICHLORODIFLUOROMETHANE	34334	7U	UG/KG	*			UG/KG
VINYL CHLORIDE	34495	7U	UG/KG	*			UG/KG
CHLOROETHANE	34314	7U	UG/KG	*			UG/KG
METHYLENE CHLORIDE	34426	7U	UG/KG	*			UG/KG
TRICHLOROFLUOROMETHANE	34491	7U	UG/KG	*			UG/KG
1,1-DICHLOROETHYLENE	34504	7U	UG/KG	*			UG/KG
1,1-DICHLOROETHANE	34499	7U	UG/KG	*			UG/KG
1,2-TRANS-DICHLOROETHYLENE	34549	7U	UG/KG	*			UG/KG
CHLOROFORM	34318	10	UG/KG	*			UG/KG
1,2-DICHLOROETHANE	34534	7U	UG/KG	*			UG/KG
1,1,1-TRICHLOROETHANE	34509	7U	UG/KG	*			UG/KG
CARBON TETRACHLORIDE	34299	7K	UG/KG	*			UG/KG
DICHLOROBROMOMETHANE	34330	7U	UG/KG	*			UG/KG
1,2-DICHLOROPROPANE	34544	7U	UG/KG	*			UG/KG
TRANS-1,3-DICHLOROPROPENE	34697	7U	UG/KG	*			UG/KG
TRICHLOROETHYLENE	34487	7K	UG/KG	*			UG/KG
BENZENE	34237	7U	UG/KG	*			UG/KG
CHLORODIBROMOMETHANE	34309	7U	UG/KG	*			UG/KG
1,1,2-TRICHLOROETHANE	34514	7U	UG/KG	*			UG/KG
CIS-1,3-DICHLOROPROPENE	34702	7U	UG/KG	*			UG/KG
2-CHLOROETHYL VINYL ETHER	34579	7U	UG/KG	*			UG/KG
BROMOFORM	34290	7U	UG/KG	*			UG/KG
1,1,2,2-TETRACHLOROETHANE	34519	7U	UG/KG	*			UG/KG
TETRACHLOROETHYLENE	34478	7K	UG/KG	*			UG/KG
TOLUENE	34483	7U	UG/KG	*			UG/KG
CHLOROBENZENE	34304	7U	UG/KG	*			UG/KG
ETHYLBENZENE	34374	7U	UG/KG	*			UG/KG
ACROLEIN	34213	140U	UG/KG	*			UG/KG
ACRYLONITRILE	34218	140U	UG/KG	*			UG/KG
% MOISTURE	70320	27	%	*			%

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 7 µg/kg

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) M-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 10/30/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1140

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: SRU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0231

CHEMIST: E.W. Loy, Jr. COMPLETED 11/18/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34421	7U	UG/KG	*			UG/KG
METHYL BROMIDE	34416	7U	UG/KG	*			UG/KG
DICHLORODIFLUOROMETHANE	34334	7U	UG/KG	*			UG/KG
VINYL CHLORIDE	34495	7U	UG/KG	*			UG/KG
CHLOROETHANE	34314	7U	UG/KG	*			UG/KG
METHYLENE CHLORIDE	34426	7U	UG/KG	*			UG/KG
TRICHLOROFLUOROMETHANE	34491	7U	UG/KG	*			UG/KG
1,1-DICHLOROETHYLENE	34504	7U	UG/KG	*			UG/KG
1,1-DICHLOROETHANE	34499	7U	UG/KG	*			UG/KG
1,2-TRANS-DICHLOROETHYLENE	34549	7U	UG/KG	*			UG/KG
CHLOROFORM	34318	7U	UG/KG	*			UG/KG
1,2-DICHLOROETHANE	34534	7U	UG/KG	*			UG/KG
1,1,1-TRICHLOROETHANE	34509	7U	UG/KG	*			UG/KG
CARBON TETRACHLORIDE	34299	7U	UG/KG	*			UG/KG
DICHLOROBROMOMETHANE	34330	7U	UG/KG	*			UG/KG
1,2-DICHLOROPROPANE	34544	7U	UG/KG	*			UG/KG
TRANS-1,3-DICHLOROPROPENE	34697	7U	UG/KG	*			UG/KG
TRICHLOROETHYLENE	34487	7U	UG/KG	*			UG/KG
BENZENE	34237	7U	UG/KG	*			UG/KG
CHLORODIBROMOMETHANE	34309	7U	UG/KG	*			UG/KG
1,1,2-TRICHLOROETHANE	34514	7U	UG/KG	*			UG/KG
CIS-1,3-DICHLOROPROPENE	34702	7U	UG/KG	*			UG/KG
2-CHLOROETHYL VINYL ETHER	34579	7U	UG/KG	*			UG/KG
BROMOFORM	34290	7U	UG/KG	*			UG/KG
1,1,2,2-TETRACHLOROETHANE	34519	7U	UG/KG	*			UG/KG
TETRACHLOROETHYLENE	34478	7U	UG/KG	*			UG/KG
TOLUENE	34483	7U	UG/KG	*			UG/KG
CHLOROBENZENE	34304	7U	UG/KG	*			UG/KG
ETHYLBENZENE	34374	7U	UG/KG	*			UG/KG
ACROLEIN	34213	140U	UG/KG	*			UG/KG
ACRYLONITRILE	34218	140U	UG/KG	*			UG/KG
% MOISTURE	70320	24	%	*			%

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 7 µg/kg

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) D-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 10/30/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82- 14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME): 12/28/81 1405

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VI-002 DRAINAGE TO BAYOU AT S CORNER OF LANDFILL SAD NO.: 82C0232

CHEMIST: E.W. Loy, Jr. COMPLETED 11/18/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34421	6U	UG/KG	*			UG/KG
METHYL BROMIDE	34416	6U	UG/KG	*			UG/KG
DICHLORODIFLUOROMETHANE	34334	6U	UG/KG	*			UG/KG
VINYL CHLORIDE	34445	6U	UG/KG	*			UG/KG
CHLOROETHANE	34314	6U	UG/KG	*			UG/KG
METHYLENE CHLORIDE	34420	6U	UG/KG	*			UG/KG
TRICHLOROFLUOROMETHANE	34491	6U	UG/KG	*			UG/KG
1,1-DICHLOROETHYLENE	34504	6U	UG/KG	*			UG/KG
1,1-DICHLOROETHANE	34499	6U	UG/KG	*			UG/KG
1,2-TRANS-DICHLOROETHYLENE	34549	6U	UG/KG	*			UG/KG
CHLOROFORM	34318	6U	UG/KG	*			UG/KG
1,2-DICHLOROETHANE	34534	6U	UG/KG	*			UG/KG
1,1,1-TRICHLOROETHANE	34509	6U	UG/KG	*			UG/KG
CARBON TETRACHLORIDE	34299	6U	UG/KG	*			UG/KG
DICHLOROBROMOMETHANE	34330	6U	UG/KG	*			UG/KG
1,2-DICHLOROPROPANE	34544	6U	UG/KG	*			UG/KG
TRANS-1,3-DICHLOROPROPENE	34697	6U	UG/KG	*			UG/KG
TRICHLOROETHYLENE	34487	6U	UG/KG	*			UG/KG
BENZENE	34237	6U	UG/KG	*			UG/KG
CHLORODIBROMOMETHANE	34309	6U	UG/KG	*			UG/KG
1,1,2-TRICHLOROETHANE	34514	6U	UG/KG	*			UG/KG
CIS-1,3-DICHLOROPROPENE	34702	6U	UG/KG	*			UG/KG
2-CHLOROETHYL VINYL ETHER	34579	6U	UG/KG	*			UG/KG
BROMOFORM	34290	6U	UG/KG	*			UG/KG
1,1,2,2-TETRACHLOROETHANE	34519	6U	UG/KG	*			UG/KG
TETRACHLOROETHYLENE	34478	6U	UG/KG	*			UG/KG
TOLUENE	34443	6U	UG/KG	*			UG/KG
CHLOROBENZENE	34304	6U	UG/KG	*			UG/KG
ETHYLBENZENE	34374	6U	UG/KG	*			UG/KG
ACROLEIN	34213	120U	UG/KG	*			UG/KG
ACRYLONITRILE	34218	120U	UG/KG	*			UG/KG
% MOISTURE	70320	27	%	*			%

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 6 µg/kg

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 10/30/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

SAMPLE START(DATE & TIME): 12/28/81 1135

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: SBU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0230

CHEMIST: E.W. Loy, Jr. COMPLETED 11/13/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34418	5U	UG/L	*			UG/L
METHYL BROMIDE	34413	5U	UG/L	*			UG/L
DICHLORODIFLUOROMETHANE	34668	5U	UG/L	*			UG/L
VINYL CHLORIDE	39175	5U	UG/L	*			UG/L
CHLOROETHANE	34311	5U	UG/L	*			UG/L
METHYLENE CHLORIDE	34423	5U	UG/L	*			UG/L
TRICHLOROFLUOROMETHANE	34488	5U	UG/L	*			UG/L
1,1-DICHLOROETHYLENE	34501	5U	UG/L	*			UG/L
1,1-DICHLOROETHANE	34496	5U	UG/L	*			UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	5U	UG/L	*			UG/L
CHLOROFORM	32106	5U	UG/L	*			UG/L
1,2-DICHLOROETHANE	32103	5U	UG/L	*			UG/L
1,1,1-TRICHLOROETHANE	34506	5U	UG/L	*			UG/L
CARBON TETRACHLORIDE	32102	5U	UG/L	*			UG/L
DICHLOROBROMOMETHANE	32101	5U	UG/L	*			UG/L
1,2-DICHLOROPROPANE	34541	5U	UG/L	*			UG/L
TRANS-1,3-DICHLOROPROPENE	34699	5U	UG/L	*			UG/L
TRICHLOROETHYLENE	39180	5U	UG/L	*			UG/L
BENZENE	34030	5U	UG/L	*			UG/L
CHLORODIBROMOMETHANE	34306	5U	UG/L	*			UG/L
1,1,2-TRICHLOROETHANE	34511	5U	UG/L	*			UG/L
CIS-1,3-DICHLOROPROPENE	34704	5U	UG/L	*			UG/L
2-CHLOROETHYL VINYL ETHER	34576	5U	UG/L	*			UG/L
BROMOFORM	32104	5U	UG/L	*			UG/L
1,1,2,2-TETRACHLOROETHANE	34516	5U	UG/L	*			UG/L
TETRACHLOROETHYLENE	34475	5U	UG/L	*			UG/L
TOLUENE	34010	5U	UG/L	*			UG/L
CHLOROBENZENE	34301	5U	UG/L	*			UG/L
ETHYLBENZENE	34371	5U	UG/L	*			UG/L
ACROLEIN	34210	100U	UG/L	*			UG/L
ACRYLONITRILE	34215	100U	UG/L	*			UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 ug/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 10/30/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME): 12/28/81 1605

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: HRD-004 MAICHER BAYOU DOWNSTREAM

SAD NO.: 82C0235

CHEMIST: E.W. Loy, Jr COMPLETED 11/19/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34421	7U	UG/KG	*			UG/KG
METHYL BROMIDE	34416	7U	UG/KG	*			UG/KG
DICHLORODIFLUOROMETHANE	34334	7U	UG/KG	*			UG/KG
VINYL CHLORIDE	34495	7U	UG/KG	*			UG/KG
CHLOROETHANE	34314	7U	UG/KG	*			UG/KG
METHYLENE CHLORIDE	34426	7U	UG/KG	*			UG/KG
TRICHLOROFLUOROMETHANE	34491	7U	UG/KG	*			UG/KG
1,1-DICHLOROETHYLENE	34504	7U	UG/KG	*			UG/KG
1,1-DICHLOROETHANE	34499	7U	UG/KG	*			UG/KG
1,2-TRANS-DICHLOROETHYLENE	34549	7U	UG/KG	*			UG/KG
CHLOROFORM	34318	7U	UG/KG	*			UG/KG
1,2-DICHLOROETHANE	34534	7U	UG/KG	*			UG/KG
1,1,1-TRICHLOROETHANE	34509	7U	UG/KG	*			UG/KG
CARBON TETRACHLORIDE	34299	7U	UG/KG	*			UG/KG
DICHLOROBROMOMETHANE	34330	7U	UG/KG	*			UG/KG
1,2-DICHLOROPROPANE	34544	7U	UG/KG	*			UG/KG
TRANS-1,3-DICHLOROPROPENE	34697	7U	UG/KG	*			UG/KG
TRICHLOROETHYLENE	34487	7U	UG/KG	*			UG/KG
BENZENE	34237	7U	UG/KG	*			UG/KG
CHLORODIBROMOMETHANE	34309	7U	UG/KG	*			UG/KG
1,1,2-TRICHLOROETHANE	34514	7U	UG/KG	*			UG/KG
CIS-1,3-DICHLOROPROPENE	34702	7U	UG/KG	*			UG/KG
2-CHLOROETHYL VINYL ETHER	34579	7U	UG/KG	*			UG/KG
BROMOFORM	34290	7U	UG/KG	*			UG/KG
1,1,2,2-TETRACHLOROETHANE	34519	7U	UG/KG	*			UG/KG
TETRACHLOROETHYLENE	34476	7U	UG/KG	*			UG/KG
TOLUENE	34483	7U	UG/KG	*			UG/KG
CHLOROBENZENE	34304	7U	UG/KG	*			UG/KG
ETHYLBENZENE	34374	7U	UG/KG	*			UG/KG
ACROLEIN	34213	140U	UG/KG	*			UG/KG
ACRYLONITRILE	34218	140U	UG/KG	*			UG/KG
% MOISTURE	70320	26	%	*			%

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 7 µg/kg

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 10/30/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30 /81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

SAMPLE START(DATE & TIME):12/28/81 1600

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: MHD-004 HATCHER BAYOU DOWNSTREAM

SAD NO.: 82C0234

CHEMIST: E.W. Loy, Jr. COMPLETED 11/13/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34418	5U	UG/L	*			UG/L
METHYL BROMIDE	34413	5U	UG/L	*			UG/L
DICHLORODIFLUOROMETHANE	34668	5U	UG/L	*			UG/L
VINYL CHLORIDE	39175	5U	UG/L	*			UG/L
CHLOROETHANE	34311	5U	UG/L	*			UG/L
METHYLENE CHLORIDE	34423	5U	UG/L	*			UG/L
TRICHLOROFLUOROMETHANE	34488	5U	UG/L	*			UG/L
1,1-DICHLOROETHYLENE	34501	5U	UG/L	*			UG/L
1,1-DICHLOROETHANE	34496	5U	UG/L	*			UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	5U	UG/L	*			UG/L
CHLOROFORM	32106	5K	UG/L	*			UG/L
1,2-DICHLOROETHANE	32103	5U	UG/L	*			UG/L
1,1,1-TRICHLOROETHANE	34506	5U	UG/L	*			UG/L
CARBON TETRACHLORIDE	32102	5K	UG/L	*			UG/L
DICHLOROBROMOMETHANE	32101	5U	UG/L	*			UG/L
1,2-DICHLOROPROPANE	34541	5U	UG/L	*			UG/L
TRANS-1,3-DICHLOROPROPENE	34699	5U	UG/L	*			UG/L
TRICHLOROETHYLENE	39180	5U	UG/L	*			UG/L
BENZENE	34030	5U	UG/L	*			UG/L
CHLORODIBROMOMETHANE	34306	5U	UG/L	*			UG/L
1,1,2-TRICHLOROETHANE	34511	5U	UG/L	*			UG/L
CIS-1,3-DICHLOROPROPENE	34704	5U	UG/L	*			UG/L
2-CHLOROETHYL VINYL ETHER	34576	5U	UG/L	*			UG/L
BROMOFORM	32104	5U	UG/L	*			UG/L
1,1,2,2-TETRACHLOROETHANE	34516	5U	UG/L	*			UG/L
TETRACHLOROETHYLENE	34475	5U	UG/L	*			UG/L
TOLUENE	34010	5U	UG/L	*			UG/L
CHLOROBENZENE	34301	5U	UG/L	*			UG/L
ETHYLBENZENE	34371	5U	UG/L	*			UG/L
ACROLEIN	34210	100U	UG/L	*			UG/L
ACRYLONITRILE	34215	100U	UG/L	*			UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 µg/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE:11/12/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1140

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: SBU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0231

CHEMIST: E.W. Loy, Jr. COMPLETED 11/10/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34271	NA	UG/KG	*	BIS(2-ETHYLHEXYL) PHTHALATE	39102	36000U	UG/KG
N-NITROSODIMETHYLAMINE	34441	NA	UG/KG	*	CHRYSENE	34323	36000U	UG/KG
1,2-DICHLOROBENZENE	34539	36000U	UG/KG	*	BENZO(A)ANTHRACENE	34529	36000U	UG/KG
1,3-DICHLOROBENZENE	34569	36000U	UG/KG	*	3,3'-DICHLOROBENZIDINE	34634	36000U	UG/KG
1,4-DICHLOROBENZENE	34574	36000U	UG/KG	*	DI-N-OCTYL PHTHALATE	34599	36000U	UG/KG
BIS(2-CHLOROETHYL) ETHER	34276	36000U	UG/KG	*	BENZO(B)FLUORANTHENE 10/	34233	36000K	UG/KG
HEXACHLOROETHANE	34399	36000U	UG/KG	*	BENZO(K)FLUORANTHENE 10/	34245	36000K	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	34286	36000U	UG/KG	*	BENZO-A-PYRENE	34250	36000K	UG/KG
N-NITROSODI-N-PROPYLAMINE	34431	36000U	UG/KG	*	INDENO (1,2,3-CD) PYRENE	34406	36000U	UG/KG
NITROBENZENE	34450	36000U	UG/KG	*	1,2,5,6-DIBENZANTHRACENE	34559	36000U	UG/KG
HEXACHLOROBUTADIENE	39705	36000U	UG/KG	*	BENZO(GHI)PERYLENE	34524	36000K	UG/KG
1,2,4-TRICHLOROBENZENE	34554	36000U	UG/KG	*	2-CHLOROPHENOL	34589	36000U	UG/KG
NAPHTHALENE	34445	36000U	UG/KG	*	2-NITROPHENOL	34594	36000U	UG/KG
BIS(2-CHLOROETHOXY) METHANE	34281	36000U	UG/KG	*	PHENOL (GC/MS)	34695	36000U	UG/KG
ISOPHORONE	34411	36000U	UG/KG	*	2,4-DIMETHYLPHENOL	34609	36000U	UG/KG
HEXACHLOROCYCLOPENTADIENE	34389	36000U	UG/KG	*	2,4-DICHLOROPHENOL	34604	36000U	UG/KG
2-CHLORONAPHTHALENE	34584	36000U	UG/KG	*	2,4,6-TRICHLOROPHENOL	34624	36000U	UG/KG
ACENAPHTHYLENE	34203	36000U	UG/KG	*	PARACHLOROMETA CRESOL	34455	36000U	UG/KG
ACENAPHTHENE	34208	36000U	UG/KG	*	2,4-DINITROPHENOL	34619	110000U	UG/KG
DIMETHYL PHTHALATE	34344	36000U	UG/KG	*	4,6-DINITRO-O-CRESOL	34660	110000U	UG/KG
2,4-DINITROTOLUENE	34614	36000U	UG/KG	*	PENTACHLOROPHENOL	39061	110000U	UG/KG
2,6-DINITROTOLUENE	34629	36000U	UG/KG	*	4-NITROPHENOL	34649	72000U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	34644	36000U	UG/KG	*	% MOISTURE	70320	24	%
FLUORENE	34384	36000U	UG/KG	*				UG/KG
DIETHYL PHTHALATE	34339	36000U	UG/KG	*				UG/KG
1,2-DIPHENYLHYDRAZINE 8/	34349	36000U	UG/KG	*				UG/KG
N-NITROSODIPHENYLAMINE 9/	34436	36000U	UG/KG	*	dinoseb		72000U	UG/KG
HEXACHLOROBENZENE	39701	36000U	UG/KG	*				UG/KG
4-BROMOPHENYL PHENYL ETHER	34639	36000U	UG/KG	*				UG/KG
PHENANTHRENE	34464	36000U	UG/KG	*	the chromatogram indicates the presence			UG/KG
ANTHRACENE	34223	36000U	UG/KG	*	of a petroleum type product			UG/KG
DI-N-BUTYL PHTHALATE	39112	36000U	UG/KG	*				UG/KG
FLUORANTHENE	34379	36000U	UG/KG	*				UG/KG
PYRENE	34472	36000U	UG/KG	*				UG/KG
N-BUTYL BENZYL PHTHALATE	34295	36000U	UG/KG	*				UG/KG
BENZIDINE	39121	36000U	UG/KG	*				UG/KG

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 110,000 µg/kg

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/12/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1605

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: HBD-004 HATCHER BAYOU DOWNSTREAM

SAD NO.: 82C0235

CHEMIST: E.W. Loy, Jr. COMPLETED 11/10/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34271	NA	UG/KG	*	BIS(2-ETHYLHEXYL) PHTHALATE	39102	8600U	UG/KG
N-NITROSODIMETHYLAMINE	34441	NA	UG/KG	*	CHRYSENE	34323	8600U	UG/KG
1,2-DICHLOROBENZENE	34539	8600U	UG/KG	*	BENZO(A)ANTHRACENE	34529	8600U	UG/KG
1,3-DICHLOROBENZENE	34569	8600U	UG/KG	*	3,3'-DICHLOROBENZIDINE	34634	8600U	UG/KG
1,4-DICHLOROBENZENE	34574	8600U	UG/KG	*	DI-N-OCTYL PHTHALATE	34599	8600U	UG/KG
BIS(2-CHLOROETHYL) ETHER	34276	8600U	UG/KG	*	BENZO(B)FLUORANTHENE 10/	34233	8600U	UG/KG
HEXACHLOROETHANE	34399	8600U	UG/KG	*	BENZO(K)FLUORANTHENE 10/	34245	8600U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	34286	8600U	UG/KG	*	BENZO-A-PYRENE	34250	8600U	UG/KG
N-NITROSODI-N-PROPYLAMINE	34431	8600U	UG/KG	*	INDENO (1,2,3-CD) PYRENE	34406	8600U	UG/KG
NITROBENZENE	34450	8600U	UG/KG	*	1,2,5,6-DIBENZANTHRACENE	34559	8600U	UG/KG
HEXACHLOROBUTADIENE	39705	8600U	UG/KG	*	BENZO(GHI)PERYLENE	34524	8600U	UG/KG
1,2,4-TRICHLOROBENZENE	34554	8600U	UG/KG	*	2-CHLOROPHENOL	34589	8600U	UG/KG
NAPHTHALENE	34445	8600U	UG/KG	*	2-NITROPHENOL	34594	8600U	UG/KG
BIS(2-CHLOROETHOXY) METHANE	34281	8600U	UG/KG	*	PHENOL (GC/MS)	34695	8600U	UG/KG
ISOPHORONE	34411	8600U	UG/KG	*	2,4-DIMETHYLPHENOL	34609	8600U	UG/KG
HEXACHLOROCYCLOPENTADIENE	34389	8600U	UG/KG	*	2,4-DICHLOROPHENOL	34604	8600U	UG/KG
2-CHLORONAPHTHALENE	34584	8600U	UG/KG	*	2,4,6-TRICHLOROPHENOL	34624	8600U	UG/KG
ACENAPHTHYLENE	34203	8600U	UG/KG	*	PARACHLOROMETA CRESOL	34455	8600U	UG/KG
ACENAPHTHENE	34208	8600U	UG/KG	*	2,4-DINITROPHENOL	34619	26000U	UG/KG
DIMETHYL PHTHALATE	34344	8600U	UG/KG	*	4,6-DINITRO-O-CRESOL	34660	26000U	UG/KG
2,4-DINITROTOLUENE	34614	8600U	UG/KG	*	PENTACHLOROPHENOL	39061	26000U	UG/KG
2,6-DINITROTOLUENE	34629	8600U	UG/KG	*	4-NITROPHENOL	34649	17000U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	34644	8600U	UG/KG	*	% MOISTURE	70320	26	%
FLUORENE	34384	8600U	UG/KG	*				UG/KG
DIETHYL PHTHALATE	34339	8600U	UG/KG	*				UG/KG
1,2-DIPHENYLHYDRAZINE 8/	34349	8600U	UG/KG	*				UG/KG
N-NITROSODIPHENYLAMINE 9/	34436	8600U	UG/KG	*				UG/KG
HEXACHLOROBENZENE	39701	8600U	UG/KG	*	dinoseb		17000U	UG/KG
4-BROMOPHENYL PHENYL ETHER	34639	8600U	UG/KG	*				UG/KG
PHENANTHRENE	34464	8600U	UG/KG	*				UG/KG
ANTHRACENE	34223	8600U	UG/KG	*				UG/KG
DI-N-BUTYL PHTHALATE	39112	8600U	UG/KG	*				UG/KG
FLUORANTHENE	34379	8600U	UG/KG	*				UG/KG
PYRENE	34472	8600U	UG/KG	*				UG/KG
N-BUTYL BENZYL PHTHALATE	34295	8600U	UG/KG	*				UG/KG
BENZIDINE	39121	8600U	UG/KG	*				UG/KG

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF ~26,000 µg/kg

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/12/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/03/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1405

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VL-002 DRAINAGE TO BAYOU AT S CORNER OF LANDFILL SAD NO.: 82C0232

CHEMIST: E.W. Loy, Jr. COMPLETED 11/10/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34271	NA	UG/KG	*	BIS(2-ETHYLHEXYL) PHTHALATE	39102	8000U	UG/KG
N-NITROSODIMETHYLAMINE	34441	NA	UG/KG	*	CHRYSENE	34323	8000U	UG/KG
1,2-DICHLOROBENZENE	34539	8000U	UG/KG	*	BENZO(A)ANTHRACENE	34529	8000U	UG/KG
1,3-DICHLOROBENZENE	34569	8000U	UG/KG	*	3,3'-DICHLOROBENZIDINE	34634	8000U	UG/KG
1,4-DICHLOROBENZENE	34574	8000U	UG/KG	*	DI-N-OCTYL PHTHALATE	34599	8000U	UG/KG
BIS(2-CHLOROETHYL) ETHER	34276	8000U	UG/KG	*	BENZO(B)FLUORANTHENE 10/	34233	8000U	UG/KG
HEXACHLOROETHANE	34399	8000U	UG/KG	*	BENZO(K)FLUORANTHENE 10/	34245	8000U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	34286	8000U	UG/KG	*	BENZO-A-PYRENE	34250	8000U	UG/KG
N-NITROSODI-N-PROPYLAMINE	34431	8000U	UG/KG	*	INDENO (1,2,3-CD) PYRENE	34406	8000U	UG/KG
NITROBENZENE	34450	8000U	UG/KG	*	1,2,5,6-DIBENZANTHRACENE	34559	8000U	UG/KG
HEXACHLOROBUTADIENE	39705	8000U	UG/KG	*	BENZO(GHI)PERYLENE	34524	8000U	UG/KG
1,2,4-TRICHLOROBENZENE	34554	8000U	UG/KG	*	2-CHLOROPHENOL	34589	8000U	UG/KG
NAPHTHALENE	34445	8000U	UG/KG	*	2-NITROPHENOL	34594	8000U	UG/KG
BIS(2-CHLOROETHOXY) METHANE	34281	8000U	UG/KG	*	PHENOL (GC/MS)	34695	8000U	UG/KG
ISOPHORONE	34411	8000U	UG/KG	*	2,4-DIMETHYLPHENOL	34609	8000U	UG/KG
HEXACHLOROCYCLOPENTADIENE	34389	8000U	UG/KG	*	2,4-DICHLOROPHENOL	34604	8000U	UG/KG
2-CHLORONAPHTHALENE	34584	8000U	UG/KG	*	2,4,6-TRICHLOROPHENOL	34624	8000U	UG/KG
ACENAPHTHYLENE	34203	8000U	UG/KG	*	PARACHLOROMETA CRESOL	34455	8000U	UG/KG
ACENAPHTHENE	34208	8000U	UG/KG	*	2,4-DINITROPHENOL	34619	24000U	UG/KG
DIMETHYL PHTHALATE	34344	8000U	UG/KG	*	4,6-DINITRO-O-CRESOL	34660	24000U	UG/KG
2,4-DINITROTOLUENE	34614	8000U	UG/KG	*	PENTACHLOROPHENOL	39061	24000U	UG/KG
2,6-DINITROTOLUENE	34629	8000U	UG/KG	*	4-NITROPHENOL	34649	16000U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	34644	8000U	UG/KG	*	% MOISTURE	70320	27	%
FLUORENE	34384	8000U	UG/KG	*				UG/KG
DIETHYL PHTHALATE	34339	8000U	UG/KG	*				UG/KG
1,2-DIPHENYLHYDRAZINE 8/	34349	8000U	UG/KG	*	atrazine		21000JN	UG/KG
N-NITROSODIPHENYLAMINE 9/	34436	8000U	UG/KG	*	cyanazine		21000JN	UG/KG
HEXACHLOROBENZENE	39701	8000U	UG/KG	*	dinoseb		16000U	UG/KG
4-BROMOPHENYL PHENYL ETHER	34639	8000U	UG/KG	*				UG/KG
PHENANTHRENE	34464	8000U	UG/KG	*				UG/KG
ANTHRACENE	34223	8000U	UG/KG	*				UG/KG
DI-N-BUTYL PHTHALATE	39112	8000U	UG/KG	*				UG/KG
FLUORANTHENE	34379	8000U	UG/KG	*				UG/KG
PYRENE	34472	8000U	UG/KG	*				UG/KG
N-BUTYL BENZYL PHTHALATE	34295	8000U	UG/KG	*				UG/KG
BENZIDINE	39121	8000U	UG/KG	*				UG/KG

* NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 24,000 µg/kg

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/12/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/03/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1430

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VL-003 DRAINAGE TO DITCH AT W CORNER OF LANDFILL SAD NO.: 82C0233

CHEMIST: E.W. Loy, Jr. COMPLETED 11/10/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34271	NA	UG/KG	*	BIS(2-ETHYLHEXYL) PHTHALATE	39102	7600U	UG/KG
N-NITROSODIMETHYLAMINE	34441	NA	UG/KG	*	CHRYSENE	34323	7600U	UG/KG
1,2-DICHLOROBENZENE	34539	7600U	UG/KG	*	BENZO(A)ANTHRACENE	34529	7600U	UG/KG
1,3-DICHLOROBENZENE	34569	7600U	UG/KG	*	3,3'-DICHLOROBENZIDINE	34634	7600U	UG/KG
1,4-DICHLOROBENZENE	34574	7600U	UG/KG	*	DI-N-OCTYL PHTHALATE	34599	7600U	UG/KG
BIS(2-CHLOROETHYL) ETHER	34276	7600U	UG/KG	*	BENZO(B)FLUORANTHENE 10/	34233	7600U	UG/KG
HEXACHLOROETHANE	34399	7600U	UG/KG	*	BENZO(K)FLUORANTHENE 10/	34245	7600U	UG/KG
BIS(2-CHLOROISOPROPYL) ETHER	34286	7600U	UG/KG	*	BENZO-A-PYRENE	34250	7600U	UG/KG
N-NITROSODI-N-PROPYLAMINE	34431	7600U	UG/KG	*	INDENO (1,2,3-CD) PYRENE	34406	7600U	UG/KG
NITROBENZENE	34450	7600U	UG/KG	*	1,2,5,6-DIBENZANTHRACENE	34559	7600U	UG/KG
HEXACHLOROBUTADIENE	39705	7600U	UG/KG	*	BENZO(GHI)PERYLENE	34524	7600U	UG/KG
1,2,4-TRICHLOROBENZENE	34554	7600U	UG/KG	*	2-CHLOROPHENOL	34589	7600U	UG/KG
NAPHTHALENE	34445	7600U	UG/KG	*	2-NITROPHENOL	34594	7600U	UG/KG
BIS(2-CHLOROETHOXY) METHANE	34281	7600U	UG/KG	*	PHENOL (GC/MS)	34695	7600U	UG/KG
ISOPHORONE	34411	7600U	UG/KG	*	2,4-DIMETHYLPHENOL	34609	7600U	UG/KG
HEXACHLOROCYCLOPENTADIENE	34389	7600U	UG/KG	*	2,4-DICHLOROPHENOL	34604	7600U	UG/KG
2-CHLORONAPHTHALENE	34584	7600U	UG/KG	*	2,4,6-TRICHLOROPHENOL	34624	7600U	UG/KG
ACENAPHTHYLENE	34203	7600U	UG/KG	*	PARACHLOROMETA CRESOL	34455	7600U	UG/KG
ACENAPHTHENE	34208	7600U	UG/KG	*	2,4-DINITROPHENOL	34619	23000U	UG/KG
DIMETHYL PHTHALATE	34344	7600U	UG/KG	*	4,6-DINITRO-O-CRESOL	34660	23000U	UG/KG
2,4-DINITROTOLUENE	34614	7600U	UG/KG	*	PENTACHLOROPHENOL	39061	23000U	UG/KG
2,6-DINITROTOLUENE	34629	7600U	UG/KG	*	4-NITROPHENOL	34649	15000U	UG/KG
4-CHLOROPHENYL PHENYL ETHER	34644	7600U	UG/KG	*	% MOISTURE	70320	27	%
FLUORENE	34384	7600U	UG/KG	*				UG/KG
DIETHYL PHTHALATE	34339	7600U	UG/KG	*				UG/KG
1,2-DIPHENYLHYDRAZINE 8/	34349	7600U	UG/KG	*				UG/KG
N-NITROSODIPHENYLAMINE 9/	34436	7600U	UG/KG	*	atrazine		7600KN	UG/KG
HEXACHLOROBENZENE	39701	7600U	UG/KG	*	dinoseb		15000KN	UG/KG
4-BROMOPHENYL PHENYL ETHER	34639	7600U	UG/KG	*	cyanazine		7600KN	UG/KG
PHENANTHRENE	34464	7600U	UG/KG	*				UG/KG
ANTHRACENE	34223	7600U	UG/KG	*				UG/KG
DI-N-BUTYL PHTHALATE	39112	7600U	UG/KG	*				UG/KG
FLUORANTHENE	34379	7600U	UG/KG	*				UG/KG
PYRENE	34472	7600U	UG/KG	*				UG/KG
N-BUTYL BENZYL PHTHALATE	34295	7600U	UG/KG	*				UG/KG
BENZIDINE	39121	7600U	UG/KG	*				UG/KG

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 23000 ug/kg

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/12/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

SAMPLE START(DATE & TIME):12/28/81 1135

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: SBU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0230

CHEMIST: E.W. Loy, Jr. COMPLETED 11/4/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	12U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	12U	UG/L
1,2-DICHLOROBENZENE	34536	12U	UG/L	*	BENZO(A)ANTHRACENE	34526	12U	UG/L
1,3-DICHLOROBENZENE	34566	12U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	12U	UG/L
1,4-DICHLOROBENZENE	34571	12U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	12U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	12U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	12U	UG/L
HEXACHLOROETHANE	34396	12U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	12U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	12U	UG/L	*	BENZO-A-PYRENE	34247	12U	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	12U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	12U	UG/L
NITROBENZENE	34447	12U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	12U	UG/L
HEXACHLOROBUTADIENE	39702	12U	UG/L	*	BENZO(GHI)PERYLENE	34521	12U	UG/L
1,2,4-TRICHLOROBENZENE	34551	12U	UG/L	*	2-CHLOROPHENOL	34586	12U	UG/L
NAPHTHALENE	34696	12U	UG/L	*	2-NITROPHENOL	34591	12U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	12U	UG/L	*	PHENOL (GC/MS)	34694	12U	UG/L
ISOPHORONE	34408	12U	UG/L	*	2,4-DIMETHYLPHENOL	34606	12U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	12U	UG/L	*	2,4-DICHLOROPHENOL	34601	12U	UG/L
2-CHLORONAPHTHALENE	34581	12U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	12U	UG/L
ACENAPHTHYLENE	34200	12U	UG/L	*	PARACHLOROMETA CRESOL	34452	12U	UG/L
ACENAPHTHENE	34205	12U	UG/L	*	2,4-DINITROPHENOL	34616	38U	UG/L
DIMETHYL PHTHALATE	34341	12U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	38U	UG/L
2,4-DINITROTOLUENE	34611	12U	UG/L	*	PENTACHLOROPHENOL	39032	38U	UG/L
2,6-DINITROTOLUENE	34626	12U	UG/L	*	4-NITROPHENOL	34646	25U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	12U	UG/L	*				%
FLUORENE	34381	12U	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	12U	UG/L	*	hexadecanoic acid		12KN	UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	12U	UG/L	*	octadecanoic acid		12KN	UG/L
N-NITROSODIPHENYLAMINE 9/	34433	12U	UG/L	*	dinoseb		25U	UG/L
HEXACHLOROBENZENE	39700	12U	UG/L	*				UG/L
4-BROMOPHENYL PHENYL ETHER	34636	12U	UG/L	*				UG/L
PHENANTHRENE	34461	12U	UG/L	*				UG/L
ANTHRACENE	34220	12U	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	12U	UG/L	*				UG/L
FLUORANTHENE	34376	12U	UG/L	*				UG/L
PYRENE	34469	12U	UG/L	*				UG/L
N-BUTYL BENZYL PHTHALATE	34292	12U	UG/L	*				UG/L
BENZIDINE	39120	12U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 38 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/12/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

SAMPLE START(DATE & TIME):12/28/81 1600

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: HRD-004 HATCHER BAYOU DOWNSTREAM

SAD NO.: 82C0234

CHEMIST: B.W. Loy, Jr. COMPLETED 11/10/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	12U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	12U	UG/L
1,2-DICHLOROBENZENE	34536	12U	UG/L	*	BENZO(A)ANTHRACENE	34526	12U	UG/L
1,3-DICHLOROBENZENE	34566	12U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	12U	UG/L
1,4-DICHLOROBENZENE	34571	12U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	12U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	12U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	12U	UG/L
HEXACHLOROETHANE	34396	12U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	12U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	12U	UG/L	*	BENZO-A-PYRENE	34247	12U	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	12U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	12U	UG/L
NITROBENZENE	34447	12U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	12U	UG/L
HEXACHLOROBUTADIENE	39702	12U	UG/L	*	BENZO(GHI)PERYLENE	34521	12U	UG/L
1,2,4-TRICHLOROBENZENE	34551	12U	UG/L	*	2-CHLOROPHENOL	34586	12U	UG/L
NAPHTHALENE	34696	12U	UG/L	*	2-NITROPHENOL	34591	12U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	12U	UG/L	*	PHENOL (GC/MS)	34694	12U	UG/L
ISOPHORONE	34408	12U	UG/L	*	2,4-DIMETHYLPHENOL	34606	12U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	12U	UG/L	*	2,4-DICHLOROPHENOL	34601	12U	UG/L
2-CHLORONAPHTHALENE	34581	12U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	12U	UG/L
ACENAPHTHYLENE	34200	12U	UG/L	*	PARACHLOROMETA CRESOL	34452	12U	UG/L
ACENAPHTHENE	34205	12U	UG/L	*	2,4-DINITROPHENOL	34616	38U	UG/L
DIMETHYL PHTHALATE	34341	12U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	38U	UG/L
2,4-DINITROTOLUENE	34611	12U	UG/L	*	PENTACHLOROPHENOL	39032	38U	UG/L
2,6-DINITROTOLUENE	34626	12U	UG/L	*	4-NITROPHENOL	34646	25U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	12U	UG/L	*				*
FLUORENE	34381	12U	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	12U	UG/L	*	hexadecanoic acid		12KN	UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	12U	UG/L	*	octadecanoic acid		12KN	UG/L
N-NITROSODIPHENYLAMINE 9/	34433	12U	UG/L	*	dinoseb		25U	UG/L
HEXACHLOROBENZENE	39700	12U	UG/L	*				UG/L
4-BROMOPHENYL PHENYL ETHER	34636	12U	UG/L	*				UG/L
PHENANTHRENE	34461	12U	UG/L	*				UG/L
ANTHRACENE	34220	12U	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	12U	UG/L	*				UG/L
FLUORANTHENE	34376	12U	UG/L	*				UG/L
PYRENE	34469	12U	UG/L	*				UG/L
N-BUTYL BENZYL PHTHALATE	34292	12U	UG/L	*				UG/L
BENZIDINE	39120	12U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 38 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/12/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1140

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: SBU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0231

CHEMIST: E.W. Loy, Jr. COMPLETED 11-23-81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39333	6U	UG/KG	*	Atrazine	1000U	UG/KG
DIELDRIN	(10)39383	6U	UG/KG	*	Methyl Parathion	9U	UG/KG
CHLORDANE (TECH. MIXTURE & METABOLITES)	39351	--	UG/KG	*	Diuron	1000U	UG/KG
P,P'-DDT	39301	10U	UG/KG	*	alpha-chlordane (11)(8)	6.5	UG/KG
P,P'-DDE	39321	10U	UG/KG	*	gamma-chlordane (11)(8)	7.6	UG/KG
P,P'-DDD	39311	10U	UG/KG	*			UG/KG
ENDOSULFAN,ALPHA	34364	6U	UG/KG	*			UG/KG
ENDOSULFAN,BETA	34359	10U	UG/KG	*			UG/KG
ENDOSULFAN SULFATE	34354	90U	UG/KG	*			UG/KG
ENDRIN	39393	10U	UG/KG	*			UG/KG
ENDRIN ALDEHYDE	34369	NA	UG/KG	*			UG/KG
HEPTACHLOR	39413	20U	UG/KG	*			UG/KG
HEPTACHLOR EPOXIDE	39423	100U	UG/KG	*			UG/KG
ALPHA-BHC	39076	20U	UG/KG	*			UG/KG
BETA-BHC	34257	20U	UG/KG	*			UG/KG
GAMMA-BHC (LINDANE)	39343	20U	UG/KG	*			UG/KG
DELTA-BHC	34262	20U	UG/KG	*			UG/KG
PCB-1242 (AROCLOR 1242)	39499	300U	UG/KG	*			UG/KG
PCB-1254 (AROCLOR 1254)	39507	80U	UG/KG	*			UG/KG
PCB-1221 (AROCLOR 1221)	39491	300U	UG/KG	*			UG/KG
PCB-1232 (AROCLOR 1232)	39495	300U	UG/KG	*			UG/KG
PCB-1248 (AROCLOR 1248)	39503	300U	UG/KG	*			UG/KG
PCB-1260 (AROCLOR 1260)	39511	80U	UG/KG	*			UG/KG
PCB-1016 (AROCLOR 1016)	39514	300U	UG/KG	*			UG/KG
TOXAPHENE	39403	200U	UG/KG	*			UG/KG
TCDD (DIOXIN)	34678	NA	UG/KG	*			UG/KG
% MOISTURE	70320	23.97	%	*			%

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/12/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1605

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: HBD-004 HATCHER BAYOU DOWNSTREAM

SAD NO.: 82C0235

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39333	30U	UG/KG	*	Atrazine	2000U	UG/KG
DIELDRIN	39383	30U	UG/KG	*	Methyl Parathion	60U	UG/KG
CHLORDANE (TECH. MIXTURE & METABOLITES) (10)	39351	---	UG/KG	*	Diuron	300U	UG/KG
P,P'-DDT	39301	80U	UG/KG	*	alpha-chlordane (11)	20U	UG/KG
P,P'-DDE	39321	80U	UG/KG	*	gamma-chlordane (11)	20U	UG/KG
P,P'-DDD	39311	80U	UG/KG	*			UG/KG
ENDOSULFAN,ALPHA	34364	30U	UG/KG	*			UG/KG
ENDOSULFAN,BETA	34359	80U	UG/KG	*			UG/KG
ENDOSULFAN SULFATE	34354	100U	UG/KG	*			UG/KG
ENDRIN	39393	80U	UG/KG	*			UG/KG
ENDRIN ALDEHYDE	34369	NA	UG/KG	*			UG/KG
HEPTACHLOR	39413	30U	UG/KG	*			UG/KG
HEPTACHLOR EPOXIDE	39423	70U	UG/KG	*			UG/KG
ALPHA-BHC	39076	30U	UG/KG	*			UG/KG
BETA-BHC	34257	30U	UG/KG	*			UG/KG
GAMMA-BHC (LINDANE)	39343	30U	UG/KG	*			UG/KG
DELTA-BHC	34262	30U	UG/KG	*			UG/KG
PCB-1242 (AROCLOR 1242)	39499	300U	UG/KG	*			UG/KG
PCB-1254 (AROCLOR 1254)	39507	500U	UG/KG	*			UG/KG
PCB-1221 (AROCLOR 1221)	39491	300U	UG/KG	*			UG/KG
PCB-1232 (AROCLOR 1232)	39495	300U	UG/KG	*			UG/KG
PCB-1248 (AROCLOR 1248)	39503	300U	UG/KG	*			UG/KG
PCB-1260 (AROCLOR 1260)	39511	500U	UG/KG	*			UG/KG
PCB-1016 (AROCLOR 1016)	39514	300U	UG/KG	*			UG/KG
TOXAPHENE	39403	2000U	UG/KG	*			UG/KG
TCDD (DIOXIN)	34678	NA	UG/KG	*			UG/KG
% MOISTURE	70320	25.53	%	*			%

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/12/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/03/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1405

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VL-002 DRAINAGE TO BAYOU AT S CORNER OF LANDFILL SAD NO.: 82C0232

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39333	100U	UG/KG	*	Atrazine (8)(9)	84,000	UG/KG
DIELDRIN	(10) 39383	600U	UG/KG	*	Methyl Parathion	600U	UG/KG
CHLORDANE (TECH. MIXTURE & METABOLITES)	39351	----	UG/KG	*	Diuron	3000U	UG/KG
P,P'-DDT	39301	1000U	UG/KG	*	alpha-chlordane (11)	300U	UG/KG
P,P'-DDE	39321	1000U	UG/KG	*	gamma-chlordane (11)	200U	UG/KG
P,P'-DDD	39311	1000U	UG/KG	*			UG/KG
ENDOSULFAN,ALPHA	34364	200U	UG/KG	*			UG/KG
ENDOSULFAN,BETA	34359	700U	UG/KG	*			UG/KG
ENDOSULFAN SULFATE	34354	1000U	UG/KG	*			UG/KG
ENDRIN	39393	600U	UG/KG	*			UG/KG
ENDRIN ALDEHYDE	34369	NA	UG/KG	*			UG/KG
HEPTACHLOR	39413	100U	UG/KG	*			UG/KG
HEPTACHLOR EPOXIDE	39423	400U	UG/KG	*			UG/KG
ALPHA-BHC	39076	100U	UG/KG	*			UG/KG
BETA-BHC	34257	100U	UG/KG	*			UG/KG
GAMMA-BHC (LINDANE)	39343	100U	UG/KG	*			UG/KG
DELTA-BHC	34262	100U	UG/KG	*			UG/KG
PCB-1242 (AROCLOR 1242)	39499	2000U	UG/KG	*			UG/KG
PCB-1254 (AROCLOR 1254) (8)	39507	7000	UG/KG	*			UG/KG
PCB-1221 (AROCLOR 1221)	39491	2000U	UG/KG	*			UG/KG
PCB-1232 (AROCLOR 1232)	39495	2000U	UG/KG	*			UG/KG
PCB-1248 (AROCLOR 1248)	39503	2000U	UG/KG	*			UG/KG
PCB-1260 (AROCLOR 1260)	39511	2000U	UG/KG	*			UG/KG
PCB-1016 (AROCLOR 1016)	39514	2000U	UG/KG	*			UG/KG
TOXAPHENE (8)	39403	13,000	UG/KG	*			UG/KG
TCDD (DIOXIN)	34678	NA	UG/KG	*			UG/KG
% MOISTURE	70320	26.70	%	*			%

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/12/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/03/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1430

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VL-003 DRAINAGE TO DITCH AT W CORNER OF LANDFILL SAD NO.: 82C0233

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
ALDRIN	39333	300U	UG/KG	*	Atrazine (8)(9)		18,000	UG/KG
DIELDRIN	39383	2000U	UG/KG	*	Methyl Parathion		1000U	UG/KG
CHLORDANE (TECH. MIXTURE & METABOLITES) (10)	39351	---	UG/KG	*	Diuron		10,000U	UG/KG
P,P'-DDT	39301	3000U	UG/KG	*	alpha-chlordane (11)		700U	UG/KG
P,P'-DDE	39321	3000U	UG/KG	*	gamma-chlordane (11)		500U	UG/KG
P,P'-DDD	39311	3000U	UG/KG	*				UG/KG
ENDOSULFAN,ALPHA	34364	300U	UG/KG	*				UG/KG
ENDOSULFAN,BETA	34359	2000U	UG/KG	*				UG/KG
ENDOSULFAN SULFATE	34354	4000U	UG/KG	*				UG/KG
ENDRIN	39393	3000U	UG/KG	*				UG/KG
ENDRIN ALDEHYDE	34369	NA	UG/KG	*				UG/KG
HEPTACHLOR	39413	300U	UG/KG	*				UG/KG
HEPTACHLOR EPOXIDE	39423	800U	UG/KG	*				UG/KG
ALPHA-BHC	39076	300U	UG/KG	*				UG/KG
BETA-BHC	34257	300U	UG/KG	*				UG/KG
GAMMA-BHC (LINDANE)	39343	300U	UG/KG	*				UG/KG
DELTA-BHC	34262	300U	UG/KG	*				UG/KG
PCB-1242 (AROCLOR 1242)	39499	4000U	UG/KG	*				UG/KG
PCB-1254 (AROCLOR 1254)	39507	10,000U	UG/KG	*				UG/KG
PCB-1221 (AROCLOR 1221)	39491	4000U	UG/KG	*				UG/KG
PCB-1232 (AROCLOR 1232)	39495	4000U	UG/KG	*				UG/KG
PCB-1248 (AROCLOR 1248)	39503	4000U	UG/KG	*				UG/KG
PCB-1260 (AROCLOR 1260)	39511	10,000U	UG/KG	*				UG/KG
PCB-1016 (AROCLOR 1016)	39514	4000U	UG/KG	*				UG/KG
TOXAPHENE (8)	39403	65,000	UG/KG	*				UG/KG
TCDD (DIOXIN)	34678	NA	UG/KG	*				UG/KG
% MOISTURE	70320	27.48	%	*				%

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/12/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

SAMPLE START(DATE & TIME):12/28/81 1135

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: SBU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0230

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39330	0.01U	UG/L	*	Atrazine	1U	UG/L
DIELDRIN	(10)B9380	0.01U	UG/L	*	Methyl Parathion	0.05U	UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES)	39350	---	UG/L	*	Diuron	4U	UG/L
P,P'-DDT	39300	0.01U	UG/L	*	alpha-chlordane (11)	0.1U	UG/L
P,P'-DDE	39320	0.01U	UG/L	*	gamma-chlordane (11)	0.1U	UG/L
P,P'-DDD	39310	0.01U	UG/L	*			UG/L
ENDOSULFAN,ALPHA	34361	0.01U	UG/L	*			UG/L
ENDOSULFAN,BETA	34356	0.01U	UG/L	*			UG/L
ENDOSULFAN SULFATE	34351	0.04U	UG/L	*			UG/L
ENDRIN	39390	0.01U	UG/L	*			UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*			UG/L
HEPTACHLOR	39410	0.01U	UG/L	*			UG/L
HEPTACHLOR EPOXIDE	39420	0.01U	UG/L	*			UG/L
ALPHA-BHC	39337	0.03U	UG/L	*			UG/L
BETA-BHC	39338	0.03U	UG/L	*			UG/L
GAMMA-BHC (LINDANE)	39340	0.03U	UG/L	*			UG/L
DELTA-BHC	34259	0.03U	UG/L	*			UG/L
PCB-1242 (AROCLOR 1242)	39496	0.2U	UG/L	*			UG/L
PCB-1254 (AROCLOR 1254)	39504	0.05U	UG/L	*			UG/L
PCB-1221 (AROCLOR 1221)	39488	0.2U	UG/L	*			UG/L
PCB-1232 (AROCLOR 1232)	39492	0.2U	UG/L	*			UG/L
PCB-1248 (AROCLOR 1248)	39500	0.2U	UG/L	*			UG/L
PCB-1260 (AROCLOR 1260)	39508	0.05U	UG/L	*			UG/L
PCB-1016 (AROCLOR 1016)	34671	0.2U	UG/L	*			UG/L
TOXAPHENE	39400	0.2U	UG/L	*			UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*			UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/12/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

SAMPLE START(DATE & TIME):12/28/81 1600

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: HBD-004 HATCHER BAYOU DOWNSTREAM

SAD NO.: 82C0234

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
ALDRIN	39330	0.01U	UG/L	*	Atrazine		2U	UG/L
DIELDRIN	39380	0.02U	UG/L	*	Methyl Parathion		0.03U	UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES) (10)	39350	--	UG/L	*	Diuron		1U	UG/L
P,P'-DDT	39300	0.01U	UG/L	*	alpha-chlordane (11)		0.02U	UG/L
P,P'-DDE	39320	0.01U	UG/L	*	gamma-chlordane (11)		0.02U	UG/L
P,P'-DDD	39310	0.01U	UG/L	*				UG/L
ENDOSULFAN,ALPHA	34361	0.02U	UG/L	*				UG/L
ENDOSULFAN,BETA	34356	0.01U	UG/L	*				UG/L
ENDOSULFAN SULFATE	34351	0.04U	UG/L	*				UG/L
ENDRIN	39390	0.02U	UG/L	*				UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*				UG/L
HEPTACHLOR	39410	0.01U	UG/L	*				UG/L
HEPTACHLOR EPOXIDE	39420	0.01U	UG/L	*				UG/L
ALPHA-BHC	39337	0.01U	UG/L	*				UG/L
BETA-BHC	39338	0.01U	UG/L	*				UG/L
GAMMA-BHC (LINDANE)	39340	0.01U	UG/L	*				UG/L
DELTA-BHC	34259	0.01U	UG/L	*				UG/L
PCB-1242 (AROCLOR 1242)	39496	0.2U	UG/L	*				UG/L
PCB-1254 (AROCLOR 1254)	39504	0.05U	UG/L	*				UG/L
PCB-1221 (AROCLOR 1221)	39488	0.2U	UG/L	*				UG/L
PCB-1232 (AROCLOR 1232)	39492	0.2U	UG/L	*				UG/L
PCB-1248 (AROCLOR 1248)	39500	0.2U	UG/L	*				UG/L
PCB-1260 (AROCLOR 1260)	39508	0.05U	UG/L	*				UG/L
PCB-1016 (AROCLOR 1016)	34671	0.2U	UG/L	*				UG/L
TOXAPHENE	39400	0.2U	UG/L	*				UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*				UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/12/81

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1140

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: SBU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0231

CHEMIST: McDaniel COMPLETED 11/12/81

ELEMENT		STORET#		UNITS
SILVER	AG	01078	1U	MG/KG
ARSENIC	AS	01003	16U	MG/KG
BORON	B	01023	NA	MG/KG
BARIUM	BA	01008	156	MG/KG
BERYLLIUM	BE	01013	4U	MG/KG
CADMIUM	CD	01028	4U	MG/KG
COBALT	CO	01038	NA	MG/KG
CHROMIUM	CR	01029	12	MG/KG
COPPER	CU	01043	8.8	MG/KG
MOLYBDENUM	MO	01063	8K	MG/KG
NICKEL	NI	01068	12	MG/KG
LEAD	PB	01052	14	MG/KG
ANTIMONY	SB	01098	16U	MG/KG
SELENIUM	SE	01148	16U	MG/KG
TIN	SN	01103	NA	MG/KG
STRONTIUM	SR	01083	61	MG/KG
TELLURIUM	TE	45513	NA	MG/KG
TITANIUM	TI	01153	240	MG/KG
THALLIUM	TL	34480	40U	MG/KG
VANADIUM	V	01088	22	MG/KG
YTTRIUM	Y	45514	12	MG/KG
ZINC	ZN	01093	50	MG/KG
ZIRCONIUM	ZR	01163	NA	MG/KG
MERCURY	HG	71921	0.12	MG/KG
ALUMINUM	AL	01108	7690	MG/KG
MANGANESE	MN	01053	3050	MG/KG
CALCIUM	CA	00917	71200	MG/KG
MAGNESIUM	MG	00924	5680	MG/KG
IRON	FE	01170	19900	MG/KG
SODIUM	NA	00934	160	MG/KG
CYANIDE	CN	00721	--	MG/KG
ASBESTOS	ASSB	34228	--	MG/KG
CHROMIUM,HEXAVALENT	CR(6)		--	
% MOISTURE	M	70320	26	%

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/12/81

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1605

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: HBD-004 HATCHER BAYOU DOWNSTREAM

SAD NO.: 82C0235

CHEMIST: McDaniel COMPLETED 11/12/81

ELEMENT		STORET#		UNITS
SILVER	AG	01078	1K	MG/KG
ARSENIC	AS	01003	NA	MG/KG
BORON	B	01023	NA	MG/KG
BARIUM	BA	01008	195	MG/KG
BERYLLIUM	BE	01013	3K	MG/KG
CADMIUM	CD	01028	3K	MG/KG
COBALT	CO	01038	NA	MG/KG
CHROMIUM	CR	01029	170	MG/KG
COPPER	CU	01043	7.8	MG/KG
MOLYBDENUM	MO	01063	6K	MG/KG
NICKEL	NI	01068	14	MG/KG
LEAD	PB	01052	21	MG/KG
ANTIMONY	SB	01098	NA	MG/KG
SELENIUM	SE	01148	12K	MG/KG
TIN	SN	01103	NA	MG/KG
STRONTIUM	SR	01083	92	MG/KG
TELLURIUM	TE	45513	NA	MG/KG
TITANIUM	TI	01153	213	MG/KG
THALLIUM	TL	34480	30K	MG/KG
VANADIUM	V	01088	22	MG/KG
YTTRIUM	Y	45514	19	MG/KG
ZINC	ZN	01093	50	MG/KG
ZIRCONIUM	ZR	01163	NA	MG/KG
MERCURY	HG	71921	0.10U	MG/KG
ALUMINUM	AL	01108	6378	MG/KG
MANGANESE	MN	01053	3150	MG/KG
CALCIUM	CA	00917	116000	MG/KG
MAGNESIUM	MG	00924	8466	MG/KG
IRON	FE	01170	26043	MG/KG
SODIUM	NA	00934	400	MG/KG
CYANIDE	CN	00721	--	MG/KG
ASBESTOS	ASSB	34228	--	MG/KG
CHROMIUM,HEXAVALENT	CR(6)		--	
% MOISTURE	M	70320	23	%

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/12/81

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/03/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1405

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VL-002 DRAINAGE TO BAYOU AT S CORNER OF LANDFILL SAD NO.: 82C0232

CHEMIST: McDaniel COMPLETED 11/12/81

ELEMENT		STORET#		UNITS
SILVER	AG	01078	1U	MG/KG
ARSENIC	AS	01003	16U	MG/KG
BORON	B	01023	NA	MG/KG
BARIUM	BA	01008	213	MG/KG
BERYLLIUM	BE	01013	4U	MG/KG
CADMIUM	CD	01028	4U	MG/KG
COBALT	CO	01038	NA	MG/KG
CHROMIUM	CR	01029	30	MG/KG
COPPER	CU	01043	17	MG/KG
MOLYBDENUM	MO	01063	8U	MG/KG
NICKEL	NI	01068	23	MG/KG
LEAD	PB	01052	20	MG/KG
ANTIMONY	SB	01098	16U	MG/KG
SELENIUM	SE	01148	16U	MG/KG
TIN	SN	01103	NA	MG/KG
STRONTIUM	SR	01083	42	MG/KG
TELLURIUM	TE	45513	NA	MG/KG
TITANIUM	TI	01153	441	MG/KG
THALLIUM	TL	34480	40U	MG/KG
VANADIUM	V	01088	41	MG/KG
YTTRIUM	Y	45514	14	MG/KG
ZINC	ZN	01093	67	MG/KG
ZIRCONIUM	ZR	01163	NA	MG/KG
MERCURY	HG	71921	0.12	MG/KG
ALUMINUM	AL	01108	14765	MG/KG
MANGANESE	MN	01053	1265	MG/KG
CALCIUM	CA	00917	38850	MG/KG
MAGNESIUM	MG	00924	10134	MG/KG
IRON	FE	01170	22988	MG/KG
SODIUM	NA	00934	210	MG/KG
CYANIDE	CN	00721	—	MG/KG
ASBESTOS	ASSB	34228	—	MG/KG
CHROMIUM,HEXAVALENT	CR(6)		—	
% MOISTURE	M	70320	25	%

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/12/81

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/03/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: SEDIM

SAMPLE START(DATE & TIME):12/28/81 1430

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: VL-003 DRAINAGE TO DITCH AT W CORNER OF LANDFILL SAD NO.: 82C0233

CHEMIST: McDaniel COMPLETED 11/12/81

ELEMENT		STORET#		UNITS
SILVER	AG	01078	1U	MG/KG
ARSENIC	AS	01003	NA	MG/KG
BORON	B	01023	NA	MG/KG
BARIUM	BA	01008	211	MG/KG
BERYLLIUM	BE	01013	3U	MG/KG
CADMIUM	CD	01028	3U	MG/KG
COBALT	CO	01038	NA	MG/KG
CHROMIUM	CR	01029	22	MG/KG
COPPER	CU	01043	15	MG/KG
MOLYBDENUM	MO	01063	6U	MG/KG
NICKEL	NI	01068	23	MG/KG
LEAD	PB	01052	20	MG/KG
ANTIMONY	SB	01098	NA	MG/KG
SELENIUM	SE	01148	12U	MG/KG
TIN	SN	01103	NA	MG/KG
STRONTIUM	SR	01083	30	MG/KG
TELLURIUM	TE	45513	NA	MG/KG
TITANIUM	TI	01153	561	MG/KG
THALLIUM	TL	34480	NA	MG/KG
VANADIUM	V	01088	46	MG/KG
YTTRIUM	Y	45514	14	MG/KG
ZINC	ZN	01093	64	MG/KG
ZIRCONIUM	ZR	01163	NA	MG/KG
MERCURY	HG	71921	0.10U	MG/KG
ALUMINUM	AL	01108	15843	MG/KG
MANGANESE	MN	01053	1589	MG/KG
CALCIUM	CA	00917	15453	MG/KG
MAGNESIUM	MG	00924	6340	MG/KG
IRON	FE	01170	24327	MG/KG
SODIUM	NA	00934	660	MG/KG
CYANIDE	CN	00721	—	MG/KG
ASBESTOS	ASSB	34228	—	MG/KG
CHROMIUM,HEXAVALENT	CR(6)		—	
% MOISTURE	M	70320	23	%

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/12/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

CITY: VICKSBURG STATE: MS

STATION: SBU-001 STANTS BAYOU UPSTREAM

SAD NO.: 82C0230

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SAMPLE START(DATE & TIME):12/28/81 1135

SAMPLE STOP(DATE & TIME): 00/00/00 0

CHEMIST: McDaniel COMPLETED 11/4/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	10U	UG/L
ARSENIC	AS	01002	50U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	64	UG/L
BERYLLIUM	BE	01012	10U	UG/L
CADMIUM	CD	01027	10U	UG/L
COBALT	CO	01037	20U	UG/L
CHROMIUM	CR	01034	10U	UG/L
COPPER	CU	01042	10U	UG/L
MOLYBDENUM	MO	01062	20U	UG/L
NICKEL	NI	01067	30U	UG/L
LEAD	PB	01051	40U	UG/L
ANTIMONY	SB	01097	40U	UG/L
SELENIUM	SE	01147	50U	UG/L
TIN	SN	01102	100U	UG/L
STRONTIUM	SR	01082	88	UG/L
TELLURIUM	TE	01064	40U	UG/L
TITANIUM	TI	01152	21	UG/L
THALLIUM	TL	01059	100U	UG/L
VANADIUM	V	01087	10U	UG/L
YTTRIUM	Y	01203	10U	UG/L
ZINC	ZN	01092	10U	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	875	UG/L
MANGANESE	MN	01055	173	UG/L
CALCIUM	CA	00916	32	MG/L
MAGNESIUM	MG	00927	8.9	MG/L
IRON	FE	74010	1.1	MG/L
SODIUM	NA	00929	6.3	MG/L
CYANIDE	CN	00720	NA	MG/L
ASBESTOS	ASSB	34225	NA	F/L
CHROMIUM,HEXAVALENT	CR(6)	01032	NA	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/12/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-14 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 10/30/81 800

SOURCE: VERTAC CHEMICAL CO

SAMPLE TYPE: AMBWA

SAMPLE START(DATE & TIME):12/28/81 1600

CITY: VICKSBURG STATE: MS

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: HBD-004 HATCHER BAYOU DOWNSTREAM

SAD NO.: 82C0234

CHEMIST: McDaniel COMPLETED 11/4/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	10U	UG/L
ARSENIC	AS	01002	50U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	112	UG/L
BERYLLIUM	BE	01012	10U	UG/L
CADMIUM	CD	01027	10U	UG/L
COBALT	CO	01037	20U	UG/L
CHROMIUM	CR	01034	10U	UG/L
COPPER	CU	01042	17	UG/L
MOLYBDENUM	MO	01062	20U	UG/L
NICKEL	NI	01067	30U	UG/L
LEAD	PB	01051	40U	UG/L
ANTIMONY	SB	01097	40U	UG/L
SELENIUM	SE	01147	50U	UG/L
TIN	SN	01102	100U	UG/L
STRONTIUM	SR	01082	122	UG/L
TELLURIUM	TE	01064	40U	UG/L
TITANIUM	TI	01152	36	UG/L
THALLIUM	TL	01059	100U	UG/L
VANADIUM	V	01087	10U	UG/L
YTTRIUM	Y	01203	10U	UG/L
ZINC	ZN	01092	17	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	1500	UG/L
MANGANESE	MN	01055	228	UG/L
CALCIUM	CA	00916	34	MG/L
MAGNESIUM	MG	00927	14	MG/L
IRON	FE	74010	1.8	MG/L
SODIUM	NA	00929	127	MG/L
CYANIDE	CN	00720	NA	MG/L
ASBESTOS	ASSB	34225	NA	F/L
CHROMIUM,HEXAVALENT	CR(6)	01032	NA	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE: 11/12/81

US EPA REGION IV S&A DIVISION
LABORATORY SERVICES BRANCH
DATA REPORTING SHEET
82C0230 - 82C0235
PROJECT # 82-14 ***PROG ELEMENT # HWSR

SOURCE: VERTAC CHEMICAL CO

SAMPLE RECEIVED DATE & TIME: 10/30/81 800

CITY : VICKSBURG STATE: MS

CHEMIST:

COMPLETED: 11-25-81

SAD NO.	STATION	DATE & TIME SAMPLED	SAMPLE TYPE	ANALYSES TO BE RUN							
82C0230	SBU-001 STANTS BAYOU UPSTREAM	12/28/81- 00/00/00	1135- 0	AMBWA	ORGS	PEST	VOA	METSCUG/L	CN	MG/L	HG UG/L
									.002K		
					T-PHOMG/L	Temp(°C)	pH(SU)				
					.40	6.5	7.1				
82C0231	SBU-001 STANTS BAYOU UPSTREAM	12/28/81- 00/00/00	1140- 0	SEDIM	ORGS	PEST	VOA	METSCMG/KG	CN	MG/KG	HG MG/KG
									0.2K		
82C0232	VL-002 DRAINAGE TO BAYOU AT S CORNER OF LANDFILL	12/28/81- 00/00/00	1405- 0	SEDIM	ORGS	PEST	VOA	METSCMG/KG	CN	MG/KG	HG MG/KG
									0.86		
82C0233	VL-003 DRAINAGE TO DITCH AT W CORNER OF LANDFILL	12/28/81- 00/00/00	1430- 0	SEDIM	ORGS	PEST	VOA	METSCMG/KG	CN	MG/KG	HG MG/KG
									0.58		
82C0234	HBD-004 HATCHER BAYOU DOWNSTREAM	12/28/81- 00/00/00	1600- 0	AMBWA	ORGS	PEST	VOA	METSCUG/L	CN	MG/L	HG UG/L
									.046		
					T-PHOMG/L	Temp(°C)	pH(SU)				
					.98	15.9	6.9				

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.

DATE: 11/12/81

US EPA REGION IV S&A DIVISION
LABORATORY SERVICES BRANCH
DATA REPORTING SHEET
82C0230 - 82C0235
PROJECT # 82-14 ***PROG ELEMENT # HWSR

SOURCE: VERTAC CHEMICAL CO

SAMPLE RECEIVED DATE & TIME: 10/30/81 800

CITY : VICKSBURG STATE: MS

CHEMIST:

COMPLETED: 11-25-81

SAD NO.	STATION	DATE & TIME SAMPLED		SAMPLE TYPE	ANALYSES TO BE RUN					
					:ORGS	:PEST	:VOA	:METSCMG/KG	:CN MG/KG	:HG MG/KG:
82C0235	HBD-004 HATCHER BAYOU DOW NSTREAM	12/28/81- 00/00/00	1605- 0	SEDIM	:	:	:	:	: 0.2K	: :
					:	:	:	:	:	: :
					:	:	:	:	:	: :

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.

ENVIRONMENTAL PROTECTION AGENCY
Surveillance and Analysis Division

REGION 4
College Station Road
Athens, Georgia 30613

CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME Vertac Chemical Co. Vicksburg MS

SAMPLERS: (Signature) [illegible] Carol Haugh

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 gal org	VOA	Metals, Hg	CN	Seal org	Seal metals	Total phos	REMARKS
SBU-001	10/28/81	1135		X	Starts Bayou upstream		1	1	1	1			1	312, 313, 314, 315, 316
"	"	1140		X	" " "						1	1		317, 318
VL-002	10/28/81	1405		X	Drainage to Bayou at south									
					corner of landfill						1	1		320, 321
VL-003	10/28/81	1430		X	Drainage to ditch									
~~HBD-003~~	~~10/28/81~~	~~[illegible]~~			along railroad						1	1		325, 326
HBD-004	10/28/81	1600		X	Hatcher Bayou downstream		1	1	1	1			1	334 — 338
"	"	1605		X	" " "						1	1		339, 390

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[illegible]	10/28/81 1655	[illegible]			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Sealed sample given to Vertac lab personnel	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

0028

ENVIRONMENTAL PROTECTION AGENCY
Surveillance and Analysis Division

REGION 4
College Station Road
Athens, Georgia 30613

CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME Vertac Chemical
Vicksburg, MS

SAMPLERS: (Signature) [signature]
[signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 gal ors	VOA	metals, Hg	CN	Org sed	Sed metals	Total phos	REMARKS
SBU-001	10/28/81	1135		X	Stants Bayou upstream		1	1	1	1	I	4	1 I	305, 306, 307, 308, 309, ~~310~~, ~~311~~
"	"	1140		X	" " "						1	1		310, 311
VL-002	10/28/81	1405		X	Drainage to Bayou at south									
~~VL-003~~	~~10/28/81~~	~~1430~~		~~X~~	corner of landfill						1	1		319, 320
VL-003	10/28/81	1430		X	Drainage to ditch at									
					west corner of landfill						1	1		323, 324
HBD-004	10/28/81	1600		X	Hatcher Bayou downstream		1	1	1	1			1	327-331
"	"	1605		X	" " "						1	1		332, 333

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	10/29/81 1900				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Sealed samples left in hall by custody room.	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

0027

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

RECEIVED
FEB 18 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

February 16, 1982

Mr. David E. Lee, P.E.
Environmental Engineer
Division of Solid Waste Management
Mississippi Department of Natural Resources
Post Office Box 10385
Jackson, Mississippi 39209

Dear Mr. Lee:

Attached are the analytical results of the initial groundwater monitoring effort. My present perception is that there is no evidence of plant-related groundwater pollution. We will continue to sample (March, June, September), then perform the required statistical analysis.

Best regards,

Dick Karkkainen
Director of Environment & Safety

DK:ew

Attachments

CC: Mr. F. Ahlers
Mr. B. Maraman

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

December 15, 1981

Mr. David E. Lee, P.E.
Environmental Engineer
Division of Solid Waste Management
Mississippi Department of Natural Resources
Post Office Box 10385
Jackson, Mississippi 39209

Dear Mr. Lee:

Attached is a copy of our hydrogeological investigation at the Vicksburg facility. We have contracted with Environmental Laboratories, Inc. in Gulfport for quarterly analysis of the 31 water quality parameters.

Best regards,

Dick Karkkainen
Director of Environment & Safety

DK:ew

Attachment

RECEIVED
DEC 18 1981
DIV. OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

October 16, 1981

Bureau of Pollution Control
Division of Solid Waste Management
Post Office Box 10385
Jackson, Mississippi 39209

Attention: Mr. David Lee

SUBJECT: HAZARDOUS WASTE MATERIALS

We now have all of the Texas Manifests up to date.

Three Louisiana Manifest original copies have not been returned to us.

Manifest Dated 8-13-81	Sequence No. 9
Manifest Dated 8-17-81	Sequence No. 10
Manifest Dated 8-26-81	Sequence No. 11

These refer to waste disposal shipments made through Brown & Ferris Industries and they informed me that they were relocating the office, and were late returning the originals to us.

I expect to receive the originals in a few days, and I will update you at that time.

Sincerely,

R. F. Maraman

R. F. Maraman
Chief Chemist

RFM/djw

cc: D. Karkkainen
File

RECEIVED
OCT 19 1981
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

October 13, 1981

RECEIVED
OCT 16 1981
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. David E. Lee, P.E.
Environmental Engineer
Division of Solid Waste Management
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O.Box 10385
Jackson, Mississippi 39209

Re: Modification of our Effluent Pond Closure and Post Closure Plans - Additional Detail and Costs Included

Dear Mr. Lee:

Upon closure, the liquid contents of the effluent pond would be pumped through the Calgon-activated carbon columns as per normal operating procedures at a typical operating expense of $0.13 per gallon. This expense is part of the cost of the products we make and as such is not an extraordinary expense.

The sludge or sediment within the pond would be solidified by adding dirt and then allowing the dirt to dry. The hill to the south of the pond would provide a source of some of the dirt. Additional dirt would be obtained elsewhere from the 600-acre plant site and dumped within the pond area. After adequate drying, the dirt emplaced within the pond would be leveled such that the average depth would be one and one-half feet after compaction. Next, the embankments around the north and south sides of the dried out pond area would be knocked down. Grade would be sloped slightly toward the east end of the area. The final step would be the addition of one foot of clay atop the entire area followed by one-half foot of topsoil, then grass seed.

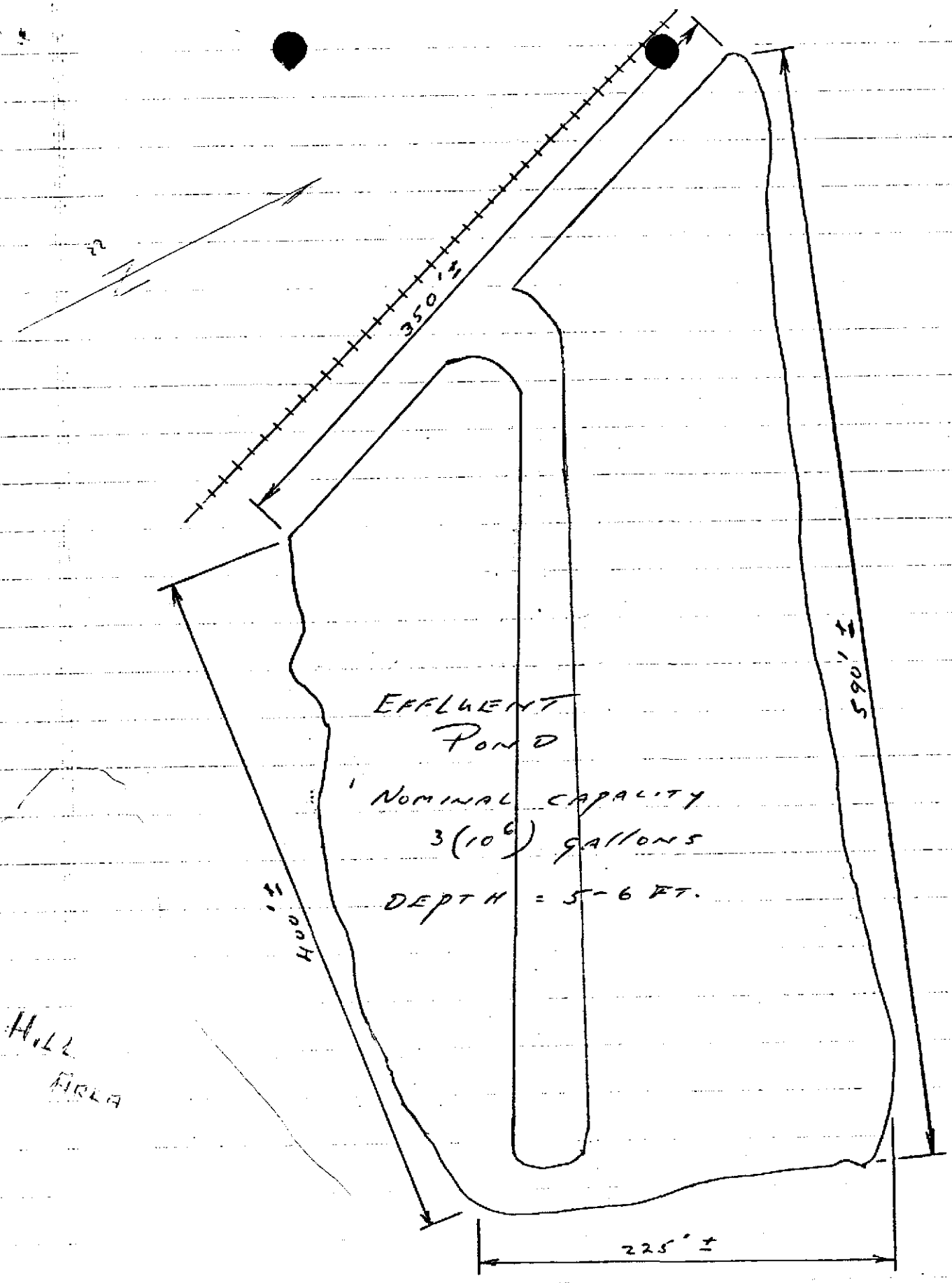
A sketch of the area is attached. The above could be accomplished at an approximate cost of $3.00 per year of dirt moved, with 10,000 yards needed. Additionally, we would continue groundwater monitoring for a period of 30 years post closure, utilizing the four (4) groundwater monitoring wells now in place, at a cost of approximately $2,000.00 per year. Groundcover remedial maintenance would cost an additional $500.00 per year. Hence, total costs are estimated at 10,000 ($3) + 30 ($2,500) = $105,000.

Very truly yours,

Richard D. Karkkainen
Director of Environment & Safety

CC: Mr. F. Ahlers
Mr. R. Guidi
Mr. R. Maraman

RDK:ew
Attachment


350' ±
590' ±
400' ±
225' ±
EFFLUENT
POND
NOMINAL CAPACITY
3(10^6) GALLONS
DEPTH = 5-6 FT.
HILL
AREA

File Copy

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

October 12, 1981

Mr. R. F. Maraman, Chief Chemist
Vertac Chemical Corporation
P. O. Box 3
Vicksburg, MS 39180

RE: Inspection of October 6, 1981

Dear Mr. Maraman:

The recent inspection of the Vertac facility by Jim Hardage and myself indicated most of the non-compliance items found on the July 27th inspection had been corrected. As we indicated, however, a few items are still in need of some attention.

The waste analysis plan should be revised to reflect frequency of sampling and sampling parameters. Signs should be posted adjacent to the railroad on both sides of the property boundary and around the old landfill area. The closure plan should be re-written to include enough detail to formulate an adequate closure cost and the cost should be calculated. Keep in mind that a requirement to place closure cost monies in a trust fund or other device will be imposed in the near future. Plans should be made to meet this requirement when it becomes effective.

A manifest exception report should be sent to this office listing the non-returned manifests and efforts being made to locate them. Items required for inclusion in the report can be found in Section 262.42 of the EPA regulations.

We will schedule a follow-up trip in the near future to discuss the aforementioned items. Please feel free to contact us if you have any questions.

Sincerely,

David E. Lee

David E. Lee, PE
Environmental Engineer
DSWM

DEL/sh

cc: Mr. Dick Karkkainen, Vertac, Memphis
Mr. Andy Kromis, EPA, Region IV

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851 TELEX 53927

September 2, 1981

Mr. David E. Lee, P.E.
Environmental Engineer
Division of Solid Waste Management
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

Subject: Request For Information
Your Letter of August 11, 1981

Dear Mr. Lee:

I have reviewed your letter with the personnel at our Vicksburg facility. They concur with my opinion that all the items you specifically list may contain proprietary process information, which we regard as confidential. Mr. Fred Ahlers, the plant manager, has been dealing with Mr. Jerry Banks with the Bureau of Pollution Control concerning an identical request. Perhaps there is wisdom in consolidating these efforts. I suggest that someone from the Vicksburg facility travel to Jackson, review each of the items of interest and individually affix to each item a statement of confidentiality.

Best regards,

Dick Karkkainen
Director of Environment & Safety

DK:ew

CC: Mr. Fred Ahlers

RECEIVED
SEP - 4 1981
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

file - Warren Vertac
HW

August 19, 1981

4606 Warrenton Road
Vicksburg, Mississippi 39180

Mr. David Lee
Environmental Engineer
Bureau of Pollution Control
Post Office Box 10385
Jackson, Mississippi 39209

Dear Mr. Lee:

Thank you for your letter of August 11, 1981. I will be awaiting the Attorney General's decision and would also like an outline of the procedures to gain all other information.

Last week I wrote Mr. Jerry Banks and notified him that when all information is clear for release, to contact my attorney R. E. Parker (1110 Jackson Street, Vicksburg, MS 39180), and he will make the determination on what information is to be copied.

Sincerely yours,

Tully Hall

Tully Hall

TH:cl

RECEIVED
AUG 20 '81
DIV. S.W.M. & V.C.
BY

RECEIVED
AUG 20 1981
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

August 11, 1981

Mr. Dick Karkkainen
Vertac Chemical Corporation
24th Floor
5100 Poplar Street
Memphis, TN 38137

Dear Mr. Karkkainen:

RE: REQUEST FOR INFORMATION

We have received a request for information contained in our files on your firm. Under state law, certain information is normally considered confidential and information may be claimed as confidential by a party. Normally, permit applications are public information unless certain parts are claimed confidential. Since no such claim was made on your RCRA application, this would be considered non-confidential.

We have a confidential file containing several assessments made by our staff and EPA on the plant and the old landfill. You have already indicated this information should be confidential and it will continue to be treated as such. However, our permit file contains several pieces of correspondence which have not been claimed as confidential. If any of this information is desired by you to be claimed as such, please indicate by September 8, 1981. Following is a list of the items contained in this file:

(1) Copy of letter from Steve West dated March 9, 1978 concerning parathion plant explosion.

(2) Letter from Jerry McAdams dated March 30, 1978 concerning disposition of wastes from explosion.

(3) Letter from Judy Jackson of Calgon concerning possible de-listing of Calgon units.

(4) Part A RCRA permit application.

(5) Industrial waste disposal inventory form completed by county sanitarian (no waste information on form).

(6) Memorandum from Sam Mabry to file dated March 6, 1980 concerning procedures used to comply with confidentiality rules.

(7) Hazardous Waste Survey form completed in December, 1980. Contains information on products manufactured, wastes from old production scheduled for disposal, generalized schematic of wastewater flow route.

(8) Letter from Sam Mabry dated April 13, 1981 responding to a request for information concerning certain materials such as pesticides, acids, and chlorine and whether they are hazardous.

(9) Letter from private citizen requesting release of all information on file for Vertac since 1976. Response to request from Air Division of the Mississippi Department of Natural Resources.

(10) Listing of currently stored wastes at Vertac and correspondence from R. F. Maraman to Dave Madsen concerning the wastes.

(11) Interim status inspection report conducted July 27, 1981.

(12) Correspondence from R. F. Maraman to David Lee dated July 29, 1981 concerning certain corrections of violations of RCRA requirements.

Items 3, 4, 5, 6, 7, 8, and 9 would not be considered confidential unless specifically requested. Due to the nature of these items, justification would also be needed in order for us to consider honoring the request.

If you need further information concerning the content of these documents, please feel free to contact us. Response to this letter should be in this office by September 11, 1981.

Sincerely,

David E. Lee

David E. Lee, P.E.
Environmental Engineer
Division of Solid Waste Management

DEL/dm

August 11, 1981

Mr. Tully Hall
4606 Warrenton Road
Vicksburg, MS 39180

Dear Mr. Hall:

Your request for release of file information on Vertac has been forwarded to our office by the Air Division of the Bureau of Pollution Control. Certain items in the file are public information and some have been claimed confidential by Vertac. We are requesting clarification from the Attorney General's office concerning confidentiality rules, since the state law governing same has recently been changed. Because of this change in state law, we are giving Vertac officials thirty (30) days to request confidentiality on any information not presently in the confidential file.

As soon as Vertac's response has been made and the clarification granted, we will send the requested information as the law permits. We will also inform you as to what procedures may be used to gain release of other information. Please be advised there will be a 10¢ per copy cost of all materials sent.

If we can be of assistance in the interim, please advise.

Sincerely,

David E. Lee

David E. Lee, P.E.
Environmental Engineer
Division of Solid Waste Management

DEL/dm

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

August 11, 1981

Mississippi Department of Natural Resources
Bureau of Pollution Control
Solid Waste Division
Post Office Box 1700
Jackson, Mississippi 39209

Attention: Mr. David Lee

SUBJECT: CLOSURE PLAN, CONTINGENCY PLAN, AND WASTE FACILITY TRAINING PROGRAM

Enclosed is a copy of the above plan per my letter of July 29, 1981.

Please advise if you need additional information.

Sincerely,

R. F. Maraman

R. F. Maraman

RFM/djw

Enclosure

cc: D. Madsen
D. Karkkainen, Memphis
File

RECEIVED
AUG 12 '81
BY

40 CFR PART 265

(INTERIM STATUS STANDARDS REQUIRED FOR FACILITIES ENGAGED IN TREATMENT, STORAGE, OR DISPOSAL OF HAZARDOUS WASTES)

THE STANDARDS AND PLANS FOR COMPLIANCE

AS THEY APPLY TO THE VICKSBURG PLANT OF VERTAC CHEMICAL CORPORATION

I. SECTION 265.13 - GENERAL WASTE ANALYSIS

A. Requirement

A detailed chemical and physical analysis of a representative sample of all hazardous wastes to be treated, stored or disposed of must be obtained. A written waste analysis plan must be developed and implemented. The plan must be kept at the facility. The plan must detail sampling and analysis methods and frequencies.

B. The Plan

For wastes discharged to an NPDES permitted privately-owned treatment facility or discharged to an NPDES permitted publicly-owned treatment works, the plan is to sample and analyze as per standard in place practice or at six-month intervals, whichever is most frequent. The method of analysis is in each case the EPA method and/or that specified in "Standard Methods of Wastewater Analysis", or if not found in either of the above, by methods developed in-house by Vertac or that company for which custom chemical manufacture is in progress.

II. SECTION 265.14 - SECURITY

A. Requirement

Alternative security devices including surveillance, fencing or barriers and controlled access must be instituted to prevent unauthorized entry to the active portion of the hazardous waste facility by humans or livestock unless physical contact with the wastes by such humans or animals will not cause injury or disturb the operations of said facility.

A. The Plan

Fences or combinations of fences and natural or artificial barriers, in conjunction with controlled roadways, are used to control entry to the active portion of the hazardous

waste facility. Signs with the legend "Danger - Unauthorized Personnel Keep Out" are posted in sufficient numbers so as to be seen from any approach to this active portion.

III. SECTION 265.15 - INSPECTIONS

A. Requirement

Inspections must be performed on a schedule sufficient to detect and correct problems which may cause a release of hazardous waste to the environment. Inspections and their results must be detailed in an inspection log which must be retained for a period of three years.

B. The Plan

1. Drums - Will be inspected weekly for leaks if the drums will be stored ninety (90) days or longer.

2. Tanks - Automatic shutdown systems, by-pass systems, and drainage systems will be inspected daily. Monitoring gauges and instruments will be inspected daily. The level will be inspected daily. The structural and functional integrity of the tank itself and surrounding dikes and/or other means of secondary containment will be inspected weekly.

3. Surface Impoundments - There will be a daily check that a minimum freeboard level of two feet exists and a weekly inspection for structural and functional integrity.

IV. SECTION 265.16 - PERSONNEL TRAINING

A. Requirement

There must be a job title and written job description for each position related to hazardous waste management. The written description must describe the training required to function in the job and ensure ability to respond to Preparedness and Prevention Plans, and Contingency and Emergency Procedure Plans. Training must be completed by May 19, 1981. Records that document initial training and annual reviews must be maintained until site closure.

B. The Plan

Personnel are trained in classrooms and on the job in:

1. Procedures for Using Emergency and Monitoring Equipment

2. Operating Waste Feed Cut-Off Systems

3. Communications Systems

4. Response to Emergencies

Job descriptions are attached.

V. SECTION 265.30 - PREPAREDNESS AND PREVENTION

A. Requirement

Hazardous waste facilities must be maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste. As appropriate for the type of wastes handled, facilities must make emergency response arrangements with local services such as fire, police and hospital.

B. The Plan

Telephones are available to summon help; portable fire extinguishers are available or water at adequate volume and pressure to supply water hose streams is available. The nature of our hazardous waste is such that emergency response plans or familiarization of local authorities with facts specific and exclusive to hazardous wastes is not necessary or desirable. There does exist instead coordination of information and emergency responses pursuant to the entire manufacturing facility, raw materials and products, as well as wastes. The potential hazardous waste emergencies at Vicksburg is not severe. Hazardous waste spills will flow to the effluent pond. The contents of the effluent pond is treated by carbon adsorption prior to discharge.

VI. SECTION 265.50 - CONTINGENCY PLAN AND EMERGENCY PROCEDURES

A. Requirement

Designate an employee as the "emergency coordinator" to be on the premises on or call at all times; designate alternatives and list them in the order in which they should be contacted. An emergency contingency plan must be prepared; copies of the plan must be maintained at the facility and submitted to all local service organizations which may be requested to respond.

B. The Plan

The designated emergency coordinator is Richard Randolph. A list of alternatives is attached. The duties of the emergency coordinator is to carry out requirements of 40 CFR Section 265.56, 45 Federal Register 33237; a copy is attached.

VII. SECTION 265.70 - MANIFEST SYSTEM, RECORDKEEPING AND REPORTING

A. Requirement

All hazardous waste treatment, storage and disposal facilites, including those which treat wastes generated on-site, must maintain an operating record at the facility which describes the quantity and quality of all hazardous wastes received, the location of each hazardous waste within the facility, the results of waste analyses, reports of all incidents requiring implementation of the contingency plan, records of all inspections, required monitoring, testing or analytical data, and all closure and post-closure cost estimates. In addition, all hazardous waste treatment, storage and disposal facilities must submit an annual report summarizing the above-cited information.

B. The Plan

Do as required.

VIII. SECTION 265.90 - GROUNDWATER MONITORING

A. Requirement

By November 19, 1981, those operating surface impoundments or active landfills as part of hazardous waste treatment storage or disposal facilities must install and operate an extensive groundwater monitoring system.

B. The Plan

Groundwater monitoring systems capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility will be installed.

IX. SECTION 265.110 - CLOSURE AND POST-CLOSURE

A. Requirement

Each facility must have a written closure plan which identifies the steps necessary to completely close the facility at any point during its intended life and at the planned closure time. Each facility must also have a post-closure plan which provides for thirty (30) years of post-closure care.

B. The Plan

Upon closure, the contents of the hill storage tank and the effluent pond will be un through the carbon columns at a rate such that the effluent remains within NPDES permit limitations. Upon closure, all above-ground drums of hazardous waste are to be brought to a permitted landfill.

Upon closure, all surface impoundments are to be drained and filled with absorbent clays. After a period of drying, a clay cap is added to the top. Groundwater monitoring will be continued for a period of thirty (30) years.

X. SECTION 265.140 - FINANCIAL REQUIREMENTS

A. Requirement

Each facility must have a written estimate of both the cost of closing the facility at the point at which closure would be the most expensive and the annual cost of post-closure care. These estimates must be updated as necessary to keep them current with the closure and post-closure plans. In addition, both estimates must be updated annually to adjust for inflation.

B. The Plan

Drums will be disposed at an estimated cost of $50 per drum (1981 costs). Surface impoundments will be closed at an estimated cost of $3 per cubic yard of volume (1981 costs). Groundwater monitoring will be maintained at an estimated cost of $500 per well, per year (1981 costs).

Hill tank water and effluent pond water will be treated at a cost of approximately $0.13 per gallon (1981 costs).

RDK:ew

Attachments

§ 265.56 Emergency procedures.

(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

(1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(2) Notify appropriate State or local agencies with designated response roles if their help is needed.

(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

(1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

(2) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area (in the applicable regional contingency plan under Part 1510 of this Title), or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:

(i) Name and telephone number of reporter;

(ii) Name and address of facility;

(iii) Time and type of incident (e.g., release, fire);

(iv) Name and quantity of material(s) involved, to the extent known;

(v) The extent of injuries, if any; and

(vi) The possible hazards to human health, or the environment, outside the facility.

(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

(f) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

[*Comment:* Unless the owner or operator can demonstrate, in accordance with § 261.3(c) or (d) of this Chapter, that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Parts 262, 263, and 265 of this Chapter.]

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with paragraph (h) of this Section before operations are resumed in the affected area(s) of the facility.

(j) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:

(1) Name, address, and telephone number of the owner or operator;

(2) Name, address, and telephone number of the facility;

(3) Date, time, and type of incident (e.g., fire, explosion);

(4) Name and quantity of material(s) involved;

(5) The extent of injuries, if any;

(6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(7) Estimated quantity and disposition of recovered material that resulted from the incident.

VERTAC CHEMICAL CORPORATION

RCRA SECTION 265.16

JOB DESCRIPTION

VICKSBURG PLANT

I. JOB TITLE

Effluent Operator - (4) - One per shift.

II. JOB DESCRIPTION

The effluent operators have the following duties that are related to hazardous wastes:

1. Operate the Calgon carbon adsorption units.

2. Monitor and control the pH of the outlet of the effluent pond.

3. Make observations and entries on the log sheet forms, including the following:

   a. Week inspection of hazardous waste drums being stored. Note any leakers, report the problem and note when remedial action is taken.

   b. Daily inspection of sampling equipment, metering equipment, tank levels and freeboard level of the effluent pond.

   c. Weekly inspection of the hill tank and the Calgon unit tanks plus dikes for structural and functional integrity.

III. TRAINING

The effluent operators receive both on the job and classroom training. The most recent classroom training was coordinated by Calgon personnel. Specific training was conducted on:

1. Basic theory or absorption.

2. Optimization of operation by periodic sampling and analysis.

3. Loading and unloading of carbon.

4. Function and purpose of instrumentation and gauges.

Effluent operators receive the same safety training as chemical operators. As such, they are trained to use emergency equipment such as fire extinguishers.

RDK:ew

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

July 29, 1981

Mississippi Department of Natural Resources
Bureau of Pollution Control
Solid Waste Division
Post Office Box 1700
Jackson, Mississippi 39209

Attention: Mr. David Lee

SUBJECT: CLOSURE PLAN, CONTIGENCY PLAN, AND WASTE FACILITY TRAINING PROGRAM

Re your visit of July 27, 1981, the above plans are in our Memphis office.

They will send me copies and when they arrive, I will send you a copy for your review.

Sincerely,

R. F. Maraman

R. F. Maraman
Chief Chemist

RFM/djw

cc: File

RECEIVED
JUL 31 '81
CH

RECEIVED

Jim, David
Please help

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

June 26, 1981

Mr. Tully Hall
4606 Warrenton Road
Vicksburg, Mississippi 39180

Dear Mr. Hall:

Pursuant to your letters of June 9, 1981, and June 18, 1981, the following information is provided:

1. We are presently determining with the assistance of the Attorney General's Office exactly which information in Vertac's file is confidential and what information can be released. Also, please be advised that there will be a charge of 10¢ per copy for the information you have requested. As soon as the volume of information required for copying is determined, I will give you an approximate cost.

2. The Freedom of Information Act applies only to Federal agencies and not State agencies. Section 49-17-39, Mississippi Code of 1972, governs release of information obtained by our Bureau.

3. We have no control of hazardous waste disposal. Information on hazardous waste disposal may be obtained from the Division of Solid Waste.

4. A chlorine emission limit of 1.2 lb/hour has been set for the C-10 vent gas scrubber at the potassium nitrate plant. Also, the chlorine emission limit for the toxaphene plant caustic scrubber has been set at 0.13 lb/hour.

5. Vertac reported a release of nitrogen dioxide from the potassium nitrate plant on June 12, 1981, as a result of a leaking nitrogen dioxide fill line. The potassium nitrate plant had been out of operation for five (5) days and was in the final phase of start-up when the leak occurred. Valves to the fill line were shut within minutes and the leak repaired. There was no release of chlorine from the plant.

We are by copy of this letter forwarding your request for hazardous waste information to Jack McMillan of the Division of Solid Waste.

RECEIVED
JUN 30 '81

If we may be of further assistance, please advise.

Yours truly,

Jerry B. Banks, P. E., Coordinator
North Air Emissions Section

JBB:ls
cc: Mr. Jack McMillan, Division of Solid Waste

This copy for

ANDERSON-TULLY COMPANY
HARDWOOD LUMBER AND FLOORING
DIMENSION STOCK

VICKSBURG, MISSISSIPPI 39180

June 9, 1981

Mr. Jerry Banks
Mississippi Bureau of Pollution Control
Department of Natural Resources
P. O. Box 10385
Jackson, Mississippi 39209

Dear Mr. Banks:

Would you please send me a copy of all correspondence, complaints, citations, permits, etc. pertaining to Vertac since 1976.

Please include copies of all hazardous waste site logs. The ones I have are difficult to read, and any further actions that have been taken in regard to Hetchcock Report on 2/18/80.

If any of this information is not covered under the Freedom of Information Act, please take any steps that are necessary to release this information.

Sincerely,

Tully Hall
4606 Warrenton Road
Vicksburg, Ms 39180

TH:ca

JUN 10 1981

RECEIVED
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL JUN 30 '81
BY S.W.M. & V.C.

INTERNAL CORRESPONDENCE

DATE April 1[illegible], 198[illegible]

TO: DAVE MADSEN

FROM: R. F. MARAMAN

CC:

SUBJECT: HAZARDOUS WASTE INVENTORY

Not all of the waste appears to be hazardous. I have divided the waste, to the best of my knowledge, into hazardous and non hazardous.

In the non hazardous section, I will contact Don Hogg to determine if we can use the Boiler and Water Treating Chemicals. We should also look at the HE-Surfactout. If it is not contaminated we may be able to salvage it.

I have no idea of what use we could make of the Aiiken Airwick now that Parathion is down.

R. F. Maraman

R. F. Maraman

RFM/djw

Attachment

cc: F. Ahlers
R. Guidi, Memphis
J. Horn
D. Karkkainen, Memphis
S. Keen
File

WASTE INVENTORY

WASTE (HAZARDOUS)	55 GAL. DRUMS	OTHER CONTAINERS
Epichlorohydrin	19	
Tri-IPOA-H20 Mixture	16	
Styrene	1	
Lab Waste	23	
DNOC Waste	78	
Cyanuric Chloride Liners	16	
" " Coveralls & Waste	28	
" " Drum	1	
Atrazine	112	
DNBP	62	7 - 5 gallon 150 - 30 gallon
DNBP Plus Tox	1	
Camphene	11	
Toxaphene	58	
Charcoal	17	
Charcoal Plus Atrazine	16	
TBA	32	
Tox, Xylene, Soap, H20 Mixture	15	8 - 30 gallon
Tox - Xylene	3	
Metachlorophenylisocyanate	1	
Unidentified	29	
Rashig Rings	1	
Trash	4	
Emulphogene Plus Waste	15	
WASTE (NON HAZARDOUS)		
Betz Boiler & Water Treating		
Liquid Treat		2
Polysperse		1
Deposit Control		4
OTHER (NON-HAZARDOUS)		
Aiiken Airwick	2	
HE-1 Surfactant	9	

Section I, Description of Site

1. 80' x 80' drum storage area. Built appx. 1973, and is part of the drumming building. There are no known springs or wells nearby. The nearest housing is appx. 1/2 mile away.

Waste comes from cleanup of spills, discarded work clothing, activeted carbon beds. It is disposed of through private waste disposal firms.

2. 3,000,000 gallon impoundment. Built by Spencer Chemical Co. prior to 1963 and improved by The Vicksburg Chemical Co. prior to Vertac ownership. Wells and housing are the same as No. 1.

This is the effluent pond for effluent from Vertac. The effluent is treated by flowing through the activated carbon system and is discharged to the Ms. River.

3. 1,600,000 gallon waste water storage tank. Built by Spencer Chemical Co. proir to 1963. Wells and housing are the same as No. 1.

This is the storage tank to hold waste from the dinitrobutyl phenol (ONBP) plant. The waste is disposed by flowing through an activated carbon bed to the 3,000,000, gal. impoundment and then through the activated carbon system a second time before discharging to the Ms. River.

Wells, springs and housing are per No. 1.

4. Activated carbon system. Wells, springs and housing are per No. 1.

A system of 5 activated carbon beds designed by Calgon which removes organic chemicals from the impounded effluent.

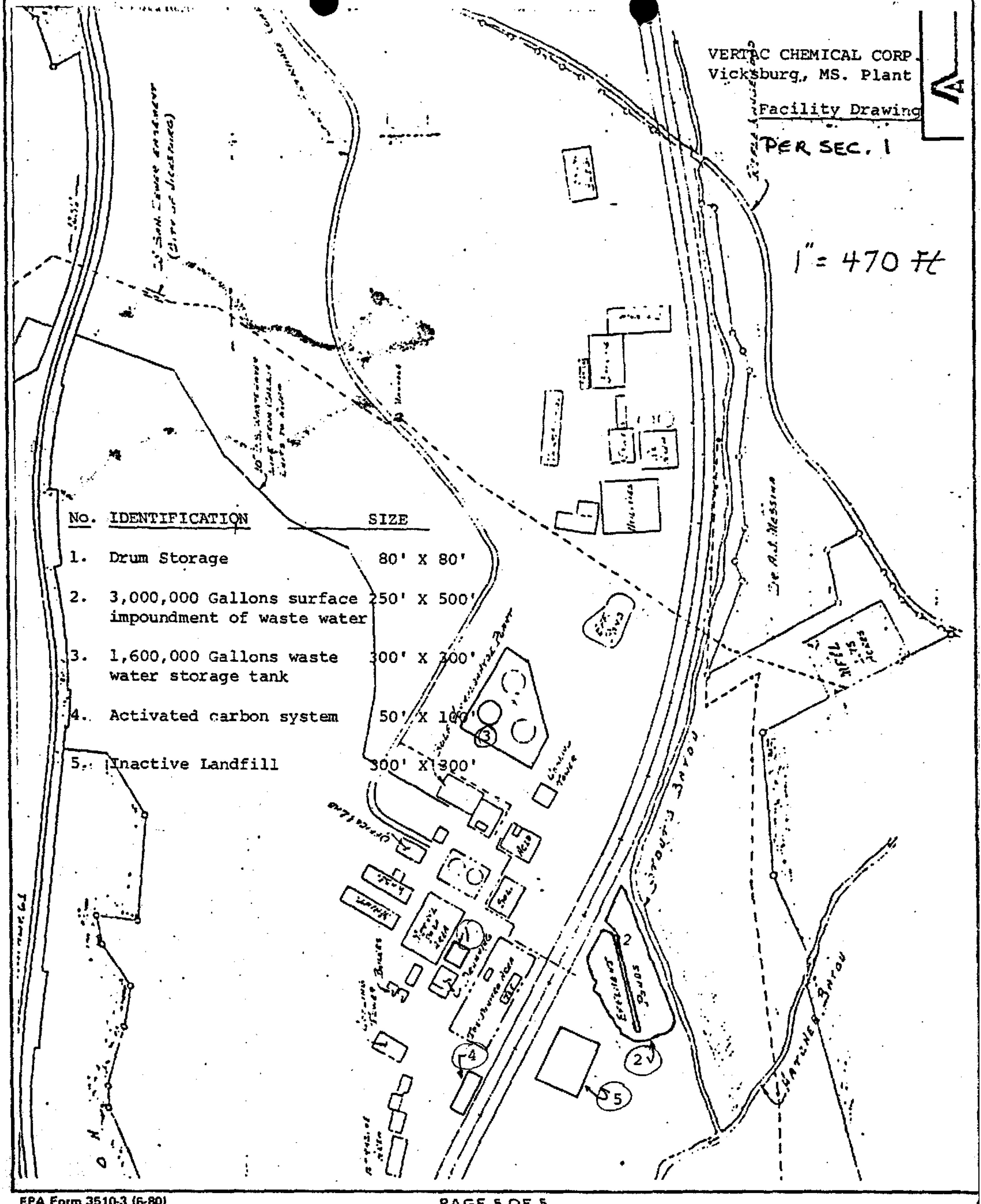
The waste contained in the spent carbon is disposed of by Calgon.

5. Inactive landfill. The wells, springs, and housing are per No. 1.

The site was activated about 1974 by Vicksburg Chemical Co. It contains empty metal drums, hydrolyzed cyanuric chloride, scrap plastic, rubber, and wooden items, etc. These items originated in the various plant areas. Vertac does not use this area as a landfill. Vertac is opening the area to dispose of the material through private waste disposal firms and plans to return the area to its original condition.

Continued from page 4.

V. FACILITY DRAWING (see page 4)



No.	IDENTIFICATION	SIZE
1.	Drum Storage	80' X 80'
2.	3,000,000 Gallons surface impoundment of waste water	250' X 500'
3.	1,600,000 Gallons waste water storage tank	300' X 300'
4.	Activated carbon system	50' X 100'
5.	Inactive Landfill	300' X 300'

April 13, 1981

Mr. Tully Hall
4606 Warrenton Road
Vicksburg, MS 39180

Dear Mr. Hall:

In response to your letter of March 31, 1981, to Dr. Cobb, the Solid Waste Management Branch of the State Board of Health has no record of a letter from you written on September 8, 1980. However, I am happy to try to answer your questions.

Of the ten chemicals which you list, the following four appear on Appendix III, Subpart D, of the Mississippi Hazardous Waste Management Regulations:

Methyl parathion (P071)
Camphene, octachloro (P123)
Toxaphene (P123)
Dinoseb (P020).

Appendix III is a list of commercial chemical products or manufacturing chemical intermediates which, when discarded or intended to be discarded, are identified as acute hazardous wastes. If a generator produces 2.2 pounds (1 kilogram) or more of one or a combination of the wastes listed in Appendix III, he must manifest that waste and treat, store, or dispose of it only in a permitted hazardous waste facility. (This management scheme of manifest and permitted facility is, of course, the "Cradle-to-Grave" system to which you refer.)

Of the other wastes on your list, waste chlorine and waste nitric acid could possibly be identified as hazardous: chlorine because it could be reactive; nitric acid because it would be corrosive. Neither of these wastes is a listed acute hazardous waste. For non-acute hazardous wastes, a generator comes under the "cradle-to-grave" regulation only if he produces at least 2200 pounds (1000 kilograms) of the wastes per month.

With respect to your request for copies of noncompliance letters to Vertac, these letters were not sent by a State Board of Health unit. Probably the letters were in regard to Vertac's NPDES permit, in which case the person to contact would be Mr. Bill Barnett, Industrial Waste-

water Section, Bureau of Pollution Control, Mississippi Department of Natural Resources (354-2550).

If I can be of further assistance, please let me know.

Sincerely,

Sam Mabry

Sam Mabry, Administrative Assistant
Solid Waste Management Branch

SM/cs

cc: Alton B. Cobb, M.D., M.P.H., State Health Officer
Mr. Joe D. Brown, P.E., Bureau of Environmental Health

March 31, 1981

4606 Warrenton Road
Vicksburg, MS 39180

Mississippi State Board of
Health
2423 North State Street
Jackson, Mississippi 39206

Dear Dr. Cobb:

On September 8, 1980 I wrote you a letter asking which of the following were covered under the Cradle-to-Grave Regulation. As of this date (3/31/81), I haven't heard from you.

Please state which of the following are and how they are regulated:

1. Potassium nitrate
2. Chlorine can be reactive
3. Nitrogen Tetroxide
4. Nitric acid corrosive
5. Methylparathion (acute HW) P071
6. Toxiphene (acute HW) P123 — (P123) Camphene, octachloro- ↗ maybe
7. Bladex
8. Toxiphene & chlorinated camphere
9. Dinbinosed ⟶ Probably Dinoseb (P020)
10. Dinitro Butalphenol

Also, would it be possible to obtain copies of letters to Vertac Chemical Co., of 1/16/80 and 2/27/80 pertaining to the noncompliance of the plant with regard to limits of Atrazine, Toxaphene, Dinoseb, ph, and Nitrate.

Thank you.

Sincerely,

Tully Hall

Tully Hall

RECEIVED
APR 7 '81
CS

TH:cl

Richard Randolph
(Vicksburg)

CALGON CORPORATION
SUBSIDIARY OF MERCK & CO., INC.

ACTIVATED CARBON DIVISION CALGON CORPORATION 4800 WEST 34TH ST. SUITE B-8 HOUSTON, TEXAS 77092 (713) 682-1301

October 1, 1980

I hope to be in Vicksburg Wed aft.
Dick

Mr. Dick Karkainnen
Director Environment & Safety
Vertac Chemical Company
P. O. Box 3
Vicksburg, MS 39180

Dear Sir:

The regulations recently adopted by the Environmental Protection Agency under the Resource Conservation and Recovery Act produced some difficult questions of interpretation as they apply to our Calgon Carbon Service. These difficult questions arose because of the unique nature of our business. We have had conversations with EPA concerning the application of these regulations to our Calgon Carbon Service business; the most recent being held on August 28th. Based on our conversations with EPA staff in Washington and our interpretation of the regulations, we understand that:

(1) The reactivation centers at which we reactivate spent carbon are exempt from the requirements of the Resource Conservation and Recovery Act as a Resource Recovery facility (See 40 CFR, Section 261.6). This is an important potential benefit to our customers as they are assured on November 19 that they have a viable solution to hazardous waste treatment and destruction needs.

(2) Many of the carbon adsorbers installed on our customers' sites will qualify for an exemption from the permitting requirements as totally enclosed treatment systems (See 40 CFR, Section 264.1 (g) 5 and 40 CFR, Section 260.10);

(3) Although a total exemption from the Resource Conservation and Recovery Act is available for activated carbon which is to be reactivated and contains waste listed in Subpart C of Part 261, only a partial exemption is available for activated carbons which are hazardous wastes because of the presence of waste listed in Subpart D of Part 261. Under this partial exemption, the transportation and storage requirements of the Resource Conservation and Recovery Act apply (See Section 261.6(b); and Calgon is taking the necessary action to comply with these requirements.

(4) To the extent that permits are required for carbon adsorbers located on customer's premises, the customer and not Calgon is to be the permitee. The regulations are not clear on this point, but in view of the obligations of the permitee to prepare an emergency plan, to train operators, to supply an emergency coordinator, etc. the EPA has agreed that the only practicable course of action is for the customer to be the permitee because of the impracticality of Calgon assuming these obligations; and

(5) The customer is to be the generator of the hazardous waste. Again this is not clear in the regulations but it seems to be the most practical approach. This should not add any significant burden to our affected customers because in almost all cases they will have filed as a generator of hazardous waste in any event.

Accordingly, on the effective date of the Resource Conservation and Recovery Act regulations, November 19, 1980, we will expect affected customers to complete a manifest as required by the Resourse Conservation and Recovery Act for the transportation of any activated carbon which is subject to the transportation requirements of the Act and

which is to be transportated to one of our reactivation sites. Calgon's transportation number should be used, of course, on the manifest. Each of the Calgon reactivation sites will receive an EPA identification number. The appropriate reactivation site identification number and an alternate ought to be indicated as the ultimate destination of the waste on the manifest form. The proper EPA identification numbers will be furnished to you as soon as available.

One of the problems we faced under the EPA regulations was assuring ourselves that all affected sites would qualify for interim permit status on August 18th. As you are aware in order to qualify for that interim status, a Notification of Hazardous Waste Activity had to be filed with the EPA prior to the August 18th date. We faced that date without a clear resolution of the question as to whether Calgon or its customers should be the permitee. In order to assure interim status, we filed notification forms for every site for which it seemed at all conceivable that it might be subject to the Resource Conservation and Recovery Act. You were previously notified of our actions in this area. In filing those notifications, we were very conservative. We advised the EPA in filing those notifications that we had adopted that approach and that ultimately we anticipated that some of the wastes which were identified as hazardous would prove not to be hazardous wastes for the purposes of the Resource Conservation and Recovery Act and that there might be facilities which would qualify for the totally enclosed treatment facility for which notices had been filed.

As you are aware, all hazardous waste treatment facilities which require a permit must file their permit application no later than November 19, 1980. In the interests of making sure that permit applications are filed for all appropriate Calgon Carbon Service facilities and assuring a uniform approach, our customer representative will call and

make an appointment to discuss the application for the Resource Conservation and Recovery Act to your facility some time in the next few weeks. At that time, we hope to reach a complete understanding of what steps are to be taken and which parties are to take them. For your information, we enclose a copy of the Notification of Hazardous Waste Activity filed with the Federal Environmental Protection Agency for your facility.

Very truly yours,

Judy Jackson

Judy A. Jackson
Specialist
Customer Services

JAJ/ljh

Enclosure

VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 3
VICKSBURG, MS 39180
(601) 636-1231

March 21, 1980

Mississippi State Board of Health
2423 North State Street
Box 1700
Jackson, Mississippi 39205

Attention Mr. Jim Hardage, Chemist
Division of Solid Waste Management

Gentlemen:

During a visit by representatives of the Mississippi State Board of Health, we provided information regarding chemical waste disposal from Vertac's Vicksburg, Mississippi, Plant. During the meeting, we indicated that the information might be confidential.

We would like to confirm that we do consider all of the information presented at that time, which is outlined in the attached State of Mississippi Assessment, to be confidential information.

The information, if known to our competitors, could suggest to them what products we are manufacturing at this plant site and what raw materials we are using in the manufacturing processes. This could possibly put us at a competitive disadvantage. Furthermore, we feel that making the information generally available would serve no useful purpose.

For these reasons, we request that the information contained in the State of Mississippi Preliminary Assessment be considered confidential. A copy of the Assessment is enclosed.

Sincerely,

Richard Randolph

Richard Randolph
Environmental Coordinator

RR:egt

Attachment

cc: EPA Region IV
Chemical Site Unit
Hazardous Materials Division
345 Courtland Street
Atlanta, Georgia 30308

Attention Mr. Joel Veater

RECEIVED
MAR 25 '80
DIV. S.W.M. & V.C.
BY

MISSISSIPPI
STATE BOARD OF HEALTH
2423 NORTH STATE STREET, P. O. BOX 1700
JACKSON, MISSISSIPPI 39205

ALTON B. COBB, M.D., M.P.H.
STATE HEALTH OFFICER

March 17, 1980

Mr. Rodger Marentis
Vertac, Inc.
P. O. Box 3
Vicksburg, MS 39180

Dear Mr. Marentis:

As you know, David Lee and I met with you and other company officials on December 6, 1979 in regard to chemical waste disposal. We recently forwarded an assessment to EPA, based primarily on information you submitted to us during that meeting.

Since you indicated that some of the information discussed with us may be confidential, we request that you review the enclosed copy of the assessment and notify this agency in writing within fifteen (15) calendar days concerning any proprietary information in the report that should remain confidential and the reasons why. Please send your reply to the attention of the Director, Mr. Jack McMillan.

You may want to make a similar request for confidentiality to EPA Region IV. The mailing address for that is as follows:

Mr. Joel Veater
Chemical Site Unit
Hazardous Materials Division
EPA Region IV
345 Courtland Street
Atlanta, GA 30308

If you have any questions, please contact this agency.

Sincerely,

Jim Hardage

Jim Hardage, Chemist
Division of Solid Waste Management

JH/cs

cc: Mr. Joel Veater

IDENTIFICATION AND PRELIMINARY ASSESSMENT

IV

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information contained on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Vicksburg Chemical Company, Drum Burial Site

B. STREET (or other identifier): Rifle Range Road

C. CITY: Vicksburg

D. STATE: MS

E. ZIP CODE:

F. COUNTY NAME: Warren

G. OWNER/OPERATOR (If known)

1. NAME: (Now owned by) Vertac Chemical Company

2. TELEPHONE NUMBER: 601-636-1231

H. TYPE OF OWNERSHIP

[ ] 1. FEDERAL [ ] 2. STATE [ ] 3. COUNTY [ ] 4. MUNICIPAL [X] 5. PRIVATE [ ] 6. UNKNOWN

I. SITE DESCRIPTION

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.): Eckhardt's Report

K. DATE IDENTIFIED (mo., day, & yr.): 11/2/79

L. PRINCIPAL STATE CONTACT

1. NAME: Mississippi State Board of Health, Division of Solid Waste Management

2. TELEPHONE NUMBER: 601-982-6317

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

[ ] 1. HIGH [ ] 2. MEDIUM [ ] 3. LOW [ ] 4. NONE [X] 5. UNKNOWN

B. RECOMMENDATION

[ ] 1. NO ACTION NEEDED (no hazard)

[ ] 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

[X] 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY: STATE

[ ] 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: James Hardage, David Lee

2. TELEPHONE NUMBER: 601-982-6317

3. DATE (mo., day): 12/10/79

III. SITE INFORMATION

A. SITE STATUS

[ ] 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

[X] 2. INACTIVE (Those sites which no longer receive wastes.)

[ ] 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" no regular or continuing use of the site for waste disposal has o

B. IS GENERATOR ON SITE?

[ ] 1. NO [X] 2. YES (specify generator's four-digit SIC Code): 2819, 2873

C. AREA OF SITE (in acres): About 5 acres

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.-min.-sec.):

2. LONGITUDE (deg.-min.-sec.):

E. ARE THERE BUILDINGS ON THE SITE?

[X] 1. NO [ ] 2. YES (specify):

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP	X	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY	X	4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

See additional comments on page 3.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1 UNKNOWN [X] 2 LIQUID [X] 3. SOLID [ ] 4. SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[ ] 1. UNKNOWN [X] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4 RADIOACTIVE [ ] 5 HIGHLY VOLATILE
[X] 6. TOXIC [ ] 7 REACTIVE [ ] 8. INERT [ ] 9 FLAMMABLE

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Records are incomplete according to the company.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT 3000 - 4000	AMOUNT	AMOUNT	AMOUNT about 200,000	AMOUNT 325-330	AMOUNT
UNIT OF MEASURE cu. yards	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE gal.	UNIT OF MEASURE Drums*	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUTICAL
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
dredge material with trace contaminants (DNBP and atrazine)			(6) CYANIDE	(6) OTHER (specify): *See bottom of page 4.	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify): Dinitrobutyl phenol (DNBP) wastewater		

Continue On Page

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

See attached page for details.

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

PERMITS HELD BY THE SITE.

[X] 1. NPDES PERMIT [X] 2. SPC[illegible]AN [ ] 3. STATE PERMIT (specify):
[X] 4. AIR PERMITS [ ] 5. LOCAL PERMIT [ ] 6. RCRA TRANSPORTER
[ ] 7. RCRA STORER [ ] 8. RCRA TREATER [ ] 9. RCRA DISPOSER

[ ] 10. OTHER (specify):

B. IN COMPLIANCE?

[ ] 1. YES [X] 2. NO [ ] 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): Not in compliance with NPDES permit with respect to Nitrates

VIII. PAST REGULATORY ACTIONS

[ ] A. NONE [X] B. YES (summarize below)

Fined by Bureau of Pollution Control for permit violation.

IX. INSPECTION ACTIVITY (past or on-going)

[ ] A. NONE [X] B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Inspection	Aug., 1979	EPA	Geological assessment
Inspection	Dec. 6, 1979	STATE	

X. REMEDIAL ACTIVITY (past or on-going)

[ ] A. NONE [X] B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
			Vertac is considering removal of soli
			secure landfill

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

EPA Form T2070-2 (10-79)

continued from question No. 2, page 2

Records do not specify size of drums; but probably are 55-gal. drums. Drummed wastes are as follows:

1. 17 drums of spent activated carbon (containing unknown trace organics)
2. 31 drums of plastic liners (from bags containing sodium nitrophenol) and empty bromine bottles.
3. 25-30 drums of DMU (dimethyl urea) and IPA (isopropyl amine)
4. 172 drums cyanuric chloride (from atrazine process)
5. 80 drums PCl_3, $PSCl_3$, or $PS(CH_3)_2Cl$

Three small pits contain dredge material from surge lagoon under NPDES permit. The dredge material is mostly dirt with traces of DNBP and atrazine. (DNBP has a 170 day half-life. Atrazine has a 90-day half-life.) The dirt comes from runoff that flows into surge lagoon. Rainwater falling into the pits is drained into surge lagoon.

Another pit contains about 200,000 gallons of DNBP wastewater. About 1 1/2 million gallons have already been treated on-site by carbon absorbtion before discharge (NPDES system). Pit should be emptied by January, 1980.

Drums contain solid materials buried in late 1974 and early 1975 by Vicksburg Chemical Company. Drummed wastes are from processes that are no longer operational. Drummed wastes, though buried in the same general area, were segregated. PCl_3 wastes were buried in a seperate area.

An additional 4000 empty drums were placed in another pit in 1975-76. Vicksburg Chemical attempted to dissolve the drums with HCl acid. Volume of acid unknown. Acid was drained off after one to two months. Probably bled into wastewater treatment system. All but about 200 deteriorated drums have been removed.

Since September, 1975, all waste materials are taken to permitted industrial waste landfills in Louisiana. There is no current on-site disposal. The methyl parathion plant is no longer operational.

This information was obtained from Vertac Chemical Company Officials.

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: IV

SITE NUMBER (to be assigned by HQ)

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information contained on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (*Preliminary Assessment*). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Vicksburg Chemical Company, Drum Burial Site

B. STREET (*for other identifier*): Rifle Range Road

C. CITY: Vicksburg

D. STATE: MS

E. ZIP CODE:

F. COUNTY NAME: Warren

G. OWNER/OPERATOR (*If known*)

1. NAME: (Now owned by) Vertac Chemical Company

2. TELEPHONE NUMBER: 601-636-1231

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

J. HOW IDENTIFIED (*i.e., citizen's complaints, OSHA citations, etc.*): Eckhardt's Report

K. DATE IDENTIFIED (*mo., day, & yr.*): 11/2/79

L. PRINCIPAL STATE CONTACT

1. NAME: Mississippi State Board of Health, Division of Solid Waste Management

2. TELEPHONE NUMBER: 601-982-6317

II. PRELIMINARY ASSESSMENT (*complete this section last*)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☒ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (*no hazard*)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☒ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY: STATE

☐ 4. SITE INSPECTION NEEDED (*low priority*)

C. PREPARER INFORMATION

1. NAME: James Hardage, David Lee

2. TELEPHONE NUMBER: 601-982-6317

3. DATE (*mo., day, & yr.*): 12/10/79

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (*Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.*)

☒ 2. INACTIVE (*Those sites which no longer receive wastes.*)

☐ 3. OTHER (*specify*): (*Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred*)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (*specify generator's four-digit SIC Code*): 2819, 2873

C. AREA OF SITE (*in acres*): About 5 acres

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (*deg.—min.—sec.*):

2. LONGITUDE (*deg.—min.—sec.*):

E. ARE THERE BUILDINGS ON THE SITE?

☒ 1. NO ☐ 2. YES (*specify*):

Continued From Front

CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP	X	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY	X	4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

See additional comments on page 3.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☒ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☒ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Records are incomplete according to the company.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT: 3000 - 4000	AMOUNT:	AMOUNT:	AMOUNT: about 200,000	AMOUNT: 325-330	AMOUNT:
UNIT OF MEASURE: cu. yards	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE: gal.	UNIT OF MEASURE: Drums*	UNIT OF MEASURE:
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
dredge material with trace contaminants (DNBP and atrazine)			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS	*See bottom of page 4.	
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify):		
			Dinitrobutyl phenol (DNBP) wastewater		

Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in decreasing order of hazard).

See attached page for details.

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

Continue On Reverse

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [X] 1. NPDES PERMIT
- [X] 2. SPCC PLAN
- [ ] 3. STATE PERMIT (specify):
- [X] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER (specify):

B. IN COMPLIANCE?

- [ ] 1. YES
- [X] 2. NO
- [ ] 3. UNKNOWN
- 4. WITH RESPECT TO (list regulation name & number): Not in compliance with NPDES permit with respect to Nitrates

VIII. PAST REGULATORY ACTIONS

- [ ] A. NONE
- [X] B. YES (summarize below)

Fined by Bureau of Pollution Control for permit violation.

IX. INSPECTION ACTIVITY (past or on-going)

- [ ] A. NONE
- [X] B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Inspection	Aug., 1979	EPA	Geological assessment
Inspection	Dec. 6, 1979	STATE	

X. REMEDIAL ACTIVITY (past or on-going)

- [ ] A. NONE
- [X] B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
			Vertac is considering removal of solids to
			secure landfill

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

continued from question No. 2, page 2

Records do not specify size of drums; but probably are 55-gal. drums.
Drummed wastes are as follows:

1. 17 drums of spent activated carbon (containing unknown trace organics)
2. 31 drums of plastic liners (from bags containing sodium nitrophenol) and empty bromine bottles.
3. 25-30 drums of DMU (dimethyl urea) and IPA (isopropyl amine)
4. 172 drums cyanuric chloride (from atrazine process)
5. 80 drums PCl_3, $PSCl_3$, or $PS(CH_3)_2Cl$

Three small pits contain dredge material from surge lagoon under NPDES permit. The dredge material is mostly dirt with traces of DNBP and atrazine. (DNBP has a 170 day half-life. Atrazine has a 90-day half-life.) The dirt comes from runoff that flows into surge lagoon. Rainwater falling into the pits is drained into surge lagoon.

Another pit contains about 200,000 gallons of DNBP wastewater. About 1 1/2 million gallons have already been treated on-site by carbon absorbtion before discharge (NPDES system). Pit should be emptied by January, 1980.

Drums contain solid materials buried in late 1974 and early 1975 by Vicksburg Chemical Company. Drummed wastes are from processes that are no longer operational. Drummed wastes, though buried in the same general area, were segregated. PCl_3 wastes were buried in a seperate area.

An additional 4000 empty drums were placed in another pit in 1975-76. Vicksburg Chemical attempted to dissolve the drums with HCl acid. Volume of acid unknown. Acid was drained off after one to two months. Probably bled into wastewater treatment system. All but about 200 deteriorated drums have been removed.

Since September, 1975, all waste materials are taken to permitted industrial waste landfills in Louisiana. There is no current on-site disposal. The methyl parathion plant is no longer operational.

This information was obtained from Vertac Chemical Company Officials.

March 17, 1980

Mr. Rodger Marentis
Vertac, Inc.
P. O. Box 3
Vicksburg, MS 39180

Dear Mr. Marentis:

As you know, David Lee and I met with you and other company officials on December 6, 1979 in regard to chemical waste disposal. We recently forwarded an assessment to EPA, based primarily on information you submitted to us during that meeting.

Since you indicated that some of the information discussed with us may be confidential, we request that you review the enclosed copy of the assessment and notify this agency in writing within fifteen (15) calendar days concerning any proprietary information in the report that should remain confidential and the reasons why. Please send your reply to the attention of the Director, Mr. Jack McMillan.

You may want to make a similar request for confidentiality to EPA Region IV. The mailing address for that is as follows:

Mr. Joel Veater
Chemical Site Unit
Hazardous Materials Division
EPA Region IV
345 Courtland Street
Atlanta, GA 30308

If you have any questions, please contact this agency.

Sincerely,

Jim Hardage

Jim Hardage, Chemist
Division of Solid Waste Management

JH/cs

cc: Mr. Joel Veater

IDENTIFICATION AND PRELIMINARY ASSESSMENT | IV | (Used by Reg)

NOTE: This form is completed for each potential hazardous waste site to have set priorities for site inspection. The info[illegible] on this form is based on available regards and may be updated on subsequent forms as a result of additional inq[illegible] and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protect[illegible] Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335), 401 M St., SW; Washington, DC 2046[illegible]

I. SITE IDENTIFICATION

A. SITE NAME: Vicksburg Chemical Company, Drum Burial Site

B. STREET (or other identifier): Rifle Range Road

C. CITY: Vicksburg

D. STATE: MS

E. ZIP CODE:

F. COUNTY NAME: Warren

G. OWNER/OPERATOR (if known)

1. NAME: (Now owned by) Vertac Chemical Company

2. TELEPHONE NUMBER: 601-636-1231

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)

Eckhardt's Report

K. DATE IDENTI[illegible] (mo., day, & y[illegible]): 11/2/79

L. PRINCIPAL STATE CONTACT

1. NAME: Mississippi State Board of Health
Division of Solid Waste Management

2. TELEPHONE NUMBER: 601-982-6317

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☒ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (no hazard)

☒ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY: STATE

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: James Hardage, David Lee

2. TELEPHONE NUMBER: 601-982-6317

3. DATE (mo., day[illegible]): 12/10/79

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☒ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" no regular or continuing use of the site for waste disposal has o[illegible]

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator's four-digit SIC Code): 2819, 2873

C. AREA OF SITE (in acres): About 5 acres

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.—min.—sec.)

2. LONGITUDE (deg.—min.—sec.)

E. ARE THERE BUILDINGS ON THE SITE?

☒ 1. NO ☐ 2. YES (specify):

3320-2 (10-79)

Continue On

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP	X	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY	X	4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

See additional comments on page 3.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1 UNKNOWN [X] 2 LIQUID [X] 3. SOLID [ ] 4. SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[ ] 1. UNKNOWN [X] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4 RADIOACTIVE [ ] 5 HIGHLY VOLATILE
[X] 6. TOXIC [ ] 7 REACTIVE [ ] 8. INERT [ ] 9 FLAMMABLE

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Records are incomplete according to the company

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT: 3000 - 4000	AMOUNT:	AMOUNT:	AMOUNT: about 200,000	AMOUNT: 325-330	AMOUNT:
UNIT OF MEASURE: cu. yards	UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE: gal.	UNIT OF MEASURE: Drums*	UNIT OF MEASURE:
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIV
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (spec
dredge material with trace contaminants (DNBP and atrazine)			(6) CYANIDE	(6) OTHER (specify): *See bottom of page 4.	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify): Dinitrobutyl phenol (DNBP) wastewater		

 Continue On Page

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

See attached page for details.

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

Continue On Reverse

[X] 1. NPDES PERMIT [X] 2. SPCC PLAN [ ] 3. STATE PERMIT (specify)
[X] 4. AIR PERMITS [ ] 5. LOCAL PERMIT [ ] 6. RCRA TRANSPORTER
[ ] 7. RCRA STORER [ ] 8. RCRA TREATER [ ] 9. RCRA DISPOSER
[ ] 10. OTHER (specify):

B. IN COMPLIANCE?
[ ] 1. YES [X] 2. NO [ ] 3. UNKNOWN
4. WITH RESPECT TO (list regulation name & number): Not in compliance with NPDES permit with respect to Nitrates

VIII. PAST REGULATORY ACTIONS

[ ] A. NONE [X] B. YES (summarize below)

Fined by Bureau of Pollution Control for permit violation.

IX. INSPECTION ACTIVITY (past or on-going)

[ ] A. NONE [X] B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Inspection	Aug., 1979	EPA	Geological assessment
Inspection	Dec. 6, 1979	STATE	

X. REMEDIAL ACTIVITY (past or on-going)

[ ] A. NONE [X] B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
			Vertac is considering removal of soli
			secure landfill

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

continued from question No. 2, page 2

Records do not specify size of drums; but probably are 55-gal. drums. Drummed wastes are as follows:

1. 17 drums of spent activated carbon (containing unknown trace organics)
2. 31 drums of plastic liners (from bags containing sodium nitrophenol) and empty bromine bottles.
3. 25-30 drums of DMU (dimethyl urea) and IPA (isopropyl amine)
4. 172 drums cyanuric chloride (from atrazine process)
5. 80 drums PCl_3, $PSCl_3$, or PS $(CH_3)_2$ Cl

Three small pits contain dredge material from surge lagoon under NPDES permit. The dredge material is mostly dirt with traces of DNBP and atrazine. (DNBP has a 170 day half-life. Atrazine has a 90-day half-life.) The dirt comes from runoff that flows into surge lagoon. Rainwater falling into the pits is drained into surge lagoon.

Another pit contains about 200,000 gallons of DNBP wastewater. About 1 1/2 million gallons have already been treated on-site by carbon absorbtion before discharge (NPDES system). Pit should be emptied by January, 1980.

Drums contain solid materials buried in late 1974 and early 1975 by Vicksburg Chemical Company. Drummed wastes are from processes that are no longer operational. Drummed wastes, though buried in the same general area, were segregated. PCl_3 wastes were buried in a seperate area.

An additional 4000 empty drums were placed in another pit in 1975-76. Vicksburg Chemical attempted to dissolve the drums with HCl acid. Volume of acid unknown. Acid was drained off after one to two months. Probably bled into wastewater treatment system. All but about 200 deteriorated drums have been removed.

Since September, 1975, all waste materials are taken to permitted industrial waste landfills in Louisiana. There is no current on-site disposal. The methyl parathion plant is no longer operational.

This information was obtained from Vertac Chemical Company Officials.

March 6, 1980

MEMORANDUM:

TO: File

FROM: Sam Mabry S.M.

SUBJECT: Conference Call: Jim Hardage, Joel Veater, Sam Mabry, re confidentiality of PA's on Vertac and Kerr Magee

I was party to a conference call among Jim Hardage, myself, and Joel Veater, E.P.A. (Time: 9:15 - 9:25 a.m.) on the above mentioned date.

Purpose of the call was to discuss with Veater procedures for ensuring adequate due process of oral (nonwritten) requests from Vertac and Kerr-Magee that material in their (Eckhardt) PA's be kept confidential.

Jim informed Veater of the following plan:

1. He would write the two companines,
   a. Citing Section 17-17-27, paragraph (3), of the Mississippi Code of 1972 (HW confidentiality);
   b. requesting a written appeal for each company that any specific parts of the PA be kept confidential, with reasons for such appeal; and
   c. informing them that he was requesting E.P.A. to keep their PA's confidential pending our agency's receipt and processing of their requests and determination regarding them.

2. He would write Veater the request noted in (1), attaching copies of the letters to the two companies.

Veater agreed to the plan, saying he would discuss it with John Dickinson, Jim Scarbrough, and an E.P.A. attorney; but that he would keep the PA's confidential until we had made our determination.

SM/dm

Date

ROUTING AND TRANSMITTAL SLIP

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Jack McMillan		
2.		
3.		
4.		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate	✓	For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

Pass on:

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
RMR	Phone No. (804) 881-3016

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

*GPO: 1978 261-700/3

REGIONAL POLICY

The purpose of this memorandum is to summarize the policy for disposal of wastes containing dioxin (2,3,7,8 tetrachloro dibenzo-para-dioxin).

Dioxin is an extremely toxic substance. The reported LD_{50} (oral) value for a mouse is given as 114 uglkg. Due to this toxicity level and the fact that the material can be absorbed by the skin, great care must be execrised when dioxin is being handled.

A review of the literature indicates that dioxin can be absorbed by various soils and will not leach. In addition, studies have indicated that in the presence of other chlorinated hydrocarbons, dioxin will biodegrade. However, this is a relatively slow process, i.e. half life on the order of one year.

In October, 1976 the U.S. Army published a report entitled "Fate of 2,3,7,8 tetrachloro dibenzo-para-dioxin in the Environment." This report considered various alternatives for disposal, including incineration, absorbtion by charcoal and landfilling.

Based on this report, EPA's regional policy is as follows:

1. Non-ignitable, non-reactive, non-liquid wastes must be disposed of in a secure chemical waste landfilling meeting the proposed hazardous waste regulations (Sec 250.45-2).

2. Wastes which do not meet any of the criteria above must be incinerated in a high temperature hazardous waste incinerator (with a high efficiency halogen scrubbing device) meeting the proposed hazardous waste regulations (Sec 250.45-1).

3. The preferred method of disposal for dioxin wastes is landfilling since this method will minimize exposion to humans.

4. Due to the potential for public opposition and the potential of impacts upon human health and the environment, dioxin wastes may have to be incinerated at sea. This alternative requires further evaluation.

RECEIVED

JAN 24 '80

DIV. S.W.M. & V.C.

BY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 14 1979

John White, Regional Administrator
Environmental Protection Agency
Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Adelene Harrison, Regional Administrator
Environmental Protection Agency
Region VI
First International Building
1201 Elm Street
Dallas, Texas 75270

RE: Interim Guidance for Management of Dioxin Contaminated Waste at VERTAC Facility

Dear John and Adelene:

It has come to the attention of the Chlorinated Dioxins Work Group and the Toxic Substances Priorities Committee that VERTAC, Inc., of Jacksonville, Arkansas, is considering shipment of 3000-4000 drums of TCDD-contaminated waste (up to 40 ppm) to the SCA landfill site in Pinewood, South Carolina, and shipment of 700 drums of 2,4-D process wastes, contaminated with parts per billion levels of TCDD, to the BFI landfill site in Livingston, Louisiana for burial. The purpose of this letter is to inform you of the developing Agency policy on management of dioxin contaminated wastes and to establish an interim position with respect to the VERTAC situation.

Because land disposal of dioxin laden wastes of this magnitude is unprecedented, and in the absence of final Agency policy for managing dioxin wastes or extensive environmental impact review at the proposed disposal sites, the following interim policy is suggested.

1. No disposal of dioxin-contaminated wastes generated at the VERTAC facility should be permitted until either: standards for waste management applicable to chlorinated dioxins are promulgated under either the Resource Conservation and Recovery Act (RCRA) or the Toxic Substances Control Act (TSCA), or both; or a dioxin "destruction process" is developed and applied to these wastes with the end result to be a reduction in TCDD concentrations that will permit more conventional management of the waste. In the interim, wastes should be stored on-site in secure containers under conditions which will minimize environmental release.

The rationale for this position is that the movement of these wastes from a relatively secure storage site to a conventional landfill which offers no special provision for dioxin-contaminated waste and uncertain site characteristics, is an unacceptable management option at this time. Furthermore, interstate shipment of this quantity of wastes over the miles of highway or railroad from VERTAC to Pinewood, South Carolina, or Livingston, Louisiana, is an additional risk for which further Federal review is needed. While no current Federal or State regulations govern waste management for dioxins, a concerted effort is underway at EPA to consider control options for such management.

The provisions for storage listed in EPA's published regulations for PCB's (FR 31555) contain guidance that can be applied in whole or in part to the storage of dioxin-contaminated waste. This rule may also be a model for similar regulatory action with respect to dioxins. The Agency has also been reviewing the viability of a dioxin "destruction process" proposed by VERTAC, which involves chemical degradation of the TCDD molecule. This process has yet to be validated for any large volume of actual waste and therefore cannot be considered as an available control option.

2. In lieu of an acceptable disposal option as defined by (1) above, no shipment of dioxin-contaminated waste from the Vertac facility site should be permitted unless it can be demonstrated that:

   a) The continued short-term (e.g., up to ten years) storage of said waste at the site presents an unreasonable* risk to the public regardless of safeguards which could be instituted;

   b) the institution of necessary safeguards at the storage site is demonstrated to be unreasonable* due to physical, technical, financial, or other constraints.

This criterion reflects the need to weigh the overall risks and benefits associated with any planned relocation of the stored dioxin-contaminated waste. It argues against relocation of stored waste if reasonable safeguards can be implemented at the VERTAC site. It also presumes, however, that an acceptable off-site disposal option would take precedence over continued maintenance of the wastes in storage.

* A judgment on what constitutes "unreasonable" will need to be made by the Regional Offices in conjunction with Headquarters (OSW and OE), with due considerations of the overall risks of waste relocation.

3. In the absence of a promulgated regulatory authority under which the acceptable management of dioxin-contaminated waste can be specified, the Agency should exercise available legal constraints to insure that this policy is implemented. Available options which may be enacted almost immediately against a violator include Section 7003 of RCRA, Section 7 and 6a (immediately effective rule), of TSCA and restrictions by DOT via the Hazardous Materials Transportation Act (HMTA).

This policy statement is specific to the VERTAC situation. However, there is a need for an overall agency interim position for management of dioxin-contaminated waste. This has been demonstrated through the various inquiries directed to the Agency on managing such waste and the potential number of sites which have dioxin-contaminated wastes. This issue will be discussed by the Toxic Substances Priorities Committee at our next meeting.

Sincerely,

Steven D. Jellinek
Assistant Administrator
Office of Toxic Substances

Chairman, Toxic Substances
Priorities Committee

cc: Joseph E. Fitzgerald (TS-793)
Steve Smith
Hartzill Truesdale
William C. Huls
Jarrell E. Southall

RECEIVED
JAN 8 1980
SOLID WASTE MANAGEMENT BRANCH

INDUSTRIAL WASTE DISPOSAL INVENTORY

County Warren
Date 24 September 1979

NAME OF PERSON COMPLETING FORM: Kit Walshock

NAME OF INDUSTRY: Vicksburg Chemical Corp.

LOCATION (Complete Address): P.O. Box 3, Rifle Range Road
Vicksburg, Mississippi 39180

CHARACTERISTICS OF WASTE (Check one): Would not release information

Liquid _____
Solid _____
Semi-Solid _____

VOLUME OF WASTE PER DAY (Fill in appropriate blank):

Pounds _____
Gallons _____
Yards _____
Other _____

WASTE DISPOSED: On Site _____
Off Site _____

COMPLETE THE FOLLOWING:

Type of Site: Landfill _____
Lagoon _____
Land Spreading _____
Other _____
Explain: _____

Site Operated by Whom: Name _____

Address _____

Location of Site: Township _____
Range _____
Section _____
Quarter Section _____

VICKSBURG CHEMICAL COMPANY

P. O. BOX 3
VICKSBURG, MISSISSIPPI 39180
PHONE (601) 636-1231

March 30, 1978

REC'D
APR. 3 1978
DIV. S. W. M. & V. C.

Mr. Jim Hardage
Division of Solid Waste
Mississippi State Board of Health
P. O. Box 1700
Jackson, Mississippi 39205

Dear Jim:

As you requested, this letter describes the disposition of waste material resulting from the company's recent methyl parathion plant decomposition.

Copies are attached of the bills of lading of the potentially contaminated debris. As you may recall, some new, empty drums were splashed with the burning methyl parathion; therefore, these drums were washed (with NaOH solution to decontaminate) and sent to either Evans Cooperage Company or Southwestern Environmental Company. Other debris (boxes, lumber, ash, etc.) which could be safely transported in a sealed trailer van were sent to Clean Land Air and Water Company.

In addition, scrap metal totaling 84,820 pounds was decontaminated by caustic wash and sent to Falk Metal Company here in Vicksburg.

Finally, debris, which was water saturated or could not be handled as above, was disposed of at the company's sludge disposal ponds here on the plant site. This debris was caustic washed and heavily dusted with soda ash for decontamination as it was deposited.

If you require any other information, please call on me.

Sincerely,

Jerry W. McAdams, P.E.
Environmental Engineer

JWMcA:egt

Attachments

cc: F. L. Ahlers
R. A. Guidi
D. Murray
S. M. Parker
S. West, Mississippi Air and Water Pollution Control Commission
File 7.0.15

RECEIVED, subject to the classifications and tariffs in effect on the date of this bill of lading, the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier throughout this contract shall mean any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination, it is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or rail-water shipment, or (2) in the applicable motor carrier classification or tariffs if this is a motor carrier shipment.

FROM: VICKSBURG CHEMICAL COMPANY VICKSBURG, MISSISSIPPI

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which govern the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CONSIGNED TO:

[illegible]
[illegible]
LIVINGSTON, LA.

J Dary
Mo Adams

CLASS OR RATE

[illegible]

ROUTE

"This is to certify that the above named articles are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

[illegible]

CUSTOMER ORDER NO.	ORDER	DATE SHIPPED	SHIPPER'S NO.
		[illegible]	

DESCRIPTION OF ARTICLES Special Marks & Exceptions	TRUCK NUMBER	NET WEIGHT POUNDS	NET WEIGHT TONS	ANALYSIS		CROSS	*TARE
SEE BELOW	[illegible]	18,100					

Number Packages	Description of Articles, Special Marks and Exceptions	Weight (Sub. to Cor.)	FREIGHT CHARGES
	Dinitrophenol Solution Poison B Poison Placards Applied		
	Insecticide Liquid Poison B Poison Placards Applied (Vicksphene)		
	Nitrogen Fertilizer Solution or Nitrg. Ammoniating Sol Nonflammable compressed gas (448) Dangerous Placards Applied Item 53793 UFC		
	Nitric Acid Corrosive Liquid Corrosive Placards Applied		
	Thiophosphoryl Chloride Corrosive Corrosive Labels Applied (PSCL3)		
	Methyl Parathion Liquid Poison B Poison Labels Applied		
44-55 gal drums 90-30 gal drums [illegible]			

VICKSBURG CHEMICAL COMPANY

Per _____

Permanent postoffice address of shipper—VICKSBURG, MISSISSIPPI

RECEIVED PER _____

THIS MEMORANDUM is an acknowledgment that a Bill of Lading has been issued and is not the [illegible] of a copy or duplicate, covering the property named herein, and is intended solely for filing or RECEIVED, subject to the classifications and tariffs [illegible] effect on the date of the receipt by the carrier of the property [illegible] in the Original Bill of Lading.

→ 7.0.15 FROM: **VICKSBURG CHEMICAL COMPANY** VICKSBURG, MISSISSIPPI

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CONSIGNED TO:
EVANS CHEMPRIDGE
HARVY, LA

CLASS OR RATE
COLLECT

"This is to certify that the above named articles are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

ROUTE
CPU

CUSTOMER ORDER NO.	ORDER	DATE SHIPPED	SHIPPER'S NO.
		3-17-78	

DESCRIPTION OF ARTICLES Special Marks & Exceptions	TRUCK NUMBER	NET WEIGHT POUNDS	NET WEIGHT TONS	ANALYSIS		GROSS	*TARE
NEW EMPTY DRUMS	CPU						

Number Packages	Description of Articles, Special Marks and Exceptions	Weight (Sub. to Cor.)	FREIGHT CHARGES
	Dinitrophenol Solution Poison B Poison Placards Applied		
	Insecticide Liquid Poison B Poison Placards Applied (Vicksaphene)		
	Nitrogen Fertilizer Solution or Fertz. Ammoniating Sol Non-flammable compressed gas (448) Dangerous Placards Applied Item 70795 UFC		
	Nitric Acid Corrosive Liquid Corrosive Placards Applied		
Methy Drum 34	Thiophosphoryl Chloride Corrosive Corrosive Labels Applied (PSCL3)		
17 E	Methyl Parathion Liquid Poison B Poison Labels Applied		
174	NEW EMPTY DRUMS.....		[illegible]
Total 208 RB.			[illegible]

VICKSBURG CHEMICAL COMPANY

Per _____

Permanent postoffice address of shipper—VICKSBURG, MISSISSIPPI

RECEIVED PER [illegible]

THIS BILL OF LADING [illegible] RECEIVED, subject to the classifications and tariffs [illegible] effect on the date of this bill of lading [illegible]

FROM: VICKSBURG CHEMICAL COMPANY VICKSBURG, MISSISSIPPI

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading on back (if a Uniform Freight Classification or rate is in effect on the date hereof, this bill of lading is subject to the applicable rules and regulations of such classification or tariff).

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CONSIGNED TO:

C.L.A.N.
PLAQUEMINE, LA

Jerry McAdams

CLASS OR RATE
PREPAID

"This is to certify that the above named articles are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

ROUTE
VCC/NB

CUSTOMER ORDER NO.	ORDER	DATE SHIPPED	SHIPPER'S NO.
		[illegible]	[illegible]

DESCRIPTION OF ARTICLES Special Marks & Exceptions	TRUCK NUMBER	NET WEIGHT POUNDS	NET WEIGHT TONS	ANALYSIS	GROSS	TARE
SEE BELOW	[illegible]	[illegible]				

Number Packages	Description of Articles, Special Marks and Exceptions	Weight (Sub. to Cor.)	FREIGHT CHARGES
	Dinitrophenol Solution Poison B Poison Placards Applied		
	Insecticide Liquid Poison B Poison Placards Applied (Vicksphene)		
	Nitrogen Fertilizer Solution or Fertz. Ammoniating Sol Non-flammable compressed gas (446) Dangerous Placards Applied Item 20995 CFC		
	Nitric Acid Corrosive Liquid Corrosive Placards Applied		
	Thiophosphoryl Chloride Corrosive Corrosive Labels Applied (PSCL3)		
	Methyl Parathion Liquid Poison B Poison Labels Applied		
70 DRUMS	[illegible]		POISON PLACARDS APPLI[illegible]
	[illegible] [illegible]	[illegible]	

VICKSBURG CHEMICAL COMPANY

Per _____

Permanent postoffice address of shipper—VICKSBURG, MISSISSIPPI

RECEIVED PER _____

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

RECEIVED

Bureau of Environmental Health

MEMORANDUM

TO: File

FROM: Steve West

SUBJECT: Vicksburg Chemical Company

DATE March 9, 1978

Vicksburg Chemical Company suffered an explosion and fire on March 7, 1978, at approximately 10:20 a.m. The explosion and fire were contained in the methyl parathion operation. The primary explosion occurred with the 10 thousand gallon storage tank for methyl parathion. The amount of methyl parathion in the tank was unknown. This tank was propelled through the roof of the structure and impacted approximately 100 yards from its take off point and skidded to a stop wedged between two buildings. Approximately three to four hundred 55 gallon drums of methyl parathion exploded. The structure showed signs of being burned and a warehouse of sodium nitro phenol, SNP, (p - Nitro Sodium Phenolate) burned subsequently.

The methyl parathion fire was under control by the time I arrived at 11:45 a.m. Prior to my arrival, the I-20 bridge across the Mississippi was closed and Warrenton Road and Jett School were evacuated. The warehouse of sodium nitro phenol was on fire, but contained to the warehouse. It was initially decided to extinguish the SNP with foam. However, rather than have a smoldering fire, parts of the warehouse walls were collapsed and the SNP was doused liberally with water.

The products of combustion for methyl parathion are carbon monoxide, carbon dioxide, oxides of nitrogen, phosphorus and sulfur.

From observing the spent storage tank and the area surrounding the methyl parathion facility, it would appear that greater than 95% of the methyl parathion facility was consumed in the explosion and subsequent fire. Adverse health effects would most likely be felt by those people in the immediate vicinity that would be exposed to any methyl parathion that was unconsumed in the explosion or fire. This material could be scattered by the blast and carried by the smoke

particles. However, because of the low explosion point of methyl parathion, 248°F, and since very little of the material was found near the facility or the storage tank, a great majority of the compound was probably consumed in the explosion and fire. Parathion causes shortness of breath and/or difficulty in breathing, possibly cyanosis (blue skin color due to oxygen deficiency). A cabbage odor was noticeable on the grounds. This was probably caused by methyl mercaptan (methanethiol) which has an unpleasant odor and can cause nausea. Because this is a by-product or intermediate in the production of methyl parathion, some amounts were released by the explosion. Due to methyl mercaptan's low molecular weight, it could be carried with the smoke.

The by-products of combustion from SNP are oxides of nitrogen, carbon dioxide and monoxide, and sodium hydroxide. Rapid self-sustaining combustion starts at 482°F. Because of this high ingition point as compared to methyl parathion, this shows that most of the methyl parathion would be deactivated by the fire.

Most of the smoke was probably caused by the structure fire and burning insulation. Claude Jackson was present from the Civil Defense. Representatives of the Highway Patrol were also on the scene. Otto Logue, personnel and safety director for Vicksburg Chemical Company, made the initial calls for assistance and evacuated Warrenton Road and Jett School. At approximately 1:30 p.m. I was asked by the Highway Patrol to reopen I-20. I indicated the danger period had passed and that traffic could resume.

The methyl parathion facility was diked by a bulldozer. Most of the runoff went to the equalization ponds. The ponds will have a high phenol content and high suspended solids. The suspended solids could plug up the activated carbon columns and the associated carbon on hand probably would not be able to absorb all the phenol present.

The cause of the explosion is at this time unknown.

SW:ln

At about 10:20 a.m. this morning a small explosion in one of Vicksburg Chemical Company's manufacturing plants caused a fire which was noticeable for several miles. The fire was in the methyl parathion plant the product of which is used as an insecticide in cotton as well as rice. The fire caused a storage tank to rupture and several barrels of product to explode and burn intensively.

Units of the Vicksburg Fire Department responded and quickly brought the fire under control although smoke and water vapor continues to be seen. As a precaution the company suggested that residents on Highway 61 South, including the students at Jett School be evacuated, although it is not expected that the smoke is dangerous.

Three Vicksburg Chemical employees suffered minor burns in the fire.

MATERIAL SAFETY DATA SHEET

SECTION I – IDENTIFICATION OF PRODUCT:

TRADE NAME: Methyl Parathion

FREIGHT CLASSIFICATION: Poison B

FORMULA: $C_8H_{10}NO_5PS$

CHEMICAL NAME & SYNONYMS: 0,0-dimethyl-o-p-nitro phosphorothioate. Dalf, Folidol, others...

SECTION II – HAZARDOUS COMPONENTS OF MIXTURES:

COMPONENT	WEIGHT %
Xylene and/or Tenneco 500 (Toluene) as solvent.	20%

SECTION III – PHYSICAL DATA:

APPEARANCE – ODOR: Yellowish solid, typical sulfur odor

BOILING POINT (°F): Decomposes at 248°

VAPOR PRESSURE 68 °F (MM MERCURY): (Toluene) 36.7 at 30°C

VAPOR DENSITY (AIR = 1): (Toluene) 3.14

EVAPORATION RATE: –

MELTING OR FREEZING POINT (°F): 95°F.

SPECIFIC GRAVITY (WATER = 1): 1.36 at 20°C.

PERCENT VOLATILE (BY WEIGHT): 20%

SOLUBILITY IN WA: Insoluble

SECTION IV – FIRE & EXPLOSION HAZARD DATA:

FLASH POINT °F (METHOD USED): 132°F., oven cup

LOWER EXPLOSION LIMIT: (Toluene) 1.27%

UPPER EX (Toluen %

AUTO IGNITION TEMPERATURE (°F): –

DUST —

MINIMUM EXPLOSION CONCENTRATIONS (OZ/CU FT.): –

ENERGY TO IGNITE (MILLIJOUL –

EXTINGUISHING MEDIA:

[X] FOAM [ ] ALCOHOL FOAM [X] CO_2 [X] DRY CHEMICAL [ ] WATER FOG [ ] OTHER

SPECIAL FIRE FIGHTING PROCEDURES: May explode and liberate toxic fumes of nitrogen, phosphorous, carbon and Use approved cannister mask or mask with air supply. Avoid contact with material containing parathi Decontaminate area when fire is out.

UNUSUAL FIRE & EXPLOSION HAZARDS: May explodewhen heated above 248°F.

SECTION V – HEALTH HAZARD DATA:

THRESHOLD LIMIT VALUE: Skin 0.1 mg/m^3

EFFECTS OF OVEREXPOSURE: Possible cyanosis, shortness of breath and/or breathing difficulty. Parathion has a high toxic level when inhaled, ingested, and from skin contact. It is recommended that Dangerous Properties of Industrial Materials, Van Nostrand Reinhold Co., N.Y., N.Y., pages 994 and 995, be studied for more complete information.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Administer oxygen and transport to physician immediately.

Ingestion: Induce vomiting with salt water until contents are clear. Save a clear sample and tra to a physician.

Eye & Skin Contact: Wash eyes for 15 minutes with clean water and transport to physician. Decontaminate clothing with soap and water or washing soda solution. Remove contaminated clothing, contact, and transport immediately to physician. Use positive pressure oxygen for bre difficulty.

Oxides of nitrogen, phosphorous, sulfur

HAZARDOUS POLYMERIZATION: Unknown

[ ] MAY OCCUR [ ] WILL NOT OCCUR

CONDITIONS TO AVOID:

INCOMPATABILITY (MATERIALS TO AVOID):

[ ] WATER [X] OTHER Alkaline solutions or caustic chemicals.

SECTION VII – SPILL OR LEAK PROCEDURE:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Confine spill, degrade with caustic such as NaOH, Na_2CO_3, soda ash, etc. Flush to disposal with water.

SECTION VIII – SPECIAL PROTECTION INFORMATION:

TYPE OF VENTILATION: Forced air to remove solvent fumes.

RESPIRATORY PROTECTION (SPECIFY TYPE): Cannister gas mask for organic vapors.

PROTECTIVE GLOVES: Other than cloth or rubber.

OTHER PROTECTIVE EQUIPMENT:

EYE PROTECTION: Goggles

SECTION IX – STORAGE AND LABELING:

STORAGE — INDOOR: [X] YES [ ] NO HEATED: (in cold weather) [X] YES [ ] NO REFRIGERATED: [ ] YES [X] NO OUTDOOR: [ ] YES

COMMENTS:

STORAGE TEMPERATURE (°F): MAX: 248 (explodes) MIN: 65°F. (salts out)

The solvent, toluene, constitutes a fire hazard. Water should not be used for fighting fire. Vapors are heavier than air.

RECAUTIONARY LABELING:

Poison labels on all 4 sides of boxcars.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. [illegible]

DATE 5-9-

ROUTING AND TRANSMITTAL SLIP

TO (Name, office symbol or location)	INITIALS	ACTION
Jack McMillan	DATE	CIRCULATE / COORDINATION
2	INITIALS	FILE
	DATE	INFORMATION
3	INITIALS	NOTE AND RETURN
	DATE	PER CONVERSATION
4	INITIALS	SEE ME
	DATE	SIGNATURE

REMARKS

For your action. You may want to check this out.

RECEIVED

JAN 17 '78

Bureau Of Environmental Health

Do NOT use this form as a RECORD of approvals, concurrences, disapprovals, clearances, and similar actions.

FROM (Name, office symbol or location)	DATE
John Dickinson	1/10/78
	PHONE

OPTIONAL FORM 41
AUGUST 1967
GSA FPMR (41CFR) 101-11.206

GPO 043—16—81419-1 419-015 5041-101

VICKSBURG CHEMICAL COMPANY
A MEMBER OF THE VERTAC GROUP

RECEIVED
REGION IV

Dec 15 11 43 AM '77
ENFORCEMENT
DIVISION

P. O. BOX 3
VICKSBURG, MISSISSIPPI 39180
PHONE (601) 636-1231

December 7, 1977

RECEIVED
JAN 17 '78
Bureau Of
Environmental
Health

12/19

Mr. Paul J. Traina
Chief, Enforcement Division
U. S. Environment Protection Agency
345 Courtland Street NE
Atlanta, Georgia 30308

RE: NEIC Report "Environmental Assessment of Vicksburg Chemical Company"

Dear Mr. Traina:

As you requested, Vicksburg Chemical Company and it's parent company, Vertac, Inc., have reviewed this report.

This section contains confidential information you don't need anyway Jack.

Since the NEIC inspection, Vicksburg Chemical Company has made some changes in its solid waste disposal procedures, and it has made some improvements to correct the deficiencies pointed out in the report. These are outlined below:

NOTE

1 SOLID WASTE - All solid waste contaminated with hazardous or potentially hazardous material is disposed of off-site in an approved hazardous waste landfill. This includes drum liners, box liners, boxes, fiber drums and other containers which require such disposal. In addition, all the drums (which could meet DOT requirements) which had been piled up in the drum disposal pond have been disposed of off-site. Rusty, deteriorated drums which could not be safely handled remain at the drum disposal pond.

2. OTHER AREAS - (a) The last paragraph on page 94 refers to a lack of containment in the atrazine plant. To prevent recurrence, an additional 4 inch concrete curb has been installed on the length of the concrete apron outside the plant diked area. This additional curbing, which runs parallel to the drainage ditch, should provide further protection from overflows. Additionally, the cause of the explosion has been determined, and modifications of plant equipment have been implemented to reduce chances of another explosion. (b) An error in the interpretation of the total effluent flow chart has been discovered. The original procedure (outlined on page 83) has been modified. Flow readings are now obtained by multiplying the chart factor of 250 by the chart reading. The resultant is flow in gallons per minute. (c) The figure for flow from the CC drum washer presented in Tabe 11 on page 84 is in error. The flow from this source is 300 to 500 gallons per day, depending on the number of atrazine batches produced. (d) The last paragraph on page 90 outlines problems occurring in the methyl parathion plant which resulted in a solid waste problem. The cause of the reactor fouling has been eliminated, and no further solid waste problem is anticipated. (e) Gas chromatographic techniques have been developed and are now in use for the NPDES monitoring requirements.

I apologize for taking longer than the thirty days allowed for comments. Thank you for permitting this review, and if you require more information or any other service, please contact me. Also, I would like to compliment the NEIC team and John Hund from your office for their professionalism and courtesy.

Sincerely,

Fred L. Ahlers

Fred L. Ahlers
Vice President/General Manager

FLA/lc

cc: S. Parker
W. Beanland
B. McAvoy
J. McAdams

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
IV	

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
VERTAC Chem.		
C. CITY	**D. STATE**	**E. ZIP CODE**
Vicksburg,	MS	

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*	X	X			
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION

Disposal area appears to be contained no leachate - no evidence of groundwater contamination

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
R. Shane Hetthcock	404/881-2234	2/18/80

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

Further investigative action needed to define scope of problem.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION *(mo, day, & yr)*	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1)				
(2)				
(3)				
b. TYPE OF MONITORING				
(1)				
(2)				
c. TYPE OF SAMPLING				
(1)				
(2)				

EPA Form T2070-4 (10-79)

Continue On Reverse

NOTE:

1. INSUFFICIENT CUT VOLUME TO EXTEND FILL AREA BEYOND THIS AREA.
2. LACK OF CUT VOLUME DUE TO HIGH MOISTURE CONTENT AND EXTREMELY HIGH SHRINKAGE FACTORS IN CUT AREAS.
3. SURVEY BASED ON TBM V-1 SURVEYED SEPT. 16, 1983
4. APPROXIMATELY .2 ACRES OF POND FILLED TO REDUCE SLOPES.
5. CAP IS MINIMUM 18" THICK COMPACTED TO 95% ASTM D-698.

PHILIP C. GEE
REGISTERED PROFESSIONAL ENGINEER
6412
STATE OF MISSISSIPPI

AS BUILT

VERTAC CHEMICAL CORP.
FINAL CAPPING PLAN
INACTIVE DISPOSAL AREA

GEE & STRICKLAND, INC.
ENGINEERS & SURVEYORS
VICKSBURG, MS.
SCALE: 1" = 40' OCT. 25, 1983