Package with raw data

11/11/96

# EXPANDED SITE INVESTIGATION

# BERNUTH LEMBCKE

# CHATHAM COUNTY, GEORGIA

## EPA I.D. GAD980556864

Prepared for:

U.S. Environmental Protection Agency
Region IV

Prepared by:

Ned Emrick
Georgia Environmental Protection Division

August 29, 1996

10715609

# CONTENTS


1. Introduction . . . . . 1
2. Site Description . . . . . 1
   2.1 Location . . . . . 1
   2.2 Site Description . . . . . 1
   2.3 Operational History and Waste Characteristics . . . . . 2
3. Waste/Source Sampling . . . . . 3
   3.1 Sample Locations . . . . . 3
   3.2 Analytical Results . . . . . 4
   3.3 Conclusions . . . . . 4
4. Groundwater Pathway . . . . . 4
5. Surface Water Pathway . . . . . 4
   5.1 Hydrologic Setting . . . . . 4
   5.2 Surface Water Targets . . . . . 5
   5.3 Surface Water Sample Locations . . . . . 5
   5.4 Surface Water Analytical Results . . . . . 5
   5.5 Surface Water Conclusions . . . . . 5
6. Soil Exposure and Air Pathways . . . . . 5
   6.1 Physical Conditions . . . . . 5
   6.2 Soil and Air Targets . . . . . 6
   6.3 Soil Sample Locations . . . . . 6
   6.4 Air Monitoring . . . . . 6
   6.5 Soil Exposure and Air Pathway Conclusions . . . . . 6
7. Summary and Conclusions . . . . . 6

References . . . . . 7

Table 1: ESI Samples . . . . . Appendix 1
Table 2: Analytical Results for sediment samples . . . . . Appendix 1

Figure 1: Site Location Map . . . . . Appendix 2
Figure 2: Surface Water Pathway Migration Route . . . . . Appendix 2
Figure 2A: Upstream/downstream sample locations . . . . . Appendix 2
Figure 3: Sample locations on/near site . . . . . Appendix 2
Figure 4: Monitoring well locations onsite . . . . . Appendix 2
Figure 5: Topographic Quadrangle Maps . . . . . Appendix 2

Photographs 1-12 . . . . . Appendix 3
Analytical Data . . . . . Appendix 4

# EXPANDED SITE INVESTIGATION

Bernuth Lembcke
Chatham County, Georgia
EPA ID No. GAD 980556864

## 1.0 INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) the U.S. Environmental Protection Agency (EPA), Waste Management Division, Region IV has authorized the Georgia Environmental Protection Division to conduct an Expanded Site Investigation at the Bernuth Lembcke property in Chatham County, Georgia. The purpose of this investigation was to collect information concerning conditions at the site, to assess the immediate or potential threat posed to human health and the environment, to determine the need for an additional investigation under CERCLA/SARA or other authority, and support site evaluation using the Hazard Ranking System (HRS) for proposal to the National Priorities List (NPL) if appropriate. The scope of this investigation included a review of available file information, a comprehensive target survey, sampling of environmental media, and collecting non-sampling information on and off-site.

## 2.0 SITE DESCRIPTION, OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

### 2.1 LOCATION

The Bernuth Lembcke Co., facility is located at E. Lathrop Avenue in Savannah, Chatham County, Georgia within the Georgia Port Authority compound on Norfolk Southern Corporation/Central of Georgia Railway System property. The geographical coordinates of the facility are 32°05′42.0″N latitude and 81°06′31.0″W longitude. The site location and site layout are shown on Figures 1, 2, 2A, 3, 4, and 5. To reach the site travel northwest along Bay Street, past the Talmadge Bridge, to the first cross street which is Lathrop Street. Turn right and travel on Lathrop Street until it ends. Turn right into the Georgia Port Authority compound. Turn left immediately past the security checkpoint onto the dirt road next to the oil tanks (Colonial Oil). Follow the dirt road until it ends at the Bernuth Lembcke site.

Chatham County is characterized by mild temperatures and abundant rainfall. The mean annual temperature for the Savannah area is approximately 66°F. Mean annual precipitation is approximately 48 inches per year. The majority of the rainfall (51%) occurs between June and September. The mean annual lake evaporation is 44 inches, making the net annual precipitation 4 inches (Ref.1). The 1 year, 24 hour rainfall for the Savannah area is 5 inches (Ref. 2).

### 2.2 SITE DESCRIPTION

The property encompasses approximately 3 acres (Ref. 3). The dirt road previously mentioned accesses the Bernuth Lembcke facility and runs along the western side of the southern railroad spur to the Firestone facility with spur roads between the north and south tanks and north

BASE MAP IS A PORTION OF THE U.S.G.S 7.5 MINUTE QUADRANGLE MAP SAVANNAH, GEORGIA, 1978.

FIGURE 1

SITE LOCATION MAP

BERNUTH LEMBCKE COMPANY, INC.
SAVANNAH, CHATHAM COUNTY, GEORGIA

HALLIBURTON NUS
Environmental Corporation

railroad spur to the Firestone facility with spur roads between the north and south tanks and north of the north tanks. There are two transfer stations; one is located south of the north tanks and the other is located south of the south tanks. There is also a railroad spur line going to Colonial Oil that runs along the spur road between the north and south tanks. South of the southeast tank is a furnace building used to heat the tanks. This building is in disrepair, with a large section of the roof missing and all the windows broken.

The flood control canal, located along the western site boundary, is underground until just north of the Colonial Oil railroad spur. The box canal is uncovered for approximately 150 feet. There is a trash screen and five pumps that pump water into the river during high tide. During low tide, water from the canal flows into the river without the aid of the pumps. The flood control canal is underground for the last 200 feet to the Savannah River.

## 2.3 OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

The Bernuth Lembcke Co., a former storage facility for creosote, is in a heavily industrialized section of Savannah. The Georgia Ports Authority compound is fenced and entrances are controlled by guards 24 hours a day (Ref. 4). The facility was used primarily for the bulk storage of creosote product, and to a lesser extent tall oil and other petroleum based products. Creosote was transferred from barges to railcars and trucks. There are four bulk storage tanks on site installed in the early 1930's (Ref. 5). Two of the bulk storage tanks were leased from the railroad by the Allied Chemical Corporation or one of its various predecessors between January 1, 1933 and December 21, 1982. Allied Chemical owned the third tank and leased the fourth tank from H.J. Gilbert. The land underlying all four tanks was leased from the railroad. Allied Chemical also entered into various subleases with Union Bag Company (now Union Camp Corporation) during the time it leased the land and tanks from the railroad (Ref.5, p. 3).

Allied Chemical Company discontinued use of the third tank in 1974, after which Bernuth Lembcke Company, Inc. leased the area for bulk storage of creosote. However, Bernuth Lembcke may have utilized one of the tanks for the storage of creosote between 1965 and 1980. It is not known what Allied stored in these tanks (Ref.7, p.2). It is estimated that these tanks had a volume of approximately 235,000 gallons each (Refs. 8 and 9). The Bernuth Lembcke facility ceased operations prior to RCRA enforcement (Ref.7, p.1).

In October 1987, creosote contamination was discovered at the Bernuth Lembcke Co., Inc. site during excavation for construction of improvements to the City of Savannah's Fell Street Storm Water Lift Station and storm water canal which transects the property (Ref. 6). The creation of a channel through the waste allowed releases of contamination to surface water during construction of the cement box canal (Ref.7, p.2).

During the field investigation for the Screening Site Inspection Report, Phase II (October, 1989) visible cracks were noted in the concrete walls and floor of the flood control canal. A viscous black substance was observed seeping through the cracks. A six inch high baffle was installed on the bottom of the box culvert to prevent the flow of creosote to the Savannah River and to provide a collection point for creosote removal utilizing a vacuum truck (Ref 5.). As evidenced by photograph Nos. 5 and 6, taken on 4/17/96, the baffle installation has only slowed

and/or partially stopped the migration of creosote into the box culvert/canal. Currently, on behalf of the Central of Georgia Railroad (COG), Coastal Divers and Pollution Control, Inc. (CDP) of Savannah, Georgia is performing activities related to containing and capturing contaminants with absorbent booms at three locations: 1) upstream from the trash screen at the outflow from the old box culvert; 2) downstream from the trash screen; and 3) at the outflow of the storm water canal to the Savannah River (Ref. photo 11). The absorbent materials are changed regularly. In addition, CDP captures creosote product with sorbent materials, and by vacuum truck, on occasions when accumulation of creosote is observed to warrant removal. The sorbent materials and creosote liquid are currently stored on-site pending proper treatment and/or disposal.

Creosote seepage is not as prevalent during high tide events when water height and movement in the storm water canal is much greater. It is postulated that, as the tide recedes, a static head differential exists with the higher water table of the surficial aquifer system exerting an upward pressure from beneath the bottom slab of the storm water canal. Thus, creosote product, which apparently is trapped beneath the concrete slab, is forced upward through cracks in the storm water canal. The canal represents a large void space at atmospheric pressure. A secondary upward driving force is created by horizontal flow of groundwater, toward the Savannah River, which encounters sheet piling located on the downstream side of the canal (Ref. 5, p. 6).

## 3.0 WASTE/SOURCE SAMPLING

### 3.1 SAMPLE LOCATIONS

Table 1 presents sample numbers, locations, and media type for all samples taken during the ESI. The Sampling and Analysis Plan (SAP) dated March 18, 1996 was adhered to wherever possible. This SAP called for evaluation of the Surface Water Pathway only. Waste/source sampling and soil sampling had been done in previous SIs. In addition the debris from the flood gate construction has been removed. Surface water, sediment, and biologic tissue samples were originally proposed. An exhaustive search by the sampling team, which included a Coastal Resources (CRD) biologist and appropriate watercraft/sampling gear, failed to produce any sessile benthic tissues or crab species. All of the samples were analyzed for PAHs and BETX. Some of the samples, utilized for both Bernuth Lembcke and Certainteed, also had metal analysis run. Nine of the sediment samples, primarily those nearest to the PPE (Probable Point of Entry) had re-extractions performed for laboratory QA/QC verification. The re-extracted samples have the same sample numbers with lab analysis dates of May 29, 1996. The original analyses have dates of May 1 and May 7, 1996.

- Eleven sediment samples were taken. One sample is a duplicate utilized for QA/QC.
- Six surface water samples were taken. One sample is a duplicate utilized for QA/QC.
- Two QA/QC trip blanks were taken (VOC analysis).

For sample locations see Figures 2, 2A, and 3.

## 3.2 ANALYTICAL RESULTS

The surface water samples and sediment samples taken away from the PPE were all non-detect. Sediment samples, taken from the PPE on the Savannah River bottom, had varying levels of PAH compounds (Ref. Table 2). Contamination levels appear slightly lower than values of soil, groundwater, and source material taken in prior events. This scenario was anticipated due to the migration of the creosote down the box culvert/flood control canal over time. Exposure to the atmosphere would drive off some of the volatile constituents. Exposure to varying water levels within the flood control canal/Savannah River would mobilize some of the semi-volatiles over time.

## 3.3 CONCLUSIONS

Previous sampling events had established the presence of PAH/creosote contaminants in soil and groundwater at the site. Contaminated soil, left onsite in a pile and resulting from excavation to improve the construction of the flood control canal, has been removed. Direct observation had indicated the presence of contaminants in surface water. Direct observation (Ref.photographs 5,6,11, and 12) and sediment samples indicate the presence of contamination in the surface water pathway during this investigation.

# 4.0 **GROUNDWATER PATHWAY**

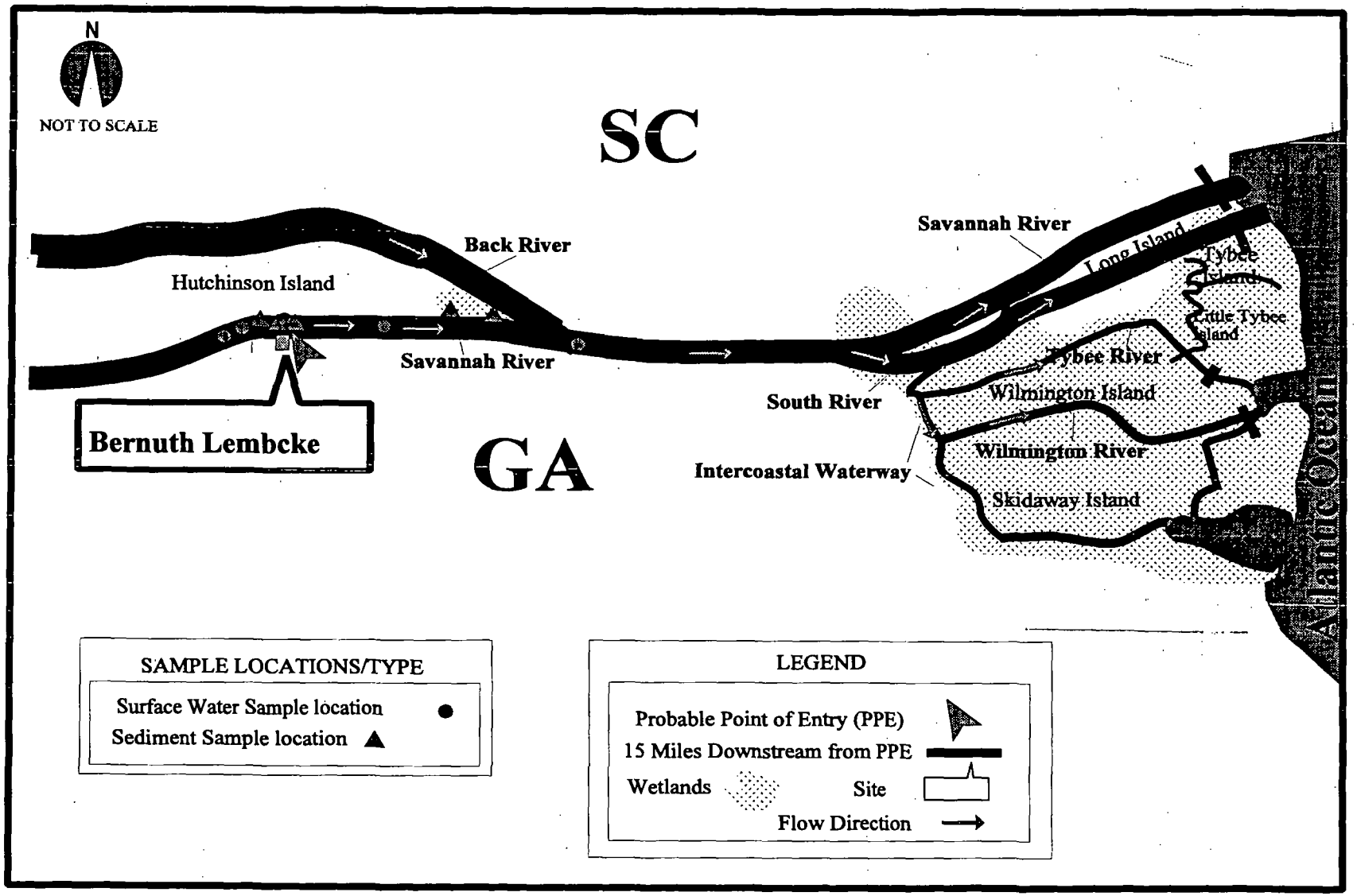
The groundwater exposure pathway was deemed to be of minimal concern due to the lack of a potentially affected population (Ref.7, p.10). Nearly all of the residential water needs of Chatham County are provided by groundwater from the Floridan aquifer. The Hawthorn Formation, which is approximately 120 feet thick, acts as a confining layer between the surficial aquifer and the lower-lying Floridan aquifer. Based on this scenario the monitoring well network was not sampled during this investigation.

# 5.0 **SURFACE WATER PATHWAY**

## 5.1 HYDROLOGIC SETTING

Surface water runoff from the facility is divided by the road between the north and south tanks. Surface water to the south of the road collects between the two tanks and evaporates or percolates into the ground. Surface water runoff on the north side of the road flows northwest to the flood control canal. There are several holes cut in the side of the flood control canal to allow surface water to flow freely into the canal. The canal then flows approximately 400 feet northeast and enters a tidal portion of the Savannah River. During low tide, water flows freely from the flood control canal into the Savannah River. During high tides, water is pumped from the flood control canal into the river. The streamflow for the Savannah River is greater than 10,000 cubic feet per second (Ref. 10, p.5) The Savannah river flows 4 miles before being joined by the Back River. After an additional 1.5 miles, the river breaks into a number of channels as it passes through extensive coastal wetlands.

**Figure 2. SURFACE WATER PATHWAY MIGRATION ROUTE AND SAMPLE LOCATIONS**



## 5.2 SURFACE WATER TARGETS

There are no drinking water intakes within the target distance limit (TDL), 15 miles downstream or upstream (tidally influenced river). Drinking water for the Savannah area is supplied from the deep Floridan aquifer not from the Savannah River. There are approximately 25 miles of wetland frontage along the surface water pathway. The Savannah River is used for sport fishing of tarpon, spotted sea trout, black drum and cobia. The federally designated endangered or threatened shortnose sturgeon (Acipenser brevirostrum), the bald eagle (Haliaeetus leucocephalus), the American alligator (Alligator Mississippiensis), and river otter (Lutra canadensis) are present in/near the Savannah River (Refs. 11 and 12).

## 5.3 SURFACE WATER SAMPLE LOCATIONS

*Samples were collected from five surface water and ten sediment locations.* The location of the samples taken are described in Table 1 and illustrated on Figures 2, 2A, and 3. All samples were analyzed for PAHs and BETX compounds. Samples utilized for both Bernuth Lembcke and Certainteed also had metals analysis performed.

## 5.4 SURFACE WATER ANALYTICAL RESULTS

All surface water (aqueous) samples were non-detect including BL-SW-1/HW 6050, taken directly in front of the PPE. Sediment samples BL-SD-1/HW 6040, BL-SD-2D/HW 6041 (duplicate of BL-SD-1), and BL-SD-3/HW 6043 had detectable levels of various PAHs. The results are illustrated on Table 2. These sediment samples, from the Savannah River bottom, were taken in close proximity to the PPE. Samples taken away from the PPE, either upstream or downstream, had non-detect levels.

## 5.5 SURFACE WATER CONCLUSIONS

The surface water pathway is of concern at the Bernuth Lembcke site. Direct observation and sample analysis indicate that creosote compounds, containing PAHs, are migrating through cracks in the flood control canal and slowly entering the Savannah River. The floating fractions are contained by absorbent booms within the canal and at the entrance to the Savannah River (Ref. photo 11). Heavier fractions/DNAPLs sink to the river bottom staying relatively close to the PPE.

# 6.0 SOIL EXPOSURE AND AIR PATHWAYS

## 6.1 PHYSICAL CONDITIONS

The Bernuth Lembcke Co., Inc. facility is located at T. Lathrop Avenue on the northwest side of Savannah, Chatham County, Georgia (Ref.13, p. 1, Fig. 1). Analytical results of surface/subsurface soil samples, taken during previous investigations, at the Bernuth Lembcke facility indicate contamination in surface (<2 feet) and subsurface soils (Ref. ,p.) Additional soil samples were not taken during this investigation. Soil material dug up during improvements made

to the flood control canal in 1987, originally left on site as an uncontained debris pile, has been removed.The site is located within the Georgia Port Authority compound and access is restricted by fencing and 24 hour security. The Port Authority dock is not accessed either through or from the site property.

## 6.2 SOIL AND AIR TARGETS

There are no residences on site. The nearest residence is approximately 3200′ south of the facility. There are no schools or day-care centers onsite or within 200′. The exact number of workers present at the facility is not known, but reliable information indicates approximately 5 or less on an average day. This includes stormwater technicians for the city of Savannah, railroad workers moving tank cars into the Colonial Oil facility, CDP creosote removal personnel, and Firestone employees (Ref. 14). There are no terrestrial sensitive environments located on areas of potential soil contamination (Ref. 7).

## 6.3 SOIL SAMPLE LOCATIONS

No soil samples were taken due to the existence of soil sampling analytical data from previous SIs and SIPs.

## 6.4 AIR MONITORING

*During this investigation no air monitoring was performed.*

## 6.5 SOIL EXPOSURE AND AIR PATHWAY CONCLUSIONS

The soil exposure pathway appears to pose a minor threat at the site. Documented contamination has been found in several areas onsite. Targets are limited to a few workers (Firestone/Colonial Oil/Central of Georgia Railroad/City of Savannah) per day. A release to air has not been documented. Access to the site is restricted to workers with Georgia Port Authority clearance.

# 7.0 SUMMARY AND CONCLUSIONS

The Bernuth Lembcke Co., Inc. site was evaluated to assess the threat posed to human health and the environment. The primary focus of this investigation was on the surface water pathway. Analytical results and direct observation indicate a release of PAH compounds, from past events at the site, to surface water sediments. PAH compounds have reached the Savannah River. The dense fractions sink downward, spreading out from the PPE toward the Georgia Port Authority dock, apparently covering a small area. The floating fractions are contained and/or recovered by absorbent booms deployed in three locations along the flood control canal. The Savannah River channel is dredged to maintain a depth of at least 37′ in this area. The dredging is done to accommodate ocean going freighters with most of the dredge spoils being placed on Hutchinson Island. Creosote reaching the deep channel would periodically be dredged up and removed. This may partially explain why PAHs were not found either downstream or upstream from the PPE.

# REFERENCES


1. U.S. Department of Commerce, Climatic Atlas of the United States (Washington, D.C.: GPO, June 1968) Reprint: 1983, National Oceanic and Atmospheric Administration.

2. U.S. Department of Agriculture, Rainfall Frequency Atlas of the United States (Washington D.C.: GPO, 1961).

3. U.S. Geological Survey, 7.5 minute series Topographic Quadrangle Maps of Georgia and South Carolina: Port Wentworth 1980, Limehouse 1980, Garden City 1980, Savannah 1978, scale 1:24,000.

4. NUS Corporation Field Logbook No. F4-1061 for Bernuth Lembcke, TDD No. F4-8908-37. Documentation of Screening Site Inspection, October 31, 1989.

5. Kotti, J.D., and Knox, R., Phase I Soil and Ground-Water Assessment Report, Bernuth Lembcke Company Site Savannah, Georgia, November 30, 1994.

6. Kotti, J.D., and Knox, R., Phase I Soil and Ground-Water Assessment Plan, Bernuth Lembcke Company Site Savannah, Georgia, March 16, 1994.

7. Final Site Inspection Report for Bernuth Lembcke Co., Savannah, Chatham County, Georgia. Prepared by Julie Keller, HALLIBURTON NUS Environmental Corporation, June 28, 1990.

8. Bud, Estimator for Metal Products, Inc., telephone conversation with Ed Billman, Halliburton NUS Corporation, March 12, 1993. Subject: Size of storage tanks.

9. Dick Smicht, Engineer at American Containment, telephone conversation with Ed Billman, Halliburton NUS Corporation, March 12, 1993. Subject: Size of storage tanks.

10. H.T. Thomson, Streamflow Maps of Georgia's Major Rivers, 1960, Information Circular 21 (Atlanta, Georgia: U.S. Geological Survey), p. 5.

11. U.S. Fish and Wildlife Service, Endangered and Threatened Species of the Southeastern United States (Atlanta, Georgia: 1988).

12. U.S. Fish and Wildlife Service, Atlantic Coast Ecological Inventory, Savannah, GA-SC, 1980. Scale 1:250,000.

13. EPA Notification of Hazardous Waste Site (EPA Form 8900-1) for Bernuth Lembcke Co., Inc., Savannah, Georgia. Filed by Roy F. Beery, Executive Vice President, June 8, 1981.

14. Henry Sanborn, stormwater technician for the city of Savannah, telephone conversation with Ned Emrick GEPD on 9/3/96. Subject: Average number of people per day on Bernuth Lembcke site.

# **APPENDIX 1 :** Tables

TABLE 1: ESI SAMPLES

| Purpose | Sample | EPD/HWMB Number<br>Lab Number | Location and Objective |
|---|---|---|---|
| Surface Water Sediment | BL-SD-1 | HW 6040<br>AB 13432 | Directly in front of box culvert-canal (PPE) to determine presence/absence of hazardous substances in fishery. |
| | BL-SD-3 | HW 6043<br>AB 13434 | SE side of box culvert-canal (PPE) to determine presence/absence of hazardous substances in fishery. |
| | BL-SD-4 | HW 6044<br>AB 13435 | NW side of box culvert-canal ((PPE) to determine presence/absence of hazardous substances in fishery. |
| | BL-SD-5 | HW 6045<br>AB 13436 | 50' NW of PPE, near rushes, to determine presence/absence of hazardous substances in fishery. Reference photo #8. |
| | BL-SD-6 | HW 6046<br>AB 13437 | 150' downstream of PPE to determine presence/absence of hazardous substances in fishery. |
| | BL-SD-8 | HW 6047<br>AB 13438 | 150' upstream of PPE, near rushes and colonial oil gangplank/dock. Reference photo #9. |
| | BL-SD-9 | HW 6048<br>AB 13440 | .5 miles upstream of PPE to determine presence/absence of hazardous substances in fishery. |
| | BL-SD-12 | HW 6049<br>AB 13442 | .7 miles downstream of PPE, near Talmadge Bridge to determine presence/absence of hazardous substances in fishery. |
| | BL-SD-14/CT-SD-10 | HW 6019<br>AB 13453 | 3.25 miles downstream of PPE to determine presence/absence of hazardous substances in wetlands. |
| | BL-SD-15/CT-SD-9 | HW 6018<br>AB 13452 | 3.75 miles downstream of PPE to determine presence/absence of hazardous substances in wetland and establish frontage of wetland. |
| QA/QC | BL-SD-2D | HW 6041<br>AB 13433 | Duplicate of BL-SD-1 |

| Purpose | Sample | EPD/HWMB Number<br>Lab Number | Location and Objective |
|---|---|---|---|
| Surface Water | BL-SW-1 | HW 6050<br>AB 13443 | Surface water sample at the PPE. |
| | BL-SW-2 | HW 6051<br>AB 13445 | Surface water sample, upstream of PPE, south of Railroad Bridge, to determine presence/absence of hazardous substances in wetlands and wetland frontage. |
| | BL-SW-3/CT-SW-1 | HW 6043<br>AB 13456 | Surface water sample, 1.5 miles upstream of PPE - possible background sample. |
| | BL-SW-5 | HW 6053<br>AB 13449 | Surface water sample, 1.85 miles downstream of PPE, to determine presence/absence of hazardous substances in wetlands and wetland frontage. |
| | BL-SW-6/CT-SW-3 | HW 6036<br>AB 13457 | Surface water sample, 4.2 miles downstream of PPE, to determine presence/absence of hazardous substances in wetlands and wetland frontage. |
| QA/QC | BL-SW-4D | HW 6052<br>AB 13447 | Duplicate of BL-SW-3. |
| | | HW 6054<br>AB 13451 | Trip Blank - VOCs |
| | | HW 6010<br>AB 13459 | Trip Blank - VOCs |

BL - Bernuth Lembcke
CT - Certainteed
BL/CT - Sample utilized for both sites
SD - Sediment
SW - Surface Water
HW- Hazardous Waste Branch (GaEPD) sample/logbook number
AB - GaEPD Laboratory sample number

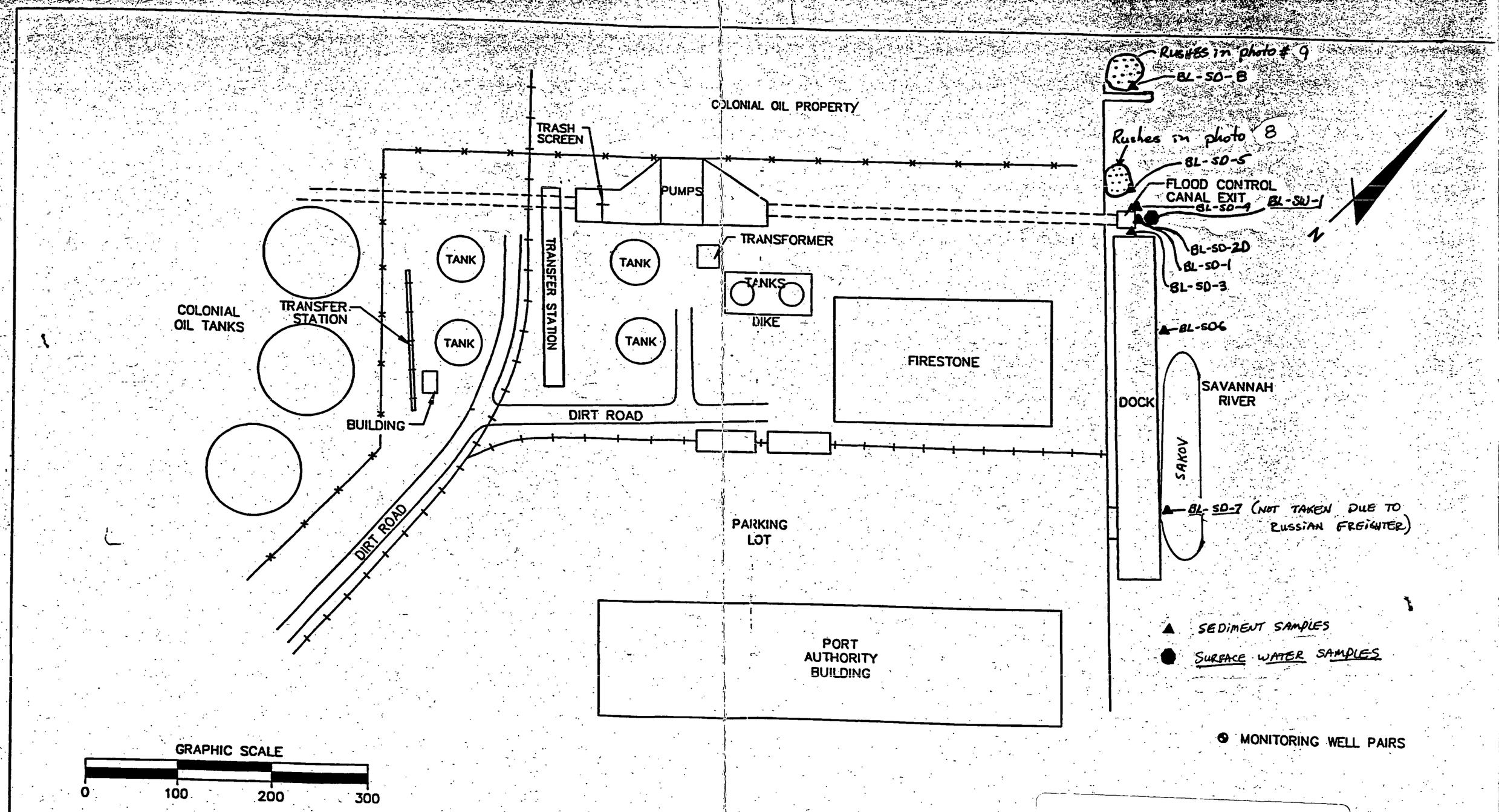



FIGURE 3

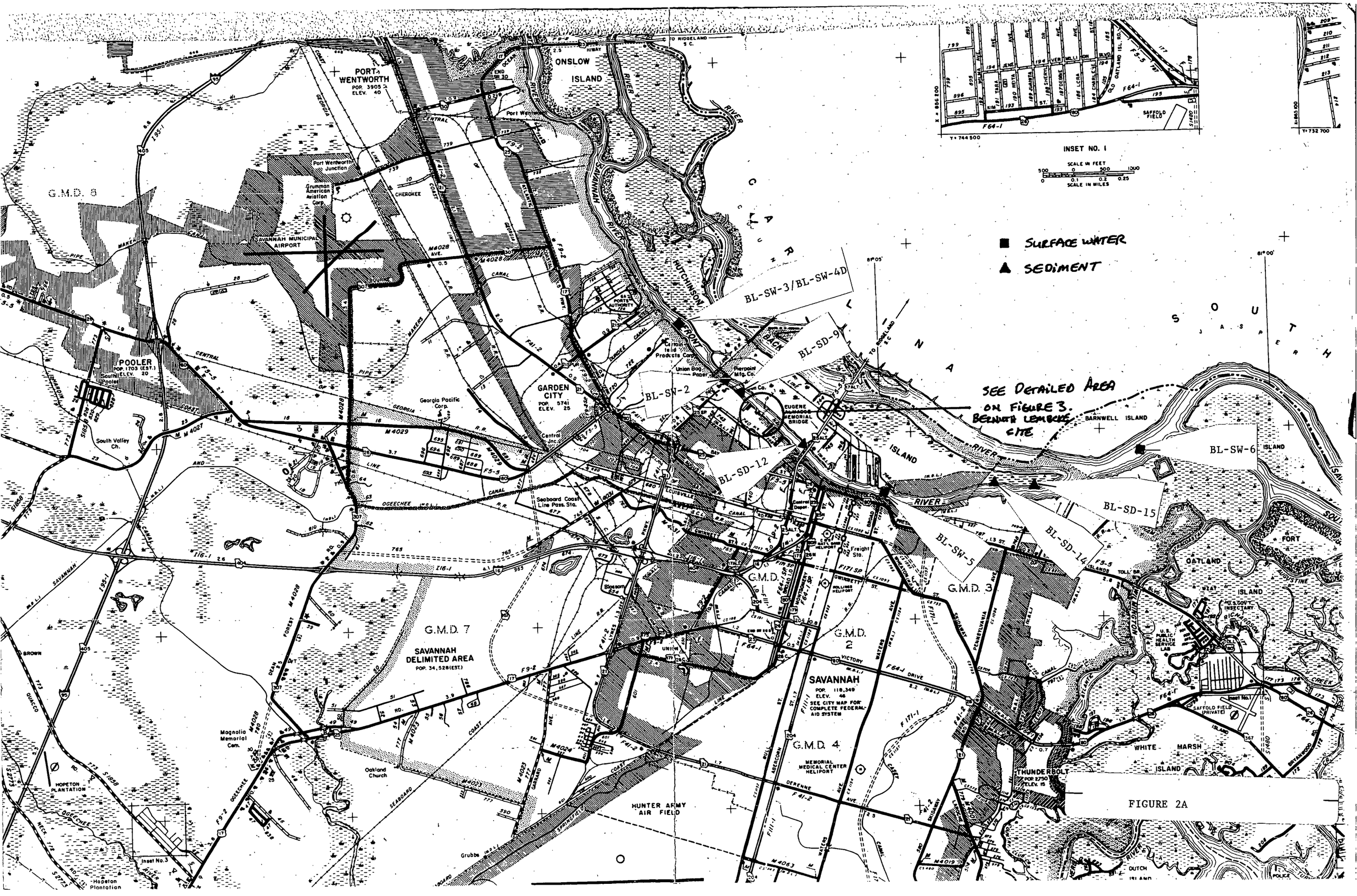
| | | | |
|---|---|---|---|
| ViroGroup EHE Division | SCALE 1"=100' | BERNUTH – LEMBCKE COMPANY, INC.<br>CENTRAL OF GEORGIA RAILROAD CO.<br>SAVANNAH, GEORGIA | SAMPLE LOCATIONS |
| | DRAWN BY TBG | | |
| | CHECKED BY | | |
| | DATE 3/15/94 | | |

FIGURE

SHEET OF

CADD NO. 118

PROJECT NO. 12-11801.0



SURFACE WATER
SEDIMENT
SEE DETAILED AREA ON FIGURE 3. BERNUTH LEMBCKE SITE
INSET NO. 1
SCALE IN FEET
SCALE IN MILES
PORT WENTWORTH
POP. 3905
ELEV. 40
ONSLOW ISLAND
Port Wentworth Junction
Grumman American Aviation Corp.
SAVANNAH MUNICIPAL AIRPORT
G.M.D. 8
POOLER
POP. 1703 (EST.)
ELEV. 20
South Pooler
South Valley Ch.
GARDEN CITY
POP. 5741
ELEV. 25
Georgia Pacific Corp.
Central Jnc.
Seaboard Coast Line Pass. Sta.
Certain Teed Products Corp.
Union Bag Paper
Pierpoint Mfg. Co.
EUGENE ALMADGE MEMORIAL BRIDGE
HUTCHINSON
BL-SW-3/BL-SW-4D
BL-SD-9
BL-SW-2
BL-SD-12
BL-SW-5
BL-SD-14
BL-SD-15
BL-SW-6
BARNWELL ISLAND
OATLAND ISLAND
FORT
G.M.D. 7
SAVANNAH DELIMITED AREA
POP. 34,528 (EST.)
G.M.D. 2
SAVANNAH
POP. 118,349
ELEV. 46
SEE CITY MAP FOR COMPLETE FEDERAL-AID SYSTEM
G.M.D. 4
MEMORIAL MEDICAL CENTER HELIPORT
G.M.D. 3
Freight Sta.
ROLLINS HELIPORT
U.S. PUBLIC HEALTH SERVICE LAB
U.S. GOV'T INSECTARY
SAFFOLD FIELD (PRIVATE)
WHITE MARSH ISLAND
THUNDERBOLT
POP. 2750
ELEV. 15
HUNTER ARMY AIR FIELD
Magnolia Memorial Cem.
Oakland Church
HOPETON PLANTATION
Hopeton Plantation
Inset No. 3
Grubbs
DUTCH ISLAND


FIGURE 2A

TABLE 2

SUMMARY OF ANALYTICAL RESULTS
BERNUTH LEMBECKE
SAVANNAH, CHATHAM COUNTY, GEORGIA

| | PPE BL-SD-1 | PPE BL-SD-2D | PPE BL-SD-3 |
|---|---|---|---|
| Sample Number(s) | HW 6040* | HW 6041* | HW 6043* |
| Parameters | ug/kg | ug/kg | ug/kg |
| Phenanthrene | 1200 | 5980 | 5760 |
| Fluoranthene | 922 | 5000 | 4380 |
| Naphthalene | - | 2070 | - |
| 2-Methylnaphthalene | - | 1770 | - |
| Acenaphthene | - | 1990 | - |
| Dibenzofuran | - | 1720 | - |
| Fluorene | - | 2140 | 1070 |
| Pyrene | - | 3430 | 2760 |
| Benzo(a)anthracene | - | 1090 | 1070 |
| Crysene | - | 1190 | 1030 |
| Benzo(b)fluoranthene | - | 814 | - |
| Anthracene | - | - | 951 |
| | - | - | - |

- Not Detected
* The levels shown are the higher of the two lab analyses (dated May 7, 1996 or May 29, 1996)

# APPENDIX 2 : Figures

BASE MAP IS A PORTION OF THE U.S.G.S 7.5 MINUTE QUADRANGLE MAP SAVANNAH, GEORGIA, 1978.

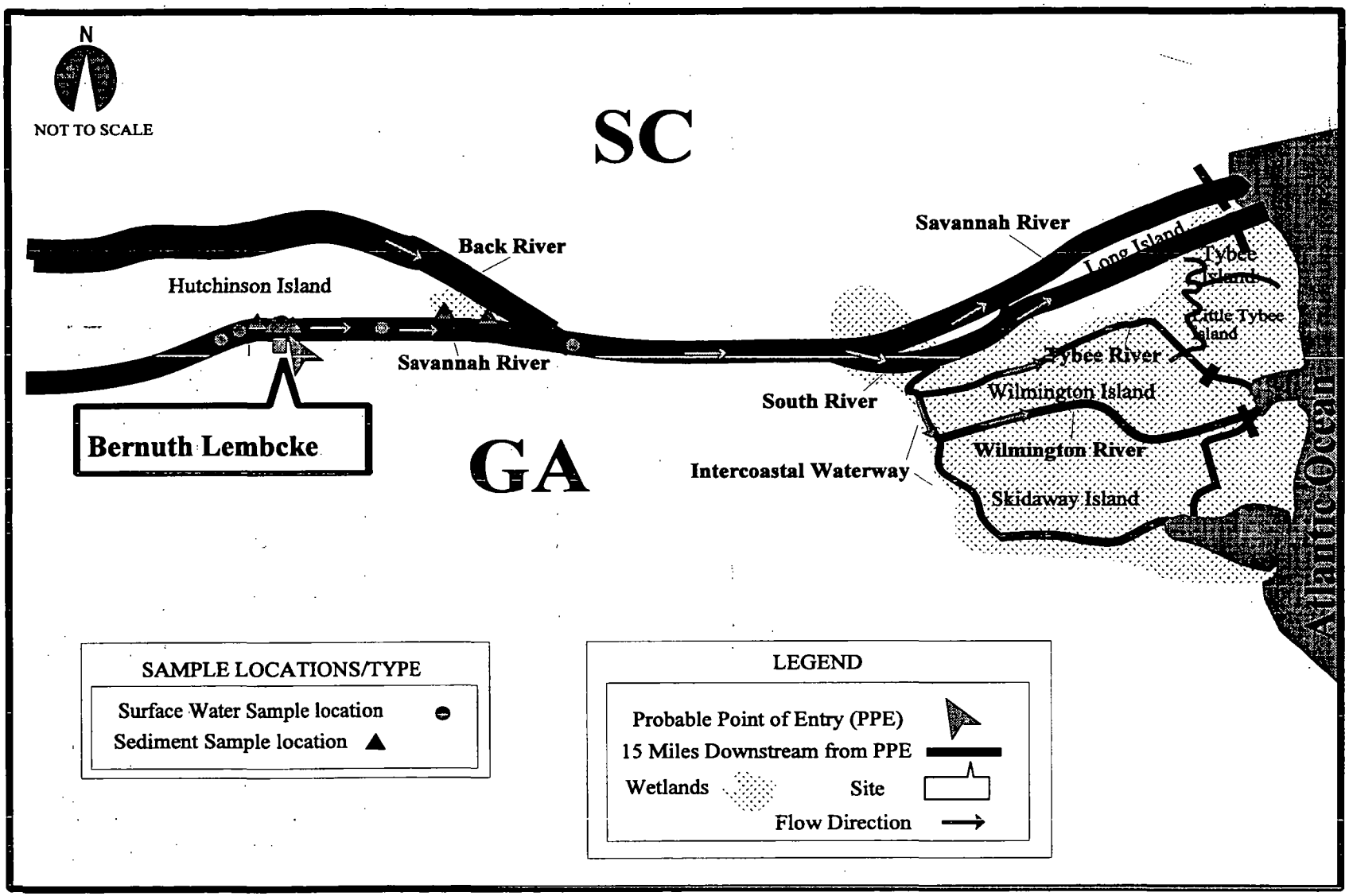
FIGURE 1

SITE LOCATION MAP

BERNUTH LEMBCKE COMPANY, INC.
SAVANNAH, CHATHAM COUNTY, GEORGIA

HALLIBURTON NUS
Environmental Corporation

**Figure 2. SURFACE WATER PATHWAY MIGRATION ROUTE AND SAMPLE LOCATIONS**



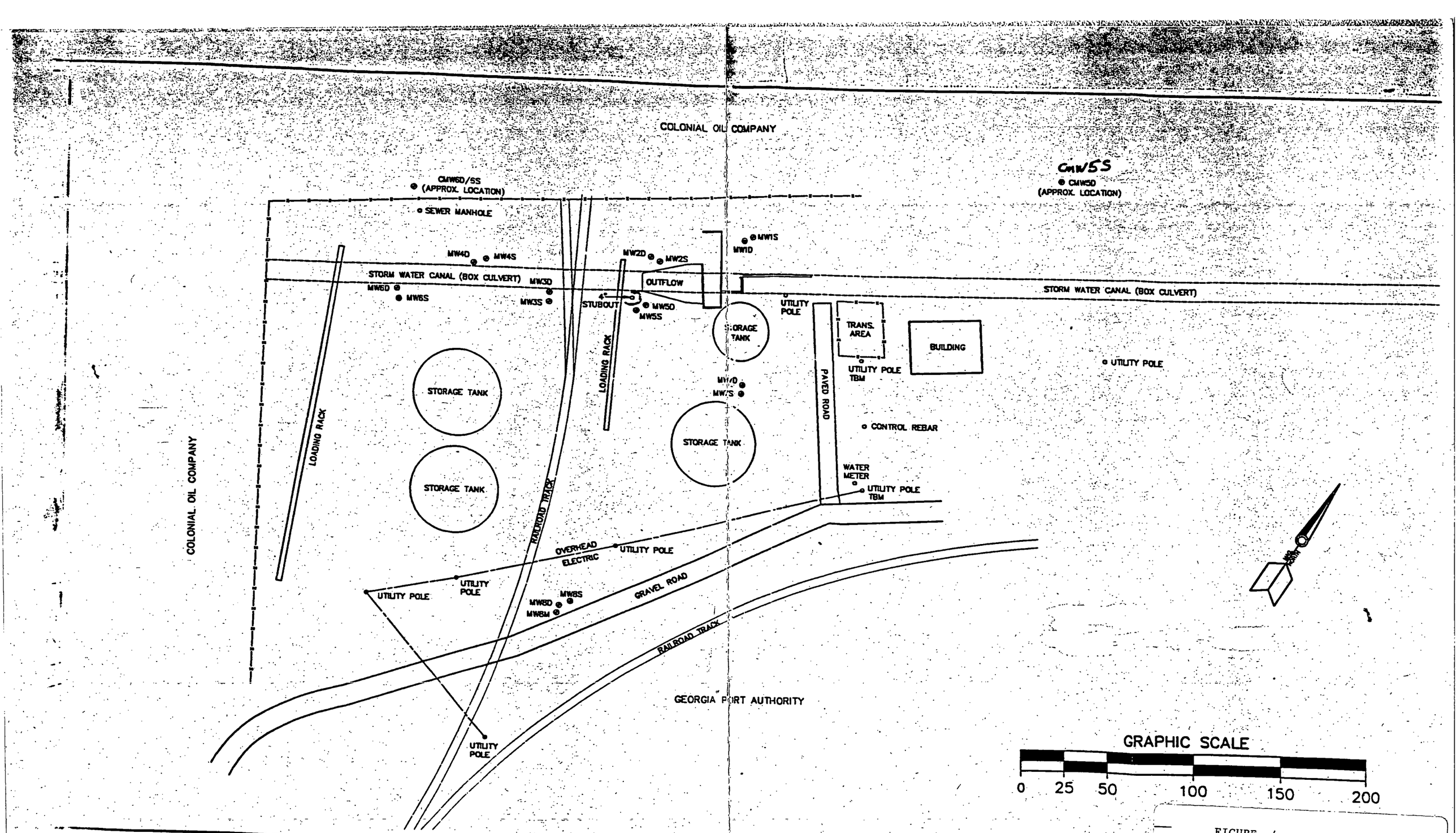



FIGURE 4

| | | | |
|---|---|---|---|
| ViroGroup EIE Division | SCALE 1" = 50' | BERNUTH–LEMBCKE COMPANY SITE<br>CENTRAL OF GEORGIA RAILROAD CO.<br>SAVANNAH, GEORGIA | MONITORING WELL LOCATIONS |
| | DRAWN BY CAB | | SHEET OF |
| | CHECKED BY JDK | | CADD NO. 11801C |
| | DATE 5/2/94 | | PROJECT NO. 12-11801.C |

U.S. EPA REGION IV

# SDMS

## Unscannable Material Target Sheet

DocID: 10715409 Site ID: GAD980556864

Site Name: Bernuth Lembke Inc.

Nature of Material:

| | | | |
|---|---|---|---|
| Map: | ☑ | Computer Disks: | ☐ |
| Photos: | ☐ | CD-ROM: | ☐ |
| Blueprints: | ☐ | Oversized Report: | ☐ |
| Slides: | ☐ | Log Book: | ☐ |

Other (describe): Radius Map (Fig 5)

Amount of material:

* Please contact the appropriate Records Center to view the material *

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

MAY - 2 1996
HAZARDOUS WASTE MANAGEMENT

May 1, 1996

To: Steve White
HWMB

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13459** Source ID#: ADHOC
DNR project: HW
sample description: CESTAINTEED HW6010
Sample Collector: S. WHITE
Sample collection date: 04/17/96 Time: 11:30
Lab submittal date: 04/18/96 Time: 15:30
DNR Lab reference: HW6010 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN WATER | see below | ug/l | 1.0 |

Data for BTEX COMPOUNDS IN WATER ug/l:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Steve White
HWMB
657-8681

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13452** Source ID#: ADHOC
DNR project: HW
sample description: CESTAINTEED HW6018
Sample Collector: S. WHITE
Sample collection date: 04/17/96 Time: 15:45
Lab submittal date: 04/18/96 Time: 15:30
DNR Lab reference: HW6018 LABORATORY: METALS

CT-SD-9

| Parameter | Result | Units | MDL |
|---|---|---|---|
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 4.9 | 3 |
| Barium | 01008 | 15 | 1 |
| Cadmium | 01028 | Not Detected | 1 |
| Chromium | 01029 | 13 | 2 |
| Lead | 01052 | 10 | 5 |
| Nickel | 01068 | 3.7 | 2 |
| Selenium | 01148 | Not Detected | 5 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| **2-Fluorophenol(Surrogate QC Std.)** | | **23.9** | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 42.5 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| **Nitrobenzene-d5(Surrogate QC Std.)** | | **21.7** | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 34.5 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 58.0 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 56.2 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| Sulfur | | 3600 TIE** | |

**Tentatively Identified/Estimated Value **

Summary of specification violations or warnings:

Analyte: 2-Fluorophenol(Surrogate QC Std.)
Lower specification value: 25 Result: 23.9

Analyte: Nitrobenzene-d5(Surrogate QC Std.)
Lower specification value: 23 Result: 21.7

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Steve White
HWMB
657-8681

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13453** Source ID#: ADHOC
DNR project: HW
sample description: CESTAINTEED HW6019
Sample Collector: S. WHITE
Sample collection date: 04/17/96 Time: 16:10
Lab submittal date: 04/18/96 Time: 15:30
DNR Lab reference: HW6019 LABORATORY: METALS

CT-SD-10

| Parameter | Result | Units | MDL |
|---|---|---|---|
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | Not Detected | 3 |
| Barium | 01008 | 3.3 | 1 |
| Cadmium | 01028 | Not Detected | 1 |
| Chromium | 01029 | Not Detected | 2 |
| Lead | 01052 | Not Detected | 5 |
| Nickel | 01068 | Not Detected | 2 |
| Selenium | 01148 | Not Detected | 5 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| **2-Fluorophenol(Surrogate QC Std.)** | | **4.84** | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| **Phenol-d5(Surrogate QC Std.)** | | **16.9** | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| **Nitrobenzene-d5(Surrogate QC Std.)** | | **2.17** | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| **2-Fluorobiphenyl(Surrogate QC Std.)** | | **13.8** | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 49.8 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 62.0 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |

Summary of specification violations or warnings:

Analyte: 2-Fluorophenol(Surrogate QC Std.)
Lower specification value: 25 Result: 4.84

Analyte: Phenol-d5(Surrogate QC Std.)
Lower specification value: 24 Result: 16.9

Analyte: Nitrobenzene-d5(Surrogate QC Std.)
Lower specification value: 23 Result: 2.17

Analyte: 2-Fluorobiphenyl(Surrogate QC Std.)
Lower specification value: 30 Result: 13.8

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 17, 1996

To: Steve White
HWMB

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13456** Source ID#: ADHOC
DNR project: HW
sample description: CESTAINTEED HW6034
Sample Collector: S. WHITE
Sample collection date: 04/17/96 Time: 10:45
Lab submittal date: 04/18/96 Time: 15:30
DNR Lab reference: HW6034 LABORATORY: METALS
CT-SW-1

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN WATER | see below | ug/l | 1.0 |
| Semivolatile water sample (8270) | see below | ug/l | 10 |
| Extraction 3510 SemiVol. L/L | LEM | ml | |
| ICP METALS FOR HAZARDOUS WASTE | see below | ug/l | |

Data for BTEX COMPOUNDS IN WATER ug/l:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

Data for Semivolatile water sample (8270) ug/l:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34438 | Not Detected | 10 |
| 2-Picoline | 77088 | Not Detected | 10 |
| Methylmethanesulfonate | 73595 | Not Detected | 10 |
| 2-Fluorophenol(Surrogate QC Std.) | | 47.1 | |
| Ethylmethanesulfonate | 73571 | Not Detected | 20 |
| Aniline | 77089 | Not Detected | 10 |
| Phenol-d5(Surrogate QC Std.) | | 29.9 | |
| Phenol | 34694 | Not Detected | 10 |
| bis(2-Chloroethyl)ether | 34273 | Not Detected | 10 |
| 2-Chlorophenol | 34586 | Not Detected | 10 |
| 1,3-Dichlorobenzene | 34566 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 1,4-Dichlorobenzene | 34571 | Not Detected | 10 |
| Benzyl alcohol | 77147 | Not Detected | 20 |
| 1,2-Dichlorobenzene | 34536 | Not Detected | 10 |
| 2-Methylphenol | | Not Detected | 10 |
| bis(2-Chloroisopropyl)ether | 34283 | Not Detected | 10 |
| Acetophenone | 81553 | Not Detected | 10 |
| 4-Methylphenol | | Not Detected | 10 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 10 |
| Hexachloroethane | 34396 | Not Detected | 10 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 91.0 | |
| Nitrobenzene | 34447 | Not Detected | 10 |
| n-Nitrosopiperidine | 73619 | Not Detected | 20 |
| Isophorone | 34408 | Not Detected | 10 |
| 2-Nitrophenol | 34591 | Not Detected | 10 |
| 2,4-Dimethylphenol | 34606 | Not Detected | 10 |
| bis(2-Chloroethoxy)methane | 34278 | Not Detected | 10 |
| Benzoic acid | 77247 | Not Detected | 50 |
| 2,4-Dichlorophenol | 34601 | Not Detected | 10 |
| 1,2,4-Trichlorobenzene | 34551 | Not Detected | 10 |
| aa-dimethyl-Phenethylamine | 73564 | Not Detected | 10 |
| Naphthalene | 34696 | Not Detected | 10 |
| 4-Chloroaniline | 73529 | Not Detected | 20 |
| 2,6-Dichlorophenol | 77541 | Not Detected | 10 |
| Hexachlorobutadiene | 38702 | Not Detected | 10 |
| n-Nitroso-di-n-butylamine | 73609 | Not Detected | 10 |
| 4-Chloro-3-methylphenol | 34452 | Not Detected | 20 |
| 2-Methylnaphthalene | 77416 | Not Detected | 10 |
| 1,2,4,5-Tetrachlorobenzene | 77734 | Not Detected | 10 |
| Hexachlorocyclopentadiene | 34386 | Not Detected | 10 |
| 2,4,6-Trichlorophenol | 34621 | Not Detected | 10 |
| 2,4,5-Trichlorophenol | 77687 | Not Detected | 10 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 96.1 | |
| 2-Chloronaphthalene | 34581 | Not Detected | 10 |
| 1-Chloronaphthalene | | Not Detected | 10 |
| 2-Nitroaniline | 78142 | Not Detected | 50 |
| Dimethylphthalate | 34341 | Not Detected | 10 |
| Acenaphthylene | 34200 | Not Detected | 10 |
| 2,6-Dinitrotoluene | 34626 | Not Detected | 10 |
| 3-Nitroaniline | 78300 | Not Detected | 50 |
| Acenaphthene | 34205 | Not Detected | 10 |
| 2,4-Dinitrophenol | 34616 | Not Detected | 50 |
| 4-Nitrophenol | 34646 | Not Detected | 50 |
| Dibenzofuran | 81302 | Not Detected | 10 |
| Pentachlorobenzene | 77793 | Not Detected | 10 |
| 2,4-Dinitrotoluene | 34611 | Not Detected | 10 |
| 1-Naphthylamine | 73600 | Not Detected | 10 |
| 2-Naphthylamine | 73601 | Not Detected | 10 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 10 |
| Diethylphthalate | 34336 | Not Detected | 10 |
| Fluorene | 34381 | Not Detected | 10 |
| 4-Chlorophenyl-phenylether | 34641 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 4-Nitroaniline | 30342 | Not Detected | 20 |
| Diphenylamine | | Not Detected | 10 |
| 4,6-Dinitro-2-methylphenol | 34657 | Not Detected | 50 |
| n-Nitrosodiphenylamine | 34433 | Not Detected | 10 |
| 1,2-Diphenylhydrazine | 34346 | Not Detected | 10 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 98.5 | |
| 4-Bromophenyl-phenylether | 34636 | Not Detected | 10 |
| Phenacetin | | Not Detected | 20 |
| Hexachlorobenzene | 39700 | Not Detected | 10 |
| 4-Aminobiphenyl | 77581 | Not Detected | 20 |
| Pentachlorophenol | 39032 | Not Detected | 50 |
| Pronamide | 39080 | Not Detected | 10 |
| Pentachloronitrobenzene | 81316 | Not Detected | 20 |
| Phenanthrene | 34461 | Not Detected | 10 |
| Anthracene | 34220 | Not Detected | 10 |
| Di-n-butylphthalate | 39110 | Not Detected | 10 |
| Fluoranthene | 34376 | Not Detected | 10 |
| Benzidine | 39120 | Not Detected | 10 |
| Pyrene | 34469 | Not Detected | 10 |
| Terphenyl-d14(Surrogate QC Std.) | | 114 | |
| p-Dimethylaminoazobenzene | 73558 | Not Detected | 10 |
| Butylbenzylphthalate | 34292 | Not Detected | 10 |
| Benzo[a]anthracene | 34526 | Not Detected | 10 |
| 3,3'-Dichlorobenzidine | 34631 | Not Detected | 20 |
| Chyrsene | 34320 | Not Detected | 10 |
| bis(2-Ethylhexyl)phthalate | 39100 | Not Detected | 10 |
| Di-n-octylphthalate | 34596 | Not Detected | 10 |
| Benzo[b]fluoranthene | 34230 | Not Detected | 10 |
| Benzo[k]fluoranthene | 34242 | Not Detected | 10 |
| 7,12-Dimethylbenz(a)anthracene | 73559 | Not Detected | 10 |
| Benzo[a]pyrene | 34247 | Not Detected | 10 |
| 3-Methylcholanthrene | 73591 | Not Detected | 10 |
| Dibenz(a,j)acridine | | Not Detected | 10 |
| Indeno[1,2,3-cd]pyrene | 34403 | Not Detected | 10 |
| Dibenz[a,h]anthracene | 34556 | Not Detected | 10 |
| Benzo[g,h,i]perylene | 34521 | Not Detected | 10 |
| Pyridine | 77045 | Not Detected | 10 |
| ALPHA BHC | 39337 | Not Detected | 10 |
| GAMMA BHC | 39340 | Not Detected | 10 |
| BETA BHC | 39338 | Not Detected | 10 |
| DELTA BHC | 34259 | Not Detected | 10 |
| HEPTACHLOR | 39410 | Not Detected | 10 |
| ALDRIN | 39330 | Not Detected | 10 |
| HEPTACHLOR EPOXIDE | 39420 | Not Detected | 25 |
| ENDOSULFAN 1 | 34361 | Not Detected | 50 |
| DIELDRIN | 39380 | Not Detected | 10 |
| P,P' DDE | 39320 | Not Detected | 10 |
| ENDRIN | 39390 | Not Detected | 20 |
| ENDOSULFAN 2 | 34356 | Not Detected | 50 |
| P,P' DDD | 39310 | Not Detected | 10 |
| ENDRIN ALDEHYDE | 34366 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| ENDOSULFAN SULFATE | 34351 | Not Detected | 25 |
| P,P' DDT | 39300 | Not Detected | 10 |

Data for ICP METALS FOR HAZARDOUS WASTE ug/l:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01077 | Not Detected | 30 |
| Arsenic | 01002 | Not Detected | 30 |
| Barium | 01007 | 17 | 10 |
| Cadmium | 01027 | Not Detected | 5 |
| Chromium | 01034 | Not Detected | 20 |
| Nickel | 01067 | Not Detected | 20 |
| Lead | 01051 | Not Detected | 50 |
| Selenium | 01147 | Not Detected | 50 |

Sample comments:

FROM SAVANNAH RIVER UPSTREAM FROM SITE

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 17, 1996

To: Steve White
HWMB

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13457** Source ID#: ADHOC
DNR project: HW
sample description: CESTAINTEED HW6036
Sample Collector: S. WHITE
Sample collection date: 04/17/96 Time: 10:50
Lab submittal date: 04/18/96 Time: 15:30
DNR Lab reference: HW6036 LABORATORY: METALS

CT-SW-3

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN WATER | see below | ug/l | 1.0 |
| Semivolatile water sample (8270) | see below | ug/l | 10 |
| Extraction 3510 SemiVol. L/L | LEM | ml | |
| ICP METALS FOR HAZARDOUS WASTE | see below | ug/l | |

Data for BTEX COMPOUNDS IN WATER ug/l:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

Data for Semivolatile water sample (8270) ug/l:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34438 | Not Detected | 10 |
| 2-Picoline | 77088 | Not Detected | 10 |
| Methylmethanesulfonate | 73595 | Not Detected | 10 |
| 2-Fluorophenol(Surrogate QC Std.) | | 49.6 | |
| Ethylmethanesulfonate | 73571 | Not Detected | 20 |
| Aniline | 77089 | Not Detected | 10 |
| Phenol-d5(Surrogate QC Std.) | | 33.4 | |
| Phenol | 34694 | Not Detected | 10 |
| bis(2-Chloroethyl)ether | 34273 | Not Detected | 10 |
| 2-Chlorophenol | 34586 | Not Detected | 10 |
| 1,3-Dichlorobenzene | 34566 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 1,4-Dichlorobenzene | 34571 | Not Detected | 10 |
| Benzyl alcohol | 77147 | Not Detected | 20 |
| 1,2-Dichlorobenzene | 34536 | Not Detected | 10 |
| 2-Methylphenol | | Not Detected | 10 |
| bis(2-Chloroisopropyl)ether | 34283 | Not Detected | 10 |
| Acetophenone | 81553 | Not Detected | 10 |
| 4-Methylphenol | | Not Detected | 10 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 10 |
| Hexachloroethane | 34396 | Not Detected | 10 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 85.9 | |
| Nitrobenzene | 34447 | Not Detected | 10 |
| n-Nitrosopiperidine | 73619 | Not Detected | 20 |
| Isophorone | 34408 | Not Detected | 10 |
| 2-Nitrophenol | 34591 | Not Detected | 10 |
| 2,4-Dimethylphenol | 34606 | Not Detected | 10 |
| bis(2-Chloroethoxy)methane | 34278 | Not Detected | 10 |
| Benzoic acid | 77247 | Not Detected | 50 |
| 2,4-Dichlorophenol | 34601 | Not Detected | 10 |
| 1,2,4-Trichlorobenzene | 34551 | Not Detected | 10 |
| aa-dimethyl-Phenethylamine | 73564 | Not Detected | 10 |
| Naphthalene | 34696 | Not Detected | 10 |
| 4-Chloroaniline | 73529 | Not Detected | 20 |
| 2,6-Dichlorophenol | 77541 | Not Detected | 10 |
| Hexachlorobutadiene | 38702 | Not Detected | 10 |
| n-Nitroso-di-n-butylamine | 73609 | Not Detected | 10 |
| 4-Chloro-3-methylphenol | 34452 | Not Detected | 20 |
| 2-Methylnaphthalene | 77416 | Not Detected | 10 |
| 1,2,4,5-Tetrachlorobenzene | 77734 | Not Detected | 10 |
| Hexachlorocyclopentadiene | 34386 | Not Detected | 10 |
| 2,4,6-Trichlorophenol | 34621 | Not Detected | 10 |
| 2,4,5-Trichlorophenol | 77687 | Not Detected | 10 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 89.0 | |
| 2-Chloronaphthalene | 34581 | Not Detected | 10 |
| 1-Chloronaphthalene | | Not Detected | 10 |
| 2-Nitroaniline | 78142 | Not Detected | 50 |
| Dimethylphthalate | 34341 | Not Detected | 10 |
| Acenaphthylene | 34200 | Not Detected | 10 |
| 2,6-Dinitrotoluene | 34626 | Not Detected | 10 |
| 3-Nitroaniline | 78300 | Not Detected | 50 |
| Acenaphthene | 34205 | Not Detected | 10 |
| 2,4-Dinitrophenol | 34616 | Not Detected | 50 |
| 4-Nitrophenol | 34646 | Not Detected | 50 |
| Dibenzofuran | 81302 | Not Detected | 10 |
| Pentachlorobenzene | 77793 | Not Detected | 10 |
| 2,4-Dinitrotoluene | 34611 | Not Detected | 10 |
| 1-Naphthylamine | 73600 | Not Detected | 10 |
| 2-Naphthylamine | 73601 | Not Detected | 10 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 10 |
| Diethylphthalate | 34336 | Not Detected | 10 |
| Fluorene | 34381 | Not Detected | 10 |
| 4-Chlorophenyl-phenylether | 34641 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 4-Nitroaniline | 30342 | Not Detected | 20 |
| Diphenylamine | | Not Detected | 10 |
| 4,6-Dinitro-2-methylphenol | 34657 | Not Detected | 50 |
| n-Nitrosodiphenylamine | 34433 | Not Detected | 10 |
| 1,2-Diphenylhydrazine | 34346 | Not Detected | 10 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 85.5 | |
| 4-Bromophenyl-phenylether | 34636 | Not Detected | 10 |
| Phenacetin | | Not Detected | 20 |
| Hexachlorobenzene | 39700 | Not Detected | 10 |
| 4-Aminobiphenyl | 77581 | Not Detected | 20 |
| Pentachlorophenol | 39032 | Not Detected | 50 |
| Pronamide | 39080 | Not Detected | 10 |
| Pentachloronitrobenzene | 81316 | Not Detected | 20 |
| Phenanthrene | 34461 | Not Detected | 10 |
| Anthracene | 34220 | Not Detected | 10 |
| Di-n-butylphthalate | 39110 | Not Detected | 10 |
| Fluoranthene | 34376 | Not Detected | 10 |
| Benzidine | 39120 | Not Detected | 10 |
| Pyrene | 34469 | Not Detected | 10 |
| Terphenyl-d14(Surrogate QC Std.) | | 97.3 | |
| p-Dimethylaminoazobenzene | 73558 | Not Detected | 10 |
| Butylbenzylphthalate | 34292 | Not Detected | 10 |
| Benzo[a]anthracene | 34526 | Not Detected | 10 |
| 3,3'-Dichlorobenzidine | 34631 | Not Detected | 20 |
| Chyrsene | 34320 | Not Detected | 10 |
| bis(2-Ethylhexyl)phthalate | 39100 | Not Detected | 10 |
| Di-n-octylphthalate | 34596 | Not Detected | 10 |
| Benzo[b]fluoranthene | 34230 | Not Detected | 10 |
| Benzo[k]fluoranthene | 34242 | Not Detected | 10 |
| 7,12-Dimethylbenz(a)anthracene | 73559 | Not Detected | 10 |
| Benzo[a]pyrene | 34247 | Not Detected | 10 |
| 3-Methylcholanthrene | 73591 | Not Detected | 10 |
| Dibenz(a,j)acridine | | Not Detected | 10 |
| Indeno[1,2,3-cd]pyrene | 34403 | Not Detected | 10 |
| Dibenz[a,h]anthracene | 34556 | Not Detected | 10 |
| Benzo[g,h,i]perylene | 34521 | Not Detected | 10 |
| Pyridine | 77045 | Not Detected | 10 |
| ALPHA BHC | 39337 | Not Detected | 10 |
| GAMMA BHC | 39340 | Not Detected | 10 |
| BETA BHC | 39338 | Not Detected | 10 |
| DELTA BHC | 34259 | Not Detected | 10 |
| HEPTACHLOR | 39410 | Not Detected | 10 |
| ALDRIN | 39330 | Not Detected | 10 |
| HEPTACHLOR EPOXIDE | 39420 | Not Detected | 25 |
| ENDOSULFAN 1 | 34361 | Not Detected | 50 |
| DIELDRIN | 39380 | Not Detected | 10 |
| P,P' DDE | 39320 | Not Detected | 10 |
| ENDRIN | 39390 | Not Detected | 20 |
| ENDOSULFAN 2 | 34356 | Not Detected | 50 |
| P,P' DDD | 39310 | Not Detected | 10 |
| ENDRIN ALDEHYDE | 34366 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| ENDOSULFAN SULFATE | 34351 | Not Detected | 25 |
| P,P' DDT | 39300 | Not Detected | 10 |

Data for ICP METALS FOR HAZARDOUS WASTE ug/l:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01077 | Not Detected | 30 |
| Arsenic | 01002 | Not Detected | 30 |
| Barium | 01007 | 12 | 10 |
| Cadmium | 01027 | Not Detected | 5 |
| Chromium | 01034 | Not Detected | 20 |
| Nickel | 01067 | Not Detected | 20 |
| Lead | 01051 | 51 | 50 |
| Selenium | 01147 | 63 | 50 |

Sample comments:

FROM SAVANNAH RIVER DOWNSTREAM FROM SITE

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

RECEIVED
MAY - 7 1996
HAZARDOUS WASTE MANAGEMENT

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13432** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6040
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:00
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6040 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| **2-Fluorophenol(Surrogate QC Std.)** | | **23.9** | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 29.6 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 27.4 | |
| Nitrobenzene | 34450 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| **2-Fluorobiphenyl(Surrogate QC Std.)** | | **29.1** | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Trace* | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Trace* | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Trace* | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 42.7 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | 1200 | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | 922 | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Trace* | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 37.9 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Trace* | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 6.3 | 3 |
| Barium | 01008 | 29 | 1 |
| Cadmium | 01028 | 1.3 | 1 |
| Chromium | 01029 | 13 | 2 |
| Lead | 01052 | 74 | 5 |
| Nickel | 01068 | 23 | 2 |
| Selenium | 01148 | Not Detected | 5 |

Summary of specification violations or warnings:

Analyte: 2-Fluorophenol(Surrogate QC Std.)
Lower specification value: 25 Result: 23.9

Analyte: 2-Fluorobiphenyl(Surrogate QC Std.)
Lower specification value: 30 Result: 29.1

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13433** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6041
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:05
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6041 LABORATORY: METALS

| **Parameter** | **Result** | **Units** | **MDL** |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| **Component Name** | | **Result** | **Component MDL** |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 40.1 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 52.3 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 42.1 | |
| Nitrobenzene | 34450 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | 2070 | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | 1770 | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 44.8 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | 1990 | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | 1720 | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | 2140 | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 69.6 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | 5980 | 660 |
| Anthracene | 34223 | 810 | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | 5000 | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | 3430 | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 62.8 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | 1090 | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | 1190 | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | 814 | 660 |
| Benzo[k]fluoranthene | 34245 | Trace* | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Trace* | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Trace* | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Trace* | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| Sulfur | | 1240 TIE** | |
| *Less Than Quantiation Limit | | * | |
| **Tentatively Identified/Estimated Value | | ** | |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 10 | 3 |
| Barium | 01008 | 22 | 1 |
| Cadmium | 01028 | 1.4 | 1 |
| Chromium | 01029 | 7.4 | 2 |
| Lead | 01052 | 48 | 5 |
| Nickel | 01068 | 5.8 | 2 |
| Selenium | 01148 | Not Detected | 5 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13434** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6043
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:10
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6043 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 38.9 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 49.4 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 36.7 | |
| Nitrobenzene | 34450 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 30.7 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 58.0 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Trace* | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 53.2 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 4.7 | 3 |
| Barium | 01008 | 44 | 1 |
| Cadmium | 01028 | 2.2 | 1 |
| Chromium | 01029 | 27 | 2 |
| Lead | 01052 | 27 | 5 |
| Nickel | 01068 | 8.8 | 2 |
| Selenium | 01148 | Not Detected | 5 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13435** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6044
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:15
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6044 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 36.1 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 48.6 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 32.0 | |
| Nitrobenzene | 34450 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| **2-Fluorobiphenyl(Surrogate QC Std.)** | | **20.5** | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 54.9 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Trace* | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Trace* | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Trace* | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 44.3 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 7.4 | 3 |
| Barium | 01008 | 31 | 1 |
| Cadmium | 01028 | 1.6 | 1 |
| Chromium | 01029 | 24 | 2 |
| Lead | 01052 | 20 | 5 |
| Nickel | 01068 | 6.6 | 2 |
| Selenium | 01148 | Not Detected | 5 |

Summary of specification violations or warnings:

Analyte: 2-Fluorobiphenyl(Surrogate QC Std.)
Lower specification value: 30 Result: 20.5

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13436** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6045
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:20
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6045 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 50.3 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 59.7 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 51.6 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 46.8 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 69.2 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Trace* | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Trace* | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Trace* | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 59.7 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| o-XYLENES | Not Detected | 2 UG/KG |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13437** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6046
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:25
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6046 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 35.6 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 49.1 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 31.9 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 41.7 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 68.1 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Trace* | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 59.8 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantation Limit | | * | |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| o-XYLENES | Not Detected | 2 UG/KG |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13438** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6047
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:30
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6047 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 35.2 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 50.1 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 34.9 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 37.3 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 57.5 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 47.3 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13440** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6048
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:35
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6048 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 29.0 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 42.1 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 24.5 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | 7970 | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Trace* | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Trace* | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| **2-Fluorobiphenyl(Surrogate QC Std.)** | | **16.3** | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 31.6 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Trace* | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 29.4 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| Sulfur | | 6780 TIE** | |
| *Less Than Quantitation Limit | | * | |
| **Tentatively Identified/Estimated Value | | ** | |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Summary of specification violations or warnings:

Analyte: 2-Fluorobiphenyl(Surrogate QC Std.)
Lower specification value: 30 Result: 16.3

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13442** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6049
Sample Collector: N. EMRICK Sample collection date: 04/17/96
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6049 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 43.8 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 51.6 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 41.9 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | 3800 | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| **2-Fluorobiphenyl(Surrogate QC Std.)** | | **23.7** | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 58.9 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 40.1 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| Sulfur | | 4140 TIE** | |

**Tentatively Identified/Estimated Value **

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| o-XYLENES | Not Detected | 2 UG/KG |

Summary of specification violations or warnings:

Analyte: 2-Fluorobiphenyl(Surrogate QC Std.)
Lower specification value: 30 Result: 23.7

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13443** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6050
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 10:00
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6050 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN WATER | see below | ug/l | 1.0 |
| Semivolatile water sample (8270) | see below | ug/l | 10 |
| Extraction 3510 SemiVol. L/L | LEM | ml | |

Data for BTEX COMPOUNDS IN WATER ug/l:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

Data for Semivolatile water sample (8270) ug/l:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34438 | Not Detected | 10 |
| 2-Picoline | 77088 | Not Detected | 10 |
| Methylmethanesulfonate | 73595 | Not Detected | 10 |
| 2-Fluorophenol(Surrogate QC Std.) | | 47.2 | |
| Ethylmethanesulfonate | 73571 | Not Detected | 20 |
| Aniline | 77089 | Not Detected | 10 |
| Phenol-d5(Surrogate QC Std.) | | 29.7 | |
| Phenol | 34694 | Not Detected | 10 |
| bis(2-Chloroethyl)ether | 34273 | Not Detected | 10 |
| 2-Chlorophenol | 34586 | Not Detected | 10 |
| 1,3-Dichlorobenzene | 34566 | Not Detected | 10 |
| 1,4-Dichlorobenzene | 34571 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Benzyl alcohol | 77147 | Not Detected | 20 |
| 1,2-Dichlorobenzene | 34536 | Not Detected | 10 |
| 2-Methylphenol | | Not Detected | 10 |
| bis(2-Chloroisopropyl)ether | 34283 | Not Detected | 10 |
| Acetophenone | 81553 | Not Detected | 10 |
| 4-Methylphenol | | Not Detected | 10 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 10 |
| Hexachloroethane | 34396 | Not Detected | 10 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 87.7 | |
| Nitrobenzene | 34447 | Not Detected | 10 |
| n-Nitrosopiperidine | 73619 | Not Detected | 20 |
| Isophorone | 34408 | Not Detected | 10 |
| 2-Nitrophenol | 34591 | Not Detected | 10 |
| 2,4-Dimethylphenol | 34606 | Not Detected | 10 |
| bis(2-Chloroethoxy)methane | 34278 | Not Detected | 10 |
| Benzoic acid | 77247 | Not Detected | 50 |
| 2,4-Dichlorophenol | 34601 | Not Detected | 10 |
| 1,2,4-Trichlorobenzene | 34551 | Not Detected | 10 |
| aa-dimethyl-Phenethylamine | 73564 | Not Detected | 10 |
| Naphthalene | 34696 | Not Detected | 10 |
| 4-Chloroaniline | 73529 | Not Detected | 20 |
| 2,6-Dichlorophenol | 77541 | Not Detected | 10 |
| Hexachlorobutadiene | 38702 | Not Detected | 10 |
| n-Nitroso-di-n-butylamine | 73609 | Not Detected | 10 |
| 4-Chloro-3-methylphenol | 34452 | Not Detected | 20 |
| 2-Methylnaphthalene | 77416 | Not Detected | 10 |
| 1,2,4,5-Tetrachlorobenzene | 77734 | Not Detected | 10 |
| Hexachlorocyclopentadiene | 34386 | Not Detected | 10 |
| 2,4,6-Trichlorophenol | 34621 | Not Detected | 10 |
| 2,4,5-Trichlorophenol | 77687 | Not Detected | 10 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 88.2 | |
| 2-Chloronaphthalene | 34581 | Not Detected | 10 |
| 1-Chloronaphthalene | | Not Detected | 10 |
| 2-Nitroaniline | 78142 | Not Detected | 50 |
| Dimethylphthalate | 34341 | Not Detected | 10 |
| Acenaphthylene | 34200 | Not Detected | 10 |
| 2,6-Dinitrotoluene | 34626 | Not Detected | 10 |
| 3-Nitroaniline | 78300 | Not Detected | 50 |
| Acenaphthene | 34205 | Not Detected | 10 |
| 2,4-Dinitrophenol | 34616 | Not Detected | 50 |
| 4-Nitrophenol | 34646 | Not Detected | 50 |
| Dibenzofuran | 81302 | Not Detected | 10 |
| Pentachlorobenzene | 77793 | Not Detected | 10 |
| 2,4-Dinitrotoluene | 34611 | Not Detected | 10 |
| 1-Naphthylamine | 73600 | Not Detected | 10 |
| 2-Naphthylamine | 73601 | Not Detected | 10 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 10 |
| Diethylphthalate | 34336 | Not Detected | 10 |
| Fluorene | 34381 | Not Detected | 10 |
| 4-Chlorophenyl-phenylether | 34641 | Not Detected | 10 |
| 4-Nitroaniline | 30342 | Not Detected | 20 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Diphenylamine | | Not Detected | 10 |
| 4,6-Dinitro-2-methylphenol | 34657 | Not Detected | 50 |
| n-Nitrosodiphenylamine | 34433 | Not Detected | 10 |
| 1,2-Diphenylhydrazine | 34346 | Not Detected | 10 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 91.0 | |
| 4-Bromophenyl-phenylether | 34636 | Not Detected | 10 |
| Phenacetin | | Not Detected | 20 |
| Hexachlorobenzene | 39700 | Not Detected | 10 |
| 4-Aminobiphenyl | 77581 | Not Detected | 20 |
| Pentachlorophenol | 39032 | Not Detected | 50 |
| Pronamide | 39080 | Not Detected | 10 |
| Pentachloronitrobenzene | 81316 | Not Detected | 20 |
| Phenanthrene | 34461 | Not Detected | 10 |
| Anthracene | 34220 | Not Detected | 10 |
| Di-n-butylphthalate | 39110 | Not Detected | 10 |
| Fluoranthene | 34376 | Not Detected | 10 |
| Benzidine | 39120 | Not Detected | 10 |
| Pyrene | 34469 | Not Detected | 10 |
| Terphenyl-d14(Surrogate QC Std.) | | 87.0 | |
| p-Dimethylaminoazobenzene | 73558 | Not Detected | 10 |
| Butylbenzylphthalate | 34292 | Not Detected | 10 |
| Benzo[a]anthracene | 34526 | Not Detected | 10 |
| 3,3'-Dichlorobenzidine | 34631 | Not Detected | 20 |
| Chyrsene | 34320 | Not Detected | 10 |
| bis(2-Ethylhexyl)phthalate | 39100 | Not Detected | 10 |
| Di-n-octylphthalate | 34596 | Not Detected | 10 |
| Benzo[b]fluoranthene | 34230 | Not Detected | 10 |
| Benzo[k]fluoranthene | 34242 | Not Detected | 10 |
| 7,12-Dimethylbenz(a)anthracene | 73559 | Not Detected | 10 |
| Benzo[a]pyrene | 34247 | Not Detected | 10 |
| 3-Methylcholanthrene | 73591 | Not Detected | 10 |
| Dibenz(a,j)acridine | | Not Detected | 10 |
| Indeno[1,2,3-cd]pyrene | 34403 | Not Detected | 10 |
| Dibenz[a,h]anthracene | 34556 | Not Detected | 10 |
| Benzo[g,h,i]perylene | 34521 | Not Detected | 10 |
| Pyridine | 77045 | Not Detected | 10 |
| ALPHA BHC | 39337 | Not Detected | 10 |
| GAMMA BHC | 39340 | Not Detected | 10 |
| BETA BHC | 39338 | Not Detected | 10 |
| DELTA BHC | 34259 | Not Detected | 10 |
| HEPTACHLOR | 39410 | Not Detected | 10 |
| ALDRIN | 39330 | Not Detected | 10 |
| HEPTACHLOR EPOXIDE | 39420 | Not Detected | 25 |
| ENDOSULFAN 1 | 34361 | Not Detected | 50 |
| DIELDRIN | 39380 | Not Detected | 10 |
| P,P' DDE | 39320 | Not Detected | 10 |
| ENDRIN | 39390 | Not Detected | 20 |
| ENDOSULFAN 2 | 34356 | Not Detected | 50 |
| P,P' DDD | 39310 | Not Detected | 10 |
| ENDRIN ALDEHYDE | 34366 | Not Detected | 10 |
| ENDOSULFAN SULFATE | 34351 | Not Detected | 25 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| P,P' DDT | 39300 | Not Detected | 10 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13445** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6051
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 10:15
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6051 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN WATER | see below | ug/l | 1.0 |
| Semivolatile water sample (8270) | see below | ug/l | 10 |
| Extraction 3510 SemiVol. L/L | LEM | ml | |

Data for BTEX COMPOUNDS IN WATER ug/l:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

Data for Semivolatile water sample (8270) ug/l:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34438 | Not Detected | 10 |
| 2-Picoline | 77088 | Not Detected | 10 |
| Methylmethanesulfonate | 73595 | Not Detected | 10 |
| 2-Fluorophenol(Surrogate QC Std.) | | 44.0 | |
| Ethylmethanesulfonate | 73571 | Not Detected | 20 |
| Aniline | 77089 | Not Detected | 10 |
| Phenol-d5(Surrogate QC Std.) | | 28.6 | |
| Phenol | 34694 | Not Detected | 10 |
| bis(2-Chloroethyl)ether | 34273 | Not Detected | 10 |
| 2-Chlorophenol | 34586 | Not Detected | 10 |
| 1,3-Dichlorobenzene | 34566 | Not Detected | 10 |
| 1,4-Dichlorobenzene | 34571 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Benzyl alcohol | 77147 | Not Detected | 20 |
| 1,2-Dichlorobenzene | 34536 | Not Detected | 10 |
| 2-Methylphenol | | Not Detected | 10 |
| bis(2-Chloroisopropyl)ether | 34283 | Not Detected | 10 |
| Acetophenone | 81553 | Not Detected | 10 |
| 4-Methylphenol | | Not Detected | 10 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 10 |
| Hexachloroethane | 34396 | Not Detected | 10 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 87.6 | |
| Nitrobenzene | 34447 | Not Detected | 10 |
| n-Nitrosopiperidine | 73619 | Not Detected | 20 |
| Isophorone | 34408 | Not Detected | 10 |
| 2-Nitrophenol | 34591 | Not Detected | 10 |
| 2,4-Dimethylphenol | 34606 | Not Detected | 10 |
| bis(2-Chloroethoxy)methane | 34278 | Not Detected | 10 |
| Benzoic acid | 77247 | Not Detected | 50 |
| 2,4-Dichlorophenol | 34601 | Not Detected | 10 |
| 1,2,4-Trichlorobenzene | 34551 | Not Detected | 10 |
| aa-dimethyl-Phenethylamine | 73564 | Not Detected | 10 |
| Naphthalene | 34696 | Not Detected | 10 |
| 4-Chloroaniline | 73529 | Not Detected | 20 |
| 2,6-Dichlorophenol | 77541 | Not Detected | 10 |
| Hexachlorobutadiene | 38702 | Not Detected | 10 |
| n-Nitroso-di-n-butylamine | 73609 | Not Detected | 10 |
| 4-Chloro-3-methylphenol | 34452 | Not Detected | 20 |
| 2-Methylnaphthalene | 77416 | Not Detected | 10 |
| 1,2,4,5-Tetrachlorobenzene | 77734 | Not Detected | 10 |
| Hexachlorocyclopentadiene | 34386 | Not Detected | 10 |
| 2,4,6-Trichlorophenol | 34621 | Not Detected | 10 |
| 2,4,5-Trichlorophenol | 77687 | Not Detected | 10 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 88.8 | |
| 2-Chloronaphthalene | 34581 | Not Detected | 10 |
| 1-Chloronaphthalene | | Not Detected | 10 |
| 2-Nitroaniline | 78142 | Not Detected | 50 |
| Dimethylphthalate | 34341 | Not Detected | 10 |
| Acenaphthylene | 34200 | Not Detected | 10 |
| 2,6-Dinitrotoluene | 34626 | Not Detected | 10 |
| 3-Nitroaniline | 78300 | Not Detected | 50 |
| Acenaphthene | 34205 | Not Detected | 10 |
| 2,4-Dinitrophenol | 34616 | Not Detected | 50 |
| 4-Nitrophenol | 34646 | Not Detected | 50 |
| Dibenzofuran | 81302 | Not Detected | 10 |
| Pentachlorobenzene | 77793 | Not Detected | 10 |
| 2,4-Dinitrotoluene | 34611 | Not Detected | 10 |
| 1-Naphthylamine | 73600 | Not Detected | 10 |
| 2-Naphthylamine | 73601 | Not Detected | 10 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 10 |
| Diethylphthalate | 34336 | Not Detected | 10 |
| Fluorene | 34381 | Not Detected | 10 |
| 4-Chlorophenyl-phenylether | 34641 | Not Detected | 10 |
| 4-Nitroaniline | 30342 | Not Detected | 20 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Diphenylamine | | Not Detected | 10 |
| 4,6-Dinitro-2-methylphenol | 34657 | Not Detected | 50 |
| n-Nitrosodiphenylamine | 34433 | Not Detected | 10 |
| 1,2-Diphenylhydrazine | 34346 | Not Detected | 10 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 89.6 | |
| 4-Bromophenyl-phenylether | 34636 | Not Detected | 10 |
| Phenacetin | | Not Detected | 20 |
| Hexachlorobenzene | 39700 | Not Detected | 10 |
| 4-Aminobiphenyl | 77581 | Not Detected | 20 |
| Pentachlorophenol | 39032 | Not Detected | 50 |
| Pronamide | 39080 | Not Detected | 10 |
| Pentachloronitrobenzene | 81316 | Not Detected | 20 |
| Phenanthrene | 34461 | Not Detected | 10 |
| Anthracene | 34220 | Not Detected | 10 |
| Di-n-butylphthalate | 39110 | Not Detected | 10 |
| Fluoranthene | 34376 | Not Detected | 10 |
| Benzidine | 39120 | Not Detected | 10 |
| Pyrene | 34469 | Not Detected | 10 |
| Terphenyl-d14(Surrogate QC Std.) | | 92.8 | |
| p-Dimethylaminoazobenzene | 73558 | Not Detected | 10 |
| Butylbenzylphthalate | 34292 | Not Detected | 10 |
| Benzo[a]anthracene | 34526 | Not Detected | 10 |
| 3,3'-Dichlorobenzidine | 34631 | Not Detected | 20 |
| Chyrsene | 34320 | Not Detected | 10 |
| bis(2-Ethylhexyl)phthalate | 39100 | Not Detected | 10 |
| Di-n-octylphthalate | 34596 | Not Detected | 10 |
| Benzo[b]fluoranthene | 34230 | Not Detected | 10 |
| Benzo[k]fluoranthene | 34242 | Not Detected | 10 |
| 7,12-Dimethylbenz(a)anthracene | 73559 | Not Detected | 10 |
| Benzo[a]pyrene | 34247 | Not Detected | 10 |
| 3-Methylcholanthrene | 73591 | Not Detected | 10 |
| Dibenz(a,j)acridine | | Not Detected | 10 |
| Indeno[1,2,3-cd]pyrene | 34403 | Not Detected | 10 |
| Dibenz[a,h]anthracene | 34556 | Not Detected | 10 |
| Benzo[g,h,i]perylene | 34521 | Not Detected | 10 |
| Pyridine | 77045 | Not Detected | 10 |
| ALPHA BHC | 39337 | Not Detected | 10 |
| GAMMA BHC | 39340 | Not Detected | 10 |
| BETA BHC | 39338 | Not Detected | 10 |
| DELTA BHC | 34259 | Not Detected | 10 |
| HEPTACHLOR | 39410 | Not Detected | 10 |
| ALDRIN | 39330 | Not Detected | 10 |
| HEPTACHLOR EPOXIDE | 39420 | Not Detected | 25 |
| ENDOSULFAN 1 | 34361 | Not Detected | 50 |
| DIELDRIN | 39380 | Not Detected | 10 |
| P,P' DDE | 39320 | Not Detected | 10 |
| ENDRIN | 39390 | Not Detected | 20 |
| ENDOSULFAN 2 | 34356 | Not Detected | 50 |
| P,P' DDD | 39310 | Not Detected | 10 |
| ENDRIN ALDEHYDE | 34366 | Not Detected | 10 |
| ENDOSULFAN SULFATE | 34351 | Not Detected | 25 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| P,P' DDT | 39300 Not Detected | 10 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13447** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6052
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 10:30
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6052 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN WATER | see below | ug/l | 1.0 |
| Semivolatile water sample (8270) | see below | ug/l | 10 |
| Extraction 3510 SemiVol. L/L | LEM | ml | |

Data for BTEX COMPOUNDS IN WATER ug/l:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

Data for Semivolatile water sample (8270) ug/l:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34438 | Not Detected | 10 |
| 2-Picoline | 77088 | Not Detected | 10 |
| Methylmethanesulfonate | 73595 | Not Detected | 10 |
| 2-Fluorophenol(Surrogate QC Std.) | | 49.2 | |
| Ethylmethanesulfonate | 73571 | Not Detected | 20 |
| Aniline | 77089 | Not Detected | 10 |
| Phenol-d5(Surrogate QC Std.) | | 31.2 | |
| Phenol | 34694 | Not Detected | 10 |
| bis(2-Chloroethyl)ether | 34273 | Not Detected | 10 |
| 2-Chlorophenol | 34586 | Not Detected | 10 |
| 1,3-Dichlorobenzene | 34566 | Not Detected | 10 |
| 1,4-Dichlorobenzene | 34571 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Benzyl alcohol | 77147 | Not Detected | 20 |
| 1,2-Dichlorobenzene | 34536 | Not Detected | 10 |
| 2-Methylphenol | | Not Detected | 10 |
| bis(2-Chloroisopropyl)ether | 34283 | Not Detected | 10 |
| Acetophenone | 81553 | Not Detected | 10 |
| 4-Methylphenol | | Not Detected | 10 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 10 |
| Hexachloroethane | 34396 | Not Detected | 10 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 98.7 | |
| Nitrobenzene | 34447 | Not Detected | 10 |
| n-Nitrosopiperidine | 73619 | Not Detected | 20 |
| Isophorone | 34408 | Not Detected | 10 |
| 2-Nitrophenol | 34591 | Not Detected | 10 |
| 2,4-Dimethylphenol | 34606 | Not Detected | 10 |
| bis(2-Chloroethoxy)methane | 34278 | Not Detected | 10 |
| Benzoic acid | 77247 | Not Detected | 50 |
| 2,4-Dichlorophenol | 34601 | Not Detected | 10 |
| 1,2,4-Trichlorobenzene | 34551 | Not Detected | 10 |
| aa-dimethyl-Phenethylamine | 73564 | Not Detected | 10 |
| Naphthalene | 34696 | Not Detected | 10 |
| 4-Chloroaniline | 73529 | Not Detected | 20 |
| 2,6-Dichlorophenol | 77541 | Not Detected | 10 |
| Hexachlorobutadiene | 38702 | Not Detected | 10 |
| n-Nitroso-di-n-butylamine | 73609 | Not Detected | 10 |
| 4-Chloro-3-methylphenol | 34452 | Not Detected | 20 |
| 2-Methylnaphthalene | 77416 | Not Detected | 10 |
| 1,2,4,5-Tetrachlorobenzene | 77734 | Not Detected | 10 |
| Hexachlorocyclopentadiene | 34386 | Not Detected | 10 |
| 2,4,6-Trichlorophenol | 34621 | Not Detected | 10 |
| 2,4,5-Trichlorophenol | 77687 | Not Detected | 10 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 99.4 | |
| 2-Chloronaphthalene | 34581 | Not Detected | 10 |
| 1-Chloronaphthalene | | Not Detected | 10 |
| 2-Nitroaniline | 78142 | Not Detected | 50 |
| Dimethylphthalate | 34341 | Not Detected | 10 |
| Acenaphthylene | 34200 | Not Detected | 10 |
| 2,6-Dinitrotoluene | 34626 | Not Detected | 10 |
| 3-Nitroaniline | 78300 | Not Detected | 50 |
| Acenaphthene | 34205 | Not Detected | 10 |
| 2,4-Dinitrophenol | 34616 | Not Detected | 50 |
| 4-Nitrophenol | 34646 | Not Detected | 50 |
| Dibenzofuran | 81302 | Not Detected | 10 |
| Pentachlorobenzene | 77793 | Not Detected | 10 |
| 2,4-Dinitrotoluene | 34611 | Not Detected | 10 |
| 1-Naphthylamine | 73600 | Not Detected | 10 |
| 2-Naphthylamine | 73601 | Not Detected | 10 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 10 |
| Diethylphthalate | 34336 | Not Detected | 10 |
| Fluorene | 34381 | Not Detected | 10 |
| 4-Chlorophenyl-phenylether | 34641 | Not Detected | 10 |
| 4-Nitroaniline | 30342 | Not Detected | 20 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Diphenylamine | | Not Detected | 10 |
| 4,6-Dinitro-2-methylphenol | 34657 | Not Detected | 50 |
| n-Nitrosodiphenylamine | 34433 | Not Detected | 10 |
| 1,2-Diphenylhydrazine | 34346 | Not Detected | 10 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 95.4 | |
| 4-Bromophenyl-phenylether | 34636 | Not Detected | 10 |
| Phenacetin | | Not Detected | 20 |
| Hexachlorobenzene | 39700 | Not Detected | 10 |
| 4-Aminobiphenyl | 77581 | Not Detected | 20 |
| Pentachlorophenol | 39032 | Not Detected | 50 |
| Pronamide | 39080 | Not Detected | 10 |
| Pentachloronitrobenzene | 81316 | Not Detected | 20 |
| Phenanthrene | 34461 | Not Detected | 10 |
| Anthracene | 34220 | Not Detected | 10 |
| Di-n-butylphthalate | 39110 | Not Detected | 10 |
| Fluoranthene | 34376 | Not Detected | 10 |
| Benzidine | 39120 | Not Detected | 10 |
| Pyrene | 34469 | Not Detected | 10 |
| Terphenyl-d14(Surrogate QC Std.) | | 109 | |
| p-Dimethylaminoazobenzene | 73558 | Not Detected | 10 |
| Butylbenzylphthalate | 34292 | Not Detected | 10 |
| Benzo[a]anthracene | 34526 | Not Detected | 10 |
| 3,3'-Dichlorobenzidine | 34631 | Not Detected | 20 |
| Chyrsene | 34320 | Not Detected | 10 |
| bis(2-Ethylhexyl)phthalate | 39100 | Not Detected | 10 |
| Di-n-octylphthalate | 34596 | Not Detected | 10 |
| Benzo[b]fluoranthene | 34230 | Not Detected | 10 |
| Benzo[k]fluoranthene | 34242 | Not Detected | 10 |
| 7,12-Dimethylbenz(a)anthracene | 73559 | Not Detected | 10 |
| Benzo[a]pyrene | 34247 | Not Detected | 10 |
| 3-Methylcholanthrene | 73591 | Not Detected | 10 |
| Dibenz(a,j)acridine | | Not Detected | 10 |
| Indeno[1,2,3-cd]pyrene | 34403 | Not Detected | 10 |
| Dibenz[a,h]anthracene | 34556 | Not Detected | 10 |
| Benzo[g,h,i]perylene | 34521 | Not Detected | 10 |
| Pyridine | 77045 | Not Detected | 10 |
| ALPHA BHC | 39337 | Not Detected | 10 |
| GAMMA BHC | 39340 | Not Detected | 10 |
| BETA BHC | 39338 | Not Detected | 10 |
| DELTA BHC | 34259 | Not Detected | 10 |
| HEPTACHLOR | 39410 | Not Detected | 10 |
| ALDRIN | 39330 | Not Detected | 10 |
| HEPTACHLOR EPOXIDE | 39420 | Not Detected | 25 |
| ENDOSULFAN 1 | 34361 | Not Detected | 50 |
| DIELDRIN | 39380 | Not Detected | 10 |
| P,P' DDE | 39320 | Not Detected | 10 |
| ENDRIN | 39390 | Not Detected | 20 |
| ENDOSULFAN 2 | 34356 | Not Detected | 50 |
| P,P' DDD | 39310 | Not Detected | 10 |
| ENDRIN ALDEHYDE | 34366 | Not Detected | 10 |
| ENDOSULFAN SULFATE | 34351 | Not Detected | 25 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| P,P' DDT | 39300 | Not Detected | 10 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 7, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13449** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6053
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 10:45
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6053 LABORATORY: METALS

| **Parameter** | **Result** | **Units** | **MDL** |
|---|---|---|---|
| *BTEX COMPOUNDS IN WATER* | see below | ug/l | 1.0 |
| Semivolatile water sample (8270) | see below | ug/l | 10 |
| Extraction 3510 SemiVol. L/L | LEM | ml | |

Data for BTEX COMPOUNDS IN WATER ug/l:

| **Component Name** | **Result** | **Component MDL** |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

Data for Semivolatile water sample (8270) ug/l:

| **Component Name** | | **Result** | **Component MDL** |
|---|---|---|---|
| n-Nitrosodimethylamine | 34438 | Not Detected | 10 |
| 2-Picoline | 77088 | Not Detected | 10 |
| Methylmethanesulfonate | 73595 | Not Detected | 10 |
| 2-Fluorophenol(Surrogate QC Std.) | | 39.8 | |
| Ethylmethanesulfonate | 73571 | Not Detected | 20 |
| Aniline | 77089 | Not Detected | 10 |
| Phenol-d5(Surrogate QC Std.) | | 28.4 | |
| Phenol | 34694 | Not Detected | 10 |
| bis(2-Chloroethyl)ether | 34273 | Not Detected | 10 |
| 2-Chlorophenol | 34586 | Not Detected | 10 |
| 1,3-Dichlorobenzene | 34566 | Not Detected | 10 |
| 1,4-Dichlorobenzene | 34571 | Not Detected | 10 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Benzyl alcohol | 77147 | Not Detected | 20 |
| 1,2-Dichlorobenzene | 34536 | Not Detected | 10 |
| 2-Methylphenol | | Not Detected | 10 |
| bis(2-Chloroisopropyl)ether | 34283 | Not Detected | 10 |
| Acetophenone | 81553 | Not Detected | 10 |
| 4-Methylphenol | | Not Detected | 10 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 10 |
| Hexachloroethane | 34396 | Not Detected | 10 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 79.1 | |
| Nitrobenzene | 34447 | Not Detected | 10 |
| n-Nitrosopiperidine | 73619 | Not Detected | 20 |
| Isophorone | 34408 | Not Detected | 10 |
| 2-Nitrophenol | 34591 | Not Detected | 10 |
| 2,4-Dimethylphenol | 34606 | Not Detected | 10 |
| bis(2-Chloroethoxy)methane | 34278 | Not Detected | 10 |
| Benzoic acid | 77247 | Not Detected | 50 |
| 2,4-Dichlorophenol | 34601 | Not Detected | 10 |
| 1,2,4-Trichlorobenzene | 34551 | Not Detected | 10 |
| aa-dimethyl-Phenethylamine | 73564 | Not Detected | 10 |
| Naphthalene | 34696 | Not Detected | 10 |
| 4-Chloroaniline | 73529 | Not Detected | 20 |
| 2,6-Dichlorophenol | 77541 | Not Detected | 10 |
| Hexachlorobutadiene | 38702 | Not Detected | 10 |
| n-Nitroso-di-n-butylamine | 73609 | Not Detected | 10 |
| 4-Chloro-3-methylphenol | 34452 | Not Detected | 20 |
| 2-Methylnaphthalene | 77416 | Not Detected | 10 |
| 1,2,4,5-Tetrachlorobenzene | 77734 | Not Detected | 10 |
| Hexachlorocyclopentadiene | 34386 | Not Detected | 10 |
| 2,4,6-Trichlorophenol | 34621 | Not Detected | 10 |
| 2,4,5-Trichlorophenol | 77687 | Not Detected | 10 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 83.7 | |
| 2-Chloronaphthalene | 34581 | Not Detected | 10 |
| 1-Chloronaphthalene | | Not Detected | 10 |
| 2-Nitroaniline | 78142 | Not Detected | 50 |
| Dimethylphthalate | 34341 | Not Detected | 10 |
| Acenaphthylene | 34200 | Not Detected | 10 |
| 2,6-Dinitrotoluene | 34626 | Not Detected | 10 |
| 3-Nitroaniline | 78300 | Not Detected | 50 |
| Acenaphthene | 34205 | Not Detected | 10 |
| 2,4-Dinitrophenol | 34616 | Not Detected | 50 |
| 4-Nitrophenol | 34646 | Not Detected | 50 |
| Dibenzofuran | 81302 | Not Detected | 10 |
| Pentachlorobenzene | 77793 | Not Detected | 10 |
| 2,4-Dinitrotoluene | 34611 | Not Detected | 10 |
| 1-Naphthylamine | 73600 | Not Detected | 10 |
| 2-Naphthylamine | 73601 | Not Detected | 10 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 10 |
| Diethylphthalate | 34336 | Not Detected | 10 |
| Fluorene | 34381 | Not Detected | 10 |
| 4-Chlorophenyl-phenylether | 34641 | Not Detected | 10 |
| 4-Nitroaniline | 30342 | Not Detected | 20 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Diphenylamine | | Not Detected | 10 |
| 4,6-Dinitro-2-methylphenol | 34657 | Not Detected | 50 |
| n-Nitrosodiphenylamine | 34433 | Not Detected | 10 |
| 1,2-Diphenylhydrazine | 34346 | Not Detected | 10 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 78.3 | |
| 4-Bromophenyl-phenylether | 34636 | Not Detected | 10 |
| Phenacetin | | Not Detected | 20 |
| Hexachlorobenzene | 39700 | Not Detected | 10 |
| 4-Aminobiphenyl | 77581 | Not Detected | 20 |
| Pentachlorophenol | 39032 | Not Detected | 50 |
| Pronamide | 39080 | Not Detected | 10 |
| Pentachloronitrobenzene | 81316 | Not Detected | 20 |
| Phenanthrene | 34461 | Not Detected | 10 |
| Anthracene | 34220 | Not Detected | 10 |
| Di-n-butylphthalate | 39110 | Not Detected | 10 |
| Fluoranthene | 34376 | Not Detected | 10 |
| Benzidine | 39120 | Not Detected | 10 |
| Pyrene | 34469 | Not Detected | 10 |
| Terphenyl-d14(Surrogate QC Std.) | | 93.9 | |
| p-Dimethylaminoazobenzene | 73558 | Not Detected | 10 |
| Butylbenzylphthalate | 34292 | Not Detected | 10 |
| Benzo[a]anthracene | 34526 | Not Detected | 10 |
| 3,3'-Dichlorobenzidine | 34631 | Not Detected | 20 |
| Chyrsene | 34320 | Not Detected | 10 |
| bis(2-Ethylhexyl)phthalate | 39100 | Not Detected | 10 |
| Di-n-octylphthalate | 34596 | Not Detected | 10 |
| Benzo[b]fluoranthene | 34230 | Not Detected | 10 |
| Benzo[k]fluoranthene | 34242 | Not Detected | 10 |
| 7,12-Dimethylbenz(a)anthracene | 73559 | Not Detected | 10 |
| Benzo[a]pyrene | 34247 | Not Detected | 10 |
| 3-Methylcholanthrene | 73591 | Not Detected | 10 |
| Dibenz(a,j)acridine | | Not Detected | 10 |
| Indeno[1,2,3-cd]pyrene | 34403 | Not Detected | 10 |
| Dibenz[a,h]anthracene | 34556 | Not Detected | 10 |
| Benzo[g,h,i]perylene | 34521 | Not Detected | 10 |
| Pyridine | 77045 | Not Detected | 10 |
| ALPHA BHC | 39337 | Not Detected | 10 |
| GAMMA BHC | 39340 | Not Detected | 10 |
| BETA BHC | 39338 | Not Detected | 10 |
| DELTA BHC | 34259 | Not Detected | 10 |
| HEPTACHLOR | 39410 | Not Detected | 10 |
| ALDRIN | 39330 | Not Detected | 10 |
| HEPTACHLOR EPOXIDE | 39420 | Not Detected | 25 |
| ENDOSULFAN 1 | 34361 | Not Detected | 50 |
| DIELDRIN | 39380 | Not Detected | 10 |
| P,P' DDE | 39320 | Not Detected | 10 |
| ENDRIN | 39390 | Not Detected | 20 |
| ENDOSULFAN 2 | 34356 | Not Detected | 50 |
| P,P' DDD | 39310 | Not Detected | 10 |
| ENDRIN ALDEHYDE | 34366 | Not Detected | 10 |
| ENDOSULFAN SULFATE | 34351 | Not Detected | 25 |

Data for Semivolatile water sample (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| P,P' DDT | 39300 | Not Detected | 10 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

RECEIVED
MAY 2 1996
HAZARDOUS WASTE MANAGEMENT BRANCH

May 1, 1996

To: Ned Emrick
HWMB

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13451** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6054
Sample Collector: N. EMRICK Sample collection date: 04/17/96
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6054 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN WATER | see below | ug/l | 1.0 |

Data for BTEX COMPOUNDS IN WATER ug/l:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 1.0 |
| TOLUENE | Not Detected | 1.0 |
| ETHYL BENZENE | Not Detected | 1.0 |
| m,p XYLENES | Not Detected | 1.0 |
| o-XYLENE | Not Detected | 1.0 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

RECEIVED
0 1996
HAZARDOUS WASTE MANAGEMENT BRANCH

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13432** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6040
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:00
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6040 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 6.3 | 3 |
| Barium | 01008 | 29 | 1 |
| Cadmium | 01028 | 1.3 | 1 |
| Chromium | 01029 | 13 | 2 |
| Lead | 01052 | 74 | 5 |
| Nickel | 01068 | 23 | 2 |
| Selenium | 01148 | Not Detected | 5 |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 53.8 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 53.7 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | 725 | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 57.6 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 53.5 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Trace* | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Trace* | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Trace* | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 51.1 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | 1020 | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | 836 | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Trace* | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 55.6 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Trace* | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13433** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6041
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:05
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6041 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 10 | 3 |
| Barium | 01008 | 22 | 1 |
| Cadmium | 01028 | 1.4 | 1 |
| Chromium | 01029 | 7.4 | 2 |
| Lead | 01052 | 48 | 5 |
| Nickel | 01068 | 5.8 | 2 |
| Selenium | 01148 | Not Detected | 5 |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 49.2 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 49.8 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Trace* | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 51.7 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 46.8 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Trace* | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Trace* | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Trace* | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 48.7 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | 2200 | 660 |
| Anthracene | 34223 | Trace* | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | 1510 | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | 933 | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 48.4 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Trace* | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Trace* | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Trace* | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13434** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6043
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:10
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6043 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 4.7 | 3 |
| Barium | 01008 | 44 | 1 |
| Cadmium | 01028 | 2.2 | 1 |
| Chromium | 01029 | 27 | 2 |
| Lead | 01052 | 27 | 5 |
| Nickel | 01068 | 8.8 | 2 |
| Selenium | 01148 | Not Detected | 5 |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 59.2 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 61.4 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 65.5 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 55.9 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Trace* | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Trace* | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | 1070 | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 55.3 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | 5760 | 660 |
| Anthracene | 34223 | 951 | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | 4380 | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | 2760 | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 54.1 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | 1070 | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | 1030 | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Trace* | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13435** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6044
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:15
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6044 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| ICP METALS FOR HW SOLIDS | see below | mg/kg | |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for ICP METALS FOR HW SOLIDS mg/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| Silver | 01078 | Not Detected | 3 |
| Arsenic | 01003 | 7.4 | 3 |
| Barium | 01008 | 31 | 1 |
| Cadmium | 01028 | 1.6 | 1 |
| Chromium | 01029 | 24 | 2 |
| Lead | 01052 | 20 | 5 |
| Nickel | 01068 | 6.6 | 2 |
| Selenium | 01148 | Not Detected | 5 |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 54.6 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 55.8 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 53.5 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 35.4 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 46.4 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Trace* | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Trace* | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Trace* | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 36.7 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |
| *Less Than Quantitation Limit | | * | |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13436** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6045
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:20
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6045 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 50.5 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 51.5 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 48.1 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 33.9 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 34.6 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 36.3 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13437** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6046
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:25
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6046 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 54.1 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 57.1 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 57.5 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 44.4 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Trace* | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 48.9 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Trace* | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Trace* | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Trace* | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 44.9 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| *Less Than Quantitation Limit | * | |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13438** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6047
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:30
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6047 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 50.9 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 50.4 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Trace* | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 54.1 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 55.7 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 55.4 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 57.8 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | Result | Component MDL |
|---|---|---|
| *Less Than Quantitation Limit | * | |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13440** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6048
Sample Collector: N. EMRICK
Sample collection date: 04/17/96 Time: 14:35
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6048 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 52.3 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 53.4 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 58.0 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 58.3 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 49.9 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 58.4 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |

If there are any questions regarding this data, please call.

SUPERVISOR

From: Georgia Dept. of Natural Resources
Environmental Protection Div. Laboratory
455 14th Street NW
Atlanta, GA 30318

May 29, 1996

To: Ned Emrick
HWMB
656-7802

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

**Sample I.D. AB13442** Source ID#: ADHOC
DNR project: HW
sample description: BERNUTH LEMBCKE HW6049
Sample Collector: N. EMRICK Sample collection date: 04/17/96
Lab submittal date: 04/18/96 Time: 15:06
DNR Lab reference: HW6049 LABORATORY: METALS

| Parameter | Result | Units | MDL |
|---|---|---|---|
| BTEX COMPOUNDS IN SEDIMENT/SOIL | see below | ug/kg | 2 UG/KG |
| Semivolatile Soil/Sed (8270) | see below | ug/kg | 660 |

Data for BTEX COMPOUNDS IN SEDIMENT/SOIL ug/kg:

| Component Name | Result | Component MDL |
|---|---|---|
| BENZENE | Not Detected | 2 UG/KG |
| TOLUENE | Not Detected | 2 UG/KG |
| ETHYL BENZENE | Not Detected | 2 UG/KG |
| m,p XYLENES | Not Detected | 2 UG/KG |
| o-XYLENES | Not Detected | 2 UG/KG |

Data for Semivolatile Soil/Sed (8270) ug/kg:

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodimethylamine | 34441 | Not Detected | 660 |
| 2-Picoline | 73310 | Not Detected | 660 |
| Methylmethanesulfonate | 73119 | Not Detected | 660 |
| 2-Fluorophenol(Surrogate QC Std.) | | 53.0 | |
| Ethylmethanesulfonate | 73118 | Not Detected | 660 |
| Aniline | 73185 | Not Detected | 660 |
| Phenol-d5(Surrogate QC Std.) | | 53.6 | |
| Phenol | 34695 | Not Detected | 660 |
| bis(2-Chloroethyl)ether | 34276 | Not Detected | 660 |
| 2-Chlorophenol | 34589 | Not Detected | 660 |
| 1,3-Dichlorobenzene | 34569 | Not Detected | 660 |
| 1,4-Dichlorobenzene | 34574 | Not Detected | 660 |
| Benzyl alcohol | 75212 | Not Detected | 1300 |
| 1,2-Dichlorobenzene | 34539 | Not Detected | 660 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| 2-Methylphenol | | Not Detected | 660 |
| bis(2-Chloroisopropyl)ether | 34286 | Not Detected | 660 |
| Acetophenone | 73272 | Not Detected | 660 |
| 4-Methylphenol | | Not Detected | 660 |
| n-Nitroso-di-n-propylamine | 34428 | Not Detected | 660 |
| Hexachloroethane | 34399 | Not Detected | 660 |
| Nitrobenzene-d5(Surrogate QC Std.) | | 59.6 | |
| Nitrobenzene | 34450 | Not Detected | 660 |
| n-Nitrosopiperidine | 73129 | Not Detected | 660 |
| Isophorone | 34411 | Not Detected | 660 |
| 2-Nitrophenol | 34594 | Not Detected | 660 |
| 2,4-Dimethylphenol | 34609 | Not Detected | 660 |
| bis(2-Chloroethoxy)methane | 34281 | Not Detected | 660 |
| Benzoic acid | 75315 | Not Detected | 3300 |
| 2,4-Dichlorophenol | 34604 | Not Detected | 660 |
| 1,2,4-Trichlorobenzene | 34554 | Not Detected | 660 |
| aa-dimethyl-Phenethylamine | 73136 | Not Detected | 660 |
| Naphthalene | 34445 | Not Detected | 660 |
| 4-Chloroaniline | 78867 | Not Detected | 1300 |
| 2,6-Dichlorophenol | 73122 | Not Detected | 660 |
| Hexachlorobutadiene | 38705 | Not Detected | 660 |
| n-Nitroso-di-n-butylamine | 73159 | Not Detected | 660 |
| 4-Chloro-3-methylphenol | 34455 | Not Detected | 1300 |
| 2-Methylnaphthalene | 78868 | Not Detected | 660 |
| 1,2,4,5-Tetrachlorobenzene | 79787 | Not Detected | 660 |
| Hexachlorocyclopentadiene | 34389 | Not Detected | 660 |
| 2,4,6-Trichlorophenol | 34624 | Not Detected | 660 |
| 2,4,5-Trichlorophenol | 78401 | Not Detected | 660 |
| 2-Fluorobiphenyl(Surrogate QC Std.) | | 56.7 | |
| 2-Chloronaphthalene | 34584 | Not Detected | 660 |
| 1-Chloronaphthalene | | Not Detected | 660 |
| 2-Nitroaniline | 78299 | Not Detected | 3300 |
| Dimethylphthalate | 34344 | Not Detected | 660 |
| Acenaphthylene | 34203 | Not Detected | 660 |
| 2,6-Dinitrotoluene | 34629 | Not Detected | 660 |
| 3-Nitroaniline | 78869 | Not Detected | 3300 |
| Acenaphthene | 34208 | Not Detected | 660 |
| 2,4-Dinitrophenol | 34619 | Not Detected | 3300 |
| 4-Nitrophenol | 34649 | Not Detected | 3300 |
| Dibenzofuran | 75647 | Not Detected | 660 |
| Pentachlorobenzene | 79790 | Not Detected | 660 |
| 2,4-Dinitrotoluene | 34614 | Not Detected | 660 |
| 1-Naphthylamine | 73143 | Not Detected | 660 |
| 2-Naphthylamine | 73124 | Not Detected | 660 |
| 2,3,4,6-Tetrachlorophenol | | Not Detected | 660 |
| Diethylphthalate | 34339 | Not Detected | 660 |
| Fluorene | 34384 | Not Detected | 660 |
| 4-Chlorophenyl-phenylether | 34644 | Not Detected | 660 |
| 4-Nitroaniline | 78870 | Not Detected | 660 |
| Diphenylamine | | Not Detected | 660 |
| 4,6-Dinitro-2-methylphenol | 34660 | Not Detected | 3300 |

Data for Semivolatile Soil/Sed (8270) (continued):

| Component Name | | Result | Component MDL |
|---|---|---|---|
| n-Nitrosodiphenylamine | 34436 | Not Detected | 660 |
| 1,2-Diphenylhydrazine | 34349 | Not Detected | 660 |
| 2,4,6-Tribromophenol(Surrogate QC Std.) | | 50.9 | |
| 4-Bromophenyl-phenylether | 34639 | Not Detected | 660 |
| Phenacetin | 73117 | Not Detected | 660 |
| Hexachlorobenzene | 39701 | Not Detected | 660 |
| 4-Aminobiphenyl | 73125 | Not Detected | 660 |
| Pentachlorophenol | 39061 | Not Detected | 3300 |
| Pronamide | 73031 | Not Detected | 660 |
| Pentachloronitrobenzene | 81808 | Not Detected | 660 |
| Phenanthrene | 34464 | Not Detected | 660 |
| Anthracene | 34223 | Not Detected | 660 |
| Di-n-butylphthalate | 39112 | Not Detected | 660 |
| Fluoranthene | 34379 | Not Detected | 660 |
| Benzidine | 39121 | Not Detected | 660 |
| Pyrene | 34472 | Not Detected | 660 |
| Terphenyl-d14(Surrogate QC Std.) | | 57.8 | |
| p-Dimethylaminoazobenzene | 73116 | Not Detected | 660 |
| Butylbenzylphthalate | 34295 | Not Detected | 660 |
| Benzo[a]anthracene | 34529 | Not Detected | 660 |
| 3,3'-Dichlorobenzidine | 34634 | Not Detected | 1300 |
| Chyrsene | 34323 | Not Detected | 660 |
| bis(2-Ethylhexyl)phthalate | 39102 | Not Detected | 660 |
| Di-n-octylphthalate | 34599 | Not Detected | 660 |
| Benzo[b]fluoranthene | 34233 | Not Detected | 660 |
| Benzo[k]fluoranthene | 34245 | Not Detected | 660 |
| 7,12-Dimethylbenz(a)anthracene | 73115 | Not Detected | 660 |
| Benzo[a]pyrene | 34250 | Not Detected | 660 |
| 3-Methylcholanthrene | 73156 | Not Detected | 660 |
| Dibenz(a,j)acridine | | Not Detected | 660 |
| Indeno[1,2,3-cd]pyrene | 34406 | Not Detected | 660 |
| Dibenz[a,h]anthracene | 34559 | Not Detected | 660 |
| Benzo[g,h,i]perylene | 34524 | Not Detected | 660 |
| Pyridine | 73312 | Not Detected | 660 |
| ALPHA BHC | 39076 | Not Detected | 660 |
| GAMMA BHC | 39343 | Not Detected | 660 |
| BETA BHC | 34257 | Not Detected | 660 |
| DELTA BHC | 34262 | Not Detected | 660 |
| HEPTACHLOR | 39413 | Not Detected | 660 |
| ALDRIN | 39333 | Not Detected | 660 |
| HEPTACHLOR EPOXIDE | 39423 | Not Detected | 1650 |
| ENDOSULFAN 1 | 34364 | Not Detected | 3300 |
| DIELDRIN | 39383 | Not Detected | 660 |
| P,P' DDE | 39321 | Not Detected | 660 |
| ENDRIN | 39393 | Not Detected | 1320 |
| ENDOSULFAN 2 | 34359 | Not Detected | 3300 |
| P,P' DDD | 39311 | Not Detected | 660 |
| ENDRIN ALDEHYDE | 34369 | Not Detected | 660 |
| ENDOSULFAN SULFATE | 34354 | Not Detected | 1650 |
| P,P' DDT | 39301 | Not Detected | 660 |

# **APPENDIX 4 :** Analytical Data

GEORGIA ENVIRONMENTAL PROTECTION DIVISION
HAZARDOUS WASTE MANAGEMENT BRANCH

CHAIN OF CUSTODY

FACILITY: BERNUTH LEMBCKE LOCATION: SAVANNAH, GA

| SAMPLE # | HWMB LOG # | LAB # | DESCRIPTION | COLLECTED BY (NAME) | DATE | TIME |
|---|---|---|---|---|---|---|
| BL-SD-1 | 6040 | | SEDIMENT - SAVANNAH RIVER | NED EMRICK | 4/17/96 | 2:00 PM |
| BL-SD-2D | 6041 | | | | | 2:05 PM |
| BL-SD-3 | 6043 | | | | | 2:10 PM |
| BL-SD-4 | 6044 | | | | | 2:15 PM |
| BL-SD-5 | 6045 | | | | | 2:20 PM |
| BL-SD-6 | 6046 | | | | | 2:25 PM |
| BL-SD-8 | 6047 | | | | | 2:30 PM |
| BL-SD-9 | 6048 | | | | | 2:35 PM |

TRANSFER RECORD

| TRANSFERRED BY (NAME) | TO (NAME) (IF FINAL: LAB NAME) | DATE | TIME | METHOD OF TRANSFER | RECEIVED BY (NAME) | DATE |
|---|---|---|---|---|---|---|
| Ned Emrick | EPD-LAB | 4/19/96 | 3:03PM | BY HAND | Robert Price | 4/18/96 |
| | | | | | | |
| | | | | | | |

ANALYSIS REQUESTED:

GEORGIA ENVIRONMENTAL PROTECTION DIVISION
HAZARDOUS WASTE MANAGEMENT BRANCH

CHAIN OF CUSTODY

FACILITY: BERNUTH LEMBCKE LOCATION: SAVANNAH, GA

| SAMPLE # | HWMB LOG # | LAB # | DESCRIPTION | COLLECTED BY (NAME) | DATE | TIME |
|---|---|---|---|---|---|---|
| BL-SD-12 | 6049 | | SEDIMENT SAVANNAH RIVER | NED EMRICK | 4/17/96 | |
| BL-SW-1 | 6050 | | SURFACE WATER | | | 10:00 AM |
| BL-SW-2 | 6051 | | | | | 10:15 AM |
| BL-SW-4D | 6052 | | | | | 10:30 AM |
| BL-SW-5 | 6053 | | | | | 10:45 AM |
| | 6054 | | TRIP BLANK (WATER) | | | |
| | | | | | | |
| | | | | | | |

TRANSFER RECORD

| TRANSFERRED BY (NAME) | TO (NAME) (IF FINAL: LAB NAME) | DATE | TIME | METHOD OF TRANSFER | RECEIVED BY (NAME) | DATE |
|---|---|---|---|---|---|---|
| Ned Emrick | EDD LAB | 4/18/96 | 3:00 PM | BY HAND | Robert Price | 4/18/96 |
| | | | | | | |
| | | | | | | |

ANALYSIS REQUESTED:

**GEORGIA ENVIRONMENTAL PROTECTION DIVISION**
**HAZARDOUS WASTE MANAGEMENT BRANCH**

**CHAIN OF CUSTODY**

**FACILITY:** Certainteed Corp **LOCATION:** Foundation Drive Savannah

| SAMPLE # | HWMB LOG # | LAB # | DESCRIPTION | COLLECTED BY (NAME) | DATE | TIME |
|---|---|---|---|---|---|---|
| CT-SD-3 | 6012 | | on-site sediment from drain ditch | M. Laney | 4/17/96 | 2:30 p |
| CT-SD-4 | 6013 | | on-site sediment from ditch into S. River | M. Laney | 4/17/96 | 2:35 p |
| CT-SD-5 | 6014 | | on-site sediment bank of river | | " | 2:45 p |
| CT-SD-6 | 6015 | | " " " " | | " | 3:00 p |
| CT-SD-7 | 6016 | | " " " " | | " | 3:05 p |
| CT-SD-8 | 6017 | | " " " " | | " | 3:30 p |
| CT-SD-9 | 6018 | | Sediment downstream of site | S. White | 4/17/96 | 3:45 p |
| CT-SD-10 | 6019 | | " " " | S. White | 4/17/96 | 11:10 a |

**TRANSFER RECORD**

| TRANSFERRED BY (NAME) | TO (NAME) (IF FINAL: LAB NAME) | DATE | TIME | METHOD OF TRANSFER | RECEIVED BY (NAME) | DATE |
|---|---|---|---|---|---|---|
| SD-3 thru SD-8 Mike Laney | Steve White | 4/18/96 | 0830 | Hand | Steve White | 4/18/96 |
| Steve White | EPD LAB | 4/18/96 | 1510 0310 PM | HAND | Robert Price | 4/18/96 |
| | | | | | | |

**ANALYSIS REQUESTED:** BTEX, PAHs, Metals

**GEORGIA ENVIRONMENTAL PROTECTION DIVISION**
**HAZARDOUS WASTE MANAGEMENT BRANCH**

**CHAIN OF CUSTODY**

**FACILITY:** Certainteed **LOCATION:** Savannah, GA

| SAMPLE # | HWMB LOG # | LAB # | DESCRIPTION | COLLECTED BY (NAME) | DATE | TIME |
|---|---|---|---|---|---|---|
| CT-SD-12 | 6021 | | Sediment at Elba Isl. | S. White | 4/17/96 | 10:30 |
| CT-SD-13 | 6022 | | " " " " | S White | 4/17/96 | 10:45 |
| CT-SW-1 | 6034 | | from Savannah river-upstream from site | " | " | 10:45 |
| CT-SW-3 | 6036 | | from S. River downstream from site | " | " | 10:50 |
| CT-SW-4 | 6037 | | " " " " | " | " | 11:00 |
| CT-SW-6 | 6039 | | water from S. River at PPE from site | " | " | 11:30 |
| BLANK | 6010 | | TRAVEL BLANK-ON-SITE | | | |
| | | | | | | |

**TRANSFER RECORD**

| TRANSFERRED BY (NAME) | TO (NAME) (IF FINAL: LAB NAME) | DATE | TIME | METHOD OF TRANSFER | RECEIVED BY (NAME) | DATE |
|---|---|---|---|---|---|---|
| | | | | | Robert Price | 4/18/96 |
| | | | | | | |
| | | | | | | |

**ANALYSIS REQUESTED:**

# **APPENDIX 3 :** Photographs

U.S. EPA REGION IV

# SDMS

## Unscannable Material Target Sheet

DocID: 10715609 Site ID: GAD980556864

Site Name: Bernuth Lembke Inc.

Nature of Material:

| | | | |
|---|---|---|---|
| Map: | ☐ | Computer Disks: | ☐ |
| Photos: | ☒ | CD-ROM: | ☐ |
| Blueprints: | ☐ | Oversized Report: | ☐ |
| Slides: | ☐ | Log Book: | ☐ |

Other (describe): Site Photos

Amount of material:

* Please contact the appropriate Records Center to view the material *

If there are any questions regarding this data, please call.

SUPERVISOR

# SITE INSPECTION WORKSHEETS

| CERCLIS IDENTIFICATION NUMBER |
|---|
| GAD 980556864 |

| SITE LOCATION | | | |
|---|---|---|---|
| SITE NAME: LEGAL, COMMON, OR DESCRIPTIVE NAME OF SITE<br>BERNUTH LEMBCKE | | | |
| STREET ADDRESS, ROUTE, OR SPECIFIC LOCATION IDENTIFIER<br>GEORGIA PORT AUTHORITY COMPOUND - NORTH LATHROP AVENUE | | | |
| CITY<br>SAVANNAH | STATE<br>GEORGIA | ZIP CODE<br>31402 | TELEPHONE<br>( ) |
| COORDINATES: LATITUDE and LONGITUDE<br>32° 05' 42" N 81° 06' 31" W | TOWNSHIP, RANGE, AND SECTION | | |

| OWNER/OPERATOR IDENTIFICATION | | | | | |
|---|---|---|---|---|---|
| OWNER<br>NORFOLK SOUTHERN CORPORATION | | | OPERATOR | | |
| OWNER ADDRESS<br>125 SPRING ST. S.W. - BOX 136 | | | OPERATOR ADDRESS | | |
| CITY<br>ATLANTA | | | CITY | | |
| STATE<br>GA | ZIP CODE<br>30303 | TELEPHONE<br>(404) 529-2109 | STATE | ZIP CODE | TELEPHONE<br>( ) |

| SITE EVALUATION | | |
|---|---|---|
| AGENCY/ORGANIZATION<br>GEORGIA ENVIRONMENTAL PROTECTION DIVISION | | |
| INVESTIGATOR<br>NED EMRICK | | |
| CONTACT<br>NED EMRICK | | |
| ADDRESS<br>205 BUTLER ST. S.E. | | |
| CITY<br>ATLANTA | STATE<br>GEORGIA | ZIP CODE<br>30334 |
| TELEPHONE<br>(404) 656-7802 | | |

# GENERAL INFORMATION

**Site Description and Operational History:** Provide a brief description of the site and its operational history. St
active or inactive statu
activities that have or,
alleged. Identify all so
other investigations. C

2.2 SITE DESCRIPTION

The property encompasses approximately 3 acres (Ref. 3). The dirt road previously mentioned accesses the Bernuth Lembcke facility and runs along the western side of the southern railroad spur to the Firestone facility with spur roads between the north and south tanks and north of the north tanks. There are two transfer stations; one is located south of the north tanks and the other is located south of the south tanks. There is also a railroad spur line going to Colonial Oil that runs along the spur road between the north and south tanks. South of the southeast tank is a furnace building used to heat the tanks. This building is in disrepair, with a large section of the roof missing and all the windows broken.

The flood control canal, located along the western site boundary, is underground until just north of the Colonial Oil railroad spur. The box canal is uncovered for approximately 150 feet. There is a trash screen and five pumps that pump water into the river during high tide. During low tide, water from the canal flows into the river without the aid of the pumps. The flood control canal is underground for the last 200 feet to the Savannah River.

2.3 OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

The Bernuth Lembcke Co., a former storage facility for creosote, is in a heavily industrialized section of Savannah. The Georgia Ports Authority compound is fenced and entrances are controlled by guards 24 hours a day (Ref. 4). The facility was used primarily for the bulk storage of creosote product, and to a lesser extent tall oil and other petroleum based products. Creosote was transferred from barges to railcars and trucks. There are four bulk storage tanks on site installed in the early 1930's (Ref. 5). Two of the bulk storage tanks were leased from the railroad by the Allied Chemical Corporation or one of its various predecessors between January 1, 1933 and December 21, 1982. Allied Chemical owned the third tank and leased the fourth tank from H.J. Gilbert. The land underlying all four tanks was leased from the railroad. Allied Chemical also entered into various subleases with Union Bag Company (now Union Camp Corporation) during the time it leased the land and tanks from the railroad (Ref.5, p. 3).

Allied Chemical Company discontinued use of the third tank in 1974, after which Bernuth Lembcke Company, Inc. leased the area for bulk storage of creosote. However, Bernuth Lembcke may have utilized one of the tanks for the storage of creosote between 1965 and 1980. It is not known what Allied stored in these tanks (Ref.7, p.2). It is estimated that these tanks had a volume of approximately 235,000 gallons each (Refs. 8 and 9). The Bernuth Lembcke facility ceased operations prior to RCRA enforcement (Ref.7, p.1).

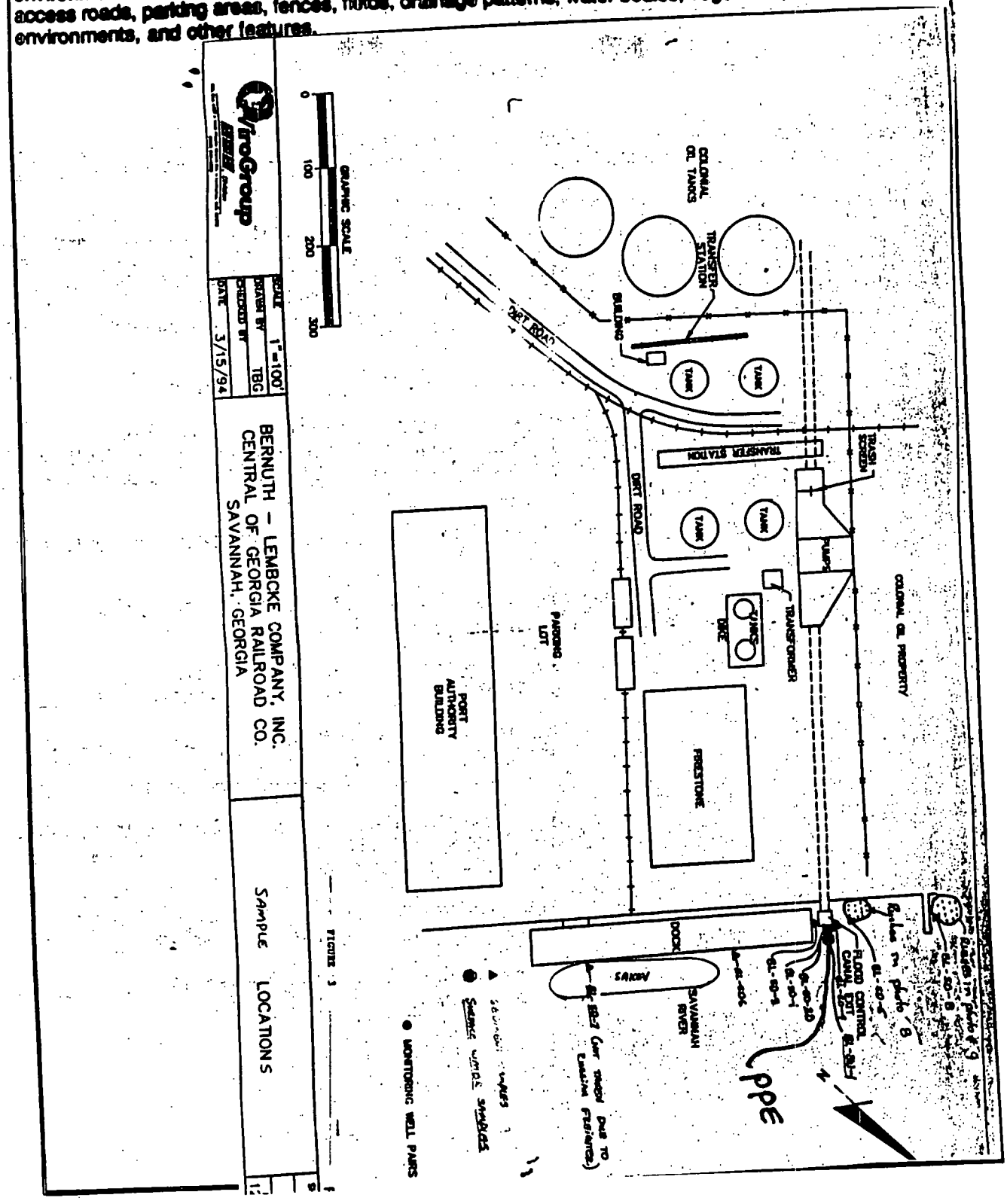
In October 1987, creosote contamination was discovered at the Bernuth Lembcke Co., Inc. site during excavation for construction of improvements to the City of Savannah's Fell Street Storm Water Lift Station and storm water canal which transects the property (Ref. 6). The creation of a channel through the waste allowed releases of contamination to surface water during construction of the cement box canal (Ref.7, p.2).

During the field investigation for the Screening Site Inspection Report, Phase II (October, 1989) visible cracks were noted in the concrete walls and floor of the flood control canal. A viscous black substance was observed seeping through the cracks. A six inch high baffle was installed on the bottom of the box culvert to prevent the flow of creosote to the Savannah River and to provide a collection point for creosote removal utilizing a vacuum truck (Ref 5.). As evidenced by photograph Nos. 5 and 6, taken on 4/17/96, the baffle installation has only slowed and/or partially stopped the migration of creosote into the box culvert/canal. Currently, on behalf of the Central of Georgia Railroad (COG), Coastal Divers and Pollution Control, Inc. (CDP) of Savannah, Georgia is performing activities related to containing and capturing contaminants with absorbent booms at three locations: 1) upstream from the trash screen at the outflow from the old box culvert; 2) downstream from the trash screen; and 3) at the outflow of the storm water canal to the Savannah River (Ref. photo 11). The absorbent materials are changed regularly. In addition, CDP captures creosote product with sorbent materials, and by vacuum truck, on occasions when accumulation of creosote is observed to warrant removal. The sorbent materials and creosote liquid are currently stored on-site pending proper treatment and/or disposal.

Creosote seepage is not as prevalent during high tide events when water height and movement in the storm water canal is much greater. It is postulated that, as the tide recedes, a static head differential exists with the higher water table of the surficial aquifer system exerting an upward pressure from beneath the bottom slab of the storm water canal. Thus, creosote product, which apparently is trapped beneath the concrete slab, is forced upward through cracks in the storm water canal. The canal represents a large void space at atmospheric pressure. A secondary upward driving force is created by horizontal flow of groundwater, toward the Savannah River, which encounters sheet piling located on the downstream side of the canal (Ref. 5, p. 6).

## GENERAL INFORMATION (continued)

**Site Sketch:** Provide a sketch of the site. Indicate all pertinent features of the site and nearby environments including sources of wastes, areas of visible and buried wastes, buildings, residences, access roads, parking areas, fences, fields, drainage patterns, water bodies, vegetation, wells, sensitive environments, and other features.



## GENERAL INFORMATION (continued)

**Source Descriptions:** Describe all sources at the site. Identify source type and relate to waste disposal operations. Provide source dimensions and the best available waste quantity information. Describe the condition of sources and all containment structures. Cite references.

## SOURCE TYPES

**Landfill:** A man-made (by excavation or construction) or natural hole in the ground into which wastes have come to be disposed by backfilling, or by contemporaneous soil deposition with waste disposal.

**Surface Impoundment:** A natural topographic depression, man-made excavation, or diked area, primarily formed from earthen materials (lined or unlined) and designed to hold an accumulation of liquid wastes, wastes containing free liquids, or sludges not backfilled or otherwise covered; depression may be wet with exposed liquid or dry if deposited liquid has evaporated, volatilized or leached; structures that may be described as lagoon, pond, aeration pit, settling pond, tailings pond, sludge pit; also a surface impoundment that has been covered with soil after the final deposition of waste materials (i.e., buried or backfilled).

**Drum:** A portable container designed to hold a standard 55-gallon volume of wastes.

**Tank and Non-Drum Container:** Any device, other than a drum, designed to contain an accumulation of waste that provides structural support and is constructed primarily of fabricated materials (such as wood, concrete, steel, or plastic); any portable or mobile device in which waste is stored or otherwise handled.

**Contaminated Soil:** An area or volume of soil onto which hazardous substances have been spilled, spread, disposed, or deposited.

**Pile:** Any non-containerized accumulation above the ground surface of solid, non-flowing wastes; includes open dumps. Some types of waste piles are:

- Chemical Waste Pile: A pile consisting primarily of discarded chemical products, by-products, radioactive wastes, or used or unused feedstocks.
- Scrap Metal or Junk Pile: A pile consisting primarily of scrap metal or discarded durable goods (such as appliances, automobiles, auto parts, batteries, etc.) composed of materials containing hazardous substances.
- Tailings Pile: A pile consisting primarily of any combination of overburden from a mining operation and tailings from a mineral mining, beneficiation, or processing operation.
- Trash Pile: A pile consisting primarily of paper, garbage, or discarded non-durable goods containing hazardous substances.

**Land Treatment:** Landfarming or other method of waste management in which liquid wastes or sludges are spread over land and tilled, or liquids are injected at shallow depths into soils.

**Other:** Sources not in categories listed above.

## GENERAL INFORMATION (continued)

**Source Description:** Include description of containment per pathway for ground water (see HRS Table 3-2), surface water (see HRS Table 4-2), and air (see HRS Tables 6-3 and 6-9).

CONTAINMENT FACTOR VALUE -10

CREOSOTE CONTAMINATION UNDERNEATH/ALONG FLOOD CONTROL CANAL. PAHs HAVE MIGRATED FROM SOURCE AREA.

SURFACE/SUBSURFACE SOIL CONTAMINATION

LR IS MAXED AT 550

**Hazardous Waste Quantity (HWQ) Calculation:** SI Tables 1 and 2 (See HRS Tables 2-5, 2-6, and 5-2). * 1 - 285,000 gallon tank

$1 yd^3 = 200$ gallons

$235{,}000 \text{ gallons} \times \frac{1 yd^3}{200 \text{ gallons}} = 1175 yd^3 = V$ (VOLUME)

TIER C (VOLUME) HRS TABLE 2-5

| | UNITS | EQUATION |
|---|---|---|
| TANKS | $yd^3$ | $V/2.5$ |

$\frac{1175 yd^3}{2.5} = 470$

HRS TABLE 2-6

HWQ FACTOR VALUES

>100 TO 10,000 - 100 = HWQ

(* >50,000 gallons - 100 HWQ)

Attach additional pages, if necessary

HWQ = 100

## SI TABLE 1: HAZARDOUS WASTE QUANTITY (HWQ) SCORES FOR SINGLE SOURCE SITES AND FORMULAS FOR MULTIPLE SOURCE SITES

| | | Single Source Sites (assigned HWQ scores) | |
|---|---|---|---|
| (Column 1) TIER | (Column 2) Source Type | (Column 3) HWQ = 10 | (Column 4) HWQ = 100 |
| **A** Hazardous Constituent Quantity | N/A | HWQ = 1 if Hazardous Constituent Quantity data are complete<br>HWQ = 10 if Hazardous Constituent Quantity data are not complete | >100 to 10,000 lbs |
| **B** Hazardous Wastestream Quantity | N/A | ≤ 500,000 lbs | >500,000 to 50 million lbs |
| **C** Volume | Landfill | ≤ 6.75 million $ft^3$<br>≤ 250,000 $yd^3$ | >6.75 million to 675 million $ft^3$<br>>250,000 to 25 million $yd^3$ |
| | Surface impoundment | ≤6,750 $ft^3$<br>≤250 $yd^3$ | >6,750 to 675,000 $ft^3$<br>>250 to 25,000 $yd^3$ |
| | Drums | ≤1,000 drums | >1,000 to 100,000 drums |
| | Tanks and non-drum containers | ≤50,000 gallons | >50,000 to 5 million gallons |
| | Contaminated soil | ≤6.75 million $ft^3$<br>≤250,000 $yd^3$ | >6.75 million to 675 million $ft^3$<br>>250,000 to 25 million $yd^3$ |
| | Pile | ≤6,750 $ft^3$<br>≤250 $yd^3$ | >6,750 to 675,000 $ft^3$<br>>250 to 25,000 $yd^3$ |
| | Other | ≤6,750 $ft^3$<br>≤250 $yd^3$ | >6,750 to 675,000 $ft^3$<br>>250 to 25,000 $yd^3$ |
| **D** Area | Landfill | ≤340,000 $ft^2$<br>≤7.8 acres | >340,000 to 34 million $ft^2$<br>>7.8 to 780 acres |
| | Surface impoundment | ≤1,300 $ft^2$<br>≤0.029 acres | >1,300 to 130,000 $ft^2$<br>>0.029 to 2.9 acres |
| | Contaminated soil | ≤3.4 million $ft^2$<br>≤78 acres | > 3.4 million to 340 million $ft^2$<br>> 78 to 7,800 acres |
| | Pile | ≤1,300 $ft^2$<br>≤0.029 acres | >1,300 to 130,000 $ft^2$<br>>0.029 to 2.9 acres |
| | Land treatment | ≤27,000 $ft^2$<br>≤0.62 acres | >27,000 to 2.7 million $ft^2$<br>>0.62 to 62 acres |

TABLE 1 (CONTINUED)

| Single Source Sites (assigned HWQ scores) | | Multiple Source Sites | | |
|---|---|---|---|---|
| (Column 5) HWQ = 10,000 | (Column 6) HWQ = 1,000,000 | (Column 7) Divisors for Assigning Source WQ Values | (Column 2) Source Type | (Column 1) TIER |
| >10,000 to 1 million lbs | > 1 million lbs | lbs ÷ 1 | N/A | A Hazardous Constituent Quantity |
| >50 million to 5 billion lbs | > 5 billion lbs | lbs ÷ 5,000 | N/A | B Hazardous Wastestream Quantity |
| >675 million to 67.5 billion $ft^3$<br>>25 million to 2.5 billion $yd^3$ | > 67.5 billion $ft^3$<br>> 2.5 billion $yd^3$ | $ft^3$ ÷ 67,500<br>$yd^3$ ÷ 2,500 | Landfill | C Volume |
| >675,000 to 67.5 million $ft^3$<br>>25,000 to 2.5 million $yd^3$ | > 67.5 million $ft^3$<br>> 2.5 million $yd^3$ | $ft^3$ ÷ 67.5<br>$yd^3$ ÷ 2.5 | Surface Impoundment | |
| >100,000 to 10 million drums | > 10 million drums | drums ÷ 10 | Drums | |
| >5 million to 500 million gallons | > 500 million gallons | gallons ÷ 500 | Tanks and non-drum containers | |
| >675 million to 67.5 billion $ft^3$<br>>25 million to 2.5 billion $yd^3$ | > 67.5 billion $ft^3$<br>> 2.5 billion $yd^3$ | $ft^3$ ÷ 67,500<br>$yd^3$ ÷ 2,500 | Contaminated Soil | |
| >675,000 to 67.5 million $ft^3$<br>>25,000 to 2.5 million $yd^3$ | > 67.5 million $ft^3$<br>> 2.5 million $yd^3$ | $ft^3$ ÷ 67.5<br>$yd^3$ ÷ 2.5 | Pile | |
| >675,000 to 67.5 million $ft^3$<br>>25,000 to 2.5 million $yd^3$ | > 67.5 million $ft^3$<br>> 2.5 million $yd^3$ | $ft^3$ ÷ 67.5<br>$yd^3$ ÷ 2.5 | Other | |
| >34 million to 3.4 billion $ft^2$<br>>780 to 78,000 acres | > 3.4 billion $ft^2$<br>>78,000 acres | $ft^2$ ÷ 3,400<br>acres ÷ 0.078 | Landfill | D Area |
| >130,000 to 13 million $ft^2$<br>>2.9 to 290 acres | > 13 million $ft^2$<br>> 290 acres | $ft^2$ ÷ 13<br>acres ÷ 0.00029 | Surface Impoundment | |
| > 340 million to 34 billion $ft^2$<br>> 7,800 to 780,000 acres | > 34 billion $ft^2$<br>> 780,000 acres | $ft^2$ ÷ 34,000<br>acres ÷ 0.78 | Contaminated Soil | |
| > 130,000 to 13 million $ft^2$<br>> 2.9 to 290 acres | > 13 million $ft^2$<br>> 290 acres | $ft^2$ ÷ 13<br>acres ÷ 0.00029 | Pile | |
| >2.7 million to 270 million $ft^2$<br>>62 to 6,200 acres | > 270 million $ft^2$<br>> 6,200 acres | $ft^2$ ÷ 270<br>acres ÷ 0.0062 | Land Treatment | |

## HAZARDOUS WASTE QUANTITY (HWQ) CALCULATION

For each migration pathway, evaluate HWQ associated with sources that are available (i.e., incompletely contained) to migrate to that pathway. (Note: If *Actual Contamination Targets* exist for ground water, surface water, or air migration pathways, assign the calculated HWQ score or 100, whichever is greater, as the HWQ score for that pathway.) For each source, evaluate HWQ for one or more of the four tiers (SI Table 1; HRS Table 2-5) for which data exist: constituent quantity, wastestream quantity, source volume, and source area. Select the tier that gives the highest value as the source HWQ. Select the source volume HWQ rather than source area HWQ if data for both tiers are available.

Column 1 of SI Table 1 indicates the quantity tier. Column 2 lists source types for the four tiers. Columns 3, 4, 5, and 6 provide ranges of waste amount for sites with only one source, corresponding to HWQ scores at the tops of the columns. Column 7 provides formulas to obtain source waste quantity values at sites with multiple sources.

1. Identify each source type.
2. Examine all waste quantity data available for each source. Record constituent quantity and waste stream mass or volume. Record dimensions of each source.
3. Convert source measurements to appropriate units for each tier to be evaluated.
4. For each source, use the formulas in the last column of SI Table 1 to determine the waste quantity value for each tier that can be evaluated. Use the waste quantity value obtained from the highest tier as the quantity value for the source.
5. Sum the values assigned to each source to determine the total site waste quantity.
6. Assign HWQ score from SI Table 2 (HRS Table 2-6).

Note these exceptions to evaluate soil exposure pathway HWQ (see HRS Table 5-2):

- The divisor for the area (square feet) of a landfill is 34,000.
- The divisor for the area (square feet) of a pile is 34.
- Wet surface impoundments and tanks and non-drum containers are the only sources for which volume measurements are evaluated for the soil exposure pathway.

**SI TABLE 2: HWQ SCORES FOR SITES**

| Site WQ Total | HWQ Score |
|---|---|
| 0 | 0 |
| 1[a] to 100 | 1[b] |
| > 100 to 10,000 | 100 |
| > 10,000 to 1 million | 10,000 |
| > 1 million | 1,000,000 |

[a] If the WQ total is between 0 and 1, round it to 1.
[b] If the hazardous constituent quantity data are not complete, assign the score of 10.

## SI TABLE 3: WASTE CHARACTERIZATION WORKSHEET

**Site Name:** BERNITH LEMBCKE

**References** SCDM

**Sources:**

1. CREOSOTE UNDERNEATH CANAL
2.
3.
4.
5.
6.
7.
8.
9.

| SOURCE | HAZARDOUS SUBSTANCE | TOXICITY | GROUND WATER PATHWAY | | SURFACE WATER PATHWAY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | OVERLAND/FLOOD MIGRATION | | | | | | | GROUND WATER TO SURFACE WATER | | | |
| | | | GW Mobility (HRS Table 3-8) | Tox/ Mobility Value (HRS Table 3-9) | Per (HRS Tables 4-10 and 4-11) | Tox/Per Value (HRS Table 4-12) | Bioac Pot. (HRS Table 4-15) | Tox/ Pers/ Bioac Value (HRS Table 4-16) | Ecotox (HRS Table 4-19) | Ecotox/ Pers (HRS Table 4-20) | Ecotox/ Pers/ Bioacc Value (HRS Table 4-21) | Tox/ Mob/ Pers Value (HRS Table 4-26) | Tox/ Mob/ Pers/ Bioacc Value (HRS Table 4-28) | Ecotox/ Mob/ Pers Value (HRS Table 4-29) | Ecotox/ Mob/ Per/ Bioacc Value (HRS Table 4-30) |
| | Fluorene | 100 | | | 1 | 100 | $5\times10^3$ | $5\times10^5$ | $1\times10^3$ | $1\times10^3$ | $5\times10^6$ | | | | |
| | Anthracene | 10 | NS | | 1 | 10 | 5000 | $5\times10^4$ | $1\times10^4$ | $1\times10^4$ | $5\times10^7$ | | NA | | |
| | Pyrene | 100 | | | 1 | 100 | 50 | $5\times10^3$ | $1\times10^4$ | $1\times10^4$ | $5\times10^5$ | | | | |
| | Benzo(a) anthracene | 1000 | | | 1 | 1000 | 50,000 | $5\times10^7$ | 10,000 | 10,000 | $5\times10^8$ | | | | |
| | | | | | | | | | | | | | | | |
| | Chrysene | 10 | | | 1 | 10 | $5\times10^2$ | $5\times10^3$ | $1\times10^3$ | $1\times10^3$ | $5\times10^6$ | | | | |
| | Fluoranthene | 100 | | | 1 | 100 | 500 | $5\times10^4$ | $1\times10^4$ | $1\times10^4$ | $5\times10^6$ | | | | |
| | Naphthalene | 100 | | | .4 | 40 | 500 | $2\times10^4$ | $1\times10^3$ | $4\times10^2$ | $2\times10^6$ | | | | |
| | 2-Methylnaphthalene | — (0) | | | .4 | 0 | $5\times10^4$ | 0 | $1\times10^3$ | $4\times10^2$ | $2\times10^6$ | | | | |
| | Acenaphthene | — (0) | | | .4 | 0 | 500 | 0 | 0 | 0 | 0 | | | | |
| | Dibenzofuran | — (0) | | | 1 | 0 | 500 | 0 | $1\times10^2$ | $1\times10^2$ | $5\times10^4$ | | | | |
| | Benzo(b) fluoranthene | 1000 | | | 1 | 1000 | 50,000 | $5\times10^7$ | 0 | 0 | 0 | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

* NS - NOT SAMPLED/SCORED FOR THIS INVESTIGATION

* NA - NOT APPLICABLE

**Ground Water Observed Release Substances Summary Table**

On SI Table 4, list the hazardous substances associated with the site detected in ground water samples for that aquifer. Include only those substances directly observed or with concentrations significantly greater than background levels. Obtain toxicity values from the Superfund Chemical Data Matrix (SCDM). Assign mobility a value of 1 for all observed release substances regardless of the aquifer being evaluated. For each substance, multiply the toxicity by the mobility to obtain the toxicity/mobility factor value; enter the highest toxicity/mobility value for the aquifer in the space provided.

**Ground Water Actual Contamination Targets Summary Table**

If there is an observed release at a drinking water well, enter each hazardous substance meeting the requirements for an observed release by well and sample ID on SI Table 5 and record the detected concentration. Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate the population using the well as a Level I target. If these percentages are less than 100% or all are N/A, evaluate the population using the well as a Level II target for that aquifer.

# SURFACE WATER PATHWAY

**Sketch of the Surface Water Migration Route:**
Label all surface water bodies. Include runoff route and drainage direction, probable point of entry, and 15-mile target distance limit. Mark sample locations, intakes, fisheries, and sensitive environments.
Indicate flo

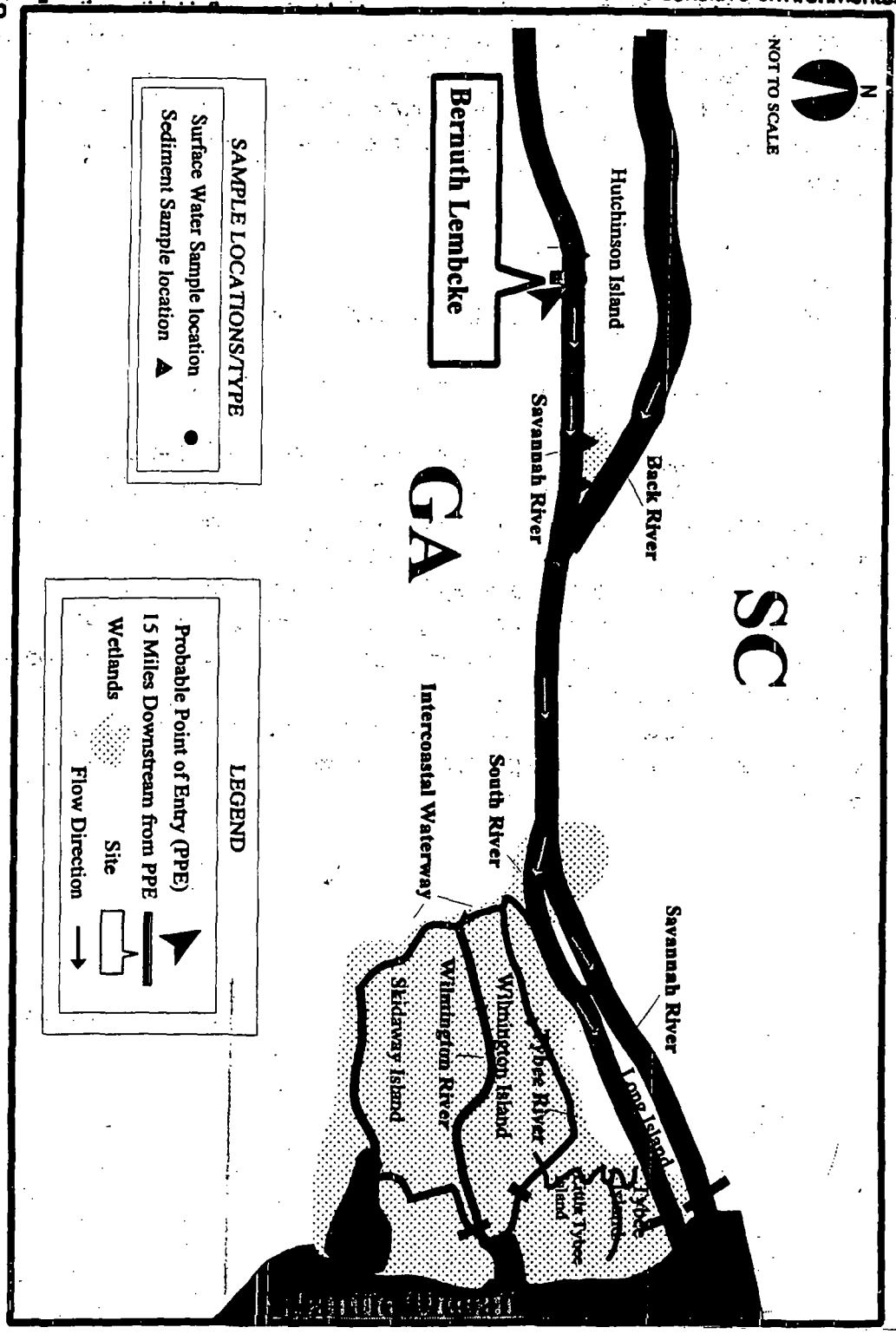



Figure 2. SURFACE WATER PATHWAY MIGRATION ROUTE AND SAMPLE LOCATIONS

## SURFACE WATER PATHWAY

### Surface Water Observed Release Substances Summary Table

On SI Table 7, list the hazardous substances detected in surface water samples for the watershed, which can be attributed to the site. Include only those substances in observed releases (direct observation) or with concentration levels significantly above background levels. Obtain toxicity, persistence, bioaccumulation potential, and ecotoxicity values from SCDM. Enter the highest toxicity/persistence, toxicity/persistence/bioaccumulation, and ecotoxicity/persistence/ecobioaccumulation values in the spaces provided.

- TP = Toxicity x Persistence
- TPB = TP x bioaccumulation
- ETPB = EP x bioaccumulation (EP = ecotoxicity x persistence)

### Drinking Water Actual Contamination Targets Summary Table

For an observed release at or beyond a drinking water intake, on SI Table 8 enter each hazardous substance by sample ID and the detected concentration. For surface water sediment samples detecting a hazardous substance at or beyond an intake, evaluate the intake as Level II contamination. Obtain benchmark, cancer risk, and reference dose concentrations for each substance from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages of the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate the population served by the intake as a Level I target. If the percentages are less than 100% or all are N/A, evaluate the population served by the intake as a Level II target.

## SI TABLE 7: SURFACE WATER OBSERVED RELEASE SUBSTANCES

| Sample ID | Hazardous Substance | Bckgrd. Conc. | Toxicity/ Persistence | Toxicity/ Persis./ Bioaccum | Ecotoxicity/ Persis/ Ecobioaccum | References |
|---|---|---|---|---|---|---|
| HW 6041 | FLUORENE | | $1 \times 10^2$ | $5 \times 10^3$ | $5 \times 10^6$ | SCDM |
| HW 6093 | Anthracene | | 10 | $5 \times 10^4$ | $5 \times 10^7$ | SCDM |
| HW 6041 | Pyrene | | 1 | $5 \times 10^3$ | $5 \times 10^5$ | SCDM |
| HW 6041 | Benzo(a)anthracene | | $1 \times 10^3$ | $5 \times 10^7$ | $5 \times 10^8$ | SCDM |
| HW 6041 | Benzo(b)fluoranthene | | $1 \times 10^3$ | $5 \times 10^7$ | 0 | SCDM |
| HW 6041 | Crysene | | 10 | $5 \times 10^3$ | $5 \times 10^6$ | SCDM |
| HW 6041 | Fluoranthene | | 100 | $5 \times 10^4$ | $5 \times 10^6$ | SCDM |
| HW 6041 | Naphthalene | | 40 | $2 \times 10^4$ | $2 \times 10^6$ | SCDM |
| HW 6041 | 2-Methylnaphthalene | | 0 | 0 | $2 \times 10^6$ | SCDM |
| HW 6041 | Acenaphthene | | 0 | 0 | 0 | SCDM |
| | | Highest Values | $1 \times 10^3$ | $5 \times 10^7$ | $5 \times 10^8$ | SCDM |

## SI TABLE 8: SURFACE WATER DRINKING WATER ACTUAL CONTAMINATION TARGETS – 0

Intake ID: _____ Sample Type _____ Level I _____ Level II _____ Population Served _____ References _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Conc. (MCL or MCLG) | % of Benchmark | Cancer Risk Conc. | % of Cancer Risk Conc. | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

Intake ID: _____ Sample Type _____ Level I _____ Level II _____ Population Served _____ References _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Conc. (MCL or MCLG) | % of Benchmark | Cancer Risk Conc. | % of Cancer Risk Conc. | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

# SURFACE WATER PATHWAY
## LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET

| LIKELIHOOD OF RELEASE– OVERLAND/FLOOD MIGRATION | Score | Data Type | Refs |
|---|---|---|---|
| 1. OBSERVED RELEASE: If sampling data or direct observation support a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7. | 550 | DO HW 6040 HW 6041 HW 6043 | |
| 2. POTENTIAL TO RELEASE: Distance to surface water: ____(feet) If sampling data do not support a release to surface water in the watershed, use the table below to assign a score from the table below based on distance to surface water and flood frequency: | | | |

| | |
|---|---|
| Distance to surface water <2500 feet | 500 |
| Distance to surface water >2500 feet, and: | |
| Site in annual or 10-yr floodplain | 500 |
| Site in 100-yr floodplain | 400 |
| Site in 500-yr floodplain | 300 |
| Site outside 500-yr floodplain | 100 |

Optionally, evaluate surface water potential to release according to HRS Section 4.1.2.1.2

LR = 550

| LIKELIHOOD OF RELEASE GROUND WATER TO SURFACE WATER MIGRATION | Score | Data Type | Refs |
|---|---|---|---|
| 1. OBSERVED RELEASE: If sampling data or direct observation support a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7. | | | |
| NOTE: Evaluate ground water to surface water migration only for a surface water body that meets all of the following conditions: | | | |
| 1) A portion of the surface water is within 1 mile of site sources having a containment factor greater than 0. | | | |
| 2) No aquifer discontinuity is established between the source and the above portion of the surface water body. | | | |
| 3) The top of the uppermost aquifer is at or above the bottom of the surface water. | | | |
| Elevation of top of uppermost aquifer _____ | | | |
| Elevation of bottom of surface water body _____ | | | |
| 2. POTENTIAL TO RELEASE: Use the ground water potential to release. Optionally, evaluate surface water potential to release according to HRS Section 3.1.2. | | | |

LR = _____

# SURFACE WATER PATHWAY
## LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET (CONTINUED)

| DRINKING WATER THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|
| Record the water body type, flow, and number of people served by each drinking water intake within the target distance limit in the watershed. If there is no drinking water intake within the target distance limit, assign 0 to factors 3, 4, and 5.<br><br>Intake Name / Water Body Type / Flow / People Served<br>_____ _____ _____ _____<br>_____ _____ _____ _____<br>_____ _____ _____ _____<br><br>Are any intakes part of a blended system? Yes _____ No _____<br>If yes, attach a page to show apportionment calculations.<br><br>3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates a drinking water intake has been exposed to a hazardous substance from the site, list the intake name and evaluate the factor score for the drinking water population (SI Table 8).<br>_____ , _____<br><br>Level I: _____ people x 10 = _____<br>Level II: _____ people x 1 = _____ Total = | 0 | | |
| 4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water intakes for the watershed that have not been exposed to a hazardous substance from the site. Assign the population values from SI Table 9. Sum the values and multiply by 0.1. | 0 | | |
| 5. NEAREST INTAKE: Assign a score of 50 for any Level I Actual Contamination Drinking Water Targets for the watershed. Assign a score of 45 if there are Level II targets for the watershed, but no Level I targets. If no Actual Contamination Drinking Water Targets exist, assign a score for the intake nearest the PPE from SI Table 9. If no drinking water intakes exist, assign 0. | 0 | | |
| 6. RESOURCES: Assign a score of 5 if one or more surface water resource applies; assign 0 if none applies.<br>• Irrigation (5 acre minimum) of commercial food crops or commercial forage crops<br>• Watering of commercial livestock<br>• Ingredient in commercial food preparation<br>• Major or designated water recreation area, excluding drinking water use | 5 | | PA, SI, SIP, ESI |
| SUM OF TARGETS T= | 5 | | |

## SI TABLE 9 (From HRS Table 4-14): DILUTION-WEIGHTED POPULATION VALUES FOR POTENTIAL CONTAMINATION FOR SURFACE WATER MIGRATION PATHWAY

| Type of Surface Water Body | Pop. | Nearest Intake | Number of people | | | | | | | | | Pop. Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 1 to 10 | 11 to 30 | 31 to 100 | 101 to 300 | 301 to 1,000 | 1,001 to 3,000 | 3,001 to 10,000 | 10,001 to 30,000 | |
| Minimal Stream (<10 cfs) | | 20 | 0 | 4 | 17 | 53 | 164 | 522 | 1,633 | 5,214 | 16,325 | |
| Small to moderate stream (10 to 100 cfs) | | 2 | 0 | 0.4 | 2 | 5 | 16 | 52 | 163 | 521 | 1,633 | |
| Moderate to large stream (> 100 to 1,000 cfs) | | 0 | 0 | 0.04 | 0.2 | 0.5 | 2 | 5 | 16 | 52 | 163 | |
| Large Stream to river (>1,000 to 10,000 cfs) | | 0 | 0 | 0.004 | 0.02 | 0.05 | 0.2 | 0.5 | 2 | 5 | 16 | |
| Large River (> 10,000 to 100,000 cfs) | | 0 | 0 | 0 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | 0.5 | 16 | |
| Very Large River (>100,000 cfs) | | 0 | 0 | 0 | 0 | 0.001 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | |
| Shallow ocean zone or Great Lake (depth < 20 feet) | | 0 | 0 | 0 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | 0.5 | 2 | |
| Moderate ocean zone or Great Lake (Depth 20 to 200 feet) | | 0 | 0 | 0 | 0 | 0.001 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | |
| Deep ocean zone or Great Lake (depth > 200 feet) | | 0 | 0 | 0 | 0 | 0 | 0.001 | 0.003 | 0.008 | 0.03 | 0.08 | |
| 3-mile mixing zone in quiet flowing river (≥ 10 cfs) | | 10 | 0 | 2 | 9 | 26 | 82 | 261 | 817 | 2,607 | 8,163 | |
| Nearest Intake = | | | | | | | | | | | Sum = | |

References _____

## SURFACE WATER PATHWAY

### Human Food Chain Actual Contamination Targets Summary Table

On SI Table 10, list the hazardous substances detected in sediment, aqueous, sessile benthic organism tissue, or fish tissue samples (taken from fish caught within the boundaries of the observed release) by sample ID and concentration. Evaluate fisheries within the boundaries of observed releases detected by sediment or aqueous samples as Level II, if at least one observed release substance has a bioaccumulation potential factor value of 500 or greater (see SI Table 7). Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For FDA/EL benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate this portion of the fishery as subject to Level I concentrations. If the percentages are less than 100% or all are N/A, evaluate the fishery as a Level II target.

### Sensitive Environment Actual Contamination Targets Summary Table

On SI Table 11, list each hazardous substance detected in aqueous or sediment samples at or beyond wetlands or a surface water sensitive environment by sample ID. Record the concentration. If contaminated sediments or tissues are detected at or beyond a sensitive environment, evaluate the sensitive environment as Level II. Obtain benchmark concentrations from SCDM. For AWQC/AWLAC benchmarks, determine the highest percentage of benchmark of the substances detected in aqueous samples. If benchmark concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage equals or exceeds 100%, evaluate that part of the sensitive environment subject to Level I concentrations. If the percentage is less than 100%, or all are N/A, evaluate the sensitive environment as Level II.

## SI TABLE 10: HUMAN FOOD CHAIN ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Fishery ID: Savannah River Sample Type Sediment Level I ✓ Level II ____ References SCDM

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Benchmark Concentration (FDAAL) | % of Benchmark | Cancer Risk Concentration | % of Cancer Risk Concentration | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| HW 6041 | Fluorene | 2.14 | NA | NA | NA | NA | .04 | 5350 |
| HW 6043 | Anthracene | .951 | NA | NA | NA | NA | .3 | 317 |
| HW 6041 | Pyrene | 3.43 | NA | NA | NA | NA | .03 | 11,433 |
| ✓ HW 6041 | Benzo(a)anthracene | 1.090 | NA | NA | .0043 | 25,349 | NA | NA |
| HW 6041 | Crysene | 1.190 | NA | NA | .43 | 276.74 | NA | NA |
| | | | Highest Percent | NA | Sum of Percents | 25,625.74 | Sum of Percents | 17,100 |

## SI TABLE 11: SENSITIVE ENVIRONMENT ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Environment ID: ____ Sample Type ____ Level I ____ Level II ____ Environment Value ____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

Environment ID: ____ Sample Type ____ Level I ____ Level II ____ Environment Value ____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

# SURFACE WATER PATHWAY (continued)
# HUMAN FOOD CHAIN THREAT WORKSHEET

| HUMAN FOOD CHAIN THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|
| Record the water body type and flow for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a score of 0 at the bottom of this page. | | | |

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

FOOD CHAIN INDIVIDUAL

7. ACTUAL CONTAMINATION FISHERIES:

If analytical evidence indicates that a fishery has been exposed to a hazardous substance with a bioaccumulation factor greater than or equal to 500 (SI Table 10), assign a score of 50 if there is a Level I fishery. Assign 45 if there is a Level II fishery, but no Level I fishery.

8. POTENTIAL CONTAMINATION FISHERIES:

If there is a release of a substance with a bioaccumulation factor greater than or equal to 500 to a watershed containing fisheries within the target distance limit, but there are no Level I or Level II fisheries, assign a score of 20.

If there is no observed release to the watershed, assign a value for potential contamination fisheries from the table below using the lowest flow at all fisheries within the target distance limit:

| Lowest Flow | FCI Value |
|---|---|
| <10 cfs | 20 |
| 10 to 100 cfs | 2 |
| >100 cfs, coastal tidal waters, oceans, or Great Lakes | 0 |
| 3-mile mixing zone in quiet flowing river | 10 |

FCI Value =

SUM OF TARGETS T =

## SI TABLE 10: HUMAN FOOD CHAIN ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Fishery ID: Savannah River Sample Type Sediment Level I ✓ Level II ____ References SCDM

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Benchmark Concentration (FDAAL) | % of Benchmark | Cancer Risk Concentration | % of Cancer Risk Concentration | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| HW 6041 | Fluoranthene | 5.0 | NA | NA | NA | NA | .04 | 12,500 |
| HW 6041 | Naphthalene | 2.07 | NA | NA | NA | NA | .04 | 5,175 |
| HW 6041 | 2-Methylnaphthalene | 1.77 | NA | NA | NA | NA | NA | NA |
| HW 6041 | Acenaphthene | 1.99 | NA | NA | NA | NA | NA | NA |
| HW 6041 | Dibenzofuran | 1.72 | NA | NA | NA | NA | NA | NA |
| | | | Highest Percent | NA | Sum of Percents | NA | Sum of Percents | 17,675 |

## SI TABLE 11: SENSITIVE ENVIRONMENT ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Environment ID: _____ Sample Type _____ Level I ____ Level II ____ Environment Value _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

Environment ID: _____ Sample Type _____ Level I ____ Level II ____ Environment Value _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

# SURFACE WATER PATHWAY (continued)
# HUMAN FOOD CHAIN THREAT WORKSHEET

| HUMAN FOOD CHAIN THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|
| Record the water body type and flow for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a score of 0 at the bottom of this page. | | | |

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

FOOD CHAIN INDIVIDUAL

7. ACTUAL CONTAMINATION FISHERIES:

If analytical evidence indicates that a fishery has been exposed to a hazardous substance with a bioaccumulation factor greater than or equal to 500 (SI Table 10), assign a score of 50 if there is a Level I fishery. Assign 45 if there is a Level II fishery, but no Level I fishery.

8. POTENTIAL CONTAMINATION FISHERIES:

If there is a release of a substance with a bioaccumulation factor greater than or equal to 500 to a watershed containing fisheries within the target distance limit, but there are no Level I or Level II fisheries, assign a score of 20.

If there is no observed release to the watershed, assign a value for potential contamination fisheries from the table below using the lowest flow at all fisheries within the target distance limit:

| Lowest Flow | FCI Value |
|---|---|
| <10 cfs | 20 |
| 10 to 100 cfs | 2 |
| >100 cfs, coastal tidal waters, oceans, or Great Lakes | 0 |
| 3-mile mixing zone in quiet flowing river | 10 |

FCI Value =

SUM OF TARGETS T =

## SI TABLE 10: HUMAN FOOD CHAIN ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Fishery ID: Savannah River Sample Type Sediment Level I ✓ Level II ____ References SCDM

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Benchmark Concentration (FDAAL) | % of Benchmark | Cancer Risk Concentration | % of Cancer Risk Concentration | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| ✓ HW6041 | Benzo(b)fluoranthene | .814 | NA | NA | .0043 | 18,930 | NA | NA |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | NA | Sum of Percents | 18,930 | Sum of Percents | NA |

## SI TABLE 11: SENSITIVE ENVIRONMENT ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Environment ID: ____ Sample Type ____ Level I ____ Level II ____ Environment Value ____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

Environment ID: ____ Sample Type ____ Level I ____ Level II ____ Environment Value ____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

# SURFACE WATER PATHWAY (continued)
# HUMAN FOOD CHAIN THREAT WORKSHEET

| HUMAN FOOD CHAIN THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|
| Record the water body type and flow for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a score of 0 at the bottom of this page. | | | |

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

Fishery Name_____ Water Body_____ Flow_____cfs

Species_____ Production_____lbs/yr
Species_____ Production_____lbs/yr

FOOD CHAIN INDIVIDUAL

7. ACTUAL CONTAMINATION FISHERIES:

If analytical evidence indicates that a fishery has been exposed to a hazardous substance with a bioaccumulation factor greater than or equal to 500 (SI Table 10), assign a score of 50 if there is a Level I fishery. Assign 45 if there is a Level II fishery, but no Level I fishery.

8. POTENTIAL CONTAMINATION FISHERIES:

If there is a release of a substance with a bioaccumulation factor greater than or equal to 500 to a watershed containing fisheries within the target distance limit, but there are no Level I or Level II fisheries, assign a score of 20.

If there is no observed release to the watershed, assign a value for potential contamination fisheries from the table below using the lowest flow at all fisheries within the target distance limit:

| Lowest Flow | FCI Value |
|---|---|
| <10 cfs | 20 |
| 10 to 100 cfs | 2 |
| >100 cfs, coastal tidal waters, oceans, or Great Lakes | 0 |
| 3-mile mixing zone in quiet flowing river | 10 |

FCI Value =

SUM OF TARGETS T =

## SI TABLE 10: HUMAN FOOD CHAIN ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Fishery ID: Savannah River Sample Type Sediment Level I Y Level II ____ References SCDM

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Benchmark Concentration (FDAAL) | % of Benchmark | Cancer Risk Concentration | % of Cancer Risk Concentration | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | TOTALS | Highest Percent | NA | Sum of Percents | 44,556 | Sum of Percents | 34,775 |

## SI TABLE 11: SENSITIVE ENVIRONMENT ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Environment ID: _____ Sample Type _____ Level I _____ Level II _____ Environment Value _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

Environment ID: _____ Sample Type _____ Level I _____ Level II _____ Environment Value _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AALAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

## SURFACE WATER PATHWAY (continued)
## HUMAN FOOD CHAIN THREAT WORKSHEET

| HUMAN FOOD CHAIN THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|
| Record the water body type and flow for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a score of 0 at the bottom of this page. | | | |

Fishery Name SAVANNAH Water Body RIVER Flow 70,000 cfs

Species SEVERAL Production > 1000 lbs/yr
Species _____ Production _____ lbs/yr

Fishery Name _____ Water Body _____ Flow _____ cfs

Species _____ Production _____ lbs/yr
Species _____ Production _____ lbs/yr

Fishery Name _____ Water Body _____ Flow _____ cfs

Species _____ Production _____ lbs/yr
Species _____ Production _____ lbs/yr

FOOD CHAIN INDIVIDUAL

7. ACTUAL CONTAMINATION FISHERIES:

If analytical evidence indicates that a fishery has been exposed to a hazardous substance with a bioaccumulation factor greater than or equal to 500 (SI Table 10), assign a score of 50 if there is a Level I fishery. Assign 45 if there is a Level II fishery, but no Level I fishery.

Score: 50 | Data Type: HW6040, HW6041, HW6043 | Refs: ESI

8. POTENTIAL CONTAMINATION FISHERIES:

If there is a release of a substance with a bioaccumulation factor greater than or equal to 500 to a watershed containing fisheries within the target distance limit, but there are no Level I or Level II fisheries, assign a score of 20.

If there is no observed release to the watershed, assign a value for potential contamination fisheries from the table below using the lowest flow at all fisheries within the target distance limit:

| Lowest Flow | FCI Value |
|---|---|
| <10 cfs | 20 |
| 10 to 100 cfs | 2 |
| >100 cfs, coastal tidal waters, oceans, or Great Lakes | 0 |
| 3-mile mixing zone in quiet flowing river | 10 |

FCI Value =

SUM OF TARGETS T = 50

# SURFACE WATER PATHWAY (continued)
# ENVIRONMENTAL THREAT WORKSHEET

When measuring length of wetlands that are located on both sides of a surface water body, sum both frontage lengths. For a sensitive environment that is more than one type, assign a value for each type.

| ENVIRONMENTAL THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|

Record the water body type and flow for each surface water sensitive environment within the target distance (see SI Table 12). If there is no sensitive environment within the target distance limit, assign a score of 0 at the bottom of the page.

| Environment Name | Water Body Type | Flow |
|---|---|---|
| SAVANNAH | RIVER | 10,000 cfs |
| | | cfs |
| | | cfs |
| | | cfs |
| | | cfs |

**9. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS:** If sampling data or direct observation indicate any sensitive environment has been exposed to a hazardous substance from the site, record this information on SI Table 11, and assign a factor value for the environment (SI Tables 13 and 14).

| Environment Name | Environment Type and Value (SI Tables 13 & 14) | Multiplier (10 for Level I, 1 for Level II) | Product |
|---|---|---|---|
| | | x | |
| | | x | |
| | | x | |
| | | x | |
| | | Sum = | 0 |

Refs: REF 10 PA/SI ESI

**10. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS:**

| Flow | Dilution Weight (SI Table 12) | Environment Type and Value (SI Tables 13 & 14) | Pot. Cont. | Product | Score | Data Type | Refs |
|---|---|---|---|---|---|---|---|
| 10,000 cfs | .0001 x | 600 x | 0.1 = | .006 | .006 | DO | ESI + REF 12 |
| cfs | x | x | 0.1 = | | | | |
| cfs | x | x | 0.1 = | | | | |
| cfs | x | x | 0.1 = | | | | |
| cfs | x | x | 0.1 = | | | | |
| | | | Sum = | | .006 | | |

T = .006

## SI TABLE 12 (HRS Table 4-13): SURFACE WATER DILUTION WEIGHTS

| Type of Surface Water Body | | Assigned Dilution Weight |
|---|---|---|
| ***Descriptor*** | ***Flow Characteristics*** | |
| Minimal stream | < 10 cfs | 1 |
| Small to moderate stream | 10 to 100 cfs | 0.1 |
| Moderate to large stream | > 100 to 1,000 cfs | 0.01 |
| Large stream to river | > 1,000 to 10,000 cfs | 0.001 |
| Large river | > 10,000 to 100,000 cfs | 0.0001 |
| Very large river | > 100,000 cfs | 0.00001 |
| Coastal tidal waters | Flow not applicable; depth not applicable | ~~0.001~~ 0.0001 |
| Shallow ocean zone or Great Lake | Flow not applicable; depth less than 20 feet | ~~0.001~~ 0.0001 |
| Moderate depth ocean zone or Great Lake | Flow not applicable; depth 20 to 200 feet | ~~0.0001~~ 0.00001 |
| Deep ocean zone or Great Lake | Flow not applicable; depth greater than 200 feet | 0.000005 |
| 3-mile mixing zone in quiet flowing river | 10 cfs or greater | 0.5 |

## SI TABLE 13 (HRS TABLE 4-23): SURFACE WATER AND AIR SENSITIVE ENVIRONMENTS VALUES

| SENSITIVE ENVIRONMENT | ASSIGNED VALUE |
|---|---|
| Critical habitat for Federal designated endangered or threatened species<br>Marine Sanctuary<br>National Park<br>Designated Federal Wilderness Area<br>Ecologically important areas identified under the Coastal Zone Wilderness Act<br>Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act<br>Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes)<br>National Monument (air pathway only)<br>National Seashore Recreation Area<br>National Lakeshore Recreation Area | 100 |
| Habitat known to be used by Federal designated or proposed endangered or threatened species<br>National Preserve<br>National or State Wildlife Refuge<br>Unit of Coastal Barrier Resources System<br>Coastal Barrier (undeveloped)<br>Federal land designated for the protection of natural ecosystems<br>Administratively Proposed Federal Wilderness Area<br>Spawning areas critical for the maintenance of fish/shellfish species within a river system, bay, or estuary<br>Migratory pathways and feeding areas critical for the maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time<br>Terrestrial areas utilized by large or dense aggregations of vertebrate animals (semi-aquatic foragers) for breeding<br>National river reach designated as recreational | 75 |
| Habitat known to be used by State designated endangered or threatened species<br>Habitat known to be used by a species under review as to its Federal endangered or threatened status<br>Coastal Barrier (partially developed)<br>Federally designated Scenic or Wild River | 50 |
| State land designated for wildlife or game management<br>State designated Scenic or Wild River<br>State designated Natural Area<br>Particular areas, relatively small in size, important to maintenance of unique biotic communities | 25 |
| State designated areas for the protection of maintenance of aquatic life under the Clean Water Act | 5 |
| Wetlands See SI Table 14 (Surface Water Pathway) or SI Table 23 (Air Pathway) | |

## SI TABLE 14 (HRS TABLE 4-24): SURFACE WATER WETLANDS FRONTAGE VALUES

| Total Length of Wetlands | Assigned Value |
|---|---|
| Less than 0.1 mile | 0 |
| 0.1 to 1 mile | 25 |
| Greater than 1 to 2 miles | 50 |
| Greater than 2 to 3 miles | 75 |
| Greater than 3 to 4 miles | 100 |
| Greater than 4 to 8 miles | 150 |
| Greater than 8 to 12 miles | 250 |
| Greater than 12 to 16 miles | 350 |
| Greater than 16 to 20 miles | 450 |
| Greater than 20 miles | 500 |

## SURFACE WATER PATHWAY (concluded)
### WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY

**WASTE CHARACTERISTICS**

| | Score |
|---|---|
| 14. If an Actual Contamination Target (drinking water, human food chain, or environmental threat) exists for the watershed, assign the calculated hazardous waste quantity score, or a score of 100, whichever is greater. | 100 |
| 15. Assign the highest value from SI Table 7 (observed release) or SI Table 3 (no observed release) for the hazardous substance waste characterization factors below. Multiply each by the surface water hazardous waste quantity score and determine the waste characteristics score for each threat. | |

| | Substance Value | | HWQ | | Product | WC Score (from Table) (Maximum of 100) |
|---|---|---|---|---|---|---|
| Drinking Water Threat Toxicity/Persistence | $1 \times 10^3$ | x | 100 | = | $1 \times 10^5$ | 18 |
| Food Chain Threat Toxicity/Persistence Bioaccumulation | $5 \times 10^7$ | x | 100 | = | $5 \times 10^9$ | 180 |
| Environmental Threat Ecotoxicity/Persistence/ Ecobioaccumulation | $5 \times 10^8$ | x | 100 | = | $5 \times 10^{10}$ | 320 |

| Product | WC Score |
|---|---|
| 0 | 0 |
| >0 to <10 | 1 |
| 10 to <100 | 2 |
| 100 to <1,000 | 3 |
| 1,000 to < 10,000 | 6 |
| 10,000 to <1E + 05 | 10 |
| 1E + 05 to <1E + 06 | 18 |
| 1E + 06 to <1E + 07 | 32 |
| 1E + 07 to <1E + 08 | 56 |
| 1E + 08 to <1E + 09 | 100 |
| 1E + 09 to <1E + 10 | 180 |
| 1E + 10 to <1E + 11 | 320 |
| 1E + 11 to <1E + 12 | 560 |
| 1E + 12 or greater | 1000 |

**SURFACE WATER PATHWAY THREAT SCORES**

| Threat | Likelihood of Release (LR) Score | Targets (T) Score | Pathway Waste Characteristics (WC) Score (determined above) | Threat Score $\frac{LR \times T \times WC}{82,500}$ |
|---|---|---|---|---|
| Drinking Water | 550 | 5 | 18 | (maximum of 100) .6 |
| Human Food Chain | 550 | 50 | 180 | (maximum of 100) 60 |
| Environmental | 550 | .006 | 320 | (maximum of 60) 0 (.013) |

**SURFACE WATER PATHWAY SCORE (Drinking Water Threat + Human Food Chain Threat + Environmental Threat)**

(maximum of 100) 60.6

## SOIL EXPOSURE PATHWAY

If there is no observed contamination (e.g., ground water plume with no known surface source), do not evaluate the soil exposure pathway. Discuss evidence for no soil exposure pathway.

### Soil Exposure Resident Population Targets Summary

For each property (duplicate page 35 as necessary):

If there is an area of observed contamination on the property and within 200 feet of a residence, school, or day care center, enter on Table 15 each hazardous substance by sample ID. Record the detected concentration. Obtain cancer risk, and reference dose concentrations from SCDM. Sum the cancer risk and reference dose percentages for the substances listed. If cancer risk or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate the residents and students as Level I. If both percentages are less than 100% or all are N/A, evaluate the targets as Level II.

## AIR PATHWAY (concluded)

### WASTE CHARACTERISTICS

| | |
|---|---|
| 9. If any Actual Contamination Targets exist for the air pathway, assign the calculated hazardous waste quantity score or a score of 100, whichever is greater; if there are no Actual Contamination Targets for the air pathway, assign the calculated HWQ score for sources available to air migration. | |
| 10. Assign the highest air toxicity/mobility value from SI Table 21. 43 | |
| 11. Multiply the air pathway toxicity/mobility and hazardous waste quantity scores. Assign the Waste Characteristics score from the table below: | WC = |

| Product | WC Score |
|---|---|
| 0 | 0 |
| >0 to <10 | 1 |
| 10 to <100 | 2 |
| 100 to <1,000 | 3 |
| 1,000 to < 10,000 | 6 |
| 10,000 to <1E + 05 | 10 |
| 1E + 05 to <1E + 06 | 18 |
| 1E + 06 to <1E + 07 | 32 |
| 1E + 07 to <1E + 08 | 56 |
| 1E + 08 or greater | 100 |

**AIR PATHWAY SCORE:** $\frac{LE \times T \times WC}{82,500}$ (maximum of 100)

| SITE SCORE CALCULATION | S | $S^2$ |
|---|---|---|
| GROUND WATER PATHWAY SCORE ($S_{GW}$) | * 0 | 0 |
| SURFACE WATER PATHWAY SCORE ($S_{SW}$) | 60.6 | 3672.4 |
| SOIL EXPOSURE ($S_S$) | * 0 | 0 |
| AIR PATHWAY SCORE ($S_A$) | * 0 | 0 |
| SITE SCORE $\sqrt{\frac{S_{GW}^2+S_{SW}^2+S_S^2+S_A^2}{4}}$ = | | 30.3 |

| COMMENTS |
|---|
| |

TABLE 4-1.—SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

| Factor categories and factors | Maximum value | Value assigned |
|---|---|---|
| **Drinking Water Threat** | | |
| **Likelihood of Release:** | | |
| 1. Observed Release | 550 | 550 |
| 2. Potential to Release by Overland Flow: | | |
| 2a. Containment | 10 | — |
| 2b. Runoff | 25 | — |
| 2c. Distance to Surface Water | 25 | — |
| 2d. Potential to Release by Overland Flow (lines 2a[2b+2c]) | 500 | — |
| 3. Potential to Release by Flood: | | |
| 3a. Containment (Flood) | 10 | — |
| 3b. Flood Frequency | 50 | — |
| 3c. Potential to Release by Flood (lines 3a×3b) | 500 | — |
| 4. Potential to Release (lines 2d+3c, subject to a maximum of 500) | 500 | — |
| 5. Likelihood of Release (higher of lines 1 and 4) | 550 | 550 |
| **Waste Characteristics:** | | |
| 6. Toxicity/Persistence 1000 x 1 = 1000 | (a) | 1000 |
| 7. Hazardous Waste Quantity | (a) | 100 |
| 8. Waste Characteristics | 100 | 18 |
| **Targets:** | | |
| 9. Nearest Intake | 50 | 0 |
| 10. Population | | |
| 10a. Level I Concentrations | (b) | 0 |
| 10b. Level II Concentrations | (b) | 0 |
| 10c. Potential Contamination | (b) | 0 |
| 10d. Population (lines 10a+10b+10c) | (b) | 0 |
| 11. Resources | 5 | 5 |
| 12. Targets (lines 9+10d+11) | (b) | 5 |
| **Drinking Water Threat Score:** | | |
| 13. Drinking Water Threat Score ([lines 5×8×12]/82,500, subject to a maximum of 100) | 100 | .6 |
| **Human Food Chain Threat** | | |
| **Likelihood of Release:** | | |
| 14. Likelihood of Release (same value as line 5) | 550 | 550 |
| **Waste Characteristics:** | | |
| 15. Toxicity/Persistence/Bioaccumulation 1000 x 1 x 50,000 | (a) | $5 \times 10^7$ |
| 16. Hazardous Waste Quantity | (a) | 100 |
| 17. Waste Characteristics | 1,000 | 180 |
| **Targets:** | | |
| 18. Food Chain Individual | 50 | 50 |
| 19. Population | | |
| 19a. Level I Concentrations | (b) | 0 (.3) |
| 19b. Level II Concentrations | (b) | 0 |
| 19c. Potential Human Food Chain Contamination | (b) | 0 (.00003) |
| 19d. Population (lines 19a+19b+19c) | (b) | 0 |
| 20. Targets (lines 18+19d) | (b) | 50 |
| **Human Food Chain Threat Score:** | | |
| 21. Human Food Chain Threat Score ([lines 14×17×20]/82,500, subject to a maximum of 100) | 100 | 60 |
| **Environmental Threat** | | |
| **Likelihood of Release:** | | |
| 22. Likelihood of Release (same value as line 5) | 550 | 550 |
| **Waste Characteristics:** | | |
| 23. Ecosystem Toxicity/Persistence/Bioaccumulation 10,000 x 1 x 50,000 | (a) | $5 \times 10^8$ |
| 24. Hazardous Waste Quantity | (a) | 100 |
| 25. Waste Characteristics | 1,000 | 320 |
| **Targets:** | | |
| 26. Sensitive Environments | | |
| 26a. Level I Concentrations | (b) | 0 |
| 26b. Level II Concentrations | (b) | 0 |
| 26c. Potential Contamination | (b) | .006 |
| 26d. Sensitive Environments (lines 26a+26b+26c) | (b) | |
| 27. Targets (value from line 26d) | (b) | |
| **Environmental Threat Score:** | | |
| 28. Environmental Threat Score ([lines 22×25×27]/82,500, subject to a maximum of 60) | 60 | .013 |
| **Surface Water Overland/Flood Migration Component Score for a Watershed** | | |
| 29. Watershed Score [c] (lines 13+21+28, subject to a maximum of 100) | 100 | 60.6 |
| **Surface Water Overland/Flood Migration Component Score** | | |
| 30. Component Score ($S_{sw}$) [c] (highest score from line 29 for all watersheds evaluated, subject to a maximum of 100) | 100 | 60.6 |

[a] Maximum value applies to waste characteristics category.
[b] Maximum value not applicable.
[c] Do not round to nearest integer.

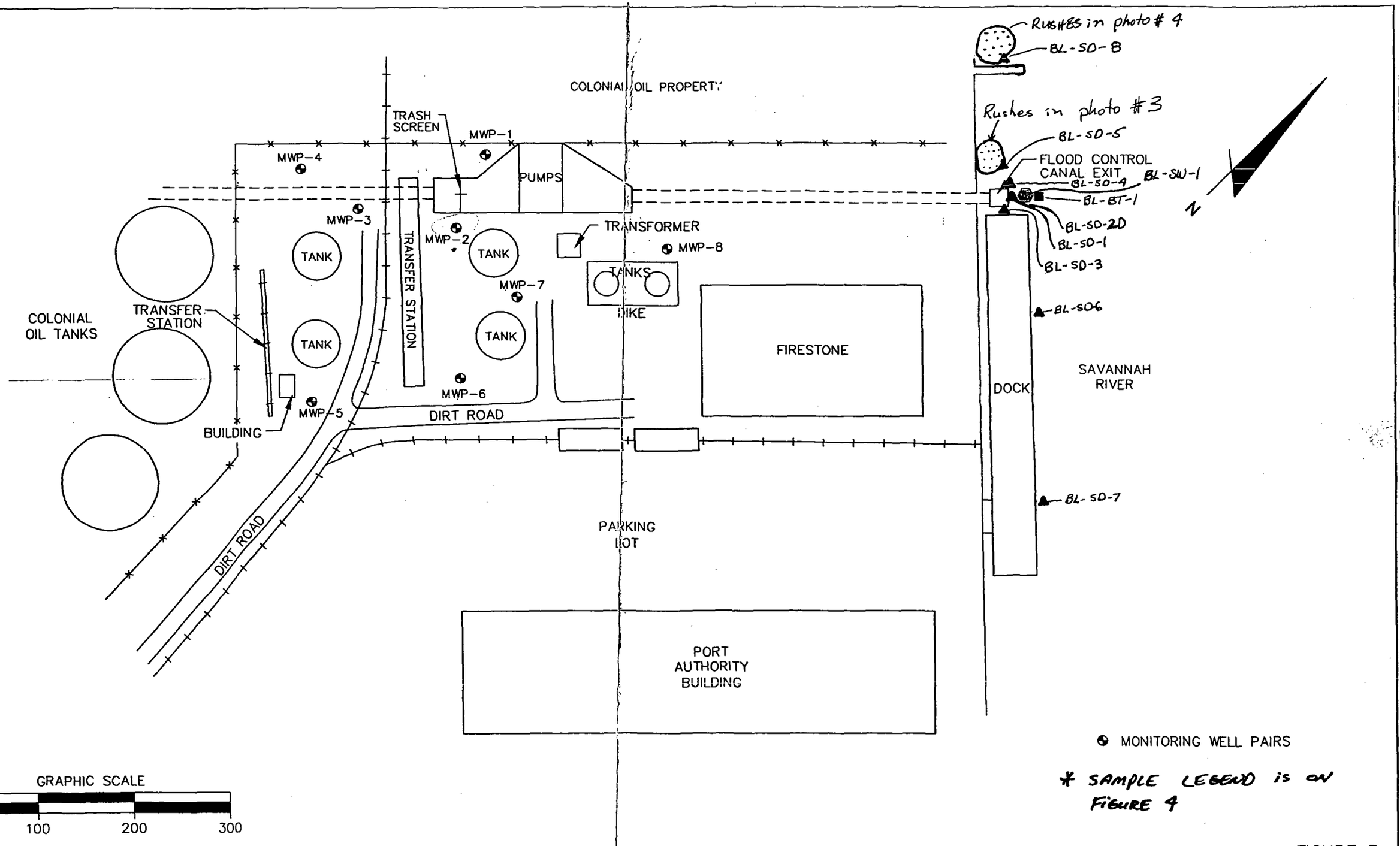



FIGURE 3

| | | | | |
|---|---|---|---|---|
| ViroGroup ETE, Division P.O. Box 1687 • 1445 Pisgah Church Rd. • Lexington, S.C. 29072 (803) 957-6270 | SCALE 1"=100' | BERNUTH – LEMBCKE COMPANY, INC. CENTRAL OF GEORGIA RAILROAD CO. SAVANNAH, GEORGIA | LOCATION | SHEET OF |
| | DRAWN BY TBG | | | CADD NO. 11801 |
| | CHECKED BY | | | PROJECT NO. 12-11801.00 |
| | DATE 3/15/94 | | | |

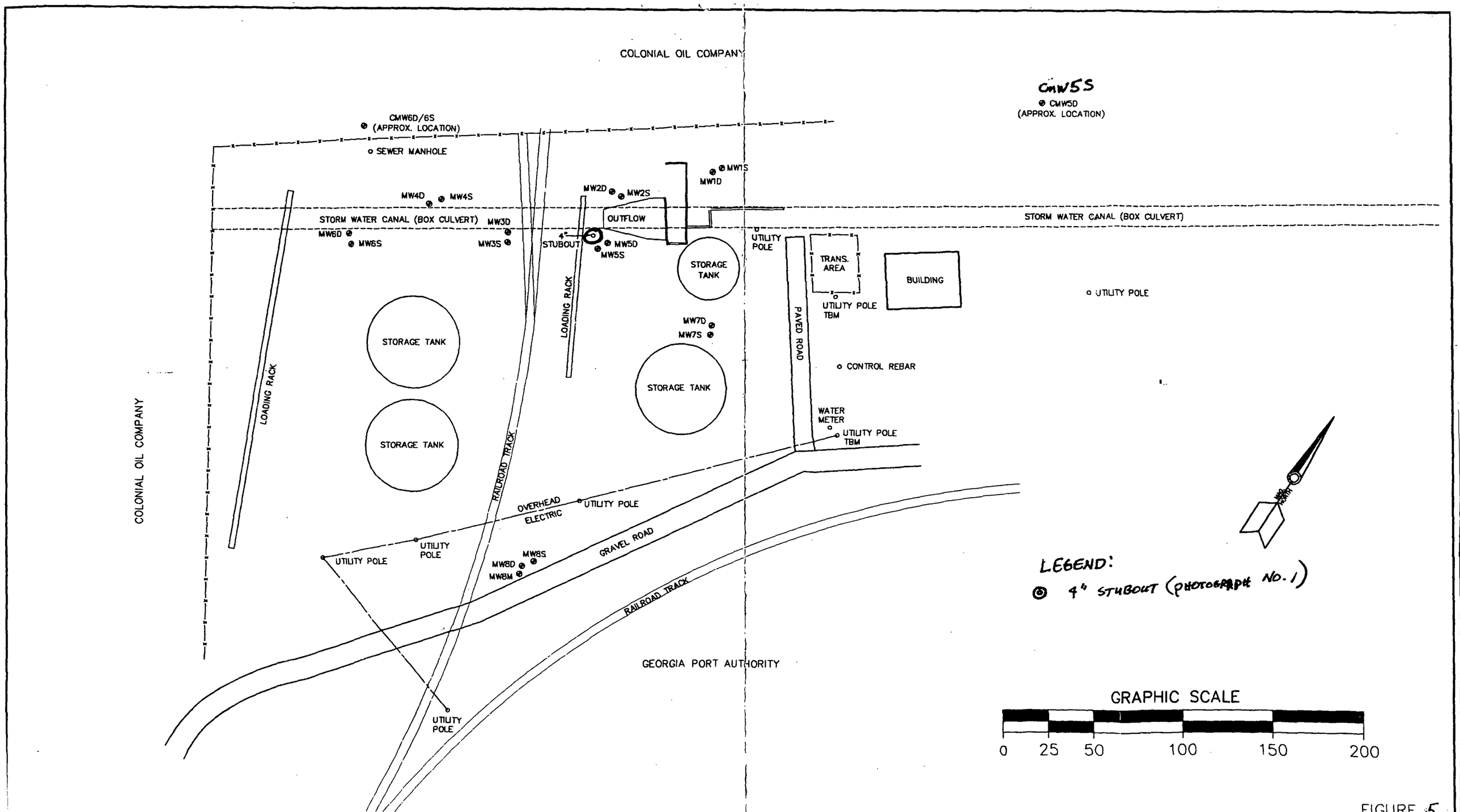



FIGURE 5

| | | | | |
|---|---|---|---|---|
| ViroGroup ETE Division<br>P.O. Box 1687 • 1440 Pisgah Church Rd. • Lexington, S.C. 29072<br>(803) 957-6270 | SCALE 1" = 50'<br>DRAWN BY CAB<br>CHECKED BY JDK<br>DATE 5/2/94 | BERNUTH–LEMBCKE COMPANY SITE<br>CENTRAL OF GEORGIA RAILROAD CO.<br>SAVANNAH, GEORGIA | MONITORING WELL LOCATIONS | SHEET OF<br>CADD NO. 1180102<br>PROJECT NO. 12–11801.00 |