#27101

R-586-10-0-60

2-27-91
LSI
Janice Pitchford

FINAL

SCREENING SITE INSPECTION PHASE II
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA
EPA ID #: GAD980496939

Prepared Under
TDD No. F4-8902-46
CONTRACT NO. 68-01-7346

Revision 0

FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 31, 1990

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Reviewed By	Approved By
Walter Riley, Jr.	Robert E. Dooley	Bob Donaghue	Phil Blackwell
Project Manager	Professional Geologist	Assistant Regional Project Manager	Regional Project Manager

ROBERT E. DO
REGISTERED PROFESSIONAL GEOLOGIST

TABLE OF CONTENTS

Section		Page No.
EXECUTIVE SUMMARY		**ES-1**
1.0	**INTRODUCTION**	**1**
1.1	Objectives	1
1.2	Scope of Work	1
2.0	**SITE CHARACTERIZATION**	**3**
2.1	Site Background History	3
2.2	Site Description	3
	2.2.1 Site Features	3
	2.2.2 Waste Characteristics	3
3.0	**REGIONAL POPULATIONS AND ENVIRONMENTS**	**7**
3.1	Population and Land Use	7
	3.1.1 Demography	7
	3.1.2 Land Use	7
3.2	Surface Water	7
	3.2.1 Climatology	7
	3.2.2 Overland Drainage	8
	3.2.3 Potentially Affected Water Bodies	8
3.3	Groundwater	8
	3.3.1 Hydrogeology	8
	3.3.2 Aquifer Use	10
	3.4 Summary of Potentially Affected Populations and Environments	**10**
4.0	**FIELD INVESTIGATION**	**13**
4.1	Field Analytical Support Project	13
4.2	Contract Laboratory Program Sample Collection	13
	4.2.1 Sample Collection Methodology	15
	4.2.2 Split Samples	15
	4.2.3 Description of Samples and Sample Locations	15
	4.2.4 Field Measurements	16
4.3	Contract Laboratory Program Sample Analysis	21
	4.3.1 Analytical Support and Methodology	21
	4.3.2 Analytical Data Quality	21
	4.3.3 Presentation of Analytical Results	21
4.4	Summary of Field Investigation	21
5.0	**SUMMARY**	**30**
REFERENCES		**31**

APPENDIX A Topographic Map
APPENDIX B Field Analytical Screening Program Methodology
APPENDIX C Analytical Results
APPENDIX D SI Form

TABLE OF CONTENTS (continued)

TABLES

Number		Page No.
Table 1	Sample Codes, Descriptions, and Rationale	18
Table 2	Field Measurements	20
Table 3	Inorganic Analyses - Groundwater Samples	23
Table 4	Inorganic Analyses - Subsurface Soil Samples	24
Table 5	Inorganic Analyses - Surface Soil Samples	25
Table 6	Organic Analyses - Groundwater Samples	26
Table 7	Organic Analyses - Subsurface Soil Samples	28
Table 8	Organic Analyses - Surface Soil Samples	29

FIGURES

Figure 1	Site Location Map	4
Figure 2	Site Layout Map	5
Figure 3	Water Level Contour	11
Figure 4	FASP Sampling Points	14
Figure 5	Sample Location Map	19

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-7346 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed or written consent of the EPA.

EXECUTIVE SUMMARY

The Old Sterling Landfill, a sanitary landfill approximately 4.3 acres in size, is located south of Highway 99 in Sterling, Glynn County, Georgia. The county operated the landfill on leased land from about 1969 through 1979. The landfill was permitted by the state in 1976 and was officially closed in 1980. The property is currently owned by Georgia Pacific.

Various types of wastes were disposed of at the Old Sterling Landfill including tree limbs, leaves, garbage, and an occasional car. The Hercules Plant of Brunswick disposed of 4,900 tons of waste, containing an estimated 1 percent toxaphene, at the landfill.

In the Brunswick area, there are three distinct aquifers. These consist of the surficial or water-table aquifer, the water-bearing units in the Miocene sediments that act as one aquifer, and the Upper Floridan aquifer (also known as the principal artesian aquifer). Within the surficial aquifer there are two productive intervals at 12 to 17 feet and 35 to 50 feet below land surface (bls). The predominantly clay Miocene sediments are approximately 450 feet thick. The Upper Floridan, the primary aquifer in the Brunswick area, is found approximately 500 feet bls and is 530 feet thick.

There are two water systems and some private wells which serve residents within a 4-mile radius of the landfill. The closest county well is 2.1 miles from the landfill. Numerous homes within 3 miles of the landfill obtain water from private wells. The nearest private well is located 500 feet north of the landfill.

Analytical results of surface and subsurface soil samples taken during the field investigation show inorganic and organic contamination. The compound of concern, toxaphene, was detected in a subsurface soil sample. Inorganic and other organic compounds were present in groundwater samples. Inorganics were present in soils at insignificant amounts. The Field Analytical Support Project (FASP) identified an area of chlorinated organic compound contamination. Samples were collected from this area and sent to a CLP laboratory, which confirmed FASP results.

The groundwater pathway is of concern because of the potential threat of contamination entering the aquifer of concern. The onsite and air pathways are not of concern, since insignificant quantities of contamination were present in the surface soils. The surface water pathway is also not a concern, since runoff generally percolates into the ground.

The laboratory analysis of groundwater samples indicates the presence of several inorganic elements and two organic compounds in the surficial aquifer. Based on this information and the number of groundwater targets, FIT 4 recommends that a Listing Site Inspection be undertaken at the Old Sterling Landfill.

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) was tasked by the U. S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Screening Site Inspection (SSI) at the Old Sterling Landfill site in Glynn County, Georgia. The inspection was performed 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 tasks were performed to satisfy the requirements stated in Technical Directive Documents (TDDs) F4-8902-46 and F4-8910-17. The field investigation was conducted October 16-20, 1989.

1.1 OBJECTIVES

The objectives of this inspection were to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection sought to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation has been made regarding future activities at the site.

1.2 SCOPE OF WORK

The objectives were achieved through the completion of a number of specific tasks. These activities were to:

- Obtain and review relevant background materials.
- Evaluate the target population within a 4-mile site radius, with regard to groundwater and surface water use, as well as possible exposure via air or direct contact.
- Conduct a survey of private wells.
- Develop a site sketch to scale.

- Determine location and distance to nearest potable well.

- Collect 16 environmental samples.

2.0 SITE CHARACTERIZATION

2.1 SITE BACKGROUND AND HISTORY

The Old Sterling Landfill is a sanitary landfill located in a sparsely populated area of Glynn County, Georgia (Refs. 1, 2). The landfill has been closed since the late 1970s, and the unfenced property is currently used as a private hunting preserve. The surrounding properties include residences and silviculture (Ref. 2). The landfill was created in an abandoned borrow pit with an original depth of about 10 feet (Ref. 3).

The county operated the landfill on leased land from about 1969 through 1979 (Ref 3). The landfill was permitted by the state in 1976 and was officially closed in 1980 (Ref. 4). The property is currently owned by Georgia Pacific but listed under the names Mead Timber Company and Scott Timber Company (part of Brunswick Pulp & Paper), which is owned by Georgia Pacific (Refs. 2, 3).

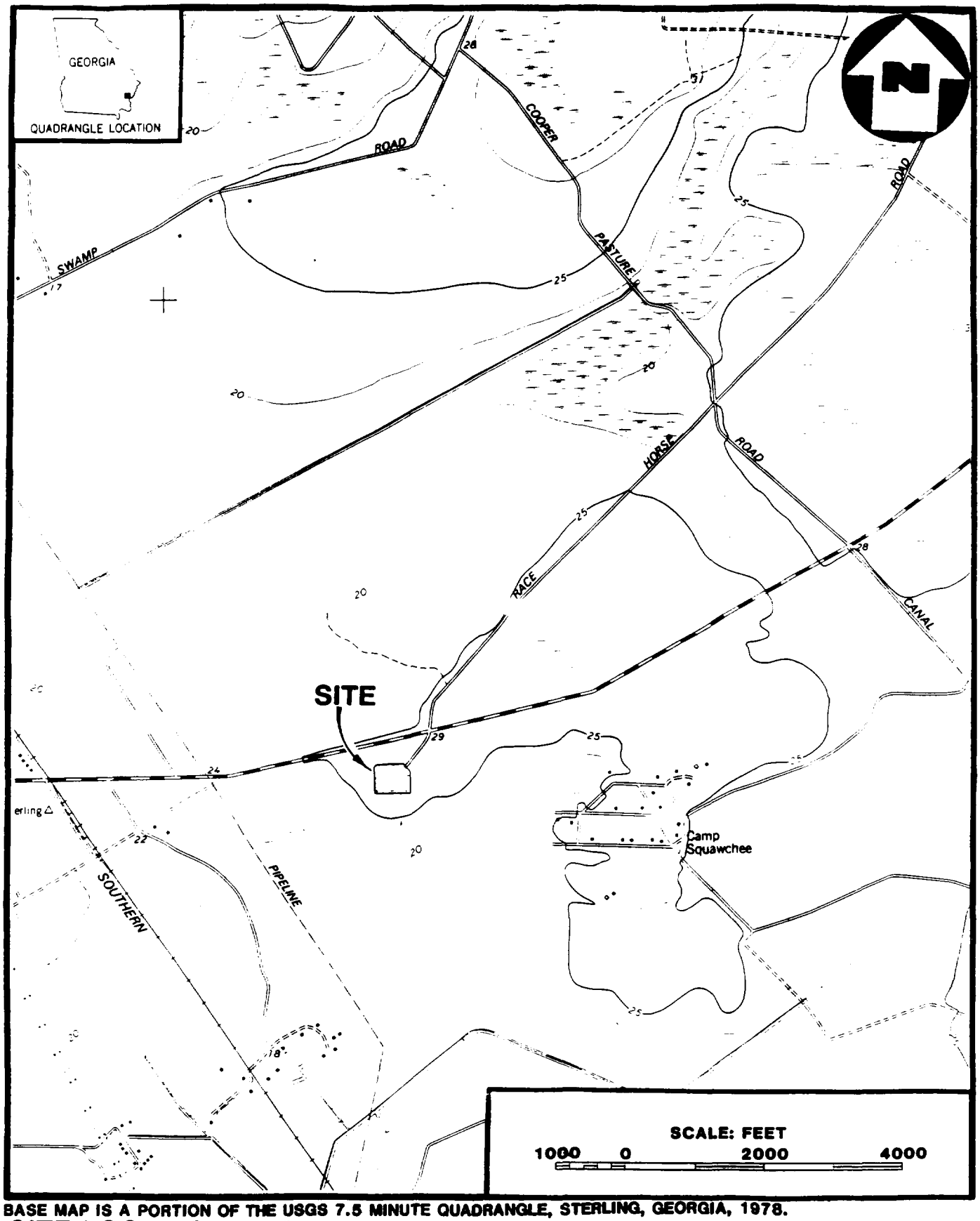
2.2 SITE DESCRIPTION

2.2.1 Site Features

The Old Sterling Landfill is 4.3 acres in size (Figures 1, 2). The fill area is clear of trees but is overgrown by tall weeds and brush in most areas; the vegetation does not appear stressed. The landfill is flat, and there are no buildings in the immediate vicinity. A loading embankment constructed of dirt is located in the southwest quadrant of the landfill. The property around the landfill is not fenced, but the entrance has a locked gate across the driveway. Most areas of the landfill were covered by pine bark. A leachate outbreak was observed in the southeast corner of the landfill (Ref. 5).

2.2.2 Waste Characteristics

An official at the Glynn County Public Works reported that only yard wastes (i.e., tree limbs and leaves) were accepted at the landfill (Ref. 3). However, another county official reported that garbage and an occasional car were also deposited in the landfill (Ref. 6). A state official from the Environmental Protection Division (EPD) reported that he had observed an orange, granular material (which took on a jelly-like consistency when wet) being placed into the landfill. He also confirmed that waste from the Hercules plant in Brunswick was deposited in the landfill (Ref. 4). File material

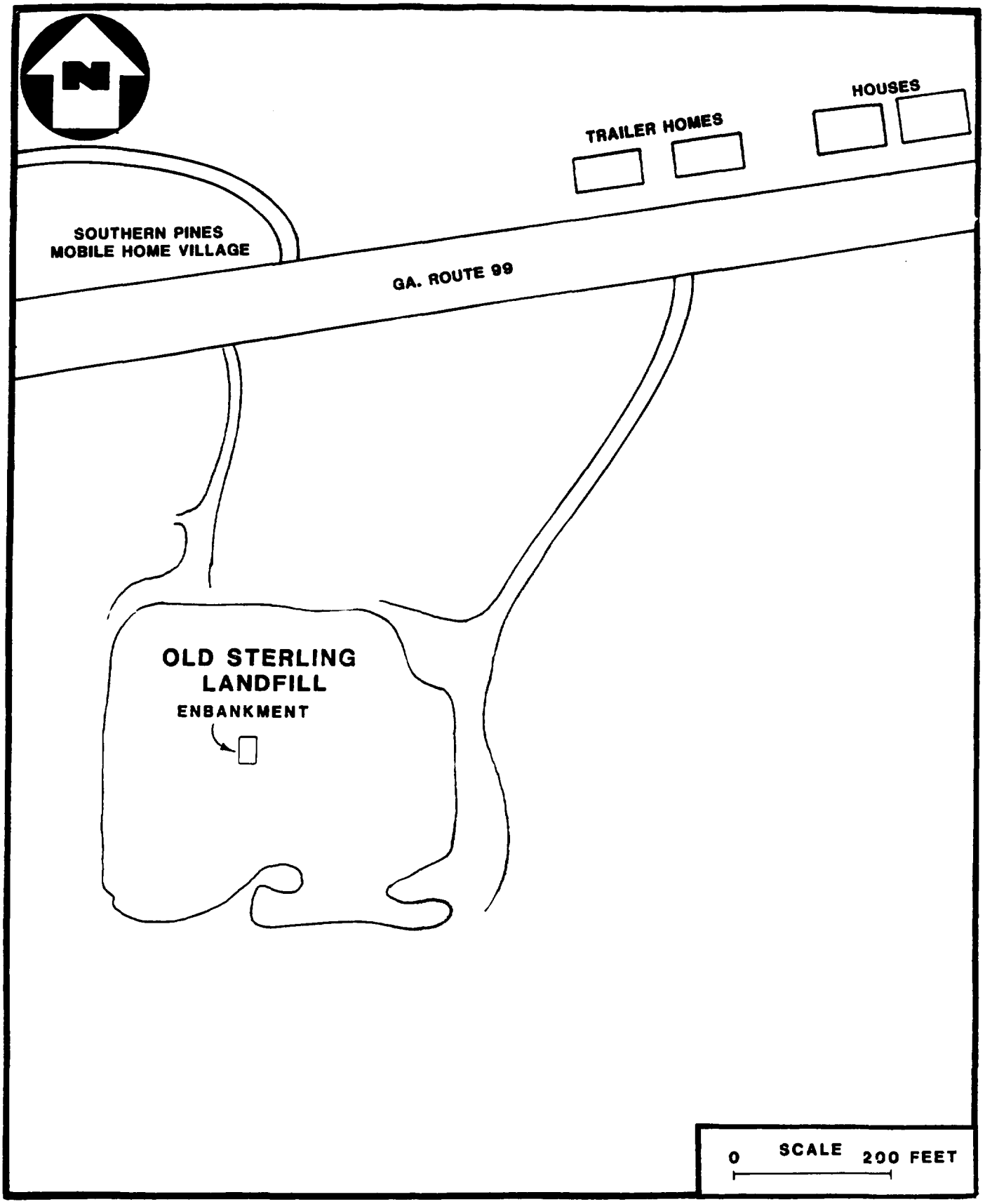


BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, STERLING, GEORGIA, 1978.

SITE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE

NUS CORPORATION



SITE LAYOUT MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 2

NUS CORPORATION

indicates that Hercules deposited 265,000 cubic feet of mixed organics, inorganics, solvents, and trash in the landfill. Hercules reported that less than 2 percent of this volume could be considered hazardous (Ref. 7). The state reported that approximately 4,900 tons of pesticides with an estimated 1 percent of toxaphene were also deposited in the landfill (Ref. 1).

3.0 REGIONAL POPULATIONS AND ENVIRONMENTS

3.1 POPULATION AND LAND USE

3.1.1 Demography

The Old Sterling Landfill is located in a sparsely populated area of Highway 99 near Sterling. The population of Brunswick, the county seat, is 17,605. The population of Glynn County is 54,981 (Ref. 8). A house count shows approximately 940 homes within 3 miles of the landfill. The total population within a 4-mile radius is estimated at 6,800 (Appendix A). There are approximately 350 residents within 1 mile and approximately 760 residents between 1 and 2 miles from the landfill (Appendix A). The population within the 2- to 3-mile radius is 2,470 (Appendix A), and the population within the 3- to 4-mile radius is 1,263 (Ref. 9).

3.1.2 Land Use

The landfill has been closed, and the property is currently used as a private hunting preserve. The surrounding properties are residences and tree farms. The landfill property is unfenced (Ref. 2). The closest residence is located approximately 500 feet north of the landfill. There are several residences along Highway 99 north of the landfill (Ref. 2). There are no schools in the immediate vicinity. Although the ranges of at least 10 endangered or threatened species include the landfill area, no critical habitats are designated in Glynn County (Ref. 10). There are several wetland areas throughout the 4-mile radius. A subdivision or trailer park is located 0.5 mile east of the landfill. The area is known as Camp Squawchee or Touchstone Ridge (Appendix A) (Ref. 8).

3.2 SURFACE WATER

3.2.1 Climatology

The climate of Glynn County is warm and humid with warm to hot, humid summers and cool, damp winters. The earliest freeze in Glynn County usually occurs in early December, and the latest freeze usually occurs at the end of February. The county generally experiences approximately 300 frost-free

days each year. The average annual precipitation for the county is 52 inches per year. Net precipitation is 7 inches (Ref. 11). The 1-year, 24-hour rainfall is 4 inches (Ref. 12).

3.2.2 Overland Drainage

The area surrounding the landfill is very flat. The surface water draining from the landfill most likely collects in low areas and percolates into the ground. Any remaining water trends south overland for 0.7 mile and enters an unnamed canal. The canal trends south for 1.8 miles and enters Burnett Creek, which flows southwest for 3.2 miles and enters Cowpen Creek. Cowpen Creek continues south for 0.4 mile and enters the Turtle River, which trends southeast for 9.5 miles. The Turtle River terminates in the Brunswick River, which trends east for about 3 miles and discharges into St. Simons Sound. Some channels exist which connect the rivers on this pathway with other rivers in the area (Appendix A).

3.2.3 Potentially Affected Water Bodies

There are no surface water intakes within 15 miles downstream of the site (Ref. 13). Although the ranges of at least 10 endangered or threatened species include the landfill area, no critical habitats are designated in Glynn County (Refs. 10, 14). The rivers in this area support a significant amount of commercial fishing (Ref. 15). Due to the topography of the landfill and surrounding area, surface water would generally percolate into the ground.

3.3 GROUNDWATER

3.3.1 Hydrogeology

Glynn County lies within the Atlantic Coastal Plain Physiographic Province. In the Brunswick area, there are three distinct aquifer systems. These consist of the surficial or water-table aquifer, the water-bearing units in the Miocene sediments that act as one aquifer, and the Upper Floridan aquifer (also known as the principal artesian aquifer) (Ref. 16, p. 183).

Pleistocene to Recent age sediments comprise the surficial aquifer system (Ref. 17, p. E9). These sediments consist primarily of sand, gravel, and thin layers of clay extending from the surface to a depth of approximately 40 to 50 feet below land surface (bls). Layers of pure sand or clay are generally no more than a few inches thick. Layers of sand-clay mixtures are usually less than 5 feet thick (Ref. 16, pp. 185, 188). Medium-grained sand at depths of 12 to 17 feet and 35 to 50 feet furnish

most of the water in the aquifer with yields of approximately 5 to 20 gallons per minute (gpm) (Ref. 17, p. E22). The surficial aquifer receives recharge directly from rainfall, which percolates through the sediments to the shallow water table (Ref. 16, p. 185). Brunswick lies along the Atlantic Coast and flow direction in the surficial aquifer appears to be tidally influenced.

The surficial aquifer is underlain by a thick series of Miocene age clays and sandy clays with lens-shaped bodies of sand, gravel, and thin carbonate layers. Beneath the site area, the unconsolidated Miocene sediments are approximately 450 feet thick. Upper Miocene gravelly sand and thin limestone beds form the system of Miocene aquifers They yield sufficient water for domestic and small industrial needs. Domestic supplies of up to 20 to 50 gpm can be obtained throughout Glynn County from wells that are 100 to 180 feet deep (Ref. 17, p. E23). These aquifers receive recharge directly from rainfall where they outcrop and from percolation of water from the overlying water-table aquifer system (Ref. 18, p. 152). Logs from domestic wells drilled in the Sterling area show the presence of a 15- to 20-foot thick clay layer which occurs approximately 120 feet bls (Ref. 19). Due to the limited amount of subsurface data, it is not known if the clay layer is continuous over the 2-mile site radius.

The Miocene aquifer system is hydraulically separated from the underlying Upper Floridan aquifer by thick sequences of dense, greenish gray, sandy clay of the Hawthorn Group ranging from 40 to 160 feet (Refs. 16, p. 185; 17, p. E10). These low-permeability sediments act as confining layers that prevent or retard the upward movement of artesian water from the Upper Floridan aquifer, as well as the downward movement of water from the overlying aquifers (Ref. 16, p. E11).

The Upper Floridan aquifer underlies most of the Georgia coastal plain and consists of limestones of early Miocene and Oligocene age, as well as the Ocala Limestone of late Eocene age. The Oligocene Series consists of phosphatic, sandy, fossiliferous, slightly dolomitic limestone. The sand is fine- to medium-grained, and black, polished phosphate pebbles are common. The Ocala Limestone is a porous, recrystallized, white to gray, bryozoan limestone. The pore spaces consist mostly of solution cavities. Caverns ranging from 2 to 7 feet in height are also present (Ref. 17, pp. E11, E12). While these solution cavities are normally indicative of karst topography, they are deep enough so that there is no surface expression of karst features (such as a sinkhole) in this area. These sediments form a continuous bed of limestone that is water bearing throughout its extent (Refs. 17, p. E25; 18, p. 70). In the site area, the top of the aquifer is found at a depth of approximately 500 feet bls, and the aquifer is approximately 530 feet thick (Ref. 16, pp. E11, E12).

In the coastal areas of Georgia, nearly all the groundwater is pumped from the Upper Floridan aquifer. Heavy pumping has created a cone of depression around Brunswick with flow in the aquifer toward the center of the cone (Figure 3). Because the Upper Floridan aquifer in the coastal area is confined and far from its recharge area, the aquifer is not influenced by local rainfall (Ref. 18, p. 108).

Sedimentary rocks of the Claiborne Group underlie the Upper Floridan aquifer. The upper portion of the Claiborne Group is a hard, dense, cherty, dolomitic limestone present at approximately 1,030 feet bls. This low-permeability unit acts as a confining layer between the freshwater in the Upper Floridan aquifer and the brackish water that occurs below this confining layer (Ref. 17, p. E13).

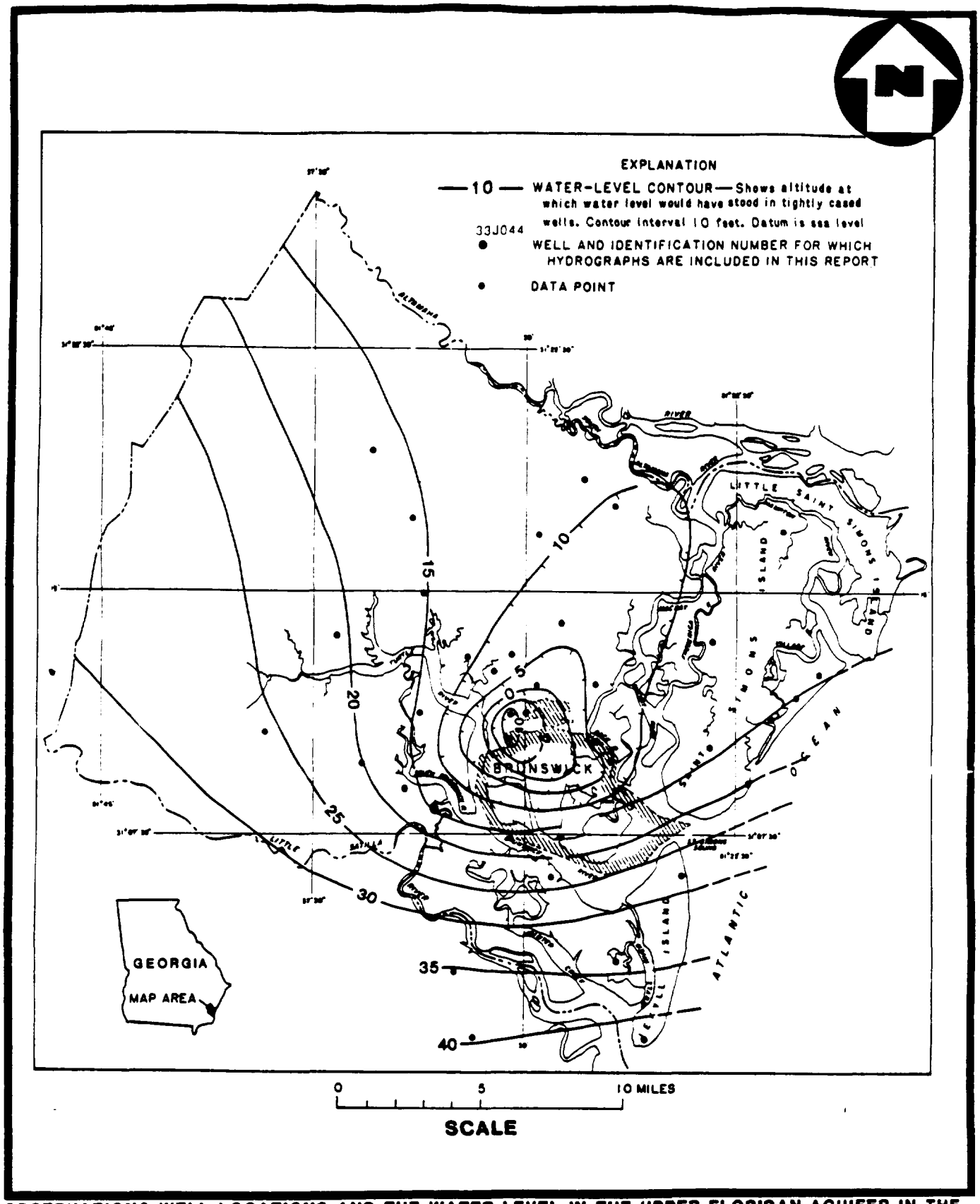
3.3.2 Aquifer Use

The surficial aquifer generally occurs in two water-bearing zones, one between approximately 12 to 17 feet bls, and one between 35 to 50 feet bls. Water yields of 5 to 20 gpm can be obtained from this aquifer, which is suitable for small domestic supplies (Ref. 17, p. E22). Domestic and small industrial wells are completed in sediments of the Hawthorn Group at depths of 140 to 500 feet bls and can produce water at rates between 2 to 500 gpm, with the deep wells giving the higher yields (Refs. 16, p. 187-189; 19).

The water needs of communities within 4 miles of the landfill are either served by the Brunswick Water System, the Glynn County Water System, or by private wells. The Brunswick Water System obtains its water from wells that are located more than 4 miles from the landfill (Ref. 20, Appendix A). The Glynn County Water System supplies about 110 connections from three wells. These wells are about 750 feet deep, and all are within 4 miles of the facility. The closest county well is 2.1 miles southeast of the landfill and serves 100 of the county's connections (Ref. 21, Appendix A). The remaining 10 connections are served by the other two county wells (Ref. 21). A house count shows approximately 940 homes within 3 miles of the landfill which are not served by one of the municipal water systems (Refs. 2, 18, 20, Appendix A). It is estimated that 95 percent of these homes obtain their water from wells cased to 120 feet bls or more. No shallow dug wells are still in use in this area (Ref. 19). The nearest private well is located 500 feet north of the landfill (Ref. 2, Appendix A).

3.4 SUMMARY OF POTENTIALLY AFFECTED POPULATIONS AND ENVIRONMENTS

The groundwater pathway is the main concern since groundwater is used for drinking, commercial, and industrial supplies. The county water system's wells are within 4 miles of the landfill. The closest



OBSERVATIONS WELL LOCATIONS AND THE WATER LEVEL IN THE UPPER FLORIDAN AQUIFER IN THE BRUNSWICK AREA, OCTOBER 1986. (REF. 22).

OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 3

NUS CORPORATION

county well is 2.1 miles southeast of the landfill. Also, it is estimated that 940 homes within 3 miles of the landfill are not served by a municipal water system (Ref. 2, Appendix A). The nearest private well is located 500 feet north of the landfill (Appendix A). Surface water in the landfill area is not of concern because runoff from the site most likely percolates into the ground.

The air and onsite pathways are not of concern because no significant amount of contaminants were present in surface soils.

4.0 FIELD INVESTIGATION

4.1 FIELD ANALYTICAL SUPPORT PROJECT

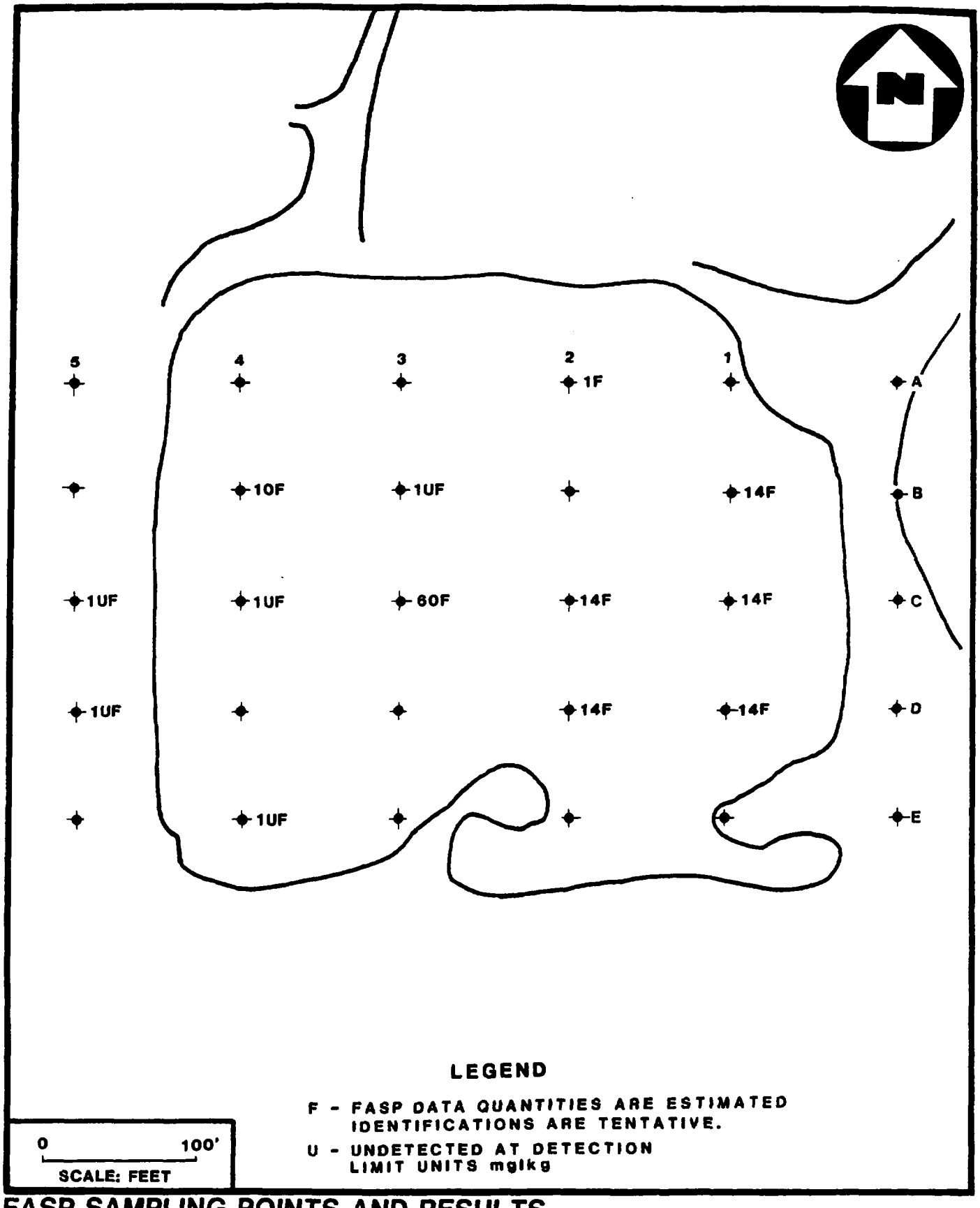
The Field Analytical Support Project (FASP) was employed at this site to assist in determining locations for collected samples to be analyzed under the Contract Laboratory Program (CLP). A mobile laboratory was set up and operated near the site. Since historical information indicated that toxaphene, an organic chlorinated compound was disposed of at this landfill, soil samples were screened by FASP for an indication of the presence of these compounds.

Prior to the FASP screening, a sampling grid was laid out at the landfill. The size of the grid was 400 by 500 feet with an approximate distance of 100 feet between sampling points. Thirteen samples were collected and analyzed during the FASP screening. Samples were collected at depths varying from 0 to 5 feet below land surface (bls). The FASP screening results indicated a specific area of chlorinated organic compound contamination at the landfill as illustrated in Figure 4 (Ref. 5). Eight of the 13 samples collected during the FASP screening were found to be contaminated. FASP screening data indicated the area near the loading embankment contained the highest concentrations of chlorinated organic compounds in the subsurface soil (Ref. 5). CLP sampling points OS-SS-02, OS-SB-02, and OS-TW-02 were moved to this area. Subsequent CLP analytical data revealed that toxaphene was present in the subsurface soil (Appendix C).

Data generated during the FASP screening are not intended to support listing or any enforcement action. The primary purpose was to help direct CLP sampling activities. Secondarily, the screening data has been used, with supporting CLP analytical results, to help characterize the landfill as to extent of contamination. Screening data was also used to support health and safety decisions, such as requirements for personal protective equipment. FASP methodology is described in Appendix B.

4.2 CONTRACT LABORATORY PROGRAM SAMPLE COLLECTION

The following discussion pertains to samples collected for analysis under the CLP.



FASP SAMPLING POINTS AND RESULTS
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 4

NUS CORPORATION

4.2.1 Sample Collection Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986

4.2.2 Split Samples

Split samples were offered to Robert S. Hicks Jr., District Forester, Georgia-Pacific Corporation The samples were declined (Ref. 5).

4.2.3 Description of Samples and Sample Locations

Sixteen environmental samples were collected during the inspection: one private well sample, four surface soil samples, one waste sample, four subsurface soil samples, one leachate sample, and five temporary well samples. Samples were collected on site to establish the types of contaminants present. A surface, subsurface, and groundwater sample were taken from four landfill locations: surface and subsurface on the westside, the southwest corner, the southside, and the eastside, respectively. The soil surface and subsurface background samples were collected from a location north of the landfill, adjacent to Highway 99. Offsite samples were collected next to the road, near the gate to the landfill, and across Highway 99 at the nearest residence. Sample code descriptions and rationale are presented in Table 1 and Figure 5, respectively. Subsurface soil samples were collected at depths of 3 to 5 feet. Water at the temporary well locations was encountered at 3 to 5 feet bls (Ref. 5). The offsite private well is approximately 146 feet deep and upgradient of the landfill (Ref. 5). The waste sample OS-WS-05, which had a jelly-like appearance and consistency and gray in color, was collected on the east side near the edge of the landfill. The leachate sample, the same substance as the waste, was also collected at this location.

4.2.4 Field Measurements

Several field measurements were recorded for all of the groundwater samples collected including temperatures of the samples at the time of collection, pH, and conductivity. Field measurements for the water samples are provided in Table 2.

TABLE 1

SAMPLE CODES, DESCRIPTIONS, AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Description	Rationale
OS-PW-01	Groundwater sample taken from private residence north of landfill, depth of well is 146 feet.	To determine the presence or absence of contaminants in the Floridan aquifer.
OS-SS-01	Background sample taken from a location north of landfill adjacent to Hwy 99 and access road. Sample collected between 0 to 4 inches bls.	To establish background parameters.
OS-SS-02	Source sample taken from area near embankment area identified by FASP Sample #3C as contaminated. Sample collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SS-03	Source sample taken from area located southwest of the landfill. Sample collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SS-04	Source sample taken from area south of landfill. Collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-WS-05	Waste sample collected from the east side of the landfill. Substance had jelly-like appearance. Collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SB-01	Background sample taken from same location as OS-SS-01. Saturated soil collected 3 to 5 feet bls.	To determined background subsurface soil conditions.
OS-SB-02	Source sample identified by FASP as a contaminated area. Saturated soil collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-SB-03	Source sample from same hole as OS-SS-03. Saturated soil collected between 3 to 4 feet bls.	To determine the presence or absence of contaminants.

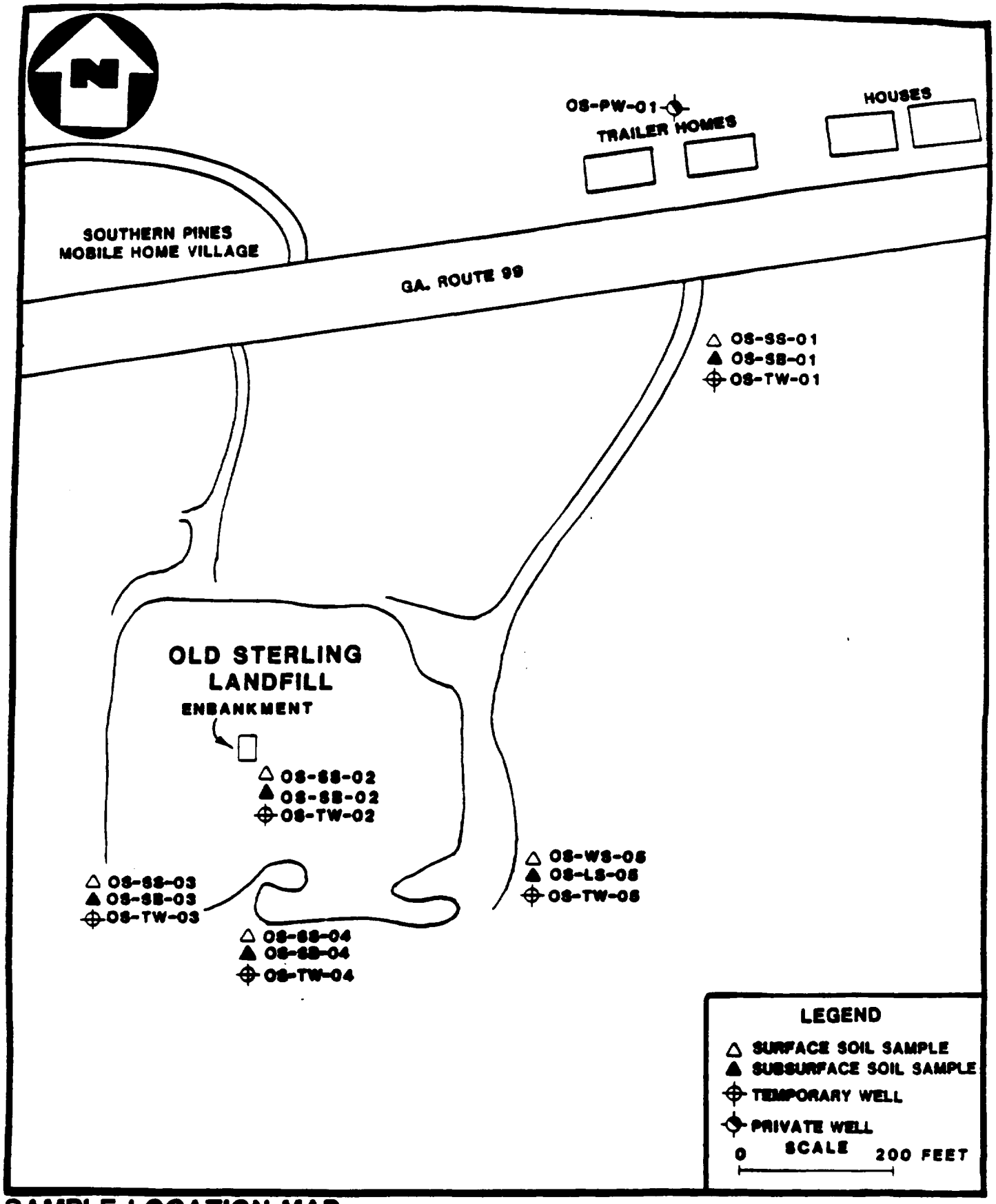
OS - Old Sterling Landfill
PW - Groundwater, Private Well
SS - Surface Soil
WS - Waste Sample
SB - Subsurface Soil
LS - Leachate Sample
TW - Groundwater, Temporary Well

TABLE 1

SAMPLE CODES, DESCRIPTIONS, AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Description	Rationale
OS-SB-04	Source sample from same location as OS-SS-04 Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-LS-05	Leachate sample collected from material leaching from ground near OS-WS-05	To determine the presence or absence of contaminants.
OS-TW-01	Groundwater sample collected upgradient from the landfill at the same location as OS-SS-01 and OS-SB-01. Collected 3 to 5 feet bls	To establish background parameters.
OS-TW-02	Groundwater sample collected from area identified by FASP. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-03	Groundwater sample collected from same location as OS-TW-03. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-04	Groundwater sample collected from same location as OS-SS-04. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-05	Groundwater sample taken from same location as OS-WS-05. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.

OS - Old Sterling Landfill
PW - Groundwater, Private Well
SS - Surface Soil
WS - Waste Sample
SB - Subsurface Soil
LS - Leachate Sample
TW - Groundwater, Temporary Well



SAMPLE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 5

NUS CORPORATION

TABLE 2

FIELD MEASUREMENTS
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Date (1989)	Time (hrs)	Temp. (°C)	pH	Conductivity (umhos/cm)
OS-PW-01	10/17	1055	23	7.0	250
OS-TW-01	10/16	1230	25	6.1	95
OS-TW-02	10/17	1300	27	6.5	850
OS-TW-03	10/17	1130	26	6.0	200
OS-TW-04	10/17	1000	24	6.9	680
OS-TW-05	10/17	NO	NO	NO	NO

OS - Old Sterling Landfill
PW - Private Well
TW - Temporary Well
NO - Not Obtained

4.3 CONTRACT LABORATORY PROGRAM SAMPLE ANALYSIS

The following discussions pertain to samples analyzed under the CLP.

4.3.1 Analytical Support and Methodology

All samples collected were analyzed under the Contract Laboratory Program (CLP) and analyzed for all parameters listed in the Target Compound List (TCL). Organic analysis of soil and water samples was performed by Aquatec, Inc., ETC, Toxicon & ESD, Athens, Georgia. Inorganic analysis of soil and water samples was performed by Southwest Labs of Oklahoma.

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; revised June 1, 1985 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

4.3.2 Analytical Data Quality

All analytical data were subject to a quality assurance review as described in the EPA, Environmental Services Division laboratory data guidelines. In the tables, some of the concentrations of the organic and inorganic parameters have been flagged with a "J". This indicates that the qualitative analysis was acceptable, but the quantitative value has been estimated. A few other compounds are flagged with an "N" indicating that they were detected based on the presumptive evidence of their presence. This means that the compound was tentatively identified, and its detection cannot be used as positive identification to its presence. The complete analytical data sheets are presented in Appendix C.

4.3.3 Presentation of Analytical Results

Throughout the following discussion of analytical results, the concentrations of some of the contaminants detected have been described as "significant". This means that the concentration was either three times that found in the background sample or it was three times the minimum quantitation limit of the background sample (MQL).

Sixteen samples, including a waste sample and a leachate sample, were collected and analyzed. Sample analyses detected several inorganic constituents of concern in three groundwater samples collected on site. Sample OS-TW-02 had an estimated concentration of 38 ug/l lead (12.7 times MQL), 230 ug/l manganese (17.7 times background), and 15 ug/l vanadium (3.75 times MQL). Sample OS-TW-04 contained 7 ug/l selenium (3.5 times MQL), and sample OS-TW-05 contained 190 ug/l barium (7.9 times background) and 510 ug/l manganese (39 times background). No significant concentrations of inorganic constituents were found in the soil samples. Inorganic analytical results can be found in Tables 3, 4, and 5.

Significant concentrations of organic constituents were found in one subsurface soil sample, two groundwater samples, and the leachate sample. Toxaphene, a pesticide reportedly disposed of at the landfill, was found in the subsurface soil sample, OS-SB-02, at a concentration of 150,000 ug/kg (714 times MQL). Other contaminants found in this sample were two tentatively identified compounds with a total estimated concentration of 11,000 ug/kg and 18 unidentified compounds having a total estimated concentration of 20,000 ug/kg. In the groundwater sample, OS-TW-02, 15 tentatively identified organic compounds with a total estimated concentration of 99,530 ug/l were detected. Some of these compounds are terpenes or derivatives of terpenes, which occur in wood and wood tar products. The second groundwater sample, OS-TW-05, contained small, estimated concentrations of six tentatively identified compounds. The leachate sample, OS-LS-05, contained several compounds associated with soaps and cleaning agents. Organic analytical results can be found in Tables 6, 7, and 8.

4.4 SUMMARY OF FIELD INVESTIGATION

The compound of major concern found at the landfill was toxaphene. Toxaphene was reported to be disposed of at the landfill. The FASP results showed an area of chlorinated organic compound contamination. This area was FASP location 3C. The FASP concentration was 60 mg/kg (Figure 4). A CLP sample, OS-SB-02, was collected from the same location. The amount detected in sample OS-SB-02 was 150,000 mg/kg for toxaphene. The CLP finding confirmed the FASP finding of organic contamination. Both results confirm that toxaphene was disposed of at the site. Barium, lead, manganese, selenium, and vandium were also found in groundwater samples.

TABLE 3

SUMMARY OF INORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

	Private Well	Upgradient	Onsite			
PARAMETERS (ug/l)	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
ALUMINUM	-	9900	12,000	15,000	1900	12,000
BARIUM	12	24	56	41	21	190
CALCIUM	64,000	1800	180,000	22,000	35,000	140,000
CHROMIUM	-	12	14	14	-	8
IRON	320J	920J	13,000J	1300J	260J	38,000J
LEAD	-	3U	38J	-	-	-
MAGNESIUM	2800	740	18,000	6100	9500	11,000
MANGANESE	61	13	230	16	-	510
MERCURY	-	0.2J	-	-	-	-
NICKEL	-	10U	26	-	-	-
POTASSIUM	1000	410	6700	7500	19,000	38,000
SELENIUM	-	2U	-	-	7	-
SODIUM	9000	11,000	31,000	8200	120,000	150,000
VANADIUM	-	4U	15	7	6	8

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 4

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (mg/kg)	Background	Onsite		
	OS-SB-01	OS-SB-02	OS-SB-03	OS-SB-04
ALUMINUM	3500	3800	4300	4900
BARIUM	40	3.2	2.2	5.4
CALCIUM	300	230	-	-
CHROMIUM	4.5	2.6	4	3.6
IRON	380J	290J	270J	650J
MAGNESIUM	32	37	38	120
MANGANESE	2.6	1.4	-	3.2
VANADIUM	10	1.9	-	2.2

- Material analyzed for but not detected above minimum quantitation limit

J Estimated value

U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 5

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

	Background	Onsite				
PARAMETERS (mg/kg)	OS-SS-01	OS-SS-02	OS-SS-03	OS-SS-04	Waste OS-WS-05	Leachate OS-LS-05
ALUMINUM	3700	3400	4600	6000	700	3400
BARIUM	12	2.3	6.7	14	7.3	5.8
CALCIUM	150	220	92	86	13,000	1520
CHROMIUM	5.2	2.9	2.6	2.9	1.4	2.5
COPPER	50UJ	-		8.9J	1.8	8.2J
IRON	6000J	290J	1400J	1800J	480	840J
LEAD	9.3J	-	-	-	-	23J
MAGNESIUM	120	52	110	170	350	220
MANGANESE	53	1.3	4.7	12	8.6	6.2
SODIUM	70U	20	-	-	14,000	14,000
VANADIUM	3U	-	2.9	3.6	2	2.1
ZINC	7U	-	-	-	5.2	-
STRONTIUM	NA	NA	NA	NA	19	NA
TITANIUM	NA	NA	NA	NA	31	NA

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
NA Not Analyzed
U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 6

SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/l)	Private Well	Upgradient	Onsite			
	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
PURGEABLE COMPOUNDS						
CARBON DISULFIDE	-	5U	-	-	-	21
CARENE[1]			600JN			
DIMETHYMETHYLENEHIPTADIENE[1]			200JN			
ETHYL BENZENE	-	5U	30J			-
ETHYLDIMETHYLBENZENE[1]			3000JN			
TRIMETHYLBICYCLOHEPTANONE[1]			700JN			
UNIDENTIFIED COMPOUNDS/NO[1]		-	3000J 3		-	-
EXTRACTABLE COMPOUNDS						
PHENOL	-	10U	-	4J	-	-
N-NITROSODIPHENLYAMINE/DIPHENYLAMINE	-	10U	-	-	-	19
PINENE[1]			5000JN			
CAMPHENE[1]			2000JN			
TRIMETHYLBICYCLOHEPTANE[1]			40,000JN/2			
METHYL(METHYLETHYL)OXABICYCLOHEPTANE[1]			4000JN			
METHYL(METHYLETHYL)BENZENE[1]			10,000JN			

- \- Material analyzed for but not detected above minimum quantitation limit
- J Estimated value
- N Presumptive evidence of presence of material
- U Material was analyzed for but not detected The number is the minimum quantitation limit
- 1 Tentatively identified compound (TIC) This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined

TABLE 6

SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/l)	Private Well	Upgradient	Onsite			
	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
CINEOLE[1]			3000JN			
DIMETHYLBICYCLOHEPTANONE[1]			2000JN			
CAMPHOR[1]			20,000JN			
TRIMETHYLBICYCLOHEPTANOL[1]			8000JN			
METHYL(METHYLETHYL)PHENOL[1]			1000JN			
TETRAMETHYLBUTYLPHENOL[1]						9JN
BENZOTHIAZOLONE[1]						50JN
TRIMETHYLHEXANOIC ACID[1]						20JN
OXYBISBENZENE[1]						20JN
TETRAMETHYLPHENANTHRENE[1]						20JN
UNIDENTIFIED COMPOUNDS/NO[1]	-	-	10,000J/4		-	40J/2

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

ORGANIC SCREENING PROTOCOLS

February 1988

NUS FIT IV

Edited by:

John Morrow
FASP Group Leader

Approved by:

Murray Warner, P.E.
Regional Project Mgr.

DRAFT

METHOD: Pesticide/PCB Quick Indicator Screen

RAPID SCREEN FOR INDICATIONS OF ORGANOCHLORINE PESTICIDES AND PCBs

Note: This method is based on SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS. Most sections of that method apply to this method.

1.0 SCOPE AND APPLICATION

1.1 This method describes the very rapid screening of water and soil/sediment samples for indications of organochlorine pesticides and polychlorinated biphenyls (PCBs). It is not intended to identify compounds, but to provide a very rapid, gross estimate of total chlorinated organic compounds.

1.2 Results are reported as "Total Chlorinated Organic Compounds, Estimated."

1.3 This method utilizes solvent extraction and gas chromatography (GC).

1.4 Detection limits vary widely with compounds and sample matrices. If required, detections limits should be determined for individual compounds, projects or sample groups.

1.5 Data generated by this method are not appropriate for listing or enforcement purposes. Data may be useful to provide indications of relative contamination, for selection of samples for standard EPA (CLP) analysis or to help characterize a site, supported by CLP data.

1.6 This method is recommended for use only by, or under the close supervision of, experienced residue analysts.

2.0 SUMMARY OF METHOD

Samples are solvent extracted. (Hexane is used for organochlorine compounds.) The extracts are analyzed by GC, using fused silica capillary column(s) and electron capture detector (ECD) or electrolytic conductivity detector (ElCD, Hall). Results are calculated from total area (excluding surrogates) and reported as "Total Chlorinated Organic Compounds, Estimated."

DRAFT

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

3.2 Interferences by phthalate esters can pose major problems in pesticide determinations when using the electron capture detector (ECD). Common plastics contain varying amounts of phthalates. Interferences from phthalates can best be minimized by avoiding contact with any plastic materials. The interference from phthalate esters can be completely eliminated with a microcoulometric or electrolytic conductivity detector (ElCD, Hall).

4.0 APPARATUS AND MATERIALS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

4.1 Gas chromatograph

4.1.1 **Gas Chromatograph:** [no changes]

4.1.2 **Column:** DB-1, 5 m x 530 um, fused silica capillary, (J & W Scientific, or equivalent).

4.1.3 **Detector(s):** Electron capture (ECD) or halogen-specific (i.e., electrolytic conductivity, ElCD, Hall).

5.0 REAGENTS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

6.0 SAMPLE STORAGE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

DRAFT

7.0 PROCEDURE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

7.4 Gas chromatographic analysis:

7.4.1 **Recommended GC conditions:**

Column oven temperature	230 °C
Injection port temperature	250 °C
Detector temperature	350 °C
Carrier gas	Helium
Carrier gas flow rate	5 - 10 ml/min
ECD purge (make-up) gas	5% methane:95% argon (P-5)
P-5 flow rate	40 - 70 ml/min

These conditions can be expected to result in total run times of about 5 minutes.

7.4.2 The GC conditions described will result in very poor separation of components. Do not expect to identify individual compounds by this method.

7.4.3 Inject 1 to 2 ul of extract. The use of an autosampler is highly recommended, to achieve reasonable precision at small injection volumes. See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, for injection sequence.

7.5 Calculations

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following modifications:

To some extent, detector response varies among analytes. If a specific analyte is being targeted at a given site, calibration may be performed for this analyte. Otherwise calibrate with aldrin. Calculate response factor (RF) as the ratio of amount injected divided by total area:

$$RF = \text{Amount/area}$$

DRAFT

For all samples, tabulate total area and surrogate area. Calculate net area by subtracting surrogate area from total area, and tabulate. Calculate "Total chlorinated organic compounds, estimated", as follows:

$$\text{Total} = \text{RF} \times (\text{Net area})$$

$$\text{Net area} = \text{Total area} - \text{Surrogate area}$$

Inform the data user that estimates will vary among analytes, and flag all data "F", field screening data: all quantities estimated, all ID's tentative.

8.0 QUALITY CONTROL

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

9.0 METHOD PERFORMANCE

New method - no data available.

10.0 REFERENCES

1. SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, February 1988.

2. U. S. EPA SW-846, "Test Methods for Evaluating Solid Waste", Methods 8000, 8080; Revision 0, September 1988.

ADAPTED FROM:

ENVIRONMENTAL PROTECTION AGENCY

REGION IV, ATHENS, GA 30613

SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS

1.0 SCOPE AND APPLICATION

1.1 This method describes the rapid screening of water and soil/sediment samples to determine if extractable organic compounds are present. It is designed to identify tentatively a small group of extractable organic compounds (see Tables 1, 2, and 3) that are commonly found at hazardous waste sites.

1.2 All other compounds detected are reported with a retention time and an estimated concentration range.

1.3 This method utilizes gas chromatography.

1.4 Estimated detection limits fro the extractable organics are 5-1000 ug/l (ppb) for water and 0.5-100 ug/g (ppm) for soil/sediment. See Tables 1 and 2 for more details.

1.5 Data generated by this method allows only rapid evaluation of a site. It is used to determine if sampling for complete analyses by standard EPA analytical methods is warranted and where the samples should be taken. The data should not be used for ranking a site or for enforcement purposes since only limited quality control procedures are required and the reported data is qualified as estimated.

2.0 SUMMARY OF METHOD

Samples are solvent extracted; hexane is used for organochlorine pesticides and polychlorinated biphenyls (PCBs) and methylene chloride is used for base/neutral/acids (BNAs). Soil/sediment samples are extracted by liquid-solid extraction and water samples by liquid-liquid extraction. The extracts are analyzed by gas chromatographs equipped with fused silica capillary columns and flameionization and electron capture detectors.

TABLE 1

EXTRACTABLE COMPOUNDS FOR SCREENING ANALYSIS

Compounds	Retention Time min.	Water Quantitation Limit ug/L
Phenol	5:24	100
Naphthalene	9:31	100
Acenaphthene	14:50	100
Pentachlorophenol	18:54	1000
Phenanthrene	19:17	100
Di-n-butylphthalate	21:28	200
Fluoranthene	22:59	100
Pyrene	23:39	200
p-Terphenyl*	24:20	
Chrysene	27:34	500
Bis (2-ethylhexyl) phthalate	28:06	500

EC DETECTABLE COMPOUNDS

Aldrin*		
Aroclor 1260	multipeak	25

* Surrogate compound

TABLE 2

ESTIMATED DETECTION LIMITS FOR EXTRACTABLES

Detector/Compound Type	Water ug/L (ppb)	Sediment/Soil ug/g (ppm)
Flameionization detector		
Polyaromatic hydrocarbons	100-5000	10-500
Phenols	100-10000	10-1000
Other non-halogenated compounds	100-5000	10-500
Electron capture detector		
Aroclor 1260	25	2.5
Most halogenated compounds	5	0.5
Organosulfur, phosphorus, nitrogen or oxygen compounds	50	5

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

4.0 APPARATUS AND MATERIALS

4.1 Gas chromatograph: An analytical system complete with a temperature programmable gas chromatograph and all required accessories including analytical columns, gases, detector and printer/plotter capable of retention time labeling of peaks and providing peak height or peak area measurements.

4.1.1 Column: 30m x 0.53 mm ID DB-5,1 micron film thickness, fused-silica capillary column (FSCC) (J&W Scientific or equivalent).

4.1.2 Detector 1: Flameionization detector
Optional detector - Photoionization.

4.1.3 Detector 2: Electron capture detector.

4.2 Balance: Top loading, capable of accurately weighing 0.1 g.

4.3 Glass scintillation vials: At least 20 mL, with screw cap and Teflon or aluminum foil liner. Glass culture tubes with screw caps and Teflon liners may be substituted for water extraction.

4.4 Spatula: Stainless steel or Teflon.

4.5 Serological glass pipets: 5 and 25 ml, disposable.

4.6 Pasteur glass pipets: 1 ml, disposable.

4.7 Bench top centrifuge: (optional) and holders for 20 ml culture tubes. May be used for breaking emulsions.

5.0 REAGENTS

5.1 Sodium sulfate: anhydrous, reagent grade, heated at 400°C for 4 hr., collected in a desiccator and stored in a glass bottle. Baker anhydrous powder, catalog #73898 or equivalent.

5.2 Methylene chloride, hexane: pesticide residue quality or equivalent.

5.3 Sulfuric acid: 1:1 mix equal volume of concentrated sulfuric acid (ACS) with distilled or distilled, deionized water.

5.4 Stock solutions: Commercially prepared stock standards can be used at any concentration if they are certified by the manufacturer or by an independent source.

5.4.1 Prepare stock standard solutions at a concentration of 1.00 ug/ul by dissolving 0.0100 g of assayed reference material in methanol and diluting to volume in a 10 ml volumetric flask. (It may be necessary to use 5-10 percent toluene to dissolve all compounds.) Larger volumes can be used at the convenience of the analyst. When compound purity is assayed to be 96% or greater, the weight can be used without correction to calculate the concentration of the stock standard.

5.4.2 Transfer the stock standard solutions into Teflon-sealed screw-cap bottles. Store at 4°C and protect from light. Stock standards should be checked frequently for signs of degradation or evaporation, especially just prior to preparing calibration standards.

5.4.3 Stock standard solutions must be replaced after six months, or sooner if comparison with check standards indicates a problem.

5.5 Calibration standard: A calibration standard mixture is prepared by dilution of the stock standards. Secondary dilutions may be necessary. The mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml (per compound). The PCB calibration standard is in hexane at a concentration of 0.010 ng/ul for aldrin and 0.25 ng/uL for Aroclor 1260.

5.6 Surrogate standard: The surrogate is p-terphenyl for BNA's and aldrin for PCBs. A stock surrogate solution in methanol should be prepared as described in Paragraph 5.1. The BNA surrogate standard spiking solution is prepared from the stock at a concentration of 500 ug/1 mL in methanol. The PCB surrogate standard spiking solution contains 0.2 ug/1 mL of aldrin in methanol.

5.7 Matrix spike standard: A matrix spike standard is prepared from the appropriate stock solutions as outlined in Paragraph 5.1. The extractable organic mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml ~~mL~~ (per compound) in methanol. The pesticide mixture contains 100 ng/ml of each of the sixteen listed pesticides (Table 3).

5.8 Reagent Water: Reagent water is defined as water in which an interferent is not observed at the method detection limit (MDL) of the parameters of interest.

6.0 SAMPLE STORAGE

6.1 The sample must be iced or refrigerated (4°C) from time of collection until extraction.

6.2 All samples must be extracted within 7 days and completely analyzed within 30 days of collection based on sample stability. However, the contract may require a shorter turnaround of data, based on site resampling requirements.

7.0 PROCEDURE

7.1 All samples and standard solutions must be allowed to warm to ambient temperature before analysis. The following procedures show preparation of two extracts for each sample. These two preparations are identical, except for the extraction solvents. Methylene Chloride is used for BNAs, to be detected by FID or PID. Hexane is used for pesticides/PCBs, to be detected by ECD. To prepare extracts for both detectors, perform only a single hexane extraction for each sample. (Do not run methylene chloride on ECD!)

7.2 Extractation of Water

7.2.1 Pipet two, 15 ml portions of a water sample into two 20 mL disposable tubes. Label one BNA and the other PCB. Add 150 uL of the appropriate surrogate standard to each sample.

7.2.1.1 For the BNA extraction, acidify the sample to pH<2 using sulfuric acid. Add 1.5 mL of methylene chloride, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the lower layer (methylene chloride). Transfer it to a 2 mL GC vial.

7.2.1.2 For the PCB extraction, add 1.5 mL of hexane, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the upper (Hexane) layer. Transfer it to a 2 mL GC vial.

7.2.2 Pipet two 15 mL portions of reagent water into separate 20 mL disposable tubes for the BNA and PCB blanks. Also select a sample to be used as a matrix spike and pipet two portions as for blanks. Add 150 uL or the appropriate surrogate standard to each blank and spike and 150 uL of the appropriate matrix spike to the spike samples. Then proceed with extraction as outlined in 7.2.1.1 and 7.2.1.2.

7.3 <u>Extraction of soil/sediment</u>

7.3.1 Transfer two 2 g portions (record weight to the nearest 0.1g) of sample to separate 20 mL scintillation vials. Wipe the mouth of the vial with a tissue to remove any sample material and record the exact weight of sample taken. Cap the vial before proceeding with the next sample to avoid any cross contamination.

7.3.2 Add 2 g of anhydrous sodium sulfate to the sample in each 20 mL vial and mix well. Additional sodium sulfate (up to 2 g) may be added, to achieve a "free-flowing powder."

7.3.3 Transfer two 2 g portions of anhydrous sodium sulfate into separate 20 mL scintillation vials for BNA and PCB blanks. Also select a sample expected to be relatively low or free of organic contaminants to be used as the matrix spike sample. Set up two, 2 g portions as for the blank and mix with 2 g of sodium sulfate. Add 1 mL of the appropriate surrogate standard to each blank and spike and 1 mL of the appropriate matrix spike to the spike samples.

7.3.4 Immediately add 10.0 mL of solvent to the sample, spike or blanks. Mix throughly (vortex) for 2 minutes.
BNAs: methylene chloride
PCBs: hexane

7.4 Analysis by Gas Chromatography

7.4.1 Recommended GC conditions:

	FTD	ECD
Initial column temperature	60°c	60°C
Initial column holding time	2 min.	2 min.
Column temperature program	8°C/min.	8°C/min.
Final column temperature	280°C	280°C
Final column holding time	16 min.	4 min.
Onjection port temperature	250°C	230°C
Detector temperature	250°C	350°C
Carrier gas flow rate	0.7-1 cm/sec	0.7-1 cm/sec
Carrier gas	helium	helium
Make up gas		95% argon/5% methane

7.4.2 See Figures 1, 2, 3 and 4 for chromatograms. The chromatograms for Aroclors 1242 and 1254 are included to assist in the identification of PCBs.

7.4.3 Inject 4 ul of sample extract. Extracts should be injected in the following sequence:

#1 Reagent blank

#2 Calibration standard

#3 Matrix spike

#4-13 Sample extracts

#14 Solvent blank

#15-24 Sample extracts

#25 Solvent blank*

#26 Calibration standard*

* If less then 20 samples are analyzed in a day, this QC required after the last sample extract.

GC/ECD extracts must be diluted or re-plotted so that the majority of peaks are on scale. This is required so that the PCB pattern is recognizable. No dilutions are required for extracts analyzed by GC/FID unless >50% of the chromatogram is off scale.

7.4.4 Calculate and report results on the data reporting sheet. If extract dilutions are made, record the size of the dilution.

7.5 Calculations

7.5.1 External standard calibration is used for the calculation of the compounds of interest. The concentration of each Table 1 analyte may be determined by the following formulas:

7.5.1.1 Aqueous sample

Concentration (ug/L) = $[(A)(V_t)(D)] / [(V_1)(V_s)]$ where:

A = Detected amount of material injected, ng.

V_1 = Volume of extract injected, ul.

D = Dilution factor if dilution was made on the sample prior to analysis. If no dilution made, D = 1, and is dimensionless.

V_t = Volume of total extract, uL.

V_s = Volume of sample extracted, mL.

7.5.2 Nonaqueous samples

concentration (ug/g) = $[(A)(V_t)(D)] / [(V_1)(W)]$ where:

W = Wet weight of sample extracted, in mg.

A, Vt, D and Vi have the same difinition as for aqueous samples.

7.5.3 Report results without correction for recovery data. Soil/sediment will be reported on a wet weight basis.

7.5.4 Unknown compound concentrations are estimated by using p-terphenyl response for BNAs or aldrin response for ECD compounds.

7.5.5 Report up to maximum of fifteen BNA extractable unknowns and fifteen ECD unknowns. Choose the fifteen that are the highest apparent concentration

8.0 QUALITY CONTROL

8.1 A reagent blank and matrix spike must be extracted with each set of samples, with a maximum of 20 samples per set.

8.2 All samples, blanks, standards and spikes must be spiked with a surrogate standard containing p-terphenyl for the BNA extracts and aldrin for the PCB extracts. Calculate recovery after analysis. If recovery is not within the range of 50-150%, another portion of smple must be analyzed. Report all surrogate data on the appropriate form. If the surrogate recovery still exceeds the ± 50% limits on the second analysis, report the data and footnote that surrogate data was high or low.

8.3 A reagent blank and calibration standard must be analyzed each day at the beginning of the GC analysis sequence. Include a solvent blank after every 10 sample extracts and again at the end of the sequence along with a calibration standard. The maximum number of sample extracts per sequence is 20.

8.3.1 The reagent and solvent blanks must be free of all analytes in Table 1.

8.3.2 The response of the most sensitive analyte inthe calibration standard (50 ng/analyte) must be greater than 30% of full scale.

TABLE 3

ORGANOCHLORINE PESTICIDES

(EPA METHOD 608)

Solutions All .1 mg/ml (100 ug/ml)	5 ml Solutions CAT. NO.
Aldrin	F89S
Dieldrin	F90S
p,p'-DDT	F92S
p,p'-DDE	F93S
p,p'-DDD	F94S
Endosulfan I	F202S
Endosulfan II	F203S
Endosulfan sulfate	F97S
Endrin	F98S
Endrin aldehyde	F99S
Heptachlor	F100S
Heptachlor epoxide	F101S
a-BHC	F102S
b-BHC	F103S
g-BHC	F104S
d-BHC	F105S

APPENDIX B

ORGANIC SCREENING PROTOCOLS

February 1988

NUS FIT IV

Edited by:

John Morrow
FASP Group Leader

Approved by:

Murray Warner, P.E.
Regional Project Mgr.

DRAFT

METHOD: Pesticide/PCB Quick Indicator Screen

RAPID SCREEN FOR INDICATIONS OF ORGANOCHLORINE PESTICIDES AND PCBs

Note: This method is based on SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS. Most sections of that method apply to this method.

1.0 SCOPE AND APPLICATION

1.1 This method describes the very rapid screening of water and soil/sediment samples for indications of organochlorine pesticides and polychlorinated biphenyls (PCBs). It is not intended to identify compounds, but to provide a very rapid, gross estimate of total chlorinated organic compounds.

1.2 Results are reported as "Total Chlorinated Organic Compounds, Estimated."

1.3 This method utilizes solvent extraction and gas chromatography (GC).

1.4 Detection limits vary widely with compounds and sample matrices. If required, detections limits should be determined for individual compounds, projects or sample groups.

1.5 Data generated by this method are not appropriate for listing or enforcement purposes. Data may be useful to provide indications of relative contamination, for selection of samples for standard EPA (CLP) analysis or to help characterize a site, supported by CLP data.

1.6 This method is recommended for use only by, or under the close supervision of, experienced residue analysts.

2.0 SUMMARY OF METHOD

Samples are solvent extracted. (Hexane is used for organochlorine compounds.) The extracts are analyzed by GC, using fused silica capillary column(s) and electron capture detector (ECD) or electrolytic conductivity detector (ElCD, Hall). Results are calculated from total area (excluding surrogates) and reported as "Total Chlorinated Organic Compounds, Estimated."

DRAFT

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

3.2 Interferences by phthalate esters can pose major problems in pesticide determinations when using the electron capture detector (ECD). Common plastics contain varying amounts of phthalates. Interferences from phthalates can best be minimized by avoiding contact with any plastic materials. The interference from phthalate esters can be completely eliminated with a microcoulometric or electrolytic conductivity detector (ElCD, Hall).

4.0 APPARATUS AND MATERIALS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

4.1 Gas chromatograph

4.1.1 **Gas Chromatograph:** [no changes]

4.1.2 **Column:** DB-1, 5 m x 530 um, fused silica capillary, (J & W Scientific, or equivalent).

4.1.3 **Detector(s):** Electron capture (ECD) or halogen-specific (i.e., electrolytic conductivity, ElCD, Hall).

5.0 REAGENTS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

6.0 SAMPLE STORAGE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

DRAFT

7.0 PROCEDURE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

7.4 Gas chromatographic analysis:

7.4.1 Recommended GC conditions:

Column oven temperature	230 °C
Injection port temperature	250 °C
Detector temperature	350 °C
Carrier gas	Helium
Carrier gas flow rate	5 - 10 ml/min
ECD purge (make-up) gas	5% methane:95% argon (P-5)
P-5 flow rate	40 - 70 ml/min

These conditions can be expected to result in total run times of about 5 minutes.

7.4.2 The GC conditions described will result in very poor separation of components. Do not expect to identify individual compounds by this method.

7.4.3 Inject 1 to 2 ul of extract. The use of an autosampler is highly recommended, to achieve reasonable precision at small injection volumes. See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, for injection sequence.

7.5 Calculations

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following modifications:

To some extent, detector response varies among analytes. If a specific analyte is being targeted at a given site, calibration may be performed for this analyte. Otherwise calibrate with aldrin. Calculate response factor (RF) as the ratio of amount injected divided by total area:

$$RF = \text{Amount/area}$$

DRAFT

For all samples, tabulate total area and surrogate area. Calculate net area by subtracting surrogate area from total area, and tabulate. Calculate "Total chlorinated organic compounds, estimated", as follows:

$$\text{Total} = \text{RF} \times (\text{Net area})$$

$$\text{Net area} = \text{Total area} - \text{Surrogate area}$$

Inform the data user that estimates will vary among analytes, and flag all data "F", field screening data: all quantities estimated, all ID's tentative.

8.0 QUALITY CONTROL

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

9.0 METHOD PERFORMANCE

New method - no data available.

10.0 REFERENCES

1. SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, February 1988.

2. U. S. EPA SW-846, "Test Methods for Evaluating Solid Waste", Methods 8000, 8080; Revision 0, September 1988.

ADAPTED FROM:

ENVIRONMENTAL PROTECTION AGENCY

REGION IV, ATHENS, GA 30613

SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS

1.0 SCOPE AND APPLICATION

1.1 This method describes the rapid screening of water and soil/sediment samples to determine if extractable organic compounds are present. It is designed to identify tentatively a small group of extractable organic compounds (see Tables 1, 2, and 3) that are commonly found at hazardous waste sites.

1.2 All other compounds detected are reported with a retention time and an estimated concentration range.

1.3 This method utilizes gas chromatography.

1.4 Estimated detection limits fro the extractable organics are 5-1000 ug/l (ppb) for water and 0.5-100 ug/g (ppm) for soil/sediment. See Tables 1 and 2 for more details.

1.5 Data generated by this method allows only rapid evaluation of a site. It is used to determine if sampling for complete analyses by standard EPA analytical methods is warranted and where the samples should be taken. The data should not be used for ranking a site or for enforcement purposes since only limited quality control procedures are required and the reported data is qualified as estimated.

2.0 SUMMARY OF METHOD

Samples are solvent extracted; hexane is used for organochlorine pesticides and polychlorinated biphenyls (PCBs) and methylene chloride is used for base/neutral/acids (BNAs). Soil/sediment samples are extracted by liquid-solid extraction and water samples by liquid-liquid extraction. The extracts are analyzed by gas chromatographs equipped with fused silica capillary columns and flameionization and electron capture detectors.

TABLE 1

EXTRACTABLE COMPOUNDS FOR SCREENING ANALYSIS

Compounds	Retention Time min.	Water Quantitation Limit ug/L
Phenol	5:24	100
Naphthalene	9:31	100
Acenaphthene	14:50	100
Pentachlorophenol	18:54	1000
Phenanthrene	19:17	100
Di-n-butylphthalate	21:28	200
Fluoranthene	22:59	100
Pyrene	23:39	200
p-Terphenyl*	24:20	
Chrysene	27:34	500
Bis (2-ethylhexyl) phthalate	28:06	500

EC DETECTABLE COMPOUNDS

Aldrin*		
Aroclor 1260	multipeak	25

* Surrogate compound

TABLE 2

ESTIMATED DETECTION LIMITS FOR EXTRACTABLES

Detector/Compound Type	Water ug/L (ppb)	Sediment/Soil ug/g (ppm)
Flameionization detector		
Polyaromatic hydrocarbons	100-5000	10-500
Phenols	100-10000	10-1000
Other non-halogenated compounds	100-5000	10-500
Electron capture detector		
Aroclor 1260	25	2.5
Most halogenated compounds	5	0.5
Organosulfur, phosphorus, nitrogen or oxygen compounds	50	5

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

4.0 APPARATUS AND MATERIALS

4.1 Gas chromatograph: An analytical system complete with a temperature programmable gas chromatograph and all required accessories including analytical columns, gases, detector and printer/plotter capable of retention time labeling of peaks and providing peak height or peak area measurements.

4.1.1 Column: 30m x 0.53 mm ID DB-5,1 micron film thickness, fused-silica capillary column (FSCC) (J&W Scientific or equivalent).

4.1.2 Detector 1: Flameionization detector
Optional detector - Photoionization.

4.1.3 Detector 2: Electron capture detector.

4.2 Balance: Top loading, capable of accurately weighing 0.1 g.

4.3 Glass scintillation vials: At least 20 mL, with screw cap and Teflon or aluminum foil liner. Glass culture tubes with screw caps and Teflon liners may be substituted for water extraction.

4.4 Spatula: Stainless steel or Teflon.

4.5 Serological glass pipets: 5 and 25 ml, disposable.

4.6 Pasteur glass pipets: 1 ml, disposable.

4.7 Bench top centrifuge: (optional) and holders for 20 ml culture tubes. May be used for breaking emulsions.

5.0 REAGENTS

5.1 Sodium sulfate: anhydrous, reagent grade, heated at 400°C for 4 hr., collected in a desiccator and stored in a glass bottle. Baker anhydrous powder, catalog #73898 or equivalent.

5.2 Methylene chloride, hexane: pesticide residue quality or equivalent.

5.3 Sulfuric acid: 1:1 mix equal volume of concentrated sulfuric acid (ACS) with distilled or distilled, deionized water.

5.4 Stock solutions: Commercially prepared stock standards can be used at any concentration if they are certified by the manufacturer or by an independent source.

5.4.1 Prepare stock standard solutions at a concentration of 1.00 ug/ul by dissolving 0.0100 g of assayed reference material in methanol and diluting to volume in a 10 ml volumetric flask. (It may be necessary to use 5-10 percent toluene to dissolve all compounds.) Larger volumes can be used at the convenience of the analyst. When compound purity is assayed to be 96% or greater, the weight can be used without correction to calculate the concentration of the stock standard.

5.4.2 Transfer the stock standard solutions into Teflon-sealed screw-cap bottles. Store at 4°C and protect from light. Stock standards should be checked frequently for signs of degradation or evaporation, especially just prior to preparing calibration standards.

5.4.3 Stock standard solutions must be replaced after six months, or sooner if comparison with check standards indicates a problem.

5.5 Calibration standard: A calibration standard mixture is prepared by dilution of the stock standards. Secondary dilutions may be necessary. The mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml (per compound). The PCB calibration standard is in hexane at a concentration of 0.010 ng/ul for aldrin and 0.25 ng/uL for Aroclor 1260.

5.6 Surrogate standard: The surrogate is p-terphenyl for BNA's and aldrin for PCBs. A stock surrogate solution in methanol should be prepared as described in Paragraph 5.1. The BNA surrogate standard spiking solution is prepared from the stock at a concentration of 500 ug/1 mL in methanol. The PCB surrogate standard spiking solution contains 0.2 ug/1 mL of aldrin in methanol.

5.7 Matrix spike standard: A matrix spike standard is prepared from the appropriate stock solutions as outlined in Paragraph 5.1. The extractable organic mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml ~~mL~~ (per compound) in methanol. The pesticide mixture contains 100 ng/ml of each of the sixteen listed pesticides (Table 3).

5.8 Reagent Water: Reagent water is defined as water in which an interferent is not observed at the method detection limit (MDL) of the parameters of interest.

6.0 SAMPLE STORAGE

6.1 The sample must be iced or refrigerated (4°C) from time of collection until extraction.

6.2 All samples must be extracted within 7 days and completely analyzed within 30 days of collection based on sample stability. However, the contract may require a shorter turnaround of data, based on site resampling requirements.

7.0 PROCEDURE

7.1 All samples and standard solutions must be allowed to warm to ambient temperature before analysis. The following procedures show preparation of two extracts for each sample. These two preparations are identical, except for the extraction solvents. Methylene Chloride is used for BNAs, to be detected by FID or PID. Hexane is used for pesticides/PCBs, to be detected by ECD. To prepare extracts for both detectors, perform only a single hexane extraction for each sample. (Do not run methylene chloride on ECD!)

7.2 Extractation of Water

7.2.1 Pipet two, 15 ml portions of a water sample into two 20 mL disposable tubes. Label one BNA and the other PCB. Add 150 uL of the appropriate surrogate standard to each sample.

7.2.1.1 For the BNA extraction, acidify the sample to pH<2 using sulfuric acid. Add 1.5 mL of methylene chloride, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the lower layer (methylene chloride). Transfer it to a 2 mL GC vial.

7.2.1.2 For the PCB extraction, add 1.5 mL of hexane, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the upper (Hexane) layer. Transfer it to a 2 mL GC vial.

7.2.2 Pipet two 15 mL portions of reagent water into separate 20 mL disposable tubes for the BNA and PCB blanks. Also select a sample to be used as a matrix spike and pipet two portions as for blanks. Add 150 uL or the appropriate surrogate standard to each blank and spike and 150 uL of the appropriate matrix spike to the spike samples. Then proceed with extraction as outlined in 7.2.1.1 and 7.2.1.2.

7.3 <u>Extraction of soil/sediment</u>

7.3.1 Transfer two 2 g portions (record weight to the nearest 0.1g) of sample to separate 20 mL scintillation vials. Wipe the mouth of the vial with a tissue to remove any sample material and record the exact weight of sample taken. Cap the vial before proceeding with the next sample to avoid any cross contamination.

7.3.2 Add 2 g of anhydrous sodium sulfate to the sample in each 20 mL vial and mix well. Additional sodium sulfate (up to 2 g) may be added, to achieve a "free-flowing powder."

7.3.3 Transfer two 2 g portions of anhydrous sodium sulfate into separate 20 mL scintillation vials for BNA and PCB blanks. Also select a sample expected to be relatively low or free of organic contaminants to be used as the matrix spike sample. Set up two, 2 g portions as for the blank and mix with 2 g of sodium sulfate. Add 1 mL of the appropriate surrogate standard to each blank and spike and 1 mL of the appropriate matrix spike to the spike samples.

7.3.4 Immediately add 10.0 mL of solvent to the sample, spike or blanks. Mix throughly (vortex) for 2 minutes.
BNAs: methylene chloride
PCBs: hexane

7.4 Analysis by Gas Chromatography

7.4.1 Recommended GC conditions:

	FTD	ECD
Initial column temperature	60°c	60°C
Initial column holding time	2 min.	2 min.
Column temperature program	8°C/min.	8°C/min.
Final column temperature	280°C	280°C
Final column holding time	16 min.	4 min.
Onjection port temperature	250°C	230°C
Detector temperature	250°C	350°C
Carrier gas flow rate	0.7-1 cm/sec	0.7-1 cm/sec
Carrier gas	helium	helium
Make up gas		95% argon/5% methane

7.4.2 See Figures 1, 2, 3 and 4 for chromatograms. The chromatograms for Aroclors 1242 and 1254 are included to assist in the identification of PCBs.

7.4.3 Inject 4 ul of sample extract. Extracts should be injected in the following sequence:

#1 Reagent blank

#2 Calibration standard

#3 Matrix spike

#4-13 Sample extracts

#14 Solvent blank

#15-24 Sample extracts

#25 Solvent blank*

#26 Calibration standard*

* If less then 20 samples are analyzed in a day, this QC required after the last sample extract.

GC/ECD extracts must be diluted or re-plotted so that the majority of peaks are on scale. This is required so that the PCB pattern is recognizable. No dilutions are required for extracts analyzed by GC/FID unless >50% of the chromatogram is off scale.

7.4.4 Calculate and report results on the data reporting sheet. If extract dilutions are made, record the size of the dilution.

7.5 Calculations

7.5.1 External standard calibration is used for the calculation of the compounds of interest. The concentration of each Table 1 analyte may be determined by the following formulas:

7.5.1.1 Aqueous sample

Concentration (ug/L) = $[(A)(V_t)(D)] / [(V_1)(V_s)]$ where:

A = Detected amount of material injected, ng.

V_1 = Volume of extract injected, ul.

D = Dilution factor if dilution was made on the sample prior to analysis. If no dilution made, D = 1, and is dimensionless.

V_t = Volume of total extract, uL.

V_s = Volume of sample extracted, mL.

7.5.2 Nonaqueous samples

concentration (ug/g) = $[(A)(V_t)(D)] / [(V_1)(W)]$ where:

W = Wet weight of sample extracted, in mg.

A, Vt, D and Vi have the same difinition as for aqueous samples.

7.5.3 Report results without correction for recovery data. Soil/sediment will be reported on a wet weight basis.

7.5.4 Unknown compound concentrations are estimated by using p-terphenyl response for BNAs or aldrin response for ECD compounds.

7.5.5 Report up to maximum of fifteen BNA extractable unknowns and fifteen ECD unknowns. Choose the fifteen that are the highest apparent concentration

8.0 QUALITY CONTROL

8.1 A reagent blank and matrix spike must be extracted with each set of samples, with a maximum of 20 samples per set.

8.2 All samples, blanks, standards and spikes must be spiked with a surrogate standard containing p-terphenyl for the BNA extracts and aldrin for the PCB extracts. Calculate recovery after analysis. If recovery is not within the range of 50-150%, another portion of smple must be analyzed. Report all surrogate data on the appropriate form. If the surrogate recovery still exceeds the ± 50% limits on the second analysis, report the data and footnote that surrogate data was high or low.

8.3 A reagent blank and calibration standard must be analyzed each day at the beginning of the GC analysis sequence. Include a solvent blank after every 10 sample extracts and again at the end of the sequence along with a calibration standard. The maximum number of sample extracts per sequence is 20.

8.3.1 The reagent and solvent blanks must be free of all analytes in Table 1.

8.3.2 The response of the most sensitive analyte inthe calibration standard (50 ng/analyte) must be greater than 30% of full scale.

TABLE 3

ORGANOCHLORINE PESTICIDES

(EPA METHOD 608)

Solutions All .1 mg/ml (100 ug/ml)	5 ml Solutions CAT. NO.
Aldrin	F89S
Dieldrin	F90S
p,p'-DDT	F92S
p,p'-DDE	F93S
p,p'-DDD	F94S
Endosulfan I	F202S
Endosulfan II	F203S
Endosulfan sulfate	F97S
Endrin	F98S
Endrin aldehyde	F99S
Heptachlor	F100S
Heptachlor epoxide	F101S
a-BHC	F102S
b-BHC	F103S
g-BHC	F104S
d-BHC	F105S

APPENDIX C

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: PW-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1655 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q520

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
5U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00

CASE NO : 12944 SAS NO.: D. NO.: Q520

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: PW-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1655 STOP: 00/00/00
D. NUMBER: Q520

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q508

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
5U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011   SAMPLE NO. 40524   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA
STATION ID: TW-01   COLLECTION START: 10/16/89 1230   STOP: 00/00/00

CASE NO.: 12944   SAS NO.:   D. NO.: Q508

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	PHENOL	50UJ	3-NITROANILINE
10UJ	BIS(2-CHLOROETHYL) ETHER	10U	ACENAPHTHENE
10U	2-CHLOROPHENOL	50U	2,4-DINITROPHENOL
10U	1,3-DICHLOROBENZENE	50U	4-NITROPHENOL
10U	1,4-DICHLOROBENZENE	10U	DIBENZOFURAN
10U	BENZYL ALCOHOL	10U	2,4-DINITROTOLUENE
10U	1,2-DICHLOROBENZENE	10U	DIETHYL PHTHALATE
10U	2-METHYLPHENOL	10U	4-CHLOROPHENYL PHENYL ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER	10U	FLUORENE
10U	(3-AND/OR 4-)METHYLPHENOL	50U	4-NITROANILINE
10U	N-NITROSODI-N-PROPYLAMINE	50U	2-METHYL-4,6-DINITROPHENOL
10U	HEXACHLOROETHANE	10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	NITROBENZENE	10U	4-BROMOPHENYL PHENYL ETHER
10U	ISOPHORONE	10U	HEXACHLOROBENZENE (HCB)
10U	2-NITROPHENOL	50U	PENTACHLOROPHENOL
10U	2,4-DIMETHYLPHENOL	10U	PHENANTHRENE
50U	BENZOIC ACID	10U	ANTHRACENE
10U	BIS(2-CHLOROETHOXY) METHANE	10U	DI-N-BUTYLPHTHALATE
10U	2,4-DICHLOROPHENOL	10U	FLUORANTHENE
10U	1,2,4-TRICHLOROBENZENE	10U	PYRENE
10U	NAPHTHALENE	10U	BENZYL BUTYL PHTHALATE
10UJ	4-CHLOROANILINE	20UJ	3,3'-DICHLOROBENZIDINE
10U	HEXACHLOROBUTADIENE	10U	BENZO(A)ANTHRACENE
10U	4-CHLORO-3-METHYLPHENOL	10U	CHRYSENE
10U	2-METHYLNAPHTHALENE	10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	10U	DI-N-OCTYLPHTHALATE
10U	2,4,6-TRICHLOROPHENOL	10U	BENZO(B AND/OR K)FLUORANTHENE
50U	2,4,5-TRICHLOROPHENOL	10U	BENZO-A-PYRENE
10U	2-CHLORONAPHTHALENE	10UJ	INDENO (1,2,3-CD) PYRENE
50U	2-NITROANILINE	10U	DIBENZO(A,H)ANTHRACENE
10U	DIMETHYL PHTHALATE	10U	BENZO(GHI)PERYLENE
10U	ACENAPHTHYLENE		
10U	2,6-DINITROTOLUENE		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1230 STOP: 00/00/00
D. NUMBER: Q508

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1300 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q517

UG/L	ANALYTICAL RESULTS
100U	CHLOROMETHANE
100U	BROMOMETHANE
100U	VINYL CHLORIDE
100U	CHLOROETHANE
50U	METHYLENE CHLORIDE
100UJ	ACETONE
50U	CARBON DISULFIDE
50U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	1,1-DICHLOROETHANE
50U	1,2-DICHLOROETHENE (TOTAL)
50U	CHLOROFORM
50U	1,2-DICHLOROETHANE
100U	METHYL ETHYL KETONE
50U	1,1,1-TRICHLOROETHANE
50U	CARBON TETRACHLORIDE
100U	VINYL ACETATE
50U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
50U	1,2-DICHLOROPROPANE
50UJ	CIS-1,3-DICHLOROPROPENE
50U	TRICHLOROETHENE(TRICHLOROETHYLENE)
50UJ	DIBROMOCHLOROMETHANE
50UJ	1,1,2-TRICHLOROETHANE
50U	BENZENE
50UJ	TRANS-1,3-DICHLOROPROPENE
50UJ	BROMOFORM
100U	METHYL ISOBUTYL KETONE
100U	METHYL BUTYL KETONE
50U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50UJ	1,1,2,2-TETRACHLOROETHANE
50U	TOLUENE
50U	CHLOROBENZENE
30J	ETHYL BENZENE
50U	STYRENE
50U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
*************************************************************************************************************
**   PROJECT NO. 90-011    SAMPLE NO. 40533  SAMPLE TYPE: GROUNDWA      PROG ELEM: NSF   COLLECTED BY: W RILEY          **
**   SOURCE: OLD STERLING LANDFIL                                       CITY: STERLING              ST: GA              **
**   STATION ID: TW-02                                                  COLLECTION START: 10/17/89  1300   STOP: 00/00/00 **
**   CASE NO.: 12944         SAS NO.:                                   D. NO.: Q517                MD NO: Q517         **
**                                                                                                                    **
*************************************************************************************************************
```

ANALYTICAL RESULTS UG/L

600JN	CARENE
200JN	DIMETHYLMETHYLENEHIPTADIENE
3000JN	ETHYLDIMETHYLBENZENE
700JN	TRIMETHYLBICYCLOHEPTANONE
3000J	3 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q517

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
500U	PHENOL	2500UJ	3-NITROANILINE
500UJ	BIS(2-CHLOROETHYL) ETHER	500U	ACENAPHTHENE
500U	2-CHLOROPHENOL	2500U	2,4-DINITROPHENOL
500U	1,3-DICHLOROBENZENE	2500U	4-NITROPHENOL
500U	1,4-DICHLOROBENZENE	500U	DIBENZOFURAN
500U	BENZYL ALCOHOL	500U	2,4-DINITROTOLUENE
500U	1,2-DICHLOROBENZENE	500U	DIETHYL PHTHALATE
500U	2-METHYLPHENOL	500U	4-CHLOROPHENYL PHENYL ETHER
500U	BIS(2-CHLOROISOPROPYL) ETHER	500U	FLUORENE
500U	(3-AND/OR 4-)METHYLPHENOL	2500UJ	4-NITROANILINE
500U	N-NITROSODI-N-PROPYLAMINE	2500U	2-METHYL-4,6-DINITROPHENOL
500U	HEXACHLOROETHANE	500U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
500U	NITROBENZENE	500U	4-BROMOPHENYL PHENYL ETHER
500U	ISOPHORONE	500U	HEXACHLOROBENZENE (HCB)
500U	2-NITROPHENOL	2500U	PENTACHLOROPHENOL
500U	2,4-DIMETHYLPHENOL	500U	PHENANTHRENE
2500U	BENZOIC ACID	500U	ANTHRACENE
500U	BIS(2-CHLOROETHOXY) METHANE	500U	DI-N-BUTYLPHTHALATE
500U	2,4-DICHLOROPHENOL	500U	FLUORANTHENE
500U	1,2,4-TRICHLOROBENZENE	500U	PYRENE
500U	NAPHTHALENE	500U	BENZYL BUTYL PHTHALATE
500UJ	4-CHLOROANILINE	1000UJ	3,3'-DICHLOROBENZIDINE
500U	HEXACHLOROBUTADIENE	500U	BENZO(A)ANTHRACENE
500U	4-CHLORO-3-METHYLPHENOL	500U	CHRYSENE
500U	2-METHYLNAPHTHALENE	500U	BIS(2-ETHYLHEXYL) PHTHALATE
500U	HEXACHLOROCYCLOPENTADIENE (HCCP)	500U	DI-N-OCTYLPHTHALATE
500U	2,4,6-TRICHLOROPHENOL	500U	BENZO(B AND/OR K)FLUORANTHENE
2500U	2,4,5-TRICHLOROPHENOL	500U	BENZO-A-PYRENE
500U	2-CHLORONAPHTHALENE	500UJ	INDENO (1,2,3-CD) PYRENE
2500U	2-NITROANILINE	500U	DIBENZO(A,H)ANTHRACENE
500U	DIMETHYL PHTHALATE	500U	BENZO(GHI)PERYLENE
500U	ACENAPHTHYLENE		
500U	2,6-DINITROTOLUENE		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00
CASE NO.: 12944 SAS NO.: D. NO.: Q517 MD NO: Q517

ANALYTICAL RESULTS UG/L

5000JN	PINENE
2000JN	CAMPHENE
40000JN	TRIMETHYLBICYCLOHEPTANE (2 ISOMERS)
4000JN	METHYL(METHYLETHYL)OXABICYCLOHEPTANE
10000JN	METHYL(METHYLETHYL)BENZENE
3000JN	CINEOLE
2000JN	DIMETHYLBICYCLOHEPTANONE
20000JN	CAMPHOR
8000JN	TRIMETHYLBICYCLOHEPTANOL
1000JN	METHYL(METHYLETHYL)PHENOL
10000J	4 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1300 STOP: 00/00/00
D. NUMBER: Q517

UG/L	ANALYTICAL RESULTS
0.10U	ALPHA-BHC
0.10U	BETA-BHC
0.10U	DELTA-BHC
0.10U	GAMMA-BHC (LINDANE)
0.10U	HEPTACHLOR
0.10U	ALDRIN
0.10U	HEPTACHLOR EPOXIDE
0.10U	ENDOSULFAN I (ALPHA)
0.20U	DIELDRIN
0.20U	4,4'-DDE (P,P'-DDE)
0.20U	ENDRIN
0.20U	ENDOSULFAN II (BETA)
0.20U	4,4'-DDD (P,P'-DDD)
0.20U	ENDOSULFAN SULFATE
0.20U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
1.0U	METHOXYCHLOR
0.20U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
1.0U	GAMMA-CHLORDANE /2
1.0U	ALPHA-CHLORDANE /2
2.0U	TOXAPHENE
1.0U	PCB-1016 (AROCLOR 1016)
1.0U	PCB-1221 (AROCLOR 1221)
1.0U	PCB-1232 (AROCLOR 1232)
1.0U	PCB-1242 (AROCLOR 1242)
1.0U	PCB-1248 (AROCLOR 1248)
2.0U	PCB-1254 (AROCLOR 1254)
2.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-03

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1130 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q514

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q514

UG/L	ANALYTICAL RESULTS
4J	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-03
CASE NUMBER: 12044 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1130 STOP: 00/00/00
D. NUMBER: Q514

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-04 COLLECTION START: 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-04 COLLECTION START: 10/17/89 1000 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: D. NUMBER: Q511

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.050U	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.050U	ALDRIN	1.0U	TOXAPHENE
0.050U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.050U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID: TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q519

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
21	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
6U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q519

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
19	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
*********************************************************************************************
**   PROJECT NO. 90-011    SAMPLE NO. 40535  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF    COLLECTED BY: W RILEY      **
**   SOURCE:                                                          CITY: STERLING            ST: GA              **
**   STATION ID: TW-05                                                COLLECTION START: 10/17/89  1515   STOP: 00/00/00 **
**   CASE.NO.: 12944          SAS NO.:                                D. NO.: Q519              MD NO: Q519         **
**                                                                                                                    **
*********************************************************************************************
```

ANALYTICAL RESULTS UG/L

40J	2 UNIDENTIFIED COMPOUNDS
9JN	TETRAMETHYLBUTYLPHENOL
50JN	BENZOTHIAZOLONE
20JN	TRIMETHYLHEXANOIC ACID
20JN	OXYBISBENZENE
20JN	TETRAMETHYLPHENANTHRENE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00
D. NUMBER: Q519

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/08/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID: 05-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY. R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
8.1U	CHLOROMETHANE
8.1U	VINYL CHLORIDE
8.1U	BROMOMETHANE
8.1U	CHLOROETHANE
8.1U	TRICHLOROFLUOROMETHANE
8.1U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
81U	ACETONE
81U	CARBON DISULFIDE
8.1U	METHYLENE CHLORIDE
8.1U	TRANS-1,2-DICHLOROETHENE
8.1U	1,1-DICHLOROETHANE
81U	VINYL ACETATE
8.1U	CIS-1,2-DICHLOROETHENE
8.1U	2,2-DICHLOROPROPANE
81U	METHYL ETHYL KETONE
8.1U	BROMOCHLOROMETHANE
8.1U	CHLOROFORM
8.1U	1,1,1-TRICHLOROETHANE
8.1U	1,1-DICHLOROPROPENE
8.1U	CARBON TETRACHLORIDE
8.1U	1,2-DICHLOROETHANE
8.1U	BENZENE
8.1U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8.1U	1,2-DICHLOROPROPANE
8.1U	DIBROMOMETHANE
8.1U	BROMODICHLOROMETHANE

MG/KG	ANALYTICAL RESULTS
8.1U	CIS-1,3-DICHLOROPROPENE
81U	METHYL ISOBUTYL KETONE
8.1U	TOLUENE
8.1U	TRANS-1,3-DICHLOROPROPENE
8.1U	1,1,2-TRICHLOROETHANE
8.1U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8.1U	1,3-DICHLOROPROPANE
81U	METHYL BUTYL KETONE
8.1U	DIBROMOCHLOROMETHANE
8.1U	CHLOROBENZENE
16U	1,1,1,2-TETRACHLOROETHANE
8.1U	ETHYL BENZENE
8.1U	(M- AND/OR P-)XYLENE
8.1U	O-XYLENE
16U	STYRENE
8.1U	BROMOFORM
16U	BROMOBENZENE
8.1U	1,1,2,2-TETRACHLOROETHANE
16U	1,2,3-TRICHLOROPROPANE
16U	O-CHLOROTOLUENE
16U	P-CHLOROTOLUENE
16U	1,3-DICHLOROBENZENE
16U	1,4-DICHLOROBENZENE
16U	1,2-DICHLOROBENZENE
	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/21/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY: R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
94UA	BIS(2-CHLOROETHYL) ETHER
94UA	BIS(2-CHLOROISOPROPYL) ETHER
94UA	N-NITROSODI-N-PROPYLAMINE
94UA	HEXACHLOROETHANE
94UA	NITROBENZENE
94UA	ISOPHORONE
94UA	BIS(2-CHLOROETHOXY) METHANE
94UA	1,2,4-TRICHLOROBENZENE
94UA	NAPHTHALENE
94UA	4-CHLOROANILINE
94UA	HEXACHLOROBUTADIENE
94UA	2-METHYLNAPHTHALENE
94UA	HEXACHLOROCYCLOPENTADIENE (HCCP)
94UA	2-CHLORONAPHTHALENE
94UA	2-NITROANILINE
94UA	DIMETHYL PHTHALATE
94UA	ACENAPHTHYLENE
94UA	2,6-DINITROTOLUENE
94UA	3-NITROANILINE
94UA	ACENAPHTHENE
94UA	DIBENZOFURAN
94UA	2,4-DINITROTOLUENE
94UA	DIETHYL PHTHALATE
94UA	FLUORENE
94UA	4-CHLOROPHENYL PHENYL ETHER
94UA	4-NITROANILINE
94UA	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
94UA	4-BROMOPHENYL PHENYL ETHER
94UA	HEXACHLOROBENZENE (HCB)
94UA	PHENANTHRENE
94UA	ANTHRACENE
94UA	DI-N-BUTYLPHTHALATE

MG/KG	ANALYTICAL RESULTS
94UA	FLUORANTHENE
94UA	PYRENE
94UA	BENZYL BUTYL PHTHALATE
94UA	3,3'-DICHLOROBENZIDINE
94UA	BENZO(A)ANTHRACENE
94UA	CHRYSENE
94UA	BIS(2-ETHYLHEXYL) PHTHALATE
94UA	DI-N-OCTYLPHTHALATE
94UA	BENZO(B AND/OR K)FLUORANTHENE
94UA	BENZO-A-PYRENE
94UA	INDENO (1,2,3-CD) PYRENE
94UA	DIBENZO(A,H)ANTHRACENE
94UA	BENZO(GHI)PERYLENE
94UA	PHENOL
94UA	2-CHLOROPHENOL
200UA	BENZYL ALCOHOL
94UA	2-METHYLPHENOL
94UA	(3-AND/OR 4-)METHYLPHENOL
94UA	2-NITROPHENOL
94UA	2,4-DIMETHYLPHENOL
200UA	BENZOIC ACID
94UA	2,4-DICHLOROPHENOL
94UA	4-CHLORO-3-METHYLPHENOL
94UA	2,4,6-TRICHLOROPHENOL
94UA	2,4,5-TRICHLOROPHENOL
200UA	2,4-DINITROPHENOL
200UA	4-NITROPHENOL
94UA	2,3,4,6-TETRACHLOROPHENOL
200UA	2-METHYL-4,6-DINITROPHENOL
200UA	PENTACHLOROPHENOL
NA	PERCENT MOISTURE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFIL
STATION ID: LS-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1315 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: 0518

UG/KG	ANALYTICAL RESULTS
36U	CHLOROMETHANE
36U	BROMOMETHANE
36U	VINYL CHLORIDE
36U	CHLOROETHANE
30U	METHYLENE CHLORIDE
200UJ	ACETONE
18U	CARBON DISULFIDE
18U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
18U	1,1-DICHLOROETHANE
18U	1,2-DICHLOROETHENE (TOTAL)
18U	CHLOROFORM
18U	1,2-DICHLOROETHANE
50U	METHYL ETHYL KETONE
18U	1,1,1-TRICHLOROETHANE
18U	CARBON TETRACHLORIDE
36U	VINYL ACETATE
18U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
18U	1,2-DICHLOROPROPANE
18U	CIS-1,3-DICHLOROPROPENE
18U	TRICHLOROETHENE(TRICHLOROETHYLENE)
18U	DIBROMOCHLOROMETHANE
18U	1,1,2-TRICHLOROETHANE
18U	BENZENE
18U	TRANS-1,3-DICHLOROPROPENE
18U	BROMOFORM
12J	METHYL ISOBUTYL KETONE
36U	METHYL BUTYL KETONE
18U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
18U	1,1,2,2-TETRACHLOROETHANE
18U	TOLUENE
18U	CHLOROBENZENE
18U	ETHYL BENZENE
18U	STYRENE
18U	TOTAL XYLENES
61	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: LS-05 COLLECTION START: 10/17/89 1315 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q518 MD NO: Q518 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

20JN TRIMETHYLBICYCLOHEPTANE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFIL
STATION ID: LS-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1315 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q518

UG/KG	ANALYTICAL RESULTS
600U	PHENOL
600UJ	BIS(2-CHLOROETHYL) ETHER
600U	2-CHLOROPHENOL
600U	1,3-DICHLOROBENZENE
600U	1,4-DICHLOROBENZENE
600U	BENZYL ALCOHOL
600U	1,2-DICHLOROBENZENE
600U	2-METHYLPHENOL
600U	BIS(2-CHLOROISOPROPYL) ETHER
89J	(3-AND/OR 4-)METHYLPHENOL
600U	N-NITROSODI-N-PROPYLAMINE
600U	HEXACHLOROETHANE
600U	NITROBENZENE
600U	ISOPHORONE
600U	2-NITROPHENOL
600U	2,4-DIMETHYLPHENOL
2900U	BENZOIC ACID
600U	BIS(2-CHLOROETHOXY) METHANE
600U	2,4-DICHLOROPHENOL
600U	1,2,4-TRICHLOROBENZENE
600U	NAPHTHALENE
600UJ	4-CHLOROANILINE
600U	HEXACHLOROBUTADIENE
600U	4-CHLORO-3-METHYLPHENOL
600U	2-METHYLNAPHTHALENE
600U	HEXACHLOROCYCLOPENTADIENE (HCCP)
600U	2,4,6-TRICHLOROPHENOL
2900U	2,4,5-TRICHLOROPHENOL
600U	2-CHLORONAPHTHALENE
2900U	2-NITROANILINE
600U	DIMETHYL PHTHALATE
600U	ACENAPHTHYLENE
600U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2900UJ	3-NITROANILINE
600U	ACENAPHTHENE
2900U	2,4-DINITROPHENOL
2900U	4-NITROPHENOL
600U	DIBENZOFURAN
600U	2,4-DINITROTOLUENE
600U	DIETHYL PHTHALATE
600U	4-CHLOROPHENYL PHENYL ETHER
600U	FLUORENE
2900U	4-NITROANILINE
2900U	2-METHYL-4,6-DINITROPHENOL
600U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
600U	4-BROMOPHENYL PHENYL ETHER
600U	HEXACHLOROBENZENE (HCB)
2900U	PENTACHLOROPHENOL
600U	PHENANTHRENE
600U	ANTHRACENE
600U	DI-N-BUTYLPHTHALATE
600U	FLUORANTHENE
600U	PYRENE
600U	BENZYL BUTYL PHTHALATE
1200UJ	3,3'-DICHLOROBENZIDINE
600U	BENZO(A)ANTHRACENE
600U	CHRYSENE
600U	BIS(2-ETHYLHEXYL) PHTHALATE
600U	DI-N-OCTYLPHTHALATE
600U	BENZO(B AND/OR K)FLUORANTHENE
600U	BENZO-A-PYRENE
600UJ	INDENO (1,2,3-CD) PYRENE
600U	DIBENZO(A,H)ANTHRACENE
600U	BENZO(GHI)PERYLENE
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFIL
STATION ID: LS-05
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1315 STOP: 00/00/00
D. NO.: Q518 MD NO: Q518

ANALYTICAL RESULTS UG/KG

10000J	9 UNIDENTIFIED COMPOUNDS
500JN	HEXANOIC ACID
2000JN	HEXADECANOIC ACID
700JN	OCTADECANOIC ACID
800JN	DIHYDROBENZODIOXEPIN

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFILL
STATION ID: LS-05
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1315 STOP: 00/00/00
D. NUMBER: Q518

UG/KG	ANALYTICAL RESULTS
15U	ALPHA-BHC
15U	BETA-BHC
15U	DELTA-BHC
15U	GAMMA-BHC (LINDANE)
15U	HEPTACHLOR
15U	ALDRIN
15U	HEPTACHLOR EPOXIDE
15U	ENDOSULFAN I (ALPHA)
29U	DIELDRIN
29U	4,4'-DDE (P,P'-DDE)
29U	ENDRIN
29U	ENDOSULFAN II (BETA)
29U	4,4'-DDD (P,P'-DDD)
29U	ENDOSULFAN SULFATE
29U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
150U	METHOXYCHLOR
29U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
150U	GAMMA-CHLORDANE /2
150U	ALPHA-CHLORDANE /2
290U	TOXAPHENE
150U	PCB-1016 (AROCLOR 1016)
150U	PCB-1221 (AROCLOR 1221)
150U	PCB-1232 (AROCLOR 1232)
150U	PCB-1242 (AROCLOR 1242)
150U	PCB-1248 (AROCLOR 1248)
290U	PCB-1254 (AROCLOR 1254)
290U	PCB-1260 (AROCLOR 1260)
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q507

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
30U	METHYLENE CHLORIDE
20U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q507

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
860UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1150 STOP: 00/00/00
D. NUMBER: Q507

UG/KG	ANALYTICAL RESULTS
10U	ALPHA-BHC
10U	BETA-BHC
10U	DELTA-BHC
10U	GAMMA-BHC (LINDANE)
10U	HEPTACHLOR
10U	ALDRIN
10U	HEPTACHLOR EPOXIDE
10U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
100U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
100U	GAMMA-CHLORDANE /2
100U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
100U	PCB-1016 (AROCLOR 1016)
100U	PCB-1221 (AROCLOR 1221)
100U	PCB-1232 (AROCLOR 1232)
100U	PCB-1242 (AROCLOR 1242)
100U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
20U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
5J	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00
CASE NO.: 12944 SAS NO.: D. NO.: Q516 MD NO: Q516

ANALYTICAL RESULTS UG/KG

1000JN	TRIMETHYLBICYCLOHEPTANE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
380U	PHENOL
380UJ	BIS(2-CHLOROETHYL) ETHER
380U	2-CHLOROPHENOL
380U	1,3-DICHLOROBENZENE
380U	1,4-DICHLOROBENZENE
380U	BENZYL ALCOHOL
380U	1,2-DICHLOROBENZENE
380U	2-METHYLPHENOL
380U	BIS(2-CHLOROISOPROPYL) ETHER
380U	(3-AND/OR 4-)METHYLPHENOL
380U	N-NITROSODI-N-PROPYLAMINE
380U	HEXACHLOROETHANE
380U	NITROBENZENE
380U	ISOPHORONE
380U	2-NITROPHENOL
380U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
380U	BIS(2-CHLOROETHOXY) METHANE
380U	2,4-DICHLOROPHENOL
380U	1,2,4-TRICHLOROBENZENE
380U	NAPHTHALENE
380UJ	4-CHLOROANILINE
380U	HEXACHLOROBUTADIENE
380U	4-CHLORO-3-METHYLPHENOL
380U	2-METHYLNAPHTHALENE
380U	HEXACHLOROCYCLOPENTADIENE (HCCP)
380U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
380U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
380U	DIMETHYL PHTHALATE
380U	ACENAPHTHYLENE
380U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
380U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
380U	DIBENZOFURAN
380U	2,4-DINITROTOLUENE
380U	DIETHYL PHTHALATE
380U	4-CHLOROPHENYL PHENYL ETHER
380U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
380U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U	4-BROMOPHENYL PHENYL ETHER
380U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
380U	PHENANTHRENE
380U	ANTHRACENE
380U	DI-N-BUTYLPHTHALATE
380U	FLUORANTHENE
380U	PYRENE
380U	BENZYL BUTYL PHTHALATE
760UJ	3,3'-DICHLOROBENZIDINE
380U	BENZO(A)ANTHRACENE
380U	CHRYSENE
380U	BIS(2-ETHYLHEXYL) PHTHALATE
380U	DI-N-OCTYLPHTHALATE
380U	BENZO(B AND/OR K)FLUORANTHENE
380U	BENZO-A-PYRENE
380UJ	INDENO (1,2,3-CD) PYRENE
380U	DIBENZO(A,H)ANTHRACENE
380U	BENZO(GHI)PERYLENE
13	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q516 MD NO: Q516 **
**
*** ***

ANALYTICAL RESULTS UG/KG

10000JN	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE CARBOXALDEHYDE
20000J	18 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID. S6-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1215 STOP: 00/00/00
D. NUMBER: Q516

UG/KG	ANALYTICAL RESULTS
460U	ALPHA-BHC
460U	BETA-BHC
460U	DELTA-BHC
460U	GAMMA-BHC (LINDANE)
460U	HEPTACHLOR
460U	ALDRIN
460U	HEPTACHLOR EPOXIDE
460U	ENDOSULFAN I (ALPHA)
920U	DIELDRIN
920U	4,4'-DDE (P,P'-DDE)
920U	ENDRIN
920U	ENDOSULFAN II (BETA)
920U	4,4'-DDD (P,P'-DDD)
920U	ENDOSULFAN SULFATE
920U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
4600U	METHOXYCHLOR
920U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
4600U	GAMMA-CHLORDANE /2
4600U	ALPHA-CHLORDANE /2
150000	TOXAPHENE
4600U	PCB-1016 (AROCLOR 1016)
4600U	PCB-1221 (AROCLOR 1221)
4600U	PCB-1232 (AROCLOR 1232)
4600U	PCB-1242 (AROCLOR 1242)
4600U	PCB-1248 (AROCLOR 1248)
9200U	PCB-1254 (AROCLOR 1254)
9200U	PCB-1260 (AROCLOR 1260)
13	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. SO 011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q513

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q513

UG/KG	ANALYTICAL RESULTS
450U	PHENOL
450U	BIS(2-CHLOROETHYL) ETHER
450U	2-CHLOROPHENOL
450U	1,3-DICHLOROBENZENE
450U	1,4-DICHLOROBENZENE
450UJ	BENZYL ALCOHOL
450U	1,2-DICHLOROBENZENE
450U	2-METHYLPHENOL
450U	BIS(2-CHLOROISOPROPYL) ETHER
450U	(3-AND/OR 4-)METHYLPHENOL
450U	N-NITROSODI-N-PROPYLAMINE
450U	HEXACHLOROETHANE
450U	NITROBENZENE
450U	ISOPHORONE
450U	2-NITROPHENOL
450U	2,4-DIMETHYLPHENOL
2200UJ	BENZOIC ACID
450U	BIS(2-CHLOROETHOXY) METHANE
450U	2,4-DICHLOROPHENOL
450U	1,2,4-TRICHLOROBENZENE
450U	NAPHTHALENE
450U	4-CHLOROANILINE
450U	HEXACHLOROBUTADIENE
450U	4-CHLORO-3-METHYLPHENOL
450U	2-METHYLNAPHTHALENE
450U	HEXACHLOROCYCLOPENTADIENE (HCCP)
450U	2,4,6-TRICHLOROPHENOL
2200U	2,4,5-TRICHLOROPHENOL
450U	2-CHLORONAPHTHALENE
2200U	2-NITROANILINE
450U	DIMETHYL PHTHALATE
450U	ACENAPHTHYLENE
450U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2200U	3-NITROANILINE
450U	ACENAPHTHENE
2200U	2,4-DINITROPHENOL
2200U	4-NITROPHENOL
450U	DIBENZOFURAN
450U	2,4-DINITROTOLUENE
450U	DIETHYL PHTHALATE
450U	4-CHLOROPHENYL PHENYL ETHER
450U	FLUORENE
2200UJ	4-NITROANILINE
2200U	2-METHYL-4,6-DINITROPHENOL
450U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
450U	4-BROMOPHENYL PHENYL ETHER
450U	HEXACHLOROBENZENE (HCB)
2200U	PENTACHLOROPHENOL
450U	PHENANTHRENE
450U	ANTHRACENE
450U	DI-N-BUTYLPHTHALATE
450U	FLUORANTHENE
450U	PYRENE
450U	BENZYL BUTYL PHTHALATE
890UJ	3,3'-DICHLOROBENZIDINE
450U	BENZO(A)ANTHRACENE
450U	CHRYSENE
450U	BIS(2-ETHYLHEXYL) PHTHALATE
450U	DI-N-OCTYLPHTHALATE
450U	BENZO(B AND/OR K)FLUORANTHENE
450U	BENZO-A-PYRENE
450UJ	INDENO (1,2,3-CD) PYRENE
450U	DIBENZO(A,H)ANTHRACENE
450U	BENZO(GHI)PERYLENE
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1050 STOP: 00/00/00
D. NUMBER: Q513

UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC
11U	BETA-BHC
11U	DELTA-BHC
11U	GAMMA-BHC (LINDANE)
11U	HEPTACHLOR
11U	ALDRIN
11U	HEPTACHLOR EPOXIDE
11U	ENDOSULFAN I (ALPHA)
22U	DIELDRIN
22U	4,4'-DDE (P,P'-DDE)
22U	ENDRIN
22U	ENDOSULFAN II (BETA)
22U	4,4'-DDD (P,P'-DDD)
22U	ENDOSULFAN SULFATE
22U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
110U	METHOXYCHLOR
22U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
110U	GAMMA-CHLORDANE /2
110U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
110U	PCB-1016 (AROCLOR 1016)
110U	PCB-1221 (AROCLOR 1221)
110U	PCB-1232 (AROCLOR 1232)
110U	PCB-1242 (AROCLOR 1242)
110U	PCB-1248 (AROCLOR 1248)
220U	PCB-1254 (AROCLOR 1254)
220U	PCB-1260 (AROCLOR 1260)
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0930 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
20UJ	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
3J	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
870UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00
D NUMBER: Q510

UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC
11U	BETA-BHC
11U	DELTA BHC
11U	GAMMA-BHC (LINDANE)
11U	HEPTACHLOR
11U	ALDRIN
11U	HEPTACHLOR EPOXIDE
11U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
110U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
110U	GAMMA-CHLORDANE /2
110U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
110U	PCB-1016 (AROCLOR 1016)
110U	PCB-1221 (AROCLOR 1221)
110U	PCB-1232 (AROCLOR 1232)
110U	PCB-1242 (AROCLOR 1242)
110U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q506

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30UJ	ACETONE
8U	CARBON DISULFIDE
8U	1,1 DICHLOROETHENE(1,1-DICHLOROETHYLENE)
8U	1,1-DICHLOROETHANE
8U	1,2-DICHLOROETHENE (TOTAL)
8U	CHLOROFORM
8U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
8U	1,1,1-TRICHLOROETHANE
8U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
8U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
8U	1,2-DICHLOROPROPANE
8U	CIS-1,3-DICHLOROPROPENE
8U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8U	DIBROMOCHLOROMETHANE
8U	1,1,2-TRICHLOROETHANE
8U	BENZENE
8U	TRANS-1,3-DICHLOROPROPENE
8U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
8U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8U	1,1,2,2-TETRACHLOROETHANE
90	TOLUENE
8U	CHLOROBENZENE
8U	ETHYL BENZENE
8U	STYRENE
8U	TOTAL XYLENES
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q506

UG/KG	ANALYTICAL RESULTS
350U	PHENOL
350UJ	BIS(2-CHLOROETHYL) ETHER
350U	2-CHLOROPHENOL
350U	1,3-DICHLOROBENZENE
350U	1,4-DICHLOROBENZENE
350U	BENZYL ALCOHOL
350U	1,2-DICHLOROBENZENE
350U	2-METHYLPHENOL
350U	BIS(2-CHLOROISOPROPYL) ETHER
350U	(3-AND/OR 4-)METHYLPHENOL
350U	N-NITROSODI-N-PROPYLAMINE
350U	HEXACHLOROETHANE
350U	NITROBENZENE
350U	ISOPHORONE
350U	2-NITROPHENOL
350U	2,4-DIMETHYLPHENOL
1700U	BENZOIC ACID
350U	BIS(2-CHLOROETHOXY) METHANE
350U	2,4-DICHLOROPHENOL
350U	1,2,4-TRICHLOROBENZENE
350U	NAPHTHALENE
350UJ	4-CHLOROANILINE
350U	HEXACHLOROBUTADIENE
350U	4-CHLORO-3-METHYLPHENOL
350U	2-METHYLNAPHTHALENE
350U	HEXACHLOROCYCLOPENTADIENE (HCCP)
350U	2,4,6-TRICHLOROPHENOL
1700U	2,4,5-TRICHLOROPHENOL
350U	2-CHLORONAPHTHALENE
1700U	2-NITROANILINE
350U	DIMETHYL PHTHALATE
350U	ACENAPHTHYLENE
350U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1700UJ	3-NITROANILINE
350U	ACENAPHTHENE
1700U	2,4-DINITROPHENOL
1700U	4-NITROPHENOL
350U	DIBENZOFURAN
350U	2,4-DINITROTOLUENE
350U	DIETHYL PHTHALATE
350U	4-CHLOROPHENYL PHENYL ETHER
350U	FLUORENE
1700UJ	4-NITROANILINE
1700U	2-METHYL-4,6-DINITROPHENOL
350U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
350U	4-BROMOPHENYL PHENYL ETHER
350U	HEXACHLOROBENZENE (HCB)
1700U	PENTACHLOROPHENOL
350U	PHENANTHRENE
350U	ANTHRACENE
350U	DI-N-BUTYLPHTHALATE
350U	FLUORANTHENE
350U	PYRENE
350U	BENZYL BUTYL PHTHALATE
690UJ	3,3'-DICHLOROBENZIDINE
350U	BENZO(A)ANTHRACENE
350U	CHRYSENE
350U	BIS(2-ETHYLHEXYL) PHTHALATE
350U	DI-N-OCTYLPHTHALATE
350U	BENZO(B AND/OR K)FLUORANTHENE
350U	BENZO-A-PYRENE
350UJ	INDENO (1,2,3-CD) PYRENE
350U	DIBENZO(A,H)ANTHRACENE
350U	BENZO(GHI)PERYLENE
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1120 STOP: 00/00/00
D. NUMBER: Q506

UG/KG	ANALYTICAL RESULTS
8.4U	ALPHA-BHC
8.4U	BETA-BHC
8.4U	DELTA-BHC
8.4U	GAMMA-BHC (LINDANE)
8.4U	HEPTACHLOR
8.4U	ALDRIN
8.4U	HEPTACHLOR EPOXIDE
8.4U	ENDOSULFAN I (ALPHA)
17U	DIELDRIN
17U	4,4'-DDE (P,P'-DDE)
17U	ENDRIN
17U	ENDOSULFAN II (BETA)
17U	4,4'-DDD (P,P'-DDD)
17U	ENDOSULFAN SULFATE
17U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
84U	METHOXYCHLOR
17U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
84U	GAMMA-CHLORDANE /2
84U	ALPHA-CHLORDANE /2
170U	TOXAPHENE
84U	PCB-1016 (AROCLOR 1016)
84U	PCB-1221 (AROCLOR 1221)
84U	PCB-1232 (AROCLOR 1232)
84U	PCB-1242 (AROCLOR 1242)
84U	PCB-1248 (AROCLOR 1248)
170U	PCB-1254 (AROCLOR 1254)
170U	PCB-1260 (AROCLOR 1260)
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
17UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
9U	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
7	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
370U	PHENOL
370UJ	BIS(2-CHLOROETHYL) ETHER
370U	2-CHLOROPHENOL
370U	1,3-DICHLOROBENZENE
370U	1,4-DICHLOROBENZENE
370U	BENZYL ALCOHOL
370U	1,2-DICHLOROBENZENE
370U	2-METHYLPHENOL
370U	BIS(2-CHLOROISOPROPYL) ETHER
370U	(3-AND/OR 4-)METHYLPHENOL
370U	N-NITROSODI-N-PROPYLAMINE
370U	HEXACHLOROETHANE
370U	NITROBENZENE
370U	ISOPHORONE
370U	2-NITROPHENOL
370U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
370U	BIS(2-CHLOROETHOXY) METHANE
370U	2,4-DICHLOROPHENOL
370U	1,2,4-TRICHLOROBENZENE
370U	NAPHTHALENE
370UJ	4-CHLOROANILINE
370U	HEXACHLOROBUTADIENE
370U	4-CHLORO-3-METHYLPHENOL
370U	2-METHYLNAPHTHALENE
370U	HEXACHLOROCYCLOPENTADIENE (HCCP)
370U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
370U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
370U	DIMETHYL PHTHALATE
370U	ACENAPHTHYLENE
370U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
370U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
370U	DIBENZOFURAN
370U	2,4-DINITROTOLUENE
370U	DIETHYL PHTHALATE
370U	4-CHLOROPHENYL PHENYL ETHER
370U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
370U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
370U	4-BROMOPHENYL PHENYL ETHER
370U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
370U	PHENANTHRENE
370U	ANTHRACENE
370U	DI-N-BUTYLPHTHALATE
370U	FLUORANTHENE
370U	PYRENE
370U	BENZYL BUTYL PHTHALATE
730UJ	3,3'-DICHLOROBENZIDINE
370U	BENZO(A)ANTHRACENE
370U	CHRYSENE
370U	BIS(2-ETHYLHEXYL) PHTHALATE
370U	DI-N-OCTYLPHTHALATE
370U	BENZO(B AND/OR K)FLUORANTHENE
370U	BENZO-A-PYRENE
370UJ	INDENO (1,2,3-CD) PYRENE
370U	DIBENZO(A,H)ANTHRACENE
370U	BENZO(GHI)PERYLENE
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011   SAMPLE NO. 40531   SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02
CASE NO.: 12944   SAS NO.:

PROG ELEM: NSF   COLLECTED BY: W RILEY
CITY: STERLING   ST: GA
COLLECTION START: 10/17/89 1200   STOP: 00/00/00
D. NO.: Q515   MD NO: Q515

ANALYTICAL RESULTS UG/KG

200JN	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE-CARBOXYLIC ACID METHYLESTER

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1200 STOP: 00/00/00
D. NUMBER: Q515

UG/KG	ANALYTICAL RESULTS
8.9U	ALPHA-BHC
8.9U	BETA-BHC
8.9U	DELTA-BHC
8.9U	GAMMA-BHC (LINDANE)
8.9U	HEPTACHLOR
8.9U	ALDRIN
8.9U	HEPTACHLOR EPOXIDE
8.9U	ENDOSULFAN I (ALPHA)
18U	DIELDRIN
18U	4,4'-DDE (P,P'-DDE)
18U	ENDRIN
18U	ENDOSULFAN II (BETA)
18U	4,4'-DDD (P,P'-DDD)
18U	ENDOSULFAN SULFATE
18U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
89U	METHOXYCHLOR
18U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
89U	GAMMA-CHLORDANE /2
89U	ALPHA-CHLORDANE /2
180U	TOXAPHENE
89U	PCB-1016 (AROCLOR 1016)
89U	PCB-1221 (AROCLOR 1221)
89U	PCB-1232 (AROCLOR 1232)
89U	PCB-1242 (AROCLOR 1242)
89U	PCB-1248 (AROCLOR 1248)
180U	PCB-1254 (AROCLOR 1254)
180U	PCB-1260 (AROCLOR 1260)
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-03

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30U	ACETONE
9UJ	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9UJ	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
15	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
390U	PHENOL	1900U	3-NITROANILINE
390U	BIS(2-CHLOROETHYL) ETHER	390U	ACENAPHTHENE
390U	2-CHLOROPHENOL	1900U	2,4-DINITROPHENOL
390U	1,3-DICHLOROBENZENE	1900U	4-NITROPHENOL
390U	1,4-DICHLOROBENZENE	390U	DIBENZOFURAN
390UJ	BENZYL ALCOHOL	390U	2,4-DINITROTOLUENE
390U	1,2-DICHLOROBENZENE	390U	DIETHYL PHTHALATE
390U	2-METHYLPHENOL	390U	4-CHLOROPHENYL PHENYL ETHER
390U	BIS(2-CHLOROISOPROPYL) ETHER	390U	FLUORENE
390U	(3-AND/OR 4-)METHYLPHENOL	1900UJ	4-NITROANILINE
390U	N-NITROSODI-N-PROPYLAMINE	1900U	2-METHYL-4,6-DINITROPHENOL
390U	HEXACHLOROETHANE	390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	NITROBENZENE	390U	4-BROMOPHENYL PHENYL ETHER
390U	ISOPHORONE	390U	HEXACHLOROBENZENE (HCB)
390U	2-NITROPHENOL	1900U	PENTACHLOROPHENOL
390U	2,4-DIMETHYLPHENOL	390U	PHENANTHRENE
1900UJ	BENZOIC ACID	390U	ANTHRACENE
390U	BIS(2-CHLOROETHOXY) METHANE	390U	DI-N-BUTYLPHTHALATE
390U	2,4-DICHLOROPHENOL	390U	FLUORANTHENE
390U	1,2,4-TRICHLOROBENZENE	390U	PYRENE
390U	NAPHTHALENE	390U	BENZYL BUTYL PHTHALATE
390U	4-CHLOROANILINE	780UJ	3,3'-DICHLOROBENZIDINE
390U	HEXACHLOROBUTADIENE	390U	BENZO(A)ANTHRACENE
390U	4-CHLORO-3-METHYLPHENOL	390U	CHRYSENE
390U	2-METHYLNAPHTHALENE	390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)	390U	DI-N-OCTYLPHTHALATE
390U	2,4,6-TRICHLOROPHENOL	390U	BENZO(B AND/OR K)FLUORANTHENE
1900U	2,4,5-TRICHLOROPHENOL	390U	BENZO-A-PYRENE
390U	2-CHLORONAPHTHALENE	390UJ	INDENO (1,2,3-CD) PYRENE
1900U	2-NITROANILINE	390U	DIBENZO(A,H)ANTHRACENE
390U	DIMETHYL PHTHALATE	390U	BENZO(GHI)PERYLENE
390U	ACENAPHTHYLENE	15	PERCENT MOISTURE
390U	2,6-DINITROTOLUENE		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE. SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE. OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q512 MD NO: Q512 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

600J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00
D. NUMBER: Q512

UG/KG	ANALYTICAL RESULTS
9.4U	ALPHA-BHC
9.4U	BETA-BHC
9.4U	DELTA-BHC
9.4U	GAMMA-BHC (LINDANE)
9.4U	HEPTACHLOR
9.4U	ALDRIN
9.4U	HEPTACHLOR EPOXIDE
9.4U	ENDOSULFAN I (ALPHA)
19U	DIELDRIN
19U	4,4'-DDE (P,P'-DDE)
19U	ENDRIN
19U	ENDOSULFAN II (BETA)
19U	4,4'-DDD (P,P'-DDD)
19U	ENDOSULFAN SULFATE
19U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
94U	METHOXYCHLOR
19U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
94U	GAMMA-CHLORDANE /2
94U	ALPHA-CHLORDANE /2
190U	TOXAPHENE
94U	PCB-1016 (AROCLOR 1016)
94U	PCB-1221 (AROCLOR 1221)
94U	PCB-1232 (AROCLOR 1232)
94U	PCB-1242 (AROCLOR 1242)
94U	PCB-1248 (AROCLOR 1248)
190U	PCB-1254 (AROCLOR 1254)
190U	PCB-1260 (AROCLOR 1260)
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0920 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
30U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
11	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
11	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0920 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
360U	PHENOL
360UJ	BIS(2-CHLOROETHYL) ETHER
360U	2-CHLOROPHENOL
360U	1,3-DICHLOROBENZENE
360U	1,4-DICHLOROBENZENE
360U	BENZYL ALCOHOL
360U	1,2-DICHLOROBENZENE
360U	2-METHYLPHENOL
360U	BIS(2-CHLOROISOPROPYL) ETHER
360U	(3-AND/OR 4-)METHYLPHENOL
360U	N-NITROSODI-N-PROPYLAMINE
360U	HEXACHLOROETHANE
360U	NITROBENZENE
360U	ISOPHORONE
360U	2-NITROPHENOL
360U	2,4-DIMETHYLPHENOL
1700U	BENZOIC ACID
360U	BIS(2-CHLOROETHOXY) METHANE
360U	2,4-DICHLOROPHENOL
360U	1,2,4-TRICHLOROBENZENE
360U	NAPHTHALENE
360UJ	4-CHLOROANILINE
360U	HEXACHLOROBUTADIENE
360U	4-CHLORO-3-METHYLPHENOL
360U	2-METHYLNAPHTHALENE
360U	HEXACHLOROCYCLOPENTADIENE (HCCP)
360U	2,4,6-TRICHLOROPHENOL
1700U	2,4,5-TRICHLOROPHENOL
360U	2-CHLORONAPHTHALENE
1700U	2-NITROANILINE
360U	DIMETHYL PHTHALATE
360U	ACENAPHTHYLENE
360U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1700UJ	3-NITROANILINE
360U	ACENAPHTHENE
1700U	2,4-DINITROPHENOL
1700U	4-NITROPHENOL
360U	DIBENZOFURAN
360U	2,4-DINITROTOLUENE
360U	DIETHYL PHTHALATE
360U	4-CHLOROPHENYL PHENYL ETHER
360U	FLUORENE
1700UJ	4-NITROANILINE
1700U	2-METHYL-4,6-DINITROPHENOL
360U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
360U	4-BROMOPHENYL PHENYL ETHER
360U	HEXACHLOROBENZENE (HCB)
1700U	PENTACHLOROPHENOL
360U	PHENANTHRENE
360U	ANTHRACENE
360U	DI-N-BUTYLPHTHALATE
360U	FLUORANTHENE
360U	PYRENE
360U	BENZYL BUTYL PHTHALATE
720UJ	3,3'-DICHLOROBENZIDINE
360U	BENZO(A)ANTHRACENE
360U	CHRYSENE
360U	BIS(2-ETHYLHEXYL) PHTHALATE
360U	DI-N-OCTYLPHTHALATE
360U	BENZO(B AND/OR K)FLUORANTHENE
360U	BENZO-A-PYRENE
360UJ	INDENO (1,2,3-CD) PYRENE
360U	DIBENZO(A,H)ANTHRACENE
360U	BENZO(GHI)PERYLENE
8	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
** PROJECT NO. 90-011   SAMPLE NO. 40525  SAMPLE TYPE: SOIL      PROG ELEM: NSF   COLLECTED BY: W RILEY        **
** SOURCE: OLD STERLING LANDFIL                                 CITY: STERLING            ST: GA               **
** STATION ID: SS-04                                            COLLECTION START: 10/17/89  0920   STOP: 00/00/00 **
** CASE.NO.: 12944          SAS NO.:                            D. NO.: Q509              MD NO: Q509          **
```

ANALYTICAL RESULTS UG/KG

1000J   1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00
D. NUMBER: Q509

UG/KG	ANALYTICAL RESULTS
8.7U	ALPHA-BHC
8.7U	BETA-BHC
8.7U	DELTA-BHC
8.7U	GAMMA-BHC (LINDANE)
8.7U	HEPTACHLOR
8.7U	ALDRIN
8.7U	HEPTACHLOR EPOXIDE
8.7U	ENDOSULFAN I (ALPHA)
17U	DIELDRIN
17U	4,4'-DDE (P,P'-DDE)
17U	ENDRIN
17U	ENDOSULFAN II (BETA)
17U	4,4'-DDD (P,P'-DDD)
17U	ENDOSULFAN SULFATE
17U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
87U	METHOXYCHLOR
17U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
87U	GAMMA-CHLORDANE /2
87U	ALPHA-CHLORDANE /2
170U	TOXAPHENE
87U	PCB-1016 (AROCLOR 1016)
87U	PCB-1221 (AROCLOR 1221)
87U	PCB-1232 (AROCLOR 1232)
87U	PCB-1242 (AROCLOR 1242)
87U	PCB-1248 (AROCLOR 1248)
170U	PCB-1254 (AROCLOR 1254)
170U	PCB-1260 (AROCLOR 1260)
8	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*****************************************************************************************************
**  PROJECT NO. 90-011   SAMPLE NO. 40521  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY         **
**  SOURCE: OLD STERLING LANDFIL                                   CITY: STERLING            ST: GA              **
**  STATION ID: PB-01                                              COLLECTION START: 10/16/89 0830  STOP: 00/00/00 **
**  CASE NO.: 12944          SAS NO.:                              D. NO.:                   MD NO: Q505          **
**                                                                                                              **
*****************************************************************************************************
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

****
** PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q508 MD NO: Q508 **
** **
****

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**  PROJECT NO. 90-011   SAMPLE NO. 40533  SAMPLE TYPE. GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY                   **
**  SOURCE. OLD STERLING LANDFIL                                   CITY: STERLING                ST: GA                     **
**  STATION ID: TW-02                                              COLLECTION START: 10/17/89  1300   STOP: 00/00/00         **
**  CASE.NO.: 12944           SAS NO.:                             D. NO.: Q517                  MD NO: Q517                **
**                                                                                                                          **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40520 SAMPLE TYPE. GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE. OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP. 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q514 MD NO: Q514 **
** **
*** ***

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011	SAMPLE NO. 40527	SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL		
STATION ID: TW-04		
CASE.NO.: 12944	SAS NO.:	

PROG ELEM: NSF	COLLECTED BY: W RILEY	
CITY: STERLING	ST: GA	
COLLECTION START: 10/17/89 1000	STOP: 00/00/00	
D. NO.: Q511	MD NO: Q511	

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*****************************************************************************************************
**   PROJECT NO  90-011    SAMPLE NO. 40535  SAMPLE TYPE. GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY          **
**   SOURCE.                                                          CITY: STERLING              ST: GA              **
**   STATION ID: TW-05                                                COLLECTION START: 10/17/89  1515   STOP: 00/00/00 **
**   CASE.NO.: 12944            SAS NO.:                              D. NO.: Q519                MD NO: Q519         **
**                                                                                                                    **
*****************************************************************************************************
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40542 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TB-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 0830 STOP: 00/00/00
D. NUMBER: Q505

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40542 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 0830 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q505

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50U	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40541 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 0830 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q505

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

****

** PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q520 MD NO: Q520 **
** **

****

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-04 COLLECTION START: 10/17/89 0930 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q510 MD NO: Q510 **
** **
*** ***

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-01 COLLECTION START: 10/16/89 1120 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q506 MD NO: Q506 **

RESULTS	UNITS	PARAMETER
1.1U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-02 COLLECTION START: 10/17/89 1200 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q515 MD NO: Q515 **

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q512 MD NO: Q512 **
**
*** ***

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40525  SAMPLE TYPE. SOIL        PROG ELEM: NSF    COLLECTED BY: W RILEY                     **
**   SOURCE. OLD STERLING LANDFIL                                     CITY: STERLING              ST: GA                            **
**   STATION ID: SS-04                                                COLLECTION START: 10/17/89  0920   STOP: 00/00/00             **
**   CASE.NO.: 12944           SAS NO.:                               D. NO.: Q509                MD NO: Q509                       **
**                                                                                                                                  **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-01 COLLECTION START: 10/16/89 1150 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q507 MD NO: Q507 **
**
*** ***

RESULTS	UNITS	PARAMETER
.99U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

****

** PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q516 MD NO: Q516 **
** **

****

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*************************************************************************************************************
**   PROJECT NO. 90-011    SAMPLE NO. 40529  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY       **
**   SOURCE: OLD STERLING LANDFIL                                    CITY: STERLING             ST: GA              **
**   STATION ID: SB-03                                               COLLECTION START: 10/17/89  1050   STOP: 00/00/00 **
**   CASE.NO.: 12944            SAS NO.:                             D. NO.: Q513              MD NO: Q513         **
**                                                                                                                 **
*************************************************************************************************************
```

RESULTS	UNITS	PARAMETER
1.6U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 11/17/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-133    SAMPLE NO. 40511  SAMPLE TYPE: WASTE        PROG ELEM: NSF   COLLECTED BY: R FRANKLIN         **
**   SOURCE: OLD STERLING LANDFIL                                       CITY: STERLING          ST: GA                     **
**   STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE                       COLLECTION START: 10/12/89  1448   STOP: 00/00/00   **
**                                                                                                                         **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
0.20	MG/KG	CYANIDE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*********************************************************************************************************
**   PROJECT NO. 90-011    SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE    PROG ELEM: NSF   COLLECTED BY: W RILEY        **
**   SOURCE: OLD STERLING LANDFIL                                    CITY: STERLING            ST: GA               **
**   STATION ID: LS-05                                               COLLECTION START: 10/17/89  1315   STOP: 00/00/00  **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q518              MD NO: Q518          **
**                                                                                                                  **
*********************************************************************************************************
```

RESULTS	UNITS	PARAMETER
2.7U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q520

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
50U	ALUMINUM	61	MANGANESE
30U	ANTIMONY	0.2UJ	MERCURY
4UJ	ARSENIC	10U	NICKEL
12	BARIUM	1000	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
64000	CALCIUM	9000	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	2U	VANADIUM
320J	IRON	3U	ZINC
2UJ	LEAD		
2800	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 11/28/89

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY: R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
[redacted]	BARIUM
0.50U	BERYLLIUM
0.50U	CADMIUM
1.0U	COBALT
[redacted]	CHROMIUM
[redacted]	COPPER
1.0U	MOLYBDENUM
2.0U	NICKEL
4.0U	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
[redacted]	STRONTIUM
5.0U	TELLURIUM
[redacted]	TITANIUM
10U	THALLIUM
[redacted]	VANADIUM
1.0U	YTTRIUM
[redacted]	ZINC
NA	ZIRCONIUM
NA	MERCURY
[redacted]	ALUMINUM
[redacted].6	MANGANESE

MG/KG	ANALYTICAL RESULTS
[redacted]	CALCIUM
[redacted]350	MAGNESIUM
[redacted]480	IRON
[redacted]	SODIUM
200U	POTASSIUM
NA	PERCENT MOISTURE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: LS-05 COLLECTION START: 10/17/89 1315 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q518

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	6.2	MANGANESE
20UJ	ANTIMONY	0.22UJ	MERCURY
1.8U	ARSENIC	4.3U	NICKEL
5.8	BARIUM	140U	POTASSIUM
0.43U	BERYLLIUM	0.89U	SELENIUM
1.7UJ	CADMIUM	0.86U	SILVER
1520	CALCIUM	14000	SODIUM
2.5	CHROMIUM	NA	THALLIUM
2.1U	COBALT	NA	TIN
8.2J	COPPER	2.1	VANADIUM
840J	IRON	20U	ZINC
23J	LEAD	56	PERCENT MOISTURE
220	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00
MD NUMBER: Q507

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3500	ALUMINUM	2.6	MANGANESE
70UJ	ANTIMONY	0.11UJ	MERCURY
0.99U	ARSENIC	2.3U	NICKEL
4U	BARIUM	80U	POTASSIUM
0.23U	BERYLLIUM	0.5U	SELENIUM
0.93UJ	CADMIUM	0.46U	SILVER
40U	CALCIUM	70U	SODIUM
4.5	CHROMIUM	1.2U	THALLIUM
1.2U	COBALT	NA	TIN
30UJ	COPPER	1U	VANADIUM
380J	IRON	3U	ZINC
5UJ	LEAD	23	PERCENT MOISTURE
32	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1215 STOP: 00/00/00
MD NUMBER: Q516

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3800	ALUMINUM	1.4	MANGANESE
6.6UJ	ANTIMONY	0.110J	MERCURY
0.88U	ARSENIC	2.2U	NICKEL
3.2	BARIUM	80U	POTASSIUM
0.22U	BERYLLIUM	0.44U	SELENIUM
0.88UJ	CADMIUM	0.44U	SILVER
230	CALCIUM	80U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
5UJ	COPPER	1.9	VANADIUM
290J	IRON	20U	ZINC
5UJ	LEAD	14	PERCENT MOISTURE
37	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1050 STOP: 00/00/00
MD NUMBER: Q513

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4300	ALUMINUM	1.1U	MANGANESE
8UJ	ANTIMONY	0.090J	MERCURY
1.1U	ARSENIC	2.7U	NICKEL
2.2	BARIUM	86U	POTASSIUM
0.27U	BERYLLIUM	0.54U	SELENIUM
1.1UJ	CADMIUM	0.54U	SILVER
50U	CALCIUM	70U	SODIUM
4	CHROMIUM	7.1U	THALLIUM
1.3U	COBALT	NA	TIN
1UJ	COPPER	1U	VANADIUM
270J	IRON	0.8U	ZINC
3UJ	LEAD	30	PERCENT MOISTURE
38	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SB-04 COLLECTION START. 10/17/89 0930 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. MD NUMBER: Q510

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4900	ALUMINUM	3.2	MANGANESE
60J	ANTIMONY	0.110J	MERCURY
0.83U	ARSENIC	1.8U	NICKEL
5.4	BARIUM	58U	POTASSIUM
0.18U	BERYLLIUM	1U	SELENIUM
0.72UJ	CADMIUM	0.36U	SILVER
30U	CALCIUM	70U	SODIUM
3.6	CHROMIUM	1U	THALLIUM
0.9U	COBALT	NA	TIN
7UJ	COPPER	2.2	VANADIUM
650J	IRON	3U	ZINC
4UJ	LEAD	23	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00
MD NUMBER: Q506

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3700	ALUMINUM	53	MANGANESE
6.3UJ	ANTIMONY	0.11UJ	MERCURY
0.69U	ARSENIC	2.1U	NICKEL
12	BARIUM	67U	POTASSIUM
0.21U	BERYLLIUM	0.34U	SELENIUM
0.83UJ	CADMIUM	0.42U	SILVER
150	CALCIUM	70U	SODIUM
5.2	CHROMIUM	0.86U	THALLIUM
1U	COBALT	NA	TIN
50UJ	COPPER	3U	VANADIUM
6000J	IRON	7U	ZINC
9.3J	LEAD	05	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00
MD NUMBER: Q515

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	1.3	MANGANESE
6.4UJ	ANTIMONY	0.11UJ	MERCURY
0.86U	ARSENIC	2.1U	NICKEL
2.3	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	0.43U	SELENIUM
0.85UJ	CADMIUM	0.42U	SILVER
230	CALCIUM	20	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
2U	COBALT	NA	TIN
5UJ	COPPER	1U	VANADIUM
290J	IRON	3U	ZINC
2U	LEAD	08	PERCENT MOISTURE
52	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q512

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4600	ALUMINUM	4.7	MANGANESE
6.3UJ	ANTIMONY	0.11UJ	MERCURY
0.9U	ARSENIC	2.1U	NICKEL
6.7	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	1U	SELENIUM
0.84UJ	CADMIUM	0.42U	SILVER
92	CALCIUM	100U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
6UJ	COPPER	2.9	VANADIUM
1400J	IRON	4U	ZINC
3UJ	LEAD	13	PERCENT MOISTURE
110	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-04 COLLECTION START: 10/17/89 0920 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q509

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
6000	ALUMINUM	12	MANGANESE
6UJ	ANTIMONY	0.11UJ	MERCURY
0.85U	ARSENIC	1.9U	NICKEL
14	BARIUM	70U	POTASSIUM
0.19U	BERYLLIUM	0.42U	SELENIUM
0.76UJ	CADMIUM	0.38U	SILVER
86	CALCIUM	20U	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
0.95U	COBALT	NA	TIN
8.9J	COPPER	3.6	VANADIUM
1800J	IRON	3U	ZINC
3UJ	LEAD	09	PERCENT MOISTURE
170	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40521 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PB-01 COLLECTION START: 10/16/89 0830 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q505

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
70U	ALUMINUM	4U	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
5U	BARIUM	330U	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1900	CALCIUM	300U	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
7U	COPPER	2U	VANADIUM
47J	IRON	3U	ZINC
2UJ	LEAD		
430	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. MD NUMBER: Q508

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
9900	ALUMINUM	13	MANGANESE
30U	ANTIMONY	0.2U	MERCURY
4UJ	ARSENIC	10U	NICKEL
24	BARIUM	410	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1800	CALCIUM	11000	SODIUM
12	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	4U	VANADIUM
920J	IRON	13U	ZINC
3UJ	LEAD		
740	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q517

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12000	ALUMINUM	230	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	26	NICKEL
56	BARIUM	6700	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
180000	CALCIUM	31000	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
40U	COPPER	15	VANADIUM
13000J	IRON	150U	ZINC
38J	LEAD		
18000	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q514

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
15000	ALUMINUM	16	MANGANESE
30U	ANTIMONY	0.2UJ	MERCURY
4UJ	ARSENIC	10U	NICKEL
41	BARIUM	7500	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
22000	CALCIUM	8200	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	7	VANADIUM
1300J	IRON	13U	ZINC
7UJ	LEAD		
6100	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-04 COLLECTION START: 10/17/89 1000 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q511

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
1900	ALUMINUM	4U	MANGANESE
40U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
21	BARIUM	19000	POTASSIUM
1U	BERYLLIUM	7	SELENIUM
4U	CADMIUM	2U	SILVER
35000	CALCIUM	120000	SODIUM
2U	CHROMIUM	50U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	6	VANADIUM
260J	IRON	60U	ZINC
3UJ	LEAD		
9500	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID. TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q519

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12000	ALUMINUM	510	MANGANESE
30U	ANTIMONY	0.40J	MERCURY
4UJ	ARSENIC	10U	NICKEL
190	BARIUM	38000	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
140000	CALCIUM	150000	SODIUM
8	CHROMIUM	50U	THALLIUM
7U	COBALT	NA	TIN
20U	COPPER	8	VANADIUM
38000J	IRON	140U	ZINC
30UJ	LEAD		
11000	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

APPENDIX D

Environmental Protection Agency
Office of Emergency and Remedial Response
Washington, DC 20460
EPA Form 2070-12
July 1984

EPA

Potential Hazardous Waste Site

Site Inspection Report

Site Inspection Report

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE: GA | 02 SITE NUMBER: D980496939

II. SITE NAME AND LOCATION

01 SITE NAME: Old Sterling Land fill

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: Old Hwy 99

03 CITY: Sterling

04 STATE: GA | 05 ZIP CODE: 31520 | 06 COUNTY: Glynn | 07 COUNTY CODE | 08 CONG DIST

09 COORDINATES: LATITUDE 31 16 18 | LONGITUDE 81 31 53

10 TYPE OF OWNERSHIP (Check one): [X] A. PRIVATE [ ] B. FEDERAL ____ [ ] C. STATE [ ] D. COUNTY [ ] E. MUNICIPAL [ ] F. OTHER ____ [ ] G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 11 16 89 (MONTH DAY YEAR)

02 SITE STATUS: [ ] ACTIVE [X] INACTIVE

03 YEARS OF OPERATION: 1969 (BEGINNING YEAR) 1979 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply): [ ] A. EPA [X] B. EPA CONTRACTOR NUS Corp (Name of firm) [ ] C. MUNICIPAL [ ] D. MUNICIPAL CONTRACTOR ____ (Name of firm) [ ] E. STATE [ ] F. STATE CONTRACTOR ____ (Name of firm) [ ] G. OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Walter Riley	Project Manager	NUS	(404) 938-7710

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Roger Franklin	Sampling Team	NUS	(404) 938-7710
Ron Young	Sampling Team	NUS	(404) 938-7710
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one): [X] PERMISSION [ ] WARRANT

18 TIME OF INSPECTION: 0900

19 WEATHER CONDITIONS: Warm + Sunny

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Mario Villamarzo	EPA	(404) 347-5065

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Walter Riley		NUS Corp	404/938-7710	02 07 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D980496939

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [X] C. SLUDGE
- [ ] D. OTHER _____ (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 49

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	49	tons	
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	Toxaphene	8001-35-2	Landfill	159000	ppm

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: GA
02 SITE NUMBER: D980496E2

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: 10/16/90) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Groundwater samples had low concentrations of lead, barium selenium, vanadium and manganese.

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: 10/16/90) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Strontium and titanium present in waste sample at low concentration.

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: 10/16/90) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

There is no significant Contamination

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE: 10/16/90) [ ] POTENTIAL [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: 6 (Acres) 04 NARRATIVE DESCRIPTION

Surface, subsurface soils have metal and organic contamination, Contamination is not significant.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Insignificant low levels of Lead Barium + Selenium and Ethylbenzene were detected in ground water, but in the surficial aquifer.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: GA
02 SITE NUMBER: D980496939

II. HAZARDOUS CONDITIONS AND INCIDENTS Continued

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION Include name(s) of species

Unknown

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
Spills/Runoff/Standing liquids/Leaking drums
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

06 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 940 homes are not served by the municipal water system.

IV. COMMENTS

V. SOURCES OF INFORMATION Cite specific references, e.g., state files, sample analysis, reports

File material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION
01 STATE: GA
02 SITE NUMBER: D980496999

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	49	TONS
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE: 4.3 ACRES

07 COMMENTS
265,000 cubic feet of mixed organics, inorganic, solvents, and Trash

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKES, LINERS, BARRIERS, ETC.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO
02 COMMENTS
Vehicle traffic limited by Gate at Entrance. Property posted. The waste is not exposed.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Like material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980496939

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☒
NON-COMMUNITY	C.	D.

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F.

03 DISTANCE TO SITE
A. .1 (mi)
B. (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 3300
03 DISTANCE TO NEAREST DRINKING WATER WELL .1 (mi)

04 DEPTH TO GROUNDWATER 5 (ft)
05 DIRECTION OF GROUNDWATER FLOW South
06 DEPTH TO AQUIFER OF CONCERN 120 (ft)
07 POTENTIAL YIELD OF AQUIFER 720,000 (gpd)
08 SOLE SOURCE AQUIFER ☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)
Wells are cased to a depth of 120 feet or more

10 RECHARGE AREA ☐ YES ☐ NO COMMENTS
11 DISCHARGE AREA ☐ YES ☐ NO COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Unnamed Canal	☐	.7 (mi)
Burnett Creek	☐	2.5 (mi)
Cowpens Creek	☐	5.7 (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE A. 322 (NO. OF PERSONS)
TWO (2) MILES OF SITE B. 1022 (NO. OF PERSONS)
THREE (3) MILES OF SITE C. 29500 (NO. OF PERSONS)

02 DISTANCE TO NEAREST POPULATION .1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 292
04 DISTANCE TO NEAREST OFF-SITE BUILDING .1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
The is approximately 92 homes within the one mile radius of old Sterling Landfills

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980496939

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☒ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☒ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
140 (ft)	3-5 (ft)	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
7 (in)	4 (in)	0 %	—	0 %

09 FLOOD POTENTIAL: SITE IS IN _____ YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. 1.8 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

10.5 (mi)

ENDANGERED SPECIES: Black Skimmer, Loggerhead Sea turtle, Brown Pelican

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. _____ (mi)	B. .1 (mi)	C. ½ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The old Sterling landfill and surrounding area is fairly flat. The site is a cleared area overgrown with weeds and tall grass. The surrounding area is mostly pinetrees. A manmade embankment was located in the southwest quadrant of the landfill.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
GA	D980[illegible]927

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	6	Southwest Labs of Ok., Broken Arrow, Ok.	1/90
SURFACE WATER		+ Aquatec Inc. of Burlington VT & ETC Tolson Bat.	
WASTE	1	ESO Athens, GA	1/9/90
AIR			
RUNOFF			
SPILL			
SOIL	8	Southwest Labs of Ok., Broken Arrow, Aquatec, Inc	1/9/90
VEGETATION		ETC Tolson, Baton Rouge LA.	
OTHER	1	" "	1/9/90

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH	
Temperature	
Conductance	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF NUS Corporation (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS NUS Corporation Files

V. OTHER FIELD DATA COLLECTED (Describe results of observations)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D 981491429

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Ga Pacific Corp	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Rt. #1 Box 684	

05 CITY	06 STATE	07 ZIP CODE
Hortense	GA	31543

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER
Ga. Pacific Corp.	

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
133 Peachtree St. NW.	

12 CITY	13 STATE	14 ZIP CODE
Atlanta	GA	30313

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable. List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
GA	D 004[illegible]939

II. CURRENT OPERATOR (Provide if different from owner)				OPERATOR'S PARENT COMPANY (If applicable)			
01 NAME			02 D+B NUMBER	10 NAME			11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)			13 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER						

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)				PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)			
01 NAME			02 D+B NUMBER	10 NAME			11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)			13 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						
01 NAME			02 D+B NUMBER	10 NAME			11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)			13 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						
01 NAME			02 D+B NUMBER	10 NAME			11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)			13 SIC CODE
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D 980 [illegible]

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: D980496339

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	02 DATE	03 AGENCY

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: DGS049639

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
GA	0980461839

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

APPENDIX C

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q520

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	5U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	5UJ	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	CHLOROETHANE	5UJ	DIBROMOCHLOROMETHANE
5U	METHYLENE CHLORIDE	5UJ	1,1,2-TRICHLOROETHANE
10UJ	ACETONE	5U	BENZENE
5U	CARBON DISULFIDE	5UJ	TRANS-1,3-DICHLOROPROPENE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5UJ	BROMOFORM
5U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
5U	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
5U	CHLOROFORM	5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,2-DICHLOROETHANE	5UJ	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	5U	TOLUENE
5U	1,1,1-TRICHLOROETHANE	5U	CHLOROBENZENE
5U	CARBON TETRACHLORIDE	5U	ETHYL BENZENE
10U	VINYL ACETATE	5U	STYRENE
5U	BROMODICHLOROMETHANE	5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: PW-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1655 STOP: 00/00/00

CASE NO : 12944 SAS NO.: D. NO.: Q520

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

APPENDIX B

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: PW-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1655 STOP: 00/00/00
U. NUMBER: 0520

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-01 COLLECTION START. 10/16/89 1230 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q508

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
5U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1230 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q508

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50U	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1230 STOP: 00/00/00
D. NUMBER: Q508

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4' DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1300 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q517

UG/L	ANALYTICAL RESULTS
100U	CHLOROMETHANE
100U	BROMOMETHANE
100U	VINYL CHLORIDE
100U	CHLOROETHANE
50U	METHYLENE CHLORIDE
100UJ	ACETONE
50U	CARBON DISULFIDE
50U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	1,1-DICHLOROETHANE
50U	1,2-DICHLOROETHENE (TOTAL)
50U	CHLOROFORM
50U	1,2-DICHLOROETHANE
100U	METHYL ETHYL KETONE
50U	1,1,1-TRICHLOROETHANE
50U	CARBON TETRACHLORIDE
100U	VINYL ACETATE
50U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
50U	1,2-DICHLOROPROPANE
50UJ	CIS-1,3-DICHLOROPROPENE
50U	TRICHLOROETHENE(TRICHLOROETHYLENE)
50UJ	DIBROMOCHLOROMETHANE
50UJ	1,1,2-TRICHLOROETHANE
50U	BENZENE
50UJ	TRANS-1,3-DICHLOROPROPENE
50UJ	BROMOFORM
100U	METHYL ISOBUTYL KETONE
100U	METHYL BUTYL KETONE
50U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50UJ	1,1,2,2-TETRACHLOROETHANE
50U	TOLUENE
50U	CHLOROBENZENE
[redacted]	[redacted]
50U	STYRENE
50U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q517 MD NO: Q517 **

ANALYTICAL RESULTS UG/L

600JN	CARENE
200JN	DIMETHYLMETHYLENEHIPTADIENE
3000JN	ETHYLDIMETHYLBENZENE
700JN	TRIMETHYLBICYCLOHEPTANONE
3000J	3 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q517

UG/L	ANALYTICAL RESULTS
500U	PHENOL
500UJ	BIS(2-CHLOROETHYL) ETHER
500U	2-CHLOROPHENOL
500U	1,3-DICHLOROBENZENE
500U	1,4-DICHLOROBENZENE
500U	BENZYL ALCOHOL
500U	1,2-DICHLOROBENZENE
500U	2-METHYLPHENOL
500U	BIS(2-CHLOROISOPROPYL) ETHER
500U	(3-AND/OR 4-)METHYLPHENOL
500U	N-NITROSODI-N-PROPYLAMINE
500U	HEXACHLOROETHANE
500U	NITROBENZENE
500U	ISOPHORONE
500U	2-NITROPHENOL
500U	2,4-DIMETHYLPHENOL
2500U	BENZOIC ACID
500U	BIS(2-CHLOROETHOXY) METHANE
500U	2,4-DICHLOROPHENOL
500U	1,2,4-TRICHLOROBENZENE
500U	NAPHTHALENE
500UJ	4-CHLOROANILINE
500U	HEXACHLOROBUTADIENE
500U	4-CHLORO-3-METHYLPHENOL
500U	2-METHYLNAPHTHALENE
500U	HEXACHLOROCYCLOPENTADIENE (HCCP)
500U	2,4,6-TRICHLOROPHENOL
2500U	2,4,5-TRICHLOROPHENOL
500U	2-CHLORONAPHTHALENE
2500U	2-NITROANILINE
500U	DIMETHYL PHTHALATE
500U	ACENAPHTHYLENE
500U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
2500UJ	3-NITROANILINE
500U	ACENAPHTHENE
2500U	2,4-DINITROPHENOL
2500U	4-NITROPHENOL
500U	DIBENZOFURAN
500U	2,4-DINITROTOLUENE
500U	DIETHYL PHTHALATE
500U	4-CHLOROPHENYL PHENYL ETHER
500U	FLUORENE
2500UJ	4-NITROANILINE
2500U	2-METHYL-4,6-DINITROPHENOL
500U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
500U	4-BROMOPHENYL PHENYL ETHER
500U	HEXACHLOROBENZENE (HCB)
2500U	PENTACHLOROPHENOL
500U	PHENANTHRENE
500U	ANTHRACENE
500U	DI-N-BUTYLPHTHALATE
500U	FLUORANTHENE
500U	PYRENE
500U	BENZYL BUTYL PHTHALATE
1000UJ	3,3'-DICHLOROBENZIDINE
500U	BENZO(A)ANTHRACENE
500U	CHRYSENE
500U	BIS(2-ETHYLHEXYL) PHTHALATE
500U	DI-N-OCTYLPHTHALATE
500U	BENZO(B AND/OR K)FLUORANTHENE
500U	BENZO-A-PYRENE
500UJ	INDENO (1,2,3-CD) PYRENE
500U	DIBENZO(A,H)ANTHRACENE
500U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011	SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA	PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL		CITY: STERLING ST: GA
STATION ID: TW-02		COLLECTION START: 10/17/89 1300 STOP: 00/00/00
CASE NO.: 12944	SAS NO.:	D. NO.: Q517 MD NO: Q517

ANALYTICAL RESULTS UG/L

5000JN	PINENE
2000JN	CAMPHENE
40000JN	TRIMETHYLBICYCLOHEPTANE (2 ISOMERS)
4000JN	METHYL(METHYLETHYL)OXABICYCLOHEPTANE
10000JN	METHYL(METHYLETHYL)BENZENE
3000JN	CINEOLE
2000JN	DIMETHYLBICYCLOHEPTANONE
20000JN	CAMPHOR
8000JN	TRIMETHYLBICYCLOHEPTANOL
1000JN	METHYL(METHYLETHYL)PHENOL
10000J	4 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1300 STOP: 00/00/00
D. NUMBER: Q517

UG/L	ANALYTICAL RESULTS
0.10U	ALPHA-BHC
0.10U	BETA-BHC
0.10U	DELTA-BHC
0.10U	GAMMA-BHC (LINDANE)
0.10U	HEPTACHLOR
0.10U	ALDRIN
0.10U	HEPTACHLOR EPOXIDE
0.10U	ENDOSULFAN I (ALPHA)
0.20U	DIELDRIN
0.20U	4,4'-DDE (P,P'-DDE)
0.20U	ENDRIN
0.20U	ENDOSULFAN II (BETA)
0.20U	4,4'-DDD (P,P'-DDD)
0.20U	ENDOSULFAN SULFATE
0.20U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
1.0U	METHOXYCHLOR
0.20U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
1.0U	GAMMA-CHLORDANE /2
1.0U	ALPHA-CHLORDANE /2
2.0U	TOXAPHENE
1.0U	PCB-1016 (AROCLOR 1016)
1.0U	PCB-1221 (AROCLOR 1221)
1.0U	PCB-1232 (AROCLOR 1232)
1.0U	PCB-1242 (AROCLOR 1242)
1.0U	PCB-1248 (AROCLOR 1248)
2.0U	PCB-1254 (AROCLOR 1254)
2.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

*** ***
** PROJECT NO. 90 011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00 **
**
** CASE NO.: 12944 SAS NO.: D. NO.: Q514 **
*** ***

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	5U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	5U	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	CHLOROETHANE	5U	DIBROMOCHLOROMETHANE
5U	METHYLENE CHLORIDE	5U	1,1,2-TRICHLOROETHANE
10U	ACETONE	5U	BENZENE
5U	CARBON DISULFIDE	5U	TRANS-1,3-DICHLOROPROPENE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5U	BROMOFORM
5U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
5U	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
5U	CHLOROFORM	5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,2-DICHLOROETHANE	5U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	5U	TOLUENE
5U	1,1,1-TRICHLOROETHANE	5U	CHLOROBENZENE
5U	CARBON TETRACHLORIDE	5U	ETHYL BENZENE
10U	VINYL ACETATE	5U	STYRENE
5U	BROMODICHLOROMETHANE	5U	TOTAL XYLENES

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1130 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q514

UG/L	ANALYTICAL RESULTS
4J	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-03
CASE NUMBER: 12044 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1130 STOP: 00/00/00
D. NUMBER: Q514

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011   SAMPLE NO. 40527   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA
STATION ID: TW-04   COLLECTION START: 10/17/89 1000   STOP: 00/00/00
CASE NUMBER: 12944   SAS NUMBER: D. NUMBER: Q511

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.050U	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.050U	ALDRIN	1.0U	TOXAPHENE
0.050U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.050U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS   1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID: TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q519

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
21	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
6U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: 0519

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
19	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00
D. NO.: Q519 MD NO: Q519

ANALYTICAL RESULTS UG/L

40J	2 UNIDENTIFIED COMPOUNDS
9JN	TETRAMETHYLBUTYLPHENOL
50JN	BENZOTHIAZOLONE
20JN	TRIMETHYLHEXANOIC ACID
20JN	OXYBISBENZENE
20JN	TETRAMETHYLPHENANTHRENE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START 10/17/89 1515 STOP: 00/00/00
D NUMBER: 0519

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

TABLE 7

SUMMARY OF ORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/kg)	Background	Onsite		
	OS-SB-01	OS-SB-02	OS-SB-03	OS-SB-04
PURGEABLE COMPOUNDS				
TOLUENE	10U	5J		3J
TRIMETHYLBICYCLOHEPTANE[1]		1000JN		
EXTRACTABLE COMPOUNDS				
OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENECARBOXALDEHYDE[1]		10 000JN		
UNIDENTIFIED COMPOUNDS/NO[1]	-	20 000J 18	-	-
PESTICIDE\PCB COMPOUNDS				
TOXAPHENE	210U	150 000		-

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

TABLE 8

SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/kg)	Background	Onsite				
	OS-SS-01	OS-SS-02	OS-SS-03	OS-SS-04	Waste OS-SS-05	Leachate OS-LS-05
PURGEABLE COMPOUNDS						
CHLOROFORM	3J		-		-	-
METHYL ISOBUTYL KETONE	17U	-				12J
TOLUENE	90	-	15	11	-	-
TRIMETHYLBICYCLOHEPTANE[1]						20JN
EXTRACTABLE COMPOUNDS						
(3-AND/OR 4-)METHYLPHENOL	350U				-	89J
HEXANOIC ACID[1]						500JN
HEXADECANOIC ACID[1]						2000JN
OCTADECANOIC ACID[1]						700JN
DIHYDROBENZODIOXEPIN[1]						800JN
OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE CARBOXYLIC ACID METHYLESTER[1]		200JN				
UNIDENTIFIED COMPOUNDS/NO	-	-	600J/1	1000J/1	-	10,000J/9

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined

5.0 SUMMARY

The groundwater pathway is of primary concern due to the number of homes in the area that use groundwater. Also, the county's water system wells are located within the 4-mile radius of the site. Analytical results of samples collected during the field investigation indicated groundwater and soil contamination at Old Sterling Landfill. The air and onsite pathways are not of concern since no contaminants were found significantly above background in surface soils. It is estimated that approximately 940 homes are not served by a municipal water system and are using private wells.

Contaminants were present in leachate, subsurface soil, and groundwater samples. A subsurface soil sample, OS-SB-02, contained an elevated concentration of toxaphene at 714 times the MQL of the background sample. This sample result supports file material information stating that toxaphene was disposed of at the landfill. Toxaphene is a suspected human carcinogen. The following heavy metals were detected in groundwater samples: barium, lead, manganese, selenium, and vanadium; no toxic organic contaminants were found. Based on the potential for migration of contaminants to the aquifer of concern, it is recommended that a Listing Site Investigation be conducted at Old Sterling Landfill.

REFERENCES

1. Potential Hazardous Waste Site Identification and Preliminary Assessment (EPA Form T2070-2) for Old Sterling Landfill. Filed by Jennifer Kaduck, Georgia Department of Natural Resources, January 15, 1980.

2. NUS Field Logbook No. F4-1279 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of facility reconnaissance, March 3, 1989.

3. Robert Howe, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

4. Morgan Cantrell, Georgia Environmental Protection Division, Municipal Solid Waste Management, telephone conversation with Geoffrey Carton, March 22, 1989 Subject: Hazardous materials at the Old Sterling Landfill.

5. NUS Corporation Field Logbook No. F4-1738 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of Phase II, Screening Site Inspection, October 16, 1989.

6. Olin Chancy, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

7. EPA Notification of Hazardous Waste Site (EPA Form 8900-1) for Hercules Incorporated, Brunswick, Georgia. Filed by K.T. Horton, Hercules, Inc., May 29, 1981.

8. Brunswick Golden Isles Chamber of Commerce, Brunswick and Vicinity (1980), scale 1:250,000

9. U.S. Environmental Protection Agency, Graphical Exposure Modeling System (GEMS) Data Base, compiled from U.S. Bureau of the Census data (1980).

10. U.S. Fish and Wildlife Service, Atlantic Coast Ecological Inventory, Georgia (1980), scale 1:250,000.

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

12. U.S. Department of Commerce, Rainfall Frequency Atlas of the United States, Technical Paper No. 40 (Washington, D.C.: GPO, 1961), p. 93.

13. Brenda Pittman, Environmental Protection Division, telephone conversation with Walter Riley, NUS Corporation, April 27, 1990. Subject: Intakes within 15 miles of Sterling.

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

15. Nelson Johnson, National National Marine Fisheries Service, U. S. Department of Commerce, letter to Bob Donaghue, NUS Corporation, February 10, 1989. Subject: Transmittal of preliminary fish landings data.

16. Thomas Watson, "Aquifer Potential of the Shallow Sediments of the Coastal Area of Georgia," in Proceedings of the Second Symposium on the Geology of the Southeastern Coastal Plain, Information Circular 53 (1982), pp. 183-194.

17. Robert Wait, Geology and Occurrence of Fresh and Brackish Ground Water in Glynn County, Georgia, Geological Survey Water-Supply Paper 1613-E (Washington, D.C.: GPO, 1965), pp. E9-E26.

18. J.S. Clarke, et al. Ground-Water Data for Georgia, Open-File Report 87-376 (Doraville, Georgia, 1987), pp. 70-177.

19. Gerald Nix, Nix Well Drilling, telephone conversation with Geoffrey Carton, NUS Corporation, March 23, 1989. Subject: Wells in the Sterling area.

20. NUS Corporation Field Logbook No. F4-1282 for LCP Chemicals, Inc., TDD No. F4-8902-27. Documentation of facility reconnaissance, March 3, 1989.

21. Ralph Thurston, Superintendent, Glynn County Water Department, telephone conversation with Geoffrey Carton, NUS Corporation, April 20, 1989. Subject: County water service and well locations.

APPENDIX A

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/08/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID: 05-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY: R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
8.1U	CHLOROMETHANE
8.1U	VINYL CHLORIDE
8.1U	BROMOMETHANE
8.1U	CHLOROETHANE
8.1U	TRICHLOROFLUOROMETHANE
8.1U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
81U	ACETONE
81U	CARBON DISULFIDE
8.1U	METHYLENE CHLORIDE
8.1U	TRANS-1,2-DICHLOROETHENE
8.1U	1,1-DICHLOROETHANE
81U	VINYL ACETATE
8.1U	CIS-1,2-DICHLOROETHENE
8.1U	2,2-DICHLOROPROPANE
81U	METHYL ETHYL KETONE
8.1U	BROMOCHLOROMETHANE
8.1U	CHLOROFORM
8.1U	1,1,1-TRICHLOROETHANE
8.1U	1,1-DICHLOROPROPENE
8.1U	CARBON TETRACHLORIDE
8.1U	1,2-DICHLOROETHANE
8.1U	BENZENE
8.1U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8.1U	1,2-DICHLOROPROPANE
8.1U	DIBROMOMETHANE
8.1U	BROMODICHLOROMETHANE

MG/KG	ANALYTICAL RESULTS
8.1U	CIS-1,3-DICHLOROPROPENE
81U	METHYL ISOBUTYL KETONE
8.1U	TOLUENE
8.1U	TRANS-1,3-DICHLOROPROPENE
8.1U	1,1,2-TRICHLOROETHANE
8.1U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8.1U	1,3-DICHLOROPROPANE
81U	METHYL BUTYL KETONE
8.1U	DIBROMOCHLOROMETHANE
8.1U	CHLOROBENZENE
16U	1,1,1,2-TETRACHLOROETHANE
8.1U	ETHYL BENZENE
8.1U	(M- AND/OR P-)XYLENE
8.1U	O-XYLENE
16U	STYRENE
8.1U	BROMOFORM
16U	BROMOBENZENE
8.1U	1,1,2,2-TETRACHLOROETHANE
16U	1,2,3-TRICHLOROPROPANE
16U	O-CHLOROTOLUENE
16U	P-CHLOROTOLUENE
16U	1,3-DICHLOROBENZENE
16U	1,4-DICHLOROBENZENE
16U	1,2-DICHLOROBENZENE
	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/21/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-133   SAMPLE NO. 40511   SAMPLE TYPE: WASTE   PROG ELEM: NSF   COLLECTED BY: R FRANKLIN
SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE   COLLECTION START: 10/12/89 1448   STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
94UA	BIS(2-CHLOROETHYL) ETHER
94UA	BIS(2-CHLOROISOPROPYL) ETHER
94UA	N-NITROSODI-N-PROPYLAMINE
94UA	HEXACHLOROETHANE
94UA	NITROBENZENE
94UA	ISOPHORONE
94UA	BIS(2-CHLOROETHOXY) METHANE
94UA	1,2,4-TRICHLOROBENZENE
94UA	NAPHTHALENE
94UA	4-CHLOROANILINE
94UA	HEXACHLOROBUTADIENE
94UA	2-METHYLNAPHTHALENE
94UA	HEXACHLOROCYCLOPENTADIENE (HCCP)
94UA	2-CHLORONAPHTHALENE
94UA	2-NITROANILINE
94UA	DIMETHYL PHTHALATE
94UA	ACENAPHTHYLENE
94UA	2,6-DINITROTOLUENE
94UA	3-NITROANILINE
94UA	ACENAPHTHENE
94UA	DIBENZOFURAN
94UA	2,4-DINITROTOLUENE
94UA	DIETHYL PHTHALATE
94UA	FLUORENE
94UA	4-CHLOROPHENYL PHENYL ETHER
94UA	4-NITROANILINE
94UA	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
94UA	4-BROMOPHENYL PHENYL ETHER
94UA	HEXACHLOROBENZENE (HCB)
94UA	PHENANTHRENE
94UA	ANTHRACENE
94UA	DI-N-BUTYLPHTHALATE

MG/KG	ANALYTICAL RESULTS
94UA	FLUORANTHENE
94UA	PYRENE
94UA	BENZYL BUTYL PHTHALATE
94UA	3,3'-DICHLOROBENZIDINE
94UA	BENZO(A)ANTHRACENE
94UA	CHRYSENE
94UA	BIS(2-ETHYLHEXYL) PHTHALATE
94UA	DI-N-OCTYLPHTHALATE
94UA	BENZO(B AND/OR K)FLUORANTHENE
94UA	BENZO-A-PYRENE
94UA	INDENO (1,2,3-CD) PYRENE
94UA	DIBENZO(A,H)ANTHRACENE
94UA	BENZO(GHI)PERYLENE
94UA	PHENOL
94UA	2-CHLOROPHENOL
200UA	BENZYL ALCOHOL
94UA	2-METHYLPHENOL
94UA	(3-AND/OR 4-)METHYLPHENOL
94UA	2-NITROPHENOL
94UA	2,4-DIMETHYLPHENOL
200UA	BENZOIC ACID
94UA	2,4-DICHLOROPHENOL
94UA	4-CHLORO-3-METHYLPHENOL
94UA	2,4,6-TRICHLOROPHENOL
94UA	2,4,5-TRICHLOROPHENOL
200UA	2,4-DINITROPHENOL
200UA	4-NITROPHENOL
94UA	2,3,4,6-TETRACHLOROPHENOL
200UA	2-METHYL-4,6-DINITROPHENOL
200UA	PENTACHLOROPHENOL
NA	PERCENT MOISTURE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

```
***********************************************************************************************
**  PROJECT NO. 90 011    SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE    PROG ELEM: NSF   COLLECTED BY. W RILEY   **
**  SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING          ST: GA          **
**  STATION ID: LS-05                                                COLLECTION START: 10/17/89  1315  STOP: 00/00/00  **
**                                                                                                          **
**  CASE NO.: 12944                          SAS NO.:                D. NO.: Q518                          **
***********************************************************************************************
```

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
36U	CHLOROMETHANE	18U	1,2-DICHLOROPROPANE
36U	BROMOMETHANE	18U	CIS-1,3-DICHLOROPROPENE
36U	VINYL CHLORIDE	18U	TRICHLOROETHENE(TRICHLOROETHYLENE)
36U	CHLOROETHANE	18U	DIBROMOCHLOROMETHANE
30U	METHYLENE CHLORIDE	18U	1,1,2-TRICHLOROETHANE
200UJ	ACETONE	18U	BENZENE
18U	CARBON DISULFIDE	18U	TRANS-1,3-DICHLOROPROPENE
18U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	18U	BROMOFORM
18U	1,1-DICHLOROETHANE	12J	METHYL ISOBUTYL KETONE
18U	1,2-DICHLOROETHENE (TOTAL)	36U	METHYL BUTYL KETONE
18U	CHLOROFORM	18U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
18U	1,2-DICHLOROETHANE	18U	1,1,2,2-TETRACHLOROETHANE
50U	METHYL ETHYL KETONE	18U	TOLUENE
18U	1,1,1-TRICHLOROETHANE	18U	CHLOROBENZENE
18U	CARBON TETRACHLORIDE	18U	ETHYL BENZENE
36U	VINYL ACETATE	18U	STYRENE
18U	BROMODICHLOROMETHANE	18U	TOTAL XYLENES
		61	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
** PROJECT NO. 90-011    SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE    PROG FLEM: NSF   COLLECTED BY: W RILEY
** SOURCE. OLD STERLING LANDFIL                                     CITY: STERLING              ST: GA
** STATION ID: LS-05                                                COLLECTION START: 10/17/89  1315   STOP: 00/00/00
** CASE.NO.: 12944          SAS NO.:                                D. NO.: Q518               MD NO: Q518
```

ANALYTICAL RESULTS UG/KG

20JN TRIMETHYLBICYCLOHEPTANE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID. LS-05 COLLECTION START. 10/17/89 1315 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q518

UG/KG	ANALYTICAL RESULTS
600U	PHENOL
600UJ	BIS(2-CHLOROETHYL) ETHER
600U	2-CHLOROPHENOL
600U	1,3-DICHLOROBENZENE
600U	1,4-DICHLOROBENZENE
600U	BENZYL ALCOHOL
600U	1,2-DICHLOROBENZENE
600U	2-METHYLPHENOL
600U	BIS(2-CHLOROISOPROPYL) ETHER
89J	(3-AND/OR 4-)METHYLPHENOL
600U	N-NITROSODI-N-PROPYLAMINE
600U	HEXACHLOROETHANE
600U	NITROBENZENE
600U	ISOPHORONE
600U	2-NITROPHENOL
600U	2,4-DIMETHYLPHENOL
2900U	BENZOIC ACID
600U	BIS(2-CHLOROETHOXY) METHANE
600U	2,4-DICHLOROPHENOL
600U	1,2,4-TRICHLOROBENZENE
600U	NAPHTHALENE
600UJ	4-CHLOROANILINE
600U	HEXACHLOROBUTADIENE
600U	4-CHLORO-3-METHYLPHENOL
600U	2-METHYLNAPHTHALENE
600U	HEXACHLOROCYCLOPENTADIENE (HCCP)
600U	2,4,6-TRICHLOROPHENOL
2900U	2,4,5-TRICHLOROPHENOL
600U	2-CHLORONAPHTHALENE
2900U	2-NITROANILINE
600U	DIMETHYL PHTHALATE
600U	ACENAPHTHYLENE
600U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2900UJ	3-NITROANILINE
600U	ACENAPHTHENE
2900U	2,4-DINITROPHENOL
2900U	4-NITROPHENOL
600U	DIBENZOFURAN
600U	2,4-DINITROTOLUENE
600U	DIETHYL PHTHALATE
600U	4-CHLOROPHENYL PHENYL ETHER
600U	FLUORENE
2900U	4-NITROANILINE
2900U	2-METHYL-4,6-DINITROPHENOL
600U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
600U	4-BROMOPHENYL PHENYL ETHER
600U	HEXACHLOROBENZENE (HCB)
2900U	PENTACHLOROPHENOL
600U	PHENANTHRENE
600U	ANTHRACENE
600U	DI-N-BUTYLPHTHALATE
600U	FLUORANTHENE
600U	PYRENE
600U	BENZYL BUTYL PHTHALATE
1200UJ	3,3'-DICHLOROBENZIDINE
600U	BENZO(A)ANTHRACENE
600U	CHRYSENE
600U	BIS(2-ETHYLHEXYL) PHTHALATE
600U	DI-N-OCTYLPHTHALATE
600U	BENZO(B AND/OR K)FLUORANTHENE
600U	BENZO-A-PYRENE
600UJ	INDENO (1,2,3-CD) PYRENE
600U	DIBENZO(A,H)ANTHRACENE
600U	BENZO(GHI)PERYLENE
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
******************************************************************************************
**   PROJECT NO. 90-011   SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE   PROG ELEM: NSF   COLLECTED BY: W RILEY   **
**   SOURCE: OLD STERLING LANDFIL                                   CITY: STERLING          ST: GA            **
**   STATION ID: LS-05                                              COLLECTION START: 10/17/89 1315  STOP: 00/00/00 **
**   CASE NO.: 12944          SAS NO.:                              D. NO.: Q518          MD NO: Q518         **
**                                                                                                            **
******************************************************************************************
```

ANALYTICAL RESULTS UG/KG

10000J	9 UNIDENTIFIED COMPOUNDS
500JN	HEXANOIC ACID
2000JN	HEXADECANOIC ACID
700JN	OCTADECANOIC ACID
800JN	DIHYDROBENZODIOXEPIN

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. SO 011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFIL
STATION ID: LS-05
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1315 STOP: 00/00/00
D. NUMBER: Q518

UG/KG	ANALYTICAL RESULTS
15U	ALPHA-BHC
15U	BETA-BHC
15U	DELTA-BHC
15U	GAMMA-BHC (LINDANE)
15U	HEPTACHLOR
15U	ALDRIN
15U	HEPTACHLOR EPOXIDE
15U	ENDOSULFAN I (ALPHA)
29U	DIELDRIN
29U	4,4'-DDE (P,P'-DDE)
29U	ENDRIN
29U	ENDOSULFAN II (BETA)
29U	4,4'-DDD (P,P'-DDD)
29U	ENDOSULFAN SULFATE
29U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
150U	METHOXYCHLOR
29U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
150U	GAMMA-CHLORDANE /2
150U	ALPHA-CHLORDANE /2
290U	TOXAPHENE
150U	PCB-1016 (AROCLOR 1016)
150U	PCB-1221 (AROCLOR 1221)
150U	PCB-1232 (AROCLOR 1232)
150U	PCB-1242 (AROCLOR 1242)
150U	PCB-1248 (AROCLOR 1248)
290U	PCB-1254 (AROCLOR 1254)
290U	PCB-1260 (AROCLOR 1260)
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: 0507

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
30U	METHYLENE CHLORIDE
20U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q507

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
860UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SB-01
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START 10/16/89 1150 STOP: 00/00/00
D. NUMBER: 0507

UG/KG	ANALYTICAL RESULTS
10U	ALPHA-BHC
10U	BETA-BHC
10U	DELTA-BHC
10U	GAMMA-BHC (LINDANE)
10U	HEPTACHLOR
10U	ALDRIN
10U	HEPTACHLOR EPOXIDE
10U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
100U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
100U	GAMMA-CHLORDANE /2
100U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
100U	PCB-1016 (AROCLOR 1016)
100U	PCB-1221 (AROCLOR 1221)
100U	PCB-1232 (AROCLOR 1232)
100U	PCB-1242 (AROCLOR 1242)
100U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
20U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
9J	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
*************************************************************************************************************
**   PROJECT NO. 90-011   SAMPLE NO. 40532  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY    **
**   SOURCE: OLD STERLING LANDFIL                                  CITY: STERLING               ST: GA       **
**   STATION ID: SB-02                                             COLLECTION START: 10/17/89  1215   STOP: 00/00/00 **
**   CASE NO.: 12944          SAS NO.:                             D. NO.: Q516               MD NO: Q516    **
**                                                                                                           **
*************************************************************************************************************
```

ANALYTICAL RESULTS UG/KG

1000JN   TRIMETHYLBICYCLOHEPTANE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
380U	PHENOL
380UJ	BIS(2-CHLOROETHYL) ETHER
380U	2-CHLOROPHENOL
380U	1,3-DICHLOROBENZENE
380U	1,4-DICHLOROBENZENE
380U	BENZYL ALCOHOL
380U	1,2-DICHLOROBENZENE
380U	2-METHYLPHENOL
380U	BIS(2-CHLOROISOPROPYL) ETHER
380U	(3-AND/OR 4-)METHYLPHENOL
380U	N-NITROSODI-N-PROPYLAMINE
380U	HEXACHLOROETHANE
380U	NITROBENZENE
380U	ISOPHORONE
380U	2-NITROPHENOL
380U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
380U	BIS(2-CHLOROETHOXY) METHANE
380U	2,4-DICHLOROPHENOL
380U	1,2,4-TRICHLOROBENZENE
380U	NAPHTHALENE
380UJ	4-CHLOROANILINE
380U	HEXACHLOROBUTADIENE
380U	4-CHLORO-3-METHYLPHENOL
380U	2-METHYLNAPHTHALENE
380U	HEXACHLOROCYCLOPENTADIENE (HCCP)
380U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
380U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
380U	DIMETHYL PHTHALATE
380U	ACENAPHTHYLENE
380U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
380U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
380U	DIBENZOFURAN
380U	2,4-DINITROTOLUENE
380U	DIETHYL PHTHALATE
380U	4-CHLOROPHENYL PHENYL ETHER
380U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
380U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U	4-BROMOPHENYL PHENYL ETHER
380U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
380U	PHENANTHRENE
380U	ANTHRACENE
380U	DI-N-BUTYLPHTHALATE
380U	FLUORANTHENE
380U	PYRENE
380U	BENZYL BUTYL PHTHALATE
760UJ	3,3'-DICHLOROBENZIDINE
380U	BENZO(A)ANTHRACENE
380U	CHRYSENE
380U	BIS(2-ETHYLHEXYL) PHTHALATE
380U	DI-N-OCTYLPHTHALATE
380U	BENZO(B AND/OR K)FLUORANTHENE
380U	BENZO-A-PYRENE
380UJ	INDENO (1,2,3-CD) PYRENE
380U	DIBENZO(A,H)ANTHRACENE
380U	BENZO(GHI)PERYLENE
13	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q516 MD NO: Q516 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE
10000JN	CARBOXALDEHYDE
20000J	18 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID. S6-02
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1215 STOP: 00/00/00
D. NUMBER: Q516

UG/KG	ANALYTICAL RESULTS
460U	ALPHA-BHC
460U	BETA-BHC
460U	DELTA-BHC
460U	GAMMA-BHC (LINDANE)
460U	HEPTACHLOR
460U	ALDRIN
460U	HEPTACHLOR EPOXIDE
460U	ENDOSULFAN I (ALPHA)
920U	DIELDRIN
920U	4,4'-DDE (P,P'-DDE)
920U	ENDRIN
920U	ENDOSULFAN II (BETA)
920U	4,4'-DDD (P,P'-DDD)
920U	ENDOSULFAN SULFATE
920U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
4600U	METHOXYCHLOR
920U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
4600U	GAMMA-CHLORDANE /2
4500U	ALPHA-CHLORDANE /2
150000	TOXAPHENE
4600U	PCB-1016 (AROCLOR 1016)
4600U	PCB-1221 (AROCLOR 1221)
4600U	PCB-1232 (AROCLOR 1232)
4600U	PCB-1242 (AROCLOR 1242)
4600U	PCB-1248 (AROCLOR 1248)
9200U	PCB-1254 (AROCLOR 1254)
9200U	PCB-1260 (AROCLOR 1260)
13	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. SO 011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q513

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SB-03 COLLECTION START: 10/17/89 1050 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: 0513

UG/KG	ANALYTICAL RESULTS
450U	PHENOL
450U	BIS(2-CHLOROETHYL) ETHER
450U	2-CHLOROPHENOL
450U	1,3-DICHLOROBENZENE
450U	1,4-DICHLOROBENZENE
450UJ	BENZYL ALCOHOL
450U	1,2-DICHLOROBENZENE
450U	2-METHYLPHENOL
450U	BIS(2-CHLOROISOPROPYL) ETHER
450U	(3-AND/OR 4-)METHYLPHENOL
450U	N-NITROSODI-N-PROPYLAMINE
450U	HEXACHLOROETHANE
450U	NITROBENZENE
450U	ISOPHORONE
450U	2-NITROPHENOL
450U	2,4-DIMETHYLPHENOL
2200UJ	BENZOIC ACID
450U	BIS(2-CHLOROETHOXY) METHANE
450U	2,4-DICHLOROPHENOL
450U	1,2,4-TRICHLOROBENZENE
450U	NAPHTHALENE
450U	4-CHLOROANILINE
450U	HEXACHLOROBUTADIENE
450U	4-CHLORO-3-METHYLPHENOL
450U	2-METHYLNAPHTHALENE
450U	HEXACHLOROCYCLOPENTADIENE (HCCP)
450U	2,4,6-TRICHLOROPHENOL
2200U	2,4,5-TRICHLOROPHENOL
450U	2-CHLORONAPHTHALENE
2200U	2-NITROANILINE
450U	DIMETHYL PHTHALATE
450U	ACENAPHTHYLENE
450U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2200U	3-NITROANILINE
450U	ACENAPHTHENE
2200U	2,4-DINITROPHENOL
2200U	4-NITROPHENOL
450U	DIBENZOFURAN
450U	2,4-DINITROTOLUENE
450U	DIETHYL PHTHALATE
450U	4-CHLOROPHENYL PHENYL ETHER
450U	FLUORENE
2200UJ	4-NITROANILINE
2200U	2-METHYL-4,6-DINITROPHENOL
450U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
450U	4-BROMOPHENYL PHENYL ETHER
450U	HEXACHLOROBENZENE (HCB)
2200U	PENTACHLOROPHENOL
450U	PHENANTHRENE
450U	ANTHRACENE
450U	DI-N-BUTYLPHTHALATE
450U	FLUORANTHENE
450U	PYRENE
450U	BENZYL BUTYL PHTHALATE
890UJ	3,3'-DICHLOROBENZIDINE
450U	BENZO(A)ANTHRACENE
450U	CHRYSENE
450U	BIS(2-ETHYLHEXYL) PHTHALATE
450U	DI-N-OCTYLPHTHALATE
450U	BENZO(B AND/OR K)FLUORANTHENE
450U	BENZO-A-PYRENE
450UJ	INDENO (1,2,3-CD) PYRENE
450U	DIBENZO(A,H)ANTHRACENE
450U	BENZO(GHI)PERYLENE
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: S6-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1050 STOP: 00/00/00
D NUMBER: Q513

UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC
11U	BETA-BHC
11U	DELTA-BHC
11U	GAMMA-BHC (LINDANE)
11U	HEPTACHLOR
11U	ALDRIN
11U	HEPTACHLOR EPOXIDE
11U	ENDOSULFAN I (ALPHA)
22U	DIELDRIN
22U	4,4'-DDE (P,P'-DDE)
22U	ENDRIN
22U	ENDOSULFAN II (BETA)
22U	4,4'-DDD (P,P'-DDD)
22U	ENDOSULFAN SULFATE
22U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
110U	METHOXYCHLOR
22U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
110U	GAMMA-CHLORDANE /2
110U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
110U	PCB-1016 (AROCLOR 1016)
110U	PCB-1221 (AROCLOR 1221)
110U	PCB-1232 (AROCLOR 1232)
110U	PCB-1242 (AROCLOR 1242)
110U	PCB-1248 (AROCLOR 1248)
220U	PCB-1254 (AROCLOR 1254)
220U	PCB-1260 (AROCLOR 1260)
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID. SB-04

CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0930 STOP: 00/00/00

D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
20UJ	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
3J	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID. SB-04

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
870UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00
D NUMBER: Q510

UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC
11U	BETA-BHC
11U	DELTA BHC
11U	GAMMA-BHC (LINDANE)
11U	HEPTACHLOR
11U	ALDRIN
11U	HEPTACHLOR EPOXIDE
11U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
110U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
110U	GAMMA-CHLORDANE /2
110U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
110U	PCB-1016 (AROCLOR 1016)
110U	PCB-1221 (AROCLOR 1221)
110U	PCB-1232 (AROCLOR 1232)
110U	PCB-1242 (AROCLOR 1242)
110U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q506

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30UJ	ACETONE
8U	CARBON DISULFIDE
8U	1,1 DICHLOROETHENE(1,1-DICHLOROETHYLENE)
8U	1,1-DICHLOROETHANE
8U	1,2-DICHLOROETHENE (TOTAL)
8U	CHLOROFORM
8U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
8U	1,1,1-TRICHLOROETHANE
8U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
8U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
8U	1,2-DICHLOROPROPANE
8U	CIS-1,3-DICHLOROPROPENE
8U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8U	DIBROMOCHLOROMETHANE
8U	1,1,2-TRICHLOROETHANE
8U	BENZENE
8U	TRANS-1,3-DICHLOROPROPENE
8U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
8U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8U	1,1,2,2-TETRACHLOROETHANE
90	TOLUENE
8U	CHLOROBENZENE
8U	ETHYL BENZENE
8U	STYRENE
8U	TOTAL XYLENES
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: 0506

UG/KG	ANALYTICAL RESULTS
350U	PHENOL
350UJ	BIS(2-CHLOROETHYL) ETHER
350U	2-CHLOROPHENOL
350U	1,3-DICHLOROBENZENE
350U	1,4-DICHLOROBENZENE
350U	BENZYL ALCOHOL
350U	1,2-DICHLOROBENZENE
350U	2-METHYLPHENOL
350U	BIS(2-CHLOROISOPROPYL) ETHER
350U	(3-AND/OR 4-)METHYLPHENOL
350U	N-NITROSODI-N-PROPYLAMINE
350U	HEXACHLOROETHANE
350U	NITROBENZENE
350U	ISOPHORONE
350U	2-NITROPHENOL
350U	2,4-DIMETHYLPHENOL
1700U	BENZOIC ACID
350U	BIS(2-CHLOROETHOXY) METHANE
350U	2,4-DICHLOROPHENOL
350U	1,2,4-TRICHLOROBENZENE
350U	NAPHTHALENE
350UJ	4-CHLOROANILINE
350U	HEXACHLOROBUTADIENE
350U	4-CHLORO-3-METHYLPHENOL
350U	2-METHYLNAPHTHALENE
350U	HEXACHLOROCYCLOPENTADIENE (HCCP)
350U	2,4,6-TRICHLOROPHENOL
1700U	2,4,5-TRICHLOROPHENOL
350U	2-CHLORONAPHTHALENE
1700U	2-NITROANILINE
350U	DIMETHYL PHTHALATE
350U	ACENAPHTHYLENE
350U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1700UJ	3-NITROANILINE
350U	ACENAPHTHENE
1700U	2,4-DINITROPHENOL
1700U	4-NITROPHENOL
350U	DIBENZOFURAN
350U	2,4-DINITROTOLUENE
350U	DIETHYL PHTHALATE
350U	4-CHLOROPHENYL PHENYL ETHER
350U	FLUORENE
1700UJ	4-NITROANILINE
1700U	2-METHYL-4,6-DINITROPHENOL
350U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
350U	4-BROMOPHENYL PHENYL ETHER
350U	HEXACHLOROBENZENE (HCB)
1700U	PENTACHLOROPHENOL
350U	PHENANTHRENE
350U	ANTHRACENE
350U	DI-N-BUTYLPHTHALATE
350U	FLUORANTHENE
350U	PYRENE
350U	BENZYL BUTYL PHTHALATE
690UJ	3,3'-DICHLOROBENZIDINE
350U	BENZO(A)ANTHRACENE
350U	CHRYSENE
350U	BIS(2-ETHYLHEXYL) PHTHALATE
350U	DI-N-OCTYLPHTHALATE
350U	BENZO(B AND/OR K)FLUORANTHENE
350U	BENZO-A-PYRENE
350UJ	INDENO (1,2,3-CD) PYRENE
350U	DIBENZO(A,H)ANTHRACENE
350U	BENZO(GHI)PERYLENE
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00
D. NUMBER: Q506

UG/KG	ANALYTICAL RESULTS
8.4U	ALPHA-BHC
8.4U	BETA-BHC
8.4U	DELTA-BHC
8.4U	GAMMA-BHC (LINDANE)
8.4U	HEPTACHLOR
8.4U	ALDRIN
8.4U	HEPTACHLOR EPOXIDE
8.4U	ENDOSULFAN I (ALPHA)
17U	DIELDRIN
17U	4,4'-DDE (P,P'-DDE)
17U	ENDRIN
17U	ENDOSULFAN II (BETA)
17U	4,4'-DDD (P,P'-DDD)
17U	ENDOSULFAN SULFATE
17U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
84U	METHOXYCHLOR
17U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
84U	GAMMA-CHLORDANE /2
84U	ALPHA-CHLORDANE /2
170U	TOXAPHENE
84U	PCB-1016 (AROCLOR 1016)
84U	PCB-1221 (AROCLOR 1221)
84U	PCB-1232 (AROCLOR 1232)
84U	PCB-1242 (AROCLOR 1242)
84U	PCB-1248 (AROCLOR 1248)
170U	PCB-1254 (AROCLOR 1254)
170U	PCB-1260 (AROCLOR 1260)
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
17UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
9U	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
7	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
370U	PHENOL
370UJ	BIS(2-CHLOROETHYL) ETHER
370U	2-CHLOROPHENOL
370U	1,3-DICHLOROBENZENE
370U	1,4-DICHLOROBENZENE
370U	BENZYL ALCOHOL
370U	1,2-DICHLOROBENZENE
370U	2-METHYLPHENOL
370U	BIS(2-CHLOROISOPROPYL) ETHER
370U	(3-AND/OR 4-)METHYLPHENOL
370U	N-NITROSODI-N-PROPYLAMINE
370U	HEXACHLOROETHANE
370U	NITROBENZENE
370U	ISOPHORONE
370U	2-NITROPHENOL
370U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
370U	BIS(2-CHLOROETHOXY) METHANE
370U	2,4-DICHLOROPHENOL
370U	1,2,4-TRICHLOROBENZENE
370U	NAPHTHALENE
370UJ	4-CHLOROANILINE
370U	HEXACHLOROBUTADIENE
370U	4-CHLORO-3-METHYLPHENOL
370U	2-METHYLNAPHTHALENE
370U	HEXACHLOROCYCLOPENTADIENE (HCCP)
370U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
370U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
370U	DIMETHYL PHTHALATE
370U	ACENAPHTHYLENE
370U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
370U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
370U	DIBENZOFURAN
370U	2,4-DINITROTOLUENE
370U	DIETHYL PHTHALATE
370U	4-CHLOROPHENYL PHENYL ETHER
370U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
370U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
370U	4-BROMOPHENYL PHENYL ETHER
370U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
370U	PHENANTHRENE
370U	ANTHRACENE
370U	DI-N-BUTYLPHTHALATE
370U	FLUORANTHENE
370U	PYRENE
370U	BENZYL BUTYL PHTHALATE
730UJ	3,3'-DICHLOROBENZIDINE
370U	BENZO(A)ANTHRACENE
370U	CHRYSENE
370U	BIS(2-ETHYLHEXYL) PHTHALATE
370U	DI-N-OCTYLPHTHALATE
370U	BENZO(B AND/OR K)FLUORANTHENE
370U	BENZO-A-PYRENE
370UJ	INDENO (1,2,3-CD) PYRENE
370U	DIBENZO(A,H)ANTHRACENE
370U	BENZO(GHI)PERYLENE
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-02 COLLECTION START: 10/17/89 1200 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: 0515 MD NO: 0515 **
** **
*** ***

ANALYTICAL RESULTS UG/KG

200JN	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE-CARBOXYLIC ACID METHYLESTER

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011   SAMPLE NO. 40531   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA
STATION ID: SS-02   COLLECTION START: 10/17/89 1200   STOP: 00/00/00
CASE NUMBER: 12944   SAS NUMBER: D. NUMBER: Q515

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
8.9U	ALPHA-BHC	89U	METHOXYCHLOR
8.9U	BETA-BHC	18U	ENDRIN KETONE
8.9U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
8.9U	GAMMA-BHC (LINDANE)	89U	GAMMA-CHLORDANE /2
8.9U	HEPTACHLOR	89U	ALPHA-CHLORDANE /2
8.9U	ALDRIN	180U	TOXAPHENE
8.9U	HEPTACHLOR EPOXIDE	89U	PCB-1016 (AROCLOR 1016)
8.9U	ENDOSULFAN I (ALPHA)	89U	PCB-1221 (AROCLOR 1221)
18U	DIELDRIN	89U	PCB-1232 (AROCLOR 1232)
18U	4,4'-DDE (P,P'-DDE)	89U	PCB-1242 (AROCLOR 1242)
18U	ENDRIN	89U	PCB-1248 (AROCLOR 1248)
18U	ENDOSULFAN II (BETA)	180U	PCB-1254 (AROCLOR 1254)
18U	4,4'-DDD (P,P'-DDD)	180U	PCB-1260 (AROCLOR 1260)
18U	ENDOSULFAN SULFATE	10	PERCENT MOISTURE
18U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS   1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30U	ACETONE
9UJ	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9UJ	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
15	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO 28 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 1 17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
390U	PHENOL	1900U	3-NITROANILINE
390U	BIS(2-CHLOROETHYL) ETHER	390U	ACENAPHTHENE
390U	2-CHLOROPHENOL	1900U	2,4-DINITROPHENOL
390U	1,3-DICHLOROBENZENE	1900U	4-NITROPHENOL
390U	1,4-DICHLOROBENZENE	390U	DIBENZOFURAN
390UJ	BENZYL ALCOHOL	390U	2,4-DINITROTOLUENE
390U	1,2-DICHLOROBENZENE	390U	DIETHYL PHTHALATE
390U	2-METHYLPHENOL	390U	4-CHLOROPHENYL PHENYL ETHER
390U	BIS(2-CHLOROISOPROPYL) ETHER	390U	FLUORENE
390U	(3-AND/OR 4-)METHYLPHENOL	1900UJ	4-NITROANILINE
390U	N-NITROSODI-N-PROPYLAMINE	1900U	2-METHYL-4,6-DINITROPHENOL
390U	HEXACHLOROETHANE	390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	NITROBENZENE	390U	4-BROMOPHENYL PHENYL ETHER
390U	ISOPHORONE	390U	HEXACHLOROBENZENE (HCB)
390U	2-NITROPHENOL	1900U	PENTACHLOROPHENOL
390U	2,4-DIMETHYLPHENOL	390U	PHENANTHRENE
1900UJ	BENZOIC ACID	390U	ANTHRACENE
390U	BIS(2-CHLOROETHOXY) METHANE	390U	DI-N-BUTYLPHTHALATE
390U	2,4-DICHLOROPHENOL	390U	FLUORANTHENE
390U	1,2,4-TRICHLOROBENZENE	390U	PYRENE
390U	NAPHTHALENE	390U	BENZYL BUTYL PHTHALATE
390U	4-CHLOROANILINE	780UJ	3,3'-DICHLOROBENZIDINE
390U	HEXACHLOROBUTADIENE	390U	BENZO(A)ANTHRACENE
390U	4-CHLORO-3-METHYLPHENOL	390U	CHRYSENE
390U	2-METHYLNAPHTHALENE	390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)	390U	DI-N-OCTYLPHTHALATE
390U	2,4,6-TRICHLOROPHENOL	390U	BENZO(B AND/OR K)FLUORANTHENE
1900U	2,4,5-TRICHLOROPHENOL	390U	BENZO-A-PYRENE
390U	2-CHLORONAPHTHALENE	390UJ	INDENO (1,2,3-CD) PYRENE
1900U	2-NITROANILINE	390U	DIBENZO(A,H)ANTHRACENE
390U	DIMETHYL PHTHALATE	390U	BENZO(GHI)PERYLENE
390U	ACENAPHTHYLENE	15	PERCENT MOISTURE
390U	2,6-DINITROTOLUENE		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE. SOIL
SOURCE. OLD STERLING LANDFIL
STATION ID: SS-03
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00
D. NO.: Q512 MD NO: Q512

ANALYTICAL RESULTS UG/KG

600J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011   SAMPLE NO. 40524   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA
STATION ID: TW-01   COLLECTION START: 10/16/89 1230   STOP: 00/00/00
CASE NO.: 12944   SAS NO.:   D. NO.: Q508   MD NO: Q508

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40521 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFILL CITY: STERLING ST: GA **
** STATION ID: PB-01 COLLECTION START: 10/16/89 0830 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: MD NO: 0505 **
**
*** ***

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00
D. NUMBER: Q512

UG/KG	ANALYTICAL RESULTS
9.4U	ALPHA-BHC
9.4U	BETA-BHC
9.4U	DELTA-BHC
9.4U	GAMMA-BHC (LINDANE)
9.4U	HEPTACHLOR
9.4U	ALDRIN
9.4U	HEPTACHLOR EPOXIDE
9.4U	ENDOSULFAN I (ALPHA)
19U	DIELDRIN
19U	4,4'-DDE (P,P'-DDE)
19U	ENDRIN
19U	ENDOSULFAN II (BETA)
19U	4,4'-DDD (P,P'-DDD)
19U	ENDOSULFAN SULFATE
19U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
94U	METHOXYCHLOR
19U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
94U	GAMMA-CHLORDANE /2
94U	ALPHA-CHLORDANE /2
190U	TOXAPHENE
94U	PCB-1016 (AROCLOR 1016)
94U	PCB-1221 (AROCLOR 1221)
94U	PCB-1232 (AROCLOR 1232)
94U	PCB-1242 (AROCLOR 1242)
94U	PCB-1248 (AROCLOR 1248)
190U	PCB-1254 (AROCLOR 1254)
190U	PCB-1260 (AROCLOR 1260)
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0920 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
30U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
11	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
11	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
360U	PHENOL
360UJ	BIS(2-CHLOROETHYL) ETHER
360U	2-CHLOROPHENOL
360U	1,3-DICHLOROBENZENE
360U	1,4-DICHLOROBENZENE
360U	BENZYL ALCOHOL
360U	1,2-DICHLOROBENZENE
360U	2-METHYLPHENOL
360U	BIS(2-CHLOROISOPROPYL) ETHER
360U	(3-AND/OR 4-)METHYLPHENOL
360U	N-NITROSODI-N-PROPYLAMINE
360U	HEXACHLOROETHANE
360U	NITROBENZENE
360U	ISOPHORONE
360U	2-NITROPHENOL
360U	2,4-DIMETHYLPHENOL
1700U	BENZOIC ACID
360U	BIS(2-CHLOROETHOXY) METHANE
360U	2,4-DICHLOROPHENOL
360U	1,2,4-TRICHLOROBENZENE
360U	NAPHTHALENE
360UJ	4-CHLOROANILINE
360U	HEXACHLOROBUTADIENE
360U	4-CHLORO-3-METHYLPHENOL
360U	2-METHYLNAPHTHALENE
360U	HEXACHLOROCYCLOPENTADIENE (HCCP)
360U	2,4,6-TRICHLOROPHENOL
1700U	2,4,5-TRICHLOROPHENOL
360U	2-CHLORONAPHTHALENE
1700U	2-NITROANILINE
360U	DIMETHYL PHTHALATE
360U	ACENAPHTHYLENE
360U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1700UJ	3-NITROANILINE
360U	ACENAPHTHENE
1700U	2,4-DINITROPHENOL
1700U	4-NITROPHENOL
360U	DIBENZOFURAN
360U	2,4-DINITROTOLUENE
360U	DIETHYL PHTHALATE
360U	4-CHLOROPHENYL PHENYL ETHER
360U	FLUORENE
1700UJ	4-NITROANILINE
1700U	2-METHYL-4,6-DINITROPHENOL
360U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
360U	4-BROMOPHENYL PHENYL ETHER
360U	HEXACHLOROBENZENE (HCB)
1700U	PENTACHLOROPHENOL
360U	PHENANTHRENE
360U	ANTHRACENE
360U	DI-N-BUTYLPHTHALATE
360U	FLUORANTHENE
360U	PYRENE
360U	BENZYL BUTYL PHTHALATE
720UJ	3,3'-DICHLOROBENZIDINE
360U	BENZO(A)ANTHRACENE
360U	CHRYSENE
360U	BIS(2-ETHYLHEXYL) PHTHALATE
360U	DI-N-OCTYLPHTHALATE
360U	BENZO(B AND/OR K)FLUORANTHENE
360U	BENZO-A-PYRENE
360UJ	INDENO (1,2,3-CD) PYRENE
360U	DIBENZO(A,H)ANTHRACENE
360U	BENZO(GHI)PERYLENE
8	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SS-04
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0920 STOP: 00/00/00
D. NO.: 0509 MD NO: 0509

ANALYTICAL RESULTS UG/KG

1000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00
D. NUMBER: 0509

UG/KG	ANALYTICAL RESULTS
8.7U	ALPHA-BHC
8.7U	BETA-BHC
8.7U	DELTA-BHC
8.7U	GAMMA-BHC (LINDANE)
8.7U	HEPTACHLOR
8.7U	ALDRIN
8.7U	HEPTACHLOR EPOXIDE
8.7U	ENDOSULFAN I (ALPHA)
17U	DIELDRIN
17U	4,4'-DDE (P,P'-DDE)
17U	ENDRIN
17U	ENDOSULFAN II (BETA)
17U	4,4'-DDD (P,P'-DDD)
17U	ENDOSULFAN SULFATE
17U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
87U	METHOXYCHLOR
17U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
87U	GAMMA-CHLORDANE /2
87U	ALPHA-CHLORDANE /2
170U	TOXAPHENE
87U	PCB-1016 (AROCLOR 1016)
87U	PCB-1221 (AROCLOR 1221)
87U	PCB-1232 (AROCLOR 1232)
87U	PCB-1242 (AROCLOR 1242)
87U	PCB-1248 (AROCLOR 1248)
170U	PCB-1254 (AROCLOR 1254)
170U	PCB-1260 (AROCLOR 1260)
8	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40E22 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LAND CITY: STERLING ST: GA **
** STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00 **
** CASE.NO.: 12944 NO.: D. NO.: Q517 MD NO: Q517 **

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40520 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00
CASE NO.: 12944 SAS NO.: D. NO.: Q514 MD NO: Q514

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011   SAMPLE NO. 40527   SAMPLE TYPE: GROUNDWA   PROG ELEM: NSF   COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA
STATION ID: TW-04   COLLECTION START: 10/17/89 1000   STOP: 00/00/00
CASE NO.: 12944   SAS NO.:   D. NO.: Q511   MD NO: Q511

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00
D. NO.: Q519 MD NO: Q519

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40542 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TB-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 0830 STOP: 00/00/00
D. NUMBER: Q505

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 90 011 SAMPLE NO. 40042 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
** SOURCE: OLD STERLING LANDFILL CITY: STERLING ST: GA
** STATION ID. TB 01 COLLECTION START 10/16/89 0830 STOP: 00/00/00
**
** CASE NO.: 12944 SAS NO.: D. NO.: Q505

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	PHENOL	50UJ	3-NITROANILINE
10UJ	BIS(2-CHLOROETHYL) ETHER	10U	ACENAPHTHENE
10U	2-CHLOROPHENOL	50U	2,4-DINITROPHENOL
10U	1,3-DICHLOROBENZENE	50U	4-NITROPHENOL
10U	1,4-DICHLOROBENZENE	10U	DIBENZOFURAN
10U	BENZYL ALCOHOL	10U	2,4-DINITROTOLUENE
10U	1,2-DICHLOROBENZENE	10U	DIETHYL PHTHALATE
10U	2-METHYLPHENOL	10U	4-CHLOROPHENYL PHENYL ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER	10U	FLUORENE
10U	(3-AND/OR 4-)METHYLPHENOL	50U	4-NITROANILINE
10U	N-NITROSODI-N-PROPYLAMINE	50U	2-METHYL-4,6-DINITROPHENOL
10U	HEXACHLOROETHANE	10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	NITROBENZENE	10U	4-BROMOPHENYL PHENYL ETHER
10U	ISOPHORONE	10U	HEXACHLOROBENZENE (HCB)
10U	2-NITROPHENOL	50U	PENTACHLOROPHENOL
10U	2,4-DIMETHYLPHENOL	10U	PHENANTHRENE
50U	BENZOIC ACID	10U	ANTHRACENE
10U	BIS(2-CHLOROETHOXY) METHANE	10U	DI-N-BUTYLPHTHALATE
10U	2,4-DICHLOROPHENOL	10U	FLUORANTHENE
10U	1,2,4-TRICHLOROBENZENE	10U	PYRENE
10U	NAPHTHALENE	10U	BENZYL BUTYL PHTHALATE
10UJ	4-CHLOROANILINE	20UJ	3,3'-DICHLOROBENZIDINE
10U	HEXACHLOROBUTADIENE	10U	BENZO(A)ANTHRACENE
10U	4-CHLORO-3-METHYLPHENOL	10U	CHRYSENE
10U	2-METHYLNAPHTHALENE	10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	10U	DI-N-OCTYLPHTHALATE
10U	2,4,6-TRICHLOROPHENOL	10U	BENZO(B AND/OR K)FLUORANTHENE
50U	2,4,5-TRICHLOROPHENOL	10U	BENZO-A-PYRENE
10U	2-CHLORONAPHTHALENE	10UJ	INDENO (1,2,3-CD) PYRENE
50U	2-NITROANILINE	10U	DIBENZO(A,H)ANTHRACENE
10U	DIMETHYL PHTHALATE	10U	BENZO(GHI)PERYLENE
10U	ACENAPHTHYLENE		
10U	2,6-DINITROTOLUENE		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40541 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 0830 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q505

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00
CASE.NO.: 12944 SAS NO.: D. NO.: Q520 MD NO: Q520

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011	SAMPLE NO. 40526 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL		CITY: STERLING ST: GA
STATION ID: SB-04		COLLECTION START: 10/17/89 0930 STOP: 00/00/00
CASE.NO.: 12944	SAS NO.:	D. NO.: Q510 MD NO: Q510

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-01 COLLECTION START: 10/16/89 1120 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q506 MD NO: Q506 **

RESULTS	UNITS	PARAMETER
1.1U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

****
** PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-02 COLLECTION START: 10/17/89 1200 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q515 MD NO: Q515 **
**
****

RESULTS	UNITS	PARAMETER
1.8U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-03
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00
D. NO.: Q512 MD NO: Q512

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0920 STOP: 00/00/00
D. NO.: Q509 MD NO: Q509

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SB-01
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00
D. NO.: Q507 MD NO: Q507

RESULTS	UNITS	PARAMETER
.90U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q516 MD NO: Q516 **

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40520 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SB-03
CASE.NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00
D. NO.: Q513 MD NO: Q513

RESULTS	UNITS	PARAMETER
1.6U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/17/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE PROG ELEM: NSF COLLECTED BY: R FRANKLIN **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE COLLECTION START: 10/12/89 1448 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
0.2U	MG/KG	CYANIDE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: LS-05 COLLECTION START: 10/17/89 1315 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q518 MD NO: Q518 **

RESULTS	UNITS	PARAMETER
2.7U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 11/28/89

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE PROG ELEM: NSF COLLECTED BY: R FRANKLIN
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
[redacted]	[redacted]
0.50U	BERYLLIUM
0.50U	CADMIUM
1.0U	COBALT
[redacted]	[redacted]
[redacted]	[redacted]
1.0U	MOLYBDENUM
2.0U	NICKEL
4.0U	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
[redacted]	[redacted]
5.0U	TELLURIUM
[redacted]	[redacted]
10U	THALLIUM
[redacted]	[redacted]
1.0U	YTTRIUM
[redacted]	[redacted]
NA	ZIRCONIUM
NA	MERCURY
[redacted]	[redacted]
[redacted]	[redacted]

MG/KG	ANALYTICAL RESULTS
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
200U	POTASSIUM
NA	PERCENT MOISTURE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00
MD NUMBER: Q507

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3500	ALUMINUM	2.6	MANGANESE
7UJ	ANTIMONY	0.11UJ	MERCURY
0.99U	ARSENIC	2.3U	NICKEL
4U	BARIUM	80U	POTASSIUM
0.23U	BERYLLIUM	0.5U	SELENIUM
0.93UJ	CADMIUM	0.46U	SILVER
40U	CALCIUM	70U	SODIUM
4.5	CHROMIUM	1.2U	THALLIUM
1.2U	COBALT	NA	TIN
30UJ	COPPER	1U	VANADIUM
380J	IRON	3U	ZINC
5UJ	LEAD	23	PERCENT MOISTURE
32	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING, ST: GA
STATION ID: LS-05 COLLECTION START: 10/17/89 1315 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q518

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	6.2	MANGANESE
20UJ	ANTIMONY	0.22UJ	MERCURY
1.8U	ARSENIC	4.3U	NICKEL
5.8	BARIUM	140U	POTASSIUM
0.43U	BERYLLIUM	0.89U	SELENIUM
1.7UJ	CADMIUM	0.86U	SILVER
1520	CALCIUM	14000	SODIUM
2.5	CHROMIUM	NA	THALLIUM
2.1U	COBALT	NA	TIN
8.2J	COPPER	2.1	VANADIUM
840J	IRON	20U	ZINC
23J	LEAD	56	PERCENT MOISTURE
220	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q520

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
50U	ALUMINUM	61	MANGANESE
30U	ANTIMONY	0 2UJ	MERCURY
4UJ	ARSENIC	10U	NICKEL
12	BARIUM	1000	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
64000	CALCIUM	9000	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	2U	VANADIUM
320J	IRON	3U	ZINC
2UJ	LEAD		
2800	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q516

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3800	ALUMINUM	1.4	MANGANESE
6.6UJ	ANTIMONY	0.110J	MERCURY
0.88U	ARSENIC	2.2U	NICKEL
3.2	BARIUM	80U	POTASSIUM
0.22U	BERYLLIUM	0.44U	SELENIUM
0.88UJ	CADMIUM	0.44U	SILVER
230	CALCIUM	80U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
5UJ	COPPER	1.9	VANADIUM
290J	IRON	20U	ZINC
5UJ	LEAD	14	PERCENT MOISTURE
37	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00
MD NUMBER: Q513

ANALYTICAL RESULTS

MG/KG		MG/KG	
4300	ALUMINUM	1.1U	MANGANESE
8UJ	ANTIMONY	0.090J	MERCURY
1.1U	ARSENIC	2.7U	NICKEL
2.2	BARIUM	86U	POTASSIUM
0.27U	BERYLLIUM	0.54U	SELENIUM
1.1UJ	CADMIUM	0.54U	SILVER
50U	CALCIUM	70U	SODIUM
4	CHROMIUM	7.1U	THALLIUM
1.3U	COBALT	NA	TIN
1UJ	COPPER	1U	VANADIUM
270J	IRON	0.8U	ZINC
3UJ	LEAD	30	PERCENT MOISTURE
38	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFILL CITY: STERLING ST: GA
STATION ID: SB-04 COLLECTION START. 10/17/89 0930 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. MD NUMBER: Q510

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4900	ALUMINUM	3.2	MANGANESE
6UJ	ANTIMONY	0.11UJ	MERCURY
0.83U	ARSENIC	1.8U	NICKEL
5.4	BARIUM	58U	POTASSIUM
0.18U	BERYLLIUM	1U	SELENIUM
0.72UJ	CADMIUM	0.36U	SILVER
30U	CALCIUM	70U	SODIUM
3.6	CHROMIUM	1U	THALLIUM
0.9U	COBALT	NA	TIN
7UJ	COPPER	2.2	VANADIUM
650J	IRON	3U	ZINC
4UJ	LEAD	23	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00
MD NUMBER: Q506

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3700	ALUMINUM	53	MANGANESE
6.3UJ	ANTIMONY	0.110J	MERCURY
0.69U	ARSENIC	2.1U	NICKEL
12	BARIUM	67U	POTASSIUM
0.21U	BERYLLIUM	0.34U	SELENIUM
0.83UJ	CADMIUM	0.42U	SILVER
150	CALCIUM	70U	SODIUM
5.2	CHROMIUM	0.86U	THALLIUM
1U	COBALT	NA	TIN
50UJ	COPPER	3U	VANADIUM
6000J	IRON	7U	ZINC
9.3J	LEAD	05	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-02 COLLECTION START. 10/17/89 1200 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q515

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	1.3	MANGANESE
6.4UJ	ANTIMONY	0.11UJ	MERCURY
0.86U	ARSENIC	2.1U	NICKEL
2.3	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	0.43U	SELENIUM
0.85UJ	CADMIUM	0.42U	SILVER
230	CALCIUM	20	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
2U	COBALT	NA	TIN
5UJ	COPPER	1U	VANADIUM
290J	IRON	3U	ZINC
2U	LEAD	08	PERCENT MOISTURE
52	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q512

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4600	ALUMINUM	4.7	MANGANESE
6.3UJ	ANTIMONY	0.11UJ	MERCURY
0.9U	ARSENIC	2.1U	NICKEL
6.7	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	1U	SELENIUM
0.84UJ	CADMIUM	0.42U	SILVER
92	CALCIUM	100U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
6UJ	COPPER	2.9	VANADIUM
1400J	IRON	4U	ZINC
3UJ	LEAD	13	PERCENT MOISTURE
110	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00
MD NUMBER: Q509

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
6000	ALUMINUM	12	MANGANESE
6UJ	ANTIMONY	0.11UJ	MERCURY
0.85U	ARSENIC	1.9U	NICKEL
14	BARIUM	70U	POTASSIUM
0.19U	BERYLLIUM	0.42U	SELENIUM
0.76UJ	CADMIUM	0.38U	SILVER
86	CALCIUM	20U	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
0.95U	COBALT	NA	TIN
8.9J	COPPER	3.6	VANADIUM
1800J	IRON	3U	ZINC
3UJ	LEAD	09	PERCENT MOISTURE
170	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO 40521 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID. F6-01 COLLECTION START. 10/16/89 0830 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q505

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
70U	ALUMINUM	4U	MANGANESE
30U	ANTIMONY	0.2UJ	MERCURY
4UJ	ARSENIC	10U	NICKEL
5U	BARIUM	330U	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1900	CALCIUM	300U	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
7U	COPPER	2U	VANADIUM
47J	IRON	3U	ZINC
2UJ	LEAD		
430	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. MD NUMBER: Q508

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
9900	ALUMINUM	13	MANGANESE
30U	ANTIMONY	0.2U	MERCURY
4UJ	ARSENIC	10U	NICKEL
24	BARIUM	410	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1800	CALCIUM	11000	SODIUM
12	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	4U	VANADIUM
920J	IRON	13U	ZINC
3UJ	LEAD		
740	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q517

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12000	ALUMINUM	230	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	26	NICKEL
56	BARIUM	6700	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
180000	CALCIUM	31000	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
40U	COPPER	15	VANADIUM
13000J	IRON	150U	ZINC
38J	LEAD		
18000	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q514

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
15000	ALUMINUM	16	MANGANESE
30U	ANTIMONY	0.2UJ	MERCURY
4UJ	ARSENIC	10U	NICKEL
41	BARIUM	7500	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
22000	CALCIUM	8200	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	7	VANADIUM
1300J	IRON	13U	ZINC
7UJ	LEAD		
6100	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-04 COLLECTION START: 10/17/89 1000 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q511

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
1900	ALUMINUM	4U	MANGANESE
40U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
21	BARIUM	19000	POTASSIUM
1U	BERYLLIUM	7	SELENIUM
4U	CADMIUM	2U	SILVER
35000	CALCIUM	120000	SODIUM
2U	CHROMIUM	50U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	6	VANADIUM
280J	IRON	60U	ZINC
3UJ	LEAD		
9500	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID. TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. MD NUMBER: Q519

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12000	ALUMINUM	510	MANGANESE
30U	ANTIMONY	0.40J	MERCURY
4UJ	ARSENIC	10U	NICKEL
190	BARIUM	38000	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
140000	CALCIUM	150000	SODIUM
8	CHROMIUM	50U	THALLIUM
7U	COBALT	NA	TIN
20U	COPPER	8	VANADIUM
38000J	IRON	140U	ZINC
30UJ	LEAD		
11000	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

APPENDIX D

EPA

Potential Hazardous Waste Site

Site Inspection Report

Site Inspection Report

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE: GA | 02 SITE NUMBER: D980496939

II. SITE NAME AND LOCATION

01 SITE NAME: Old Sterling Land fill

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: Old Hwy 99

03 CITY: Sterling

04 STATE: GA | 05 ZIP CODE: 31520 | 06 COUNTY: Glynn | 07 COUNTY CODE | 08 CONG DIST

09 COORDINATES: LATITUDE 31 16 18 | LONGITUDE 81 32 52

10 TYPE OF OWNERSHIP (Check one): ☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 11 16 89 (MONTH DAY YEAR)

02 SITE STATUS: ☐ ACTIVE ☒ INACTIVE

03 YEARS OF OPERATION: 1969 (BEGINNING YEAR) | 1979 (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply): ☐ A. EPA ☒ B. EPA CONTRACTOR NUS Corp ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ☐ E. STATE ☐ F. STATE CONTRACTOR ☐ G. OTHER

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Walter Riley	Project Manager	NUS	(404) 938-7710

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Roger Franklin	Sampling Team	NUS	(404) 938-7710
Ron Young	Sampling Team	NUS	(404) 938-7710
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one): ☒ PERMISSION ☐ WARRANT

18 TIME OF INSPECTION: 0900

19 WEATHER CONDITIONS: Warm + Sunny

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Mario Villamarzo	EPA	(404) 347-5065

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Walter Riley		NUS Corp	404/938-7710	02 07 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D48 349 939

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [X] C. SLUDGE
- [ ] D. OTHER _____ (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 49

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	49	tons	
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	Toxaphene	8001-35-2	Landfill	159000	ppm

V. FEEDSTOCKS (See appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980491[illegible]

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: 10/16/90) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Ground water samples [illegible] had low concentrations of lead, barium [illegible] and manganese.

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: 10/16/90) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Strontium and titanium present in waste sample at low concentration.

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: 10/16/90) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
There is no significant contamination

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Unknown

01 [ ] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Unknown

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE: 10/16/90) — [ ] POTENTIAL — [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: 6 Acres 04 NARRATIVE DESCRIPTION
Surface, subsurface soils have metal and organic contamination, contamination is not significant.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Insignificant low levels of lead, Barium, Selenium and Ethylbenzene were detected in ground water, but in the surficial aquifer.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Unknown

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D-8049 6929

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

Unknown

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 940 homes are not served by the municipal water system.

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D980496799

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	49	TONS
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE: 4.3 ACRES

07 COMMENTS

265,000 cubic feet of mixed organics, inorganics, solvents, and trash

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKES, LINERS, BARRIERS, ETC.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Vehicle traffic limited by Gate at Entrance. Property posted. The waste is not exposed.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Like material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: [illegible] 02 SITE NUMBER: [illegible]

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☒
NON-COMMUNITY	C.	D.

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F.

03 DISTANCE TO SITE
A. [illegible] (mi)
B. ____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 3300

03 DISTANCE TO NEAREST DRINKING WATER WELL .1 (mi)

04 DEPTH TO GROUNDWATER 5 (ft)

05 DIRECTION OF GROUNDWATER FLOW South

06 DEPTH TO AQUIFER OF CONCERN 120 (ft)

07 POTENTIAL YIELD OF AQUIFER 720,000 (gpd)

08 SOLE SOURCE AQUIFER ☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including casings, depth, and screened versus in production and buildings)

Wells are cased to a depth of 120 feet or more

10 RECHARGE AREA
☐ YES
☐ NO
COMMENTS

11 DISCHARGE AREA
☐ YES
☐ NO
COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Unnamed Canal	☐	.7 (mi)
Burnett Creek	☐	2.5 (mi)
Cowpens Creek	☐	5.7 (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 322 (NO. OF PERSONS)	B. 1022 (NO. OF PERSONS)	C. 29500 (NO. OF PERSONS)

02 DISTANCE TO NEAREST POPULATION .1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 292

04 DISTANCE TO NEAREST OFF-SITE BUILDING .1 (mi)

06 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The is approximately 92 homes within the one mile radius of old Sterling Landfills

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 092C49c139

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☒ A. 10^{-6} - 10^{-8} cm/sec ☐ B. 10^{-4} - 10^{-6} cm/sec ☐ C. 10^{-4} - 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) ☒ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
140 (ft)	3-5 (ft)	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
7 (in)	4 (in)	0 %	—	0 %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. 1.8 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

10.5 (mi)

ENDANGERED SPECIES: Black Skimmer, Leatherback Sea turtle, Brown Pelican

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. _____ (mi)	B. .1 (mi)	C. ½ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The old sterling landfill and surrounding area is fairly flat. The site is a cleared area overgrown with weeds and tall grass. The surrounding area is mostly pine trees. A manmade embankment was located in the southwest quadrant of the landfill.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
LA	[illegible]

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	10	Southwest Labs of Oklahoma, Broken Arrow, Ok.	[illegible]
SURFACE WATER		+ Quality Inc of Baton Rouge & ETC Tarron	[illegible]
WASTE	1	ESD Athens, GA	[illegible]
AIR			
RUNOFF			
SPILL			
SOIL	8	Southwest Labs of Ok. Broken Arrow, Quality Inc	[illegible]
VEGETATION		ETC Tarron, Baton Rouge LA.	
OTHER	1	" "	[illegible]

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH	
Temperature	
Conductance	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF NUS Corporation
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS NUS Corporation Files

V. OTHER FIELD DATA COLLECTED (Attach additional sheets if necessary)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D [illegible]

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
[illegible]	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Rt 3 Box 284	

05 CITY	06 STATE	07 ZIP CODE
[illegible]	GA	31543

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER
GA [illegible]	

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
135 [illegible] St. N.W.	

12 CITY	13 STATE	14 ZIP CODE
Atlanta	GA	30313

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D [illegible]

II. CURRENT OPERATOR				OPERATOR'S PARENT COMPANY		
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER					

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)				PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)		
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD					
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

IDENTIFICATION
01 STATE | 02 SITE NUMBER
GA | 09

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: LA | 02 SITE NUMBER: LAD 980 [illegible]

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

NA

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980496939

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CT	D980461939

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

OVERSIZED

DOCUMENT

HAZARD RANKING SYSTEM SCORING SUMMARY

FOR

OLD STERLING LANDFILL
EPA SITE NUMBER GAD980496959
STERLING
GLYNN COUNTY, GA
EPA REGION: 4

SCORE STATUS: IN PREPARATION

SCORED BY WALTER RILEY
OF NUS CORPORATION
ON 02/20/90

DATE OF THIS REPORT: 08/22/90
DATE OF LAST MODIFICATION: 08/22/90

GROUND WATER ROUTE SCORE :	71.84
SURFACE WATER ROUTE SCORE:	6.55
AIR ROUTE SCORE :	0.00
MIGRATION SCORE :	41.70

HRS GROUND WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ROUTE CHARACTERISTICS			
DEPTH TO WATER TABLE	12 FEET		
DEPTH TO BOTTOM OF WASTE	6 FEET		
DEPTH TO AQUIFER OF CONCERN	6 FEET	3	6
PRECIPITATION	52.0 INCHES		
EVAPORATION	45.0 INCHES		
NET PRECIPITATION	7.0 INCHES	2	2
PERMEABILITY	1.0X10-4 CM/SEC	2	2
PHYSICAL STATE		2	2
TOTAL ROUTE CHARACTERISTICS SCORE:			12
3. CONTAINMENT		3	3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:TOXAPHENE			13
WASTE QUANTITY CUBIC YDS	0		
DRUMS	0		
GALLONS	0		
TONS	4900		
TOTAL	4900 CU. YDS	8	3
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
GROUND WATER USE		3	5
DISTANCE TO NEAREST WELL	500 FEET		
AND	MATRIX VALUE	35	35
TOTAL POPULATION SERVED	3572 PERSONS		
NUMBER OF HOUSES	940		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			44

GROUND WATER ROUTE SCORE (Sgw) = 71.84

HRS SURFACE WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ROUTE CHARACTERISTICS			
SITE LOCATED IN SURFACE WATER	NO		
SITE WITHIN CLOSED BASIN	NO		
FACILITY SLOPE	1.0 %		
INTERVENING SLOPE	1.0 %	0	0
24-HOUR RAINFALL	3.5 INCHES	3	3
DISTANCE TO DOWN-SLOPE WATER	3600 FEET	2	4
PHYSICAL STATE	2		2
TOTAL ROUTE CHARACTERISTICS SCORE:			9
3. CONTAINMENT	3		3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE: TOXAPHENE			18
WASTE QUANTITY CUBIC YDS	0		
DRUMS	0		
GALLONS	0		
TONS	4900		
TOTAL	4900 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
SURFACE WATER USE		2	6
DISTANCE TO SENSITIVE ENVIRONMENTS		0	0
COASTAL WETLANDS	12900 FEET		
FRESH-WATER WETLANDS	NONE		
CRITICAL HABITAT	NONE		
DISTANCE TO STATIC WATER	> 3 MILES		
DISTANCE TO WATER SUPPLY INTAKE	> 3 MILES		
AND	MATRIX VALUE	0	0
TOTAL POPULATION SERVED	0		
NUMBER OF HOUSES	0		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			6

SURFACE WATER ROUTE SCORE (Ssw) = 6.55

HRS AIR ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0

2. WASTE CHARACTERISTICS

REACTIVITY: MATRIX VALUE

INCOMPATIBILITY

TOXICITY

WASTE QUANTITY CUBIC YARDS
DRUMS
GALLONS
TONS

TOTAL

TOTAL WASTE CHARACTERISTICS SCORE: N/A

3. TARGETS

POPULATION WITHIN 4-MILE RADIUS
0 to 0.25 mile
0 to 0.50 mile
0 to 1.0 mile
0 to 4.0 miles

DISTANCE TO SENSITIVE ENVIRONMENTS
COASTAL WETLANDS
FRESH-WATER WETLANDS
CRITICAL HABITAT

DISTANCE TO LAND USES
COMMERCIAL/INDUSTRIAL
PARK/FOREST/RESIDENTIAL
AGRICULTURAL LAND
PRIME FARMLAND
HISTORIC SITE WITHIN VIEW?

TOTAL TARGETS SCORE: N/A

AIR ROUTE SCORE (Sa) = 0.00

HAZARD RANKING SYSTEM SCORING CALCULATIONS
FOR
SITE: OLD STERLING LANDFILL
AS OF 08/22/90

GROUND WATER ROUTE SCORE

ROUTE CHARACTERISTICS		12
CONTAINMENT	X	3
WASTE CHARACTERISTICS	X	26
TARGETS	X	44

= +1184 /57,330 X 100 = 71.84 = S_{gw}

SURFACE WATER ROUTE SCORE

ROUTE CHARACTERISTICS		9
CONTAINMENT	X	3
WASTE CHARACTERISTICS	X	26
TARGETS	X	6

= +212 /64,350 X 100 = 6.55 = S_{sw}

AIR ROUTE SCORE

OBSERVED RELEASE 0 /35,100 X 100 = 0.00 = S_{air}

SUMMARY OF MIGRATION SCORE CALCULATIONS

	S	S^2
GROUND WATER ROUTE SCORE (S_{gw})	71.84	5160.99
SURFACE WATER ROUTE SCORE (S_{sw})	6.55	42.90
AIR ROUTE SCORE (S_{air})	0.00	0.00
$S^2_{gw} + S^2_{sw} + S^2_{air}$		5203.89
$\sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}$		72.14
$S_M = \sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}/1.73$		41.70

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (to be assigned by Hq)

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

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

I. SITE IDENTIFICATION

A. SITE NAME: OLD STERLING LANDFILL

B. STREET (or other identifier): OLD HWY 99

C. CITY: STERLING

D. STATE: GA

E. ZIP CODE: 31520

F. COUNTY NAME: GLYNN

G. OWNER/OPERATOR (if known)
1. NAME: GLYNN COUNTY **REFERENCE 1**
2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☒ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION
CLOSED SANITARY LANDFILL - NEVER PERMITTED

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)
EPD FILES

K. DATE IDENTIFIED (mo., day, & yr.)
PRIOR TO 1975

L. PRINCIPAL STATE CONTACT
1. NAME: MOSES N. McCALL
2. TELEPHONE NUMBER: 404 656-2833

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM
☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☒ 4. NONE ☐ 5. UNKNOWN

Ref. 1

B. RECOMMENDATION
☒ 1. NO ACTION NEEDED (no hazard)
☐ 2. IMMEDIATE SITE INSPECTION
a. TENTATIVELY SCHEDULE
b. WILL BE PERFORMED BY:
☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION
1. NAME: JENNIFER KADUCK (JIM USSERY) 9/1/82
2. TELEPHONE NUMBER: 404 656 2833
3. DATE (mo., day, & yr.): 1-15-80

III. SITE INFORMATION

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

B. IS GENERATOR ON SITE?
☒ 1. NO ☐ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres)
~ 30

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE (deg.—min.—sec.)
2. LONGITUDE (deg.—min.—sec.)

E. ARE THERE BUILDINGS ON THE SITE?
☒ 1. NO ☐ 2. YES (specify):

Continue On Reverse

IV. CHARACTERIZATION OF SITE ACTIVI

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

CLOSED MUNICIPAL SANITARY LANDFILL

V. WASTE RELATED INFORMATION

A. WASTE TYPE

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

B. WASTE CHARACTERISTICS

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

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

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

No

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT 4,900	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE TONS	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			X (4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		
			TOXAPHENE ≈ 1%		

 Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

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

TOXAPHENE

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

NONE

VI. HAZARD DESCRIPTION

	A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
A	1. NO HAZARD				
B	2. HUMAN HEALTH				POSSIBLE THRU VERTICAL & HORIZONTAL LEACHATE MOVEMENT
C	3. NON-WORKER INJURY/EXPOSURE				
D	4. WORKER INJURY	X			"
E	5. CONTAMINATION OF WATER SUPPLY	X			"
F	6. CONTAMINATION OF FOOD CHAIN	X			"
G	7. CONTAMINATION OF GROUND WATER	X			"
H	8. CONTAMINATION OF SURFACE WATER				
I	9. DAMAGE TO FLORA/FAUNA				
J	10. FISH KILL				
K	11. CONTAMINATION OF AIR				
L	12. NOTICEABLE ODORS				
M	13. CONTAMINATION OF SOIL	X			"
N	14. PROPERTY DAMAGE				
O	15. FIRE OR EXPLOSION				
P	16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
Q	17. SEWER, STORM DRAIN PROBLEMS				
R	18. EROSION PROBLEMS				
S	19. INADEQUATE SECURITY				
T	20. INCOMPATIBLE WASTES				
U	21. MIDNIGHT DUMPING				
V	22. OTHER (specify):				

 Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT (specify): NONE
- [ ] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER (specify):

B. IN COMPLIANCE?

- [x] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN
- 4. WITH RESPECT TO (list regulation name & number) R & R FOR SOLID WASTE MGT 391-3-4

VIII. PAST REGULATORY ACTIONS

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

IX. INSPECTION ACTIVITY (past or on-going)

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

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
INSPECTION	1-17-80	EPD	VISUAL INSPECTION

X. REMEDIAL ACTIVITY (past or on-going)

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

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

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

REFERENCE 2

a product of

J. L. DARLING CORPORATION

TACOMA, WASHINGTON 98421 U.S.A.

"Rite in the Rain" WEATHERPROOF

LEVEL

NOTEBOOK NO. 311

HF-1279

IY-8902-46

Old Sterling Landfill

Sterling, Glynn County, Georgia

Geoffrey Carton

March 3, 1989

Recon

LOGBOOK REQUIREMENTS
REVISED - NOVEMBER 29, 1988

NOTE: ALL LANGUAGE SHOULD BE FACTUAL AND OBJECTIVE

1. Record on front cover of the Logbook: TDD No., Site Name, Site Location, Project Manager

2. All entries are made using ink. Draw a single line though errors. Initial and date corrections.

3. Statement of Work Plan, Study Plan, and Safety Plan discussion and distribution to field team with team member signatures.

5. Sign and date each page. Project Manager is to review and sign off on each logbook daily.

6. Document all calibration and pre-operational checks of equipment. Provide serial numbers of equipment used onsite.

7. Provide reference to Sampling Field Sheets for detailed sampling information.

8. Describe sampling locations in detail and document all changes from project planning documents.

9. Provide a site sketch with sample locations and photo locations.

10. Maintain photo log by completing the stamped information at the end of the logbook.

11. If no site representative is on hand to accept the receipt for samples an entry to that effect must be placed in the logbook.

12. Record I.D. numbers of COC and receipt for sample forms used. Also record numbers of destroyed documents.

13. Complete SMO information in the space provided.

I have read and understood the phase I work plan for this facility.

Hoffman La Stan

01

3/3/89

1320 Cloudy 65°F
arrive at Glynn County tax assessors office.
The landfill is on County Maps 71 and 72 1. Copies of the aerial photos were obtained. The assessor suggested that Jim Chancy and Robert Howe with public works would be the best ones to talk to about the landfill.
The landfill is on parcel 71-12 the listed owner is Mead Timber Co and Scott Timber Co. They are apparently part of Georgia Pacific Pulp + Paper which was bought by Georgia Pacific. Some of the surrounding parcels are owned as follows:

Geoffrey Carton

3/3/89

92-23 Henry J. Lane
92-19 John Henry Lane Sr
92-25 John H Lane Jr.

1650 The landfill location given by the tax office is in error.

1750 arrive Brunswick City hall to meet with Bill Powell of the water department.

He reports that there is no water service within 5 miles of Sterling. The county may serve the area in a few years.

1955 arrive in Sterling we are unable to find the landfill. We stopped at a gas station and they said that there are

Geoffrey Carton

3/3/89

2 large oaks at the entrance and the gate is rusting. We found the entrance. The landfill is not in the location that the tax assessor indicated. There are No trespassing signs posted that indicate it is run by Buffalo Hunting Club. Trees almost completely screen the landfill. We could see down the access road and about all we could see is a mound of dirt about 250 feet down the road.

1610 Spoke to residents across street. There are trailers directly across from landfill entrance. Both have wells about 110 feet deep.

04 [illegible]

3/3/89

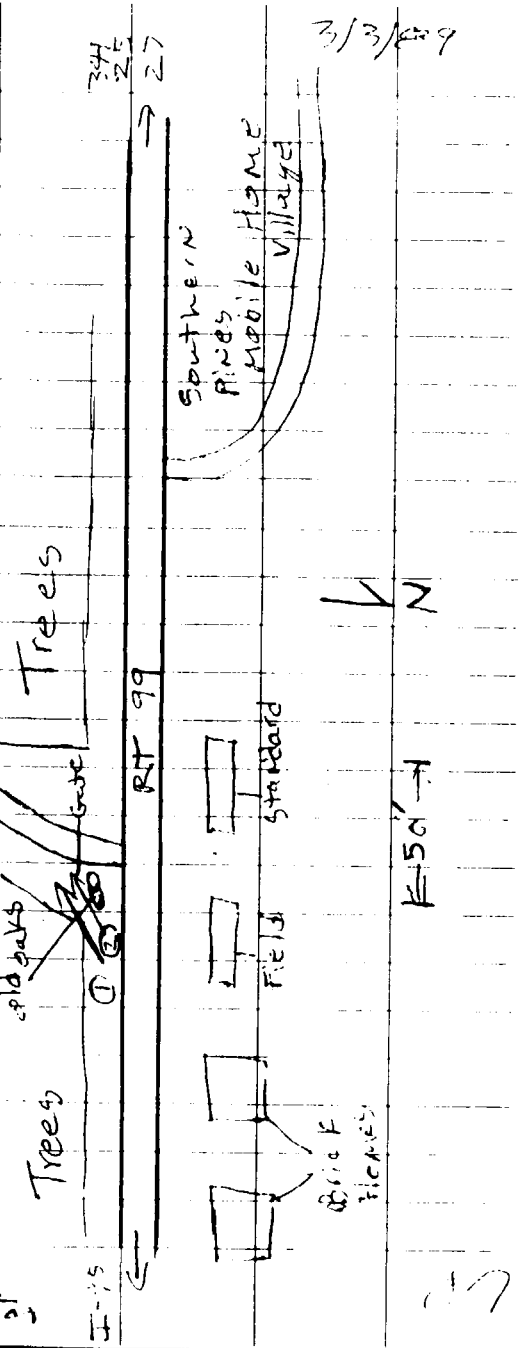
Water use survey sheets were filled out for both. The owners are Mrs. Standard (912-267-[illegible]) and Roy Field, Sr. (912-267-6909). They confirmed that the land across the street was the old landfill. The Southern Pines Mobile Home Village ~~park~~ is located just west of Mrs. Standard's property. The phone # is 267-7547 (on sign). There were about 50 homes. A resident by the RR tracks 0.7 mile west of the landfill on Rt 99 would not identify themselves but said that someone else had been by asking about wells.

[illegible] 05

3/3/2009

He did not know who they were. He does not know of any dug wells in the area and reported his well depth to be 165 feet. There is a tree farm east of the landfill. The landfill is about 1.5 miles east of route 311 on Route 99. The easiest access is by exit 9 from I-95. Headed west it is about 2-3 miles. There seemed to be trailers on the south side of the landfill but we were unable to find the road to access them.

Jeffrey Carter



Jeffrey Carter

3/23/89

Additional Notes

Upon study of the Sterling topographic Map, I determined that the aerial photo we obtained from the tax office does show the landfill but, what we had assumed was the landfill (on the photo), was not. The facility discussed in this log book is the actual landfill location. We had difficulty identifying it because some of the roads visible on the photo no longer exist.

Jeffrey Carlton

NUS CORPORATION AND SUBSIDIARIES **TELECON NOTE**

CONTROL NO. F4-8902-46	DATE: March 17, 1989	TIME: 0910

DISTRIBUTION:
File
Old Sterling Landfill
Sterling, Glynn County, Georgia

REFERENCE 3

BETWEEN: Robert Howe	OF: Glynn County Department of Public Works	PHONE: (912) 267-5760

AND: Geoffrey Carton, NUS Corporation

DISCUSSION:

Mr. Howe was assistant superintendent at the time the landfill was in operation. He confirmed the location of the landfill by the two trees we used as a landmark. The landfill was permitted by the state and was in operation from about 1969 through 1979. They received official closure from the State. The landfill was created in an old borrow pit with an original depth of about 10 feet. They did have to pump some water in order to fill but there was not much water seeping in. The landfill is between 6 and 10 acres. The landfill was attended during the day and was locked at night. A fence surrounded the property. Only yard wastes (i.e., limbs and leaves) were accepted. No garbage was allowed. He does not remember any wastes coming from the Hercules plant to this landfill. No tankers or drums were ever allowed. Hercules had their own dump on "T" Street which received their trash. They had their own hazardous waste dump during the time the Old Sterling Landfill was in operation. The Old Sterling Landfill property was leased by the County. The property is currently owned by Georgia Pacific. GC

NUS CORPORATION AND SUBSIDIARIES **TELECON NOTE**

CONTROL NO.	DATE: 03/22/89	TIME: 1555

DISTRIBUTION: File
Old Sterling Landfill
Savannah, Chatham County, GA

REFERENCE 4

BETWEEN: Morgan Cantrell	OF: GA EPD Muncipal Solid Waste Management	PHONE: (404) 669-2836

AND: Geoffrey Carton, NUS Corporation

DISCUSSION:

Mr. Cantrell reported that the landfill was state permitted from 1976 through 1979. Closure was approved in April, 1980. He observed an orange, granular material with a resinous odor being deposited into the landfill. When wet, the material would aquire a jelly-like consistancy. He reported that material from the Hercules plant was placed in the landfill. Complete information is available from the archives. GC

"Rite in the Rain" - A unique All-Weather Writing Paper created to shed water and preserve the written image. It is widely used throughout the world for recording critical field data in all kinds of weather.

Available in a variety of standard and custom printed case-bound field books, loose leaf, spiral and stapled notebooks, multi-copy sets and computer papers.

"Rite in the Rain" All-Weather Writing Papers are also available in a wide selection of rolls and sheets for printing and photocopying.

a product of

J. L. DARLING CORPORATION
TACOMA, WA 98421-3696 USA

"Rite in the Rain"

ALL-WEATHER
LEVEL
Fieldbook No. 311

F4473[illegible]

[illegible]
Old Stirling No. 11
Stirling, Wilkinson County Georgia
10-16-89

REFERENCE 5

LOGBOOK REQUIREMENTS
REVISED - NOVEMBER 29, 1988

NOTE: ALL LANGUAGE SHOULD BE FACTUAL AND OBJECTIVE

1. Record on front cover of the Logbook: TDD No., Site Name, Site Location, Project Manager.
2. All entries are made using ink. Draw a single line through errors. Initial and date corrections.
3. Statement of Work Plan, Study Plan, and Safety Plan discussion and distribution to field team with team members' signatures
4. Record weather conditions and general site information.
5. Sign and date each page. Project Manager is to review and sign off on each logbook daily.
6. Document all calibration and pre-operational checks of equipment. Provide serial numbers of equipment used onsite.
7. Provide reference to Sampling Field Sheets for detailed sampling information.
8. Describe sampling locations in detail and document all changes from project planning documents.
9. Provide a site sketch with sample locations and photo locations.
10. Maintain photo log by completing the stamped information at the end of the logbook.
11. If no site representative is on hand to accept the receipt for samples, an entry to that effect must be placed in the logbook.
12. Record I.D. numbers of COC and receipt for sample forms used. Also record numbers of destroyed documents.
13. Complete [illegible] information in the space provided.

10-16-89

Work plan read and understood.

Walter Riley
Daniel Howard
D.M. Nathan
[illegible]
[illegible]

Arrived at Old Sterling Landfill site at approximately 9:00 AM. The weather condition was sunny. The Landfill is located off HWY 99. There is road between two large trees leading into the landfill area. The entrance to the landfill had a locked gate. The entrance road goes for approximately a two hundred yards south and opens to a clearing which is the landfill area.

10/16/89 Walter Riley

The Fasp Team began layout & sampling grid at approximately 0923 9:23.

The loading embankment stood in the approximate center of the land fill.

Site Dimensions: 0930

East - West approximately 450 ft.

North South approximately 420 ft

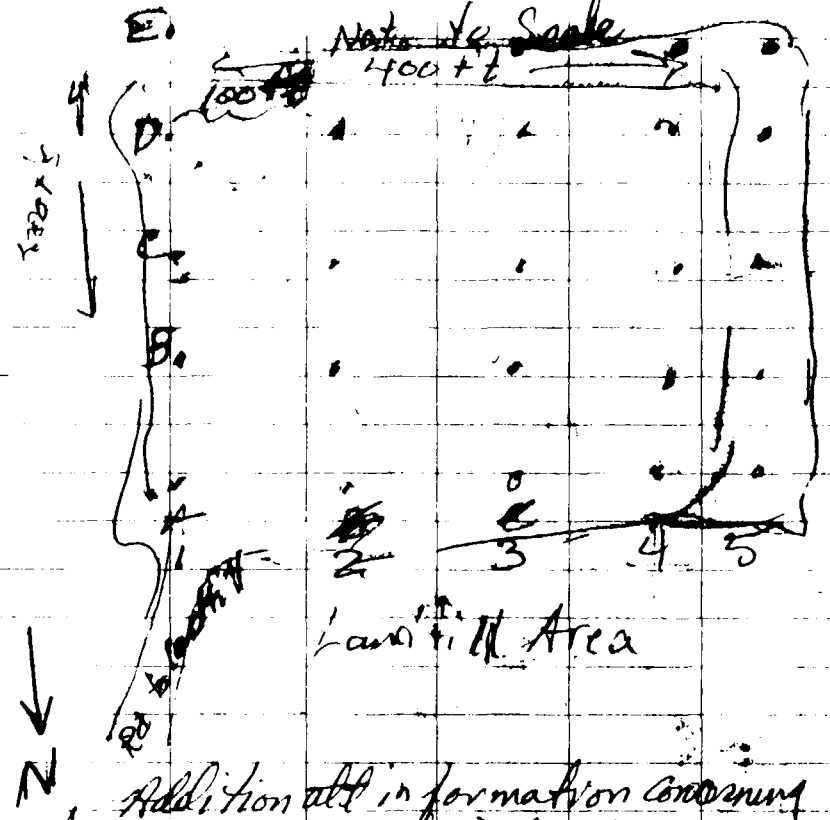
0942

Received key to Gate 10:00
Drove vehicle onto property
Key from Mr. Robert S. Hicks

Fasp Sampling Grid Completed 10:00

10/16/89 Walter Riley Jr.

Fasp laid on sampling Grid 100 ft by 400 ft 100 ft intervals



Additional information concerning Fasp can found in log book 1726

10/16/89 Walter Riley Jr.

Attempted to Drill Trap hole A1, encountered difficulty. Drill over a few feet. Still had problems. Abandoned hole A1, moved to B1. Successfully collected sample at B1. 10:30

Roger Franklin + Ron Young went to start on sample 05-55, 05-58, 05-TW01 the up gradient sample whose location was moved next to the main entrance road on the east side. 11:00

Fasp completed samples for six points. Stop for lunch 12:52

Ron Young and Roger Franklin had completed sampling on 05-01 the up gradient sample 12:55

10/16/89 Walter Riley

PH Calibrations Buffer 7, calib 7 12:30
Buffer 4 at 4.1 10:
Return to site at approximate by 1330 FASP began completion of remainder of acid.
Field Sampling Sheets were Completed + Samples Tagged
Fasp Completed Sampling at approximate 16:15 Collecting a total of Fourteen Samples Some areas were difficult to drill because of hard soil and obstruction encountered when drilling. 16:20

10/16/89 Walter Riley

10/17/89

Arrived at site approximately 9:20 Am. Had received FASP information that one sampling location could potentially contain Toxaphene. This location was TW3 located just south of the loading embankment area. 09:21

10/17/89 Walter Riley

Sampling team began
pulling and collecting
sample for 05-04 09:22

PH Calibration by Con Yong
Buffer 7 - 7.00
Buffer 4 - 4.09
Buffer 10 - 10.05

Sampling Completed for
05-04 SS-04, 05-SB-04, 05-TW-04 10:24
Field Sampling Sheets were Complete + Samples Tagged
Started on Sample 05-03
Sampling Completed.
11:28
Field Sampling Sheets were Completed + Samples Tagged
PH Meter Calibration 11:41
Buffer 4 3.99
" 7 7.00
Buffer 10 10.10

10/17/89 Walter Riley Jr.

Started on Sample 05-02
at approximate 12:00
Sample 05-02 moved
to FASP "Hot Spot"

Ph Calibration 13:28
Buffer 7 7.00
" 4 4.08
10 10.03

Temporary well was slow
in recharging But was
able to collect sample 13:00

Completed Sampling of
05-02 SS-02, 05-SB-02, 05-TW-02 13:30
Field Sampling Sheet Completed + Samples Tagged
Started on Sample 05-05
05-SS-05, 05-SB-05, 05-TW-05. 14:50
A leachate was present
at the sampling point.
The substance was
cloudy with a jelly

10/17/89 Walter Riley

like appearance. A sample of this subsurface was taken and labeled LS. The subsurface soil was approximate 3 ft south of where the leachate material.

PH Calibration 15:48

Buffer 4	4.04
Buffer 7	7.00
Buffer 10	10.05

Finish collecting last sample at approximately 15:30

Started PW Sampling 16:36

PH Calibration

Buffer 7	6.99
Buffer 4	4.08
Buffer 10	10.00

Field Sampling Sheets were Completed + Samples Tagged

Private Well was purged and readings taken at 3 min. intervals

10/17/89 Walter Riley

OS-PW-01

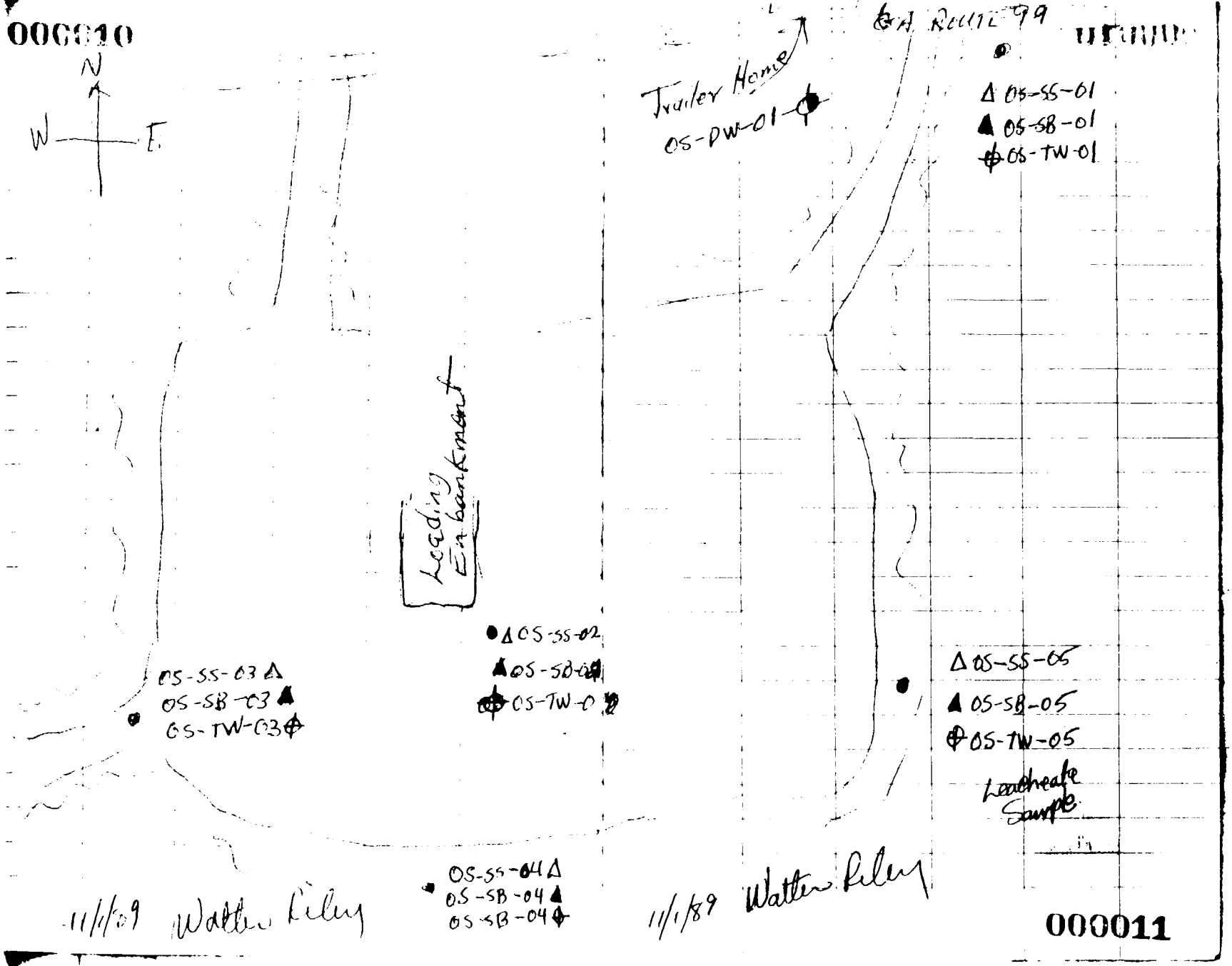
Time	Temp	pH	Cond
16:37	25	7.33	260
16:40	25	7.10	256
16:43	24	7.10	253
16:46	24	7.00	253
16:49	23	7.00	255
16:52	23	7.00	255

Sampled a private well across the street from the entrance of landfill at a trailer belonging to Mr. Bailey B. Standard
Route 11, Box 662
Brunswick, Ga 31520

The well was 146 ft deep, made with PVC pipe.

Field Sampling Sheets were Completed + Samples Tagged

Walter Riley


N
W
E
Trailer Home
OS-DW-01
GA Route 99
Δ OS-SS-01
▲ OS-SB-01
OS-TW-01
Leading Embankment
Δ OS-SS-02
▲ OS-SB-02
OS-TW-02
OS-SS-03 Δ
OS-SB-03 ▲
OS-TW-03
Δ OS-SS-05
▲ OS-SB-05
OS-TW-05
Leachate Sample
OS-SS-04 Δ
OS-SB-04 ▲
OS-SB-04
11/1/89 Walter Riley
11/1/89 Walter Riley

11/28/89

Description of sample depths

OS-SS-01 Surface Soil
~~located~~ at LS
OS-SB-01 Subsurface Soil
3-5 ft BLS
OS-TW-01 Temp. Well
Ground water 3.5 ft BLS

Sample location is immediately South of HWY 6A Route 99 and East of the entrance to the land fill (See Sketch)

Walter Riley

11/28/89

OS-SS-04 Surface Soil

OS-SB-04 Subsurface Soil
3-5 ft BLS
OS-TW-04 Temp. Well
Ground water 4.1 ft BLS

Sample location is at the south end of the land fill approximately facing loading ~~embankment~~ (see sketch)

OS-SS-03 Surface Soil

OS-SB-03 Subsurface Soil
3-5 ft BLS
OS-TW-03 Temp. Well
Ground water at 3.5 BLS

Sample location is at the south end and on the west side of the landfill (see sketch).

Walter Riley

11/28/89

05-SS-02 Surface Soil

05-SB-02 Subsurface Soil
3.5 ft

05-TW-02 Temp well
Groundwater 3 ft

Sample location center of the landfill, southwest the loading embankment (see sketch)

Walter Riley Jr.

The fill area is clear of trees but is overgrown by tall weeds and brush in most areas. The vegetation did not appear stressed. The landfill area was flat, and there are no buildings on or near the landfill. A loading embankment constructed of dirt, is located in the southwest quadrant of the landfill. The entrance of the landfill had a locked gate across the drive way. The property was not fenced. Most areas of the landfill was covered by pine bark. Some unknown material was leaching from the ground in the south east (corner) side of the landfill.

Walter Riley Jr.

NUS CORPORATION AND SUBSIDIARIES **TELECON NOTE**

CONTROL NO. F4-8902-46	DATE: March 17, 1989	TIME: 0815

DISTRIBUTION: File
Old Sterling Landfill
Sterling, Glynn County, Georgia

REFERENCE 6

BETWEEN: Olin Chaney	OF: Glynn County Dept. of Public Works	PHONE: (912) 267-5760

AND: Geoffrey Carton, NUS Corp.

DISCUSSION:

Mr. Chaney reported that he had occasionally worked at the landfill. It was a pit that was dug to about 6 feet deep and filled. He reported that ground water is found at about 2 feet below land surface throughout Glynn County and thus they had to pump water from the pit in order to fill it. The only fill he remembers entering the landfill was garbage and an occasional car. The soil at the landfill is sandy. He does not recall any trash from the Hercules plant entering the landfill. Robert Howe is the best person to take to about the landfill. HC

EPA Notification Hazardous Waste Si

United States Environmental Prot Agency Washington DC 20460

R

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

810609

REFERENCE 7 GAS000001092

A Person Required to Notify:
Enter the name and address of the person or organization required to notify.

Name: Hercules Incorporated
Street: Cook and L Streets
City: Brunswick State: GA Zip Code: 31521

B Site Location:
Enter the common name (if known) and actual location of the site.

GAD980496939

Name of Site: Old Sterling Landfill
Street: 1.5 miles East of Highway 341 on "Old Highway 99"
City: Sterling County: Glynn State: GA Zip Code: 31520

C Person to Contact:
Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): P. J. Lunsford, Environmental Coordinator
Phone: (912) 265-3550

D Dates of Waste Handling:
Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1969 To (Year): 1975

E Waste Type: Choose the option you prefer to complete

Option I: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☒ Organics
2. ☒ Inorganics
3. ☒ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☒ Other (Specify) Trash, rubble

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☒ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

RECEIVED EPA/REGION IV JUN 9 ENFORCEMENT DIVISION

00535

Form Approved OMB No. 2000-0138
EPA Form 8900-1

F Waste Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☒ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet 265,000 (*)

gallons

Total Facility Area

square feet

acres 15

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ No

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assess hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

This site formerly included in 1979 Waste Disposal Site Survey Directory.

(*) It is estimated that less than 2% of total would b classified as hazardous waste, with by far the largest portion being sludges hazardous only becau of flash point below 140°F.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name K. T. Horton, Resident Manager

Street Cook and L Streets

City Brunswick State GA Zip Code 31521

Signature K T Horton Date 5/29/81

☐ Owner, Present
☐ Owner, Past
☒ Transporter
☐ Operator, Preser
☐ Operator, Past
☐ Other

D-586-1-0-35

SISB/SAS
RECEIVED
SEP 06 1990
EPA - REGION IV
ATLANTA, GA

DRAFT

SCREENING SITE INSPECTION PHASE II
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA
EPA ID #: GAD980496939

2-27-91
LSI
James P Thomas

Prepared Under
TDD No. F4-8902-46
CONTRACT NO. 68-01-7346

Revision 0

FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

AUGUST 31, 1990

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Reviewed By	Approved By
Walter Riley, Jr. Project Manager	Professional Geologist	Bob Donaghue Assistant Regional Project Manager	Phil Blackwell Regional Project Manager

TABLE OF CONTENTS

Section		Page No.
EXECUTIVE SUMMARY		**ES-1**
1.0	**INTRODUCTION**	**1**
1.1	Objectives	1
1.2	Scope of Work	1
2.0	**SITE CHARACTERIZATION**	**3**
2.1	Site Background History	3
2.2	Site Description	3
	2.2.1 Site Features	3
	2.2.2 Waste Characteristics	3
3.0	**REGIONAL POPULATIONS AND ENVIRONMENTS**	**7**
3.1	Population and Land Use	7
	3.1.1 Demography	7
	3.1.2 Land Use	7
3.2	Surface Water	7
	3.2.1 Climatology	7
	3.2.2 Overland Drainage	8
	3.2.3 Potentially Affected Water Bodies	8
3.3	Groundwater	8
	3.3.1 Hydrogeology	8
	3.3.2 Aquifer Use	10
	3.4 Summary of Potentially Affected Populations and Environments	**10**
4.0	**FIELD INVESTIGATION**	**13**
4.1	Field Analytical Support Project	13
4.2	Contract Laboratory Program Sample Collection	13
	4.2.1 Sample Collection Methodology	15
	4.2.2 Split Samples	15
	4.2.3 Description of Samples and Sample Locations	15
	4.2.4 Field Measurements	16
4.3	Contract Laboratory Program Sample Analysis	21
	4.3.1 Analytical Support and Methodology	21
	4.3.2 Analytical Data Quality	21
	4.3.3 Presentation of Analytical Results	21
4.4	Summary of Field Investigation	21
5.0	**SUMMARY**	**30**
REFERENCES		**31**

APPENDIX A Topographic Map
APPENDIX B Field Analytical Screening Program Methodology
APPENDIX C Analytical Results
APPENDIX D SI Form

TABLE OF CONTENTS (*continued*)

TABLES

Number		Page No.
Table 1	Sample Codes, Descriptions, and Rationale	18
Table 2	Field Measurements	20
Table 3	Inorganic Analyses - Groundwater Samples	23
Table 4	Inorganic Analyses - Subsurface Soil Samples	24
Table 5	Inorganic Analyses - Surface Soil Samples	25
Table 6	Organic Analyses - Groundwater Samples	26
Table 7	Organic Analyses - Subsurface Soil Samples	28
Table 8	Organic Analyses - Surface Soil Samples	29

FIGURES

Number		Page No.
Figure 1	Site Location Map	4
Figure 2	Site Layout Map	5
Figure 3	Water Level Contour	11
Figure 4	FASP Sampling Points	14
Figure 5	Sample Location Map	19

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-7346 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed or written consent of the EPA.

EXECUTIVE SUMMARY

The Old Sterling Landfill, a sanitary landfill approximately 4.3 acres in size, is located south of Highway 99 in Sterling, Glynn County, Georgia. The county operated the landfill on leased land from about 1969 through 1979. The landfill was permitted by the state in 1976 and was officially closed in 1980. The property is currently owned by Georgia Pacific.

Various types of wastes were disposed of at the Old Sterling Landfill including tree limbs, leaves, garbage, and an occasional car. The Hercules Plant of Brunswick disposed of 4,900 tons of waste, containing an estimated 1 percent toxaphene, at the landfill.

In the Brunswick area, there are three distinct aquifers. These consist of the surficial or water-table aquifer, the water-bearing units in the Miocene sediments that act as one aquifer, and the Upper Floridan aquifer (also known as the principal artesian aquifer). Within the surficial aquifer there are two productive intervals at 12 to 17 feet and 35 to 50 feet below land surface (bls). The predominantly clay Miocene sediments are approximately 450 feet thick. The Upper Floridan, the primary aquifer in the Brunswick area, is found approximately 500 feet bls and is 530 feet thick.

There are two water systems and some private wells which serve residents within a 4-mile radius of the landfill. The closest county well is 2.1 miles from the landfill. Numerous homes within 3 miles of the landfill obtain water from private wells. The nearest private well is located 500 feet north of the landfill.

Analytical results of surface and subsurface soil samples taken during the field investigation show inorganic and organic contamination. The compound of concern, toxaphene, was detected in a subsurface soil sample. Inorganic and other organic compounds were present in groundwater samples. Inorganics were present in soils at insignificant amounts. The Field Analytical Support Project (FASP) identified an area of chlorinated organic compound contamination. Samples were collected from this area and sent to a CLP laboratory, which confirmed FASP results.

The groundwater pathway is of concern because of the potential threat of contamination entering the aquifer of concern. The onsite and air pathways are not of concern, since insignificant quantities of contamination were present in the surface soils. The surface water pathway is also not a concern, since runoff generally percolates into the ground.

The laboratory analysis of groundwater samples indicates the presence of several inorganic elements and two organic compounds in the surficial aquifer. Based on this information and the number of groundwater targets, FIT 4 recommends that a Listing Site Inspection be undertaken at the Old Sterling Landfill.

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) was tasked by the U. S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Screening Site Inspection (SSI) at the Old Sterling Landfill site in Glynn County, Georgia. The inspection was performed 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 tasks were performed to satisfy the requirements stated in Technical Directive Documents (TDDs) F4-8902-46 and F4-8910-17 The field investigation was conducted October 16-20, 1989.

1.1 OBJECTIVES

The objectives of this inspection were to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection sought to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation has been made regarding future activities at the site.

1.2 SCOPE OF WORK

The objectives were achieved through the completion of a number of specific tasks. These activities were to:

- Obtain and review relevant background materials.
- Evaluate the target population within a 4-mile site radius, with regard to groundwater and surface water use, as well as possible exposure via air or direct contact.
- Conduct a survey of private wells.
- Develop a site sketch to scale.

- Determine location and distance to nearest potable well.

- Collect 16 environmental samples.

2.0 SITE CHARACTERIZATION

2.1 SITE BACKGROUND AND HISTORY

The Old Sterling Landfill is a sanitary landfill located in a sparsely populated area of Glynn County, Georgia (Refs. 1, 2). The landfill has been closed since the late 1970s, and the unfenced property is currently used as a private hunting preserve. The surrounding properties include residences and silviculture (Ref. 2). The landfill was created in an abandoned borrow pit with an original depth of about 10 feet (Ref. 3).

The county operated the landfill on leased land from about 1969 through 1979 (Ref 3). The landfill was permitted by the state in 1976 and was officially closed in 1980 (Ref. 4). The property is currently owned by Georgia Pacific but listed under the names Mead Timber Company and Scott Timber Company (part of Brunswick Pulp & Paper), which is owned by Georgia Pacific (Refs. 2, 3).

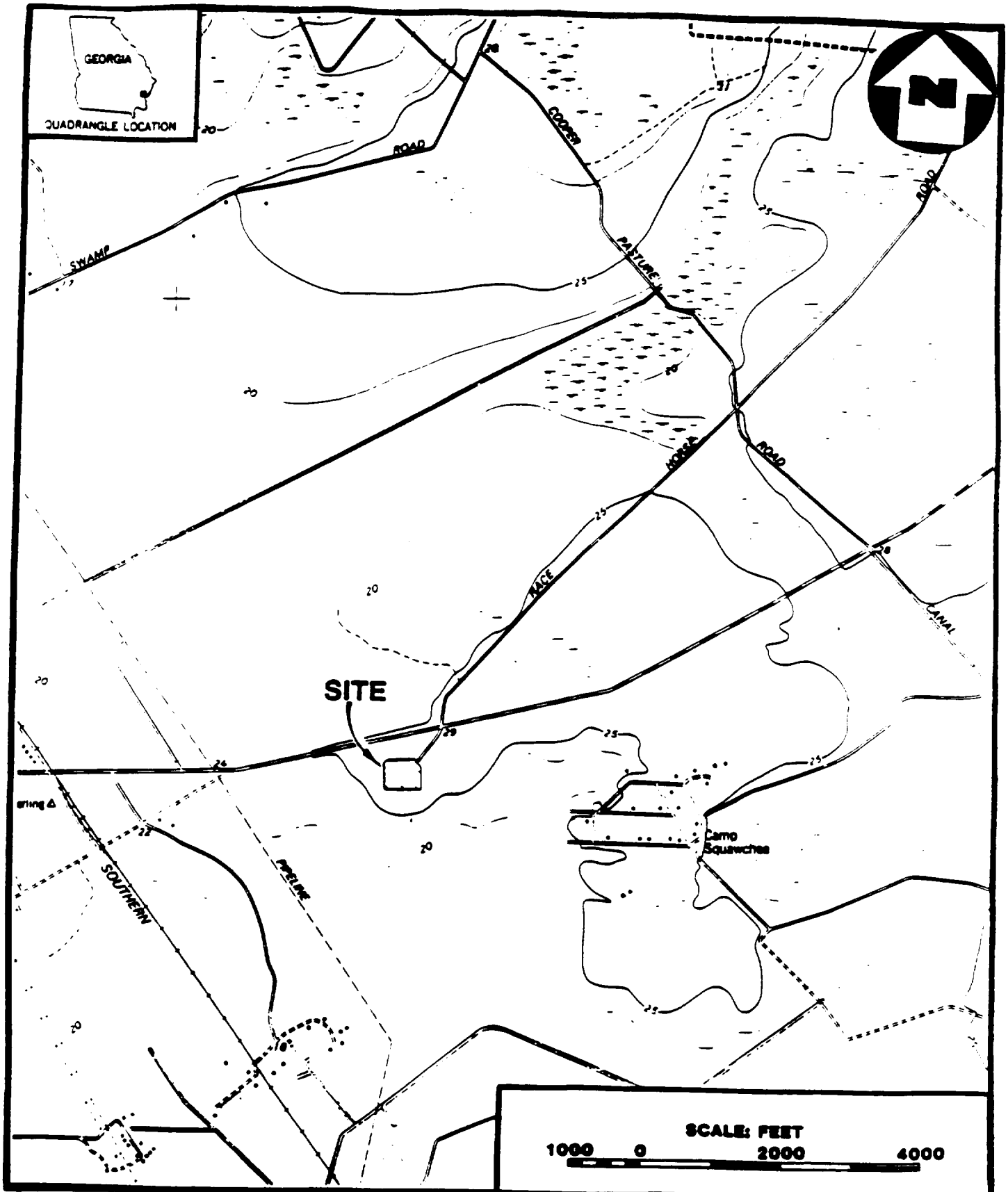
2.2 SITE DESCRIPTION

2.2.1 Site Features

The Old Sterling Landfill is 4.3 acres in size (Figures 1, 2). The fill area is clear of trees but is overgrown by tall weeds and brush in most areas; the vegetation does not appear stressed. The landfill is flat, and there are no buildings in the immediate vicinity. A loading embankment constructed of dirt is located in the southwest quadrant of the landfill. The property around the landfill is not fenced, but the entrance has a locked gate across the driveway. Most areas of the landfill were covered by pine bark. A leachate outbreak was observed in the southeast corner of the landfill (Ref. 5).

2.2.2 Waste Characteristics

An official at the Glynn County Public Works reported that only yard wastes (i.e., tree limbs and leaves) were accepted at the landfill (Ref. 3). However, another county official reported that garbage and an occasional car were also deposited in the landfill (Ref. 6). A state official from the Environmental Protection Division (EPD) reported that he had observed an orange, granular material (which took on a jelly-like consistency when wet) being placed into the landfill. He also confirmed that waste from the Hercules plant in Brunswick was deposited in the landfill (Ref. 4). File material

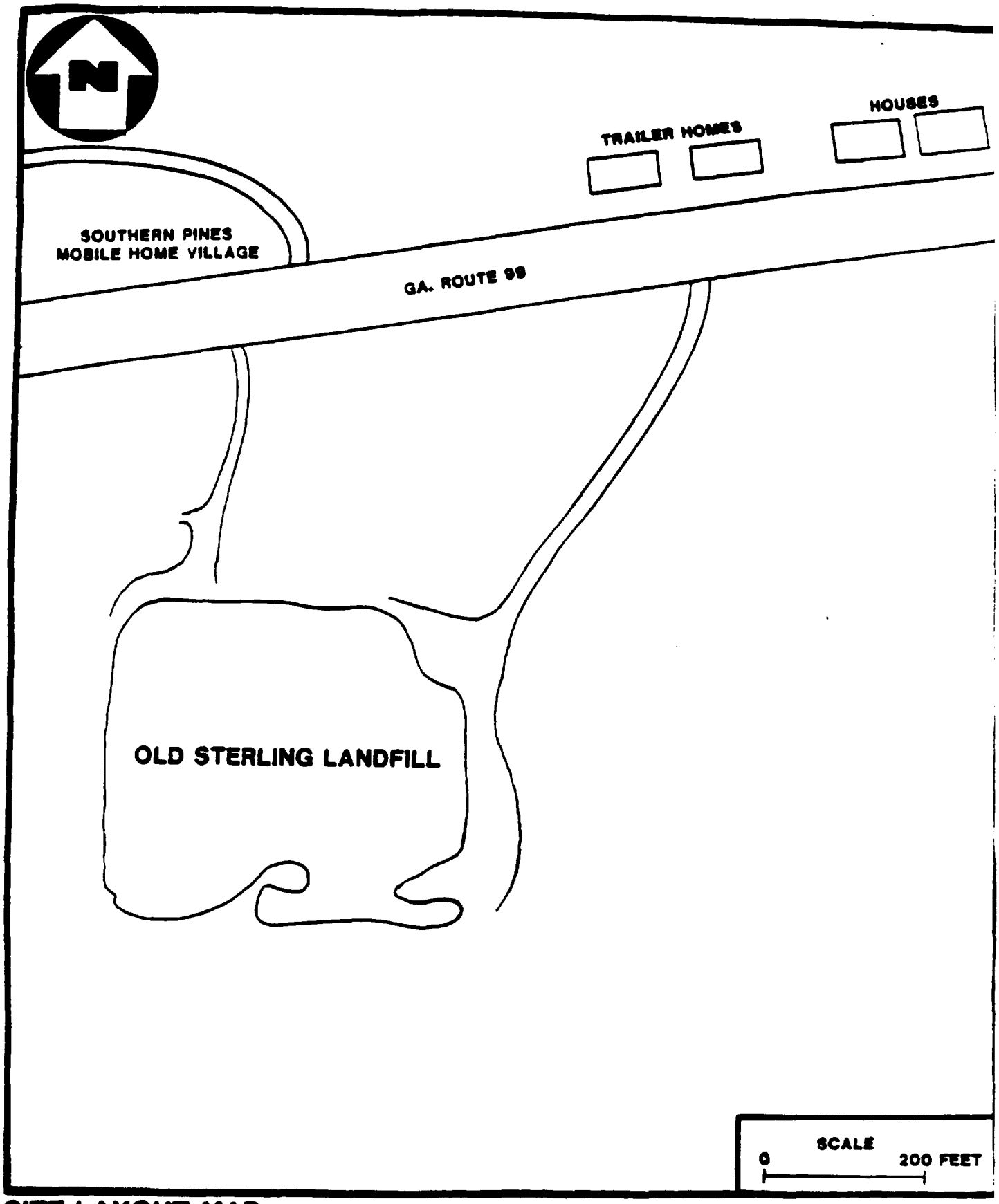


BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, STERLING, GEORGIA, 1978.

SITE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 1

NUS CORPORATION



SITE LAYOUT MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 2

NUS CORPORATION

indicates that Hercules deposited 265,000 cubic feet of mixed organics, inorganics, solvents, and trash in the landfill. Hercules reported that less than 2 percent of this volume could be considered hazardous (Ref. 7). The state reported that approximately 4,900 tons of pesticides with an estimated 1 percent of toxaphene were also deposited in the landfill (Ref. 1).

3.0 REGIONAL POPULATIONS AND ENVIRONMENTS

3.1 POPULATION AND LAND USE

3.1.1 Demography

The Old Sterling Landfill is located in a sparsely populated area of Highway 99 near Sterling. The population of Brunswick, the county seat, is 17,605. The population of Glynn County is 54,981 (Ref. 8). A house count shows approximately 940 homes within 3 miles of the landfill. The total population within a 4-mile radius is estimated at 6,800 (Appendix A). There are approximately 350 residents within 1 mile and approximately 760 residents between 1 and 2 miles from the landfill (Appendix A). The population within the 2- to 3-mile radius is 2,470 (Appendix A), and the population within the 3- to 4-mile radius is 1,263 (Ref. 9).

3.1.2 Land Use

The landfill has been closed, and the property is currently used as a private hunting preserve. The surrounding properties are residences and tree farms. The landfill property is unfenced (Ref. 2). The closest residence is located approximately 500 feet north of the landfill. There are several residences along Highway 99 north of the landfill (Ref. 2). There are no schools in the immediate vicinity. Although the ranges of at least 10 endangered or threatened species include the landfill area, no critical habitats are designated in Glynn County (Ref. 10). There are several wetland areas throughout the 4-mile radius. A subdivision or trailer park is located 0.5 mile east of the landfill. The area is known as Camp Squawchee or Touchstone Ridge (Appendix A) (Ref. 8).

3.2 SURFACE WATER

3.2.1 Climatology

The climate of Glynn County is warm and humid with warm to hot, humid summers and cool, damp winters. The earliest freeze in Glynn County usually occurs in early December, and the latest freeze usually occurs at the end of February. The county generally experiences approximately 300 frost-free

days each year. The average annual precipitation for the county is 52 inches per year. Net precipitation is 7 inches (Ref. 11). The 1-year, 24-hour rainfall is 4 inches (Ref. 12).

3.2.2 Overland Drainage

The area surrounding the landfill is very flat. The surface water draining from the landfill most likely collects in low areas and percolates into the ground. Any remaining water trends south overland for 0.7 mile and enters an unnamed canal. The canal trends south for 1.8 miles and enters Burnett Creek, which flows southwest for 3.2 miles and enters Cowpen Creek. Cowpen Creek continues south for 0.4 mile and enters the Turtle River, which trends southeast for 9.5 miles. The Turtle River terminates in the Brunswick River, which trends east for about 3 miles and discharges into St. Simons Sound. Some channels exist which connect the rivers on this pathway with other rivers in the area (Appendix A).

3.2.3 Potentially Affected Water Bodies

There are no surface water intakes within 15 miles downstream of the site (Ref. 13). Although the ranges of at least 10 endangered or threatened species include the landfill area, no critical habitats are designated in Glynn County (Refs. 10, 14). The rivers in this area support a significant amount of commercial fishing (Ref. 15). Due to the topography of the landfill and surrounding area, surface water would generally percolate into the ground.

3.3 GROUNDWATER

3.3.1 Hydrogeology

Glynn County lies within the Atlantic Coastal Plain Physiographic Province. In the Brunswick area, there are three distinct aquifer systems. These consist of the surficial or water-table aquifer, the water-bearing units in the Miocene sediments that act as one aquifer, and the Upper Floridan aquifer (also known as the principal artesian aquifer) (Ref. 16, p. 183).

Pleistocene to Recent age sediments comprise the surficial aquifer system (Ref. 17, p. E9). These sediments consist primarily of sand, gravel, and thin layers of clay extending from the surface to a depth of approximately 40 to 50 feet below land surface (bls). Layers of pure sand or clay are generally no more than a few inches thick. Layers of sand-clay mixtures are usually less than 5 feet thick (Ref. 16, pp. 185, 188). Medium-grained sand at depths of 12 to 17 feet and 35 to 50 feet furnish

most of the water in the aquifer with yields of approximately 5 to 20 gallons per minute (gpm) (Ref. 17, p. E22). The surficial aquifer receives recharge directly from rainfall, which percolates through the sediments to the shallow water table (Ref. 16, p. 185). Brunswick lies along the Atlantic Coast and flow direction in the surficial aquifer appears to be tidally influenced.

The surficial aquifer is underlain by a thick series of Miocene age clays and sandy clays with lens-shaped bodies of sand, gravel, and thin carbonate layers. Beneath the site area, the unconsolidated Miocene sediments are approximately 450 feet thick. Upper Miocene gravelly sand and thin limestone beds form the system of Miocene aquifers. They yield sufficient water for domestic and small industrial needs. Domestic supplies of up to 20 to 50 gpm can be obtained throughout Glynn County from wells that are 100 to 180 feet deep (Ref. 17, p. E23). These aquifers receive recharge directly from rainfall where they outcrop and from percolation of water from the overlying water-table aquifer system (Ref. 18, p. 152). Logs from domestic wells drilled in the Sterling area show the presence of a 15- to 20-foot thick clay layer which occurs approximately 120 feet bls (Ref. 19). Due to the limited amount of subsurface data, it is not known if the clay layer is continuous over the 2-mile site radius.

The Miocene aquifer system is hydraulically separated from the underlying Upper Floridan aquifer by thick sequences of dense, greenish gray, sandy clay of the Hawthorn Group ranging from 40 to 160 feet (Refs. 16, p. 185; 17, p. E10). These low-permeability sediments act as confining layers that prevent or retard the upward movement of artesian water from the Upper Floridan aquifer, as well as the downward movement of water from the overlying aquifers (Ref. 16, p. E11).

The Upper Floridan aquifer underlies most of the Georgia coastal plain and consists of limestones of early Miocene and Oligocene age, as well as the Ocala Limestone of late Eocene age. The Oligocene Series consists of phosphatic, sandy, fossiliferous, slightly dolomitic limestone. The sand is fine- to medium-grained, and black, polished phosphate pebbles are common. The Ocala Limestone is a porous, recrystallized, white to gray, bryozoan limestone. The pore spaces consist mostly of solution cavities. Caverns ranging from 2 to 7 feet in height are also present (Ref. 17, pp. E11, E12). While these solution cavities are normally indicative of karst topography, they are deep enough so that there is no surface expression of karst features (such as a sinkhole) in this area. These sediments form a continuous bed of limestone that is water bearing throughout its extent (Refs. 17, p. E25; 18, p. 70). In the site area, the top of the aquifer is found at a depth of approximately 500 feet bls, and the aquifer is approximately 530 feet thick (Ref. 16, pp. E11, E12).

In the coastal areas of Georgia, nearly all the groundwater is pumped from the Upper Floridan aquifer. Heavy pumping has created a cone of depression around Brunswick with flow in the aquifer toward the center of the cone (Figure 3). Because the Upper Floridan aquifer in the coastal area is confined and far from its recharge area, the aquifer is not influenced by local rainfall (Ref. 18, p. 108).

Sedimentary rocks of the Claiborne Group underlie the Upper Floridan aquifer. The upper portion of the Claiborne Group is a hard, dense, cherty, dolomitic limestone present at approximately 1,030 feet bls. This low-permeability unit acts as a confining layer between the freshwater in the Upper Floridan aquifer and the brackish water that occurs below this confining layer (Ref. 17, p. E13).

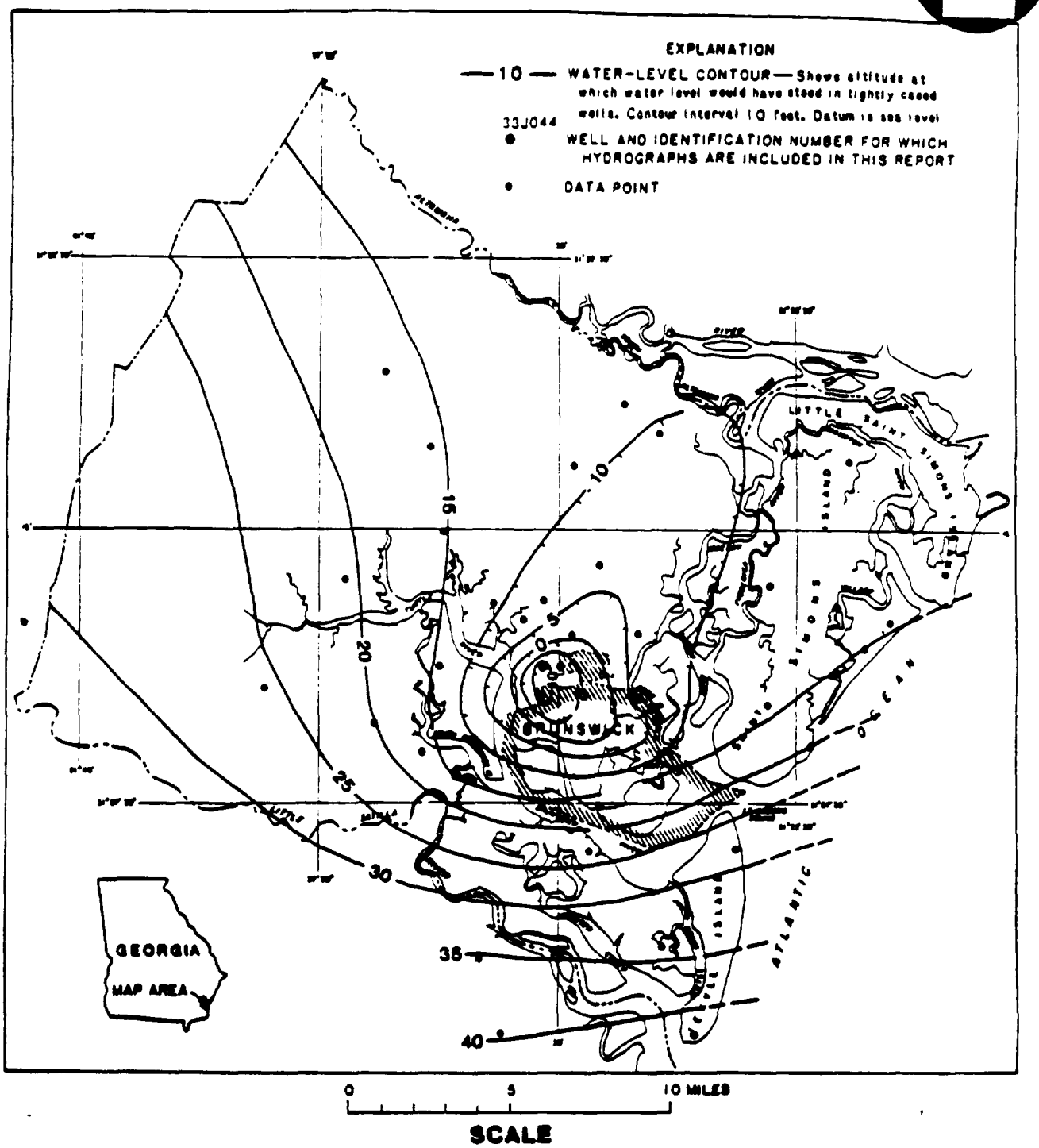
3.3.2 Aquifer Use

The surficial aquifer generally occurs in two water-bearing zones, one between approximately 12 to 17 feet bls, and one between 35 to 50 feet bls. Water yields of 5 to 20 gpm can be obtained from this aquifer, which is suitable for small domestic supplies (Ref. 17, p. E22). Domestic and small industrial wells are completed in sediments of the Hawthorn Group at depths of 140 to 500 feet bls and can produce water at rates between 2 to 500 gpm, with the deep wells giving the higher yields (Refs. 16, p. 187-189; 19).

The water needs of communities within 4 miles of the landfill are either served by the Brunswick Water System, the Glynn County Water System, or by private wells. The Brunswick Water System obtains its water from wells that are located more than 4 miles from the landfill (Ref. 20, Appendix A). The Glynn County Water System supplies about 110 connections from three wells. These wells are about 750 feet deep, and all are within 4 miles of the facility. The closest county well is 2.1 miles southeast of the landfill and serves 100 of the county's connections (Ref. 21, Appendix A). The remaining 10 connections are served by the other two county wells (Ref. 21). A house count shows approximately 940 homes within 3 miles of the landfill which are not served by one of the municipal water systems (Refs. 2, 18, 20, Appendix A). It is estimated that 95 percent of these homes obtain their water from wells cased to 120 feet bls or more. No shallow dug wells are still in use in this area (Ref. 19). The nearest private well is located 500 feet north of the landfill (Ref. 2, Appendix A).

3.4 SUMMARY OF POTENTIALLY AFFECTED POPULATIONS AND ENVIRONMENTS

The groundwater pathway is the main concern since groundwater is used for drinking, commercial, and industrial supplies. The county water system's wells are within 4 miles of the landfill. The closest



OBSERVATIONS WELL LOCATIONS AND THE WATER LEVEL IN THE UPPER FLORIDAN AQUIFER IN THE BRUNSWICK AREA, OCTOBER 1986. (REF. 22).

OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 3

NUS CORPORATION

county well is 2.1 miles southeast of the landfill. Also, it is estimated that 940 homes within 3 miles of the landfill are not served by a municipal water system (Ref. 2, Appendix A). The nearest private well is located 500 feet north of the landfill (Appendix A). Surface water in the landfill area is not of concern because runoff from the site most likely percolates into the ground.

The air and onsite pathways are not of concern because no significant amount of contaminants were present in surface soils.

4.0 FIELD INVESTIGATION

4.1 FIELD ANALYTICAL SUPPORT PROJECT

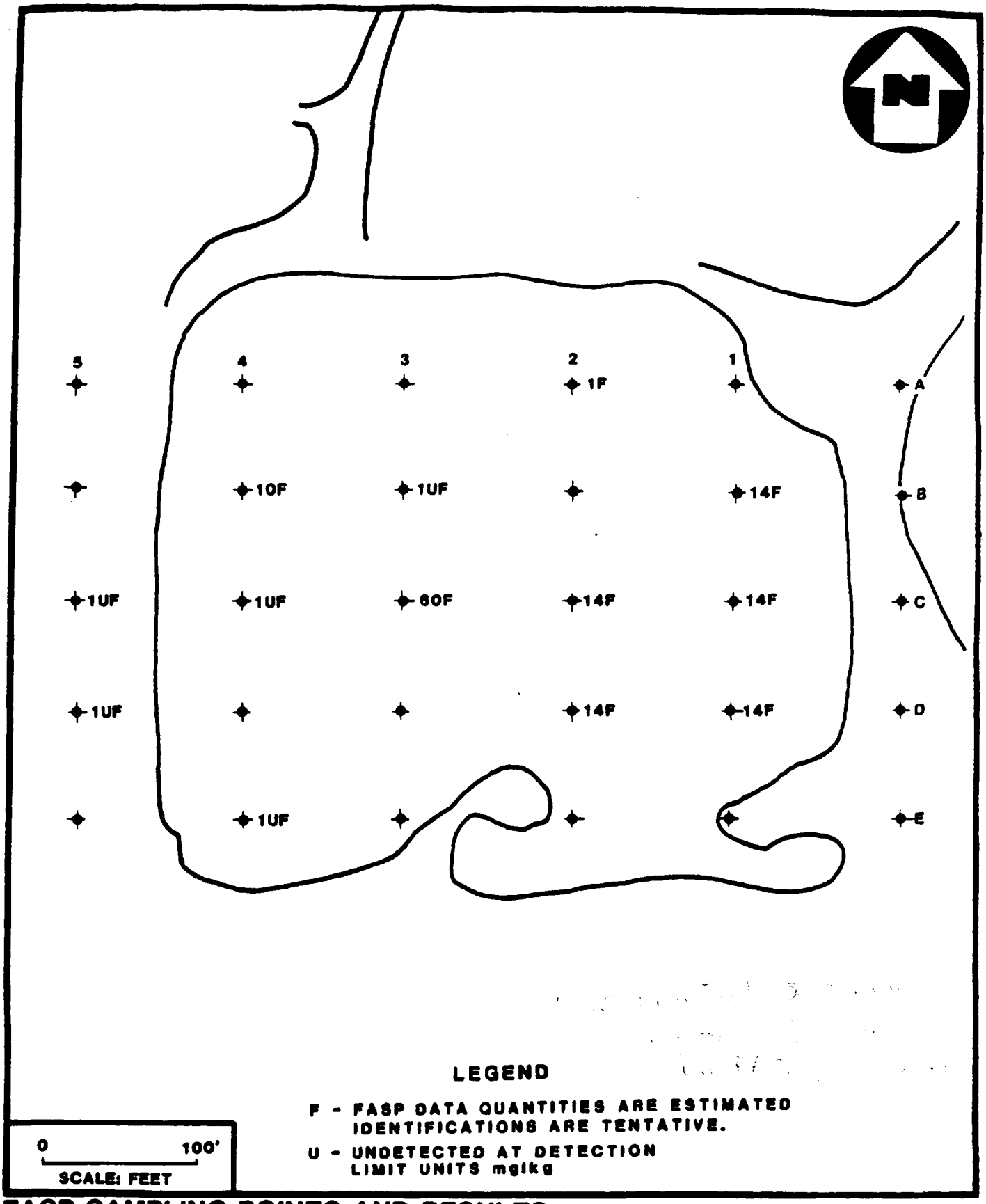
The Field Analytical Support Project (FASP) was employed at this site to assist in determining locations for collected samples to be analyzed under the Contract Laboratory Program (CLP). A mobile laboratory was set up and operated near the site. Since historical information indicated that toxaphene, an organic chlorinated compound was disposed of at this landfill, soil samples were screened by FASP for an indication of the presence of these compounds.

Prior to the FASP screening, a sampling grid was laid out at the landfill. The size of the grid was 400 by 500 feet with an approximate distance of 100 feet between sampling points. Thirteen samples were collected and analyzed during the FASP screening. Samples were collected at depths varying from 0 to 5 feet below land surface (bls). The FASP screening results indicated a specific area of chlorinated organic compound contamination at the landfill as illustrated in Figure 4 (Ref. 5). Eight of the 13 samples collected during the FASP screening were found to be contaminated. FASP screening data indicated the area near the loading embankment contained the highest concentrations of chlorinated organic compounds in the subsurface soil (Ref. 5). CLP sampling points OS-SS-02, OS-SB-02, and OS-TW-02 were moved to this area. Subsequent CLP analytical data revealed that toxaphene was present in the subsurface soil (Appendix C).

Data generated during the FASP screening are not intended to support listing or any enforcement action. The primary purpose was to help direct CLP sampling activities. Secondarily, the screening data has been used, with supporting CLP analytical results, to help characterize the landfill as to extent of contamination. Screening data was also used to support health and safety decisions, such as requirements for personal protective equipment. FASP methodology is described in Appendix B.

4.2 CONTRACT LABORATORY PROGRAM SAMPLE COLLECTION

The following discussion pertains to samples collected for analysis under the CLP.



FASP SAMPLING POINTS AND RESULTS
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 4

NUS CORPORATION

4.2.1 Sample Collection Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986.

4.2.2 Split Samples

Split samples were offered to Robert S. Hicks Jr., District Forester, Georgia-Pacific Corporation. The samples were declined (Ref. 5).

4.2.3 Description of Samples and Sample Locations

Sixteen environmental samples were collected during the inspection: one private well sample, four surface soil samples, one waste sample, four subsurface soil samples, one leachate sample, and five temporary well samples. Samples were collected on site to establish the types of contaminants present. A surface, subsurface, and groundwater sample were taken from four landfill locations: surface and subsurface on the westside, the southwest corner, the southside, and the eastside, respectively. The soil surface and subsurface background samples were collected from a location north of the landfill, adjacent to Highway 99. Offsite samples were collected next to the road, near the gate to the landfill, and across Highway 99 at the nearest residence. Sample code descriptions and rationale are presented in Table 1 and Figure 5, respectively. Subsurface soil samples were collected at depths of 3 to 5 feet. Water at the temporary well locations was encountered at 3 to 5 feet bls (Ref. 5). The offsite private well is approximately 146 feet deep and upgradient of the landfill (Ref. 5). The waste sample OS-WS-05, which had a jelly-like appearance and consistency and gray in color, was collected on the east side near the edge of the landfill. The leachate sample, the same substance as the waste, was also collected at this location.

4.2.4 Field Measurements

Several field measurements were recorded for all of the groundwater samples collected including temperatures of the samples at the time of collection, pH, and conductivity. Field measurements for the water samples are provided in Table 2.

TABLE 1

SAMPLE CODES, DESCRIPTIONS, AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Description	Rationale
OS-PW-01	Groundwater sample taken from private residence north of landfill, depth of well is 146 feet.	To determine the presence or absence of contaminants in the Floridan aquifer.
OS-SS-01	Background sample taken from a location north of landfill adjacent to Hwy. 99 and access road. Sample collected between 0 to 4 inches bls.	To establish background parameters.
OS-SS-02	Source sample taken from area near embankment area identified by FASP Sample #3C as contaminated. Sample collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SS-03	Source sample taken from area located southwest of the landfill. Sample collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SS-04	Source sample taken from area south of landfill. Collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-WS-05	Waste sample collected from the east side of the landfill. Substance had jelly-like appearance. Collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SB-01	Background sample taken from same location as OS-SS-01. Saturated soil collected 3 to 5 feet bls.	To determined background subsurface soil conditions.
OS-SB-02	Source sample identified by FASP as a contaminated area. Saturated soil collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-SB-03	Source sample from same hole as OS-SS-03. Saturated soil collected between 3 to 4 feet bls.	To determine the presence or absence of contaminants.

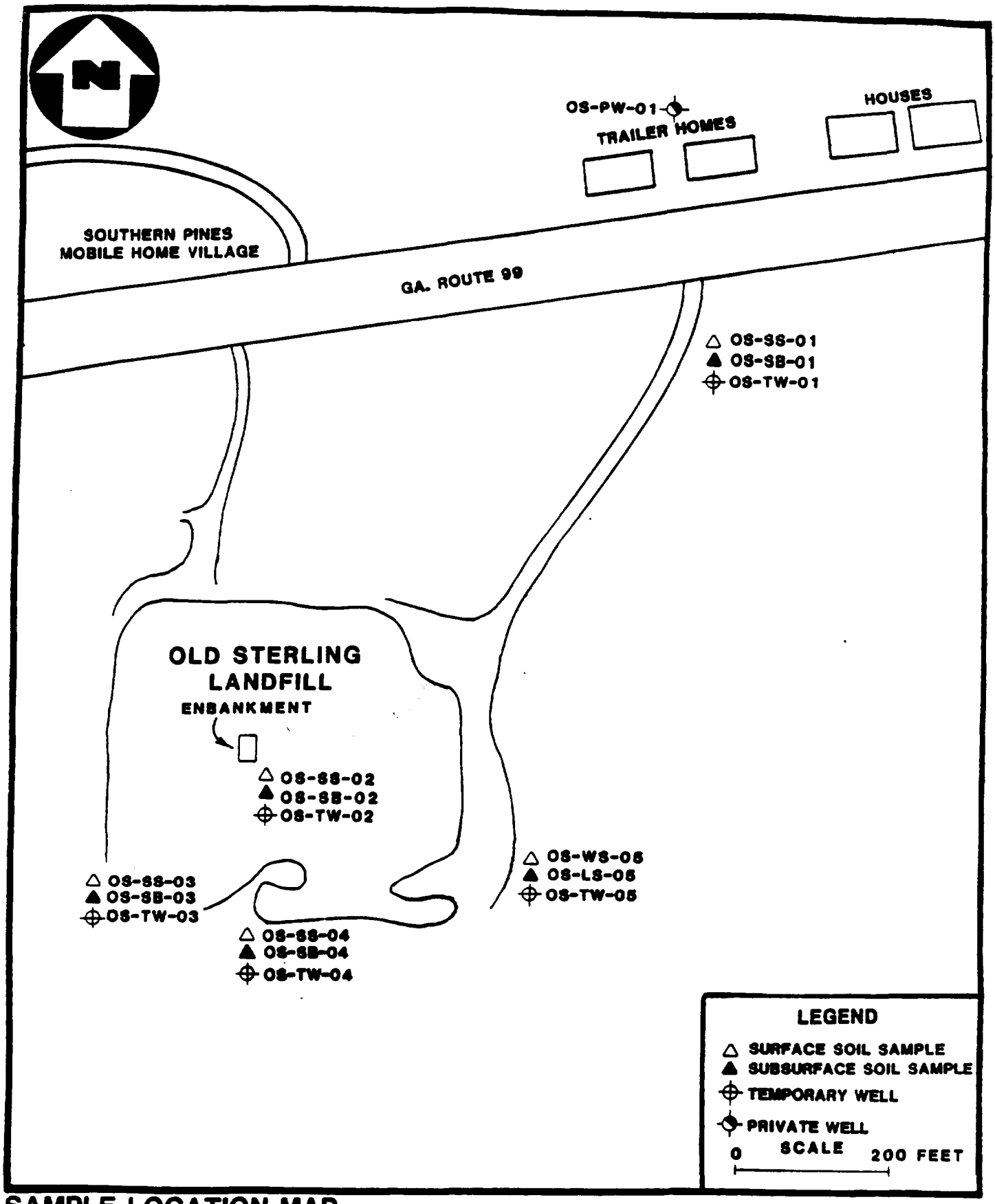
OS - Old Sterling Landfill
PW - Groundwater, Private Well
SS - Surface Soil
WS - Waste Sample
SB - Subsurface Soil
LS - Leachate Sample
TW - Groundwater, Temporary Well

TABLE 1

SAMPLE CODES, DESCRIPTIONS, AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Description	Rationale
OS-SB-04	Source sample from same location as OS-SS-04. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-LS-05	Leachate sample collected from material leaching from ground near OS-WS-05	To determine the presence or absence of contaminants.
OS-TW-01	Groundwater sample collected upgradient from the landfill at the same location as OS-SS-01 and OS-SB-01. Collected 3 to 5 feet bls.	To establish background parameters.
OS-TW-02	Groundwater sample collected from area identified by FASP. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-03	Groundwater sample collected from same location as OS-TW-03. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-04	Groundwater sample collected from same location as OS-SS-04. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-05	Groundwater sample taken from same location as OS-WS-05. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.

OS - Old Sterling Landfill
PW - Groundwater, Private Well
SS - Surface Soil
WS - Waste Sample
SB - Subsurface Soil
LS - Leachate Sample
TW - Groundwater, Temporary Well



SAMPLE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 5

NUS CORPORATION

TABLE 2

FIELD MEASUREMENTS
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Date (1989)	Time (hrs)	Temp. (°C)	pH	Conductivity (umhos/cm)
OS-PW-01	10/17	1055	23	7.0	250
OS-TW-01	10/16	1230	25	6.1	95
OS-TW-02	10/17	1300	27	6.5	850
OS-TW-03	10/17	1130	26	6.0	200
OS-TW-04	10/17	1000	24	6.9	680
OS-TW-05	10/17	NO	NO	NO	NO

OS - Old Sterling Landfill
PW - Private Well
TW - Temporary Well
NO - Not Obtained

4.3 CONTRACT LABORATORY PROGRAM SAMPLE ANALYSIS

The following discussions pertain to samples analyzed under the CLP.

4.3.1 Analytical Support and Methodology

All samples collected were analyzed under the Contract Laboratory Program (CLP) and analyzed for all parameters listed in the Target Compound List (TCL). Organic analysis of soil and water samples was performed by Aquatec, Inc., ETC, Toxicon & ESD, Athens, Georgia. Inorganic analysis of soil and water samples was performed by Southwest Labs of Oklahoma.

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; revised June 1, 1985 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

4.3.2 Analytical Data Quality

All analytical data were subject to a quality assurance review as described in the EPA, Environmental Services Division laboratory data guidelines. In the tables, some of the concentrations of the organic and inorganic parameters have been flagged with a "J". This indicates that the qualitative analysis was acceptable, but the quantitative value has been estimated. A few other compounds are flagged with an "N" indicating that they were detected based on the presumptive evidence of their presence. This means that the compound was tentatively identified, and its detection cannot be used as positive identification to its presence. The complete analytical data sheets are presented in Appendix C.

4.3.3 Presentation of Analytical Results

Throughout the following discussion of analytical results, the concentrations of some of the contaminants detected have been described as "significant". This means that the concentration was either three times that found in the background sample or it was three times the minimum quantitation limit of the background sample (MQL).

Sixteen samples, including a waste sample and a leachate sample, were collected and analyzed. Sample analyses detected several inorganic constituents of concern in three groundwater samples collected on site. Sample OS-TW-02 had an estimated concentration of 38 ug/l lead (12.7 times MQL), 230 ug/l manganese (17.7 times background), and 15 ug/l vanadium (3.75 times MQL). Sample OS-TW-04 contained 7 ug/l selenium (3.5 times MQL), and sample OS-TW-05 contained 190 ug/l barium (7.9 times background) and 510 ug/l manganese (39 times background). No significant concentrations of inorganic constituents were found in the soil samples. Inorganic analytical results can be found in Tables 3, 4, and 5.

Significant concentrations of organic constituents were found in one subsurface soil sample, two groundwater samples, and the leachate sample. Toxaphene, a pesticide reportedly disposed of at the landfill, was found in the subsurface soil sample, OS-SB-02, at a concentration of 150,000 ug/kg (714 times MQL). Other contaminants found in this sample were two tentatively identified compounds with a total estimated concentration of 11,000 ug/kg and 18 unidentified compounds having a total estimated concentration of 20,000 ug/kg. In the groundwater sample, OS-TW-02, 15 tentatively identified organic compounds with a total estimated concentration of 99,530 ug/l were detected. Some of these compounds are terpenes or derivatives of terpenes, which occur in wood and wood tar products. The second groundwater sample, OS-TW-05, contained small, estimated concentrations of six tentatively identified compounds. The leachate sample, OS-LS-05, contained several compounds associated with soaps and cleaning agents. Organic analytical results can be found in Tables 6, 7, and 8.

4.4 SUMMARY OF FIELD INVESTIGATION

The compound of major concern found at the landfill was toxaphene. Toxaphene was reported to be disposed of at the landfill. The FASP results showed an area of chlorinated organic compound contamination. This area was FASP location 3C. The FASP concentration was 60 mg/kg (Figure 4). A CLP sample, OS-SB-02, was collected from the same location. The amount detected in sample OS-SB-02 was 150,000 mg/kg for toxaphene. The CLP finding confirmed the FASP finding of organic contamination. Both results confirm that toxaphene was disposed of at the site. Barium, lead, manganese, selenium, and vandium were also found in groundwater samples.

TABLE 3

SUMMARY OF INORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

	Private Well	Upgradient	Onsite			
PARAMETERS (ug/l)	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
ALUMINUM	-	9900	12,000	15,000	1900	12,000
BARIUM	12	24	56	41	21	190
CALCIUM	64,000	1800	180,000	22,000	35,000	140,000
CHROMIUM	-	12	14	14	-	8
IRON	320J	920J	13,000J	1300J	260J	38,000J
LEAD	-	3U	38J	-	-	-
MAGNESIUM	2800	740	18,000	6100	9500	11,000
MANGANESE	61	13	230	16	-	510
MERCURY	-	0.2J	-	-	-	-
NICKEL	-	10U	26	-	-	-
POTASSIUM	1000	410	6700	7500	19,000	38,000
SELENIUM	-	2U	-	-	7	-
SODIUM	9000	11,000	31,000	8200	120,000	150,000
VANADIUM	-	4U	15	7	6	8

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 4

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (mg/kg)	Background	Onsite		
	OS-SB-01	OS-SB-02	OS-SB-03	OS-SB-04
ALUMINUM	3500	3800	4300	4900
BARIUM	40	3 2	2 2	5 4
CALCIUM	40U	230	-	-
CHROMIUM	4 5	2 6	4	3 6
IRON	380J	290J	270J	650J
MAGNESIUM	32	37	38	120
MANGANESE	2 6	4	-	3 2
VANADIUM	10	1 9	-	2 2

- Material analyzed for but not detected above minimum quantitation limit

J Estimated value

U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 5

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

	Background	Onsite				
PARAMETERS (mg/kg)	OS-SS-01	OS-SS-02	OS-SS-03	OS-SS-04	Waste OS-WS-05	Leachate OS-LS-05
ALUMINUM	3700	3400	4600	6000	700	3400
BARIUM	12	2.3	6.7	14	7.3	5.8
CALCIUM	150	230	92	86	13,000	1520
CHROMIUM	5.2	2.9	2.6	2.9	1.4	2.5
COPPER	50UJ	-	-	8.9J	1.8	8.2J
IRON	6000J	290J	1400J	1800J	480	840J
LEAD	9.3J	-	-	-	-	23J
MAGNESIUM	120	52	110	170	350	220
MANGANESE	53	1.3	4.7	12	8.6	6.2
SODIUM	70U	20	-	-	14,000	14,000
VANADIUM	3U	-	2.9	3.6	2	2.1
ZINC	7U	-	-	-	5.2	-
STRONTIUM	NA	NA	NA	NA	19	NA
TITANIUM	NA	NA	NA	NA	31	NA

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
NA Not Analyzed
U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 6

SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/l)	Private Well	Upgradient	Onsite			
	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
PURGEABLE COMPOUNDS						
CARBON DISULFIDE	-	5U	-	-	-	21
CARENE[1]			600JN			
DIMETHYMETHYLENEHIPTADIENE[1]			200JN			
ETHYL BENZENE	-	5U	30J	-	-	-
ETHYLDIMETHYLBENZENE[1]			3000JN			
TRIMETHYLBICYCLOHEPTANONE[1]			700JN			
UNIDENTIFIED COMPOUNDS,NO[1]		-	3000J.3	-	-	-
EXTRACTABLE COMPOUNDS						
PHENOL	-	10U	-	4J	-	-
N-NITROSODIPHENLYAMINE/DIPHENYLAMINE	-	10U	-	-	-	19
PINENE[1]			5000JN		-	
CAMPHENE[1]			2000JN			
TRIMETHYLBICYCLOHEPTANE[1]			40,000JN/2			
METHYL(METHYLETHYL)OXABICYCLOHEPTANE[1]			4000JN			
METHYL(METHYLETHYL)BENZENE[1]			10,000JN			

- \- Material analyzed for but not detected above minimum quantitation limit
- J Estimated value
- N Presumptive evidence of presence of material
- U Material was analyzed for but not detected. The number is the minimum quantitation limit.
- 1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

TABLE 6

SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/l)	Private Well	Upgradient	Onsite			
	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
CINEOLE[1]			3000JN			
DIMETHYLBICYCLOHEPTANONE[1]			2000JN			
CAMPHOR[1]			20,000JN			
TRIMETHYLBICYCLOHEPTANOL[1]			8000JN			
METHYL(METHYLETHYL)PHENOL[1]			1000JN			
TETRAMETHYLBUTYLPHENOL[1]						9JN
BENZOTHIAZOLONE[1]						50JN
TRIMETHYLHEXANOIC ACID[1]						20JN
OXYBISBENZENE[1]						20JN
TETRAMETHYLPHENANTHRENE[1]						20JN
UNIDENTIFIED COMPOUNDS/NO[1]	-	-	10,000J 4		-	40J 2

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

TABLE 7

SUMMARY OF ORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/kg)	Background	Onsite		
	OS-SB-01	OS-SB-02	OS-SB-03	OS-SB-04
PURGEABLE COMPOUNDS				
TOLUENE	10U	5J		3J
TRIMETHYLBICYCLOHEPTANE[1]		1000JN		
EXTRACTABLE COMPOUNDS				
OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENECARBOXALDEHYDE[1]		10 000JN		
UNIDENTIFIED COMPOUNDS/NO[1]	-	20 000J 18	-	-
PESTICIDE\PCB COMPOUNDS				
TOXAPHENE	210U	150,000		-

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit.
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

TABLE 8

SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/kg)	Background	Onsite				
	OS-SS-01	OS-SS-02	OS-SS-03	OS-SS-04	Waste OS-SS-05	Leachate OS-LS-05
PURGEABLE COMPOUNDS						
CHLOROFORM	3J	-	-	-	-	-
METHYL ISOBUTYL KETONE	17U	-	-		-	12J
TOLUENE	90	-	15	11	-	-
TRIMETHYLBICYCLOHEPTANE[1]						20JN
EXTRACTABLE COMPOUNDS						
(3-AND/OR 4-)METHYLPHENOL	350U	-	-	-	-	89J
HEXANOIC ACID[1]						500JN
HEXADECANOIC ACID[1]						2000JN
OCTADECANOIC ACID[1]						700JN
DIHYDROBENZODIOXEPIN[1]						800JN
OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE CARBOXYLIC ACID METHYLESTER[1]		200JN				
UNIDENTIFIED COMPOUNDS/NO	-	-	600J/1	1000J/1	-	10,000J/9

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit.
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

5.0 SUMMARY

The groundwater pathway is of primary concern due to the number of homes in the area that use groundwater. Also, the county's water system wells are located within the 4-mile radius of the site. Analytical results of samples collected during the field investigation indicated groundwater and soil contamination at Old Sterling Landfill. The air and onsite pathways are not of concern since no contaminants were found significantly above background in surface soils. It is estimated that approximately 940 homes are not served by a municipal water system and are using private wells.

Contaminants were present in leachate, subsurface soil, and groundwater samples. A subsurface soil sample, OS-SB-02, contained an elevated concentration of toxaphene at 714 times the MQL of the background sample. This sample result supports file material information stating that toxaphene was disposed of at the landfill. Toxaphene is a suspected human carcinogen. The following heavy metals were detected in groundwater samples: barium, lead, manganese, selenium, and vanadium; no toxic organic contaminants were found. Based on the potential for migration of contaminants to the aquifer of concern, it is recommended that a Listing Site Investigation be conducted at Old Sterling Landfill.

REFERENCES

1. Potential Hazardous Waste Site Identification and Preliminary Assessment (EPA Form T2070-2) for Old Sterling Landfill. Filed by Jennifer Kaduck, Georgia Department of Natural Resources, January 15, 1980.

2. NUS Field Logbook No. F4-1279 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of facility reconnaissance, March 3, 1989.

3. Robert Howe, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

4. Morgan Cantrell, Georgia Environmental Protection Division, Municipal Solid Waste Management, telephone conversation with Geoffrey Carton, March 22, 1989. Subject: Hazardous materials at the Old Sterling Landfill.

5. NUS Corporation Field Logbook No. F4-1738 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of Phase II, Screening Site Inspection, October 16, 1989.

6. Olin Chancy, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

7. EPA Notification of Hazardous Waste Site (EPA Form 8900-1) for Hercules Incorporated, Brunswick, Georgia. Filed by K.T. Horton, Hercules, Inc., May 29, 1981.

8. Brunswick Golden Isles Chamber of Commerce, Brunswick and Vicinity (1980), scale 1:250,000.

9. U.S. Environmental Protection Agency, Graphical Exposure Modeling System (GEMS) Data Base, compiled from U.S. Bureau of the Census data (1980).

10. U.S. Fish and Wildlife Service, Atlantic Coast Ecological Inventory, Georgia (1980), scale 1:250,000.

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

12. U.S. Department of Commerce, Rainfall Frequency Atlas of the United States, Technical Paper No. 40 (Washington, D.C.: GPO, 1961), p. 93.

13. Brenda Pittman, Environmental Protection Division, telephone conversation with Walter Riley, NUS Corporation, April 27, 1990. Subject: Intakes within 15 miles of Sterling.

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

15. Nelson Johnson, National National Marine Fisheries Service, U. S. Department of Commerce, letter to Bob Donaghue, NUS Corporation, February 10, 1989. Subject: Transmittal of preliminary fish landings data.

16. Thomas Watson, "Aquifer Potential of the Shallow Sediments of the Coastal Area of Georgia," in Proceedings of the Second Symposium on the Geology of the Southeastern Coastal Plain, Information Circular 53 (1982), pp. 183-194.

17. Robert Wait, Geology and Occurrence of Fresh and Brackish Ground Water in Glynn County, Georgia, Geological Survey Water-Supply Paper 1613-E (Washington, D.C.: GPO, 1965), pp. E9-E26.

18. J.S. Clarke, et al. Ground-Water Data for Georgia, Open-File Report 87-376 (Doraville, Georgia, 1987), pp. 70-177.

19. Gerald Nix, Nix Well Drilling, telephone conversation with Geoffrey Carton, NUS Corporation, March 23, 1989. Subject: Wells in the Sterling area.

20. NUS Corporation Field Logbook No. F4-1282 for LCP Chemicals, Inc., TDD No. F4-8902-27. Documentation of facility reconnaissance, March 3, 1989.

21. Ralph Thurston, Superintendent, Glynn County Water Department, telephone conversation with Geoffrey Carton, NUS Corporation, April 20, 1989. Subject: County water service and well locations.

No city found ! press RETURN to try again.

REFERENCE 9

COVERAGE

STATE	COUNTY	STATE NAME	COUNTY NAME
13	127	Georgia	Glynn Co
13	191	Georgia	Mc Intosh Co
13	305	Georgia	Wayne Co

CENTER POINT AT STATE : 13 Georgia
COUNTY : 127 Glynn Co

Press RETURN key to continue...

REGION OF THE COUNTRY

Zipcode found: 31520 at a distance of 7.6 Km

STATE	CITY NAME	COMMUNITY	FIPSCODE	LATITUDE	LONGITUDE
GA	BRUNSWICK	JEKYLL ISLAND	13127	31.2000	81.5050

Press RETURN key to continue ...

CENSUS DATA

OLD STERLING
LATITUDE 31:16: 0 LONGITUDE 81:31:25 1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	0	0	0	0	0	0
S 2	0	0	0	0	0	0	0
S 3	0	0	0	0	2675	0	2675
S 4	0	0	0	0	0	0	0
S 5	0	0	0	0	1222	1263	2485
S 6	0	0	0	0	1614	0	1614
S 7	0	0	0	0	0	0	0
S 8	0	0	0	0	0	0	0
RING TOTALS	0	0	0	0	5511	1263	6774

Press RETURN key to continue ...

STAR STATION

INDEX NUMBER	STATION NAME	LATITUDE DEGREE	LONGITUDE DEGREE	PERIOD OF RECORD	STABILITY CLASSES	DISTANCE (km)
93836	BRUNSWICK/GLYNCO GA	31.2500	81.4667			5 5.71
13889	JACKSONVILLE FL	30.5000	81.7000			5 86.82
13824	SAVANNAH/HUNTER GA	32.0167	81.1333			5 91.14
13870	ALMA/BACON CO GA	31.5333	82.5167			5 98.72
03822	SAVANNAH/TRAVIS GA	32.1333	81.2000			5101.02
93545	VALDOSTA GA	30.7833	83.2833			5175.92
13880	CHARLESTON SC	32.9000	80.0333			5239.35

Press RETURN key to continue ...

U.S. SOIL DATA

STATE : GEORIGA

LATITUDE : 31:16: 0 LONGITUDE : 81:31:25
THE STATION IS INSIDE H.U. 3070203

GROUND WATER ZONE	: 10			
RUNOFF SOIL TYPE	: 1			
EROSION	: 7.7190E-04			CM/MONTH
DEPTH TO GROUND WATER BETWEEN	: 3.0480E+02	AND	1.5240E+03	
FIELD CAPACITY FOR TOP SOIL	: 6.0000E-02			
EFFECTIVE POROSITY BETWEEN	: 2.0000E-02	AND	3.0000E-01	
SEEPAGE TO GROUNDWATER BETWEEN	: 4.6330E+03	AND	1.3900E+04	CM/MONTH
DISTANCE TO DRINKING WELL	: 2.6000E+04			CM

Press RETURN key to continue ...

U.S. CITY

MENU: Geodata Handling Data List procedures

1. Site level retrieval of data (SITERET)
2. Access Census Data (CENSUS)
3. Determine County Coverage (COVERAGE)
4. Geographic Data Management (GEODM)
5. HUCODE/SOIL locator (HUCODE)
6. Convert to Lat/Long (LATLON)
7. Lookup/Examine Star Station Data (STAR)
8. Find US cities (USCITY)
9. Find Soil Survey Status of Counties (SSURVEY)

Enter an option number or a procedure name (in parentheses)
or a command: HELP, HELP option, BACK, CLEAR, EXIT, TUTOR
GEMS>

Enter an option number or a procedure name (in parentheses)
or a command: HELP, HELP option, BACK, CLEAR, EXIT, TUTOR
GEMS>

Enter an option number or a procedure name (in parentheses)
or a command: HELP, HELP option, BACK, CLEAR, EXIT, TUTOR
GEMS>

Enter an option number or a procedure name (in parentheses)

REFERENCE 10

Shown in BROWN; species with special status shown in RED-(F) or (S) indicates species protected by Federal or State Legislation (see text)

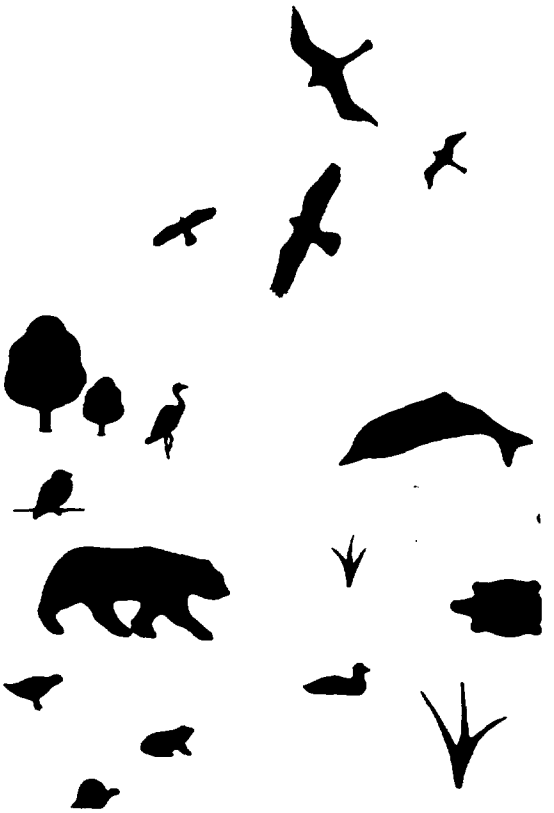
SYMBOL	SPECIES
	PLANTS (301–350)
	301 Eastern hemlock
	302 Spleenwort (S)
	303 Spider lily (S)
	304 Pond bush (S)
	305 Watermilfoil (S)
	306 Hooded pitcher plant (S)
	307 Tree
	308 Prickly pear cactus (S)
	309 Trailing arbutus (S)
	310 Eastern bumelia
	311 Pitcher plant
	312 Baldcypress
	313 Redbay
	314 Seaside alder
	315 Box huckleberry
	316 Purple fringeless orchid
	317 Pink lady's slipper
	318 Ebony spleenwort (S)
	319 Orchids (S)
	320 Golden club (S)
	321 Florida beargrass
	322 East-coast coontie
	323 Fall-flowering ixia
	324 Jackson-vine
	325 Spoon-flower
	326 Curtiss milkweed
	327 Sea lavender
	328 Hand fern
	329 Needle palm
	330 Yellow squirrel-banana
	331 Beach creeper
	332 Florida coontie
	333 Four-petal pawpaw
	334 Bird's nest spleenwort
	335 Burrowing four-o'clock
	336 Beach star
	337 Silver palm
	338 Dancing lady orchid
	339 Tamarindillo
	340 Fuch's bromeliad
	341 Everglades peperomia
	342 Buccaneer palm
	343 Slender spleenwort
	344 Pineland jacquemontia
	345 Mahogany mistletoe
	346 Florida thatch
	347 Twisted air plant
	348 Long's bittercress
	349 Venus's flytrap
	INVERTEBRATES (351–400)
	351 Monarch butterfly
	352 Zebra butterfly
	BIRDS (401–600)
	SHOREBIRDS (401–430)
	401 Shorebirds
	402 Terns
	403 Gulls
	404 Forster's tern
	405 Arctic tern
	406 Least tern (S)
	407 Roseate tern (S)
	408 Common tern
	409 Great black-backed gull
	410 Herring gull
	411 Laughing gull
	412 Black skimmer (S)
	413 Turnstones
	414 Plovers
	415 Piping plover
	416 American oystercatcher (S)
	WADING BIRDS (431–460)
	431 Wading birds
	432 Herons
	433 Egrets
	434 Rails
	435 Ibises
	436 Bitterns
	437 Great blue heron (S)
	438 Wood ibis (S)
	439 Anhinga
	440 Little blue heron (S)
	441 Yellow-crowned night heron (S)
	442 Black-crowned night heron
	443 Florida sandhill crane (S)
	444 Louisiana heron (S)
	445 Limpkin (S)
	446 Roseate spoonbill (S)
	447 Snowy egret (S)
	448 Magnificent frigate-bird (S)
	449 Reddish egret (S)
	450 Clapper rail
	451 King rail
	452 Virginia rail
	453 Sora rail
	WATERFOWL (461–500)
	461 Waterfowl
	462 Swans
	463 Geese
	464 Dabbling ducks
	465 Diving ducks
	466 Common eider
	467 Harlequin duck
	468 Wood duck
	469 Fulvous tree duck
	470 Loons
	471 Grebes

Brunswick

GEORGIA

1:250 000-scale map of

Atlantic Coast Ecological Inventor



Produced by

U. S. FISH AND WILD SERVICE

1980

AQUATIC ORGANISMS

Shown in BLUE; species with special status shown in RED-(F) or (S) indicates species protected by Federal or State Legislation (see text)

SYMBOL	SPECIES
	PLANTS [illegible]
	1 [illegible] moss
	2 [illegible]
	INVERTEBRATES [illegible]
	51 Crabs
	[illegible] Mussels
	[illegible] Oysters
	[illegible] Scallops
	[illegible] Clams
	[illegible] Whelks
	[illegible]
	[illegible]

439 Anhinga
440 Little blue heron (S)
441 Yellow-crowned night heron (S)
442 Black-crowned night heron
443 Florida sandhill crane (S)
444 Louisiana heron (S)
445 Limpkin (S)
446 Roseate spoonbill (S)
447 Snowy egret (S)
448 Magnificent frigate-bird (S)
449 Reddish egret (S)
450 Clapper rail
451 King rail
452 Virginia rail
453 Sora rail

WATERFOWL (461-500)

461 Waterfowl
462 Swans
463 Geese
464 Dabbling ducks
465 Diving ducks
466 Common eider
467 Harlequin duck
468 Wood duck
469 Fulvous tree duck
470 Loons
471 Grebes
472 Brant geese
473 Snow goose
474 Gadwall
475 Black duck

RAPTORS (501-530)

501 Raptors
502 Owls
503 Kites
504 Hawks
505 Bald eagle (F)
506 Osprey (S)
507 Peregrine falcon (F)
508 Copper's hawk (S)
509 Swallow-tailed kite
510 Marsh hawk (S)
511 Southeastern American kestrel (S)
512 Florida burrowing owl (S)

SEABIRDS (531-550)

531 Seabirds
532 Petrels, shearwaters, and albatroses
533 Pelican and allies
534 Alcids
535 Brown pelican (F)
536 Black guillemot
537 Leach's petrel
538 Razorbill
539 Common puffin
540 Double-crested cormorant
541 Gannet
542 Wilson's petrel
543 Northern phalarope
544 Audubon's shearwater
545 Greater shearwater
546 Shearwaters
547 Petrels
548 Jaegers
549 White pelican

SONGBIRDS AND OTHERS (551-600)

551 Songbirds and others
552 Red-cockaded woodpecker (F)
553 Chachalaca
554 Bachman's warbler (F)
555 Wild turkey
556 American woodcock
557 Pileated woodpecker
558 Swainson's warbler
559 Ruffed grouse
560 Bobwhite
561 Mourning dove
562 Warblers
563 Ring-necked pheasant
564 Bank swallow
565 Dusky seaside sparrow (F)
566 White-crowned pigeon (S)

REPTILES AND AMPHIBIANS (601-700)

601 Eastern narrow-mouthed toad (S)
602 Eastern indigo snake (F)
603 American alligator (F)
604 Northern diamondback terrapin
605 Amphibians
606 Greater siren
607 Bog turtle (S)
608 Gopher tortoise (S)
609 Eastern tiger salamander (S)
610 Northern fence lizard
611 Five-lined skink
612 Map turtle
613 Plymouth red-bellied turtle (F)
614 Eastern diamondback rattlesnake
615 Carolina gopher frog
616 Florida gopher frog (S)
617 Atlantic salt marsh watersnake (F)
618 American crocodile (F)
619 Florida Keys mole skink (S)
620 Florida black-headed snake (S)
621 Pine barrens tree frog (S)
622 Northern pine snake (S)
623 Corn snake (S)
624 Timber rattlesnake (S)
625 Southern gray tree frog (S)

MAMMALS (701-800)

701 Beaver
702 Whitetail deer
703 European fallow deer
704 Blackbeard Island deer
[illegible]

[illegible] RED-[illegible] indicates species protected by Federal [illegible] State Legislation (see text)

SYMBOL SPECIES

PLANTS (1-50)

1 [illegible] moss
2 Rockweed

INVERTEBRATES (51-[illegible])

51 Crabs
52 Mussels
53 Oysters
54 [illegible]
55 Clams
56 Worms
57 Shrimp
58 American lobster
59 Blue crab
60 Eastern oyster
[illegible]

FISH [illegible]

[illegible]
129 Striped bass
130 Black sea bass
131 Redbreast [illegible]
132 Warmouth
133 Bluegill
134 Largemouth bass
135 Black crappie
136 Sheepshead
137 Spotted seatrout
138 Weakfish
139 Spot
140 [illegible]
[illegible]
145 [illegible]
[illegible]

[illegible]
603 American alligator (F)
604 Northern diamondback terrapin
605 Amphibians
606 Greater siren
607 Bog turtle (S)
608 Gopher tortoise (S)
609 Eastern tiger salamander (S)
610 Northern fence lizard
611 Five-lined skink
612 Map turtle
613 Plymouth red-bellied turtle (F)
614 Eastern diamondback rattlesnake
615 Carolina gopher frog
616 Florida gopher frog (S)
617 Atlantic salt marsh watersnake (F)
618 American crocodile (F)
619 Florida Keys mole skink (S)
620 Florida black-headed snake (S)
621 Pine barrens tree frog (S)
622 Northern pine snake (S)
623 Corn snake (S)
624 Timber rattlesnake (S)
625 Southern gray tree frog (S)

MAMMALS (701–800)

701 Beaver
702 Whitetail deer
703 European fallow deer
704 Blackbeard Island deer
705 Opossum
706 Marsh rabbit
707 Rice rat
708 Raccoon
709 St. Simon Island raccoon
710 Mink
711 River otter (F)
712 Feral hog
713 Feral cow
714 Cumberland Island pocket gopher
715 Anastasia Island cotton mouse
716 Aquatic furbearers
717 Black bear (S)
718 Bobcat
719 Eastern gray squirrel
720 Eastern fox squirrel
721 Eastern cottontail
722 Delmarva fox squirrel (F)
723 Muskrat
724 Red fox
725 Bats
726 Gray fox
727 Striped skunk
728 Nutria
729 Longtail weasel
730 Colonial pocket gopher (S)
731 Wild ponies
732 Sika deer
733 Beach meadow vole
734 Block Island meadow vole
735 Pallid beach mouse (S)
736 Sherman's fox squirrel (S)
737 Florida mouse (S)
738 Florida panther (F)
739 Goff's pocket gopher (S)
740 Key Largo wood rat (S)
741 Lower keys cotton rat (S)
742 Key Largo cotton mouse (S)

HABITAT USE

Shown in RED for species with special status, BLUE for aquatic organisms and BROWN for terrestrial organisms

a Spawning ground
b Nursery
c Commercial harvesting area
d Adult concentration
e Overwintering area
f Sport fishing/hunting area
g Migratory area
h Nesting area
i Unusual distribution or specimen

433 Egrets
434 Rails

146 Black drum
147 Summer flounder
148 Southern flounder
149 Winter flounder
150 Rainbow smelt
151 Atlantic herring
152 Threadfin shad
153 Yaro
154 Atlantic croaker
155 Spot croaker
156 White bass
157 Northern kingfish
158 Silver perch
159 Florida pompano
160 Bluefish
161 Spanish mackerel
162 Cobia
163 Mullet
164 White shrimp
165 Redeye chub
166 Pink shrimp
167 Yellow perch
168 Pumpkinseed
169 Brown bullhead
170 Atlantic cod
171 Pollock
172 Haddock
173 Hake
174 Bluefish
175 Walleye
176 Northern pike
177 Scup
178 Tautog
179 Atlantic haddock
180 Bay anchovy
181 Butterfish
182 Little tunny
183 Atlantic silverside
184 Brown trout
185 Dolphin
186 Yellowfin flounder
187 Gulf flounder
188 Pinfish
189 King mackerel
190 Pigfish
191 White grunt
192 Tripletail
193 Ladyfish
194 Snook
195 Jack
196 Snapper
197 Grouper
198 Sailfish
199 Great barracuda
200 Maryland darter (F)

REPTILES AND AMPHIBIANS [illegible]

201 Green sea turtle (F)
202 Loggerhead sea turtle (F)
203 Hawksbill turtle (F)
204 Atlantic ridley turtle (F)
205 Leatherback turtle (F)

MAMMALS (251–300)

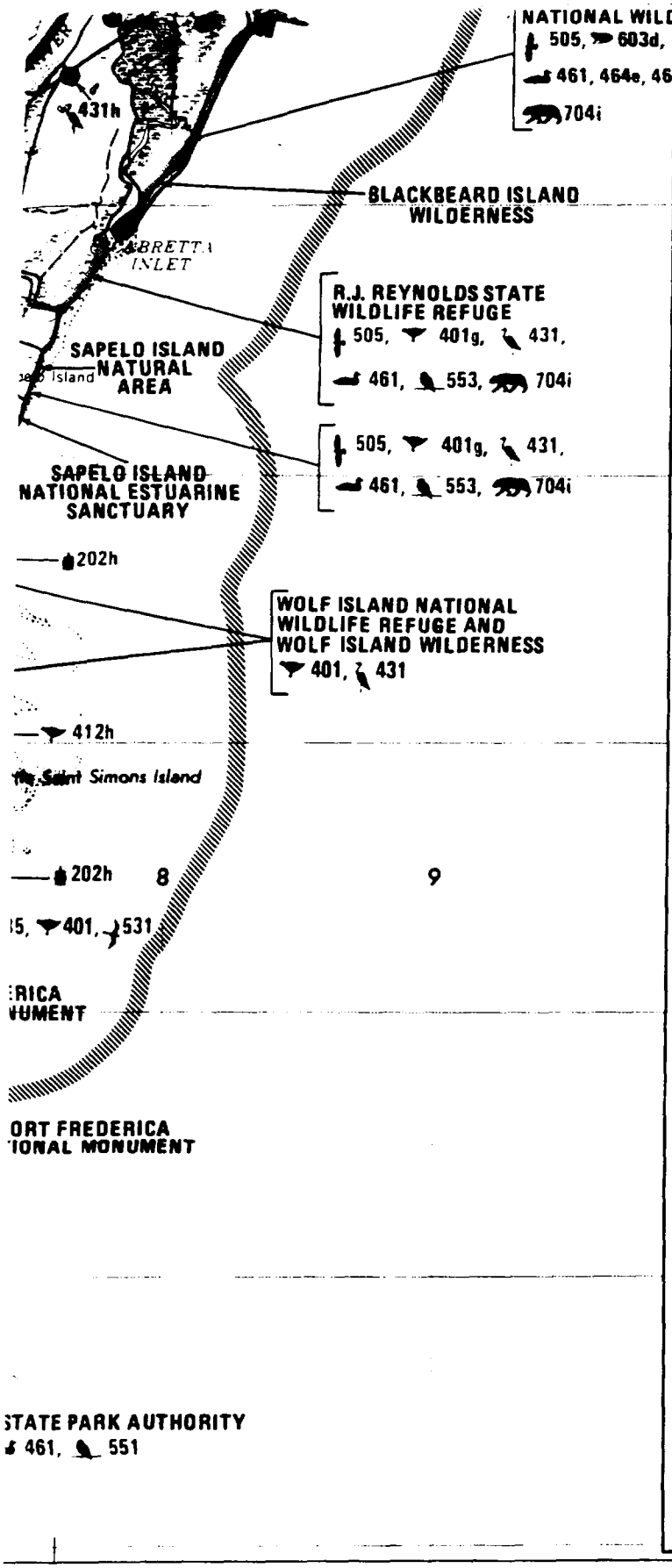
251 Florida manatee (F)
252 Atlantic bottlenose dolphin
253 Pigmy sperm whale
254 Short-finned pilot whale
255 Harbor seal
256 Gray seal
257 Right whale (F)
258 Atlantic spotted dolphin

High salinity estuarine habitat (generally 16.5 to 30 parts per thousand); arrows used for wide estuaries

Mid salinity estuarine habitat (generally 5 to 16.5 parts per thousand)

Low salinity estuarine habitat (generally 0.5 to 5 parts per thousand) and tidal freshwater

Non-tidal freshwater riverine and lacustrine habitat



NOTES

GENERAL

Wolf Island National Wildlife Refuge is a Class I air quality area

SPECIES WITH SPECIAL STATUS

Species with special status that can be found throughout the coastal zone depicted on the Brunswick sheet include:

110g, 201, 251g, 505g, 506g, 507g, 535, 552, 602, 603.

The following species with special status can be found in specific Georgia counties:

Spleenwort (302) in Camden County;

Spider lily (303) in Bryan County;

Pond bush(304) in Glynn, McIntosh, and Bryan Counties;

Water milfoil (305) in McIntosh County; and

Hooded pitcher plant (306) in Camden, Glynn, McIntosh, Liberty, Bryan, and Chatham Counties.

AQUATIC ORGANISMS

Due to scale limitations, only representative estuarine and riverine systems are shown.

Species that can be found from the shoreline to the three-mile limit depicted on the Brunswick sheet include:

110g, 59acd, 71acdg, 72c, 113g, [illegible] 120fg, 127adef, 130, 136af, 137adf, 138af, 139adf, [illegible] 143acdfg, 144adfg, 146afg, 147acdfg, 148acdfg, [illegible] 161bfg, 162bfg, 163d, 252, 253, 254.

Generally includes the following species:

110g, 59abcdef, 60abcf, 66abcf, 71bf, 72bcf, [illegible] 113eg, 114cfg, 116cfg, 117b, 120fg, 127abdfg, 130, 136f, [illegible] 138abefg, 139bcefg, 140abf, 141abcf, 143, 144bf, 146fg, [illegible] 148cfg, 158f, 159g, 160fg, 162, 163bef, 252.

Generally includes the following species:

110g, 59bcdef, 60abcf, 66abcf, 71bcef, 72bcef, [illegible] 113g, 114cefg, 116cefg, 117b, 127b, 129fg, 135f, 137bf, 138bf, 139bf, 140bf, 141bf, 143, 146bf, 147bf, 148bf, 158bf, 163b.

Generally include the following species:

and 110g, 111abcg, 113abfg, 114abcefg, 116abcefg, [illegible] 123abcf, 124abf, 125abf, 126abf, 129abfg, [illegible] 134abf, 135abf.

Species of importance in a particular river, creek or sound are denoted on the map.

TERRESTRIAL ORGANISMS

Species that can be found throughout the coastal zone depicted on the Brunswick sheet include:

464e, 465e, 555, 701, 702f, 705c, 706c, 707c, 708c, 709f, 710c, 711c, 712, 713.

15' 48 49 81°00' 50 51 52

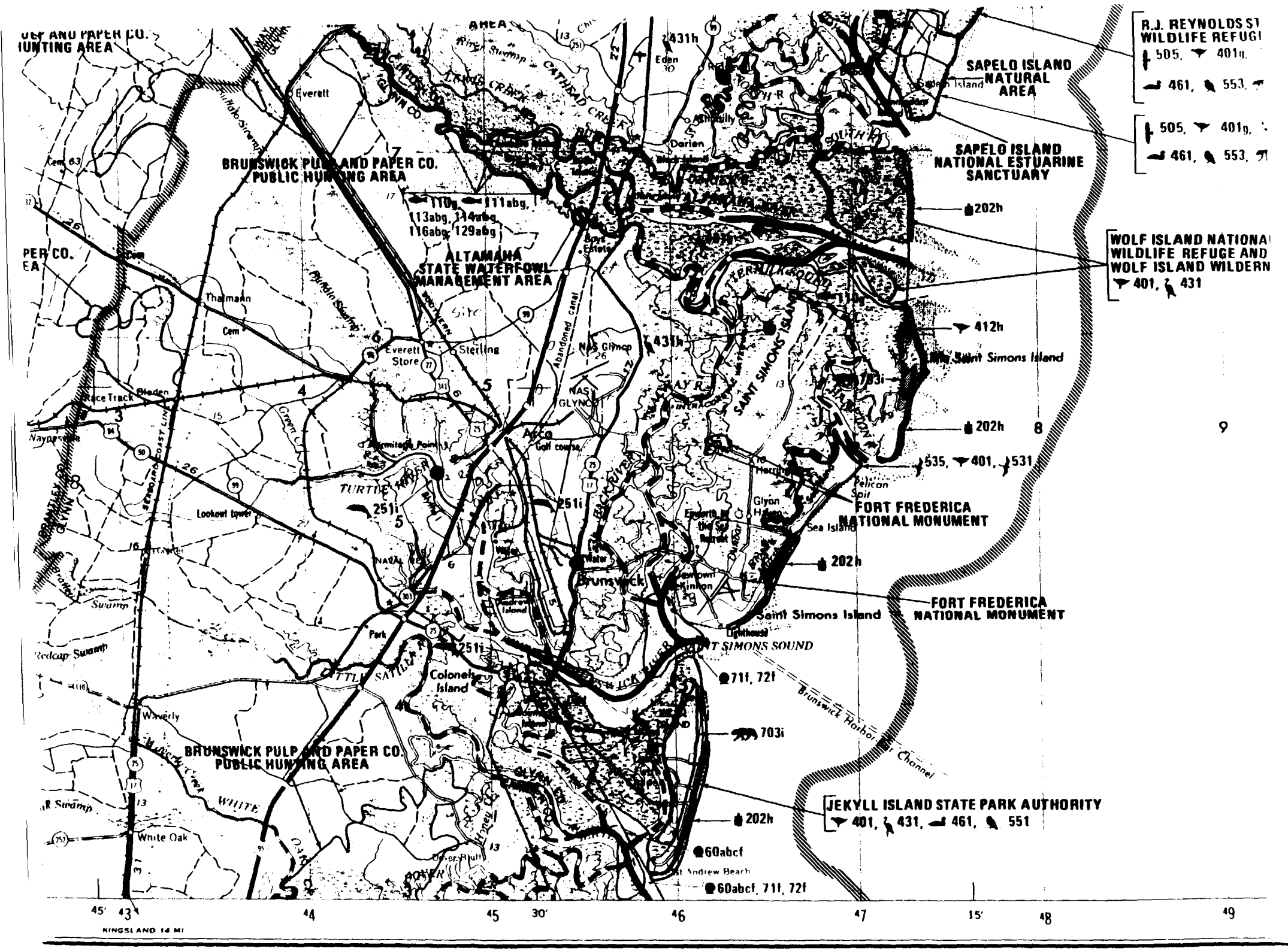
Scale 1:250,000

5 0 5 10 15 20 Statute Mi

5 0 5 10 15 20 25 30 Kilometers

5 0 5 10 15 Nautical Miles

TRANSVERSE MERCATOR PROJECTION


R.J. REYNOLDS ST
WILDLIFE REFUGE
505, 401g,
461, 553,
505, 401g,
461, 553,
SAPELO ISLAND
NATURAL
AREA
SAPELO ISLAND
NATIONAL ESTUARINE
SANCTUARY
WOLF ISLAND NATIONAL
WILDLIFE REFUGE AND
WOLF ISLAND WILDERN
401, 431
202h
412h
202h
535, 401, 531
FORT FREDERICA
NATIONAL MONUMENT
202h
FORT FREDERICA
NATIONAL MONUMENT
711, 721
703i
202h
60abcf
60abcf, 711, 721
JEKYLL ISLAND STATE PARK AUTHORITY
401, 431, 461, 551
BRUNSWICK PULP AND PAPER CO.
PUBLIC HUNTING AREA
110g, 111abg,
113abg, 114abg,
116abg, 129abg
ALTAMAHA
STATE WATERFOWL
MANAGEMENT AREA
431h
431h
251i
251i
251i
BRUNSWICK PULP AND PAPER CO.
PUBLIC HUNTING AREA
Everett
Thalmann
Everett
Store
Sterling
Bladen
Race Track
Waynesville
Lookout Tower
Waverly
White Oak
Brunswick
Colonels
Island
Darien
Eden
Glyn Harbor
Sea Island
Saint Simons Island
Saint Simons Island
Pelican
Spit
Lighthouse
Brunswick Harbor Channel
St Andrew Beach
NAS Glynco
Abandoned canal
Golf course
Park
Redcap Swamp
Swamp
TURTLE RIVER
BACK RIVER
SAINT SIMONS SOUND
SAINT SIMONS ISLAND
WHITE OAK
KINGSLAND 14 MI
45'
43
44
45
30'
46
47
15'
48
49

LEGEND

REFERENCE 11

Reference No.

CLIMATIC ATLAS OF THE UNITED STATES

U.S. DEPARTMENT OF COMMERCE
C. R. Smith, Secretary

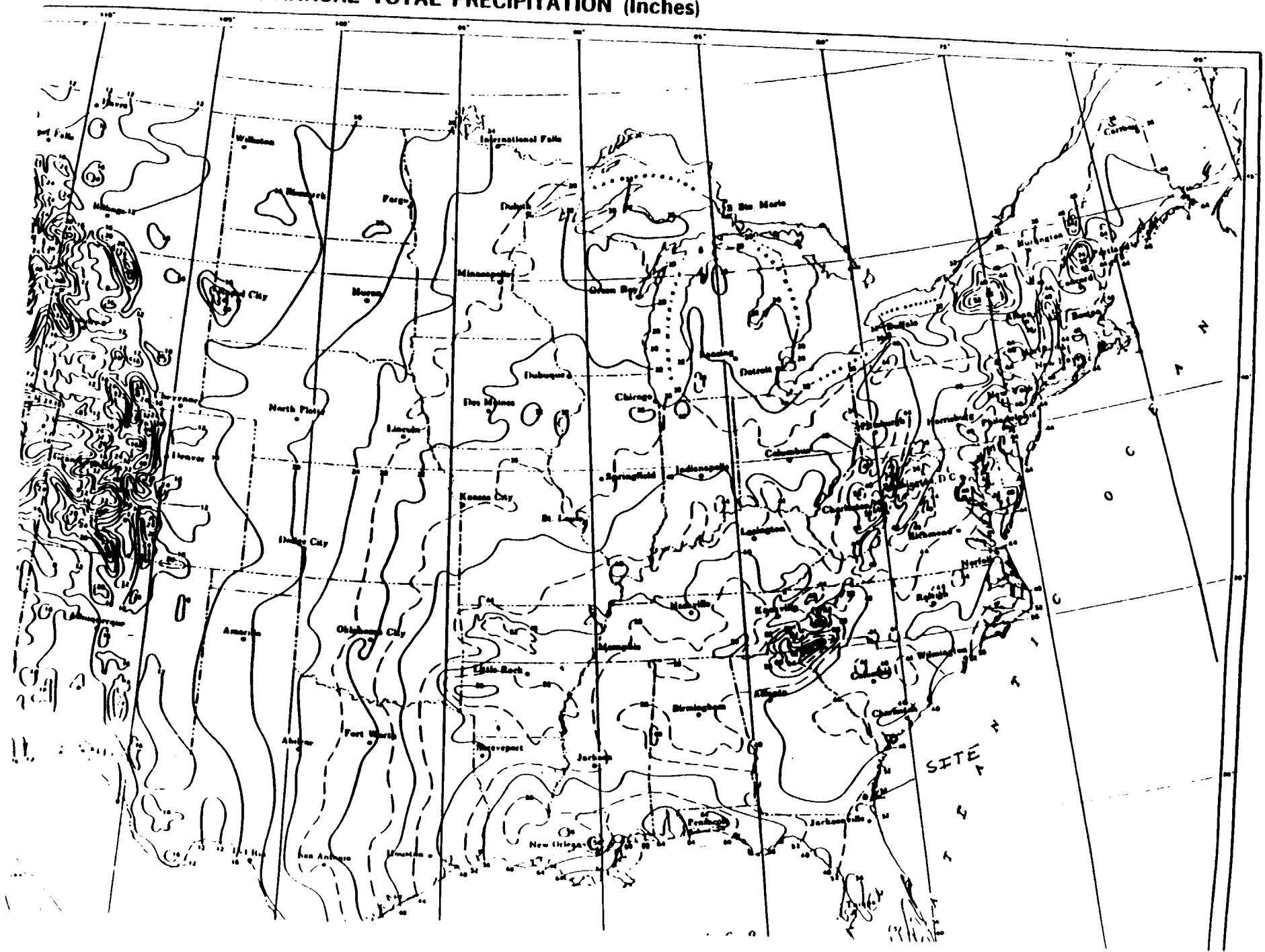
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
Robert M. White, Administrator

ENVIRONMENTAL DATA SERVICE
Woodrow C. Jacobs, Director

JUNE 1968

REPRINTED BY THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
1983

NORMAL ANNUAL TOTAL PRECIPITATION (Inches)



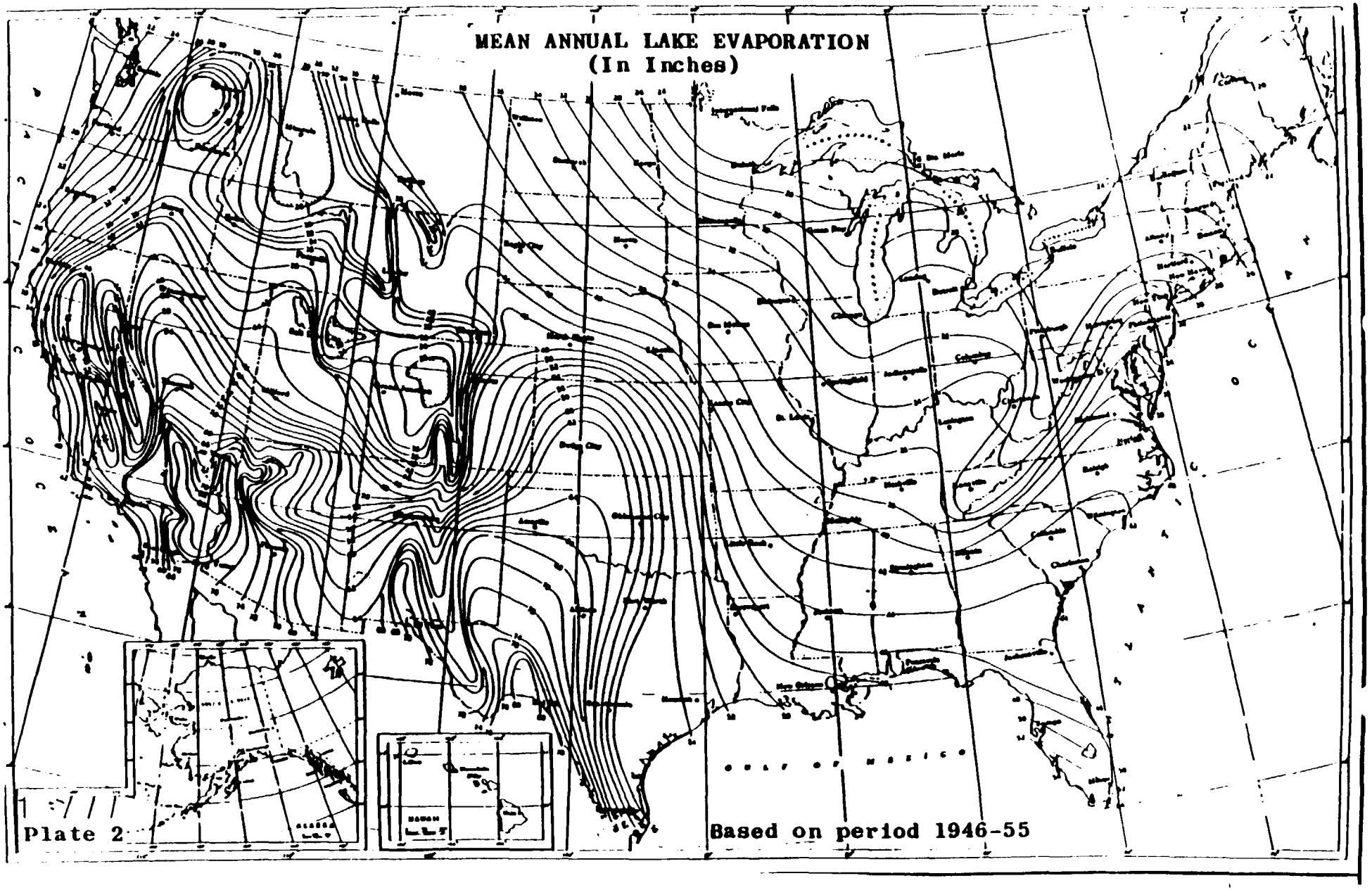

MEAN ANNUAL LAKE EVAPORATION
(In Inches)
Based on period 1946-55

Plate 2

DEPARTMENT OF COMMERCE
Luther H. Hodges, Secretary

WEATHER BUREAU
F. W. Reichelderfer, Chief

TECHNICAL PAPER NO. 40

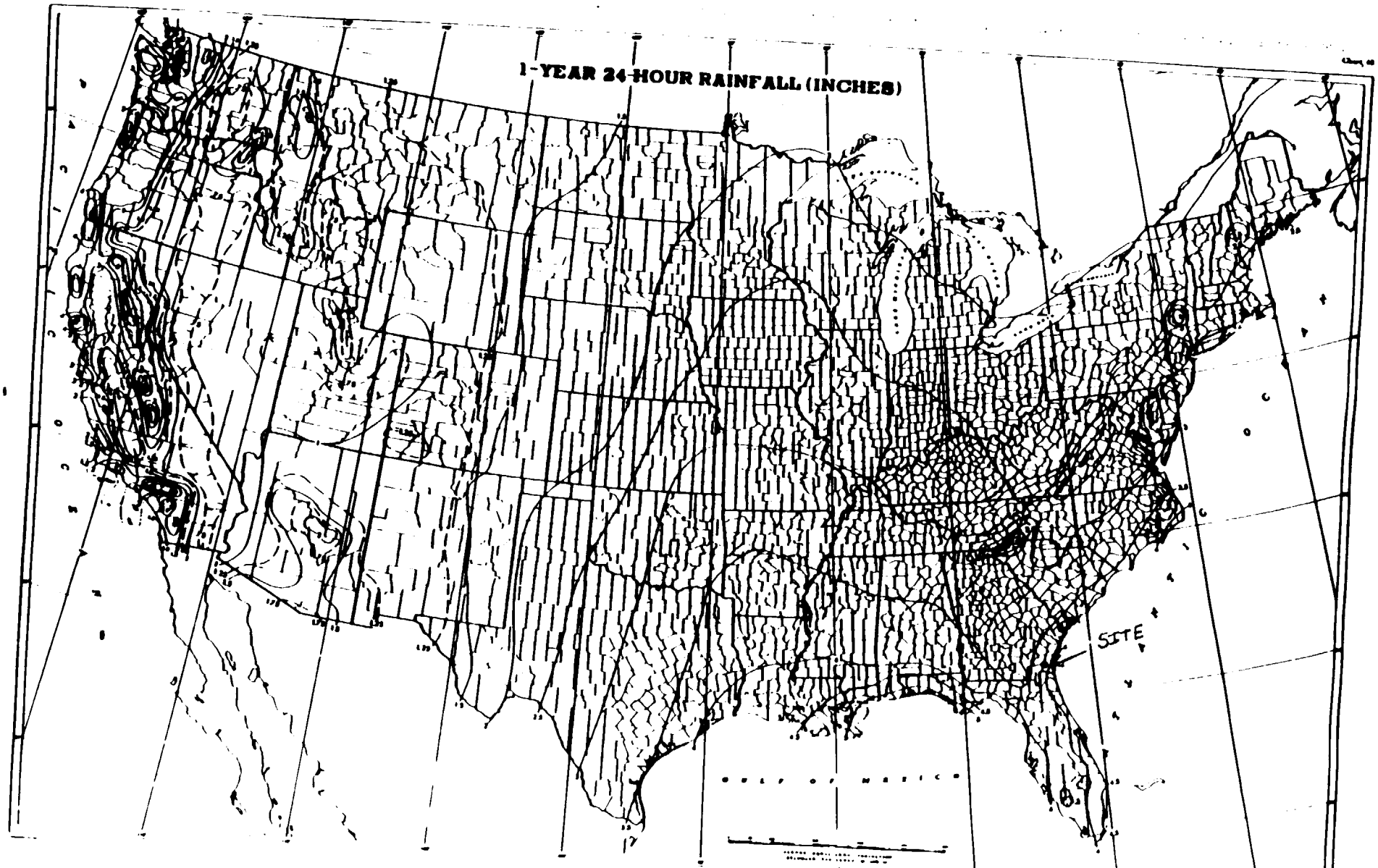
RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture

REFERENCE 12

PROPERTY OF EPA
FIT IV


1-YEAR 24-HOUR RAINFALL (INCHES)
SITE

NUS CORPORATION AND SUBSIDIARIES		TELECON NOTE
CONTROL NO.	DATE: April 27, 1990	TIME: 8:35

DISTRIBUTION:

REFERENCE 13

BETWEEN: Brenda Pittman	OF: Environmental Protection Division	PHONE: (912) 264-7284

AND: Walter Riley, NUS Corporation

UR

DISCUSSION:

Don't use surface water in this area. There are no intakes within 15 miles of the sterling area.

ENDANGERED AND THREATENED SPECIES

REFERENCE 14

U.S. FISH AND WILDLIFE SERVICE

REGION 4 - ATLANTA

FLORIDA (cont'd)

	General Distribution
Plover, piping (*Charadrius melodus*) - T	Coast
Sparrow, Cape Sable (*Ammodramus* (=*Ammospiza*) *maritima mirabilis*) - E,CH	Extreme southwest
Sparrow, dusky seaside (*Ammodramus* (=*Ammospiza*) *maritima nigrescens*) - E,CH	Merritt Island, St. Johns R.
Sparrow, Florida grasshopper (*Ammodramus savannarum floridanus*) - E	Osceola, Polk, Highlands, Okeechobee and Glades Counties
Stork, wood (*Mycteria americana*) - E	Peninsular swamps
Tern, roseate (*Sterna dougalli dougalli*) - T	Keys
Warbler, Bachman's (*Vermivora bachmanii*) - E	Entire state
Warbler, Kirtland's (*Dendroica kirtlandii*) - E	Atlantic coast
Woodpecker, ivory-billed (*Campephilus principalis*) - E	Entire state
Woodpecker, red-cockaded (*Picoides* (=*Dendrocopos*) *borealis*) - E	Entire state

Reptiles

Alligator, American (*Alligator mississippiensis*) - T(S/A)*	Entire state
Crocodile, American (*Crocodylus acutus*) - E,CH	Extreme south
Skink, blue-tailed mole (*Eumeces egregius lividus* - T	Polk and Highlands Counties
Skink, sand (*Neoseps reynoldsi*) - T	Marion, Lake, Orange, Polk, Highlands Counties
Snake, Atlantic salt marsh (*Nerodia fasciata taeniata*) - T	Volusia, Brevard, Indian River Counties
Snake, eastern indigo (*Drymarchon corais couperi*) - T	Entire state
Turtle, Kemp's (Atlantic) ridley (*Lepidochelys kempii*) - E	Coastal waters
Turtle, green (*Chelonia mydas*) - E	Coastal waters

*Alligators are biologically neither endangered nor threatened. For law enforcement purposes they are classified as "Threatened due to Similarity of Appearance." Alligator hunting is regulated in accordance with State law.

FLORIDA (cont'd)

	General Distribution
Turtle, hawksbill (*Eretmochelys imbricata*) - E	Coastal waters
Turtle, leatherback (*Dermochelys coriacea*) - E	Coastal waters
Turtle, loggerhead (*Caretta caretta*) - T	Coastal waters
Fishes	
Darter, Okaloosa (*Etheostoma okaloosae*) - E	Eglin Air Force Base
Sturgeon, shortnose (*Acipenser brevirostrum*) - E	Atlantic seaboard rivers
Mollusks	
Snail, Stock Island tree (*Orthalicus reses reses*) - T	Stock Island
Arthropods	
Butterfly, Schaus swallowtail (*Papilio aristodemus ponceanus*) - E	Biscayne National Monument, Key Largo
Plants	
Amorpha crenulata (crenulate lead-plant) - E	Dade County
Asimina tetramera (four-petal pawpaw) - E	Martin and Palm Beach Counties
Bonamia grandiflora (Florida bonamia) - T	Polk, Highlands, Orange Hardee, Marion Counties
Cereus eriophorus var. *fragrans* (fragrant prickly-apple) - E	St. Lucie County
Cereus robinii (Key tree-cactus) - E	Florida Keys
Chionanthus pygmaeus (pygmy fringe tree) - E	Lake, Osceola, Polk, Highlands Counties
Chrysopsis floridana (Florida golden aster) - E	Hillsborough County
Deeringothamnus pulchellus (beautiful pawpaw) - E	Lee County (Pine Island) and Charlotte County
Deeringothamnus rugelii (Rugel's pawpaw) - E	Volusia County

FLORIDA (cont'd)

	General Distribution
Dicerandra cornutissima (longspurred mint) - E	Marion County
Dicerandra frutescens (scrub mint) - E	Highlands County
Dicerandra immaculata (Lakela's mint) - E	Indian R. and St. Lucie Counties
Eryngium cuneifolium (snakeroot) - E	Highlands, Collier, Putnam Counties
Euphorbia deltoidea (deltoid spurge) - E	Dade County
Euphorbia garberi (Garber's spurge) - T	Dade and Monroe Counties
Galactia smallii (Small's milkpea) - E	Dade County
Harperocallis flava (Harper's beauty) - E	Apalachicola National Forest - Franklin and Liberty Counties
Hypericum cumulicola (highlands scrub hypericum) - E	Highlands, Polk Counties
Lupinus aridorum (scrub lupine) - E	Orange and Polk Counties
Paronychia chartacea (papery whitlow-wort) - T	Lake, Orange, Polk, Highlands Counties
Polygala smallii (tiny polygala) - E	Dade County
Polygonella basiramia (wireweed) - E	Polk, Highlands Counties
Prunus geniculata (scrub plum) - E	Lake, Polk, Highlands Counties
Ribes echinellum (Miccosukee gooseberry) - T	Jefferson County
Rhododendron chapmanii (Chapman's rhododendron) - E	Clay, Gulf, Gadsden and Liberty Counties
Torreya taxifolia (Florida torreya) - E	Gadsden, Liberty and Jackson Counties (Apalachicola River area)
Warea amplexifolia (wide-leaf warea) - E	Lake and Polk Counties
Warea carteri (Carter's mustard) - E	Polk and Highlands Counties

Federally Listed Species by State

FLORIDA

(E=Endangered; T=Threatened; CH=Critical Habitat determined)

Mammals	General Distribution
Bat, gray (*Myotis grisescens*) - E	Panhandle
Bat, Indiana (*Myotis sodalis*) - E	Panhandle
Deer, Key (*Odocoileus virginianus clavium*) - E	Lower Keys
Manatee, West Indian (*Trichechus manatus*) - E,CH	Coastal waters and streams
Mouse, Choctawhatchee beach (*Peromyscus polionotus allophrys*) - E,CH	Coastal; Walton & Bay Counties
Mouse, Key Largo cotton (*Peromyscus gossypinus allapaticola*) - E	N. Key Largo, Lignum Vitae Key *
Mouse, Perdido Key beach (*Peromyscus polionotus trissyllepsis*) - E,CH	Perdido Key
Panther, Florida (*Felis concolor coryi*) - E	Entire state
Whale, finback (*Balaenoptera physalus*) - E	Coastal waters
Whale, humpback (*Megaptera novaeangliae*) - E	Coastal waters
Whale, right (*Eubalaena glacialis*) - E	Coastal waters
Whale, sei (*Balaenoptera borealis*) - E	Coastal waters
Whale, sperm (*Physeter catodon*) - E	Coastal waters
Woodrat, Key Largo (*Neotoma floridana smalli*) - E	N. Key Largo, Lignum Vitae Key *

Birds	
Caracara, Audubon's Crested (*Polyborus plancus audubonii*) - T	Central
Eagle, bald (*Haliaeetus leucocephalus*) - E	Entire state
Falcon, Arctic peregrine (*Falco peregrinus tundrius*) - T	Coast
Jay, Florida scrub (*Aphelocoma coerulescens coerulescens*) - T	Peninsular
Kite, Everglade (*Rostrhamus sociabilis plumbeus*) - E,CH	South

* Introduced 1970

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administratio
NATIONAL MARINE FISHERIES SERVICE
Statistical Surveys
Beaufort, N. C. 28516
(919) 728-4168

February 10, 1989

Mr. Bob Donahue
NUS Corporation
1927 Lakeside Parkway
Suite 614
Tucker, GA 30084

REFERENCE 15

Dear Mr. Donahue:

Enclosed are the runs and code sheets that you requested. Please note that this data is preliminary.

We hope that this information will meet your needs.

Sincerely,

Nelson Johnson
Fishery Rept. Specialist

Enclosure

Water-4L ? Flo (Eng Pl Sol)
Offshore 0 ?
Spec-Ps 1235 (Flounder undessified)

10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration
A young agency with a historic tradition of service to the Nation

GEORGIA

DISTRICTS

NORTHERN	CENTRAL	SOUTHERN
Bryan	Liberty	Camden
Chatham	McIntosh	Glynn
		Wayne

****

COUNTIES

01 Bryan
03 Brantley
05 Bullock
07 Camden
09 Charlton
11 Chatham
13 Effingham
15 Glynn
17 Liberty
19 Long
21 McIntosh
23 Screven
25 Tattnall
27 Wayne

****

GEAR

Otter Trawls:
205 Crab
215 Shrimp

Pots & Traps:
330 Crab
345 Fish
355 Spiny Lobster

Gill Nets:
425 Anchor
465 Drift, shad

Lines:
610 Hand
675 Long/Set Hooks

Dip Nets:
705 Drop
735 Cast Nets

Dredges:
825 Scallops, sea

Tongs & Grabs:
840 Oyster
855 Rakes, other

By Hand:
951 Oyster

****

WATERS

24 Atlantic Ocean
01 Altamaha River & Sound
03 Cumberland Sound
05 Doboy Sound
07 Isle of Hope River
09 Ogeechee River
11 Ossabaw Sound
13 Saint Andrew Sound
29 Saint Catherines Sound
31 Saint Marys River
33 Saint Simon Sound
35 Sapeloe Sound
36 Satilla River
37 Tybee River (Bull River)
39 Wassaw Sound
47 Savannah River

24 - Atlantic Ocean
24-1 0 - 3 miles of
24-2 3 - 12 miles o
24-3 12 and beyond

Revised: 10/06/8

NMFS SPECIES CODE LIST FOR LANDINGS DATA

0010	Alewives
0030	Amberjacks
0090	Angelfishes
0120	Anglerfish
0180	Barracuda
0230	Bluefish
0330	Bonito
0360	Bowfin
0510	Butterfishes, large
0515	Butterfishes, medium
0520	Butterfishes, small
0521	Butterfishes, unclassified
0570	Cobia
0630	Carp
0661	Catfishes and Bullheads
0820	Cod
0870	Crevalle (Jacks)
0900	Croaker, large
0915	Croaker, medium
0920	Croaker, small
0925	Croaker, unclassified
0990	Cutlassfish, Atlantic
1050	Dolphinfish
1081	Drum, Black
1082	Drum, Red
1141	Eel, Common
1142	Eel, Conger
1199	Flounder, Blackback, unclassified
1200	Flounder, Blackback, large
1202	Flounder, Blackback, small
1208	Flounder, Fluke, jumbo
1210	Flounder, Fluke, large
1211	Flounder, Fluke, unclassified
1212	Flounder, Fluke, medium
1214	Flounder, Fluke, small
1215	Flounder, Gray Sole
1228	Flounder, Yellow-tail, large
1229	Flounder, Yellow-tail, small
1230	Flounder, Yellow-tail, unclassified
1330	Garfish
1340	Gizzard Shad
1410	Groupers, unclassified
1411	Hind, Speckled
1412	Hind, Rock
1413	Hind, Red
1414	Grouper, Snowy
1415	Grouper, Yellowedge
1416	Grouper, Red
1417	Grouper, Marbled
4740	Grouper, Warsaw
1419	
1420	Grouper, Misty
1421	
1423	Grouper, Gag
1424	Scamp
1425	Grouper, Yellowmouth
1426	Grouper, Yellowfin
1427	Creole-fish
1428	Graysby
1429	Coney
1440	Grunts
1480	Haddock, unclassified
1520	Hakes, Red
1550	Hakes, Atlantic, unclassified
1650	Harvestfish, large
1653	Harvestfish, medium
1655	Harvestfish, small
1656	Harvestfish, unclassified
1687	Herring, Thread
1730	Hickory Shad
1790	Hogfish
1940	King Mackerel
1970	King Whiting
2030	Lamprey
2095	Lookdown
2120	Mackerel, Atlantic
2174	Marlin, Black
2176	Marlin, Striped
2177	Marlin, White
2179	Marlin, Blue
2180	Marlins, unclassified
2210	Menhaden
2211	Menhaden Bait
2341	Mullets
2550	Permit
2580	Pigfish
2670	Pinfish
2690	Pollock, Atlantic
2720	Pompano
3026	Sailfishes
3295	Porgies, unclassified
3302	Porgy, Red
3304	Porgy, Saucereye
3306	Porgy, Whitebone
3308	Porgy, Knobbed
3310	Porgy, Littlehead
3314	Pinfish, Spottail
3110	Sand Perch
3298	Scups, unclassified
3351	Sea Basses, large
3353	Sea Basses, medium
3355	Sea Basses, small
3360	Sea Basses, unclassified
3441	Sea Trout, Gray, large
3443	Sea Trout, Gray, medium
3445	Sea Trout, Gray, small
3446	Sea Trout, Gray, unclassified
3447	Sea Trout, Spotted
3471	Shad, Buck
3472	Shad, Roe
3474	Shad, unclassified
3503	Sharks, Dogfish
3505	Sharks, Bonito (Shortfin Mako)
3508	Sharks
3509	Sharks, Thresher
3512	Shark, White
3513	Shark, Sandbar
3514	Shark, Dusky
3515	Shark, Tiger
3516	Shark, Hammerhead
3560	Sheepshead
3650	Skates
3680	Skippers
3757	Snapper, Blackfin
3758	Snapper, Silk
3759	Snapper, Cubera
3761	Snapper, Lane
3762	Snapper, Gray (Mangrove)
3763	Snapper, Mutton
3764	Snapper, Red
3765	Snapper, Vermilion
3767	Snapper, Yellowtail
3768	Snappers, unclassified
3810	Spadefish
3840	Spanish Mackerel
4060	Spot
4180	Striped Bass, unclassified
4181	Striped Bass, large
4182	Striped Bass, medium
4183	Striped Bass, small
4211	Sturgeons
4290	Swellfish
4320	Swordfish
4350	Tarpon
4380	Tautog
4470	Tilefish, Northern
4472	Tilefish, Goldface
4474	Tilefish, Blueline
4476	Tilefish, Blackline
4478	Tilefish, Sand
4480	Tilefishes, unclassified
4500	Toadfishes
4560	Triggerfishes
4590	Tripletail
4651	Tuna, Albacore
4652	Tuna, Bluefin
4653	Tuna, Little
4654	Tuna, Skipjack
4655	Tuna, Yellowfin
4656	Tunas, unclassified
4657	Tuna, Bigeye
4658	Tuna, Blackfin
4710	Wahoo
5060	White Perch
5090	Whiting
5130	Wreckfish
5170	Yellow Perch
5260	Unclassified for Food
5290	Unclassified for Industrial
7000	Crab, Blue, Hard
7028	Crab, Blue, Peeler
7029	Crab, Blue, Soft
7030	Crab, Blue, Soft and Peeler
7180	Crab, Stone
7240	Crab, Horseshoe
7270	Lobster, American, unclassifi
7272	Lobster, American, small
7273	Lobster, American, select
7274	Lobster, American, large
7275	Lobster, American, jumbo
7360	Shrimp, unclassified (heads o
7310	Shrimp, Brown
7320	Shrimp, Pink
7325	Shrimp, Rock
7340	Shrimp, White
7480	Clams, Hard (Meats)
7520	Clams, Sunray Venus (Meats)
7750	Conchs (Meats)
7860	Octopus
7895	Oyster, Private, Spring (Meat
7891	Oyster, Public, Spring (Meats
7896	Oyster, Private, Fall (Meats)
7892	Oyster, Public, Fall (Meats)
8001	Scallop, Bay (Meats)
8005	Scallop, Calico (Meats)
8009	Scallop, Sea (Meats)
8030	Squids, unclassified
8031	Squids, Short-finned
8032	Squids, Long-finned
8116	Turtles, Snapper

[illegible]	[illegible]	Roe Shad	[illegible]	1
WATER	[illegible]	Sapeloe Sound	[illegible]	[illegible]
OFFSHORE	0		[illegible]	[illegible]
SPECIES	[illegible]	Clams	[illegible]	[illegible]
WATER	[illegible]	Wassaw Sound	[illegible]	114
OFFSHORE	0		[illegible]	114
SPECIES	[illegible]	Sturgeon	70.0000	1
SPECIES	2000	Blue crab	[illegible]	24
SPECIES	2030	Blue crab	[illegible]	[illegible]
SPECIES	2030	Blue crab	[illegible]	6
SPECIES	2130	Stone Crab	[illegible]	7
SPECIES	2510	Clams	[illegible]	11
SPECIES	2250	Conch	[illegible]	12
~~WATER~~	~~[illegible]~~ ?		~~[illegible]~~	1
~~OFFSHORE~~	~~[illegible]~~		~~[illegible]~~	1 INVALID
~~SPECIES~~	~~[illegible]~~		~~120.0000~~	1
WATER	47	Savannah River	[illegible]	213
OFFSHORE	0		[illegible]	213
SPECIES	[illegible]	Carp	554.0000	1
SPECIES	661	Bullhead catfish	[illegible]	4
SPECIES	1730	Hickory Shad	110.0000	7
SPECIES	3471	Buck Shad	[illegible]	31
SPECIES	3472	Roe Shad	[illegible]	51
SPECIES	4211	Sturgeon	70.0000	1

10 FEB 87 [illegible] LANDINGS BY COUNTY BY WATER BY SPECIES.
06:23:14 NORTHWEST & ALASKA FISHERIES MOD [illegible] [illegible] PAGE 78

CRITERION VARIABLE WEIGHT

VARIABLE	VALUE	LABEL	SUM	CASES
SPECIES	2000	Blue Crab	[illegible]	84
SPECIES	2030	Blue crab	177.0000	3
SPECIES	2030	Blue Crab	[illegible]	7
SPECIES	2030	Blue crab	[illegible]	1
SPECIES	2130	Stone Crab	[illegible]	10
SPECIES	2250	Conch	647.0000	13
COUNTY	[illegible]	Glynn Co	[illegible]	721
WATER	1	Altamaha River and Sound	[illegible]	93
OFFSHORE	0		[illegible]	93
SPECIES	661	Bullhead Catfish	[illegible]	29
SPECIES	1730	Hickory Shad	[illegible]	1
SPECIES	3471	Buck Shad	414.0000	10
SPECIES	3472	Roe Shad	6580.0000	15
SPECIES	2000	Blue Crab	[illegible]	35
SPECIES	2030	Blue Crab	[illegible]	[illegible]
SPECIES	2030	Blue Crab	30.0000	[illegible]
SPECIES	2250	Conch	[illegible]	[illegible]
WATER	13	St. Andrews Sound	[illegible]	[illegible]
OFFSHORE	0		[illegible]	[illegible]
SPECIES	2000	Blue Crab	[illegible]	30
SPECIES	2030	Blue Crab	[illegible]	[illegible]
SPECIES	[illegible]	Oyster	[illegible]	[illegible]
SPECIES	[illegible]	Oyster	[illegible]	[illegible]

SPECIES	[illegible]	Cubic	[illegible]	[illegible]
SPECIES	[illegible]	Croaker	[illegible]	[illegible]
SPECIES	[illegible]	Black Drum	[illegible]	[illegible]
SPECIES	1055	Red Drum	[illegible]	[illegible]
SPECIES	[illegible]	Flounder	[illegible]	[illegible]
SPECIES	[illegible]	King Mackerel	[illegible]	1
SPECIES	[illegible]	King Whiting	[illegible]	[illegible]
SPECIES	[illegible]	Mullet	[illegible]	[illegible]
SPECIES	[illegible]	Pompano	[illegible]	[illegible]
SPECIES	[illegible] ?		[illegible]	1
SPECIES	[illegible]	Gray Sea Trout	[illegible]	[illegible]
SPECIES	[illegible]	Spotted Sea Trout	[illegible]	[illegible]
SPECIES	[illegible]	Shark	[illegible]	[illegible]
SPECIES	[illegible]	Sheepshead	[illegible]	[illegible]
SPECIES	8340	Spanish Mackerel	[illegible]	4
SPECIES	4060	Spot	112.0000	3
SPECIES	[illegible]	Sharpnose	104.0000	2
SPECIES	[illegible]	Triplotail	[illegible]	[illegible]
SPECIES	[illegible]	Unclassified Sea Food	13504.0000	51
SPECIES	7000	Blue Crab	125833.00	20
SPECIES	7023	Blue Crab	4833.0000	5

10 FEB 89 1987 GEORGIA LANDINGS BY COUNTY BY WATER BY SPECIES PAGE [illegible]
[illegible] NORTHWEST & ALAMO FISHERIES MPF [illegible] NUMBERS 78

CRITERION VARIABLE WEIGH

VARIABLE	VALUE	LABEL	SUM	CASES
SPECIES	7023	Blue Crab	7134.0000	21
SPECIES	7130	Stone Crab	12004.0000	25
SPECIES	7750	Conch	94401.0000	32
SPECIES	[illegible]	Squid	52.0000	3
OFFSHORE	1	0-3 miles offshore	521163.000	40
SPECIES	7000	Blue Crab	51464.0000	18
SPECIES	[illegible]	Conch	470004.000	24
OFFSHORE	2	3-12 miles offshore	100.0000	2
SPECIES	[illegible]	Flounder	30.0000	1
SPECIES	1070	King Whiting	70.0000	1
OFFSHORE	3	12 miles and beyond	[illegible]	12
SPECIES	[illegible]		12.0000	1
SPECIES	1050		63.0000	2
SPECIES	1040		414.0000	2
SPECIES	[illegible]		63.0000	1
SPECIES	3764		3.0000	1
WATER	[illegible]	Saint Simon Sound	294379.000	76
OFFSHORE	0		294379.000	76
SPECIES	7000	Blue crab	[illegible]	[illegible]
SPECIES	7023	Blue Crab	143.0000	[illegible]
SPECIES	[illegible]	Blue crab	113.0000	[illegible]
SPECIES	7750	Conch	133.0000	6
WATER	[illegible]	Satilla River	1503.0000	3
OFFSHORE	0		1503.0000	3
SPECIES	[illegible]	Bullhead Catfish	1503.0000	3
COUNTY	[illegible]	Liberty Co	[illegible]	[illegible]
Water ~~offshore~~	24		343.0000	1
	7000	Blue Crab	343.0000	1

SPECIES	[illegible]	Blue Crab	[illegible]	11
SPECIES	[illegible]	Blue Crab	[illegible]	1
COUNTY	[illegible]	McIntosh Co	[illegible]	[illegible]
WATER	[illegible]	Altamaha River & Sound	[illegible]	[illegible]
OFFSHORE	0		[illegible]	[illegible]
SPECIES	[illegible]	Bullhead catfish	[illegible]	16
SPECIES	[illegible]	Hickory Shad	[illegible]	7
SPECIES	[illegible]	Buck shad	[illegible]	[illegible]
SPECIES	[illegible]	Roe shad	[illegible]	17
SPECIES	[illegible]	Sturgeon	[illegible]	15
SPECIES	[illegible]	Blue Crab	[illegible]	[illegible]

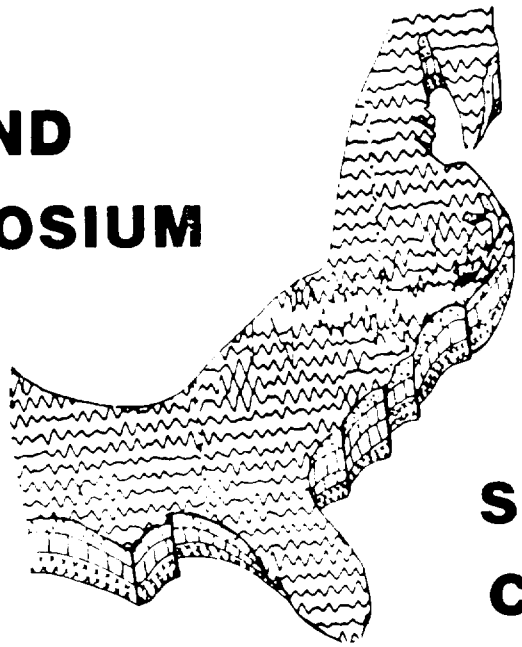
TO FILE [illegible] [illegible] GEORGIA LANDINGS BY COUNTY BY WATER BY SPECIES [illegible]
06:23:15 NORTHWEST & ALASKA FISHERIES MOD 3.6 BOROUGHS: 78

CRITERION VARIABLE: DETAIL

VARIABLE	VALUE	LABEL	SUM	CASES
WATER	[illegible]	Dobay Sound	[illegible]	36
OFFSHORE	0		[illegible]	36
SPECIES	2000	Blue Crab	[illegible]	34
SPECIES	[illegible]	Clams	447.0000	1
SPECIES	[illegible]	Conch	1000.0000	1
WATER	[illegible]	Ogeechee River	[illegible]	5
OFFSHORE	0		[illegible]	5
SPECIES	2000	Blue Crab	[illegible]	4
SPECIES	7130	Stone Crab	30.0000	1
WATER	11	Ossabaw Sound	[illegible]	11
OFFSHORE	0		[illegible]	11
SPECIES	2000	Blue Crab	[illegible]	11
WATER	[illegible]	St Andrew Sound	[illegible]	1
OFFSHORE	0		[illegible]	1
SPECIES	2000	Blue Crab	[illegible]	1
WATER	[illegible]		[illegible]	[illegible]
OFFSHORE	0		[illegible]	201
SPECIES	[illegible]		[illegible]	1
SPECIES	[illegible]		1.30.0000	1
SPECIES	[illegible]		10.0000	1
SPECIES	[illegible]		[illegible]	4
SPECIES	[illegible]		[illegible]	[illegible]
SPECIES	[illegible]		[illegible]	1
SPECIES	[illegible]		[illegible]	[illegible]
SPECIES	[illegible]		[illegible]	1
SPECIES	[illegible]		[illegible]	1
SPECIES	947		[illegible]	4
SPECIES	[illegible]		[illegible]	6
SPECIES	[illegible]		13.0000	1
SPECIES	[illegible]		[illegible]	[illegible]
SPECIES	4211		[illegible]	[illegible]
SPECIES	[illegible]		[illegible]	[illegible]
SPECIES	2000		[illegible]	16
SPECIES	[illegible]		1140.0000	5
SPECIES	[illegible]		[illegible]	[illegible]
SPECIES	[illegible]		[illegible]	[illegible]

PROCEEDINGS

SECOND SYMPOSIUM on the GEOLOGY of the SOUTHEASTERN COASTAL PLAIN



REFERENCE 16

Edited by

Daniel D. Arden, Barry F. Beck, and Eleanore Morrow

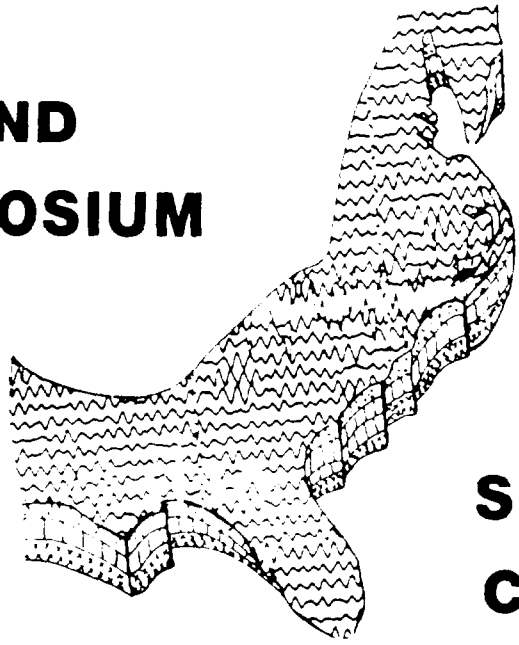
Sponsored and hosted by
Earth Science Department
Georgia Southwestern College
Americus, Georgia
March 5-6, 1979

Published by
Department of Natural Resources
Environmental Protection Division
Georgia Geologic Survey

INFORMATION CIRCULAR 53

PROCEEDINGS

SECOND SYMPOSIUM on the GEOLOGY of the SOUTHEASTERN COASTAL PLAIN



Edited by

Daniel D. Arden, Barry F. Beck, and Eleanore Morrow

Sponsored and hosted by
Earth Science Department
Georgia Southwestern College
Americus, Georgia
March 5-6, 1979

Published by

Department of Natural Resources
Joe D. Tanner, Commissioner
Environmental Protection Division
J. Leonard Ledbetter, Director
Georgia Geologic Survey
William H. McLemore, State Geologist

Atlanta 1982

INFORMATION CIRCULAR 53

SYMPOSIUM COMMITTEES

Daniel D. Arden, General Chairman

Technical Program:
- Barry F. Beck
- Harland E. Cofer

Publicity and Printing:
- Barry F. Beck
- Richard Little

Housing
- A. Richard Henderson
- Frank B. Jones

Local Arrangements:
- J. Philip Manker
- Walter K. Mathews
- James W. Russell

Smoker:
- A. Richard Henderson
- William Tietjen

Registration:
- Dowe P. Carter
- Jack C. Carter
- O. Jay Cliett
- Max T. McKinney

AQUIFER POTENTIAL OF THE SHALLOW SEDIMENTS OF THE COASTAL AREA OF GEORGIA

Thomas Watson
Georgia Department of Natural Resources
Georgia Geologic Survey
Atlanta, Georgia

ABSTRACT

In the coastal area of Georgia, there are three distinct aquifer systems. For many years, the principal artesian aquifer (a deep sequence of limestones) has been the primary source of all ground-water withdrawals in southeastern Georgia. The principal artesian aquifer of coastal Georgia is overlain by sediments ranging in thickness from less than 200 to more than 600 ft. These sediments can be subdivided into two shallow aquifer systems. The surface aquifer system is a series of laminated sands and clays, attaining a maximum thickness of 70 ft near the coast. These sediments are predominantly fine grained and have a low hydraulic conductivity.

The surficial aquifer is underlain by the second ground-water system, a 400-500 ft thick series of Miocene clays and sandy clays with lens-shaped bodies of sand, gravel, and thin carbonate layers. Although the Miocene series varies widely in hydraulic conductivity, and the lower strata act as a confining bed overlying the principal artesian aquifer, it is commonly used as an aquifer. Wells with yields of over 200 gallons per minute (gpm) are being used by several industries in the coastal area.

Shallow aquifers have less aquifer capacity than the principal artesian aquifer. As alternative sources of good quality ground water, they have a potential of from 50,000 to over 300,000 gal/day, depending on location and well construction.

Induced recharge to the principal artesian aquifer through the use of connnector wells may be a feasible method to take advantage of water in the surface aquifer.

Water quality of the shallow aquifers varies with depth and lithology. In the surface aquifer, water quality varies from very low total dissolved solids to slightly alkaline, moderately hard water with total dissolved solids averaging less than 200 milligrams per liter (mg/l). Water from the Miocene sediments is somewhat more uniform in quality, with total dissolved solids averaging about 250 mg/l.

The surface aquifer is extremely vulnerable to contamination. Although some contamination is inevitable as population increases, careful planning of potential sources of pollution would minimize the spread of contaminated ground water.

The high clay content of the Miocene series reduces the vulnerability of these sediments to surface contamination. Here, as in the surface aquifer, care in planning would minimize the effects of pollution.

INTRODUCTION

The principal artesian aquifer of Georgia is a series of carbonate strata long recognized as one of the most productive aquifers in the world. For many years, the principal artesian aquifer has been the primary source of all large ground-water withdrawals in the coastal area. Heavy ground-water withdrawal and subsequent lowering of water levels have allowed saline water intrusion into the fresh water zone of the principal artesian aquifer in Brunswick (Wait and Gregg, 1973, p. 1). Current levels of withdrawal in the Savannah area may be approaching the limits of safe levels of water withdrawal (Counts and Krause, 1976, p. 3).

As competition for available fresh water becomes more intense, ground water from sediment overlying the principal artesian aquifer will almost surely play an important role in the future development of coastal Georgia. This report is intended to provide a basis for further research and to guide general water-management decisions.

PURPOSE

Future management of the ground-water resources of coastal Georgia may include redistribution of water withdrawals to minimize cones of depression in the principal artesian aquifer. Another resource management technique that is being considered is increasing recharge to the freshwater zones of the principal artesian aquifer. Both practices can include the use of secondary aquifers such as the Miocene and surface aquifers, collectively referred to as the shallow aquifer system.

The purpose of this study was to evaluate aquifer potential of the shallower sediments overlying the principal artesian aquifer. This information is necessary in determining to what extent the shallow aquifer may be used to augment the principal artesian aquifer. Augmentation through the use of secondary aquifers would help solve the problem of potential or existing salt water intrusion in specific areas of the coast by changing the hydrostatic pressure differential between fresh water and salt water bodies in the principal artesian aquifer. Using these shallower sediments as aquifers is not a new idea. Interviews conducted in the study area indicate that

When completing a water well, the contractor often measures the specific capacity of the well, the response of the water level in the well to pumping. Specific capacity figures can be used to estimate aquifer potential, especially when the geology of the aquifer is known (Brown, R.H., 1963, p. 336). Both grain-size analysis and specific capacity tests were used to determine potential water-yielding characteristics of the shallow aquifers. The results of both methods were in close agreement.

Ground-water chemistry samples for this study were collected according to methods described by Brown and others (1974, p. 6-12) to insure uniformly accurate results. Thirty ground-water samples were collected for this report, and chemical analyses were performed by the Georgia Geologic Survey or the U.S. Geological Survey.

GEOHYDROLOGY

The sediments overlying the principal artesian aquifer can be divided into two distinct aquifer systems. These systems have dissimilar aquifer characteristics, and will be discussed individually. Figure 2 shows two generalized cross sections which illustrate the general relationship of the aquifers found near the coast.

Miocene Aquifers

The older of the two series lies directly above the principal artesian aquifer. This group of sediments was deposited in shallow seas which covered much of South Georgia during the Miocene epoch. Miocene sediments are thickest in Wayne County where they attain a thickness of over 500 ft as shown in figure 3. The Miocene section can be divided into lower, middle, and upper units, the lower being mostly carbonate rock which is hydraulically connected to the principal artesian aquifer.

Middle and upper Miocene units are hydraulically separated from the principal artesian aquifer by thick sequences of dense, greenish-gray, sandy clay. Interlayered with the clay are lens-shaped bodies of sand, which are of interest because of their aquifer potential. Although individual sand lenses are not continuous throughout the study area, data indicate that they are most common in the thicker portions of the Miocene units and generally occur at depths greater than 200 ft below land surface. Below this depth, sand lenses often reach a thickness of 50 to 80 ft, and extend laterally for over a mile.

Texture of the Miocene sands varies somewhat. The coefficient of sorting is generally high, indicating poor sorting, with sands and gravels mixed. Median grain size is approximately one millimeter in diameter. No apparent trends linking grain size with depth or location were evident from the data examined during this study.

Surface Aquifer

Overlying the Miocene series are sediments of the surface aquifer system, the youngest shallow aquifer. These sediments form a relatively thin layer of sands, gravels, and clays, extending from the surface to a depth of approximately 80 ft. Figure 4 shows the distribution and thickness of this aquifer.

Data indicate that the surface aquifer system consists primarily of sand and thin layers of white to reddish-brown clay. Layers of pure sand or clay are generally no more than a few inches thick. Layers of sand-clay mixtures are usually less than 5 ft thick. Sand in the surface aquifer is fine grained and well sorted in most instances.

Two notable exceptions to this general description were observed. First, flood plain deposits of major rivers in the study area commonly exhibit a wide range of grain sizes from sand to fine gravel. The Altamaha River in Wayne County, for example, has an extensive system of medium-to coarse-grained alluvial deposits. These deposits are more than 120 ft thick in some places.

Second, in the central portion of the study area at depths of from 30 to 50 ft below land surface, there is an extensive layer of coarse and fine gravel (see fig. 4). The thickness of this sand layer varies from 5 to 15 ft, and it is laterally persistent, occurring at the base of the surface sediments in Wayne, Glynn, Long, and McIntosh Counties.

GROUND-WATER USE AND AVAILABILITY

The surface aquifer receives recharge directly from rainfall which percolates through the sediments. In most areas of coastal Georgia the surface water table is quite shallow. During dry months the base flow of streams and rivers of the coastal area is maintained by ground water discharging from the surficial aquifer. The coastal area has very sandy soils which are actually part of the surface aquifer in many cases. The result is a very high rate of rainfall infiltration.

Recharge to the Miocene aquifers is the result of percolation from the surface aquifer, and in some areas, discharge from the principal artesian aquifer. Although clay layers conduct ground water very slowly, thickness and density of the clays are variable throughout the study area causing recharge rates to be variable as well.

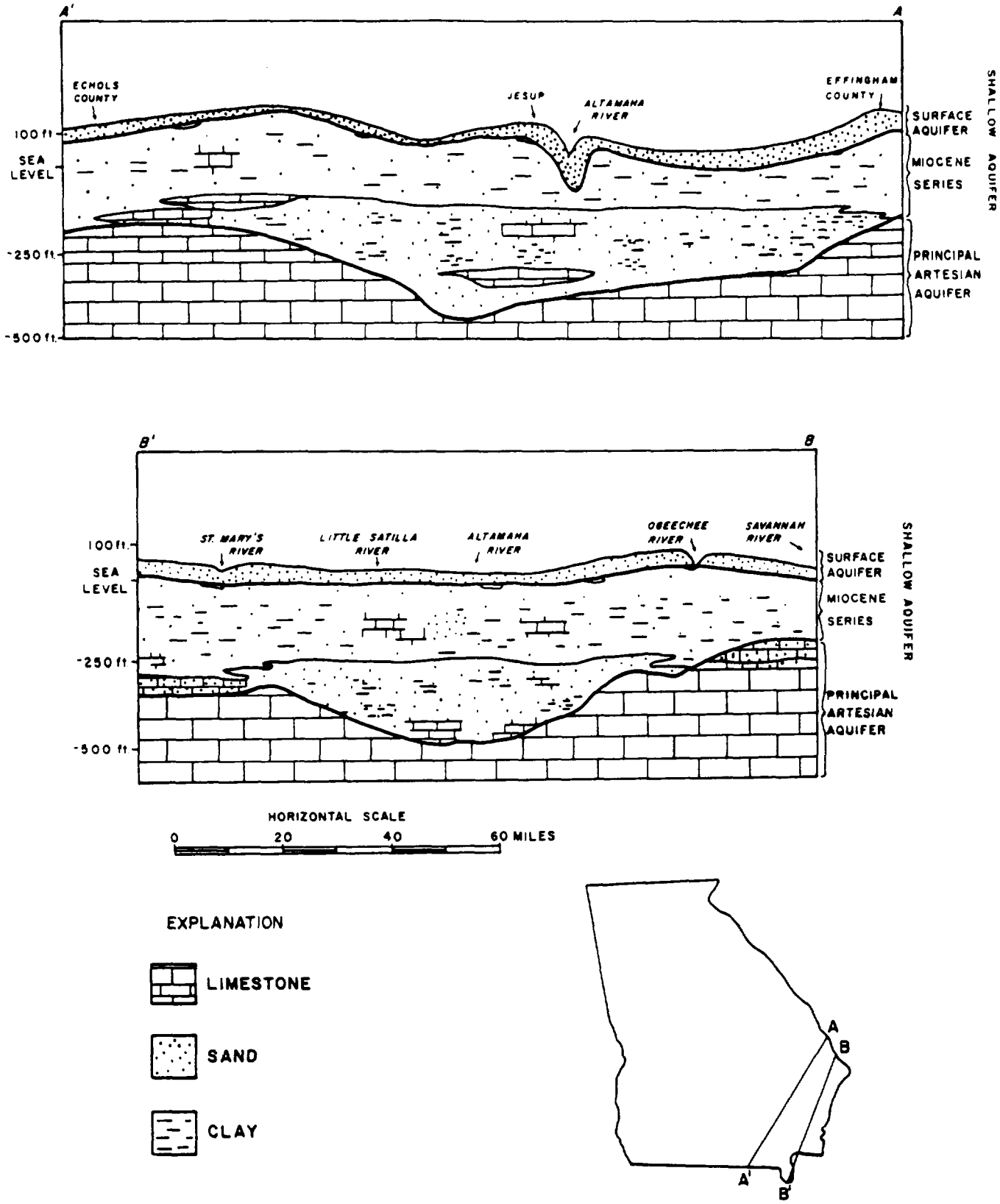


Figure 2. Generalized cross sections showing stratigraphic relationship of shallow aquifers and the principal artesian aquifer.

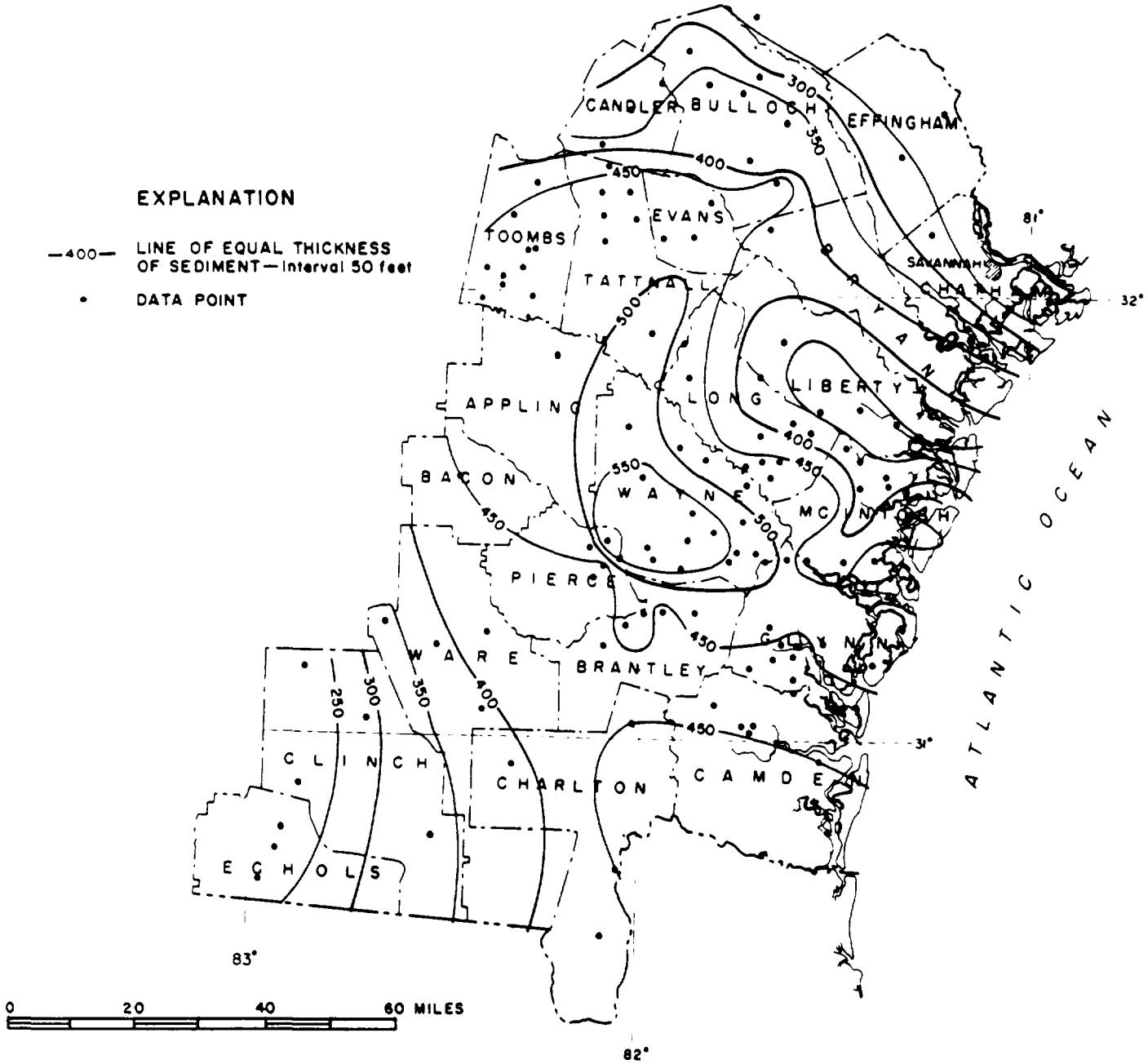


Figure 3. Thickness of unconsolidated Miocene sediments.

At present, the shallow aquifer system is almost exclusively used as a source of water for domestic wells. In the central portion of the study area where the shallow sediments are thickest as shown in figure 5, it is estimated that more than 80% of all domestic wells tap the shallow aquifer system. The great depth of the principal artesian aquifer in this area makes the shallow aquifer system economically more attractive for most people.

In the counties along the coast, many dwellings also have a well tapping only the surface aquifer. These shallow wells are most commonly used as a secondary water supply for yard irrigation rather than for drinking water. However, many rural homes use water from the surface aquifer for all water needs. Surface aquifer wells range from 10 to 80 ft.

Figure 6 shows the variations in estimated water-well potential of the Miocene and surface aquifers combined. Water-well potential is expressed as the estimated yield in gallons per day of a properly constructed well penetrating the full thickness of the saturated sand or gravel aquifers. Proper well spacing to prevent interference between two or more wells is assumed. A well designed to make the best use of shallow aquifer potential would be receiving water from several zones.

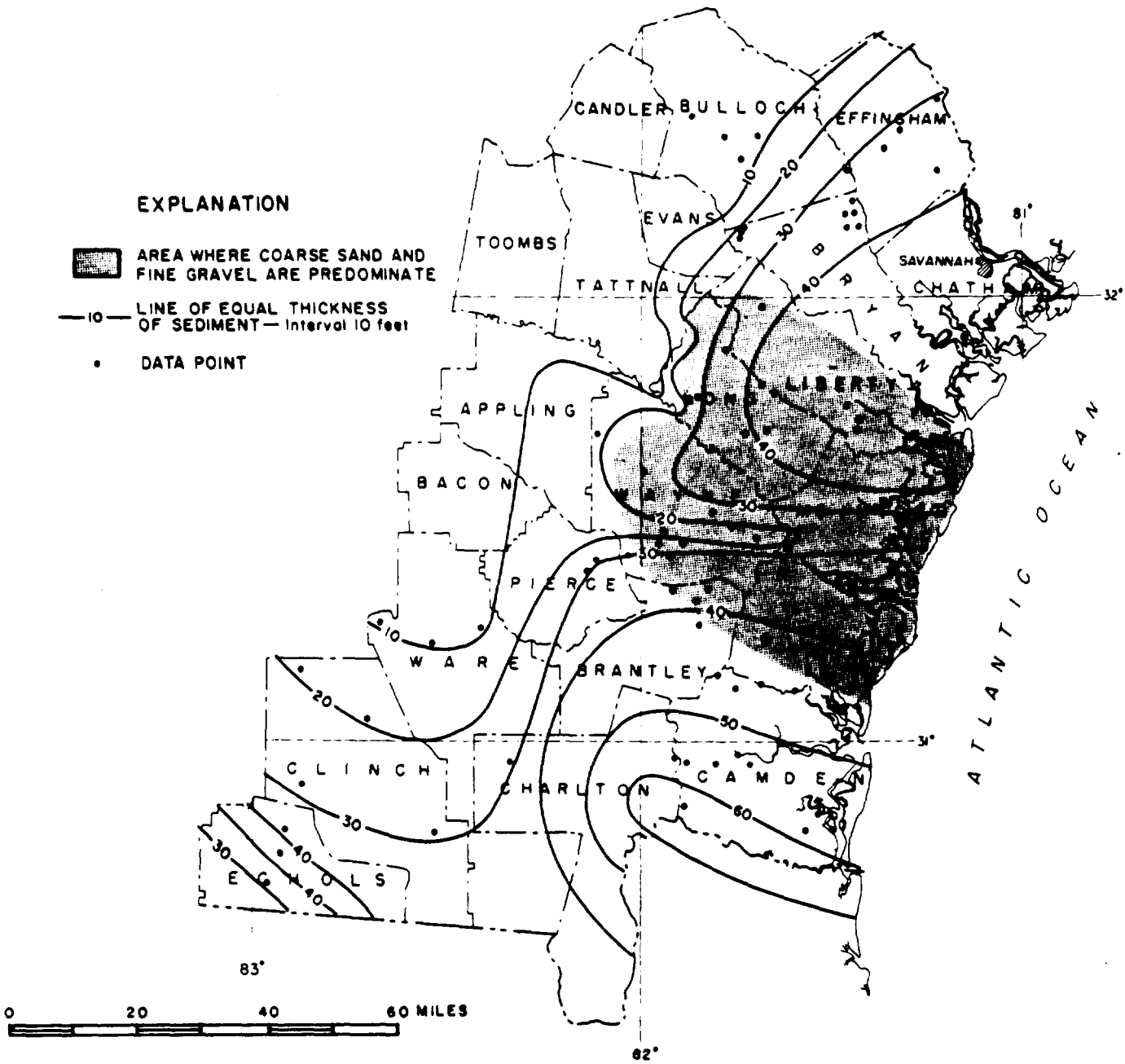


Figure 4. Distribution and thickness of sediments comprising the surface aquifer. Modified from Herrick, 1965.

GROUND-WATER DEVELOPMENT TECHNIQUES

There are several reasons why the shallow sand and gravel aquifers are not used more extensively for commercial and agricultural wells. Developing a large capacity well in a sand and gravel aquifer requires that the well contractor have specific equipment and experience. Many water well contractors in coastal Georgia have never constructed a well in a sand and gravel aquifer, largely because there was no need to do so. In addition, well construction and maintenance in a sand and gravel aquifer can be more expensive than simply drilling an open hole in a limestone aquifer. Care must be used to avoid well collapse and sand in the water. Finally, low hydraulic conductivity of the shallow aquifers in some areas of coastal Georgia limits ground-water flow and availability. Essentially, constructing a large capacity well in the sands and gravels of coastal Georgia has offered no apparent disadvantage over the use of the principal artesian aquifer, which produced water in seemingly unlimited quantity.

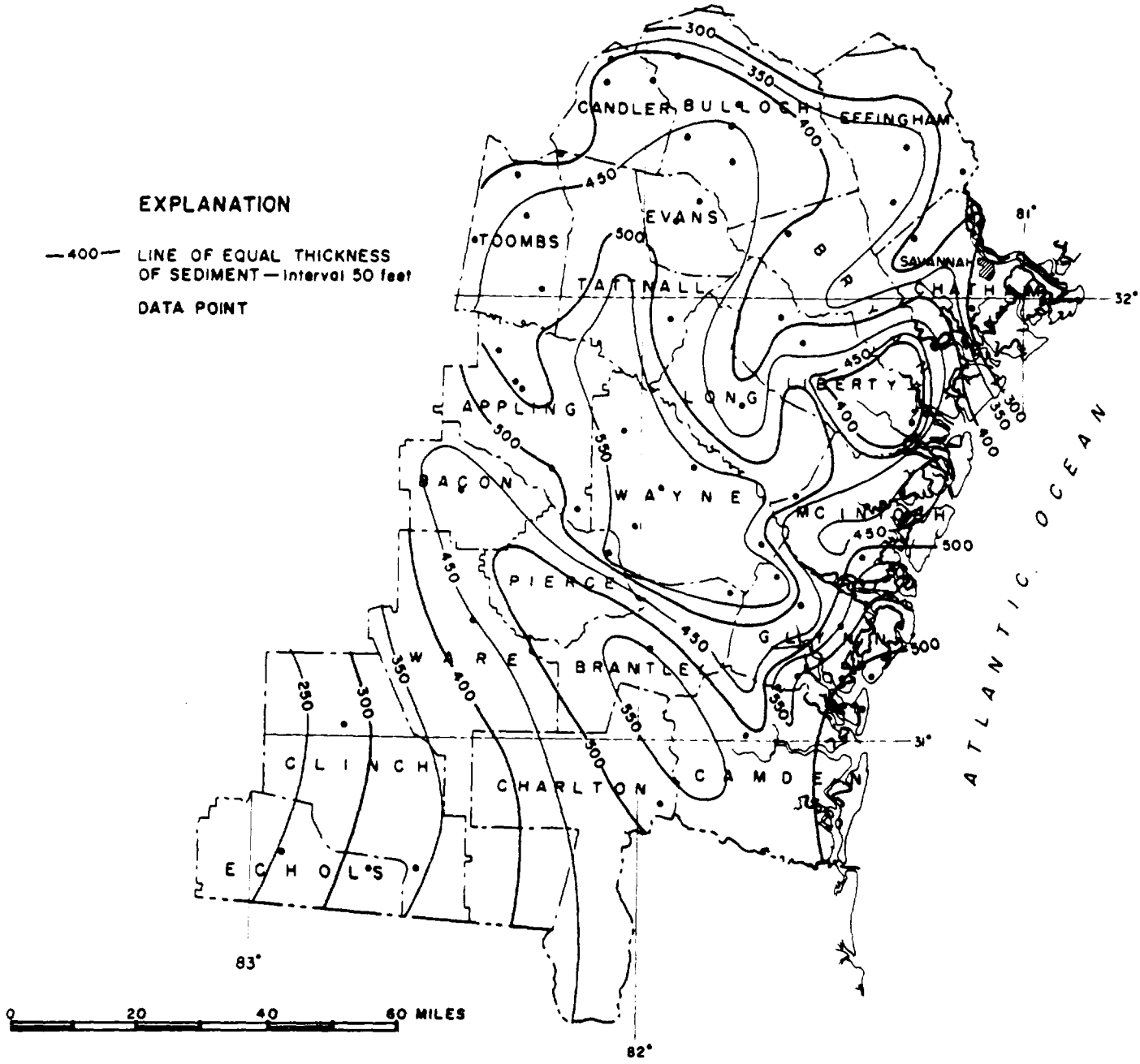


Figure 5. Total thickness of unconsolidated shallow sediment.

Well construction techniques are available that can eliminate well collapse and make good use of "tight" aquifers of apparent low productivity. These special techniques have been used successfully in other areas of the country where water is much less abundant than in coastal Georgia. By taking advantage of optimum well construction technology, more ground water could be obtained from the shallow aquifer system, thus helping to reduce drawdown in the principal artesian aquifer.

Current Well Construction Methods

One type of shallow well commonly used in the study area is called a "rock" well. In constructing a "rock" well, a hole is drilled until a resistant layer is encountered. Resistant layers, usually thin limestones or dolomitic limestones, are common at the top of the Miocene Series. Drilling continues through the rock layer, and compressed air is used to create a hollow or reservoir immediately beneath. Casing is then set from the surface to the "rock".

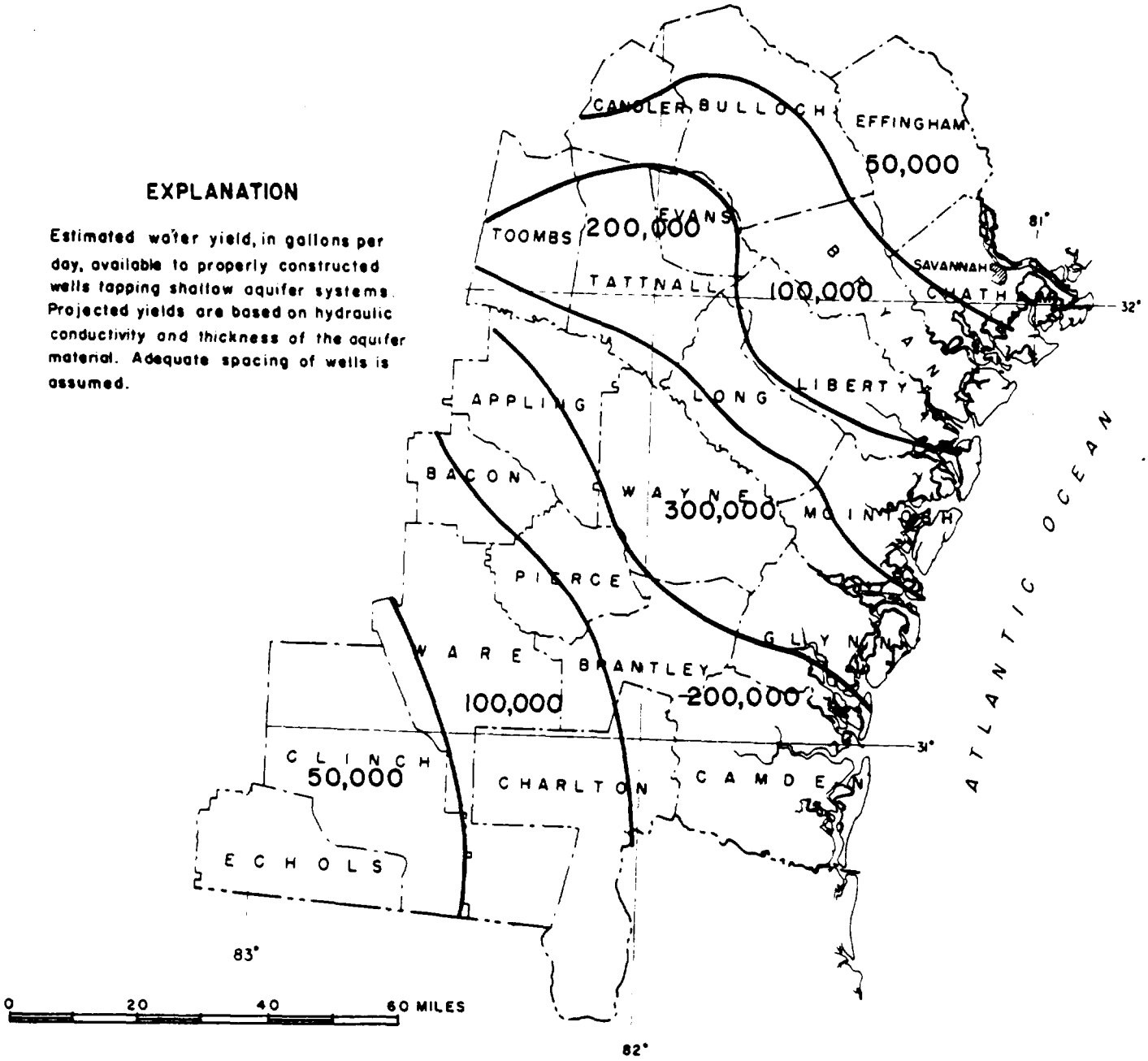


Figure 6. Estimated minimum well yield of shallow aquifers.

"Rock" wells are a popular variety of domestic well because they are economical to construct and yield from 2 to 10 gpm. However, the reservoir, which is not screened, can and often does collapse, greatly reducing pumping capacity. "Rock" wells are usually no more than 80-ft deep; however, a 200-ft deep "rock" well used by a seafood processing plant in Brunswick has been in use since 1969, delivering slightly over 100 gpm.

The best method for preventing the collapse of wells in unconsolidated aquifers is the use of well screens. Well screens are preferable to simply perforating the casing, because the size of openings in a screen can be selected to complement the sand size of a specific aquifer. This allows maximum surface area of the aquifer to be exposed to screen, while minimizing the quantity of sand which enters the well. The screen is welded or threaded onto the string of well casing at intervals to correspond with the sand aquifers.

If the sand aquifer is very fine grained, or if the grain-size sorting is poor, a technique known as filter packing can be used to enhance well yield. When a driller constructs a filter pack, the hole is purposely

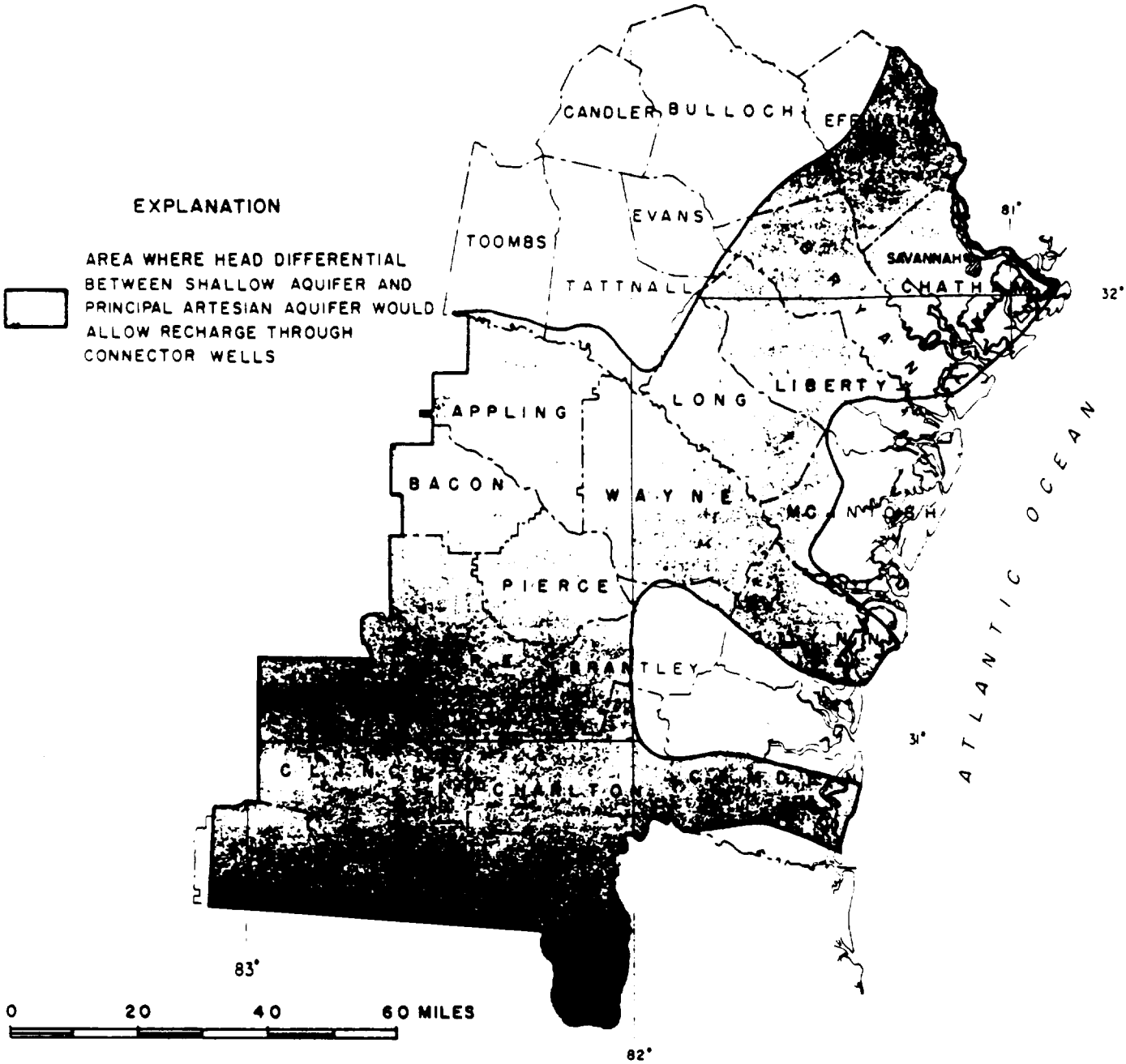


Figure 7. Well construction techniques.

drilled quite large, the casing and screen are installed as needed, and the annular space between the formation and the screen is filled with sand or gravel carefully graded for size. The grain size and sorting of the filter pack are chosen to keep sand in the aquifer from being pumped into the well.

Perhaps the most common type of shallow domestic well in the study area is known as a driven or jetted well. Driven wells are usually installed by homeowners to serve as a secondary water supply. A drive point, or slotted galvanized pipe with a pointed tip, is driven into the surface sands, often with the help of water pressure from a garden or portable pump. Driven wells are nearly always less than 40 ft-deep and no more than 2 in. in diameter. They generally provide from 1 to 5 gpm of water. Driven wells are common even where municipal water is available, and are used chiefly for yard irrigation. The main drawback to driven wells is that they are vulnerable to surface contamination.

Figure 7 shows examples of various well construction methods. Examples B through E are in use in coastal Georgia, with D and E being the most common construction techniques.

Potential Ground-Water Development Techniques

Well capacity can be increased by enlarging the well diameter. Water in large diameter wells can be pumped from storage in the well bore, and pumpage can exceed the volume of water flowing into the well bore for short periods. A large diameter well also exposes a large surface area of the aquifer facilitating the flow of water into the well. A pond can be thought of as a shallow, large diameter, uncased well.

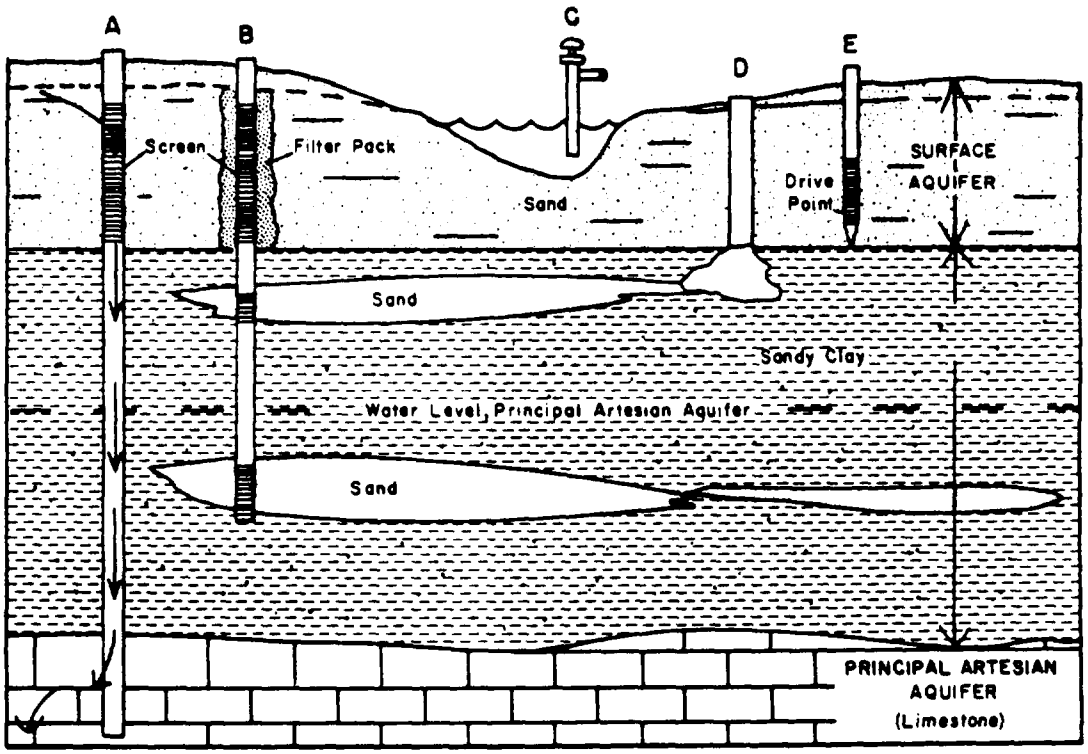
The pond-well technique is successfully used for agricultural irrigation in the Waycross area under geohydrologic conditions similar to those found over a wide portion of this report area. The pond is designed to hold enough water to operate an irrigation system for a predetermined length of time. Water in the pond is depleted during the irrigation and allowed to recover before the next irrigation.

Calculations (Beck, 1978, p. 19) have shown that ponds with a radius of 50 ft and a depth of 15 ft below the water table are capable of yielding 100,000 gal-/day. Initial construction costs are reasonable, depending upon location.

In addition to conventional withdrawal of ground water from wells, induced recharge by means of connector wells could be an alternative use for the surface aquifer.

Rainfall in the coastal area is rapidly absorbed by the surface aquifer. However, dense clay layers in the Miocene series prevent much of the water stored in the surface sands from percolating down to recharge the principal artesian aquifer. The main recharge areas for the principal artesian aquifer are to the west of the study area, where the confining layer is thin.

Connector wells within the study area would link the surface aquifer with the principal artesian aquifer, bypassing the Miocene clays. Water from the surface aquifer would then flow downward by gravity into the principal artesian aquifer. In effect, a connector well hastens the natural recharge process. In order for induced recharge to take place, the water table of the surface aquifer must be at a higher elevation than the artesian pressure level in the principal artesian aquifer. This situation exists throughout much of the coastal area. Figure 8 shows the portion of the study area where the hydraulic head differential is suitable for induced recharge.



EXPLANATION

A. CONNECTOR WELL CONDUCTING WATER FROM SURFACE AQUIFER TO PRINCIPAL ARTESIAN AQUIFER. DIRECTION OF WATER FLOW IS SHOWN BY ARROWS.

B. MULTIPLE AQUIFER WELL WITH THREE SCREENED INTERVALS AND ONE FILTER-PACKED INTERVAL.

C. POND-WELL UTILIZING SURFACE AQUIFER.

D. "ROCK" WELL DRAWING WATER FROM RESERVOIR EXCAVATED IN SURFACE AQUIFER.

E. DRIVEN OR JETTED WELL.

Figure 8. Map showing the area where connector wells may be feasible.

Calculations based on hydraulic conductivity of the Miocene clay layers (Callahan, 1964, p. 24; Counts and Donsky, 1964, p. 77) and measured hydraulic head potential indicate that approximately 48,000 gal/day/sq mi reach the principal artesian aquifer by natural percolation in the coastal area. This is equivalent to only 1 in. of rainfall per square mile per year. Using a method described by Lohman (1972, p. 23), estimates of recharge via gravity-flow connector wells show that approximately 19,000 gal/day could be injected into the principal artesian aquifer through one connector well. This is a 40% increase in the calculated natural recharge per square mile. A series of 3 or 4 connector wells in a square mile could more than double the natural recharge in a specific area.

Connector wells are a potential management option. Their use in the Brunswick area, for instance, could help decrease head differential in the principal artesian aquifer, which would in turn slow the intrusion of brackish water. However, in any situation where human activity interferes with a natural process, results can be detrimental and difficult to anticipate. For instance, the greatest danger with artificial recharge is the introduction of inferior quality water into an aquifer. At this time, additional research into the economic and technical feasibility of connector wells in Georgia seems justified.

GROUND-WATER QUALITY

The chemical quality of ground water is the result of chemical interactions between the aquifer materials and the water they contain. Rainwater is usually quite low in dissolved solids and neutral to slightly acidic. That portion of rainfall which percolates downward changes its chemical composition even as it moves through the soil zone. Since ground-water movement is quite slow, commonly measured in feet per year, the ground water has time to adjust to the chemical properties of the aquifer material.

Thirty water samples were collected for this study to determine the range in chemical quality. Laboratory analyses were performed either by the Georgia Geologic Survey or the U.S. Geological Survey. Table 1 shows selected summary results for the samples evaluated.

Quality of water from Neogene sediment is good through most of the study area, based on Department of Natural Resources, Environmental Protection Division, 1977, Safe Drinking Water Standards. This applies only to the major inorganic dissolved solids included in the analyses. Bacterial and organic chemical determinations were not performed at this time.

In general, the quality of water is a relative indication of its source; that is, the level of dissolved solids increases with depth. Water from the surface aquifer is usually lower in dissolved solids than is water from the Miocene aquifers. Total dissolved solids average less than 100 parts per million (ppm) from surface sediments, while water from Miocene sediments averages slightly over 300 ppm.

Table 1. Summary of ground-water quality analyses.

Constituent or Physical Property	ANALYTICAL RESULTS(1)		
	MAXIMUM	MEDIAN	MINIMUM
TEMPERATURE °C	23.8	21.9	20.5
SILICA SiO_2	42.0	20.7	4.0
IRON Fe	2.6	0.6	0.0
CALCIUM Ca	65.0	29.5	1.6
MAGNESIUM Mg	38.0	10.3	0.0
SODIUM Na	146	20.5	2.5
POTASSIUM K	22.0	4.0	0.1
BICARBONATE HCO_3	348	133	0.0
SULFATE SO_4	164	25	0
CHLORIDE Cl	175	25.2	1
FLORIDE F	1.2	0.3	0.0
NITRATE NO_3	350(2)	312(2)	0.0
DISSOLVED SOLIDS	548(2)	204	30
CARBONATE HARDNESS	319	121	4
CONDUCTIVITY MICROMHOS	720	401	51
FIELD pH	7.65	6.80	4.63

(1) Values in milligrams per liter, except Temperature (Degrees Celsius); Conductivity (Micromhos @ 25 C); and pH.

(2) Values greater than recommended limits.

Water from the shallow aquifers is of three chemical types: (1) Water from the Miocene aquifer is generally a moderately hard calcium-bicarbonate water; (2) Samples from the surface aquifer were a sodium bicarbonate type; and (3) Some wells in the surface aquifer yielded sodium chloride water, although the concentration was usually not in excess of safe drinking water standards.

Maintaining the chemical quality of water in the shallow aquifers will be a serious challenge. Although the surface and Miocene aquifers are not extensively used at present, they contain a substantial reserve of water available for future use.

The surface aquifer is especially vulnerable to contamination because permeable sands which form the aquifer are found at, or close to, land surface. With increased development of the coastal area, a certain amount of contamination to the surface aquifer is probably unavoidable, especially from non-point pollution resulting from surface runoff. However, damage to surface aquifers from identifiable point sources of pollution is needless, and can be prevented. Location of potential points of contamination should be based on complete geologic and hydrologic data, including the thickness and extent of local clay layers and a water-table contour map.

The geology of the Miocene aquifer makes it less susceptible to contamination. Substantial thicknesses of clay surrounding the lenticular sand aquifers will slow the recharge of surface water and allow natural filtration and absorption to take place.

Care should be taken to prevent needless pollution of the Neogene aquifers. Complex relationships between surface water and ground water can lead to pollution in unexpected places, and a polluted shallow aquifer is useless, as well as dangerous to the health of those dependent upon shallow ground water.

SELECTED REFERENCES

Beck, B.F., 1978, The feasibility of using ponds as shallow wells in the coastal area of Georgia: unpub. report prepared for Environ. Resources Center, Georgia Inst. Technology and Georgia Dept. Nat. Resources, 22 p.

Brown, Eugene, Skougstand, M.W., and Fishman, M.J., 1974, Methods for collection and analysis of water samples for dissolved minerals and gases: Techniques of water resources investigations, Book 5, Chap. A 1, 160 p.

Brown R.H., 1963, Estimating the transmissibility of an artesian aquifer from the specific capacity of a well: *in* Bental, Ray, comp., Methods of determining permeability, transmissibility, and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 336-338.

Callahan, J.T., 1964, The yield of sedimentary aquifers of the coastal plain southeast river basins: U.S. Geol. Survey Water-Supply Paper 1669-W, 56 p.

Counts, H.B., and Donsky, Ellis, 1963, Salt water encroachment, geology and ground water resources of Savannah area, Georgia and South Carolina: U.S. Geol. Survey Water-Supply Paper 1611, 100 p.

Counts, H.B. and Krause, R.E., 1976, Digital model analysis of the principal artesian aquifer, Savannah, Georgia area: Water Resources Investigations 76-133, U.S. Geol. Survey Open-file rept., 4 p.

Folk, R.L., 1965, Petrology of sedimentary rocks: Univ. Texas, 159 p.

Georgia Department of Natural Resources, 1977, Rules for safe drinking water: Chap. 391-3-5, Environ. Protection Div., Atlanta.

Herrick, S.M., 1965, A subsurface study of pleistocene deposits in coastal Georgia: Georgia Dept. Mines, Mining and Geology, Inf. Circ. 31, 8 p.

_____, 1971, Well logs of the coastal plain of Georgia: Georgia Geol. Survey Bull. 70, 460 p.

Lohman, S.W., 1972, Ground water hydraulics: U.S. Geol. Survey Prof. Paper 708, 67 p.

Masch, F.D., and Denny, K.J., 1966, Grain size distribution and its effect on the permeability of unconsolidated sands: Water Resources Research, v. 2, no. 4, p. 665-667.

Wait, R.L., and Gregg, D.O., 1973, Hydrology and chloride contamination of the principal artesian aquifer of Glynn County, Georgia: Georgia Dept. Nat. Resources, Georgia Geol. Survey, Hydrologic Rept. 1, 93 p.

U.S Department of Commerce, 1977, Climatological data, Georgia, Annual Summary: Nat'l Oceanic and Atmospheric Admin., Environ. Data Service, Asheville, N.C.

Geology and Occurrence of Fresh and Brackish Ground Water in Glynn County, Georgia

By ROBERT L. WAIT

RELATION OF SALT WATER TO FRESH GROUND WATER

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1613-E

Prepared in cooperation with the city of Brunswick, with Glynn County, and with the Georgia Department of Mines, Mining, and Geology

REFERENCE 17

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1965

more abundant in older shoreline deposits and that chemical decay of the less stable ones causes a decrease in particle size in the older deposits.

RECENT AND PLEISTOCENE SERIES

The Recent and Pleistocene Series consists, at the top, of very fine to fine-grained sand that is well rounded and usually well sorted. It grades downward into slightly coarser sand containing abundant small pelecypod shells and appears to be typical of beach sand present today on the sea islands. Hard calcareous to siliceous, gravelly sand was present in test well 2 (D-182) from about 42 to 44 feet. The depth to this hard gravelly sand varies somewhat with differences in land-surface altitude, but in general the sand is at about the same altitude throughout the area. This gravelly sand is probably the base of the Pleistocene in Glynn County. The sand composing the Pleistocene is feldspathic, and most of the gravel consists of feldspar. Heavy mineral deposits are known to exist in Recent and Pleistocene beach deposits.

Veatch and Stephenson (1911, p. 377-379) listed fossils dredged from the Brunswick River that were identified by T. W. Vaughan as ranging from Miocene to Recent. They concluded that the dredging had cut through a thin covering of Recent and Pleistocene deposits and entered the Miocene deposits. Several species of vertebrate fossils obtained from the old Brunswick and Altamaha Canal were listed by Hay (1923) and quoted by Cooke (1943). Dredging in the Brunswick River during 1959-61 produced numerous vertebrate remains, including teeth and bones. The material was identified by F. C. Whitmore, Jr. (written comm. Oct. 5, 1961), of the U.S. Geological Survey. No new species were found as compared with those of Hay. Whitmore said that the vertebrate fossils ranged in age from late Kansan through Wisconsin and that "the sharks teeth in this collection have been reworked or were dredged from Tertiary deposits underlying the Pleistocene. Their freshness shows that they have not been transported very far. If we assume (which is risky) that they all came from the same horizon, the assemblage represents a range of Eocene to Miocene inclusive. Individual genera in the collection range as low as the Upper Cretaceous and as high as the Recent."

Such a mixed faunal assemblage can be expected from a river bed and cannot be used to date the sediments in which it is found. However, it can be used to interpret the age range of the sediments composing the source material of the Miocene and Pleistocene rocks.

MIOCENE SERIES

POST-HAWTHORN(?) ROCKS

Beneath the Pleistocene Series and above the rocks known to belong to the Hawthorn Formation is a thick series of feldspathic sand, gravel, and thin limestone beds, all of uncertain age. These beds are here designated the post-Hawthorn(?) rocks. They consist of granule to pebble gravel, sandy gravel, silty sand, limestone, clay, and sandy clay. Some of the beds of clay and sandy clay are calcareous and some of the sand is unconsolidated. Thin beds of brown, slightly dolomitic limestone occur irregularly throughout the series. Coarse-grained to pebble phosphate is common near the base of the formation. The gravel generally becomes coarser at the base, just above the fuller's earth of the Hawthorn Formation. Fish teeth are rare and large flakes of muscovite are rare to common near the base of the post-Hawthorn(?) rocks. The rocks are usually some shade of gray, ranging from pinkish gray (5YR 8/1)[1] to medium light gray (N 6). The rocks range from about 120 to 140 feet in thickness.

HAWTHORN FORMATION

The Hawthorn Formation consists of fuller's earth clay, greenish-gray sandy silt, feldspathic phosphatic sand, thin phosphatic limestone beds, and silty calcareous sand. The fuller's earth is pale olive gray (10Y 6/2) to greenish gray (5GY 6/1). Dark-brown chert beds 3 to 4 inches thick are interbedded in the clay. Some very fine to fine-grained sand is present also. The clay ranges in thickness from about 40 to 160 feet. At some wells, there are two clay beds separated by 10 to 30 feet of fine to coarse-grained, weakly cemented sand. The limestone is slightly dolomitic and much recrystallized; casts and molds of pelecypods are common. It contains fine- to medium-grained sand and has small solution cavities from which the shells have been dissolved. The cavities are usually lined with fine-grained calcite or dolomite crystals. Beneath the limestone is an argillaceous, weakly cemented phosphatic sand and sandy limestone which is slightly dolomitic and weathered; it is cemented with calcium carbonate at places. Black polished phosphate pebbles as much as half an inch in diameter are present throughout the sand. Fine- to medium-grained brown phosphate is common. The phosphate beds are usually less than a foot thick, and in some places no more than 0.1 foot as measured by gamma-ray logging. They produce peaks A and B on the gamma-ray logs (pls. 1, 2). The limestone beds are sandy and phosphatic and contain casts and molds of pelecypods.

[1] Numbers refer to Rock-Color Chart (Goddard and others, 1948).

A sandy phosphatic lime
may be equivalent to the
places, by sand or cemented

The fuller's earth at th
marker bed; it is persistent
plain. A fuller's earth bed
tion in western Georgia als

The basal contact of the
because the basal limestone
stone are lithologically si
change in lithology from
stone to a hard dense, sl
and molds of gastropods
ries than in the Miocene S

No outcropping Hawth
scribed in the subsurface
present are far from the
served and poorly expose
incomplete, having either
but seldom both. Placem
cause of lack of paleonto
correct. The Duplin Mar
basal gravel of the post-
fauna indicative of the
face in Glynn County to
the U.S. Geological Sur
lack of paleontologic evi
area.

The fuller's earth and
are confining beds that
of artesian water and als

OL

The Oligocene(?) Seri
phatic sandy fossiliferou
is fine- to medium-grai
are common to abunda
abundant. The thickness
but appears to be less th
interval from 477 to 550
Oligocene(?) Series is
is hydraulically connect

CENE SERIES

WTHORN(?) ROCKS

eries and above the rocks known to nation is a thick series of feldspathic one beds, all of uncertain age. These post-Hawthorn(?) rocks. They con- avel, sandy gravel, silty sand, lime- Some of the beds of clay and sandy of the sand is unconsolidated. Thin olomitic limestone occur irregularly -grained to pebble phosphate is com- nation. The gravel generally becomes e the fuller's earth of the Hawthorn re and large flakes of muscovite are of the post-Hawthorn(?) rocks. The of gray, ranging from pinkish gray gray (N 6). The rocks range from ss.

RN FORMATION

onsists of fuller's earth clay, green ic phosphatic sand, thin phosphatic areous sand. The fuller's earth is reenish gray (5GY 6/1). Dark-brown are interbedded in the clay. Some is present also. The clay ranges in 0 feet. At some wells, there are two 30 feet of fine to coarse-grained, limestone is slightly dolomitic and l molds of pelecypods are common. grained sand and has small solution s have been dissolved. The cavities rained calcite or dolomite crystals. rgillaceous, weakly cemented phos- ne which is slightly dolomitic and calcium carbonate at places. Black much as half an inch in diameter l. Fine- to medium-grained brown osphate beds are usually less than no more than 0.1 foot as measured roduce peaks A and B on the gam- imestone beds are sandy and phos- lds of pelecypods.

oddard and others, 1948)

A sandy phosphatic limestone unit near the base of the section may be equivalent to the Tampa Limestone; it is underlain, at places, by sand or cemented phosphatic sand.

The fuller's earth at the top of the Hawthorn is an excellent marker bed; it is persistent throughout most of the Georgia coastal plain. A fuller's earth bed marks the top of the Hawthorn Formation in western Georgia also.

The basal contact of the Hawthorn is more difficult to determine because the basal limestone and the underlying Oligocene(?) limestone are lithologically similar. The contact was picked on the change in lithology from a soft marly, finely recrystallized limestone to a hard dense, slightly dolomitic sandy limestone. Casts and molds of gastropods are more abundant in the Oligocene Series than in the Miocene Series.

No outcropping Hawthorn in Georgia is as thick as that described in the subsurface in Glynn County. Such outcrops as are present are far from the coastal area, and they are poorly preserved and poorly exposed. In addition, the exposed sections are incomplete, having either an upper or a lower contact exposed, but seldom both. Placement of contacts may be questionable because of lack of paleontological evidence, but it is believed to be correct. The Duplin Marl, where present, has been included in the basal gravel of the post-Hawthorn(?). None of the foraminiferal fauna indicative of the Duplin has been identified in the subsurface in Glynn County to date, according to S. M. Herrick (1961) of the U.S. Geological Survey. Other workers also have noted the lack of paleontologic evidence in the Hawthorn Formation in this area.

The fuller's earth and the sandy silty beds in the Miocene Series are confining beds that prevent or retard the upward movement of artesian water and also the downward movement of ocean water.

OLIGOCENE(?) SERIES

The Oligocene(?) Series consists of yellowish-gray (5Y 8/1) phosphatic sandy fossiliferous, slightly dolomitic limestone. The sand is fine- to medium-grained, and black polished phosphate pebbles are common to abundant. Casts and molds of gastropods are abundant. The thickness of the limestone varies throughout the area but appears to be less than 100 feet. In well D-182 (test well 2) the interval from 477 to 550 feet was assigned to the Oligocene(?). The Oligocene(?) Series is a part of the principal artesian aquifer; it is hydraulically connected with the underlying Ocala Limestone.

761-476 O—6——2

EOCENE SERIES

UPPER EOCENE (OCALA LIMESTONE)

The Ocala Limestone consists of white to gray bryozoan limestone; pelecypod shells, casts, and molds are abundant in the upper part of the formation. Foraminifera are common to abundant and in some places form most of the limestone. The limestone is much recrystallized and porous. The pore space consists mostly of solution cavities from which pelecypod shells have been dissolved. The cavities are lined with crystals of calcite. The top of the Ocala was determined by the first appearance of white (N 9) to very pale orange (10YR 8/2) recrystallized limestone below the yellowish-gray sandy phosphatic limestone of the Oligocene(?) Series. The contact is easily distinguishable in most wells, but not in all.

The lower part of the Ocala is a soft porous bryozoan limestone that can be drilled rapidly.

Brown dolomitic limestone is present near the base of the Ocala. The limestone was first penetrated between the depths of 860 and 927 feet in test well 2. In some wells, the beds are totally recrystallized, and rhombs of dolomite have obliterated all fossils. Caverns ranging from 2 to 7 feet in height were noted in this zone during the drilling of three wells at the Brunswick Pulp and Paper Co. All the dolomitic limestone in the Ocala appears to be secondary. The bed between the depths of 860 and 927 feet is persistent laterally, occurring in wells throughout the county, and is recognizable on electric logs.

The configuration of the Ocala on electric logs is shown in the cross sections (pl. 2). The upper part of the formation is shown as alternating beds of hard and softer limestone by excursions of the resistance and spontaneous-potential curves to the right and left respectively, at the position of the hard beds. The softer lower part of the Ocala can be drilled rapidly; it is largely featureless and flat on the electric logs. The lower dolomitized part of the Ocala has increased resistance and spontaneous potential. Inflection point D on the gamma-ray log generally corresponds to the first appearance of white or very pale orange limestone at the top of the Ocala.

MIDDLE EOCENE (CLAIBORNE GROUP)

The Claiborne Group consists of gray bryozoan limestone, brown dense cherty dolomitic limestone, cavernous dolomitic limestone, and chert beds. The top of the Claiborne is a hard dense cherty dolomitic limestone that was present at about 1,030 feet in test well 2 (D–182). This bed is the upper confining bed of the brackish-water zone in test well 2 and appears to be present in wells in

the Hercules Powder Co. w
wick Peninsula; it is evider
Pulp and Paper Co. well 10

The dolomitic limestone
bryozoan limestone and cl
were in Brunswick Pulp a
of 1,702 to 1,723 feet and
beds act as confining laye
salty water.

LOWER E

The Wilcox Group consi
limestone, calcareous silt,
sory constituents consist o
top of the Wilcox Grou
abundant glauconite and
overlying formations and

The Brunswick Pulp an
the Wilcox Group in the
total thickness of the W
drilling and is not know
1169, fig. 3) showed a th
Group in Glynn County.

G

Plate 2 shows east-we
sections based on gamma-
shown on plate 3.

Section A–A′ extends
Simons Island on the ea
ray logs are used as co
sent thin phosphatic sa
C generally corresponds
limestone in the Oligoc
mate top of the princip
responds to the top of
fossiliferous limestone t
Limestone.

Section A–A′ shows
70 feet lower on Blythe
land at Hercules Powd
dip, measured along th
eastward and westward

The north-south cros
in the vicinity of the

ENE SERIES

(OCALA LIMESTONE)

ts of white to gray bryozoan lime- and molds are abundant in the up- raminifera are common to abundant of the limestone. The limestone is ts. The pore space consists mostly ch pelecypod shells have been dis- with crystals of calcite. The top of the first appearance of white (N 9) 2) recrystallized limestone below the tic limestone of the Oligocene(?) distinguishable in most wells, but

is a soft porous bryozoan limestone

present near the base of the Ocala. ated between the depths of 860 and e wells, the beds are totally recrys- e have obliterated all fossils. Cav- in height were noted in this zone ls at the Brunswick Pulp and Paper e in the Ocala appears to be sec- lepths of 860 and 927 feet is persist- lls throughout the county, and is

la on electric logs is shown in the er part of the formation is shown d softer limestone by excursions of potential curves to the right and of the hard beds. The softer lower d rapidly; it is largely featureless The lower dolomitized part of the and spontaneous potential. Inflec- y log generally corresponds to the y pale orange limestone at the top

(CLAIBORNE GROUP)

of gray bryozoan limestone, brown e, cavernous dolomitic limestone, Claiborne is a hard dense cherty resent at about 1,030 feet in test upper confining bed of the brack- d appears to be present in wells in

the Hercules Powder Co. well field and other wells on the Brunswick Peninsula; it is evident on the time-drilling log of Brunswick Pulp and Paper Co. well 10 (E-137) between 1,000 and 1,100 feet.

The dolomitic limestone is interbedded with gray fossiliferous, bryozoan limestone and chert beds. The two thickest chert beds were in Brunswick Pulp and Paper Co. well 10 (E-137) at depths of 1,702 to 1,723 feet and 1,785 to 1,815 feet. Both of these chert beds act as confining layers and retard the upward movement of salty water.

LOWER EOCENE (WILCOX GROUP)

The Wilcox Group consists of gray fossiliferous limestone, sandy limestone, calcareous silt, and some dolomitic limestone. Accessory constituents consist of glauconite, pyrite, and phosphate. The top of the Wilcox Group is marked by the first appearance of abundant glauconite and pyrite, which are rarely present in the overlying formations and are not abundant in any of them.

The Brunswick Pulp and Paper Co. well 10 penetrated the top of the Wilcox Group in the interval from 1,815 to 1,825 feet. The total thickness of the Wilcox was not penetrated during the test drilling and is not known for Glynn County. Toulmin (1952, p. 1169, fig. 3) showed a thickness of 500 to 750 feet for the Wilcox Group in Glynn County.

GEOLOGIC SECTIONS

Plate 2 shows east-west (*A-A'*) and north-south (*B-B'*) cross sections based on gamma-ray logs. The locations of the sections are shown on plate 3.

Section *A-A'* extends from Blythe Island on the west to St. Simons Island on the east. Four inflection points on the gamma-ray logs are used as correlation points. Peaks A and B represent thin phosphatic sand beds in the Hawthorn Formation. Peak C generally corresponds to a phosphatic sandy, slightly dolomitic limestone in the Oligocene(?) Series and represents the approximate top of the principal artesian aquifer. Inflection point D corresponds to the top of a hard dense, somewhat recrystallized white fossiliferous limestone that is believed to be the top of the Ocala Limestone.

Section *A-A'* shows that the correlation points are as much as 70 feet lower on Blythe and St. Simons Islands than on the mainland at Hercules Powder Co. well L (J-11). The component of dip, measured along the line of section, is about 13 feet per mile eastward and westward from well L (J-11).

The north-south cross section (*B-B'*) extends from well J-226 in the vicinity of the bridge on Jekyll Creek northwestward to the

downward through the soil and is held in the zone of aeration by molecular attraction. This water is termed "vadose water" (Meinzer, 1923, p. 39). Part of the vadose water is used by vegetation and ultimately is returned to the atmosphere by transpiration. Another part continues downward, because of gravity, to the zone of saturation. The top of the zone of saturation is called the "water table," and it is in direct contact with the atmosphere through the pore spaces in the soil. Water in the upper part of the zone of saturation is said to occur under water-table conditions. It is also described as being unconfined. The water that is present in the Pleistocene sand in Glynn County occurs under water-table conditions.

The water table rises and falls in response to many things, chiefly rainfall and discharge from wells and springs.

ARTESIAN CONDITIONS

The rocks in which ground water occurs are called aquifers. If aquifers are overlain and underlain by confining rocks of low permeability and if the water in them is under pressure, the water is known as artesian water. The water-bearing rocks or aquifers may be sand, gravel, limestone, or dolomite. Because the ground water is between beds of low permeability and all available pore space in the aquifer is filled with water, the water is under pressure. When a well is drilled into an artesian aquifer, the water rises in the borehole of the well because it is under pressure. If the pressure is sufficient to cause the water level to rise above the land surface, the well flows. Thus, the important distinguishing characteristic of an artesian well is that the water is confined and is under pressure and not necessarily that the well flows at the land surface. Wells in Glynn County that are deeper than about 50 feet are artesian.

WATER-BEARING ROCKS OF GLYNN COUNTY

PLEISTOCENE SERIES

The Pleistocene sand in Glynn County furnishs water to wells that are less than about 50 feet deep. Local rainfall recharges the sand. Medium-grained sand at depths of 12 to 17 feet and of 35 to about 50 feet furnish most of the water. Fine-grained sandy clay overlying the medium-grained sand is a semiconfining bed in much of the area.

Yields of about 5 to 20 gpm are obtained from 2-inch wells and the water is used mostly for sprinkling lawns and irrigating gardens.

The wells are usually constructed by using a garden hose to wash a length of pipe, to be used as the casing, into the sand until a firm bed of sand or sandy clay is reached. A hole is then jetted through the firm material and into the underlying medium-grained

loose sand, and a small cavity is created by pumping loose sand from beneath the firm sandy clay. Local conditions and the previous experience of the home owners are usually the governing factors in constructing the wells. If the casing is not seated on the top of a firm sandy silt or weakly consolidated sand, the wells sometimes yield sand and water in about equal proportions.

A battery of 65 well points was used to dewater a pit in which the concrete foundation of the city's overhead water-storage tank was poured. The well points were placed in a medium-grained sand between the depths of 15 and 20 feet, and each was gravel packed. All were connected to a single discharge pipe of larger diameter, and it was connected to a centrifugal pump. Once started, pumping was continuous so that the excavation could be kept dry until the concrete was poured and hardened. The pumping continued for about 30 days.

When dewatering started, the rate of pumping was estimated to be about 500 gpm, and after several days it decreased to 200 to 250 gpm, or slightly more than 3 gpm for each well point. The water temperature was 69°F. This dewatering operation shows the amount of water that can be obtained from properly constructed wells in the Pleistocene sand.

POST-HAWTHORN(?) ROCKS

The gravelly sand and thin limestone beds of the post-Hawthorn(?) rocks yield sufficient water for domestic and small industrial needs. The wells are as much as 180 feet deep, are cased from 70 to about 130 feet, and are 2 to 3 inches in diameter. Local practice is to drill until hard beds of calcareous sand or sandy limestone are reached and to set the casing on these beds. The drilling continues to the depth believed necessary to produce the required amount of water. The final depth to which the well is drilled usually depends on the experience of the driller and on local geologic conditions. When drilling is completed, the well is pumped to clean it of drill cuttings and fine sand. These wells are uncased in the lower part. Locally the wells are called "rock wells." The allusion is that once hard rock is penetrated and the casing placed in the drill hole, drilling continues below the hard bed, into softer sand. Pumping the well is said to produce a cavity or "basin" from which water is obtained. Probably much of the water is derived from the limestone beds below the casing. Yields of as much as 300 gpm have been obtained from the wells, although this amount of water is exceptional. Domestic supplies of as much as 20 to 50 gpm can be obtained throughout the county from 3-inch wells 100 to 180 feet deep.

Several shallow wells in the post-Hawthorn(?) rocks flow. Wells E–96, E–110, and E–126 have flows ranging from 2 to 15 gpm. Well E–96 is 125 feet deep, and the water level was 0.3 foot above land surface on February 19, 1960. Its measured flow was 5 gpm on November 10, 1960. The well is on the north bank of the old Brunswick-Altamaha Canal. The owner reports that the water level is affected by the tide, and the flow occurs when the tide is high. Well E–110 is 120 feet deep; its water level was 3.0 feet above land surface on September 10, 1959, and the flow was 15 gpm on October 11, 1960. The well is in the western part of the county, south of U.S. 84. Well E–126 is 170 feet deep and is cased to 70 feet with 2-inch casing. Its water level was 2.6 feet above land surface on July 25, 1960, and the flow was 2 gpm on November 3, 1960.

HAWTHORN FORMATION

The Hawthorn Formation underlies all of Glynn County. The sand and limestone beds are the main aquifers in it. The Hawthorn Formation furnished water to most of the early wells drilled in Glynn County. These wells were cased only to about 250 to 300 feet. Modern wells are cased to depths of approximately 500 to 600 feet and do not obtain water from the Hawthorn.

Older reports, parts of which are quoted in the following discussion, give information about the water available in the Hawthorn Formation.

The first wells were drilled in Glynn County in 1884, according to McCallie (1898, p. 85). He reported that there were 16 flowing wells in the city, ranging in depth from 400 to 500 feet. Flows ranged from 100 to 250 gpm. Two zones of flow were reported from most of the wells at depths of about 350 feet and about 435 to 475 feet. By 1908, McCallie reported (p. 111–119) that "* * * three deep wells * * * located at the city pumping station had diminished in flow since they were first drilled and had to be equipped with pumps." He attributed the decrease in flow to "* * * an overdraft on the water-bearing strata * * *." Sand probably caved into the wells, because they were usually left uncased in the calcareous sands of the Hawthorn Formation.

In the southern part of the city, three zones of flow were reported from an 820-foot well owned by Colonel Goodyear. Flows were reported to occur at 302, 425, and 525 feet. The pressures reported from the zones were, respectively, 12, 28, and 57 feet above land surface (McCallie, 1908, p. 112). The flows at 302 feet and 425 feet were from the Hawthorn Formation.

In a well drilled in 1919 for the Glynn Ice and Coal Co., the driller reported flow from "soft shell rock" at 325 to 410 feet, from "sand and gravel" and "chalk" at 420 to 475 feet and from "shelly

sand rock, very porous" at a depth of 490 feet. The depths from which flow of water occurred generally coincide throughout the area. They were described as first, second, and third flows. The first and second flows were from what is here considered to be the Hawthorn Formation. The third flow was from the limestone near the base of the Miocene Series, the Oligocene(?) limestone and the Ocala Limestone, depending upon the final depth of the well.

Stephenson and Veatch (1915, p. 258–267) reported "* * * many flowing artesian wells in and near the city which range in depth from 300 to 1,000 feet * * *." A well at the Southern Naval Stores Construction Co. northwest of the city was reported by them to be 1,000 feet deep and to flow more than 3,500 gpm. Three zones of flow were reported from the well—at 300 to 340 feet, at 470 to 490 feet, and at 650 feet. The pressures from these zones were 1.12, 8.0, and about 22 feet above land surface. When the well was completed, the flow from a nearby well about 650 feet deep decreased from 700 to 500 gpm. These pressures are lower than those reported in Colonel Goodyear's well about 7 or 8 years previously. Part of the decrease from the 425- to 490-foot zone is probably related to the difference in the depth of the two wells, and part is the result of increased use of water from that zone during the intervening years.

Many of the wells in Glynn County that have been drilled since about 1950 have been cased to the top of the water-bearing limestone and do not obtain water from the sand, gravel, or limestone of the Miocene except possibly from the basal limestone. Thus, few wells remain from which data can be obtained regarding the amount of water now available from the Hawthorn Formation. Probably domestic and small-capacity industrial wells could be developed in the sand and sandy dolomitic limestone beds above the depth of about 450 feet. The wells should be screened and gravel-packed for maximum water recovery and to prevent caving sand from entering the well.

PRINCIPAL ARTESIAN AQUIFER

The limestones of early Miocene and Oligocene(?) ages and the Ocala Limestone of late Eocene age form a continuous bed of limestone that is water bearing throughout its extent. These rocks collectively are called the principal artesian aquifer in Georgia. They underlie about two-thirds of the Georgia Coastal Plain and extend into southwestern South Carolina, Florida, and southeastern Alabama. The aquifer is one of the most extensive and most productive in the Southeastern States. It consists of hard to soft porous fossiliferous limestone, cavernous dolomitic limestone, cherty limestone, and chert. The geologic characteris-

tics of the formations composing it have been described previously. The test drilling in Glynn County during this investigation shows that the principal artesian aquifer extends to a depth of about 1,700 feet at places.

PIEZOMETRIC SURFACE

A piezometric, or pressure-indicating, surface is the height to which water in an acquifer would rise above a given datum in properly constructed wells tapping that aquifer. It also indicates the general direction of movement of ground water. The piezometric surface of the principal artesian aquifer about 1880 (Stringfield, Warren, and Cooper, 1941, fig. 3) was between 60 and 70 feet above sea level in Glynn County, and the direction of movement of ground water through the county was slightly north of east. Warren (1944, p. 27) showed that from 1880 to 1942 water levels in Glynn County had declined about 20 feet in the center of the county, where withdrawals of ground water for industrial use were concentrated, and about 10 feet throughout the remainder of the county.

Piezometric maps made in 1957 (Stewart and Counts, 1958, p. 30, fig. 7) and in 1958 (Stewart and Croft, 1960, p. 88, fig. 7) showed a further decline of the water levels and the development of several small cones of depression, including the one at Brunswick.

Plate 3 shows the piezometric surface of the principal artesian aquifer in Glynn County for December 1960. Two small cones of depression around well fields, one of the Hercules Powder Co. and the other of the Brunswick Pulp and Paper Co., form the center of the major cone of depression in the piezometric surface. The cone of depression around the Hercules Powder Co. well field is indicated by 5- and 10-foot closed contours, and the cone around the Brunswick Pulp and Paper Co. well field by a 10-foot closed contour. These two small cones of depression merge to form the large cone indicated by the 15-foot closed contour. The large cone of depression is elongated east and west. In 1960 the pumpage was 24.4 mgd (million gallons per day) at the Hercules Powder Co., 34 mgd at the Brunswick Pulp and Paper Co., and 13.4 mgd at the Solvay Process Division of Allied Chemical Co., which is immediately north of the Brunswick Pulp and Paper Co.

The cone of depression at the Hercules Powder Co. is deeper and steeper than that at the Brunswick Pulp and Paper Co., even though the latter cone reflects about a 41-percent greater rate of pumping. The reasons for this variation appear to be lower transmissibility in the area of the Hercules Powder Co. and a smaller area of concentrated pumping.

GROUND-WATER DATA FOR GEORGIA, 1986

By J.S. Clarke, S.A. Longsworth, C.N. Joiner,
M.F. Peck, K.W. McFadden, and B.J. Milby

REFERENCE 18

Open-File Report 87-376

Prepared in cooperation with the

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
GEORGIA GEOLOGIC SURVEY

Doraville, Georgia

1987

PROPERTY OF EPA
FIT IV

2.7 Upper Floridan Aquifer

The Upper Floridan aquifer (formerly the principal artesian aquifer) is part of the Floridan aquifer system, one of the most productive ground-water reservoirs in the United States. Regionally, the Floridan aquifer system has been divided by Miller (1986) into the Upper and Lower Floridan aquifers. About 600 Mgal/d is pumped from the Upper Floridan aquifer in Georgia, mostly for industrial use and for irrigation (Pierce and Barber, 1982).

The Upper Floridan aquifer consists of a sequence of limestone and dolostone that underlies most of the Georgia Coastal Plain. Water in the Floridan is under artesian pressure except where it crops out at land surface. In some areas, the artesian pressure is sufficient to produce flowing wells.

In outcrop areas, the water level in the Upper Floridan aquifer fluctuates seasonally in response to recharge from precipitation. Near the coast where the aquifer is deeply buried, the water level responds primarily to pumping, and fluctuations relating to recharge are less pronounced.

In October 1986, water levels were measured in 361 wells tapping the Upper Floridan aquifer in southwestern Georgia and adjacent parts of Alabama and Florida, and in 100 wells in the Glynn County area. From these measurements, maps were drawn showing the configuration of the potentiometric surface in each area.

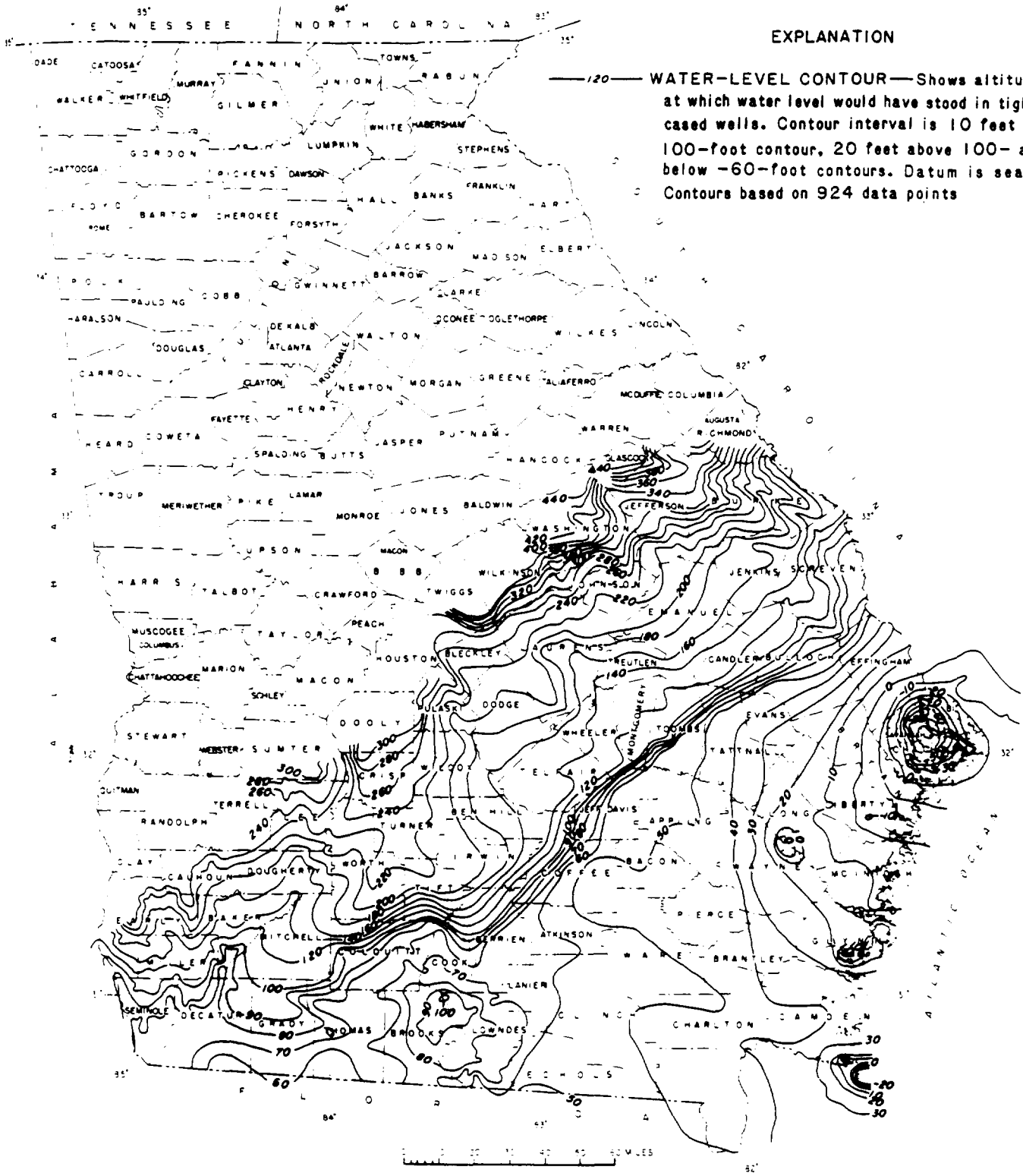


Figure 2.7-1.—Water level in the Upper Floridan aquifer, May 1985.

2.7.4 Coastal area

In the coastal area of Georgia and adjacent parts of Florida and South Carolina, the potentiometric surface of the Upper Floridan aquifer is characterized by cones of depression caused by large ground-water withdrawals. The combined pumpage in the coastal area of Georgia in 1986 was about 273 Mgal/d, about 80 percent of which was used for industrial purposes (G.L. Doonan, U.S. Geological Survey, oral commun., 1986). In the coastal areas of Georgia, nearly all the ground water is pumped from the Upper Floridan aquifer (then referred to as the principal artesian aquifer; Wait and Gregg, 1973, p. 9). Ground-water pumping from the Upper Floridan, primarily in the Savannah, Jesup, Brunswick, and St Marys-Fernandina Beach areas, has resulted in water-level declines and the development of cones of depression. Because the Upper Floridan aquifer in the coastal area is deeply buried and far from the outcrop area, the ground-water level is not influenced by concurrent rainfall. The water level is, however, affected by increased withdrawals during hot, dry periods.

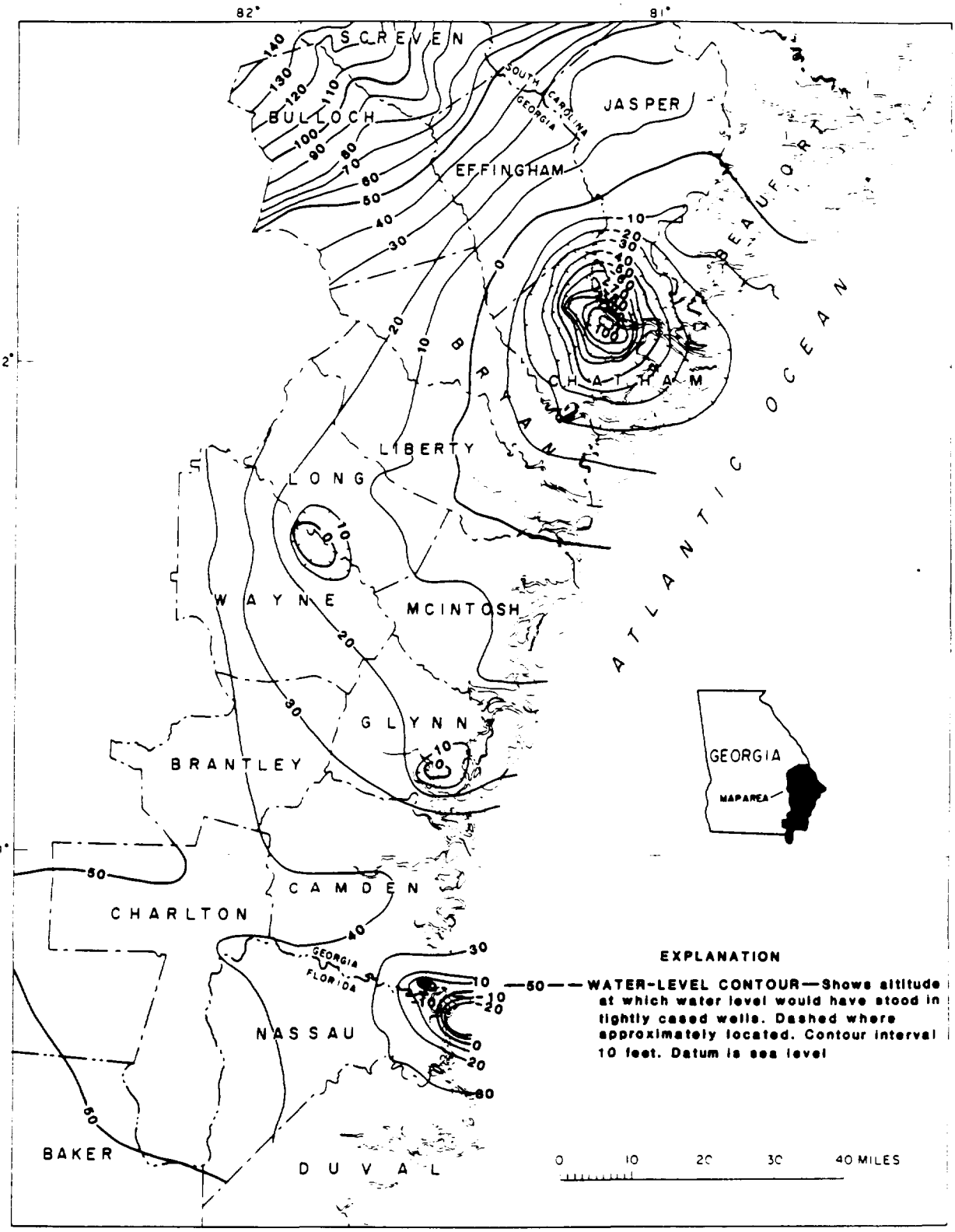


Figure 2.7.4-1.—Water level in the Upper Floridan aquifer in the coastal area, May 1985.

2.7.4.3 Brunswick area

The water level in the Upper Floridan aquifer in the Brunswick area is affected primarily by industrial pumpage that was about 83 Mgal/d in 1986. This pumping has resulted in the development of a cone of depression centered at Brunswick. In 1986, a partial industrial shutdown is reflected by a sharp water-level rise during late April and early May.

In October 1986, water levels were measured in 100 wells tapping the Upper Floridan aquifer in the Brunswick area and a map showing the potentiometric surface was prepared. Better data coverage in October 1986 indicates that the cone of depression at Brunswick extends farther northward than previously interpreted.

Mean water levels in water-bearing zones of the Upper Floridan aquifer in the Brunswick area were from 1.7 to 3.1 feet lower in 1986 than in 1985. The mean water level in the brackish-water zone of the Lower Floridan aquifer was from 0.8 foot to 1.3 feet lower in 1986 than in 1985. These declines reflect an increase in pumping during the first 7 months of 1986 and the slight downward trend since 1983 has continued. By the end of 1986 the water levels in all zones had recovered from 1.6 to 2.0 feet, but remained below the previous year-end levels.

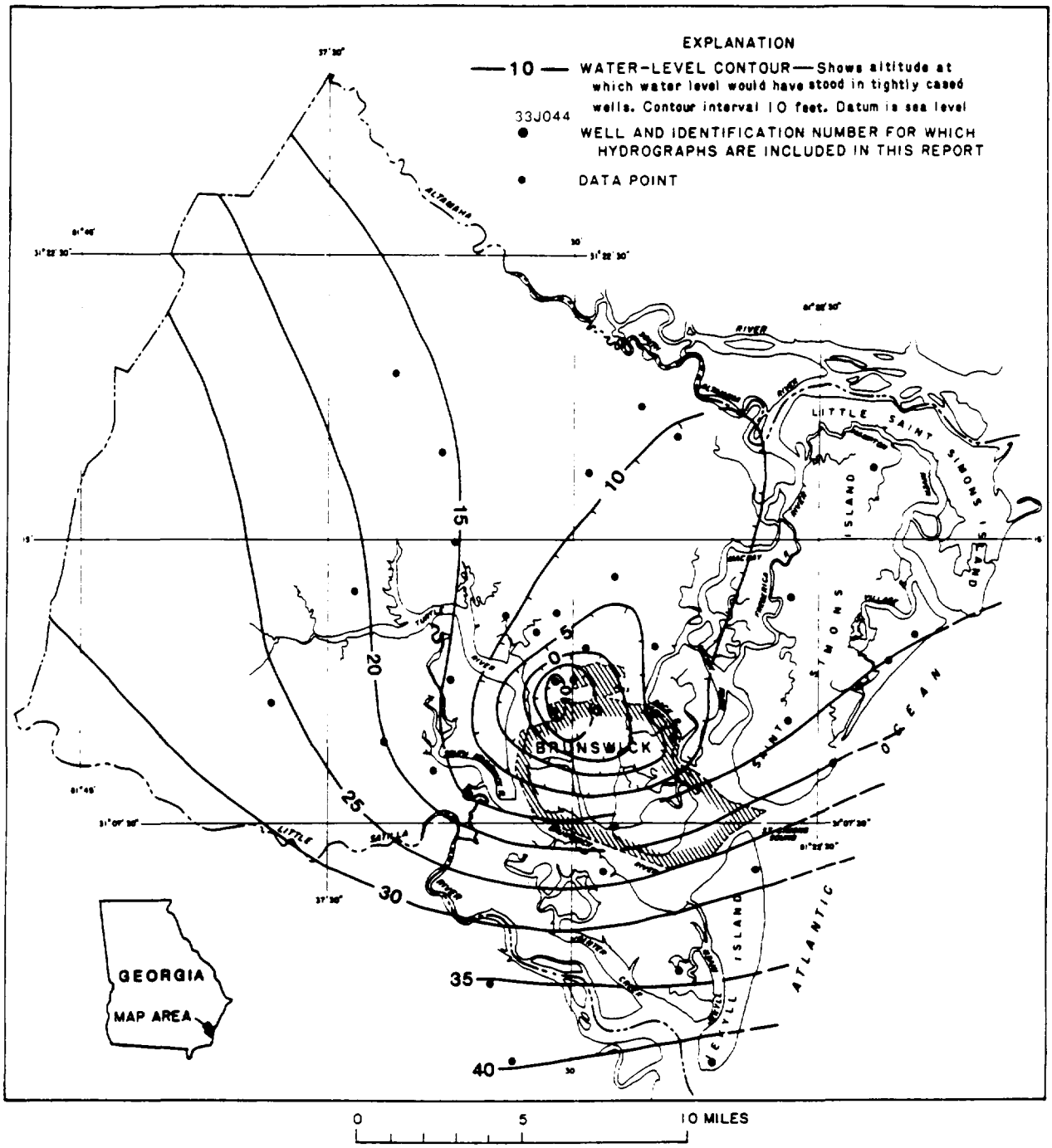


Figure 2.7.4.3-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Brunswick area, October 1986.

33H127 TEST WELL 3 GLYNN COUNTY

311007081301701 Local number, 33H127.
LOCATION.--Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, in south corner of Greenwood Cemetery in Brunswick.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 1,002 ft, cased to 823 ft, open hole.
DATUM.--Elevation of land-surface datum is 6.2 ft.
Measuring point: Floor of recorder shelter, 8.00 ft above land-surface datum.
REMARKS.--Water levels for periods of missing record, January 29 to February 26, were estimated. Well pumped and sampled semi-annually.
PERIOD OF RECORD.--August 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.00 ft above land-surface datum, October 9, 1962; lowest, 11.19 ft below land-surface datum, July 14, 1977.

Water level, in feet above or below land surface, through calendar year 1986 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.48	-1.56	-1.06	-1.82	3.21	-3.62	-3.66	-5.96	-4.66	-3.29	-4.92	-4.77
2	2.30	-1.68	-1.17	-1.77	2.73	-3.80	-3.86	-6.22	-4.94	-3.10	-5.28	-4.88
3	1.58	-0.69	-1.36	-1.75	3.32	-3.29	-3.66	-6.58	-5.02	-4.32	-5.45	-5.02
4	1.72	-0.13	-1.33	-2.20	3.32	-3.95	-3.21	-6.62	-4.08	-4.78	-5.64	-4.45
5	1.76	-0.57	-1.05	-2.56	3.30	-2.82	-2.74	-6.50	-4.93	-4.80	-5.41	-4.81
6	1.74	.86	-0.90	-2.04	2.32	-3.22	-3.39	-6.49	-4.86	-5.07	-5.79	-4.76
7	.57	1.13	-1.08	-2.12	.32	-3.42	-3.07	-5.33	-5.34	-5.20	-5.06	-4.79
8	.03	-0.03	-0.99	-1.77	-0.03	-3.63	-3.17	-5.98	-5.28	-5.00	-5.51	-4.67
9	-1.11	-0.51	-1.26	-2.02	-1.37	-3.57	-3.80	-5.58	-5.38	-4.47	-5.37	-4.59
10	-1.04	-0.14	-1.37	-2.08	-1.66	-3.31	-4.16	-6.36	-5.00	-4.59	-5.93	-4.35
11	-0.02	.85	-2.48	-2.10	-2.64	-4.01	-4.37	-6.55	-4.18	-4.73	-5.40	-3.76
12	-0.02	.11	-3.32	-2.37	-2.49	-4.23	-4.33	-6.42	-4.96	-4.77	-4.97	-3.65
13	-0.40	-0.26	-3.37	-2.44	-2.74	-4.14	-4.18	-5.56	-4.75	-4.80	-4.17	-4.13
14	-0.46	-0.36	-2.06	-2.70	-2.68	-3.56	-4.30	-4.88	-4.94	-4.68	-4.81	-4.25
15	.45	-0.08	-1.80	-1.94	-2.94	-3.89	-5.16	-4.36	-4.86	-4.19	-5.36	-4.33
16	.24	.25	-1.82	-2.20	-2.74	-3.79	-5.66	-5.72	-4.83	-3.81	-5.53	-4.15
17	.44	.29	-1.48	-2.36	-3.25	-3.49	-5.18	-5.72	-5.26	-3.52	-5.24	-4.50
18	.46	-0.18	-1.64	-3.15	-3.57	-4.02	-5.84	-5.88	-4.93	-3.10	-5.28	-3.87
19	-0.23	-0.56	-1.81	-2.78	-3.68	-3.76	-5.84	-5.66	-4.80	-3.51	-4.90	-4.43
20	.20	-0.96	-1.50	-3.04	-4.03	-4.53	-5.96	-5.18	-5.00	-3.83	-4.48	-4.36
21	.40	-0.14	-1.48	-1.84	-3.70	-4.18	-6.18	-5.08	-4.23	-3.42	-5.00	-4.55
22	-0.55	-0.52	-1.70	-0.55	-3.42	-4.40	-5.58	-5.09	-4.26	-3.59	-4.99	-4.73
23	.00	-0.21	-1.63	-0.22	-4.37	-4.76	-6.06	-5.28	-5.16	-3.61	-4.62	-4.46
24	-0.74	-0.02	-1.40	-0.96	-4.36	-4.80	-5.48	-4.92	-4.98	-3.78	-5.10	-4.12
25	-1.70	-0.06	-1.57	-1.10	-3.92	-4.92	-5.24	-5.40	-4.52	-3.73	-4.75	-4.50
26	-0.58	-0.60	-1.54	-1.33	-3.64	-4.88	-5.49	-5.78	-5.07	-3.80	-3.96	-4.75
27	-0.72	-1.14	-1.10	.03	-3.90	-4.70	-6.29	-5.22	-4.47	-4.15	-4.31	-4.67
28	-2.50	-0.92	-1.74	2.79	-4.12	-4.56	-5.98	-4.38	-4.05	-4.74	-4.69	-4.83
29	-2.51	---	-1.71	4.26	-3.98	-4.58	-5.62	-4.33	-3.86	-4.72	-4.68	-4.85
30	-1.00	---	-2.01	4.27	-3.86	-4.30	-5.57	-4.50	-4.20	-4.81	-4.71	-4.15
31	-1.57	---	-1.56	---	-4.18	---	-5.18	-4.69	---	-4.62	---	-4.65
MEAN	.01	-0.28	-1.62	-1.33	-1.90	-4.00	-4.78	-5.56	-4.76	-4.21	-5.04	-4.48

CAL YR 1986 MEAN -3.18 MAX 4.27 MIN -6.62

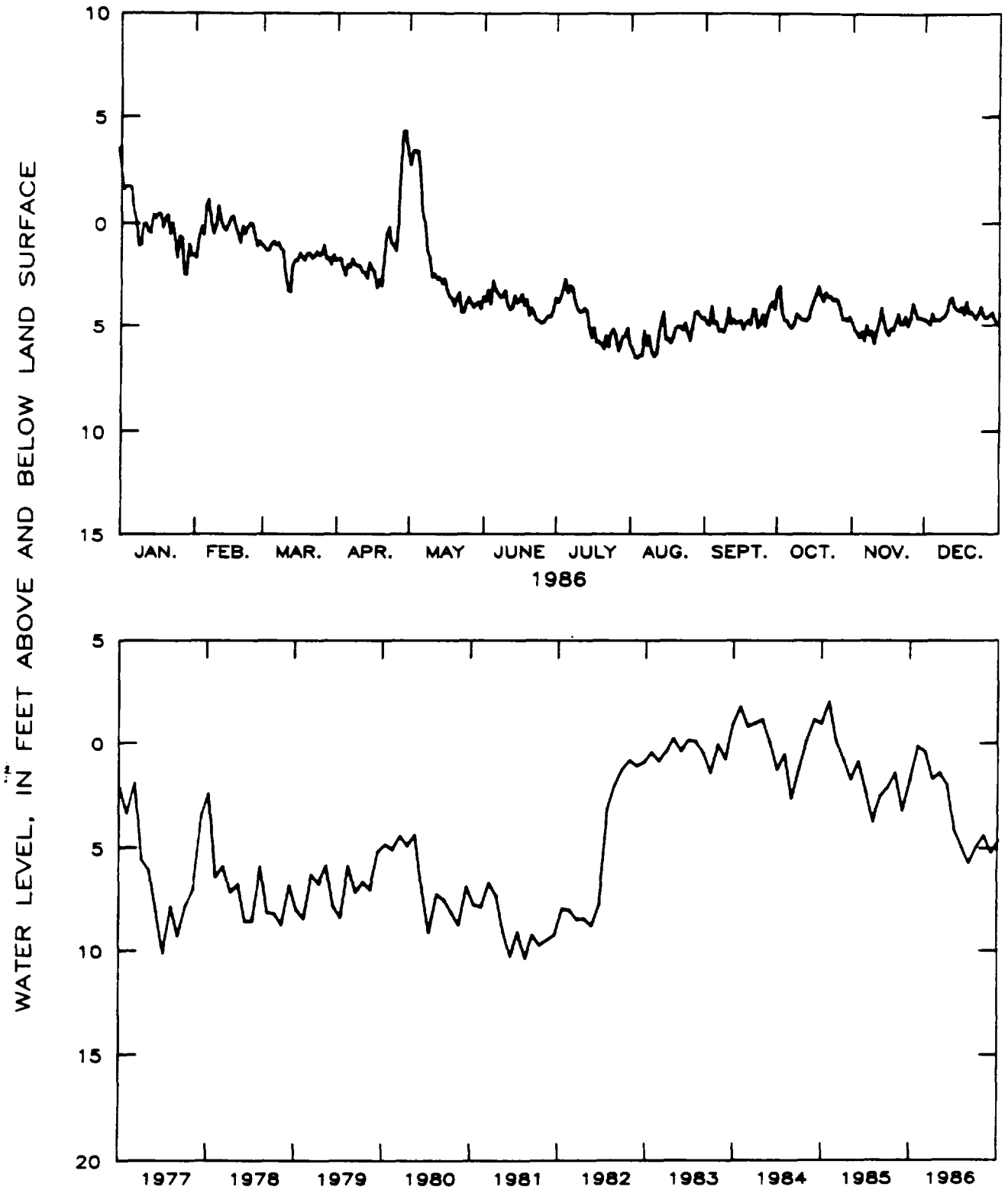


Figure 2.7.4.3–2.––Water level in observation well 33H127, lower water–bearing zone, Glynn County.

33H133 TEST WELL 6 GLYNN COUNTY

311007081301702 Local number, 33H133.
LOCATION.--Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, in south corner of Greenwood Cemetery in Brunswick.
Owner: U.S. Geological Survey, test well 6.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 790 ft, cased to 520 ft, open hole.
DATUM.--Elevation of land-surface datum is 6.7 ft.
Measuring point: Floor of recorder shelter, 5.1 ft above land-surface datum.
REMARKS.--Well pumped and sampled semi-annually. Borehole geophysical survey conducted September 26, 1977. Water levels for periods of missing record, February 26, April 22, August 8 to September 22, and November 1-13, were estimated.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.07 ft above land-surface datum, December 26, 1965; lowest, 21.87 ft below land-surface datum, July 22, 1977.

Water level, in feet above or below land surface, through calendar year 1986 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-5.50	-11.82	-10.28	-10.45	-3.64	-12.77	-11.93	-15.60	-14.18	-11.40	-14.38	-14.88
2	-6.66	-11.89	-10.14	-10.44	-5.72	-12.67	-12.22	-15.98	-14.47	-11.46	-14.81	-14.99
3	-7.68	-10.84	-10.52	-10.26	-5.75	-11.98	-11.89	-16.52	-14.55	-13.40	-15.05	-15.15
4	-7.26	-10.22	-10.33	-10.72	-5.79	-12.76	-11.42	-16.53	-13.62	-14.27	-15.31	-13.91
5	-6.96	-10.60	-10.13	-11.42	-5.29	-11.18	-10.96	-16.18	-14.48	-14.10	-15.15	-14.63
6	-7.39	-9.11	-9.96	-10.47	-5.62	-11.98	-10.32	-16.07	-14.42	-14.77	-15.60	-14.34
7	-8.76	-8.78	-10.02	-10.98	-8.23	-11.91	-10.59	-14.64	-14.91	-14.75	-14.93	-14.55
8	-9.40	-9.88	-9.82	-10.32	-8.85	-12.24	-11.03	-15.30	-14.86	-14.33	-15.45	-14.45
9	-9.37	-10.30	-9.97	-10.78	-9.82	-12.29	-12.45	-14.91	-14.96	-12.98	-15.38	-14.18
10	-10.05	-9.87	-10.57	-10.43	-10.98	-11.63	-12.87	-15.69	-14.59	-13.50	-16.01	-13.71
11	-10.10	-8.82	-12.62	-10.67	-12.10	-13.02	-13.04	-15.89	-13.78	-14.57	-15.55	-13.08
12	-11.12	-9.51	-13.96	-11.16	-11.80	-13.10	-12.99	-15.77	-14.57	-14.40	-15.19	-13.23
13	-11.10	-9.82	-13.60	-11.16	-11.90	-13.12	-12.75	-14.92	-14.37	-14.57	-14.46	-13.80
14	-11.06	-9.86	-11.64	-11.32	-11.64	-12.32	-13.88	-14.25	-14.57	-14.48	-15.17	-14.00
15	-11.80	-9.52	-11.33	-10.62	-11.72	-12.98	-14.54	-13.74	-14.49	-13.55	-15.14	-13.95
16	-10.84	-9.13	-11.08	-10.80	-11.56	-12.83	-15.24	-15.10	-14.47	-13.19	-15.19	-14.16
17	-11.90	-9.03	-11.11	-10.99	-12.23	-12.28	-14.57	-15.11	-14.91	-12.32	-14.70	-14.57
18	-11.36	-9.44	-11.04	-11.83	-12.98	-12.88	-15.29	-15.28	-14.59	-11.93	-14.76	-13.55
19	-10.88	-9.76	-10.84	-11.56	-13.13	-12.36	-15.15	-15.07	-14.47	-12.81	-13.92	-14.48
20	-11.24	-10.10	-9.82	-11.78	-13.11	-13.34	-15.72	-14.60	-14.68	-13.26	-13.50	-14.55
21	-11.13	-9.22	-10.54	-11.16	-12.82	-13.22	-15.46	-14.51	-13.91	-12.64	-14.38	-14.65
22	-12.13	-9.55	-10.61	-9.45	-12.19	-13.43	-14.78	-14.52	-13.95	-12.87	-14.28	-14.85
23	-10.90	-9.18	-10.48	-7.74	-12.70	-14.06	-15.32	-14.72	-14.86	-13.27	-13.81	-14.47
24	-10.88	-8.93	-10.19	-8.66	-12.59	-13.80	-14.24	-14.37	-14.23	-13.51	-14.79	-13.97
25	-11.51	-8.91	-10.52	-8.90	-12.96	-14.14	-13.64	-14.86	-13.55	-13.58	-14.30	-14.64
26	-10.88	-9.39	-10.66	-9.21	-12.84	-13.93	-14.84	-15.25	-14.68	-13.56	-13.24	-14.86
27	-11.38	-9.87	-9.94	-8.36	-12.70	-13.53	-15.71	-14.70	-13.91	-14.07	-13.89	-14.86
28	-13.00	-9.58	-10.56	-3.50	-13.10	-13.53	-15.81	-13.86	-13.09	-14.56	-14.69	-15.04
29	-12.95	---	-10.52	.50	-13.12	-13.58	-14.90	-13.82	-13.06	-14.36	-14.52	-15.18
30	-11.38	---	-10.80	.04	-12.83	-12.80	-14.70	-14.00	-13.37	-14.51	-14.85	-14.09
31	-11.89	---	-10.44	---	-13.39	---	-14.39	-14.20	---	-14.01	---	-14.91
MEAN	-10.27	-9.75	-10.78	-9.49	-10.75	-12.86	-13.63	-15.03	-14.29	-13.58	-14.75	-14.38

CAL YR 1986 MEAN -12.48 MAX .50 MIN -16.53

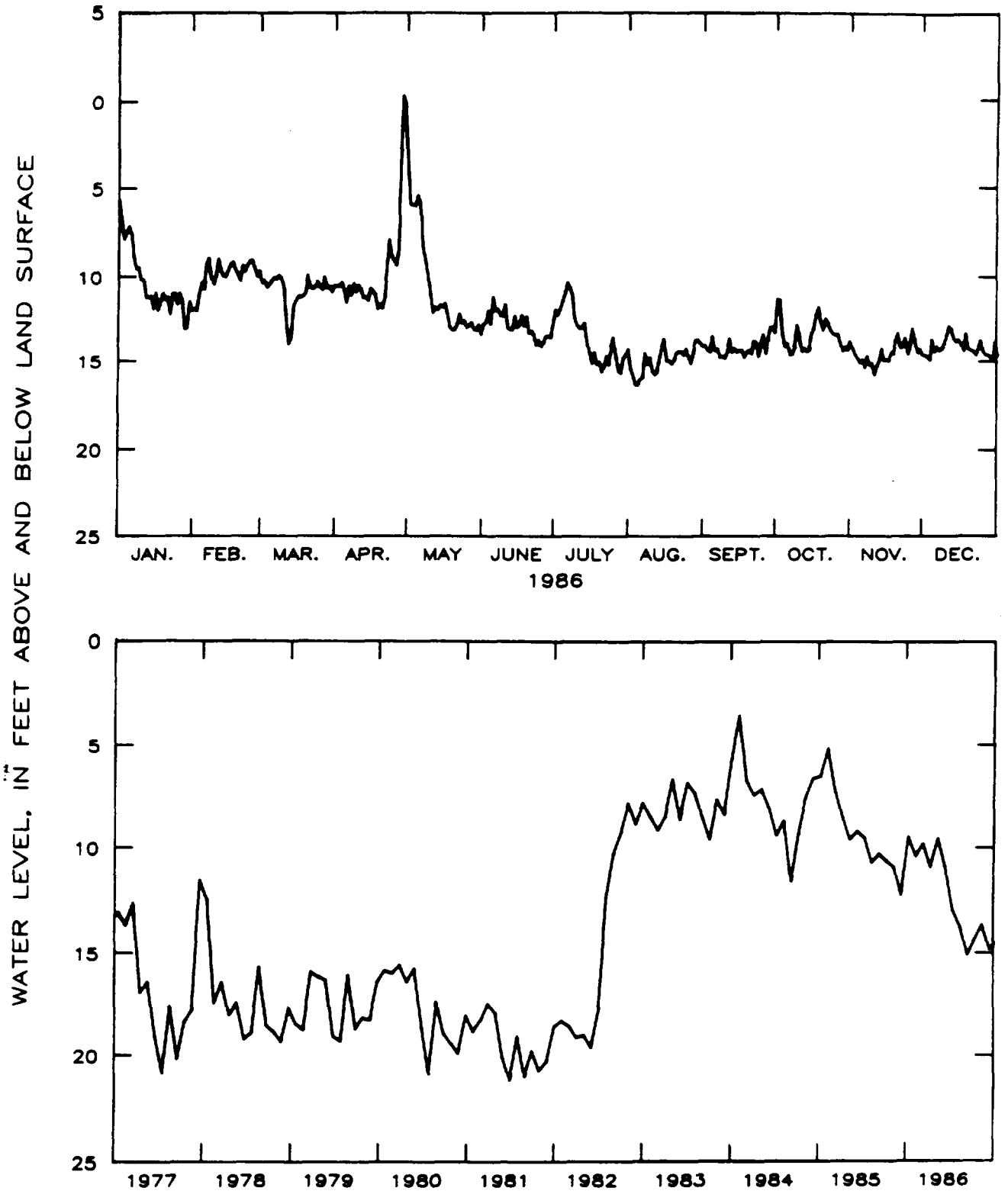


Figure 2.7.4.3–3.--Water level in observation well 33H133, upper water–bearing zone, Glynn County.

34H391 TEST WELL 16 GLYNN COUNTY

310818081294201 Local number, 34H391.
LOCATION.--Lat 31°08'18", long 81°29'42", Hydrologic Unit 03070203, located near intersection of Albermarle Street and Bay Street in Brunswick.
Owner: U.S. Geological Survey, test well 16.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 1,150 ft, cased to 1,070 ft, open hole.
DATUM.--Elevation of land-surface datum is 7.13 ft.
Measuring point: Floor of recorder shelter 12.5 ft above land-surface datum.
REMARKS.--Well pumped and sampled semi-annually. Well was flowing January 1-5.
PERIOD OF RECORD.--August 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.65 ft above land-surface datum, October 13-14, 1985; lowest, 2.96 ft below land-surface datum, July 27, 1977.

Water level, in feet above land surface, through calendar year 1986 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	5.71	6.83	6.70	9.73	4.44	4.17	2.50	3.85	4.45	4.24	3.62
2	---	5.86	6.79	6.79	9.00	4.44	4.26	2.41	3.76	4.61	4.21	3.50
3	---	6.16	6.73	6.95	8.97	4.61	4.51	2.16	3.56	4.35	4.09	3.25
4	---	6.44	6.76	6.64	8.95	4.45	4.77	2.02	3.71	4.02	3.94	3.32
5	---	6.46	6.76	6.42	8.93	4.71	4.90	2.11	3.66	3.96	3.95	3.42
6	8.66	6.85	6.93	6.58	8.86	4.77	4.82	2.08	3.68	3.83	3.79	3.43
7	8.11	7.03	6.88	6.66	7.90	4.72	4.85	2.00	3.52	3.64	3.82	3.50
8	7.45	6.96	6.83	6.82	7.49	4.62	4.83	2.02	3.42	3.65	3.91	3.51
9	7.23	6.83	6.89	6.72	7.06	4.43	4.59	2.02	3.44	3.92	3.95	3.58
10	7.25	6.95	6.94	6.72	6.58	4.49	4.30	2.38	3.52	4.08	3.73	3.72
11	7.15	7.10	6.51	6.72	6.16	4.23	4.21	2.38	3.78	3.97	3.92	3.98
12	6.74	6.79	5.95	6.59	5.95	4.04	4.13	2.35	3.77	3.91	4.13	4.09
13	6.60	6.64	5.68	6.58	5.82	3.88	4.17	2.68	3.76	3.90	4.42	3.85
14	6.42	6.86	6.18	6.46	5.68	4.16	3.86	3.01	3.80	3.89	4.45	3.86
15	6.14	6.84	6.42	6.47	5.48	4.22	3.32	3.26	3.74	4.04	4.20	3.84
16	6.14	6.71	6.62	6.60	5.46	4.19	3.02	3.16	3.76	4.28	4.09	3.93
17	6.13	6.75	6.61	6.44	5.35	4.28	2.93	3.08	3.74	4.40	4.25	3.81
18	6.21	6.76	6.62	6.22	5.20	4.14	2.90	2.99	3.64	4.71	4.30	3.99
19	6.50	6.88	6.60	6.12	5.05	4.21	2.91	3.06	3.73	4.65	4.44	3.88
20	6.31	6.88	6.65	6.20	5.00	3.99	2.91	3.16	3.70	4.45	4.67	3.81
21	6.19	6.80	6.77	6.52	5.06	4.01	2.60	3.14	3.89	4.53	4.52	3.71
22	5.96	6.81	6.64	7.21	5.17	3.99	2.68	3.20	4.11	4.45	4.50	3.58
23	6.15	6.81	6.71	7.38	4.99	3.75	2.70	3.34	3.82	4.29	4.68	3.62
24	6.34	6.68	6.68	6.80	4.97	3.63	2.67	3.54	3.73	4.17	4.53	3.99
25	6.33	6.59	6.70	6.78	4.91	3.47	2.87	3.41	3.84	3.39	4.50	3.83
26	6.53	6.68	6.73	6.69	4.87	3.41	2.73	3.14	3.65	3.09	4.15	3.73
27	6.21	6.77	6.89	6.76	4.75	3.46	2.60	3.12	3.77	4.08	3.81	3.82
28	5.68	6.90	6.75	8.17	4.44	3.57	2.66	3.48	4.01	4.14	3.65	3.81
29	5.28	---	6.75	9.75	4.12	3.63	2.70	3.75	4.23	4.12	3.64	3.75
30	5.51	---	6.68	10.47	4.28	3.89	2.78	3.72	3.94	4.25	3.70	3.77
31	5.65	---	6.74	---	4.28	---	2.77	3.77	---	4.35	---	3.88
MEAN	6.50	6.70	6.65	6.93	6.14	4.13	3.55	2.85	3.75	4.12	4.14	3.72

CAL YR 1986 MEAN 4.90 MAX 10.47 MIN 2.00

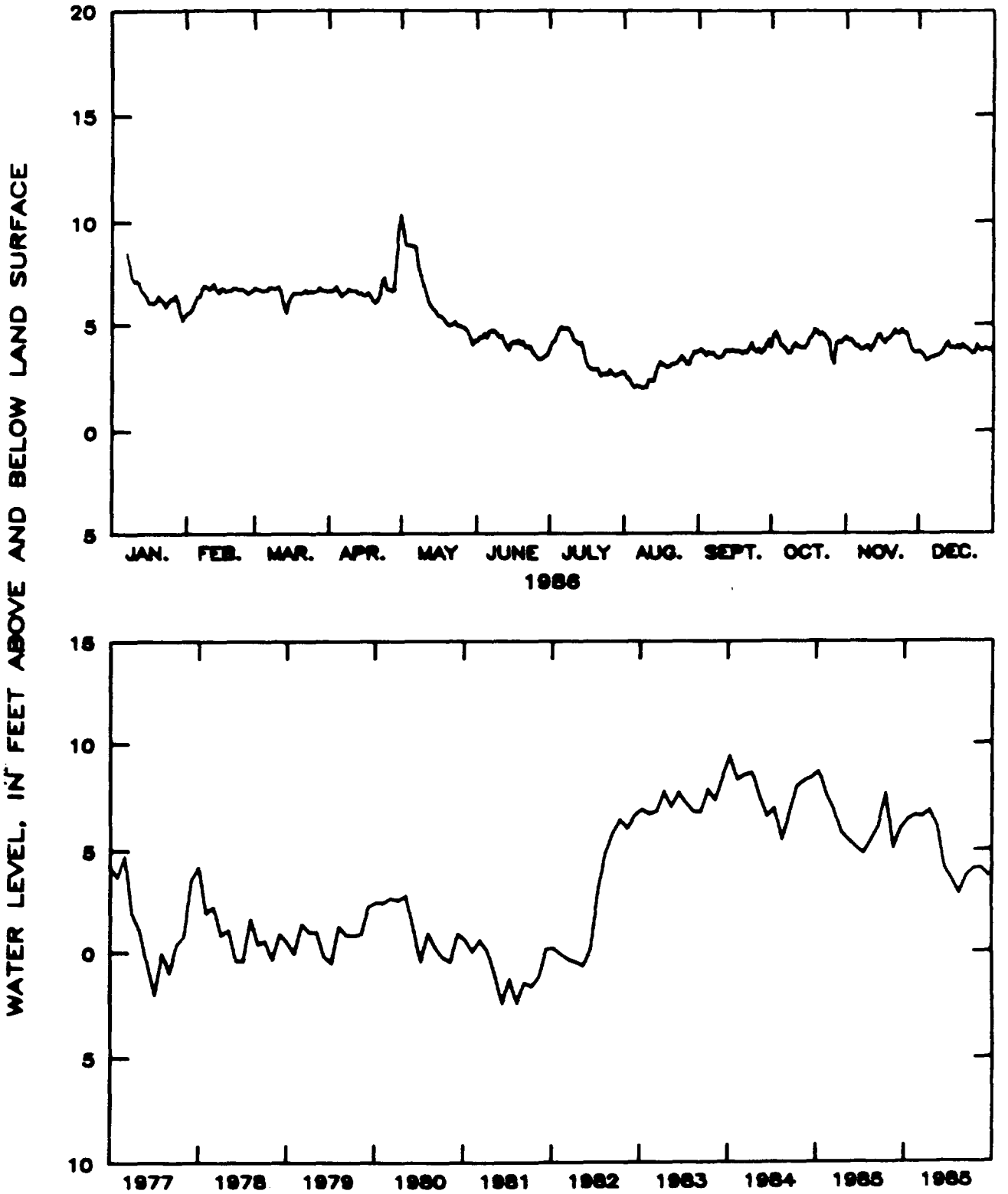


Figure 2.7.4.3–4.––Water level in observation well 34H391, brackish water zone, Glynn County.

33J044 TEST WELL 27 GLYNN COUNTY

311633081324001 Local number, 33J044.
LOCATION.--Lat 31°16'33", long 81°32'40", Hydrologic Unit 03070203, 1.2 mi east of Sterling, off State Highway 99 at the Brunswick Pulp and Paper Company, Sterling Wood Products Division.
Owner: Brunswick Pulp and Paper Co., USGS test well 27.
AQUIFER.--Lower Floridan aquifer.
WELL CHARACTERISTICS.--Drilled unused oil-test well converted to observation well, diameter 9 in., depth 2,260 ft, cased to 1,079 ft, open hole.
DATUM.--Elevation of land-surface datum is 20 ft.
Measuring point: Floor of recorder shelter, 4.5 ft above land-surface datum.
REMARKS.--This is the Sterling oil-test well. Water levels for periods of missing record, May 12 to June 22, June 24, June 26 to July 2, July 4-10, and July 12-20, were estimated.
PERIOD OF RECORD.--May 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.09 ft above land-surface datum, October 13, 1985; lowest, 6.30 ft below land-surface datum, August 11, 1981.

Water level, in feet above or below land surface, through calendar year 1986 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	-0.44	.44	.49	2.35	-0.30	-2.02	-3.50	-2.88	-2.58	-2.70	-2.36
2	---	-0.34	.34	.52	2.11	-0.32	-2.24	-3.64	-2.90	-2.42	-2.65	-2.42
3	---	-0.18	.42	.30	1.94	.10	-2.14	-3.77	-2.95	-2.40	-2.72	-2.60
4	---	-0.04	.42	.29	1.88	-0.43	-1.58	-3.89	-2.88	-2.49	-2.79	-2.86
5	---	.11	.35	.20	1.92	.39	-1.40	-3.91	-2.80	-2.55	-2.82	-2.86
6	1.71	.24	.52	.22	1.94	-0.07	-1.59	-3.92	-2.80	-2.63	-2.99	-2.89
7	1.58	.40	.44	.34	1.76	-0.30	-1.34	-3.78	-2.86	-2.77	-3.08	-2.82
8	1.18	.42	.31	.48	1.53	-0.48	-1.34	-3.68	-3.00	-2.83	-3.01	-2.74
9	1.05	.40	.35	.52	1.24	-0.61	-1.83	-3.68	-3.06	-2.78	-2.97	-2.69
10	1.23	.55	.50	.40	.86	.00	-2.10	-3.68	-3.02	-2.66	-3.08	-2.64
11	1.12	.60	.44	.41	.86	-1.30	-2.11	-3.77	-2.89	-2.69	-3.00	-2.52
12	.90	.43	.32	.39	.81	-1.45	-2.09	-3.82	-2.76	-2.73	-2.92	-2.43
13	.80	.28	.02	.32	.71	-1.56	-1.72	-3.76	-2.82	-2.70	-2.88	-2.64
14	.65	.44	.12	.18	.71	-0.85	-2.09	-3.61	-2.85	-2.67	-2.84	-2.65
15	.44	.48	.15	.12	.58	-1.08	-2.82	-3.42	-2.86	-2.68	-2.73	-2.57
16	.24	.36	.24	.21	.47	-0.99	-3.06	-3.34	-2.84	-2.62	-2.76	-2.50
17	.32	.42	.22	.08	.20	-0.79	-2.84	-3.35	-2.87	-2.59	-2.71	-2.48
18	.42	.52	.26	-0.16	-0.13	-1.32	-2.95	-3.40	-2.90	-2.52	-2.66	-2.38
19	.58	.54	.37	-0.22	-0.28	-1.04	-2.82	-3.44	-2.88	-2.46	-2.65	-2.42
20	.42	.53	.32	-0.14	-0.32	-1.63	-2.87	-3.46	-2.86	-2.43	-2.52	-2.48
21	.28	.49	.27	-0.12	-0.28	-1.55	-3.12	-3.46	-2.77	-2.43	-2.58	-2.62
22	.28	.47	.22	.23	.03	-1.66	-3.36	-3.45	-2.61	-2.39	-2.61	-2.70
23	.02	.48	.22	.37	-0.41	-2.07	-3.38	-3.34	-2.62	-2.43	-2.55	-2.48
24	.18	.44	.24	.40	-0.26	-2.14	-3.38	-3.20	-2.74	-2.43	-2.56	-2.30
25	.16	.40	.26	.48	-0.39	-2.20	-3.32	-3.22	-2.80	-2.38	-2.60	-2.46
26	.26	.43	.38	.48	-0.43	-2.23	-3.33	-3.36	-2.84	-2.37	-2.50	-2.56
27	.47	.54	.54	.47	-0.46	-2.21	-3.38	-3.34	-2.83	-2.47	-2.42	-2.56
28	-0.29	.43	.46	.90	-0.64	-2.27	-3.40	-3.22	-2.76	-2.68	-2.46	-2.62
29	-0.06	---	.44	1.66	-0.68	-2.40	-3.42	-3.12	-2.68	-2.72	-2.46	-2.62
30	-0.37	---	.45	2.21	-0.45	-2.62	-3.39	-3.04	-2.74	-2.66	-2.35	-2.54
31	-0.44	---	.46	---	-0.72	---	-3.44	-2.96	---	-2.70	---	-2.32
MEAN	.51	.34	.34	.40	.53	-1.18	-2.58	-3.50	-2.84	-2.58	-2.72	-2.57

CAL YR 1986 MEAN -1.36 MAX 2.35 MIN -3.92

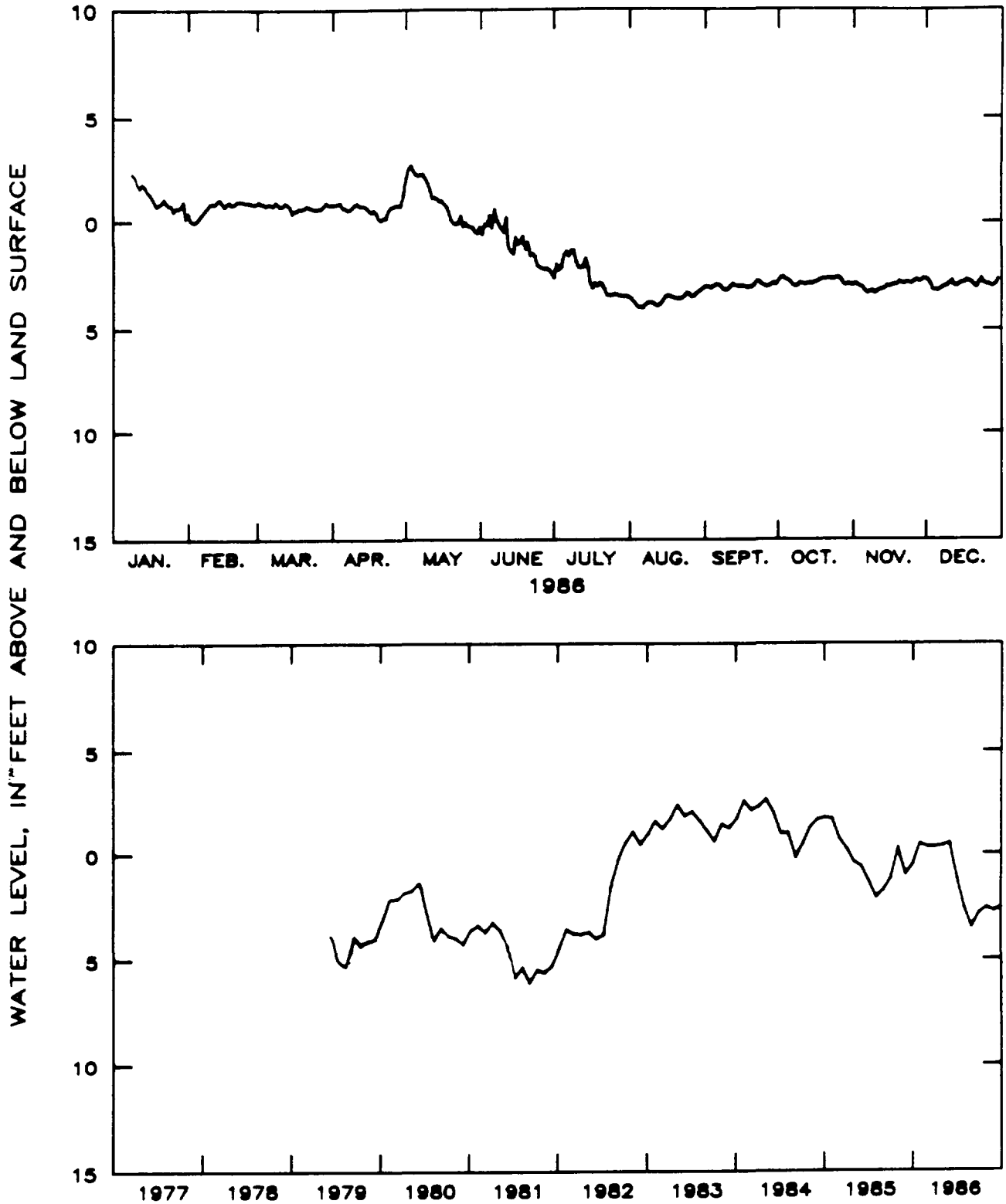


Figure 2.7.4.3–5.––Water level in observation well 33J044, brackish water zone, Glynn County.

2.8 Miocene aquifers

Miocene aquifers in the southeastern Coastal Plain of Georgia consist of interlayered calcareous sand, clay, silt, and dolomitic limestone that in some areas exceed a thickness of 500 feet (Watson, 1982, p. 185).

Two Miocene aquifers have been identified in the Brunswick and Jesup areas, and one aquifer in the Bulloch County area. The Miocene aquifers receive recharge directly from rainfall where they crop out and from the percolation of water from the overlying water-table aquifer. In some areas, the Miocene aquifers are hydraulically connected to, and recharged by, the Upper Floridan aquifer (Watson, 1982, p. 185). The water level in the uppermost Miocene aquifer is affected primarily by rainfall and evapotranspiration.

During 1986, the mean water levels in two wells tapping the Miocene aquifer in Bulloch County were from 0.8 foot lower to 0.5 foot higher than in 1985. By the end of the year, the water levels in the two wells had recovered 3.2 to 3.8 feet from the summer lows, but remained below the previous year-end levels.

In well 34H438 near Brunswick and well 32L016 near Jesup, the mean water levels in 1986 were about 1 foot lower than in 1985. The declines continued downward trends that began in 1984. Although the periods of record are short, water-level trends in the Miocene aquifers are downward and somewhat similar to those in the Upper Floridan aquifer in proximate areas.

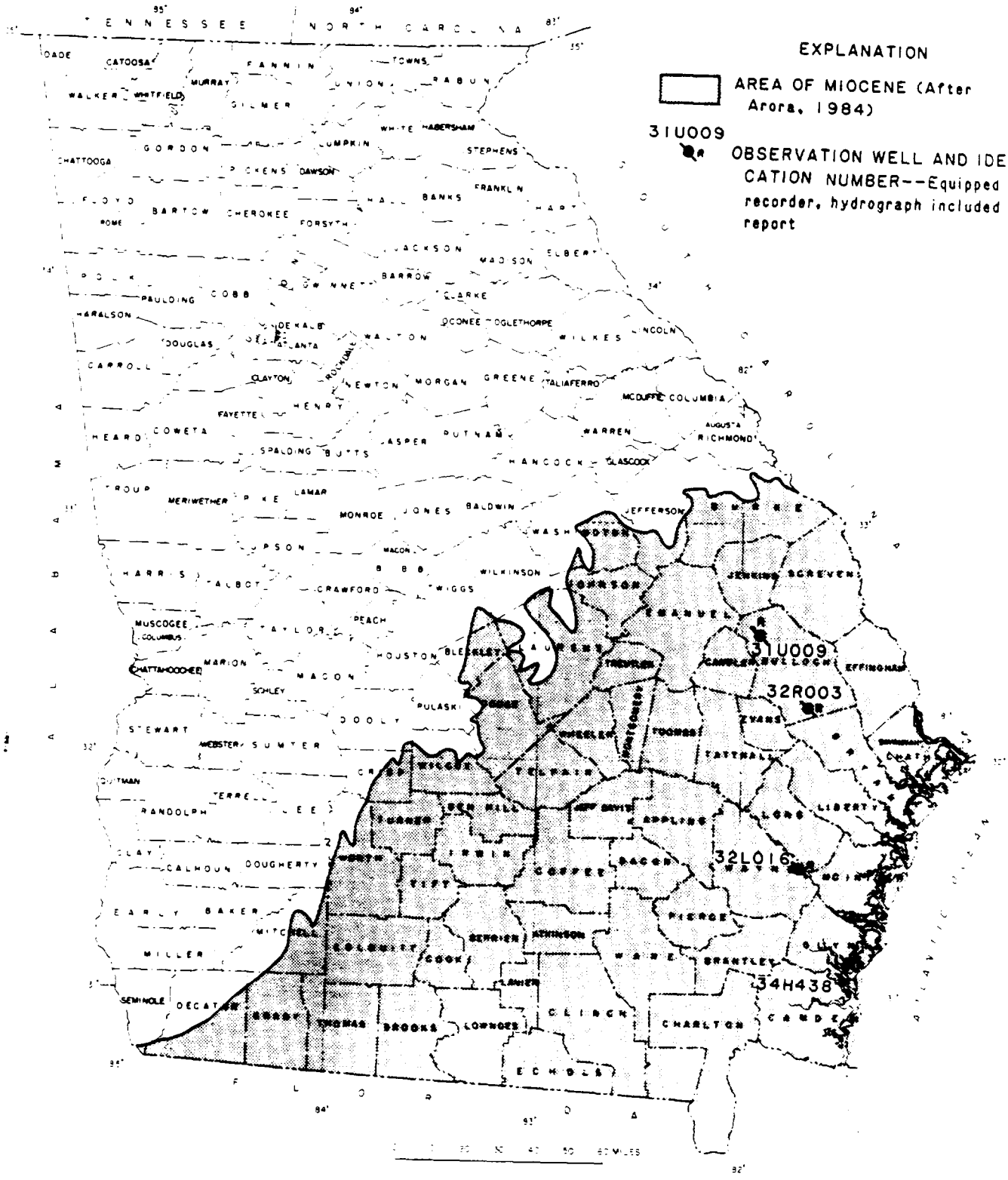


Figure 2.8-1.--Location of observation wells in the Miocene aquifers.

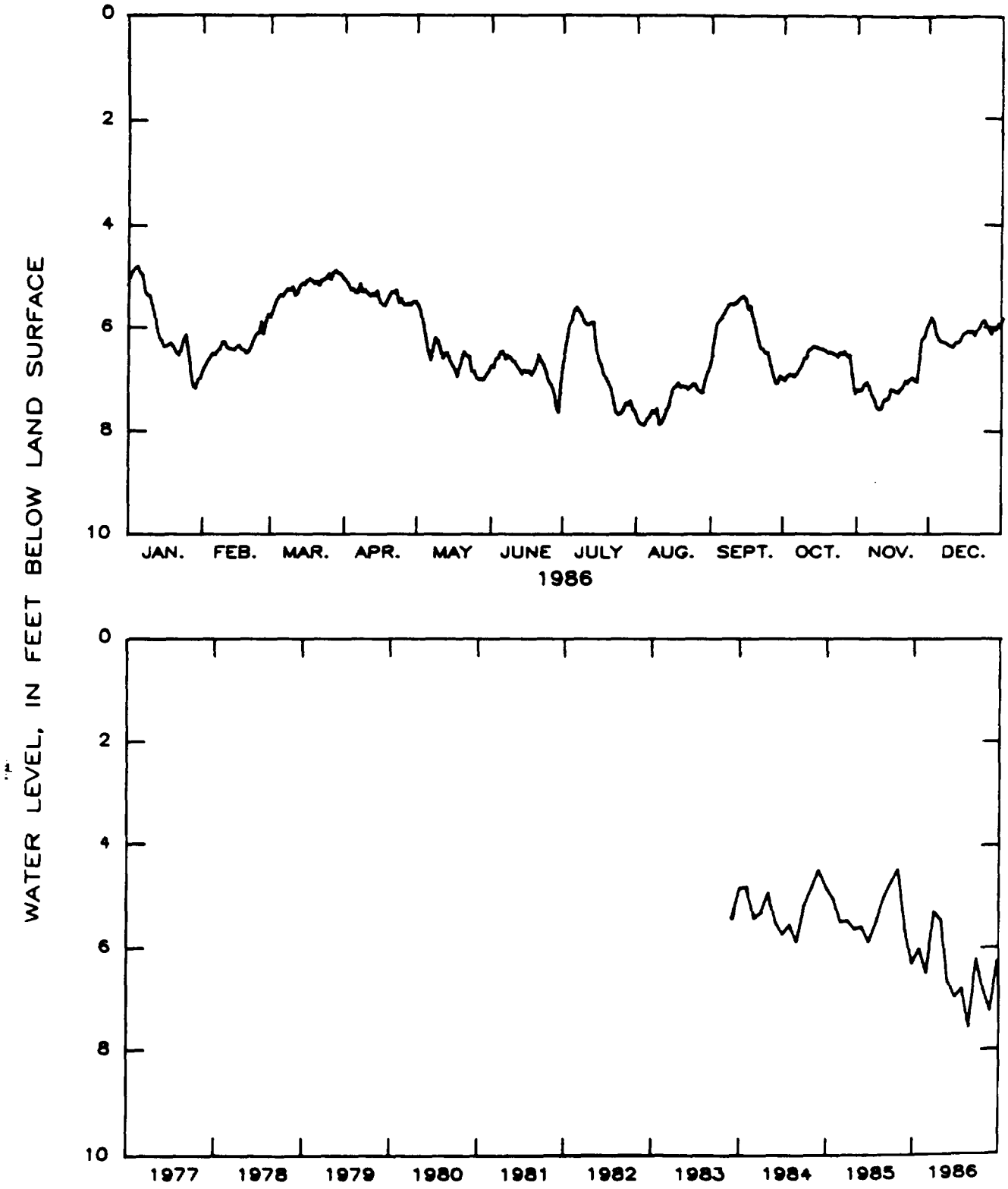


Figure 2.8-5.--Water level in observation well 34H438, Glynn County.

3.2 Brunswick Area

In the Brunswick area, the Floridan aquifer system is divided into the Upper Floridan aquifer and the Lower Floridan aquifer. The Upper Floridan aquifer includes two freshwater-bearing zones: the upper water-bearing zone and the lower water-bearing zone described by Wait and Gregg (1973, p. 16) and Gregg and Zimmerman (1974, p. D17 and pl. 1). The upper part of the Lower Floridan aquifer includes a zone of water that has a chloride concentration of about 6,000 mg/L, referred to as the brackish-water zone by Gregg and Zimmerman (1974, pl. 1). The lower part of the Lower Floridan aquifer is called the Fernandina permeable zone (Krause and Randolph, 1985) and contains water that in 1978 had a chloride concentration of more than 20,000 mg/L (Gill and Mitchell, 1979).

Since pumping began in the late 1800's, ground-water withdrawal in the Brunswick area has lowered the water level in the Upper Floridan aquifer by as much as 25 to 65 feet. This water-level decline has allowed saltwater to migrate upward in the aquifer at three known locations in Brunswick and move downgradient toward the centers of pumping. Changes in chloride concentration may be attributed to shifting water-level gradients that alter the direction of chloride migration. About 80 wells in Glynn County, mostly in the Brunswick area, are pumped and sampled periodically for chloride analysis. At two locations in Brunswick, the chloride concentration in the upper water-bearing zone has risen to more than 2,000 mg/L.

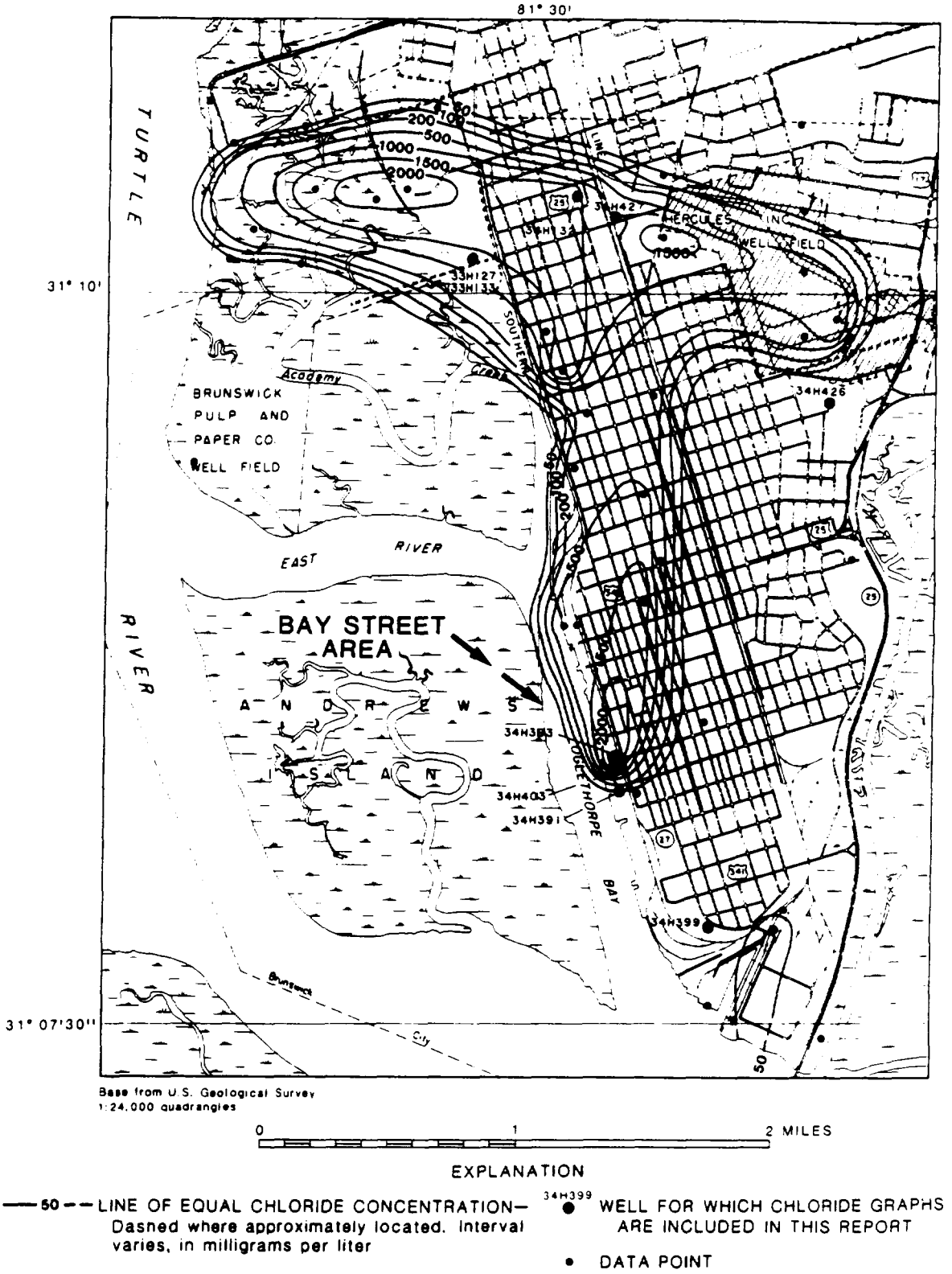


Figure 3.2-1.—Locations of the chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October 1986.

The chloride concentration in well 34H393, which taps the upper water-bearing zone in the Bay Street area, has remained steady since 1976 and was about 2,400 mg/L at the end of 1986. Well 34H403, which taps the lower water-bearing zone, yields water that has a chloride concentration of about 1,500 mg/L. The chloride concentrations in both wells have remained fairly stable for the last few years. Chloride concentrations in the Bay Street area respond to local pumping. Wells 34H391 and 34H399, which tap the brackish-water zone, increased in chloride concentration during 1977-82, but have decreased since, probably in response to an estimated 20-Mgal/d decrease in industrial pumpage in 1982.

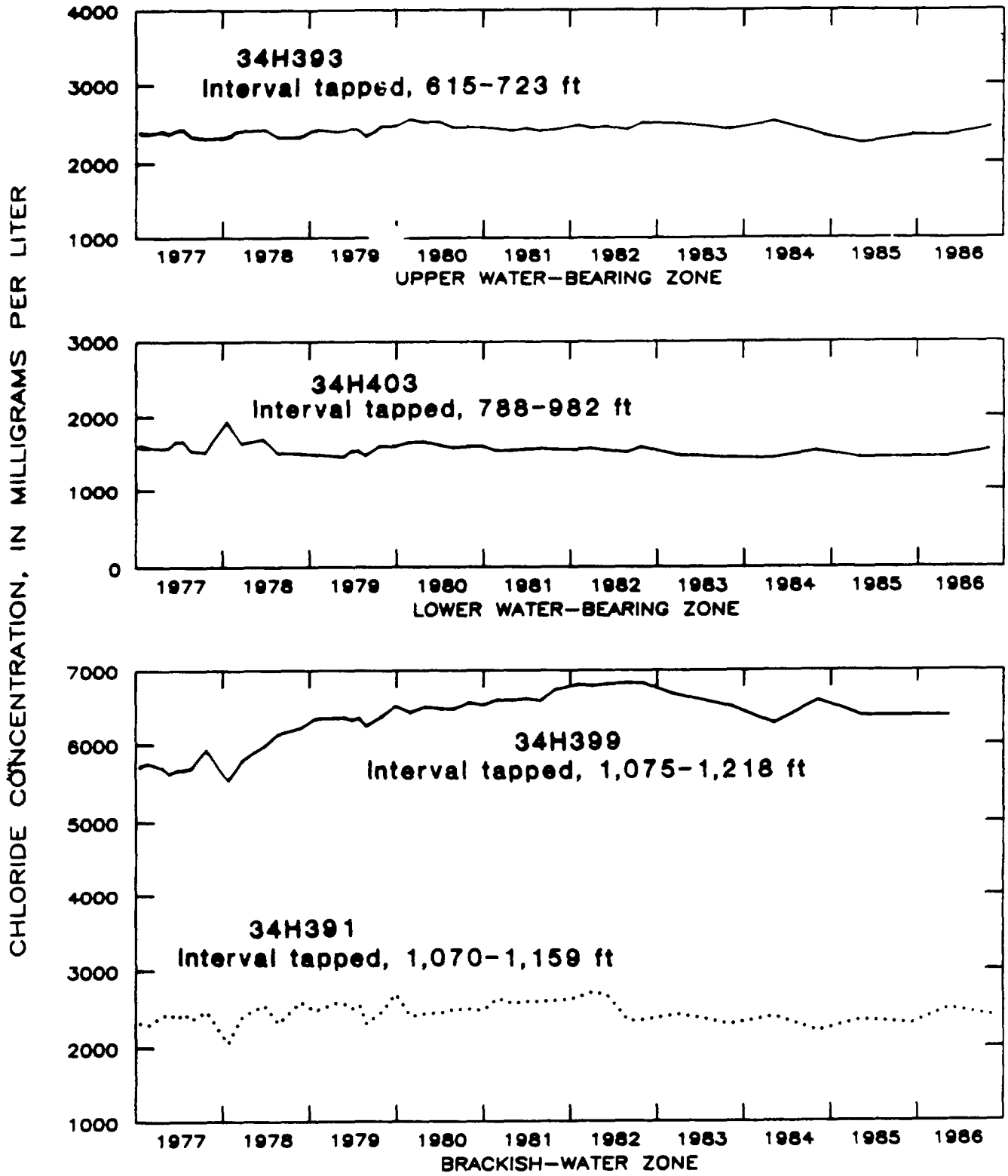


Figure 3.2-2.--Chloride concentrations in the Bay Street area of Brunswick.

During 1986, chloride concentrations in the upper water-bearing zone in the north Brunswick area showed a slight increase in well 33H133 and continued to decrease in wells 34H427 and 34H132. At the end of 1986, the chloride concentration in well 33H133 was 1,400 mg/L, in well 34H427 was 1,000 mg/L, and in well 34H132 was 1,600 mg/L.

The chloride concentration in well 33H127, which taps the lower water-bearing zone in the northwestern part of Brunswick, increased slightly during 1979-86 and at the end of 1986 was about 600 mg/L.

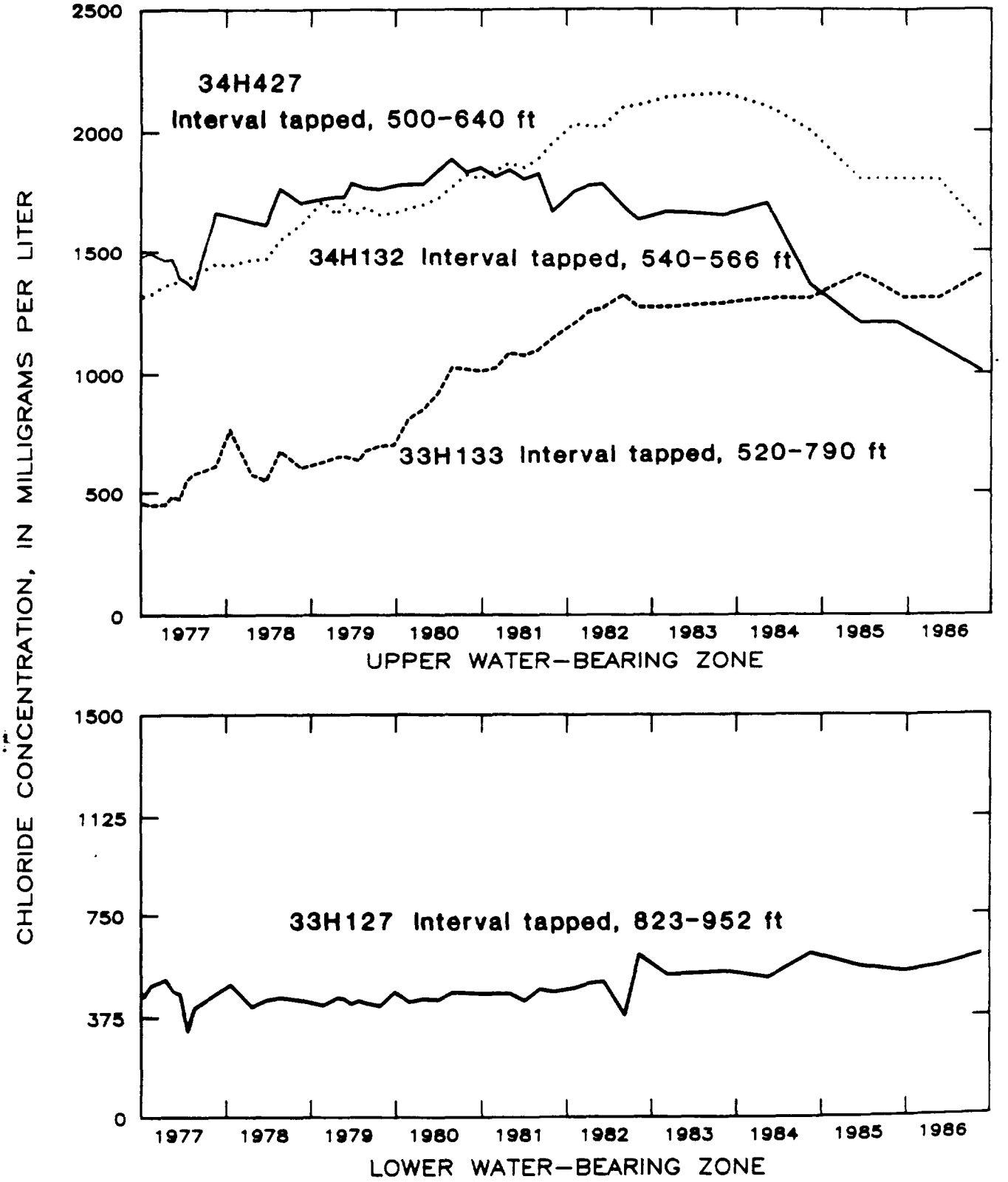


Figure 3.2-3.--Chloride concentrations in the north Brunswick area.

4.0 SELECTED REFERENCES

Arora, Ram, editor, 1984, Hydrogeologic evaluation for underground injection control in the Coastal Plain of Georgia: Georgia Geologic Survey ed., Hydrologic Atlas 10, 45 p.

Brooks, Rebekah, Clarke, J.S., and Faye, R.E., 1985, Hydrogeology of the Gordon aquifer system of east-central Georgia: Georgia Geologic Survey Information Circular 75, 41 p.

Callahan, J.T., 1964, The yield of sedimentary aquifers of the Coastal Plain, Southeast River Basins: U.S. Geological Survey Water-Supply Paper 1669-W, 56 p.

Carter, R.F., 1983, Effects of the drought of 1980-81 on streamflow and on groundwater levels in Georgia: U.S. Geological Survey Water-Resources Investigations Report 83-4158, 46 p.

Clarke, J.S., 1987, Potentiometric surface of the Upper Floridan aquifer in Georgia, May 1985, and water-level trends, 1980-85: Georgia Geologic Survey Hydrologic Atlas 16, 1 map, scale 1:1,000,000.

Clarke, J.S., Brooks, Rebekah, and Faye, R.E., 1985a, Hydrogeology of the Dublin and Midville aquifer systems of east-central Georgia: Georgia Geologic Survey Information Circular 74, 62 p.

Clarke, J.S., Faye, R.E., and Brooks, Rebekah, 1983, Hydrogeology of the Providence aquifer of southwest Georgia: Georgia Geologic Survey Hydrologic Atlas 11, 5 sheets.

----- 1984a, Hydrogeology of the Clayton aquifer of southwest Georgia: Georgia Geologic Survey Hydrologic Atlas 13, 6 sheets.

Clarke, J.S., Joiner, C.N., Longsworth, S.A., McFadden, K.W., and Peck, M.F., 1986, Ground-water data for Georgia, 1985: U.S. Geological Survey Open-File Report 86-304, 159 p.

Clarke, J.S., Hester, W.G., and O'Byrne, M.P., 1979, Ground-water levels and quality data for Georgia, 1978: U.S. Geological Survey Open-File Report 79-1290, 94 p.

Clarke, J.S., Longsworth, S.A., McFadden, K.W., and Peck, M.F., 1985b, Ground-Water Data for Georgia, 1984: U.S. Geological Survey Open-File Report 85-331, 150 p.

Clarke, J.S., Peck, M.F., Longsworth, S.A., and McFadden, K.W., 1984b, Ground-Water Data for Georgia, 1983: U.S. Geological Survey Open-File Report 84-605, 145 p.

Clarke, J.S., and Pierce, R.R., 1984, Ground-Water Resources of Georgia: Georgia Operator, v. 21, no. 4, p. 10-39.

Counts, H.B., and Donsky, Ellis, 1963, Salt-water encroachment, geology, and ground-water resources of Savannah area, Georgia and South Carolina: U.S. Geological Survey Water-Supply Paper 1611, 100 p.

Cressler, C.W., Thurmond, C.J., and Hester, W.G., 1983, Ground water in the Greater Atlanta Region, Georgia: Georgia Geologic Survey Information Circular 63, 144 p.

Cressler, C.W., Franklin, M.A., and Hester, W.G., 1976, Availability of water supplies in northwest Georgia: Georgia Geological Survey Bulletin 91, 140 p.

Gill, H.E., Mitchell, G.D., and Bisdorf, Robert, 1978, Saltwater encroachment in a carbonate aquifer system at Brunswick, Georgia [abs., Southeastern Section of the Geological Society of America, 28th annual meeting]: Abstracts with programs, 1979, v. 11, no. 4, p. 180.

Gill, H.E., and Mitchell, G.D., 1979, Results of Colonels Island deep hydrologic test well, in Investigations of alternative sources of ground water in the coastal area of Georgia: Georgia Geologic Survey Open-File Report 80-3, p. C1-C13.

Gregg, D.O., and Zimmerman, E.A., 1974, Geologic and hydrologic control of chloride contamination in aquifers in Brunswick, Glynn County, Georgia: U.S. Geological Survey Water-Supply Paper 2029-D, 44 p.

Hayes, R.H., Maslia, M.L., and Meeks, W.C., 1983, Hydrology and model evaluation of the principal artesian aquifer, Dougherty Plain, southwest Georgia: Georgia Geologic Survey Bulletin 97, 93 p.

Hicks, D.W., Krause, R.E., and Clarke, J.S., 1981, Geohydrology of the Albany area, Georgia: Georgia Geologic Survey Information Circular 57, 31 p.

Johnston, R.H., Healy, H.G., and Hayes, L.R., 1981, Potentiometric surface of the Tertiary limestone aquifer system, Southeastern United States, May 1980: U.S. Geological Survey Open-File Report 81-486, 1 sheet.

Krause, R.E., 1972, Effects of ground-water pumping in parts of Liberty and McIntosh Counties, Georgia, 1966-70: Georgia Geological Survey Information Circular 45, 15 p.

----- 1976, Occurrence and distribution of color and hydrogen sulfide in water from the principal artesian aquifer in the Valdosta area, Georgia: U.S. Geological Survey Open-File Report 76-378, 11 p.

----- 1979, Geohydrology of Brooks, Lowndes, and western Echols Counties, Georgia: U.S. Geological Survey Water-Resources Investigations 78-117, 48 p.

Krause, R.E., 1982, Digital model evaluation of the predevelopment flow system of the Tertiary limestone aquifer, southeast Georgia, northeast Florida, and southern South Carolina: U.S. Geological Survey Water-Resources Investigations 82-173, 27 p.

Krause, R.E., and Counts, H.B., 1975, Digital model analysis of the principal artesian aquifer, Glynn County, Georgia: U.S. Geological Survey Water-Resources Investigations 1-75, 4 sheets.

Krause, R.E., and Gregg, D.O., 1972, Water from the principal artesian aquifer in coastal Georgia: Georgia Geological Survey Hydrologic Atlas 1, 4 sheets.

Krause, R.E., and Hayes, L.R., 1981, Potentiometric surface of the principal artesian aquifer in Georgia, May 1980: Georgia Geologic Survey Hydrologic Atlas 6, 1 sheet.

Krause, R.E., Matthews, S.E., and Gill, H.E., 1984, Evaluation of the ground-water resources of coastal Georgia--Preliminary report on the data available as of July 1983: Georgia Geologic Survey Information Circular 62, 55 p.

Krause, R.E., and Randolph, R.B., 1985, Hydrology of the Floridan aquifer system in southeast Georgia and adjacent parts of Florida and South Carolina: U.S. Geological Survey Professional Paper 1403-D (in press).

McCollum, M.J., 1966, Ground-water resources and geology of Rockdale County, Georgia: Georgia Geological Survey Information Circular 33, 17 p.

McFadden, S.S., and Perriello, P.D., 1983, Hydrogeology of the Clayton and Claiborne aquifers in southwestern Georgia: Georgia Geologic Survey Information Circular 55, 59 p.

Matthews, S.E., Hester, W.G., and McFadden, K.W., 1982, Ground-water data for Georgia, 1981: U.S. Geological Survey Open-File Report 82-904, 110 p.

Matthews, S.E., Hester, W.G., and O'Byrne, M.P., 1980, Ground-water data for Georgia, 1979: U.S. Geological Survey Open-File Report 80-501, 93 p.

----- 1981, Ground-water data for Georgia, 1980: U.S. Geological Survey Open-File Report 81-1068, 94 p.

Miller, J.A., 1986, Hydrogeologic framework of the Floridan aquifer system in Florida and in parts of Georgia, South Carolina, and Alabama: U.S. Geological Survey Professional Paper 1403-B, 91 p.

Mitchell, G.D., 1980, Potentiometric surface of the principal artesian aquifer in Georgia, November 1979: Georgia Geologic Survey Hydrologic Atlas 4.

Pierce, R.R., and Barber, N.L., 1982, Water use in Georgia, 1980--Summary: Georgia Geologic Survey Circular 4-A, 17 p.

Pierce, R.R., Barber, N.L., and Stiles, H.R., 1982, Water use in Georgia by county for 1980: Georgia Geologic Survey Information Circular 59, 180 p.

Pollard, L.D., Grantham, R.G., and Blanchard, H.E., Jr., 1978, A preliminary appraisal of the impact of agriculture on ground-water availability in southwest Georgia: U.S. Geological Survey Water-Resources Investigations 79-7, 22 p.

Pollard, L.D., and Vorhis, R.C., 1979, Geohydrology of the Cretaceous aquifer system in Georgia: Georgia Geologic Survey Hydrologic Atlas 3, 5 sheets.

Sever, C.W., 1964, Geology and ground-water resources of crystalline rocks, Dawson County, Georgia: Georgia Geological Survey Information Circular 30, 32 p.

Stiles, H.R., and Matthews, S.E., 1983, Ground-water data for Georgia, 1982: U.S. Geological Survey Open-File Report 83-678, 147 p.

Stringfield, V.T., 1966, Artesian water in Tertiary limestone in the Southeastern States: U.S. Geological Survey Professional Paper 517, 226 p.

Thomson, M.T., Herrick, S.M., Brown, Eugene, and others, 1956, Availability and use of water in Georgia: Georgia Geological Survey Bulletin 65, 329 p.

U.S. Geological Survey, 1978, Ground-water levels and quality data for Georgia, 1977: U.S. Geological Survey Open-File Report 79-123, 88 p.

Watson, T.W., 1982, Aquifer potential of the shallow sediments of the coastal area of Georgia, in Proceedings of the Second Symposium on the Geology of the Southeastern Coastal Plain: Georgia Geologic Survey Information Circular 53, p. 183-194.

Wait, R.L., 1963, Geology and ground-water resources of Dougherty County Georgia: U.S. Geological Survey Water-Supply Paper 1539-P, 102 p.

----- 1965, Geology and occurrence of fresh and brackish ground water in Glynn County, Georgia: U.S. Geological Survey Water-Supply Paper 1613-E, 89 p.

Wait, R.L., and Gregg, D.O., 1973, Hydrology and chloride contamination of the principal artesian aquifer in Glynn County, Georgia: Georgia Geological Survey Hydrologic Report 1, 93 p.

NUS CORPORATION AND SUBSIDIARIES **TELECON NOTE**

CONTROL NO.	DATE: March 23, 1989	TIME: 0820

DISTRIBUTION: File
Glynn County, Georgia

REFERENCE 19

BETWEEN: Gerald Nix	OF: Nix Well Drilling	PHONE: (912) 265-4067

AND: Geoffrey Carton, NUS Corporation

DISCUSSION:

Mr. Nix reported that residential wells in the Sterling area are generally cased to 130 feet with a total depth of about 150 feet. A 15 to 20 foot thick clay layer is encountered at about 120 feet. Over 95% of the wells in the area have 120 or more feet of casing. He said that he has encountered a number of wells in the area that were drilled to 200 feet with 90 feet or less of casing. There are no dug wells still in use in the area. He mentioned that during the growing season when farmers are irrigating, the water table drops 3 to 4 feet in this area.

a product of

J. L. DARLING CORPORATION

TACOMA, WASHINGTON 98421 U.S.A.

"Rite in the Rain."

WEATHERPROOF

LEVEL

NOTEBOOK NO. 311

F4-1282

LLP CHEMICALS Inc

BRUNSWICK, GLYNN COUNTY, GA

MITCH COHEN, P.E.-PROJECT MANAGER

TDD No. F4-8902-27

REFERENCE 20

LOGBOOK REQUIREMENTS
REVISED - NOVEMBER 29, 1988

NOTE: ALL LANGUAGE SHOULD BE FACTUAL AND OBJECTIVE

1. Record on front cover of the Logbook: TDD No., Site Name, Site Location, Project Manager
2. All entries are made using ink. Draw a single line though errors. Initial and date corrections.
3. Statement of Work Plan, Study Plan, and Safety Plan discussion and distribution to field team with team member signatures.
5. Sign and date each page. Project Manager is to review and sign off on each logbook daily.
6. Document all calibration and pre-operational checks of equipment. Provide serial numbers of equipment used onsite.
7. Provide reference to Sampling Field Sheets for detailed sampling information.
8. Describe sampling locations in detail and document all changes from project planning documents.
9. Provide a site sketch with sample locations and photo locations.
10. Maintain photo log by completing the stamped information at the end of the logbook.
11. If no site representative is on hand to accept the receipt for samples an entry to that effect must be placed in the logbook.
12. Record I.D. numbers of COC and receipt for sample forms used. Also record numbers of destroyed documents.
13. Complete SMO information in the space provided.

All entries in this book will be made by Mitch Cohen

We, the undersigned, have read the study plan/work plan and understand the scope of this study
See TDD F4-3812-02

Mitchell A Cohen
Mitchell A Cohen

Jeffrey Cohen
Jeffrey Cohen

01

14:00 T = 70° partly sunny 3/3/99

We arrived at Brunswick Water Dept. off of Gloucester Street. Mr. Bill Powell showed us location of municipal well on topographic maps.

20" well
12"

- 1 - Howard Cottin - 900' complete 700' cased
- 2 - Brunswick Villa - 900' complete 700' cased
- 3 - Goodyear Park - 900' complete 700' cased
- 4 - I-95 station - Serves only I-95 area
- 5 - Glenn Annex - 900' complete 700' cased
- 6 - Fletcher 900' complete 700' cased
- 7 - Beverly Stores - to be abandoned

2 wells

Approximately 2 % of population with service area use private wells, according to Bill Powell.

Mr. Powell mapped out area of service

(2) Charlotte C. Cohen

14:30 T = 70° partly sunny 3/3/99

6 MGD ~~for~~ from the system

0.5 MGD from I-95 well

10,000 connections on total system

I-95 is approximately half mostly commercial.

There were no photos taken

Charlotte C. Cohen

(3)

NUS CORPORATION AND SUBSIDIARIES **TELECON NOTE**

CONTROL NO.	DATE: April 20, 1989	TIME: 1600

DISTRIBUTION:

File
Glynn County, Georgia

REFERENCE 21

BETWEEN: Ralph Thurston, Superintendent	OF: Glynn County Water Department	PHONE: (912) 638-5910

AND: Geoffrey Carton, NUS Corporation

DISCUSSION:

Mr. Thurston described the county water system while I marked a map for our files. There is a 4-inch well at Ridgewood Plantation. It is cased to 750 feet. It will soon be replaced with a 12-inch well. It services about 100 connections. The county has another separate system near the airport served by two wells. Both wells are about 750 feet deep. They serve about 5 commercial and 5 residential connections. He also reported a private water system about 2 miles north of Arco and a well serving about 160 public works employees on Route 341 about 1 mile south of the Crispen Boulevard intersection. The county systems have no tie-ins to other systems. GC

ACTION ITEMS:

Old Sterling
Landfill
GAD980496539

APPENDICES

APPENDIX A

SISB/SAS
RECEIVED
JAN 02 1990
EPA - REGION IV
ATLANTA, GA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

*****MEMORANDUM******

DATE: 12/08/89

SUBJECT: Results of Pesticide/PCB Analysis;
90-011 OLD STERLING LANDFIL
STERLING GA
CASE NO: 12944

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1120 STOP: 00/00/00
D. NUMBER: Q506

UG/KG	ANALYTICAL RESULTS
8.4U	ALPHA-BHC
8.4U	BETA-BHC
8.4U	DELTA-BHC
8.4U	GAMMA-BHC (LINDANE)
8.4U	HEPTACHLOR
8.4U	ALDRIN
8.4U	HEPTACHLOR EPOXIDE
8.4U	ENDOSULFAN I (ALPHA)
17U	DIELDRIN
17U	4,4'-DDE (P,P'-DDE)
17U	ENDRIN
17U	ENDOSULFAN II (BETA)
17U	4,4'-DDD (P,P'-DDD)
17U	ENDOSULFAN SULFATE
17U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
84U	METHOXYCHLOR
17U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
84U	GAMMA-CHLORDANE /2
84U	ALPHA-CHLORDANE /2
170U	TOXAPHENE
84U	PCB-1016 (AROCLOR 1016)
84U	PCB-1221 (AROCLOR 1221)
84U	PCB-1232 (AROCLOR 1232)
84U	PCB-1242 (AROCLOR 1242)
84U	PCB-1248 (AROCLOR 1248)
170U	PCB-1254 (AROCLOR 1254)
170U	PCB-1260 (AROCLOR 1260)
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00
D. NUMBER: Q507

UG/KG	ANALYTICAL RESULTS
10U	ALPHA-BHC
10U	BETA-BHC
10U	DELTA-BHC
10U	GAMMA-BHC (LINDANE)
10U	HEPTACHLOR
10U	ALDRIN
10U	HEPTACHLOR EPOXIDE
10U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
100U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
100U	GAMMA-CHLORDANE /2
100U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
100U	PCB-1016 (AROCLOR 1016)
100U	PCB-1221 (AROCLOR 1221)
100U	PCB-1232 (AROCLOR 1232)
100U	PCB-1242 (AROCLOR 1242)
100U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1230 STOP: 00/00/00
D. NUMBER: Q508

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

```
***********************************************************************************************
**  PROJECT NO. 90-011    SAMPLE NO. 40525  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY                **
**  SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING              ST: GA                   **
**  STATION ID: SS-04                                                COLLECTION START: 10/17/89  0920   STOP: 00/00/00      **
**  CASE NUMBER: 12944          SAS NUMBER:                           D. NUMBER: Q509                                     **
**                                                                                                                          **
***********************************************************************************************
```

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
8.7U	ALPHA-BHC	87U	METHOXYCHLOR
8.7U	BETA-BHC	17U	ENDRIN KETONE
8.7U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
8.7U	GAMMA-BHC (LINDANE)	87U	GAMMA-CHLORDANE /2
8.7U	HEPTACHLOR	87U	ALPHA-CHLORDANE /2
8.7U	ALDRIN	170U	TOXAPHENE
8.7U	HEPTACHLOR EPOXIDE	87U	PCB-1016 (AROCLOR 1016)
8.7U	ENDOSULFAN I (ALPHA)	87U	PCB-1221 (AROCLOR 1221)
17U	DIELDRIN	87U	PCB-1232 (AROCLOR 1232)
17U	4,4'-DDE (P,P'-DDE)	87U	PCB-1242 (AROCLOR 1242)
17U	ENDRIN	87U	PCB-1248 (AROCLOR 1248)
17U	ENDOSULFAN II (BETA)	170U	PCB-1254 (AROCLOR 1254)
17U	4,4'-DDD (P,P'-DDD)	170U	PCB-1260 (AROCLOR 1260)
17U	ENDOSULFAN SULFATE	8	PERCENT MOISTURE
17U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00
D. NUMBER: Q510

UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC
11U	BETA-BHC
11U	DELTA-BHC
11U	GAMMA-BHC (LINDANE)
11U	HEPTACHLOR
11U	ALDRIN
11U	HEPTACHLOR EPOXIDE
11U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
110U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
110U	GAMMA-CHLORDANE /2
110U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
110U	PCB-1016 (AROCLOR 1016)
110U	PCB-1221 (AROCLOR 1221)
110U	PCB-1232 (AROCLOR 1232)
110U	PCB-1242 (AROCLOR 1242)
110U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1000 STOP: 00/00/00
D. NUMBER: Q511

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00
D. NUMBER: Q512

UG/KG	ANALYTICAL RESULTS
9.4U	ALPHA-BHC
9.4U	BETA-BHC
9.4U	DELTA-BHC
9.4U	GAMMA-BHC (LINDANE)
9.4U	HEPTACHLOR
9.4U	ALDRIN
9.4U	HEPTACHLOR EPOXIDE
9.4U	ENDOSULFAN I (ALPHA)
19U	DIELDRIN
19U	4,4'-DDE (P,P'-DDE)
19U	ENDRIN
19U	ENDOSULFAN II (BETA)
19U	4,4'-DDD (P,P'-DDD)
19U	ENDOSULFAN SULFATE
19U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
94U	METHOXYCHLOR
19U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
94U	GAMMA-CHLORDANE /2
94U	ALPHA-CHLORDANE /2
1900U	TOXAPHENE
94U	PCB-1016 (AROCLOR 1016)
94U	PCB-1221 (AROCLOR 1221)
94U	PCB-1232 (AROCLOR 1232)
94U	PCB-1242 (AROCLOR 1242)
94U	PCB-1248 (AROCLOR 1248)
190U	PCB-1254 (AROCLOR 1254)
190U	PCB-1260 (AROCLOR 1260)
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1050 STOP: 00/00/00
D. NUMBER: Q513

UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC
11U	BETA-BHC
11U	DELTA-BHC
11U	GAMMA-BHC (LINDANE)
11U	HEPTACHLOR
11U	ALDRIN
11U	HEPTACHLOR EPOXIDE
11U	ENDOSULFAN I (ALPHA)
22U	DIELDRIN
22U	4,4'-DDE (P,P'-DDE)
22U	ENDRIN
22U	ENDOSULFAN II (BETA)
22U	4,4'-DDD (P,P'-DDD)
22U	ENDOSULFAN SULFATE
22U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
110U	METHOXYCHLOR
22U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
110U	GAMMA-CHLORDANE /2
110U	ALPHA-CHLORDANE /2
220U	TOXAPHENE
110U	PCB-1016 (AROCLOR 1016)
110U	PCB-1221 (AROCLOR 1221)
110U	PCB-1232 (AROCLOR 1232)
110U	PCB-1242 (AROCLOR 1242)
110U	PCB-1248 (AROCLOR 1248)
220U	PCB-1254 (AROCLOR 1254)
220U	PCB-1260 (AROCLOR 1260)
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

*** ***
** PROJECT NO. 90 011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER. D. NUMBER: Q514 **
** **
*** ***

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA BHC		CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.050U	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.050U	ALDRIN	1.0U	TOXAPHENE
0.050U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.050U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00
D. NUMBER: Q515

UG/KG	ANALYTICAL RESULTS
8.9U	ALPHA-BHC
8.9U	BETA-BHC
8.9U	DELTA-BHC
8.9U	GAMMA-BHC (LINDANE)
8.9U	HEPTACHLOR
8.9U	ALDRIN
8.9U	HEPTACHLOR EPOXIDE
8.9U	ENDOSULFAN I (ALPHA)
18U	DIELDRIN
18U	4,4'-DDE (P,P'-DDE)
18U	ENDRIN
18U	ENDOSULFAN II (BETA)
18U	4,4'-DDD (P,P'-DDD)
18U	ENDOSULFAN SULFATE
18U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
89U	METHOXYCHLOR
18U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
89U	GAMMA-CHLORDANE /2
89U	ALPHA-CHLORDANE /2
180U	TOXAPHENE
89U	PCB-1016 (AROCLOR 1016)
89U	PCB-1221 (AROCLOR 1221)
89U	PCB-1232 (AROCLOR 1232)
89U	PCB-1242 (AROCLOR 1242)
89U	PCB-1248 (AROCLOR 1248)
180U	PCB-1254 (AROCLOR 1254)
180U	PCB-1260 (AROCLOR 1260)
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: D. NUMBER: Q516

UG/KG	ANALYTICAL RESULTS
460U	ALPHA-BHC
460U	BETA-BHC
460U	DELTA-BHC
460U	GAMMA-BHC (LINDANE)
460U	HEPTACHLOR
460U	ALDRIN
460U	HEPTACHLOR EPOXIDE
460U	ENDOSULFAN I (ALPHA)
920U	DIELDRIN
920U	4,4'-DDE (P,P'-DDE)
920U	ENDRIN
920U	ENDOSULFAN II (BETA)
920U	4,4'-DDD (P,P'-DDD)
920U	ENDOSULFAN SULFATE
920U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
4600U	METHOXYCHLOR
920U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
4600U	GAMMA-CHLORDANE /2
4600U	ALPHA-CHLORDANE /2
150000	TOXAPHENE
4600U	PCB-1016 (AROCLOR 1016)
4600U	PCB-1221 (AROCLOR 1221)
4600U	PCB-1232 (AROCLOR 1232)
4600U	PCB-1242 (AROCLOR 1242)
4600U	PCB-1248 (AROCLOR 1248)
9200U	PCB-1254 (AROCLOR 1254)
9200U	PCB-1260 (AROCLOR 1260)
13	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: D. NUMBER: Q517

UG/L	ANALYTICAL RESULTS
0.10U	ALPHA-BHC
0.10U	BETA-BHC
0.10U	DELTA-BHC
0.10U	GAMMA-BHC (LINDANE)
0.10U	HEPTACHLOR
0.10U	ALDRIN
0.10U	HEPTACHLOR EPOXIDE
0.10U	ENDOSULFAN I (ALPHA)
0.20U	DIELDRIN
0.20U	4,4'-DDE (P,P'-DDE)
0.20U	ENDRIN
0.20U	ENDOSULFAN II (BETA)
0.20U	4,4'-DDD (P,P'-DDD)
0.20U	ENDOSULFAN SULFATE
0.20U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
1.0U	METHOXYCHLOR
0.20U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
1.0U	GAMMA-CHLORDANE /2
1.0U	ALPHA-CHLORDANE /2
2.0U	TOXAPHENE
1.0U	PCB-1016 (AROCLOR 1016)
1.0U	PCB-1221 (AROCLOR 1221)
1.0U	PCB-1232 (AROCLOR 1232)
1.0U	PCB-1242 (AROCLOR 1242)
1.0U	PCB-1248 (AROCLOR 1248)
2.0U	PCB-1254 (AROCLOR 1254)
2.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

*** ***

** PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: LS-05 COLLECTION START: 10/17/89 1315 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER: D. NUMBER: Q518 **
** **

*** ***

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
15U	ALPHA-BHC	150U	METHOXYCHLOR
15U	BETA-BHC	29U	ENDRIN KETONE
15U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
15U	GAMMA-BHC (LINDANE)	150U	GAMMA-CHLORDANE /2
15U	HEPTACHLOR	150U	ALPHA-CHLORDANE /2
15U	ALDRIN	290U	TOXAPHENE
15U	HEPTACHLOR EPOXIDE	150U	PCB-1016 (AROCLOR 1016)
15U	ENDOSULFAN I (ALPHA)	150U	PCB-1221 (AROCLOR 1221)
29U	DIELDRIN	150U	PCB-1232 (AROCLOR 1232)
29U	4,4'-DDE (P,P'-DDE)	150U	PCB-1242 (AROCLOR 1242)
29U	ENDRIN	150U	PCB-1248 (AROCLOR 1248)
29U	ENDOSULFAN II (BETA)	290U	PCB-1254 (AROCLOR 1254)
29U	4,4'-DDD (P,P'-DDD)	290U	PCB-1260 (AROCLOR 1260)
29U	ENDOSULFAN SULFATE	45	PERCENT MOISTURE
29U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00
D. NUMBER: Q519

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40536  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY                          **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING                ST: GA                          **
**   STATION ID: PW-01                                                COLLECTION START. 10/17/89  1655   STOP: 00/00/00            **
**   CASE NUMBER: 12944          SAS NUMBER:                           D. NUMBER: Q520                                            **
**                                                                                                                                   **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.050U	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.050U	ALDRIN	1.0U	TOXAPHENE
0.050U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.050U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011   SAMPLE NO. 40542  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY              **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING              ST: GA                      **
**   STATION ID: TB-01                                                COLLECTION START: 10/16/89  0830   STOP: 00/00/00      **
**   CASE NUMBER: 12944           SAS NUMBER:                          D. NUMBER: Q505                                       **
**                                                                                                                            **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.050U	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.050U	ALDRIN	1.0U	TOXAPHENE
0.050U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.050U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SESD / SAS
RECEIVED
JAN 02 1990
EPA - REGION IV
ATLANTA, GA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

*****MEMORANDUM******

DATE: 12/08/89

SUBJECT: Results of Extractable Organic Analysis;
90-011 OLD STERLING LANDFIL
STERLING GA
CASE NO: 12944

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

CC: Al Hanke

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-01 COLLECTION START: 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q506

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
350U	PHENOL	1700UJ	3-NITROANILINE
350UJ	BIS(2-CHLOROETHYL) ETHER	350U	ACENAPHTHENE
350U	2-CHLOROPHENOL	1700U	2,4-DINITROPHENOL
350U	1,3-DICHLOROBENZENE	1700U	4-NITROPHENOL
350U	1,4-DICHLOROBENZENE	350U	DIBENZOFURAN
350U	BENZYL ALCOHOL	350U	2,4-DINITROTOLUENE
350U	1,2-DICHLOROBENZENE	350U	DIETHYL PHTHALATE
350U	2-METHYLPHENOL	350U	4-CHLOROPHENYL PHENYL ETHER
350U	BIS(2-CHLOROISOPROPYL) ETHER	350U	FLUORENE
350U	(3-AND/OR 4-)METHYLPHENOL	1700UJ	4-NITROANILINE
350U	N-NITROSODI-N-PROPYLAMINE	1700U	2-METHYL-4,6-DINITROPHENOL
350U	HEXACHLOROETHANE	350U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
350U	NITROBENZENE	350U	4-BROMOPHENYL PHENYL ETHER
350U	ISOPHORONE	350U	HEXACHLOROBENZENE (HCB)
350U	2-NITROPHENOL	1700U	PENTACHLOROPHENOL
350U	2,4-DIMETHYLPHENOL	350U	PHENANTHRENE
1700U	BENZOIC ACID	350U	ANTHRACENE
350U	BIS(2-CHLOROETHOXY) METHANE	350U	DI-N-BUTYLPHTHALATE
350U	2,4-DICHLOROPHENOL	350U	FLUORANTHENE
350U	1,2,4-TRICHLOROBENZENE	350U	PYRENE
350U	NAPHTHALENE	350U	BENZYL BUTYL PHTHALATE
350UJ	4-CHLOROANILINE	690UJ	3,3'-DICHLOROBENZIDINE
350U	HEXACHLOROBUTADIENE	350U	BENZO(A)ANTHRACENE
350U	4-CHLORO-3-METHYLPHENOL	350U	CHRYSENE
350U	2-METHYLNAPHTHALENE	350U	BIS(2-ETHYLHEXYL) PHTHALATE
350U	HEXACHLOROCYCLOPENTADIENE (HCCP)	350U	DI-N-OCTYLPHTHALATE
350U	2,4,6-TRICHLOROPHENOL	350U	BENZO(B AND/OR K)FLUORANTHENE
1700U	2,4,5-TRICHLOROPHENOL	350U	BENZO-A-PYRENE
350U	2-CHLORONAPHTHALENE	350UJ	INDENO (1,2,3-CD) PYRENE
1700U	2-NITROANILINE	350U	DIBENZO(A,H)ANTHRACENE
350U	DIMETHYL PHTHALATE	350U	BENZO(GHI)PERYLENE
350U	ACENAPHTHYLENE	5	PERCENT MOISTURE
350U	2,6-DINITROTOLUENE		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40523  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY                                  **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING                ST: GA                                   **
**   STATION ID: SB-01                                                COLLECTION START: 10/16/89  1150   STOP: 00/00/00                    **
**                                                                                                                                            **
**  CASE NO.: 12944                          SAS NO.:                 D. NO.: Q507                                                         **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
860UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1230 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q508

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50U	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-04 COLLECTION START: 10/17/89 0920 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
360U	PHENOL
360UJ	BIS(2-CHLOROETHYL) ETHER
360U	2-CHLOROPHENOL
360U	1,3-DICHLOROBENZENE
360U	1,4-DICHLOROBENZENE
360U	BENZYL ALCOHOL
360U	1,2-DICHLOROBENZENE
360U	2-METHYLPHENOL
360U	BIS(2-CHLOROISOPROPYL) ETHER
360U	(3-AND/OR 4-)METHYLPHENOL
360U	N-NITROSODI-N-PROPYLAMINE
360U	HEXACHLOROETHANE
360U	NITROBENZENE
360U	ISOPHORONE
360U	2-NITROPHENOL
360U	2,4-DIMETHYLPHENOL
1700U	BENZOIC ACID
360U	BIS(2-CHLOROETHOXY) METHANE
360U	2,4-DICHLOROPHENOL
360U	1,2,4-TRICHLOROBENZENE
360U	NAPHTHALENE
360UJ	4-CHLOROANILINE
360U	HEXACHLOROBUTADIENE
360U	4-CHLORO-3-METHYLPHENOL
360U	2-METHYLNAPHTHALENE
360U	HEXACHLOROCYCLOPENTADIENE (HCCP)
360U	2,4,6-TRICHLOROPHENOL
1700U	2,4,5-TRICHLOROPHENOL
360U	2-CHLORONAPHTHALENE
1700U	2-NITROANILINE
360U	DIMETHYL PHTHALATE
360U	ACENAPHTHYLENE
360U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1700UJ	3-NITROANILINE
360U	ACENAPHTHENE
1700U	2,4-DINITROPHENOL
1700U	4-NITROPHENOL
360U	DIBENZOFURAN
360U	2,4-DINITROTOLUENE
360U	DIETHYL PHTHALATE
360U	4-CHLOROPHENYL PHENYL ETHER
360U	FLUORENE
1700UJ	4-NITROANILINE
1700U	2-METHYL-4,6-DINITROPHENOL
360U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
360U	4-BROMOPHENYL PHENYL ETHER
360U	HEXACHLOROBENZENE (HCB)
1700U	PENTACHLOROPHENOL
360U	PHENANTHRENE
360U	ANTHRACENE
360U	DI-N-BUTYLPHTHALATE
360U	FLUORANTHENE
360U	PYRENE
360U	BENZYL BUTYL PHTHALATE
720UJ	3,3'-DICHLOROBENZIDINE
360U	BENZO(A)ANTHRACENE
360U	CHRYSENE
360U	BIS(2-ETHYLHEXYL) PHTHALATE
360U	DI-N-OCTYLPHTHALATE
360U	BENZO(B AND/OR K)FLUORANTHENE
360U	BENZO-A-PYRENE
360UJ	INDENO (1,2,3-CD) PYRENE
360U	DIBENZO(A,H)ANTHRACENE
360U	BENZO(GHI)PERYLENE
8	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
870UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS
390U	PHENOL
390U	BIS(2-CHLOROETHYL) ETHER
390U	2-CHLOROPHENOL
390U	1,3-DICHLOROBENZENE
390U	1,4-DICHLOROBENZENE
390UJ	BENZYL ALCOHOL
390U	1,2-DICHLOROBENZENE
390U	2-METHYLPHENOL
390U	BIS(2-CHLOROISOPROPYL) ETHER
390U	(3-AND/OR 4-)METHYLPHENOL
390U	N-NITROSODI-N-PROPYLAMINE
390U	HEXACHLOROETHANE
390U	NITROBENZENE
390U	ISOPHORONE
390U	2-NITROPHENOL
390U	2,4-DIMETHYLPHENOL
1900UJ	BENZOIC ACID
390U	BIS(2-CHLOROETHOXY) METHANE
390U	2,4-DICHLOROPHENOL
390U	1,2,4-TRICHLOROBENZENE
390U	NAPHTHALENE
390U	4-CHLOROANILINE
390U	HEXACHLOROBUTADIENE
390U	4-CHLORO-3-METHYLPHENOL
390U	2-METHYLNAPHTHALENE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)
390U	2,4,6-TRICHLOROPHENOL
1900U	2,4,5-TRICHLOROPHENOL
390U	2-CHLORONAPHTHALENE
1900U	2-NITROANILINE
390U	DIMETHYL PHTHALATE
390U	ACENAPHTHYLENE
390U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1900U	3-NITROANILINE
390U	ACENAPHTHENE
1900U	2,4-DINITROPHENOL
1900U	4-NITROPHENOL
390U	DIBENZOFURAN
390U	2,4-DINITROTOLUENE
390U	DIETHYL PHTHALATE
390U	4-CHLOROPHENYL PHENYL ETHER
390U	FLUORENE
1900UJ	4-NITROANILINE
1900U	2-METHYL-4,6-DINITROPHENOL
390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	4-BROMOPHENYL PHENYL ETHER
390U	HEXACHLOROBENZENE (HCB)
1900U	PENTACHLOROPHENOL
390U	PHENANTHRENE
390U	ANTHRACENE
390U	DI-N-BUTYLPHTHALATE
390U	FLUORANTHENE
390U	PYRENE
390U	BENZYL BUTYL PHTHALATE
780UJ	3,3'-DICHLOROBENZIDINE
390U	BENZO(A)ANTHRACENE
390U	CHRYSENE
390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	DI-N-OCTYLPHTHALATE
390U	BENZO(B AND/OR K)FLUORANTHENE
390U	BENZO-A-PYRENE
390UJ	INDENO (1,2,3-CD) PYRENE
390U	DIBENZO(A,H)ANTHRACENE
390U	BENZO(GHI)PERYLENE
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40529  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY                                          **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING                 ST: GA                                          **
**   STATION ID: SB-03                                                COLLECTION START: 10/17/89  1050   STOP: 00/00/00                          **
**                                                                                                                                                    **
**  CASE NO.: 12944                          SAS NO.:                 D. NO.: Q513                                                                  **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
450U	PHENOL	2200U	3-NITROANILINE
450U	BIS(2-CHLOROETHYL) ETHER	450U	ACENAPHTHENE
450U	2-CHLOROPHENOL	2200U	2,4-DINITROPHENOL
450U	1,3-DICHLOROBENZENE	2200U	4-NITROPHENOL
450U	1,4-DICHLOROBENZENE	450U	DIBENZOFURAN
450UJ	BENZYL ALCOHOL	450U	2,4-DINITROTOLUENE
450U	1,2-DICHLOROBENZENE	450U	DIETHYL PHTHALATE
450U	2-METHYLPHENOL	450U	4-CHLOROPHENYL PHENYL ETHER
450U	BIS(2-CHLOROISOPROPYL) ETHER	450U	FLUORENE
450U	(3-AND/OR 4-)METHYLPHENOL	2200UJ	4-NITROANILINE
450U	N-NITROSODI-N-PROPYLAMINE	2200U	2-METHYL-4,6-DINITROPHENOL
450U	HEXACHLOROETHANE	450U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
450U	NITROBENZENE	450U	4-BROMOPHENYL PHENYL ETHER
450U	ISOPHORONE	450U	HEXACHLOROBENZENE (HCB)
450U	2-NITROPHENOL	2200U	PENTACHLOROPHENOL
450U	2,4-DIMETHYLPHENOL	450U	PHENANTHRENE
2200UJ	BENZOIC ACID	450U	ANTHRACENE
450U	BIS(2-CHLOROETHOXY) METHANE	450U	DI-N-BUTYLPHTHALATE
450U	2,4-DICHLOROPHENOL	450U	FLUORANTHENE
450U	1,2,4-TRICHLOROBENZENE	450U	PYRENE
450U	NAPHTHALENE	450U	BENZYL BUTYL PHTHALATE
450U	4-CHLOROANILINE	890UJ	3,3'-DICHLOROBENZIDINE
450U	HEXACHLOROBUTADIENE	450U	BENZO(A)ANTHRACENE
450U	4-CHLORO-3-METHYLPHENOL	450U	CHRYSENE
450U	2-METHYLNAPHTHALENE	450U	BIS(2-ETHYLHEXYL) PHTHALATE
450U	HEXACHLOROCYCLOPENTADIENE (HCCP)	450U	DI-N-OCTYLPHTHALATE
450U	2,4,6-TRICHLOROPHENOL	450U	BENZO(B AND/OR K)FLUORANTHENE
2200U	2,4,5-TRICHLOROPHENOL	450U	BENZO-A-PYRENE
450U	2-CHLORONAPHTHALENE	450UJ	INDENO (1,2,3-CD) PYRENE
2200U	2-NITROANILINE	450U	DIBENZO(A,H)ANTHRACENE
450U	DIMETHYL PHTHALATE	450U	BENZO(GHI)PERYLENE
450U	ACENAPHTHYLENE	26	PERCENT MOISTURE
450U	2,6-DINITROTOLUENE		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q514

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
4J	PHENOL	50UJ	3-NITROANILINE
10UJ	BIS(2-CHLOROETHYL) ETHER	10U	ACENAPHTHENE
10U	2-CHLOROPHENOL	50U	2,4-DINITROPHENOL
10U	1,3-DICHLOROBENZENE	50U	4-NITROPHENOL
10U	1,4-DICHLOROBENZENE	10U	DIBENZOFURAN
10U	BENZYL ALCOHOL	10U	2,4-DINITROTOLUENE
10U	1,2-DICHLOROBENZENE	10U	DIETHYL PHTHALATE
10U	2-METHYLPHENOL	10U	4-CHLOROPHENYL PHENYL ETHER
10U	BIS(2-CHLOROISOPROPYL) ETHER	10U	FLUORENE
10U	(3-AND/OR 4-)METHYLPHENOL	50UJ	4-NITROANILINE
10U	N-NITROSODI-N-PROPYLAMINE	50U	2-METHYL-4,6-DINITROPHENOL
10U	HEXACHLOROETHANE	10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	NITROBENZENE	10U	4-BROMOPHENYL PHENYL ETHER
10U	ISOPHORONE	10U	HEXACHLOROBENZENE (HCB)
10U	2-NITROPHENOL	50U	PENTACHLOROPHENOL
10U	2,4-DIMETHYLPHENOL	10U	PHENANTHRENE
50U	BENZOIC ACID	10U	ANTHRACENE
10U	BIS(2-CHLOROETHOXY) METHANE	10U	DI-N-BUTYLPHTHALATE
10U	2,4-DICHLOROPHENOL	10U	FLUORANTHENE
10U	1,2,4-TRICHLOROBENZENE	10U	PYRENE
10U	NAPHTHALENE	10U	BENZYL BUTYL PHTHALATE
10UJ	4-CHLOROANILINE	20UJ	3,3'-DICHLOROBENZIDINE
10U	HEXACHLOROBUTADIENE	10U	BENZO(A)ANTHRACENE
10U	4-CHLORO-3-METHYLPHENOL	10U	CHRYSENE
10U	2-METHYLNAPHTHALENE	10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	10U	DI-N-OCTYLPHTHALATE
10U	2,4,6-TRICHLOROPHENOL	10U	BENZO(B AND/OR K)FLUORANTHENE
50U	2,4,5-TRICHLOROPHENOL	10U	BENZO-A-PYRENE
10U	2-CHLORONAPHTHALENE	10UJ	INDENO (1,2,3-CD) PYRENE
50U	2-NITROANILINE	10U	DIBENZO(A,H)ANTHRACENE
10U	DIMETHYL PHTHALATE	10U	BENZO(GHI)PERYLENE
10U	ACENAPHTHYLENE		
10U	2,6-DINITROTOLUENE		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
370U	PHENOL
370UJ	BIS(2-CHLOROETHYL) ETHER
370U	2-CHLOROPHENOL
370U	1,3-DICHLOROBENZENE
370U	1,4-DICHLOROBENZENE
370U	BENZYL ALCOHOL
370U	1,2-DICHLOROBENZENE
370U	2-METHYLPHENOL
370U	BIS(2-CHLOROISOPROPYL) ETHER
370U	(3-AND/OR 4-)METHYLPHENOL
370U	N-NITROSODI-N-PROPYLAMINE
370U	HEXACHLOROETHANE
370U	NITROBENZENE
370U	ISOPHORONE
370U	2-NITROPHENOL
370U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
370U	BIS(2-CHLOROETHOXY) METHANE
370U	2,4-DICHLOROPHENOL
370U	1,2,4-TRICHLOROBENZENE
370U	NAPHTHALENE
370UJ	4-CHLOROANILINE
370U	HEXACHLOROBUTADIENE
370U	4-CHLORO-3-METHYLPHENOL
370U	2-METHYLNAPHTHALENE
370U	HEXACHLOROCYCLOPENTADIENE (HCCP)
370U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
370U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
370U	DIMETHYL PHTHALATE
370U	ACENAPHTHYLENE
370U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
370U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
370U	DIBENZOFURAN
370U	2,4-DINITROTOLUENE
370U	DIETHYL PHTHALATE
370U	4-CHLOROPHENYL PHENYL ETHER
370U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
370U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
370U	4-BROMOPHENYL PHENYL ETHER
370U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
370U	PHENANTHRENE
370U	ANTHRACENE
370U	DI-N-BUTYLPHTHALATE
370U	FLUORANTHENE
370U	PYRENE
370U	BENZYL BUTYL PHTHALATE
730UJ	3,3'-DICHLOROBENZIDINE
370U	BENZO(A)ANTHRACENE
370U	CHRYSENE
370U	BIS(2-ETHYLHEXYL) PHTHALATE
370U	DI-N-OCTYLPHTHALATE
370U	BENZO(B AND/OR K)FLUORANTHENE
370U	BENZO-A-PYRENE
370UJ	INDENO (1,2,3-CD) PYRENE
370U	DIBENZO(A,H)ANTHRACENE
370U	BENZO(GHI)PERYLENE
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
380U	PHENOL
380UJ	BIS(2-CHLOROETHYL) ETHER
380U	2-CHLOROPHENOL
380U	1,3-DICHLOROBENZENE
380U	1,4-DICHLOROBENZENE
380U	BENZYL ALCOHOL
380U	1,2-DICHLOROBENZENE
380U	2-METHYLPHENOL
380U	BIS(2-CHLOROISOPROPYL) ETHER
380U	(3-AND/OR 4-)METHYLPHENOL
380U	N-NITROSODI-N-PROPYLAMINE
380U	HEXACHLOROETHANE
380U	NITROBENZENE
380U	ISOPHORONE
380U	2-NITROPHENOL
380U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
380U	BIS(2-CHLOROETHOXY) METHANE
380U	2,4-DICHLOROPHENOL
380U	1,2,4-TRICHLOROBENZENE
380U	NAPHTHALENE
380UJ	4-CHLOROANILINE
380U	HEXACHLOROBUTADIENE
380U	4-CHLORO-3-METHYLPHENOL
380U	2-METHYLNAPHTHALENE
380U	HEXACHLOROCYCLOPENTADIENE (HCCP)
380U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
380U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
380U	DIMETHYL PHTHALATE
380U	ACENAPHTHYLENE
380U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
380U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
380U	DIBENZOFURAN
380U	2,4-DINITROTOLUENE
380U	DIETHYL PHTHALATE
380U	4-CHLOROPHENYL PHENYL ETHER
380U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
380U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U	4-BROMOPHENYL PHENYL ETHER
380U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
380U	PHENANTHRENE
380U	ANTHRACENE
380U	DI-N-BUTYLPHTHALATE
380U	FLUORANTHENE
380U	PYRENE
380U	BENZYL BUTYL PHTHALATE
760UJ	3,3'-DICHLOROBENZIDINE
380U	BENZO(A)ANTHRACENE
380U	CHRYSENE
380U	BIS(2-ETHYLHEXYL) PHTHALATE
380U	DI-N-OCTYLPHTHALATE
380U	BENZO(B AND/OR K)FLUORANTHENE
380U	BENZO-A-PYRENE
380UJ	INDENO (1,2,3-CD) PYRENE
380U	DIBENZO(A,H)ANTHRACENE
380U	BENZO(GHI)PERYLENE
13	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q517

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
500U	PHENOL	2500UJ	3-NITROANILINE
500UJ	BIS(2-CHLOROETHYL) ETHER	500U	ACENAPHTHENE
500U	2-CHLOROPHENOL	2500U	2,4-DINITROPHENOL
500U	1,3-DICHLOROBENZENE	2500U	4-NITROPHENOL
500U	1,4-DICHLOROBENZENE	500U	DIBENZOFURAN
500U	BENZYL ALCOHOL	500U	2,4-DINITROTOLUENE
500U	1,2-DICHLOROBENZENE	500U	DIETHYL PHTHALATE
500U	2-METHYLPHENOL	500U	4-CHLOROPHENYL PHENYL ETHER
500U	BIS(2-CHLOROISOPROPYL) ETHER	500U	FLUORENE
500U	(3-AND/OR 4-)METHYLPHENOL	2500UJ	4-NITROANILINE
500U	N-NITROSODI-N-PROPYLAMINE	2500U	2-METHYL-4,6-DINITROPHENOL
500U	HEXACHLOROETHANE	500U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
500U	NITROBENZENE	500U	4-BROMOPHENYL PHENYL ETHER
500U	ISOPHORONE	500U	HEXACHLOROBENZENE (HCB)
500U	2-NITROPHENOL	2500U	PENTACHLOROPHENOL
500U	2,4-DIMETHYLPHENOL	500U	PHENANTHRENE
2500U	BENZOIC ACID	500U	ANTHRACENE
500U	BIS(2-CHLOROETHOXY) METHANE	500U	DI-N-BUTYLPHTHALATE
500U	2,4-DICHLOROPHENOL	500U	FLUORANTHENE
500U	1,2,4-TRICHLOROBENZENE	500U	PYRENE
500U	NAPHTHALENE	500U	BENZYL BUTYL PHTHALATE
500UJ	4-CHLOROANILINE	1000UJ	3,3'-DICHLOROBENZIDINE
500U	HEXACHLOROBUTADIENE	500U	BENZO(A)ANTHRACENE
500U	4-CHLORO-3-METHYLPHENOL	500U	CHRYSENE
500U	2-METHYLNAPHTHALENE	500U	BIS(2-ETHYLHEXYL) PHTHALATE
500U	HEXACHLOROCYCLOPENTADIENE (HCCP)	500U	DI-N-OCTYLPHTHALATE
500U	2,4,6-TRICHLOROPHENOL	500U	BENZO(B AND/OR K)FLUORANTHENE
2500U	2,4,5-TRICHLOROPHENOL	500U	BENZO-A-PYRENE
500U	2-CHLORONAPHTHALENE	500UJ	INDENO (1,2,3-CD) PYRENE
2500U	2-NITROANILINE	500U	DIBENZO(A,H)ANTHRACENE
500U	DIMETHYL PHTHALATE	500U	BENZO(GHI)PERYLENE
500U	ACENAPHTHYLENE		
500U	2,6-DINITROTOLUENE		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFIL
STATION ID: LS-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1315 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q518

UG/KG	ANALYTICAL RESULTS
600U	PHENOL
600UJ	BIS(2-CHLOROETHYL) ETHER
600U	2-CHLOROPHENOL
600U	1,3-DICHLOROBENZENE
600U	1,4-DICHLOROBENZENE
600U	BENZYL ALCOHOL
600U	1,2-DICHLOROBENZENE
600U	2-METHYLPHENOL
600U	BIS(2-CHLOROISOPROPYL) ETHER
89J	(3-AND/OR 4-)METHYLPHENOL
600U	N-NITROSODI-N-PROPYLAMINE
600U	HEXACHLOROETHANE
600U	NITROBENZENE
600U	ISOPHORONE
600U	2-NITROPHENOL
600U	2,4-DIMETHYLPHENOL
2900U	BENZOIC ACID
600U	BIS(2-CHLOROETHOXY) METHANE
600U	2,4-DICHLOROPHENOL
600U	1,2,4-TRICHLOROBENZENE
600U	NAPHTHALENE
600UJ	4-CHLOROANILINE
600U	HEXACHLOROBUTADIENE
600U	4-CHLORO-3-METHYLPHENOL
600U	2-METHYLNAPHTHALENE
600U	HEXACHLOROCYCLOPENTADIENE (HCCP)
600U	2,4,6-TRICHLOROPHENOL
2900U	2,4,5-TRICHLOROPHENOL
600U	2-CHLORONAPHTHALENE
2900U	2-NITROANILINE
600U	DIMETHYL PHTHALATE
600U	ACENAPHTHYLENE
600U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2900UJ	3-NITROANILINE
600U	ACENAPHTHENE
2900U	2,4-DINITROPHENOL
2900U	4-NITROPHENOL
600U	DIBENZOFURAN
600U	2,4-DINITROTOLUENE
600U	DIETHYL PHTHALATE
600U	4-CHLOROPHENYL PHENYL ETHER
600U	FLUORENE
2900U	4-NITROANILINE
2900U	2-METHYL-4,6-DINITROPHENOL
600U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
600U	4-BROMOPHENYL PHENYL ETHER
600U	HEXACHLOROBENZENE (HCB)
2900U	PENTACHLOROPHENOL
600U	PHENANTHRENE
600U	ANTHRACENE
600U	DI-N-BUTYLPHTHALATE
600U	FLUORANTHENE
600U	PYRENE
600U	BENZYL BUTYL PHTHALATE
1200UJ	3,3'-DICHLOROBENZIDINE
600U	BENZO(A)ANTHRACENE
600U	CHRYSENE
600U	BIS(2-ETHYLHEXYL) PHTHALATE
600U	DI-N-OCTYLPHTHALATE
600U	BENZO(B AND/OR K)FLUORANTHENE
600U	BENZO-A-PYRENE
600UJ	INDENO (1,2,3-CD) PYRENE
600U	DIBENZO(A,H)ANTHRACENE
600U	BENZO(GHI)PERYLENE
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q519

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
19	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40536  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY                          **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING                ST: GA                          **
**   STATION ID: PW-01                                                COLLECTION START: 10/17/89  1655   STOP: 00/00/00            **
**                                                                                                                                   **
**  CASE NO.: 12944                          SAS NO.:                 D. NO.: Q520                                                 **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40542 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 0830 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q505

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50U	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011   SAMPLE NO. 40525  SAMPLE TYPE. SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY            **
**   SOURCE. OLD STERLING LANDFIL                                    CITY: STERLING             ST: GA                 **
**   STATION ID: SS-04                                               COLLECTION START: 10/17/89  0920  STOP: 00/00/00   **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q509               MD NO: Q509            **
**                                                                                                                      **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

ANALYTICAL RESULTS UG/KG

1000J   1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL	CITY: STERLING ST: GA
STATION ID: SS-03	COLLECTION START: 10/17/89 1045 STOP: 00/00/00
CASE.NO.: 12944 SAS NO.:	D. NO.: Q512 MD NO: Q512

ANALYTICAL RESULTS UG/KG

600J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011   SAMPLE NO. 40531  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY           **
**   SOURCE: OLD STERLING LANDFIL                                    CITY: STERLING            ST: GA                 **
**   STATION ID: SS-02                                               COLLECTION START: 10/17/89  1200   STOP: 00/00/00  **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q515              MD NO: Q515            **
**                                                                                                                    **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

ANALYTICAL RESULTS UG/KG

	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE-
200JN	CARBOXYLIC ACID METHYLESTER

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40532  SAMPLE TYPE. SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY                  **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING               ST: GA                    **
**   STATION ID: SB-02                                                COLLECTION START: 10/17/89  1215   STOP: 00/00/00     **
**   CASE.NO.: 12944            SAS NO.:                              D. NO.: Q516              MD NO: Q516                 **
**                                                                                                                            **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

ANALYTICAL RESULTS UG/KG

10000JN	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE CARBOXALDEHYDE
20000J	18 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
*************************************************************************************************
**   PROJECT NO. 90-011   SAMPLE NO. 40533  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY   **
**   SOURCE: OLD STERLING LANDFIL                                    CITY: STERLING            ST: GA          **
**   STATION ID: TW-02                                               COLLECTION START: 10/17/89  1300  STOP: 00/00/00  **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q517              MD NO: Q517     **
**                                                                                                             **
*************************************************************************************************
```

ANALYTICAL RESULTS UG/L

5000JN	PINENE
2000JN	CAMPHENE
40000JN	TRIMETHYLBICYCLOHEPTANE (2 ISOMERS)
4000JN	METHYL(METHYLETHYL)OXABICYCLOHEPTANE
10000JN	METHYL(METHYLETHYL)BENZENE
3000JN	CINEOLE
2000JN	DIMETHYLBICYCLOHEPTANONE
20000JN	CAMPHOR
8000JN	TRIMETHYLBICYCLOHEPTANOL
1000JN	METHYL(METHYLETHYL)PHENOL
10000J	4 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
*****************************************************************************************************
**   PROJECT NO. 90-011   SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE    PROG ELEM: NSF   COLLECTED BY: W RILEY          **
**   SOURCE: OLD STERLING LANDFIL                                    CITY: STERLING            ST: GA                **
**   STATION ID: LS-05                                               COLLECTION START: 10/17/89  1315   STOP: 00/00/00 **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q518              MD NO: Q518           **
**                                                                                                                   **
*****************************************************************************************************
```

ANALYTICAL RESULTS UG/KG

10000J	9 UNIDENTIFIED COMPOUNDS
500JN	HEXANOIC ACID
2000JN	HEXADECANOIC ACID
700JN	OCTADECANOIC ACID
800JN	DIHYDROBENZODIOXEPIN

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
** PROJECT NO. 90-011    SAMPLE NO. 40535  SAMPLE TYPE. GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY
** SOURCE.                                                          CITY: STERLING              ST: GA
** STATION ID: TW-05                                                COLLECTION START: 10/17/89  1515   STOP: 00/00/00
** CASE.NO.: 12944          SAS NO.:                                D. NO.: Q519                MD NO: Q519
```

ANALYTICAL RESULTS UG/L

40J	2 UNIDENTIFIED COMPOUNDS
9JN	TETRAMETHYLBUTYLPHENOL
50JN	BENZOTHIAZOLONE
20JN	TRIMETHYLHEXANOIC ACID
20JN	OXYBISBENZENE
20JN	TETRAMETHYLPHENANTHRENE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SISB/SAS
RECEIVED
JAN 02 1990
EPA - REGION IV
ATLANTA, GA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

*****MEMORANDUM******

DATE: 12/08/89

SUBJECT: Results of Purgeable Organic Analysis;
90-011 OLD STERLING LANDFIL
STERLING GA
CASE NO: 12944

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q506

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30UJ	ACETONE
8U	CARBON DISULFIDE
8U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
8U	1,1-DICHLOROETHANE
8U	1,2-DICHLOROETHENE (TOTAL)
3J	CHLOROFORM
8U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
8U	1,1,1-TRICHLOROETHANE
8U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
8U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
8U	1,2-DICHLOROPROPANE
8U	CIS-1,3-DICHLOROPROPENE
8U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8U	DIBROMOCHLOROMETHANE
8U	1,1,2-TRICHLOROETHANE
8U	BENZENE
8U	TRANS-1,3-DICHLOROPROPENE
8U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
8U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8U	1,1,2,2-TETRACHLOROETHANE
90	TOLUENE
8U	CHLOROBENZENE
8U	ETHYL BENZENE
8U	STYRENE
8U	TOTAL XYLENES
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1150 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q507

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
30U	METHYLENE CHLORIDE
20U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q508

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
5U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0920 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
30U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
11	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
11	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0930 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
20UJ	ACETONE
10U	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
3J	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-04 COLLECTION START: 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	5U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	5U	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	CHLOROETHANE	5U	DIBROMOCHLOROMETHANE
5U	METHYLENE CHLORIDE	5U	1,1,2-TRICHLOROETHANE
10U	ACETONE	5U	BENZENE
5U	CARBON DISULFIDE	5U	TRANS-1,3-DICHLOROPROPENE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5U	BROMOFORM
5U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
5U	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
5U	CHLOROFORM	5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,2-DICHLOROETHANE	5U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	5U	TOLUENE
5U	1,1,1-TRICHLOROETHANE	5U	CHLOROBENZENE
5U	CARBON TETRACHLORIDE	5U	ETHYL BENZENE
10U	VINYL ACETATE	5U	STYRENE
5U	BROMODICHLOROMETHANE	5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE	9U	1,2-DICHLOROPROPANE
18U	BROMOMETHANE	9U	CIS-1,3-DICHLOROPROPENE
18U	VINYL CHLORIDE	9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
18U	CHLOROETHANE	9U	DIBROMOCHLOROMETHANE
20U	METHYLENE CHLORIDE	9U	1,1,2-TRICHLOROETHANE
30U	ACETONE	9U	BENZENE
9UJ	CARBON DISULFIDE	9U	TRANS-1,3-DICHLOROPROPENE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	9U	BROMOFORM
9U	1,1-DICHLOROETHANE	18U	METHYL ISOBUTYL KETONE
9U	1,2-DICHLOROETHENE (TOTAL)	18U	METHYL BUTYL KETONE
9U	CHLOROFORM	9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,2-DICHLOROETHANE	9U	1,1,2,2-TETRACHLOROETHANE
18U	METHYL ETHYL KETONE	15	TOLUENE
9U	1,1,1-TRICHLOROETHANE	9U	CHLOROBENZENE
9UJ	CARBON TETRACHLORIDE	9U	ETHYL BENZENE
18U	VINYL ACETATE	9U	STYRENE
9U	BROMODICHLOROMETHANE	9U	TOTAL XYLENES
		14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q513

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1130 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q514

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
170J	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
9U	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
7	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

SSB/SAS
RECEIVED
JAN 12 1990
EPA - REGION IV
ATLANTA, GA.

*****MEMORANDUM******

DATE: 12/16/89

SUBJECT: Results of Pesticide/PCB Analysis;
90-133 OLD STERLING LANDFIL
STERLING GA

FROM: Tom B. Bennett, jr.
Chief, Organic Chemistry Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/15/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY: R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
0.71U	ALDRIN
0.71U	HEPTACHLOR
0.71U	HEPTACHLOR EPOXIDE
0.36U	ALPHA-BHC
0.71U	BETA-BHC
0.36U	GAMMA-BHC (LINDANE)
0.71U	DELTA-BHC
0.71U	ENDOSULFAN I (ALPHA)
0.71U	DIELDRIN
0.89U	4,4'-DDT (P,P'-DDT)
0.71U	4,4'-DDE (P,P'-DDE)
0.71U	4,4'-DDD (P,P'-DDD)
0.71U	ENDRIN
0.71U	ENDOSULFAN II (BETA)
0.89U	ENDOSULFAN SULFATE
3.1U	CHLORDANE (TECH. MIXTURE) /1
8.9U	PCB-1242 (AROCLOR 1242)
8.9U	PCB-1254 (AROCLOR 1254)
8.9U	PCB-1221 (AROCLOR 1221)

MG/KG	ANALYTICAL RESULTS
8.9U	PCB-1232 (AROCLOR 1232)
8.9U	PCB-1248 (AROCLOR 1248)
8.9U	PCB-1260 (AROCLOR 1260)
8.9U	PCB-1016 (AROCLOR 1016)
35U	TOXAPHENE
---	CHLORDENE /2
---	ALPHA-CHLORDENE /2
---	BETA CHLORDENE /2
---	GAMMA-CHLORDENE /2
---	1-HYDROXYCHLORDENE /2
---	GAMMA-CHLORDANE /2
---	TRANS-NONACHLOR /2
---	ALPHA-CHLORDANE /2
---	CIS-NONACHLOR /2
---	OXYCHLORDANE (OCTACHLOREPOXIDE) /2
0.89U	METHOXYCHLOR
0.89U	ENDRIN KETONE
NA	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT. C-CONFIRMED BY GC/MS
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS. 2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SITE OLD STERLING LANDFILL (FIT) RPM/OSC ROGER FRANKLIN (NUS)
PROJECT # 90-133 SHIPWEEK 10/09/89

SOILVOA BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OVOA BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILEXT BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OEXT BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILPEST BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OPEST BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILMET BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OMET BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILCN BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OCN BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
SOILOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OOTH1 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
H2OOTH2 BOOKED	0	DATA RECEIVED	/ /	FOR		SAMPLES
OTHER1 BOOKED	1	DATA RECEIVED	12/26/89	FOR	1	SAMPLES
OTHER2 BOOKED	1	DATA RECEIVED	01/12/90	FOR	1	SAMPLES

OV REQUESTED? N

All data rec'd for 90-133
Sample Control
NT
JAN 12 1990

SASB/SAS
RECEIVED
JAN 12 1990
EPA - REGION IV

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

SISB/SAS
RECEIVED
JAN 02 1990
EPA - REGION IV
ATLANTA, GA.

*****MEMORANDUM******

DATE: 12/09/89

SUBJECT: Results of Purgeable Organic Analysis;
90-133 OLD STERLING LANDFIL
STERLING GA

FROM: Tom B. Bennett, jr.
Chief, Organic Chemistry Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/08/89

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID. 03-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY: R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
8.1U	CHLOROMETHANE
8.1U	VINYL CHLORIDE
8.1U	BROMOMETHANE
8.1U	CHLOROETHANE
8.1U	TRICHLOROFLUOROMETHANE
8.1U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
81U	ACETONE
81U	CARBON DISULFIDE
8.1U	METHYLENE CHLORIDE
8.1U	TRANS-1,2-DICHLOROETHENE
8.1U	1,1-DICHLOROETHANE
81U	VINYL ACETATE
8.1U	CIS-1,2-DICHLOROETHENE
8.1U	2,2-DICHLOROPROPANE
81U	METHYL ETHYL KETONE
8.1U	BROMOCHLOROMETHANE
8.1U	CHLOROFORM
8.1U	1,1,1-TRICHLOROETHANE
8.1U	1,1-DICHLOROPROPENE
8.1U	CARBON TETRACHLORIDE
8.1U	1,2-DICHLOROETHANE
8.1U	BENZENE
8.1U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8.1U	1,2-DICHLOROPROPANE
8.1U	DIBROMOMETHANE
8.1U	BROMODICHLOROMETHANE

MG/KG	ANALYTICAL RESULTS
8.1U	CIS-1,3-DICHLOROPROPENE
81U	METHYL ISOBUTYL KETONE
8.1U	TOLUENE
8.1U	TRANS-1,3-DICHLOROPROPENE
8.1U	1,1,2-TRICHLOROETHANE
8.1U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8.1U	1,3-DICHLOROPROPANE
81U	METHYL BUTYL KETONE
8.1U	DIBROMOCHLOROMETHANE
8.1U	CHLOROBENZENE
16U	1,1,1,2-TETRACHLOROETHANE
8.1U	ETHYL BENZENE
8.1U	(M- AND/OR P-)XYLENE
8.1U	O-XYLENE
16U	STYRENE
8.1U	BROMOFORM
16U	BROMOBENZENE
8.1U	1,1,2,2-TETRACHLOROETHANE
16U	1,2,3-TRICHLOROPROPANE
16U	O-CHLOROTOLUENE
16U	P-CHLOROTOLUENE
16U	1,3-DICHLOROBENZENE
16U	1,4-DICHLOROBENZENE
16U	1,2-DICHLOROBENZENE
	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

SISB/SAS
RECEIVED
JAN 03 1990
EPA - REGION IV
ATLANTA GA.

*****MEMORANDUM******

DATE: 11/18/89

SUBJECT: Results of Cyanide Analysis;
90-133 OLD STERLING LANDFIL
STERLING GA

FROM: William H. McDaniel
Chief, Inorganic Chemistry Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/17/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-133   SAMPLE NO. 40511  SAMPLE TYPE: WASTE      PROG ELEM: NSF   COLLECTED BY: R FRANKLIN                **
**   SOURCE: OLD STERLING LANDFIL                                   CITY: STERLING             ST: GA                        **
**   STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE                   COLLECTION START: 10/12/89  1448   STOP: 00/00/00        **
**                                                                                                                           **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
0.20	MG/KG	CYANIDE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

SISB/SAS
RECEIVED
JAN 02 1990
EPA - REGION IV
ATLANTA, GA.

*****MEMORANDUM******

DATE: 11/22/89

SUBJECT: Results of Extractable Organic Analysis;
90-133 OLD STERLING LANDFIL
STERLING GA

FROM: Tom B. Bennett, jr.
Chief, Organic Chemistry Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   11/21/89

EXTRACTABLE ORGANICS DATA REPORT

*** ***
** PROJECT NO. 90-133   SAMPLE NO. 40511   SAMPLE TYPE: WASTE   PROG ELEM: NSF   COLLECTED BY: R FRANKLIN **
** SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA **
** STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE   COLLECTION START: 10/12/89 1448   STOP: 00/00/00 **
**   **
*** ***

MG/KG	ANALYTICAL RESULTS
94UA	BIS(2-CHLOROETHYL) ETHER
94UA	BIS(2-CHLOROISOPROPYL) ETHER
94UA	N-NITROSODI-N-PROPYLAMINE
94UA	HEXACHLOROETHANE
94UA	NITROBENZENE
94UA	ISOPHORONE
94UA	BIS(2-CHLOROETHOXY) METHANE
94UA	1,2,4-TRICHLOROBENZENE
94UA	NAPHTHALENE
94UA	4-CHLOROANILINE
94UA	HEXACHLOROBUTADIENE
94UA	2-METHYLNAPHTHALENE
94UA	HEXACHLOROCYCLOPENTADIENE (HCCP)
94UA	2-CHLORONAPHTHALENE
94UA	2-NITROANILINE
94UA	DIMETHYL PHTHALATE
94UA	ACENAPHTHYLENE
94UA	2,6-DINITROTOLUENE
94UA	3-NITROANILINE
94UA	ACENAPHTHENE
94UA	DIBENZOFURAN
94UA	2,4-DINITROTOLUENE
94UA	DIETHYL PHTHALATE
94UA	FLUORENE
94UA	4-CHLOROPHENYL PHENYL ETHER
94UA	4-NITROANILINE
94UA	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
94UA	4-BROMOPHENYL PHENYL ETHER
94UA	HEXACHLOROBENZENE (HCB)
94UA	PHENANTHRENE
94UA	ANTHRACENE
94UA	DI-N-BUTYLPHTHALATE

MG/KG	ANALYTICAL RESULTS
94UA	FLUORANTHENE
94UA	PYRENE
94UA	BENZYL BUTYL PHTHALATE
94UA	3,3'-DICHLOROBENZIDINE
94UA	BENZO(A)ANTHRACENE
94UA	CHRYSENE
94UA	BIS(2-ETHYLHEXYL) PHTHALATE
94UA	DI-N-OCTYLPHTHALATE
94UA	BENZO(B AND/OR K)FLUORANTHENE
94UA	BENZO-A-PYRENE
94UA	INDENO (1,2,3-CD) PYRENE
94UA	DIBENZO(A,H)ANTHRACENE
94UA	BENZO(GHI)PERYLENE
94UA	PHENOL
94UA	2-CHLOROPHENOL
200UA	BENZYL ALCOHOL
94UA	2-METHYLPHENOL
94UA	(3-AND/OR 4-)METHYLPHENOL
94UA	2-NITROPHENOL
94UA	2,4-DIMETHYLPHENOL
200UA	BENZOIC ACID
94UA	2,4-DICHLOROPHENOL
94UA	4-CHLORO-3-METHYLPHENOL
94UA	2,4,6-TRICHLOROPHENOL
94UA	2,4,5-TRICHLOROPHENOL
200UA	2,4-DINITROPHENOL
200UA	4-NITROPHENOL
94UA	2,3,4,6-TETRACHLOROPHENOL
200UA	2-METHYL-4,6-DINITROPHENOL
200UA	PENTACHLOROPHENOL
NA	PERCENT MOISTURE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SISB/SAS
RECEIVED
JAN 02 1990
EPA - REGION IV
ATLANTA GA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

*****MEMORANDUM******

DATE: 11/29/89

SUBJECT: Results of Metals Analysis;
90-133 OLD STERLING LANDFIL
STERLING GA

FROM: William H. McDaniel
Chief, Inorganic Chemistry Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 11/28/89

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE PROG ELEM: NSF COLLECTED BY: R FRANKLIN
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
1.0U	SILVER	13000	CALCIUM
3.0U	ARSENIC	350	MAGNESIUM
NA	BORON	480	IRON
7.3	BARIUM	14000	SODIUM
0.50U	BERYLLIUM	200U	POTASSIUM
0.50U	CADMIUM	NA	PERCENT MOISTURE
1.0U	COBALT		
1.4	CHROMIUM		
1.8	COPPER		
1.0U	MOLYBDENUM		
2.0U	NICKEL		
4.0U	LEAD		
3.0U	ANTIMONY		
4.0U	SELENIUM		
2.5U	TIN		
19	STRONTIUM		
5.0U	TELLURIUM		
31	TITANIUM		
10U	THALLIUM		
2.0	VANADIUM		
1.0U	YTTRIUM		
5.2	ZINC		
NA	ZIRCONIUM		
NA	MERCURY		
700	ALUMINUM		
8.6	MANGANESE		

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

GSSD/SAS
RECEIVED
JAN 02 1990
EPA - REGION IV
ATLANTA, GA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

*****MEMORANDUM******

DATE: 12/08/89

SUBJECT: Results of Metals Analysis;
90-011 OLD STERLING LANDFIL
STERLING GA
CASE NO: 12944

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

cc: Al Hanke

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40521 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PB-01 COLLECTION START: 10/16/89 0830 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q505

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
70U	ALUMINUM	4U	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
5U	BARIUM	330U	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1900	CALCIUM	300U	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
7U	COPPER	2U	VANADIUM
47J	IRON	3U	ZINC
2UJ	LEAD		
430	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00
MD NUMBER: Q506

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3700	ALUMINUM	53	MANGANESE
6.3UJ	ANTIMONY	0.11UJ	MERCURY
0.69U	ARSENIC	2.1U	NICKEL
12	BARIUM	67U	POTASSIUM
0.21U	BERYLLIUM	0.34U	SELENIUM
0.83UJ	CADMIUM	0.42U	SILVER
150	CALCIUM	70U	SODIUM
5.2	CHROMIUM	0.86U	THALLIUM
1U	COBALT	NA	TIN
50UJ	COPPER	3U	VANADIUM
6000J	IRON	7U	ZINC
9.3J	LEAD	05	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00
MD NUMBER: Q507

ANALYTICAL RESULTS

MG/KG	
3500	ALUMINUM
7UJ	ANTIMONY
0.99U	ARSENIC
4U	BARIUM
0.23U	BERYLLIUM
0.93UJ	CADMIUM
40U	CALCIUM
4.5	CHROMIUM
1.2U	COBALT
30UJ	COPPER
380J	IRON
5UJ	LEAD
32	MAGNESIUM
2.6	MANGANESE
0.11UJ	MERCURY
2.3U	NICKEL
80U	POTASSIUM
0.5U	SELENIUM
0.46U	SILVER
70U	SODIUM
1.2U	THALLIUM
NA	TIN
1U	VANADIUM
3U	ZINC
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q508

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
9900	ALUMINUM	13	MANGANESE
30U	ANTIMONY	0.2J	MERCURY
4UJ	ARSENIC	10U	NICKEL
24	BARIUM	410	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1800	CALCIUM	11000	SODIUM
12	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	4U	VANADIUM
920J	IRON	13U	ZINC
3UJ	LEAD		
740	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00
MD NUMBER: Q509

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
6000	ALUMINUM	12	MANGANESE
6UJ	ANTIMONY	0.11UJ	MERCURY
0.85U	ARSENIC	1.9U	NICKEL
14	BARIUM	70U	POTASSIUM
0.19U	BERYLLIUM	0.42U	SELENIUM
0.76UJ	CADMIUM	0.38U	SILVER
86	CALCIUM	20U	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
0.95U	COBALT	NA	TIN
8.9J	COPPER	3.6	VANADIUM
1800J	IRON	3U	ZINC
3UJ	LEAD	09	PERCENT MOISTURE
170	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00
MD NUMBER: Q510

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4900	ALUMINUM	3.2	MANGANESE
6UJ	ANTIMONY	0.11UJ	MERCURY
0.83U	ARSENIC	1.8U	NICKEL
5.4	BARIUM	58U	POTASSIUM
0.18U	BERYLLIUM	1U	SELENIUM
0.72UJ	CADMIUM	0.36U	SILVER
30U	CALCIUM	70U	SODIUM
3.6	CHROMIUM	1U	THALLIUM
0.9U	COBALT	NA	TIN
7UJ	COPPER	2.2	VANADIUM
650J	IRON	3U	ZINC
4UJ	LEAD	23	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-04 COLLECTION START. 10/17/89 1000 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q511

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
1900	ALUMINUM	4U	MANGANESE
40U	ANTIMONY	0.20J	MERCURY
40J	ARSENIC	10U	NICKEL
21	BARIUM	19000	POTASSIUM
1U	BERYLLIUM	7	SELENIUM
4U	CADMIUM	2U	SILVER
35000	CALCIUM	120000	SODIUM
2U	CHROMIUM	50U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	6	VANADIUM
260J	IRON	60U	ZINC
3UJ	LEAD		
9500	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q512 **
** **
*** ***

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4600	ALUMINUM	4.7	MANGANESE
6.3UJ	ANTIMONY	0.11UJ	MERCURY
0.9U	ARSENIC	2.1U	NICKEL
6.7	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	1U	SELENIUM
0.84UJ	CADMIUM	0.42U	SILVER
92	CALCIUM	100U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
6UJ	COPPER	2.9	VANADIUM
1400J	IRON	4U	ZINC
3UJ	LEAD	13	PERCENT MOISTURE
110	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00
MD NUMBER: Q513

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4300	ALUMINUM	1.1U	MANGANESE
8UJ	ANTIMONY	0.09UJ	MERCURY
1.1U	ARSENIC	2.7U	NICKEL
2.2	BARIUM	86U	POTASSIUM
0.27U	BERYLLIUM	0.54U	SELENIUM
1.1UJ	CADMIUM	0.54U	SILVER
50U	CALCIUM	70U	SODIUM
4	CHROMIUM	7.1U	THALLIUM
1.3U	COBALT	NA	TIN
1UJ	COPPER	1U	VANADIUM
27OJ	IRON	0.8U	ZINC
3UJ	LEAD	30	PERCENT MOISTURE
38	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q514 **
** **
*** ***

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
15000	ALUMINUM	16	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
41	BARIUM	7500	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
22000	CALCIUM	8200	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	7	VANADIUM
1300J	IRON	13U	ZINC
7UJ	LEAD		
6100	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00
MD NUMBER: Q515

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	1.3	MANGANESE
6.4UJ	ANTIMONY	0.11UJ	MERCURY
0.86U	ARSENIC	2.1U	NICKEL
2.3	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	0.43U	SELENIUM
0.85UJ	CADMIUM	0.42U	SILVER
230	CALCIUM	20	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
2U	COBALT	NA	TIN
5UJ	COPPER	1U	VANADIUM
290J	IRON	3U	ZINC
2U	LEAD	08	PERCENT MOISTURE
52	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1215 STOP: 00/00/00
MD NUMBER: Q516

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3800	ALUMINUM	1.4	MANGANESE
6.6UJ	ANTIMONY	0.11UJ	MERCURY
0.88U	ARSENIC	2.2U	NICKEL
3.2	BARIUM	80U	POTASSIUM
0.22U	BERYLLIUM	0.44U	SELENIUM
0.88UJ	CADMIUM	0.44U	SILVER
230	CALCIUM	80U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
5UJ	COPPER	1.9	VANADIUM
290J	IRON	20U	ZINC
5UJ	LEAD	14	PERCENT MOISTURE
37	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q517

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12000	ALUMINUM	230	MANGANESE
30U	ANTIMONY	0.2UJ	MERCURY
4UJ	ARSENIC	26	NICKEL
56	BARIUM	6700	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
180000	CALCIUM	31000	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
40U	COPPER	15	VANADIUM
13000J	IRON	150U	ZINC
38J	LEAD		
18000	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

** PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: LS-05 COLLECTION START: 10/17/89 1315 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q518 **

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	6.2	MANGANESE
20UJ	ANTIMONY	0.22UJ	MERCURY
1.8U	ARSENIC	4.3U	NICKEL
5.8	BARIUM	140U	POTASSIUM
0.43U	BERYLLIUM	0.89U	SELENIUM
1.7UJ	CADMIUM	0.86U	SILVER
1520	CALCIUM	14000	SODIUM
2.5	CHROMIUM	NA	THALLIUM
2.1U	COBALT	NA	TIN
8.2J	COPPER	2.1	VANADIUM
840J	IRON	20U	ZINC
23J	LEAD	56	PERCENT MOISTURE
220	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID: TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q519

UG/L		ANALYTICAL RESULTS
12000	ALUMINUM	
30U	ANTIMONY	
4UJ	ARSENIC	
190	BARIUM	
1U	BERYLLIUM	
4U	CADMIUM	
140000	CALCIUM	
8	CHROMIUM	
7U	COBALT	
20U	COPPER	
38000J	IRON	
30UJ	LEAD	
11000	MAGNESIUM	

UG/L		ANALYTICAL RESULTS
510	MANGANESE	
0.4UJ	MERCURY	
10U	NICKEL	
38000	POTASSIUM	
2U	SELENIUM	
2U	SILVER	
150000	SODIUM	
50U	THALLIUM	
NA	TIN	
8	VANADIUM	
140U	ZINC	

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q520

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
50U	ALUMINUM	61	MANGANESE
30U	ANTIMONY	0.2UJ	MERCURY
4UJ	ARSENIC	10U	NICKEL
12	BARIUM	1000	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
64000	CALCIUM	9000	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	2U	VANADIUM
320J	IRON	3U	ZINC
2UJ	LEAD		
2800	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SISB/SAS
RECEIVED
JAN 0 1990
EPA - REGION IV
ATLANTA, GA.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
COLLEGE STATION RD.
ATHENS, GA. 30613

*****MEMORANDUM******

DATE: 12/08/89

SUBJECT: Results of Cyanide Analysis;
90-011 OLD STERLING LANDFIL
STERLING GA
CASE NO: 12944

FROM: Robert W. Knight
Chief, Laboratory Evaluation/Quality Assurance Section

TO: PHIL BLACKWELL

Attached are the results of analysis of samples collected as part of the subject project.

If you have any questions please contact me.

ATTACHMENT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40521  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY                  **
**   SOURCE: OLD STERLING LANDFIL                                      CITY: STERLING              ST: GA                       **
**   STATION ID: PB-01                                                  COLLECTION START: 10/16/89  0830   STOP: 00/00/00        **
**   CASE NO.: 12944          SAS NO.:                                  D. NO.:                     MD NO: Q505                  **
**                                                                                                                               **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40522  SAMPLE TYPE. SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY                  **
**   SOURCE. OLD STERLING LANDFIL                                     CITY: STERLING             ST: GA                       **
**   STATION ID: SS-01                                                COLLECTION START: 10/16/89  1120   STOP: 00/00/00      **
**   CASE.NO.: 12944          SAS NO.:                                D. NO.: Q506               MD NO: Q506                  **
**                                                                                                                            **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
1.1U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011   SAMPLE NO. 40523  SAMPLE TYPE. SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY                  **
**   SOURCE. OLD STERLING LANDFIL                                    CITY: STERLING              ST: GA                     **
**   STATION ID: SB-01                                               COLLECTION START: 10/16/89  1150   STOP. 00/00/00      **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q507                MD NO: Q507                **
**                                                                                                                          **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
.99U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
************************************************************************************************************
**   PROJECT NO. 90-011    SAMPLE NO. 40524  SAMPLE TYPE: GROUNDWA     PROG ELEM: NSF   COLLECTED BY: W RILEY              **
**   SOURCE: OLD STERLING LANDFIL                                      CITY: STERLING               ST: GA                 **
**   STATION ID: TW-01                                                 COLLECTION START: 10/16/89  1230   STOP: 00/00/00  **
**   CASE NO.: 12944           SAS NO.:                                D. NO.: Q508                 MD NO: Q508            **
**                                                                                                                          **
************************************************************************************************************
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL
CITY: STERLING ST: GA
STATION ID: SS-04
COLLECTION START: 10/17/89 0920 STOP: 00/00/00
CASE NO.: 12944 SAS NO.:
D. NO.: Q509 MD NO: Q509

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO  90-011    SAMPLE NO. 40526  SAMPLE TYPE: SOIL         PROG ELEM: NSF   COLLECTED BY: W RILEY                     **
**   SOURCE: OLD STERLING LANDFIL                                      CITY: STERLING               ST: GA                       **
**   STATION ID: SB-04                                                 COLLECTION START: 10/17/89  0930   STOP: 00/00/00         **
**   CASE.NO.: 12944          SAS NO.:                                 D. NO.: Q510                 MD NO: Q510                  **
**                                                                                                                               **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40527  SAMPLE TYPE. GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY                        **
**   SOURCE. OLD STERLING LANDFIL                                     CITY: STERLING               ST: GA                           **
**   STATION ID: TW-04                                                COLLECTION START: 10/17/89  1000   STOP: 00/00/00             **
**   CASE.NO.: 12944           SAS NO.:                               D. NO.: Q511                MD NO: Q511                      **
**                                                                                                                                  **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40528  SAMPLE TYPE: SOIL        PROG ELEM: NSF    COLLECTED BY: W RILEY              **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING              ST: GA                       **
**   STATION ID: SS-03                                                COLLECTION START: 10/17/89  1045   STOP: 00/00/00        **
**   CASE.NO.: 12944           SAS NO.:                               D. NO.: Q512                MD NO: Q512                  **
**                                                                                                                             **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011   SAMPLE NO. 40520   SAMPLE TYPE: SOIL   PROG ELEM: NSF   COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL   CITY: STERLING   ST: GA
STATION ID: SB-03   COLLECTION START: 10/17/89 1050   STOP: 00/00/00
CASE NO.: 12944   SAS NO.:   D. NO.: Q513   MD NO: Q513

RESULTS	UNITS	PARAMETER
1.6U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q514 MD NO: Q514 **
** **
*** ***

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40531  SAMPLE TYPE. SOIL       PROG ELEM: NSF   COLLECTED BY: W RILEY                  **
**   SOURCE. OLD STERLING LANDFIL                                    CITY: STERLING              ST: GA                     **
**   STATION ID: SS-02                                               COLLECTION START: 10/17/89  1200   STOP: 00/00/00      **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q515              MD NO: Q515                  **
**                                                                                                                           **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO  90-011    SAMPLE NO. 40532  SAMPLE TYPE: SOIL       PROG ELEM: NSF   COLLECTED BY: W RILEY             **
**   SOURCE: OLD STERLING LANDFIL                                    CITY: STERLING            ST: GA                   **
**   STATION ID: SB-02                                               COLLECTION START: 10/17/89  1215   STOP: 00/00/00  **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q516              MD NO: Q516              **
**                                                                                                                      **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40533  SAMPLE TYPE: GROUNDWA     PROG ELEM: NSF    COLLECTED BY: W RILEY                 **
**   SOURCE: OLD STERLING LANDFIL                                      CITY: STERLING               ST: GA                     **
**   STATION ID: TW-02                                                 COLLECTION START: 10/17/89  1300   STOP: 00/00/00       **
**   CASE.NO.: 12944          SAS NO.:                                 D. NO.: Q517                MD NO: Q517                 **
**                                                                                                                             **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
** PROJECT NO. 90-011   SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE   PROG ELEM: NSF   COLLECTED BY: W RILEY        **
** SOURCE: OLD STERLING LANDFIL                                   CITY: STERLING          ST: GA                   **
** STATION ID: LS-05                                              COLLECTION START: 10/17/89 1315  STOP: 00/00/00  **
** CASE.NO.: 12944          SAS NO.:                              D. NO.: Q518            MD NO: Q518              **
```

RESULTS	UNITS	PARAMETER
2.7U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA	PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE:	CITY: STERLING ST: GA
STATION ID: TW-05	COLLECTION START: 10/17/89 1515 STOP: 00/00/00
CASE.NO.: 12944 SAS NO.:	D. NO.: Q519 MD NO: Q519

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011   SAMPLE NO. 40536   SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY                          **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING               ST: GA                             **
**   STATION ID: PW-01                                                COLLECTION START: 10/17/89  1655   STOP: 00/00/00               **
**   CASE.NO.: 12944          SAS NO.:                                D. NO.: Q520                MD NO: Q520                         **
**                                                                                                                                    **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
20U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
5J	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-02

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1300 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q517

UG/L	ANALYTICAL RESULTS
100U	CHLOROMETHANE
100U	BROMOMETHANE
100U	VINYL CHLORIDE
100U	CHLOROETHANE
50U	METHYLENE CHLORIDE
100UJ	ACETONE
50U	CARBON DISULFIDE
50U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
50U	1,1-DICHLOROETHANE
50U	1,2-DICHLOROETHENE (TOTAL)
50U	CHLOROFORM
50U	1,2-DICHLOROETHANE
100U	METHYL ETHYL KETONE
50U	1,1,1-TRICHLOROETHANE
50U	CARBON TETRACHLORIDE
100U	VINYL ACETATE
50U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
50U	1,2-DICHLOROPROPANE
50UJ	CIS-1,3-DICHLOROPROPENE
50U	TRICHLOROETHENE(TRICHLOROETHYLENE)
50UJ	DIBROMOCHLOROMETHANE
50UJ	1,1,2-TRICHLOROETHANE
50U	BENZENE
50UJ	TRANS-1,3-DICHLOROPROPENE
50UJ	BROMOFORM
100U	METHYL ISOBUTYL KETONE
100U	METHYL BUTYL KETONE
50U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
50UJ	1,1,2,2-TETRACHLOROETHANE
50U	TOLUENE
50U	CHLOROBENZENE
30J	ETHYL BENZENE
50U	STYRENE
50U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFIL
STATION ID: LS-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1315 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q518

UG/KG	ANALYTICAL RESULTS
36U	CHLOROMETHANE
36U	BROMOMETHANE
36U	VINYL CHLORIDE
36U	CHLOROETHANE
30U	METHYLENE CHLORIDE
200UJ	ACETONE
18U	CARBON DISULFIDE
18U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
18U	1,1-DICHLOROETHANE
18U	1,2-DICHLOROETHENE (TOTAL)
18U	CHLOROFORM
18U	1,2-DICHLOROETHANE
50U	METHYL ETHYL KETONE
18U	1,1,1-TRICHLOROETHANE
18U	CARBON TETRACHLORIDE
36U	VINYL ACETATE
18U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
18U	1,2-DICHLOROPROPANE
18U	CIS-1,3-DICHLOROPROPENE
18U	TRICHLOROETHENE(TRICHLOROETHYLENE)
18U	DIBROMOCHLOROMETHANE
18U	1,1,2-TRICHLOROETHANE
18U	BENZENE
18U	TRANS-1,3-DICHLOROPROPENE
18U	BROMOFORM
12J	METHYL ISOBUTYL KETONE
36U	METHYL BUTYL KETONE
18U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
18U	1,1,2,2-TETRACHLOROETHANE
18U	TOLUENE
18U	CHLOROBENZENE
18U	ETHYL BENZENE
18U	STYRENE
18U	TOTAL XYLENES
61	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID: TW-05 COLLECTION START. 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q519

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
21	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
6U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q520

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	5U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	5UJ	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	CHLOROETHANE	5UJ	DIBROMOCHLOROMETHANE
5U	METHYLENE CHLORIDE	5UJ	1,1,2-TRICHLOROETHANE
10UJ	ACETONE	5U	BENZENE
5U	CARBON DISULFIDE	5UJ	TRANS-1,3-DICHLOROPROPENE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5UJ	BROMOFORM
5U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
5U	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
5U	CHLOROFORM	5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,2-DICHLOROETHANE	5UJ	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	5U	TOLUENE
5U	1,1,1-TRICHLOROETHANE	5U	CHLOROBENZENE
5U	CARBON TETRACHLORIDE	5U	ETHYL BENZENE
10U	VINYL ACETATE	5U	STYRENE
5U	BROMODICHLOROMETHANE	5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40541 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TB-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 0830 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q505

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
*********************************************************************************************************
**  PROJECT NO. 90-011   SAMPLE NO. 40532  SAMPLE TYPE. SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY   **
**  SOURCE. OLD STERLING LANDFIL                                    CITY: STERLING            ST: GA          **
**  STATION ID: SB-02                                               COLLECTION START: 10/17/89  1215  STOP: 00/00/00  **
**  CASE.NO.: 12944          SAS NO.:                               D. NO.: Q516              MD NO: Q516     **
**                                                                                                          **
*********************************************************************************************************
```

ANALYTICAL RESULTS UG/KG

1000JN   TRIMETHYLBICYCLOHEPTANE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
**   PROJECT NO. 90-011    SAMPLE NO. 40533  SAMPLE TYPE: GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY                        **
**   SOURCE: OLD STERLING LANDFIL                                     CITY: STERLING              ST: GA                              **
**   STATION ID: TW-02                                                COLLECTION START: 10/17/89  1300   STOP: 00/00/00               **
**   CASE.NO.: 12944           SAS NO.:                               D. NO.: Q517               MD NO: Q517                         **
**                                                                                                                                    **
*** * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * ***
```

ANALYTICAL RESULTS UG/L

600JN	CARENE
200JN	DIMETHYLMETHYLENEHIPTADIENE
3000JN	ETHYLDIMETHYLBENZENE
700JN	TRIMETHYLBICYCLOHEPTANONE
3000J	3 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
** PROJECT NO. 90-011    SAMPLE NO. 40534  SAMPLE TYPE. LEACHATE    PROG FLEM: NSF   COLLECTED BY: W RILEY
** SOURCE. OLD STERLING LANDFIL                                      CITY: STERLING            ST: GA
** STATION ID: LS-05                                                 COLLECTION START: 10/17/89  1315   STOP: 00/00/00
** CASE.NO.: 12944          SAS NO.:                                 D. NO.: Q518              MD NO: Q518
```

ANALYTICAL RESULTS UG/KG

20JN TRIMETHYLBICYCLOHEPTANE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

NUS CORPORATION

1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

C-586-10-9-29

October 2, 1989

SISB/SAS
RECEIVED
OCT 9 1989

Mr. A. R. Hanke
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Screening Site Inspection, Phase II Study Plan
Revision 1
Old Sterling Landfill
Sterling, Glynn County, Georgia
EPA ID No. GAD9804963939
TDD No. F4-8902-46

Revision 1

Dear Mr. Hanke:

Enclosed please find one (1) copy of the Screening Site Inspection, Phase II Study Plan, Revision 1, for Old Sterling Landfill, located in Sterling, Glynn County, Georgia. Please contact me if you have any questions concerning this study plan.

Very truly yours,

Walter Riley

Walter Riley
Project Manager

Approved:

WR/kw

Enclosure (1)

R-586-9-9-15

STUDY PLAN
SCREENING SITE INSPECTION, PHASE II
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA
EPA ID #GAD980496939

SIBB/BAS
RECEIVED
OCT 11 1989
EPA - REGION IV
ATLANTA, GA.

Prepared Under
TDD No. F4-8902-46
CONTRACT NO. 68-01-7346

Revision 1

FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 3, 1989

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Walter Riley, Jr.	Phil Blackwell	Murray Warner, P.E.
Project Manager	Assistant Regional Project Manager	Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-7346 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed or written consent of the EPA.

TABLE OF CONTENTS

Section		Page
1.0	**INTRODUCTION**	**1**
1.1	Objectives	1
1.2	Scope of Work	2
1.3	Schedule	2
1.4	Personnel	2
1.5	Permits and Authorization Requirements	2
1.6	Site History and Description	3
1.7	Regional Hydrogeology	3
2.0	**FIELD ANALYTICAL SCREENING**	**6**
2.1	Rationale	7
2.2	Data Quality Objectives	7
3.0	**SAMPLING INVESTIGATION**	**7**
3.1	Soil and Groundwater Sampling	7
3.2	Analytical and Container Requirements	10
3.3	Methodology	11
REFERENCES		12

Number		Page

FIGURES

Figure 1	Site Location Map	4
Figure 2	Site Layout Map	5
Figure 3	Sample Location Map	8

TABLES

Table 1	Sample Locations and Rationale	9

STUDY PLAN
SCREENING SITE INSPECTION, PHASE II
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA
EPA ID #GAD980496939
TDD NO. F4-8902-46

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) has been tasked by the U.S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Screening Site Inspection (SSI) at the Old Sterling Landfill facility in Glynn County, Georgia. The inspection will be performed 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). Tasks will be performed to satisfy the requirements stated in Phase II of Technical Directive Document (TDD) number F4-8902-46.

1.1 Objectives

The objectives of this Phase II inspection will be to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection will seek to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation will be made regarding future activities at the site.

Specific elements are:

- Obtain information to prepare a site-specific preliminary HRS
- Provide EPA the necessary information to make decisions on any other actions warranted at the site.

1.2 Scope of Work

The scope of this investigation will include the following activities:

- Obtain and review background materials relevant to HRS scoring of site
- Obtain aerial photographs and maps of site, if possible
- Obtain information on local water systems
- Evaluate target populations associated with the groundwater, surface water, air and onsite exposure pathways
- Conduct a survey of private wells
- Determine location and distance to nearest potable well
- Develop a site sketch
- Collect environmental samples

1.3 Schedule

The week of October 16, 1989

1.4 Personnel

Project Manager - Walter Riley
Other personnel as required

1.5 Permits and Authorization Requirements

EPA is responsible for obtaining access to the site and permission to take photographs of site. In addition, EPA is responsible for all permits which may be required to accomplish this task.

1.6 Site History and Description

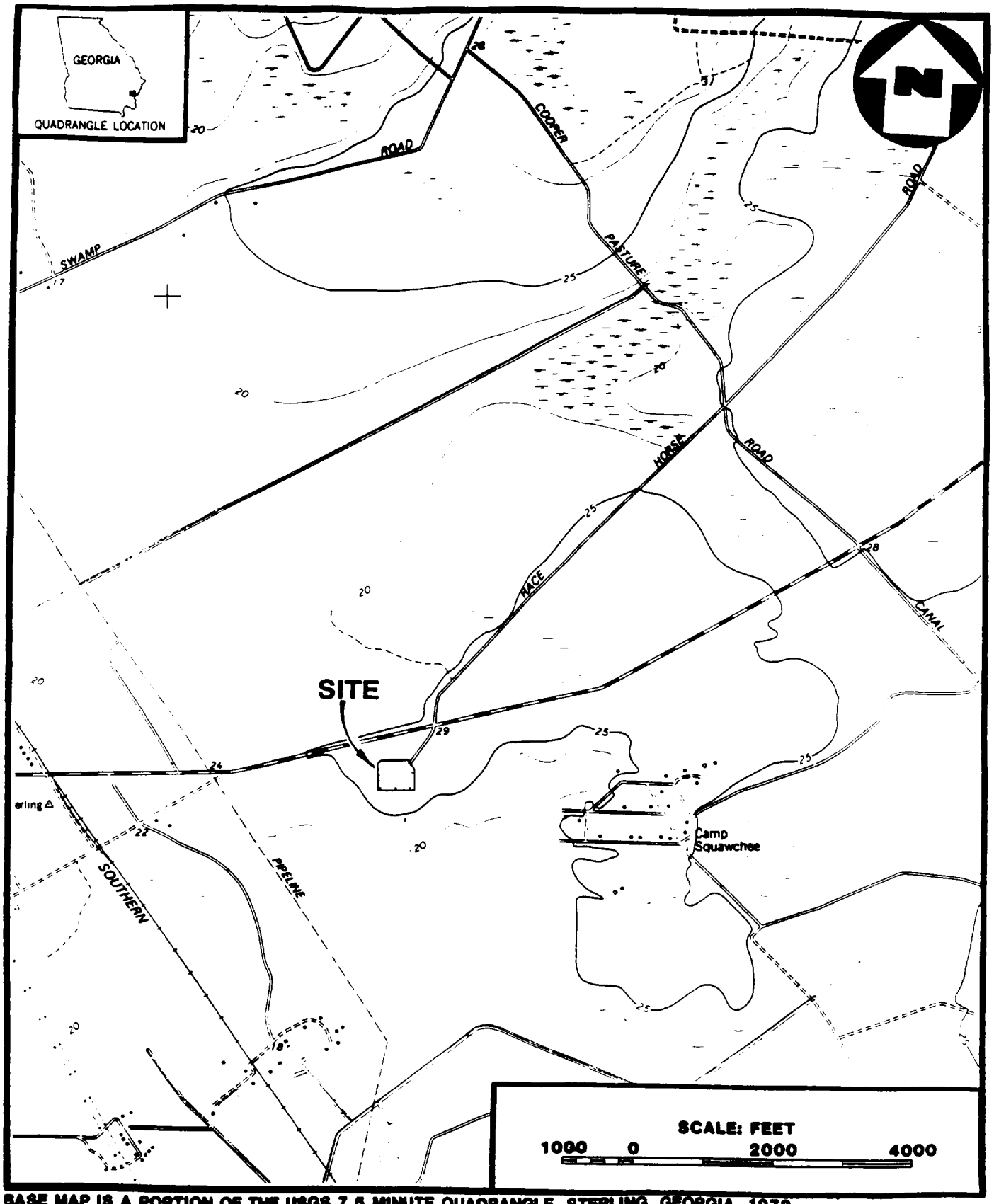
The Old Sterling Landfill is a sanitary landfill located in a sparsely populated area (Refs. 1, 2). The landfill has been closed, and the property is currently used as a private hunting preserve. The surrounding properties are residential and contain some tree farms. The landfill property is unfenced (Ref. 2).

The county operated the landfill from about 1969 through 1979 on leased land (Ref. 3). The landfill was permitted by the state in 1976 and was officially closed in 1980 (Ref. 4). The property is currently owned by Georgia Pacific. The fill area is between 6 and 10 acres in size. It was created in an abandoned borrow pit with an original depth of about 10 feet. In order to fill the pit, it was necessary to operate a pump to remove groundwater (Ref. 3).

A Glynn County Public Works official reported that only yard wastes (i.e., trees, limbs and leaves) were accepted at the landfill (Ref. 3). However, another county official reported that garbage and an occasional car were deposited in the landfill (Ref. 5). A state official reported that he had observed an orange, granular material (which took on a jelly-like consistency when wet) being placed into the landfill. He also confirmed that waste from the Hercules plant in Brunswick was deposited in the landfill (Ref. 4). File material indicates that Hercules deposited 265,000 cubic feet of mixed organics, inorganics, solvents, and trash in the landfill. Hercules reported that less than 2 percent of this volume could be considered hazardous (Ref. 6). The state reported that approximately 49 tons of toxaphene was deposited in the landfill (Ref. 1).

1.7 Regional Hydrogeology

The facility is located in the Coastal Plain Physiographic Province in Glynn County, Georgia. This area has a humid climate with a net annual precipitation of 7 inches (Ref. 7). Precipitation is heaviest during the period of June through September and lightest from November through January (Ref. 8, p. 56). Geology in the area consists of sedimentary deposits ranging in composition from dense limestone to compact clays to a loose sand and shell material that overlies faulted Paleozoic igneous and metamorphic basement rocks. In the site area these Cretaceous and younger sedimentary deposits are approximately 4,500 feet thick and are the source of groundwater in the area (Refs. 9, p. 9; 10, p. E25). Water occurs in these units as an unconfined, water-table aquifer and under confined (artesian) conditions (Ref. 10, pp. E21-22).

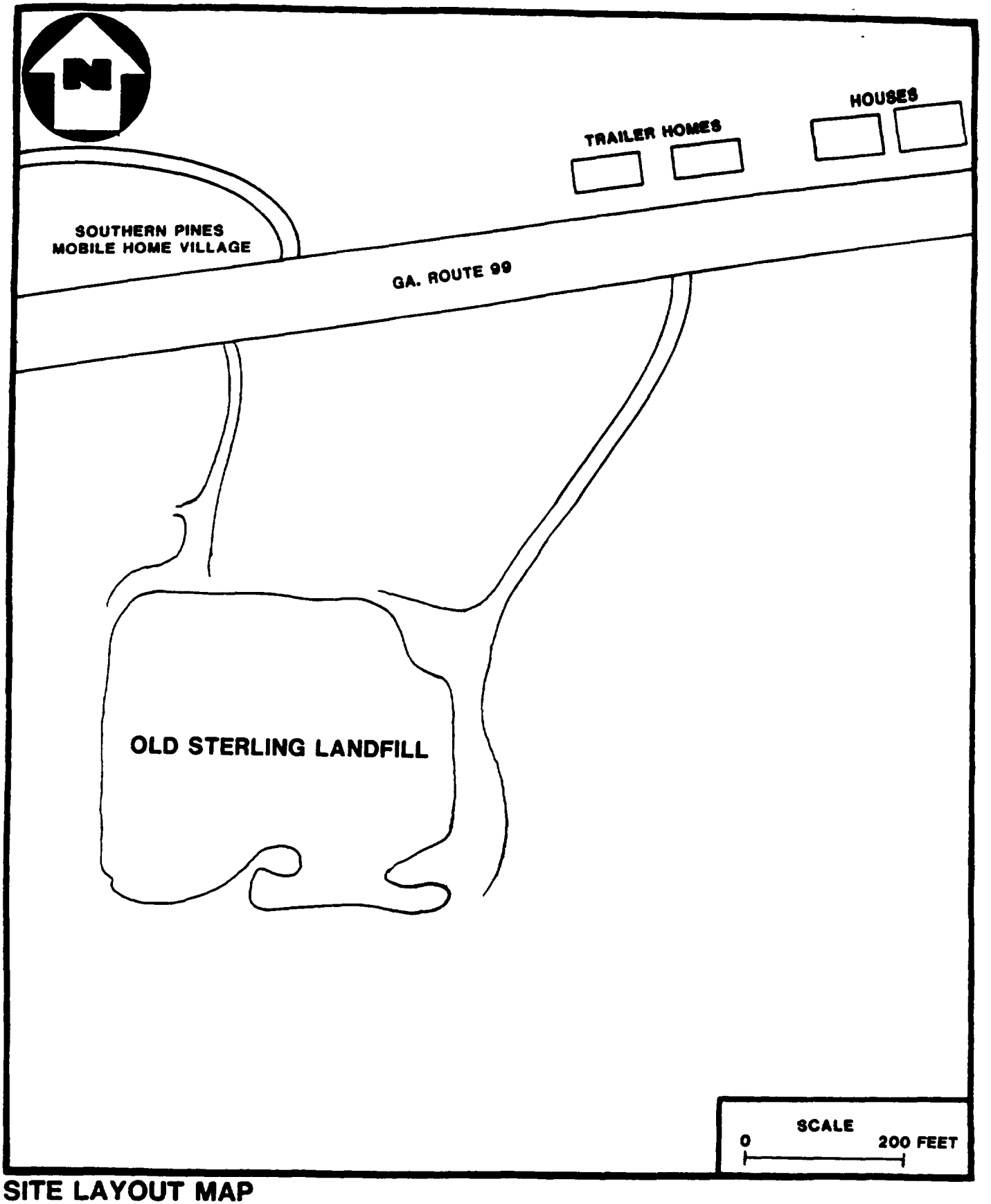


BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, STERLING, GEORGIA, 1978.

SITE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 1

NUS CORPORATION



SITE LAYOUT MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 2

NUS CORPORATION

Stratigraphy in the site area, in descending order, consists of unconsolidated surficial sand deposits; the gravely sand and thin limestone beds of post-Hawthorne Formation rocks; the sand, clay and limestone beds of the Hawthorne Formation; the undifferentiated limestones of Eocene and Oligocene age (principal artesian aquifer); and the undifferentiated Cretaceous age rocks (Refs. 9, pp. 9-19; 10, pp. E22-26). Generally, wells completed in formations at depths greater than 50 feet below land surface (bls) will flow under artesian conditions (Ref. 10, p. E22).

Three aquifers underlie this facility: the unconsolidated surficial water-table aquifer, the confined sands and micaceous clays of a limestone bed of the Hawthorne Formation; the confined limestones and dolomites of the early Miocene and Oligocene age rocks, and the confined Ocala Limestone (Refs. 10, pp. E24-25; 11, pp. 3, 6). The aquifer of concern consists of the Miocene and Oligocene rocks and the Ocala Limestone. Collectively these units are known as the "principal artesian aquifer" in the site area (Ref. 10, p. E25).

Water in the surficial aquifer generally occurs in two zones, one from approximately 12 to 17 feet bls, and one from 35 to 50 feet bls. Yields of 5 to 20 gallons per minute (gpm) can be obtained from this aquifer and it is suitable for small domestic supplies (Ref. 10, p. E22). A confining layer of late Miocene age clayey silt, which is approximately 120 to 150 feet thick, underlies the surficial aquifer and separates it from the underlying Hawthorne Formation (Refs. 11, pp. 76-78; 12, pp. 210-220). Domestic and small industrial wells are completed in the Hawthorne Formation at depths of 100 to 500 feet bls and can yield from 20 to 500 gpm with the deeper wells giving the higher yields. This formation is underlain by a hard limestone approximately 60 to 400 feet thick that separates it from the underlying principle artesian aquifer (Refs. 11, p. 78; 12, pp. 210-220). This aquifer system contains two water-bearing zones, one at approximately 500 to 760 feet bls and one at 860 to 1,000 feet bls. In some places, this lower zone may extend to 1,700 feet bls (Refs. 10, pp. E25-26; 11, p. 78). This aquifer system is underlain by a dense dolomite that separates it from an underlying leakage of the brackish water through a local porous part of the dolomitic confining bed (Ref. 11, p. 1).

2.0 FIELD ANALYTICAL SCREENING

FIT 4's field analytical support program will be employed at this site, to assist in determining locations at which to collect CLP samples. A mobile GC lab will be set up and operated at or near the site. Soil samples will be screened for indications of chlorinated pesticides. Full analytical protocol is presented in Appendix A.

2.1 Rationale

As described in section 1.6, Site History and Description, there are reports of unknown chemical wastes and toxaphene having been deposited in this landfill. To provide preliminary assistance in locating these wastes, FASP will provide low cost, quick turn-around screening for indications of chlorinated pesticides, in the field. Results of this screening will be provided to the Project Manager early in the study, for his consideration in the selection of locations for CLP samples. Approximateluy 25 screening samples are intended to be collected on a square grid with 100-foot intervals, field conditions permitting.

2.2 Data Quality Objectives

Data generated from this screening survey are not intended to support listing or any enforcement action. The primary purposes is to help direct CLP sampling activities. Secondarily, the screening data may be used, with supporting CLP results, to help characterize the site as to extent of contamination. Screening data may also be used to support health and safety decisions, such as requirements for personal protective equipment.

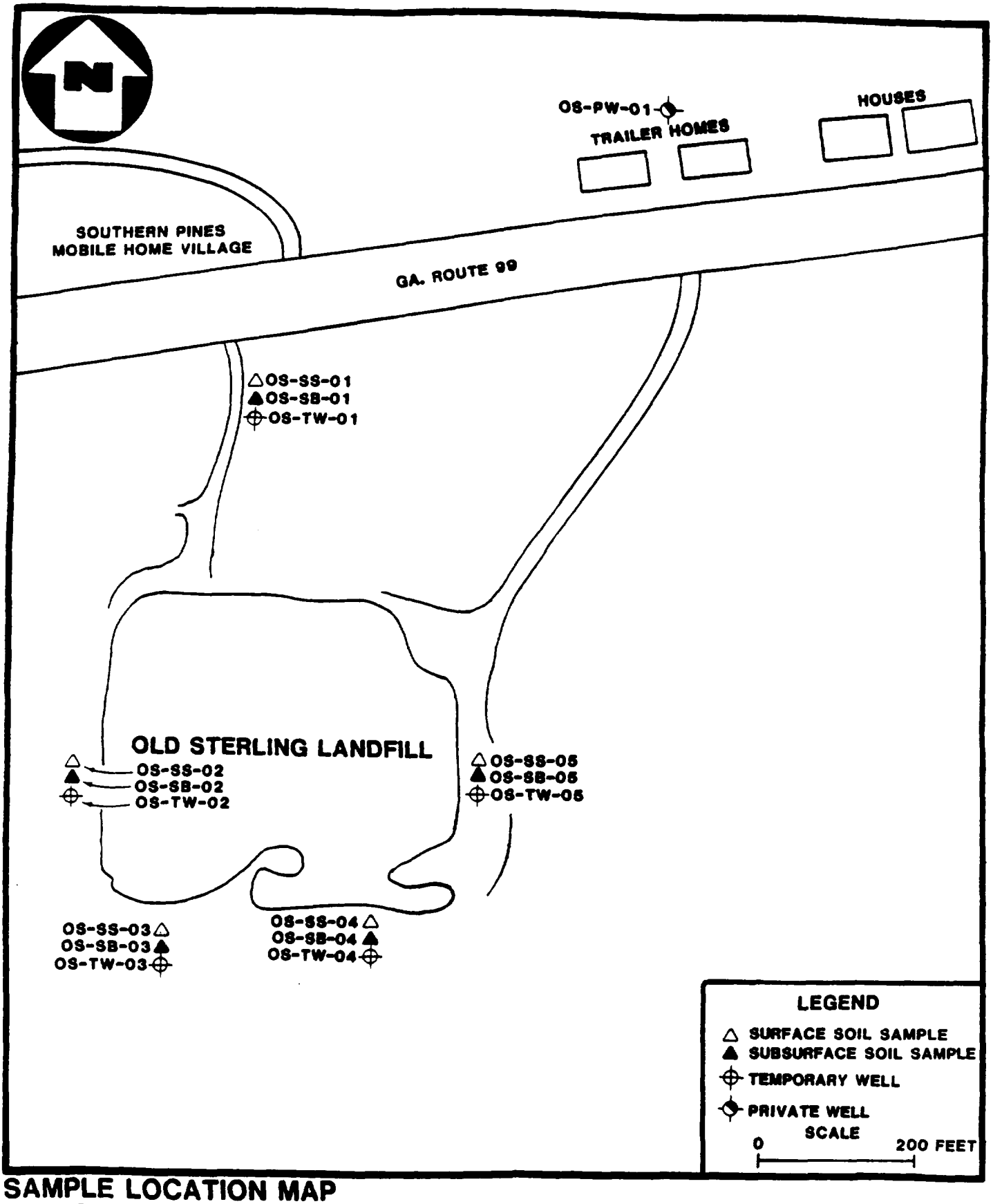
Because of the short duration of this project and the urgency of data needs, limited tentative results may be reported even if all QC requirements are not met. At the direction of the Project Manager and Project Chemist, analyses failing QC requirements may be repeated later.

3.0 SAMPLING INVESTIGATION

The sampling investigation will include the collection of five surface, five subsurface soil samples, five groundwater samples and one private well sample. Samples will be analyzed for extractable and purgeable organic compounds, pesticides, PCBs, cyanides, and metals. Analyses will be performed under the Contract Laboratory Program (CLP).

3.1 Soil and Groundwater Sampling

A total of five temporary monitoring wells will be installed during this investigation. A surface and subsurface soil sample will be collected from each borehole above and at the saturation zone. The borehole will be advanced to below the water table and the well will be installed. One groundwater sample will be collected from each temporary well location. The five locations include one north of



SAMPLE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 3

NUS CORPORATION

TABLE 1

SAMPLE LOCATIONS AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Sample Type	Location	Rationale
OS-PW-01	Private Well	Upgradient of landfill	To determine the presence or absence of contaminants
OS-SS-01	Surface Soil	North of landfill	Establish background parameters
OS-SS-02	Surface Soil	East of landfill	To determine the presence or absence of contaminants
OS-SS-03	Surface Soil	Southeast of landfill	To determine the presence or absence of contaminants
OS-SS-04	Surface Soil	South of landfill	To determine the presence or absence of contaminants
OS-SS-05	Surface Soil	West of landfill	To determine the presence or absence of contaminants
OS-SB-01	Subsurface Soil	North of landfill from TW-01 borehole	Establish background parameters
OS-SB-02	Subsurface Soil	East of landfill from TW-02 borehole	To determine the presence or absence of contaminants
OS-SB-03	Subsurface Soil	Southeast of landfill from TW-03 borehole	To determine the presence or absence of contaminants
OS-SB-04	Subsurface Soil	South of landfill from TW-04 borehole	To determine the presence or absence of contaminants
OS-SB-05	Subsurface Soil	West of landfill from TW-05 borehole	To determine the presence or absence of contaminants
OS-TW-01	Temporary Well	North of landfill	Establish background parameters
OS-TW-02	Temporary Well	East of landfill	To determine the presence or absence of contaminants
OS-TW-03	Temporary Well	Southeast of landfill	To determine the presence or absence of contaminants
OS-TW-04	Temporary Well	South of landfill	To determine the presence or absence of contaminants
OS-TW-05	Temporary Well	West of landfill	To determine the presence or absence of contaminants

the landfill to establish background parameters; and four east, southeast, south and west of the landfill to test for the presence or absence of contaminants.

In addition to the fifteen samples mentioned above, one private well sample, if possible, will be collected downgradient of the landfill to determine the presence or absence of contaminants. Sample locations are shown on Figure 3 and sample codes, descriptions and rationale are presented in Table 1. All sample locations are subject to change based on field conditions.

3.2 Analytical and Container Requirements

Sample containers used will be in accordance with the requirements specified in the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986. The following is a description of the analysis and types of containers required.

Analyses	Container	Preservatives**
Ext. Organics, Water	1 gal., amber glass*	None
Volatile Organics, Water	40 ml., glass vial*	4 drops conc. HCL to pH <2
Metals, Water	1 liter, plastic	50% HNO_3 to pH <2
Cyanide, Water	1 liter, plastic	NaOH to pH >12
Ext. Organics, Soil/Sediment	8 oz., glass*	None
Volatile Organics Soil/Sediment	4 oz., glass*	None
Inorganics, Soil/Sediment	8 oz., glass*	None

* Sample container lids are lined with teflon.
** All samples will be iced to 4°C upon collection.

3.3 Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation will be in accordance with the standard operating procedures as specified in Section 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986.

All laboratory analyses and laboratory quality assurance procedures used during this investigation will be in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; revised June 1, 1985 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

REFERENCES

1. Potential Hazardous Waste Site Identification and Preliminary Assessment (EPA Form 2070-2) for Old Sterling Landfill. Filed by Jennifer Kaduck, Georgia Department of Natural Resources, January 15, 1980.

2. NUS Field Logbook No. F4-1279 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of facility reconnaissance, march 3, 1989.

3. Robert Howe, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

4. Morgan Cantrell, Georgia Environmental Protection Division, Municipal Solid Waste Management, telephone conversation with Geoffrey Carton, NUS Corporation, March 22, 1989. Subject: Hazardous materials at Old Sterling Landfill.

5. Olin Chancy, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

6. EPA Notification of Hazardous Waste Site (EPA Form 8900-1) for Hercules Incorporated, Brunswick, Georgia. Filed by K. T. Horton, Hercules, Inc., May 29, 1981.

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

8. U.S. Department of Agriculture, Soil Conservation Service, "Soil Survey of Camden and Glynn Counties, Georgia," Table 1.

9. Stephen Herrick and Robert Vorhis, "Subsurface Geology of the Georgia Coastal Plain," Information Circular No. 25 (Atlanta, Georgia: U.S. Geological Survey, 1963), pp. 9-19.

10. Robert Wait, "Geology and Occurrence of Fresh and Brackish Groundwater in Glynn County, Georgia," Geological Survey Water Supply Paper 1613-E (Washington, D.C.: GPO, 1965), pp. E22-26.

11. Robert L. Wait and Dean O. Gregg, "Hydrology and Chloride Contamination of the Principal Artesian Aquifer in Glynn County, Georgia," (Atlanta, Georgia: Georgia Department of Natural Resources, 1973), pp. 1, 3, 5, 76, 78.

12. Stephen Herrick, "Well Logs of the Coastal Plain of Georgia," Bulletin Number 70 (Atlanta, Georgia: Georgia Geological Survey, 1961), pp. 210-220.

Appendix A

ORGANIC SCREENING PROTOCOLS

February 1988

NUS FIT IV

Edited by:

John Morrow
FASP Group Leader

Approved by:

Murray Warner, P.E.
Regional Project Mgr.

DRAFT

METHOD: Pesticide/PCB Quick Indicator Screen

RAPID SCREEN FOR INDICATIONS OF ORGANOCHLORINE PESTICIDES AND PCBs

Note: This method is based on SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS. Most sections of that method apply to this method.

1.0 SCOPE AND APPLICATION

1.1 This method describes the very rapid screening of water and soil/sediment samples for indications of organochlorine pesticides and polychlorinated biphenyls (PCBs). It is not intended to identify compounds, but to provide a very rapid, gross estimate of total chlorinated organic compounds.

1.2 Results are reported as "Total Chlorinated Organic Compounds, Estimated."

1.3 This method utilizes solvent extraction and gas chromatography (GC).

1.4 Detection limits vary widely with compounds and sample matrices. If required, detections limits should be determined for individual compounds, projects or sample groups.

1.5 Data generated by this method are not appropriate for listing or enforcement purposes. Data may be useful to provide indications of relative contamination, for selection of samples for standard EPA (CLP) analysis or to help characterize a site, supported by CLP data.

1.6 This method is recommended for use only by, or under the close supervision of, experienced residue analysts.

2.0 SUMMARY OF METHOD

Samples are solvent extracted. (Hexane is used for organochlorine compounds.) The extracts are analyzed by GC, using fused silica capillary column(s) and electron capture detector (ECD) or electrolytic conductivity detector (ElCD, Hall). Results are calculated from total area (excluding surrogates) and reported as "Total Chlorinated Organic Compounds, Estimated."

DRAFT

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

3.2 Interferences by phthalate esters can pose major problems in pesticide determinations when using the electron capture detector (ECD). Common plastics contain varying amounts of phthalates. Interferences from phthalates can best be minimized by avoiding contact with any plastic materials. The interference from phthalate esters can be completely eliminated with a microcoulometric or electrolytic conductivity detector (ElCD, Hall).

4.0 APPARATUS AND MATERIALS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

4.1 Gas chromatograph

4.1.1 **Gas Chromatograph:** [no changes]

4.1.2 **Column:** DB-1, 5 m x 530 um, fused silica capillary, (J & W Scientific, or equivalent).

4.1.3 **Detector(s):** Electron capture (ECD) or halogen-specific (i.e., electrolytic conductivity, ElCD, Hall).

5.0 REAGENTS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

6.0 SAMPLE STORAGE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

DRAFT

7.0 PROCEDURE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

7.4 Gas chromatographic analysis:

7.4.1 Recommended GC conditions:

Column oven temperature	230 °C
Injection port temperature	250 °C
Detector temperature	350 °C
Carrier gas	Helium
Carrier gas flow rate	5 - 10 ml/min
ECD purge (make-up) gas	5% methane:95% argon (P-5)
P-5 flow rate	40 - 70 ml/min

These conditions can be expected to result in total run times of about 5 minutes.

7.4.2 The GC conditions described will result in very poor separation of components. Do not expect to identify individual compounds by this method.

7.4.3 Inject 1 to 2 ul of extract. The use of an autosampler is highly recommended, to achieve reasonable precision at small injection volumes. See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, for injection sequence.

7.5 Calculations

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following modifications:

To some extent, detector response varies among analytes. If a specific analyte is being targeted at a given site, calibration may be performed for this analyte. Otherwise calibrate with aldrin. Calculate response factor (RF) as the ratio of amount injected divided by total area:

$$RF = \text{Amount/area}$$

DRAFT

For all samples, tabulate total area and surrogate area. Calculate net area by subtracting surrogate area from total area, and tabulate. Calculate "Total chlorinated organic compounds, estimated", as follows:

$$\text{Total} = \text{RF} \times (\text{Net area})$$

$$\text{Net area} = \text{Total area} - \text{Surrogate area}$$

Inform the data user that estimates will vary among analytes, and flag all data "F", field screening data: all quantities estimated, all ID's tentative.

8.0 QUALITY CONTROL

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

9.0 METHOD PERFORMANCE

New method - no data available.

10.0 REFERENCES

1. SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, February 1988.

2. U. S. EPA SW-846, "Test Methods for Evaluating Solid Waste", Methods 8000, 8080; Revision 0, September 1988.

ADAPTED FROM:

ENVIRONMENTAL PROTECTION AGENCY

REGION IV, ATHENS, GA 30613

SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS

1.0 SCOPE AND APPLICATION

1.1 This method describes the rapid screening of water and soil/sediment samples to determine if extractable organic compounds are present. It is designed to identify tentatively a small group of extractable organic compounds (see Tables 1, 2, and 3) that are commonly found at hazardous waste sites.

1.2 All other compounds detected are reported with a retention time and an estimated concentration range.

1.3 This method utilizes gas chromatography.

1.4 Estimated detection limits fro the extractable organics are 5-1000 ug/l (ppb) for water and 0.5-100 ug/g (ppm) for soil/sediment. See Tables 1 and 2 for more details.

1.5 Data generated by this method allows only rapid evaluation of a site. It is used to determine if sampling for complete analyses by standard EPA analytical methods is warranted and where the samples should be taken. The data should not be used for ranking a site or for enforcement purposes since only limited quality control procedures are required and the reported data is qualified as estimated.

2.0 SUMMARY OF METHOD

Samples are solvent extracted; hexane is used for organochlorine pesticides and polychlorinated biphenyls (PCBs) and methylene chloride is used for base/neutral/acids (BNAs). Soil/sediment samples are extracted by liquid-solid extraction and water samples by liquid-liquid extraction. The extracts are analyzed by gas chromatographs equipped with fused silica capillary columns and flameionization and electron capture detectors.

TABLE 1

EXTRACTABLE COMPOUNDS FOR SCREENING ANALYSIS

Compounds	Retention Time min.	Water Quantitation Limit ug/L
Phenol	5:24	100
Naphthalene	9:31	100
Acenaphthene	14:50	100
Pentachlorophenol	18:54	1000
Phenanthrene	19:17	100
Di-n-butylphthalate	21:28	200
Fluoranthene	22:59	100
Pyrene	23:39	200
p-Terphenyl*	24:20	
Chrysene	27:34	500
Bis (2-ethylhexyl) phthalate	28:06	500

EC DETECTABLE COMPOUNDS

Aldrin*		
Aroclor 1260	multipeak	25

* Surrogate compound

TABLE 2

ESTIMATED DETECTION LIMITS FOR EXTRACTABLES

Detector/Compound Type	Water ug/L (ppb)	Sediment/Soil ug/g (ppm)
Flameionization detector		
Polyaromatic hydrocarbons	100-5000	10-500
Phenols	100-10000	10-1000
Other non-halogenated compounds	100-5000	10-500
Electron capture detector		
Aroclor 1260	25	2.5
Most halogenated compounds	5	0.5
Organosulfur, phosphorus, nitrogen or oxygen compounds	50	5

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

4.0 APPARATUS AND MATERIALS

4.1 Gas chromatograph: An analytical system complete with a temperature programmable gas chromatograph and all required accessories including analytical columns, gases, detector and printer/plotter capable of retention time labeling of peaks and providing peak height or peak area measurements.

4.1.1 Column: 30m x 0.53 mm ID DB-5,1 micron film thickness, fused-silica capillary column (FSCC) (J&W Scientific or equivalent).

4.1.2 Detector 1: Flameionization detector
Optional detector - Photoionization.

4.1.3 Detector 2: Electron capture detector.

4.2 Balance: Top loading, capable of accurately weighing 0.1 g.

4.3 Glass scintillation vials: At least 20 mL, with screw cap and Teflon or aluminum foil liner. Glass culture tubes with screw caps and Teflon liners may be substituted for water extraction.

4.4 Spatula: Stainless steel or Teflon.

4.5 Serological glass pipets: 5 and 25 ml, disposable.

4.6 Pasteur glass pipets: 1 ml, disposable.

4.7 Bench top centrifuge: (optional) and holders for 20 ml culture tubes. May be used for breaking emulsions.

5.0 REAGENTS

5.1 Sodium sulfate: anhydrous, reagent grade, heated at 400°C for 4 hr., collected in a desiccator and stored in a glass bottle. Baker anhydrous powder, catalog #73898 or equivalent.

5.2 Methylene chloride, hexane: pesticide residue quality or equivalent.

5.3 Sulfuric acid: 1:1 mix equal volume of concentrated sulfuric acid (ACS) with distilled or distilled, deionized water.

5.4 Stock solutions: Commercially prepared stock standards can be used at any concentration if they are certified by the manufacturer or by an independent source.

5.4.1 Prepare stock standard solutions at a concentration of 1.00 ug/ul by dissolving 0.0100 g of assayed reference material in methanol and diluting to volume in a 10 ml volumetric flask. (It may be necessary to use 5-10 percent toluene to dissolve all compounds.) Larger volumes can be used at the convenience of the analyst. When compound purity is assayed to be 96% or greater, the weight can be used without correction to calculate the concentration of the stock standard.

5.4.2 Transfer the stock standard solutions into Teflon-sealed screw-cap bottles. Store at 4°C and protect from light. Stock standards should be checked frequently for signs of degradation or evaporation, especially just prior to preparing calibration standards.

5.4.3 Stock standard solutions must be replaced after six months, or sooner if comparison with check standards indicates a problem.

5.5 Calibration standard: A calibration standard mixture is prepared by dilution of the stock standards. Secondary dilutions may be necessary. The mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml (per compound). The PCB calibration standard is in hexane at a concentration of 0.010 ng/ul for aldrin and 0.25 ng/uL for Aroclor 1260.

5.6 Surrogate standard: The surrogate is p-terphenyl for BNA's and aldrin for PCBs. A stock surrogate solution in methanol should be prepared as described in Paragraph 5.1. The BNA surrogate standard spiking solution is prepared from the stock at a concentration of 500 ug/1 mL in methanol. The PCB surrogate standard spiking solution contains 0.2 ug/1 mL of aldrin in methanol.

5.7 Matrix spike standard: A matrix spike standard is prepared from the appropriate stock solutions as outlined in Paragraph 5.1. The extractable organic mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml ~~mL~~ (per compound) in methanol. The pesticide mixture contains 100 ng/ml of each of the sixteen listed pesticides (Table 3).

5.8 Reagent Water: Reagent water is defined as water in which an interferent is not observed at the method detection limit (MDL) of the parameters of interest.

6.0 SAMPLE STORAGE

6.1 The sample must be iced or refrigerated (4°C) from time of collection until extraction.

6.2 All samples must be extracted within 7 days and completely analyzed within 30 days of collection based on sample stability. However, the contract may require a shorter turnaround of data, based on site resampling requirements.

7.0 PROCEDURE

7.1 All samples and standard solutions must be allowed to warm to ambient temperature before analysis. The following procedures show preparation of two extracts for each sample. These two preparations are identical, except for the extraction solvents. Methylene Chloride is used for BNAs, to be detected by FID or PID. Hexane is used for pesticides/PCBs, to be detected by ECD. To prepare extracts for both detectors, perform only a single hexane extraction for each sample. (Do not run methylene chloride on ECD!)

7.2 Extractation of Water

7.2.1 Pipet two, 15 ml portions of a water sample into two 20 mL disposable tubes. Label one BNA and the other PCB. Add 150 uL of the appropriate surrogate standard to each sample.

7.2.1.1 For the BNA extraction, acidify the sample to pH<2 using sulfuric acid. Add 1.5 mL of methylene chloride, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the lower layer (methylene chloride). Transfer it to a 2 mL GC vial.

7.2.1.2 For the PCB extraction, add 1.5 mL of hexane, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the upper (Hexane) layer. Transfer it to a 2 mL GC vial.

7.2.2 Pipet two 15 mL portions of reagent water into separate 20 mL disposable tubes for the BNA and PCB blanks. Also select a sample to be used as a matrix spike and pipet two portions as for blanks. Add 150 uL or the appropriate surrogate standard to each blank and spike and 150 uL of the appropriate matrix spike to the spike samples. Then proceed with extraction as outlined in 7.2.1.1 and 7.2.1.2.

7.3 <u>Extraction of soil/sediment</u>

7.3.1 Transfer two 2 g portions (record weight to the nearest 0.1g) of sample to separate 20 mL scintillation vials. Wipe the mouth of the vial with a tissue to remove any sample material and record the exact weight of sample taken. Cap the vial before proceeding with the next sample to avoid any cross contamination.

7.3.2 Add 2 g of anhydrous sodium sulfate to the sample in each 20 mL vial and mix well. Additional sodium sulfate (up to 2 g) may be added, to achieve a "free-flowing powder."

7.3.3 Transfer two 2 g portions of anhydrous sodium sulfate into separate 20 mL scintillation vials for BNA and PCB blanks. Also select a sample expected to be relatively low or free of organic contaminants to be used as the matrix spike sample. Set up two, 2 g portions as for the blank and mix with 2 g of sodium sulfate. Add 1 mL of the appropriate surrogate standard to each blank and spike and 1 mL of the appropriate matrix spike to the spike samples.

7.3.4 Immediately add 10.0 mL of solvent to the sample, spike or blanks. Mix throughly (vortex) for 2 minutes.
BNAs: methylene chloride
PCBs: hexane

7.4 Analysis by Gas Chromatography

7.4.1 Recommended GC conditions:

	FTD	ECD
Initial column temperature	60°c	60°C
Initial column holding time	2 min.	2 min.
Column temperature program	8°C/min.	8°C/min.
Final column temperature	280°C	280°C
Final column holding time	16 min.	4 min.
Onjection port temperature	250°C	230°C
Detector temperature	250°C	350°C
Carrier gas flow rate	0.7-1 cm/sec	0.7-1 cm/sec
Carrier gas	helium	helium
Make up gas		95% argon/5% methane

7.4.2 See Figures 1, 2, 3 and 4 for chromatograms. The chromatograms for Aroclors 1242 and 1254 are included to assist in the identification of PCBs.

7.4.3 Inject 4 ul of sample extract. Extracts should be injected in the following sequence:

#1 Reagent blank

#2 Calibration standard

#3 Matrix spike

#4-13 Sample extracts

#14 Solvent blank

#15-24 Sample extracts

#25 Solvent blank*

#26 Calibration standard*

* If less then 20 samples are analyzed in a day, this QC required after the last sample extract.

GC/ECD extracts must be diluted or re-plotted so that the majority of peaks are on scale. This is required so that the PCB pattern is recognizable. No dilutions are required for extracts analyzed by GC/FID unless >50% of the chromatogram is off scale.

7.4.4 Calculate and report results on the data reporting sheet. If extract dilutions are made, record the size of the dilution.

7.5 Calculations

7.5.1 External standard calibration is used for the calculation of the compounds of interest. The concentration of each Table 1 analyte may be determined by the following formulas:

7.5.1.1 Aqueous sample

Concentration (ug/L) = $[(A)(V_t)(D)] / [(V_1)(V_s)]$ where:

A = Detected amount of material injected, ng.

V_1 = Volume of extract injected, ul.

D = Dilution factor if dilution was made on the sample prior to analysis. If no dilution made, D = 1, and is dimensionless.

V_t = Volume of total extract, uL.

V_s = Volume of sample extracted, mL.

7.5.2 Nonaqueous samples

concentration (ug/g) = $[(A)(V_t)(D)] / [(V_1)(W)]$ where:

W = Wet weight of sample extracted, in mg.

A, Vt, D and Vi have the same difinition as for aqueous samples.

7.5.3 Report results without correction for recovery data. Soil/sediment will be reported on a wet weight basis.

7.5.4 Unknown compound concentrations are estimated by using p-terphenyl response for BNAs or aldrin response for ECD compounds.

7.5.5 Report up to maximum of fifteen BNA extractable unknowns and fifteen ECD unknowns. Choose the fifteen that are the highest apparent concentration

8.0 QUALITY CONTROL

8.1 A reagent blank and matrix spike must be extracted with each set of samples, with a maximum of 20 samples per set.

8.2 All samples, blanks, standards and spikes must be spiked with a surrogate standard containing p-terphenyl for the BNA extracts and aldrin for the PCB extracts. Calculate recovery after analysis. If recovery is not within the range of 50-150%, another portion of smple must be analyzed. Report all surrogate data on the appropriate form. If the surrogate recovery still exceeds the ± 50% limits on the second analysis, report the data and footnote that surrogate data was high or low.

8.3 A reagent blank and calibration standard must be analyzed each day at the beginning of the GC analysis sequence. Include a solvent blank after every 10 sample extracts and again at the end of the sequence along with a calibration standard. The maximum number of sample extracts per sequence is 20.

8.3.1 The reagent and solvent blanks must be free of all analytes in Table 1.

8.3.2 The response of the most sensitive analyte inthe calibration standard (50 ng/analyte) must be greater than 30% of full scale.

TABLE 3

ORGANOCHLORINE PESTICIDES

(EPA METHOD 608)

Solutions All .1 mg/ml (100 ug/ml)	5 ml Solutions CAT. NO.
Aldrin	F89S
Dieldrin	F90S
p,p'-DDT	F92S
p,p'-DDE	F93S
p,p'-DDD	F94S
Endosulfan I	F202S
Endosulfan II	F203S
Endosulfan sulfate	F97S
Endrin	F98S
Endrin aldehyde	F99S
Heptachlor	F100S
Heptachlor epoxide	F101S
a-BHC	F102S
b-BHC	F103S
g-BHC	F104S
d-BHC	F105S

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV, ATHENS, GEORGIA

SISB/SAS
RECEIVED
OCT 18 1989
EPA - REGION IV
ATLANTA, GA.

MEMORANDUM

DATE: OCT 17 1989

SUBJECT: Review of the SSI Study Plan, Old Sterling Landfill, Sterling, Georgia; ESD Project No. 90E-032

FROM: James C. Gray
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

TO: Al Hanke, Chief
Site Assessment Section
Site Investigation and Support Branch
Waste Management Division

THRU: M. D. Lair, Chief
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

The Screening Site Inspection (SSI) study plan for the Old Sterling Landfill in Sterling, Georgia has been reviewed. The plan has been found acceptable as written to accomplish the objectives stated. However, I would like to encourage the NUS inspectors to include an attempt to locate and sample leachate points in their future landfill inspections.

Should you have any questions or comments concerning this review, please call me at FTS: 250-3308, or COMM: 404/546-3308.

cc: Finger/Patton
Lair/Bokey
Knight
Blackwell

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IV, ATHENS, GEORGIA

SISB/SAS
RECEIVED
OCT 18 1989
EPA - REGION IV
ATLANTA, GA.

MEMORANDUM

DATE: OCT 16 1989

SUBJECT: Document Review of NUS Corp. SSI Study Plan for
Old Sterling Landfill site
Sterling, Glynn County, Georgia ← FILE
EPA ID No. GAD980496939
ESD Project No. 90E-012

FROM: John D. Schoolfield
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

TO: Al Hanke, Chief
Site Assessment Section
Site Investigation and Support Branch
Waste Management Division

THRU: M. D. Lair, Chief
Hazardous Waste Section
Environmental Compliance Branch
Environmental Services Division

The Screening Site Inspection Study Plan (SSI), prepared by NUS Corporation, for the Old Sterling Landfill site, Sterling, Glynn County, Georgia, has been reviewed. The study plan appears adequate. If you have any questions, I may be reached at (FTS) 250-3317.

cc: Finger/Patton
Lair/Bokey
Knight

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

ENVIRONMENTAL SERVICES DIVISION
ATHENS, GEORGIA 30613

SASB/SAS
RECEIVED
OCT 11 1989
EPA - REGION IV
ATLANTA, GA

MEMORANDUM

DATE: October 5, 1989

SUBJECT: Old Sterling Landfill, Sterling, GA, SSI Study Plan
GAD980496939

FROM: Pat Stamp
Laboratory Quality Control Specialist
Laboratory Evaluation & Quality Assurance Section

TO: Al Hanke, Chief
Site Assessment Section
Site Investigation and Support Branch, WASTMD

THRU: Wade Knight, Chief
Laboratory Evaluation & Quality Assurance Section

We have reviewed the subject document and have the following comments:

Table 1 --

a. The location of sample OS-PW-01 is described as "Upgradient of landfill;" however, in Section 2.1 the location of the private well sample is described as "downgradient of the landfill."

b. The locations of samples OS-SS-02, OS-SB-02 and OS-TW-02 are described as "East of landfill;" however, on Figure 3 they are shown on the west side.

c. The locations of samples OS-SS-03, OS-SB-03 and OS-TW-03 are described as "Southeast of landfill;" however, on Figure 3 they are shown on the southwest side.

d. The locations of samples OS-SS-05, OS-SB-05 and OS-TW-05 are described as "West of landfill;" however, on Figure 3 they are shown on the east side.

e. With the number of discrepancies cited above, it is not clear whether the locations of samples OS-SS-01, OS-SB-01 and OS-TW-01, described as "North of landfill;" are upgradient or downgradient. This needs to be determined, as the rationale states they are to "Establish background parameters."

NUS CORPORATION
1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

C-586-9-9-169

SISB/SAS
RECEIVED
SEP 26 1989
EPA - REGION IV
ATLANTA, GA

September 25, 1989

Mr. A.R. Hanke
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Subject: Screening Site Inspection, Phase II Study Plan
Revision 0
Old Sterling Landfill
Sterling, Glynn County, Georgia
EPA ID No. GAD980496939
TDD No. F4-8902-46

FILE

Dear Mr. Hanke:

Enclosed please find one (1) copy of the Screening Site Inspection, Phase II Study Plan, Revision 0, for Old Sterling Landfill, located in Sterling, Glynn County, Georgia. Please contact me if you have any questions concerning this study plan.

Very truly yours,

Walter Riley Jr.
Walter Riley
Project Manager

Approved:

Greg Schank

WR/gwn

Enclosure (1)

R-586-9-9-15

STUDY PLAN
SCREENING SITE INSPECTION, PHASE II
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA
EPA ID #GAD980496939

Prepared Under
TDD No. F4-8902-46
CONTRACT NO. 68-01-7346

Revision 0

SISB/SAS
RECEIVED
SEP 26 1989
EPA - REGION IV
ATLANTA, GA.

FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 22, 1989

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Walter Riley, Jr.	Phil Blackwell	Murray Warner, P.E.
Project Manager	Assistant Regional Project Manager	Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-7346 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed or written consent of the EPA.

TABLE OF CONTENTS

Section		Page
1.0	**INTRODUCTION**	**1**
1.1	Objectives	1
1.2	Scope of Work	2
1.3	Schedule	2
1.4	Personnel	2
1.5	Permits and Authorization Requirements	2
1.6	Site History and Description	3
1.7	Regional Hydrogeology	3
2.0	**SAMPLING INVESTIGATION**	**6**
2.1	Soil and Groundwater Sampling	7
2.2	Analytical and Container Requirements	7
2.3	Methodology	10
REFERENCES		11

Number		Page

FIGURES

Figure 1	Site Location Map	4
Figure 2	Site Layout Map	5
Figure 3	Sample Location Map	8

TABLES

Table 1	Sample Locations and Rationale	9

STUDY PLAN
SCREENING SITE INSPECTION, PHASE II
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA
EPA ID #GAD980496939
TDD NO. F4-8902-46

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) has been tasked by the U.S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Screening Site Inspection (SSI) at the Old Sterling Landfill facility in Glynn County, Georgia. The inspection will be performed 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). Tasks will be performed to satisfy the requirements stated in Phase II of Technical Directive Document (TDD) number F4-8902-46.

1.1 Objectives

The objectives of this Phase II inspection will be to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection will seek to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation will be made regarding future activities at the site.

Specific elements are:

- Obtain information to prepare a site-specific preliminary HRS
- Provide EPA the necessary information to make decisions on any other actions warranted at the site.

1.2 Scope of Work

The scope of this investigation will include the following activities:

- Obtain and review background materials relevant to HRS scoring of site
- Obtain aerial photographs and maps of site, if possible
- Obtain information on local water systems
- Evaluate target populations associated with the groundwater, surface water, air and onsite exposure pathways
- Conduct a survey of private wells
- Determine location and distance to nearest potable well
- Develop a site sketch
- Collect environmental samples

1.3 Schedule

The week of October 16, 1989

1.4 Personnel

Project Manager - Walter Riley
Other personnel as required

1.5 Permits and Authorization Requirements

EPA is responsible for obtaining access to the site and permission to take photographs of site. In addition, EPA is responsible for all permits which may be required to accomplish this task.

1.6 Site History and Description

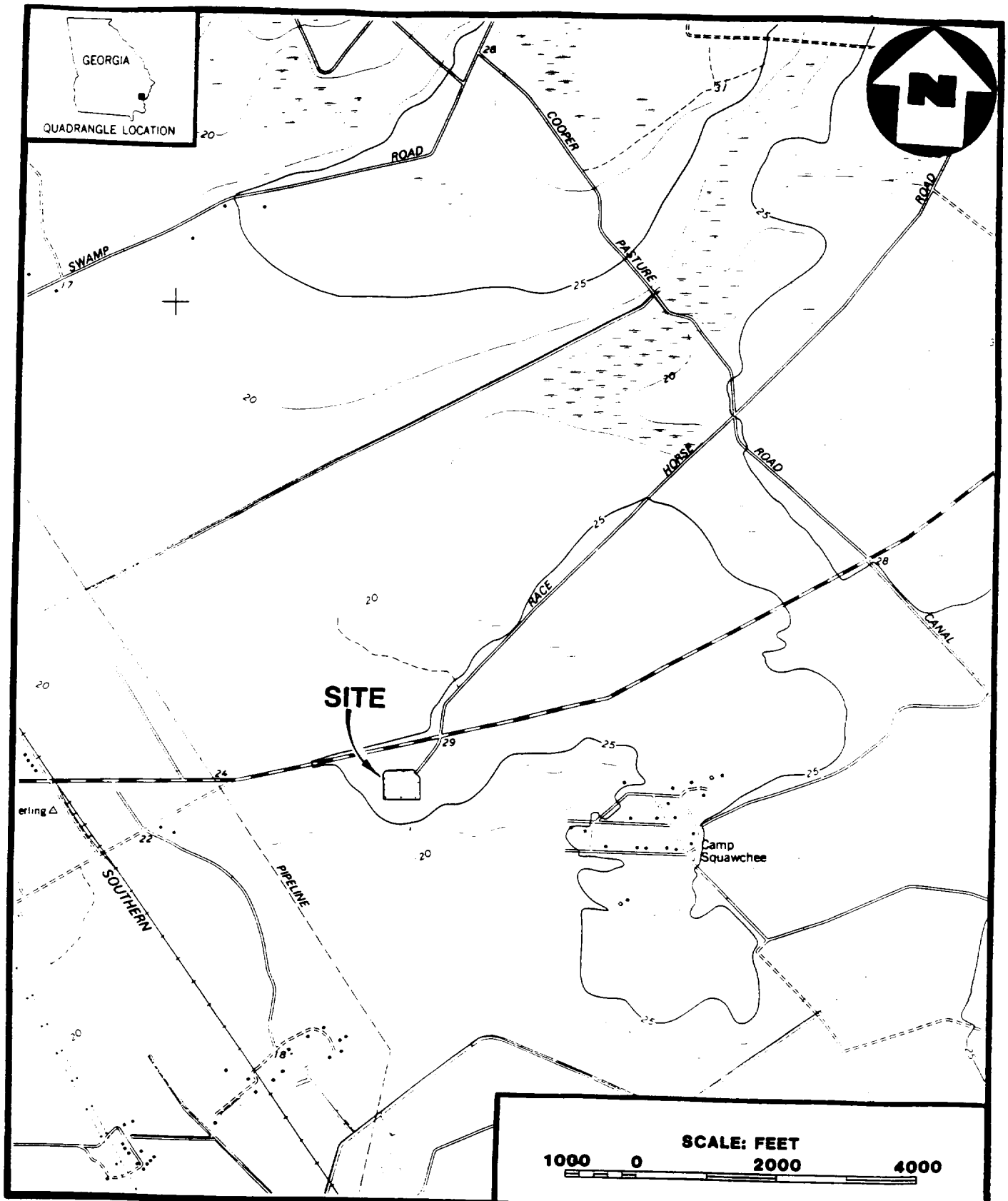
The Old Sterling Landfill is a sanitary landfill located in a sparsely populated area (Refs. 1, 2). The landfill has been closed, and the property is currently used as a private hunting preserve. The surrounding properties are residential and contain some tree farms. The landfill property is unfenced (Ref. 2).

The county operated the landfill from about 1969 through 1979 on leased land (Ref. 3). The landfill was permitted by the state in 1976 and was officially closed in 1980 (Ref. 4). The property is currently owned by Georgia Pacific. The fill area is between 6 and 10 acres in size. It was created in an abandoned borrow pit with an original depth of about 10 feet. In order to fill the pit, it was necessary to operate a pump to remove groundwater (Ref. 3).

A Glynn County Public Works official reported that only yard wastes (i.e., trees, limbs and leaves) were accepted at the landfill (Ref. 3). However, another county official reported that garbage and an occasional car were deposited in the landfill (Ref. 5). A state official reported that he had observed an orange, granular material (which took on a jelly-like consistency when wet) being placed into the landfill. He also confirmed that waste from the Hercules plant in Brunswick was deposited in the landfill (Ref. 4). File material indicates that Hercules deposited 265,000 cubic feet of mixed organics, inorganics, solvents, and trash in the landfill. Hercules reported that less than 2 percent of this volume could be considered hazardous (Ref. 6). The state reported that approximately 49 tons of toxaphene was deposited in the landfill (Ref. 1).

1.7 Regional Hydrogeology

The facility is located in the Coastal Plain Physiographic Province in Glynn County, Georgia. This area has a humid climate with a net annual precipitation of 7 inches (Ref. 7). Precipitation is heaviest during the period of June through September and lightest from November through January (Ref. 8, p. 56). Geology in the area consists of sedimentary deposits ranging in composition from dense limestone to compact clays to a loose sand and shell material that overlies faulted Paleozoic igneous and metamorphic basement rocks. In the site area these Cretaceous and younger sedimentary deposits are approximately 4,500 feet thick and are the source of groundwater in the area (Refs. 9, p. 9; 10, p. E25). Water occurs in these units as an unconfined, water-table aquifer and under confined (artesian) conditions (Ref. 10, pp. E21-22).

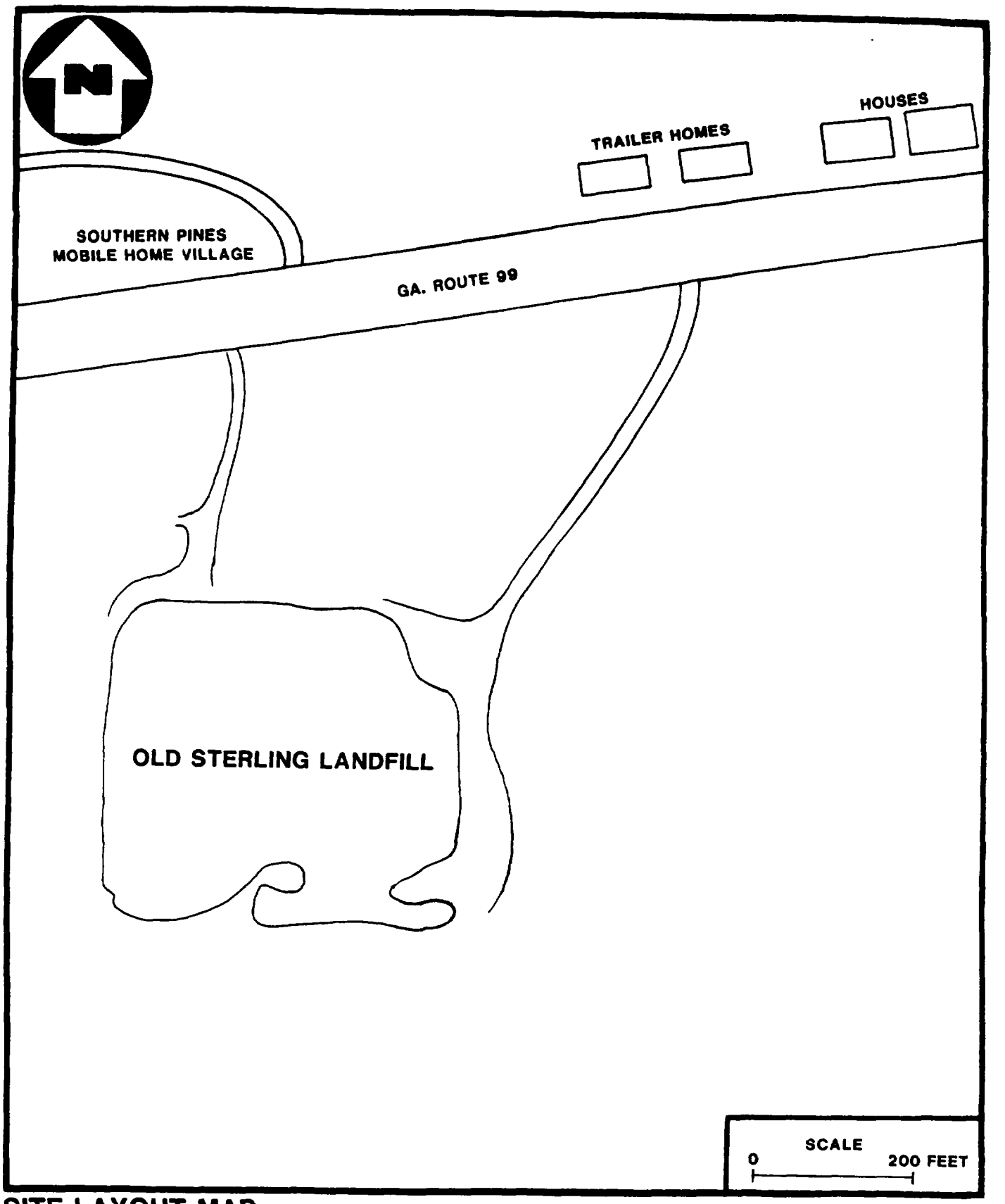


BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, STERLING, GEORGIA, 1978.

SITE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 1

NUS CORPORATION



SITE LAYOUT MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 2

NUS CORPORATION

Stratigraphy in the site area, in descending order, consists of unconsolidated surficial sand deposits; the gravely sand and thin limestone beds of post-Hawthorne Formation rocks; the sand, clay and limestone beds of the Hawthorne Formation; the undifferentiated limestones of Eocene and Oligocene age (principal artesian aquifer); and the undifferentiated Cretaceous age rocks (Refs. 9, pp. 9-19; 10, pp. E22-26). Generally, wells completed in formations at depths greater than 50 feet below land surface (bls) will flow under artesian conditions (Ref. 10, p. E22).

Three aquifers underlie this facility: the unconsolidated surficial water-table aquifer, the confined sands and micaceous clays of a limestone bed of the Hawthorne Formation; the confined limestones and dolomites of the early Miocene and Oligocene age rocks, and the confined Ocala Limestone (Refs. 10, pp. E24-25; 11, pp. 3, 6). The aquifer of concern consists of the Miocene and Oligocene rocks and the Ocala Limestone. Collectively these units are known as the "principal artesian aquifer" in the site area (Ref. 10, p. E25).

Water in the surficial aquifer generally occurs in two zones, one from approximately 12 to 17 feet bls, and one from 35 to 50 feet bls. Yields of 5 to 20 gallons per minute (gpm) can be obtained from this aquifer and it is suitable for small domestic supplies (Ref. 10, p. E22). A confining layer of late Miocene age clayey silt, which is approximately 120 to 150 feet thick, underlies the surficial aquifer and separates it from the underlying Hawthorne Formation (Refs. 11, pp. 76-78; 12, pp. 210-220). Domestic and small industrial wells are completed in the Hawthorne Formation at depths of 100 to 500 feet bls and can yield from 20 to 500 gpm with the deeper wells giving the higher yields. This formation is underlain by a hard limestone approximately 60 to 400 feet thick that separates it from the underlying principle artesian aquifer (Refs. 11, p. 78; 12, pp. 210-220). This aquifer system contains two water-bearing zones, one at approximately 500 to 760 feet bls and one at 860 to 1,000 feet bls. In some places, this lower zone may extend to 1,700 feet bls (Refs. 10, pp. E25-26; 11, p. 78). This aquifer system is underlain by a dense dolomite that separates it from an underlying leakage of the brackish water through a local porous part of the dolomitic confining bed (Ref. 11, p. 1).

2.0 SAMPLING INVESTIGATION

The sampling investigation will include the collection of five surface, five subsurface soil samples, five groundwater samples and one private well sample. Samples will be analyzed for extractable and purgeable organic compounds, pesticides, PCBs, cyanides, and metals. Analyses will be performed under the Contract Laboratory Program (CLP).

2.1 Soil and Groundwater Sampling

A total of five temporary monitoring wells will be installed during this investigation. A surface and subsurface soil sample will be collected from each borehole above and at the saturation zone. The borehole will be advanced to below the water table and the well will be installed. One groundwater sample will be collected from each temporary well location. The five locations include one north of the landfill to establish background parameters; and four east, southeast, south and west of the landfill to test for the presence or absence of contaminants.

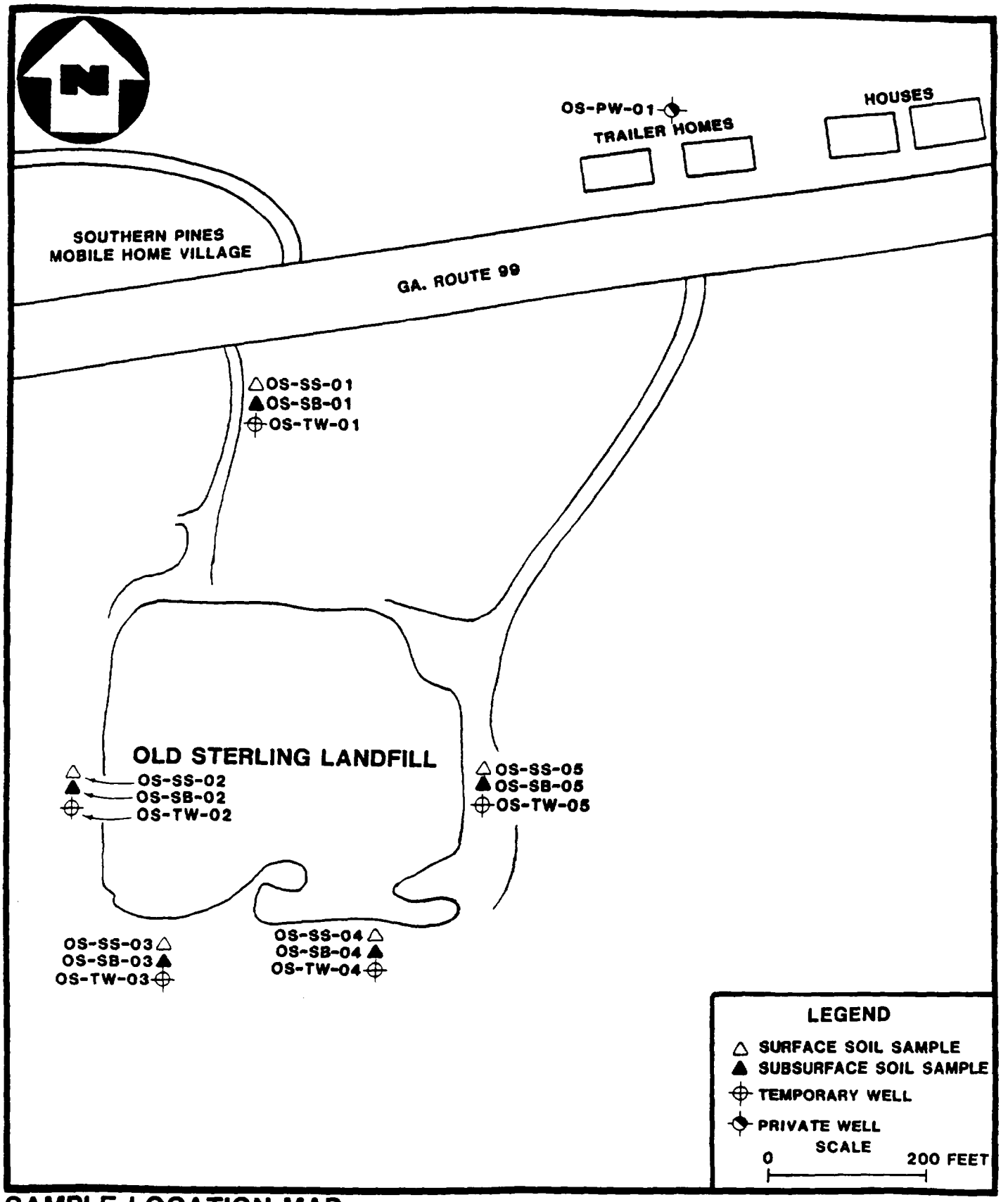
In addition to the fifteen samples mentioned above, one private well sample, if possible, will be collected downgradient of the landfill to determine the presence or absence of contaminants. Sample locations are shown on Figure 3 and sample codes, descriptions and rationale are presented in Table 1.

2.2 Analytical and Container Requirements

Sample containers used will be in accordance with the requirements specified in the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986. The following is a description of the analysis and types of containers required.

Analyses	Container	Preservatives**
Ext. Organics, Water	1 gal., amber glass*	None
Volatile Organics, Water	40 ml., glass vial*	4 drops conc. HCL to pH <2
Metals, Water	1 liter, plastic	50% HNO_3 to pH <2
Cyanide, Water	1 liter, plastic	NaOH to pH >12
Ext. Organics, Soil/Sediment	8 oz., glass*	None
Volatile Organics Soil/Sediment	4 oz., glass*	None
Inorganics, Soil/Sediment	8 oz., glass*	None

* Sample container lids are lined with teflon.
** All samples will be iced to 4°C upon collection.



SAMPLE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 3

NUS CORPORATION

TABLE 1

SAMPLE LOCATIONS AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Sample Type	Location	Rationale
OS-PW-01	Private Well	Upgradient of landfill	To determine the presence or absence of contaminants
OS-SS-01	Surface Soil	North of landfill	Establish background parameters
OS-SS-02	Surface Soil	East of landfill	To determine the presence or absence of contaminants
OS-SS-03	Surface Soil	Southeast of landfill	To determine the presence or absence of contaminants
OS-SS-04	Surface Soil	South of landfill	To determine the presence or absence of contaminants
OS-SS-05	Surface Soil	West of landfill	To determine the presence or absence of contaminants
OS-SB-01	Subsurface Soil	North of landfill from TW-01 borehole	Establish background parameters
OS-SB-02	Subsurface Soil	East of landfill from TW-02 borehole	To determine the presence or absence of contaminants
OS-SB-03	Subsurface Soil	Southeast of landfill from TW-03 borehole	To determine the presence or absence of contaminants
OS-SB-04	Subsurface Soil	South of landfill from TW-04 borehole	To determine the presence or absence of contaminants
OS-SB-05	Subsurface Soil	West of landfill from TW-05 borehole	To determine the presence or absence of contaminants
OS-TW-01	Temporary Well	North of landfill	Establish background parameters
OS-TW-02	Temporary Well	East of landfill	To determine the presence or absence of contaminants
OS-TW-03	Temporary Well	Southeast of landfill	To determine the presence or absence of contaminants
OS-TW-04	Temporary Well	South of landfill	To determine the presence or absence of contaminants
OS-TW-05	Temporary Well	West of landfill	To determine the presence or absence of contaminants

2.3 Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation will be in accordance with the standard operating procedures as specified in Section 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986.

All laboratory analyses and laboratory quality assurance procedures used during this investigation will be in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; revised June 1, 1985 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

REFERENCES

1. Potential Hazardous Waste Site Identification and Preliminary Assessment (EPA Form 2070-2) for Old Sterling Landfill. Filed by Jennifer Kaduck, Georgia Department of Natural Resources, January 15, 1980.

2. NUS Field Logbook No. F4-1279 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of facility reconnaissance, march 3, 1989.

3. Robert Howe, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

4. Morgan Cantrell, Georgia Environmental Protection Division, Municipal Solid Waste Management, telephone conversation with Geoffrey Carton, NUS Corporation, March 22, 1989. Subject: Hazardous materials at Old Sterling Landfill.

5. Olin Chancy, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

6. EPA Notification of Hazardous Waste Site (EPA Form 8900-1) for Hercules Incorporated, Brunswick, Georgia. Filed by K. T. Horton, Hercules, Inc., May 29, 1981.

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

8. U.S. Department of Agriculture, Soil Conservation Service, "Soil Survey of Camden and Glynn Counties, Georgia," Table 1.

9. Stephen Herrick and Robert Vorhis, "Subsurface Geology of the Georgia Coastal Plain," Information Circular No. 25 (Atlanta, Georgia: U.S. Geological Survey, 1963), pp. 9-19.

10. Robert Wait, "Geology and Occurrence of Fresh and Brackish Groundwater in Glynn County, Georgia," Geological Survey Water Supply Paper 1613-E (Washington, D.C.: GPO, 1965), pp. E22-26.

11. Robert L. Wait and Dean O. Gregg, "Hydrology and Chloride Contamination of the Principal Artesian Aquifer in Glynn County, Georgia," (Atlanta, Georgia: Georgia Department of Natural Resources, 1973), pp. 1, 3, 5, 76, 78.

12. Stephen Herrick, "Well Logs of the Coastal Plain of Georgia," Bulletin Number 70 (Atlanta, Georgia: Georgia Geological Survey, 1961), pp. 210-220.

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-7346 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed or written consent of the EPA.

TABLE OF CONTENTS

Section		Page No.
EXECUTIVE SUMMARY		ES-1
1.0	INTRODUCTION	1
1.1	Objectives	1
1.2	Scope of Work	1
2.0	SITE CHARACTERIZATION	3
2.1	Site Background History	3
2.2	Site Description	3
	2.2.1 Site Features	3
	2.2.2 Waste Characteristics	3
3.0	REGIONAL POPULATIONS AND ENVIRONMENTS	7
3.1	Population and Land Use	7
	3.1.1 Demography	7
	3.1.2 Land Use	7
3.2	Surface Water	7
	3.2.1 Climatology	7
	3.2.2 Overland Drainage	8
	3.2.3 Potentially Affected Water Bodies	8
3.3	Groundwater	8
	3.3.1 Hydrogeology	8
	3.3.2 Aquifer Use	10
	3.4 Summary of Potentially Affected Populations and Environments	10
4.0	FIELD INVESTIGATION	13
4.1	Field Analytical Support Project	13
4.2	Contract Laboratory Program Sample Collection	13
	4.2.1 Sample Collection Methodology	15
	4.2.2 Split Samples	15
	4.2.3 Description of Samples and Sample Locations	15
	4.2.4 Field Measurements	16
4.3	Contract Laboratory Program Sample Analysis	21
	4.3.1 Analytical Support and Methodology	21
	4.3.2 Analytical Data Quality	21
	4.3.3 Presentation of Analytical Results	21
4.4	Summary of Field Investigation	21
5.0	SUMMARY	30
REFERENCES		31

APPENDIX A Topographic Map
APPENDIX B Field Analytical Screening Program Methodology
APPENDIX C Analytical Results
APPENDIX D SI Form

R-586-10-0-60

FINAL

SCREENING SITE INSPECTION PHASE II
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA
EPA ID #: GAD980496939

2-27-91
LSI
Janice P Stroms

Prepared Under
TDD No F4-8902-46
CONTRACT NO 68-01-7346

Revision 0

FOR THE

WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 31, 1990

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Reviewed By	Approved By
Walter Riley, Jr.	Robert E. Dooley	Bob Donaghue	Phil Blackwell
Walter Riley, Jr. Project Manager	Professional Geologist	Bob Donaghue Assistant Regional Project Manager	Phil Blackwell Regional Project Manager

TABLE OF CONTENTS (continued)

TABLES

Number		Page No.
Table 1	Sample Codes, Descriptions, and Rationale	18
Table 2	Field Measurements	20
Table 3	Inorganic Analyses - Groundwater Samples	23
Table 4	Inorganic Analyses - Subsurface Soil Samples	24
Table 5	Inorganic Analyses - Surface Soil Samples	25
Table 6	Organic Analyses - Groundwater Samples	26
Table 7	Organic Analyses - Subsurface Soil Samples	28
Table 8	Organic Analyses - Surface Soil Samples	29

FIGURES

Figure 1	Site Location Map	4
Figure 2	Site Layout Map	5
Figure 3	Water Level Contour	11
Figure 4	FASP Sampling Points	14
Figure 5	Sample Location Map	19

EXECUTIVE SUMMARY

The Old Sterling Landfill, a sanitary landfill approximately 4.3 acres in size, is located south of Highway 99 in Sterling, Glynn County, Georgia. The county operated the landfill on leased land from about 1969 through 1979. The landfill was permitted by the state in 1976 and was officially closed in 1980. The property is currently owned by Georgia Pacific.

Various types of wastes were disposed of at the Old Sterling Landfill including tree limbs, leaves, garbage, and an occasional car. The Hercules Plant of Brunswick disposed of 4,900 tons of waste, containing an estimated 1 percent toxaphene, at the landfill.

In the Brunswick area, there are three distinct aquifers. These consist of the surficial or water-table aquifer, the water-bearing units in the Miocene sediments that act as one aquifer, and the Upper Floridan aquifer (also known as the principal artesian aquifer). Within the surficial aquifer there are two productive intervals at 12 to 17 feet and 35 to 50 feet below land surface (bls). The predominantly clay Miocene sediments are approximately 450 feet thick. The Upper Floridan, the primary aquifer in the Brunswick area, is found approximately 500 feet bls and is 530 feet thick.

There are two water systems and some private wells which serve residents within a 4-mile radius of the landfill. The closest county well is 2.1 miles from the landfill. Numerous homes within 3 miles of the landfill obtain water from private wells. The nearest private well is located 500 feet north of the landfill.

Analytical results of surface and subsurface soil samples taken during the field investigation show inorganic and organic contamination. The compound of concern, toxaphene, was detected in a subsurface soil sample. Inorganic and other organic compounds were present in groundwater samples. Inorganics were present in soils at insignificant amounts. The Field Analytical Support Project (FASP) identified an area of chlorinated organic compound contamination. Samples were collected from this area and sent to a CLP laboratory, which confirmed FASP results.

The groundwater pathway is of concern because of the potential threat of contamination entering the aquifer of concern. The onsite and air pathways are not of concern, since insignificant quantities of contamination were present in the surface soils. The surface water pathway is also not a concern, since runoff generally percolates into the ground.

The laboratory analysis of groundwater samples indicates the presence of several inorganic elements and two organic compounds in the surficial aquifer. Based on this information and the number of groundwater targets, FIT 4 recommends that a Listing Site Inspection be undertaken at the Old Sterling Landfill.

1.0 INTRODUCTION

The NUS Corporation Region 4 Field Investigation Team (FIT) was tasked by the U. S. Environmental Protection Agency (EPA), Waste Management Division to conduct a Screening Site Inspection (SSI) at the Old Sterling Landfill site in Glynn County, Georgia. The inspection was performed 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 tasks were performed to satisfy the requirements stated in Technical Directive Documents (TDDs) F4-8902-46 and F4-8910-17. The field investigation was conducted October 16-20, 1989.

1.1 OBJECTIVES

The objectives of this inspection were to determine the nature of contaminants present at the site and to determine if a release of these substances has occurred or may occur. Further, this inspection sought to determine the possible pathways by which contamination could migrate from the site and the populations and environments it would potentially affect. Through these objectives, a recommendation has been made regarding future activities at the site.

1.2 SCOPE OF WORK

The objectives were achieved through the completion of a number of specific tasks. These activities were to:

- Obtain and review relevant background materials.
- Evaluate the target population within a 4-mile site radius, with regard to groundwater and surface water use, as well as possible exposure via air or direct contact.
- Conduct a survey of private wells.
- Develop a site sketch to scale.

- Determine location and distance to nearest potable well.
- Collect 16 environmental samples.

2.0 SITE CHARACTERIZATION

2.1 SITE BACKGROUND AND HISTORY

The Old Sterling Landfill is a sanitary landfill located in a sparsely populated area of Glynn County, Georgia (Refs. 1, 2). The landfill has been closed since the late 1970s, and the unfenced property is currently used as a private hunting preserve. The surrounding properties include residences and silviculture (Ref. 2). The landfill was created in an abandoned borrow pit with an original depth of about 10 feet (Ref. 3).

The county operated the landfill on leased land from about 1969 through 1979 (Ref 3). The landfill was permitted by the state in 1976 and was officially closed in 1980 (Ref. 4). The property is currently owned by Georgia Pacific but listed under the names Mead Timber Company and Scott Timber Company (part of Brunswick Pulp & Paper), which is owned by Georgia Pacific (Refs. 2, 3).

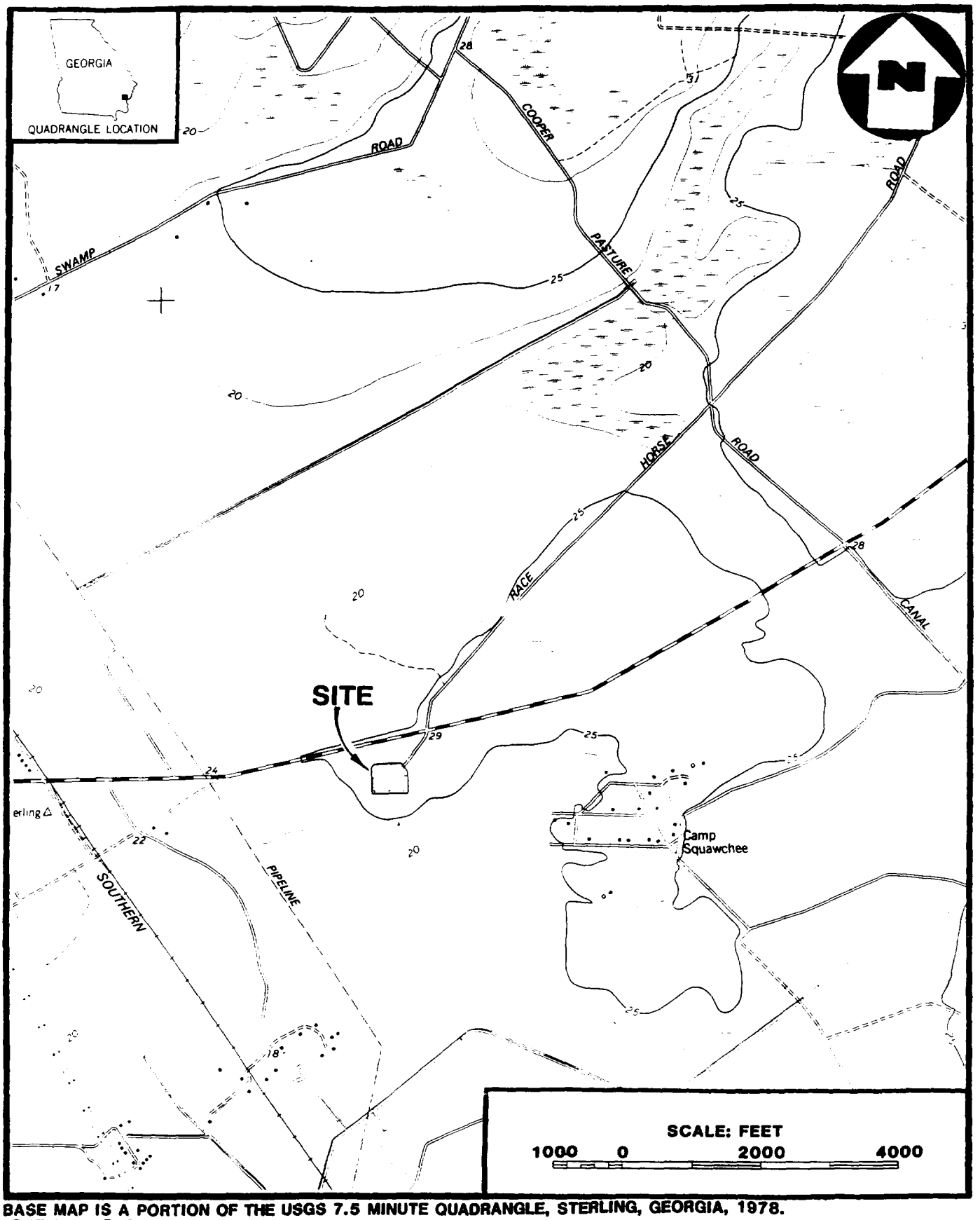
2.2 SITE DESCRIPTION

2.2.1 Site Features

The Old Sterling Landfill is 4.3 acres in size (Figures 1, 2). The fill area is clear of trees but is overgrown by tall weeds and brush in most areas; the vegetation does not appear stressed. The landfill is flat, and there are no buildings in the immediate vicinity. A loading embankment constructed of dirt is located in the southwest quadrant of the landfill. The property around the landfill is not fenced, but the entrance has a locked gate across the driveway. Most areas of the landfill were covered by pine bark. A leachate outbreak was observed in the southeast corner of the landfill (Ref. 5).

2.2.2 Waste Characteristics

An official at the Glynn County Public Works reported that only yard wastes (i.e., tree limbs and leaves) were accepted at the landfill (Ref. 3). However, another county official reported that garbage and an occasional car were also deposited in the landfill (Ref. 6). A state official from the Environmental Protection Division (EPD) reported that he had observed an orange, granular material (which took on a jelly-like consistency when wet) being placed into the landfill. He also confirmed that waste from the Hercules plant in Brunswick was deposited in the landfill (Ref. 4). File material

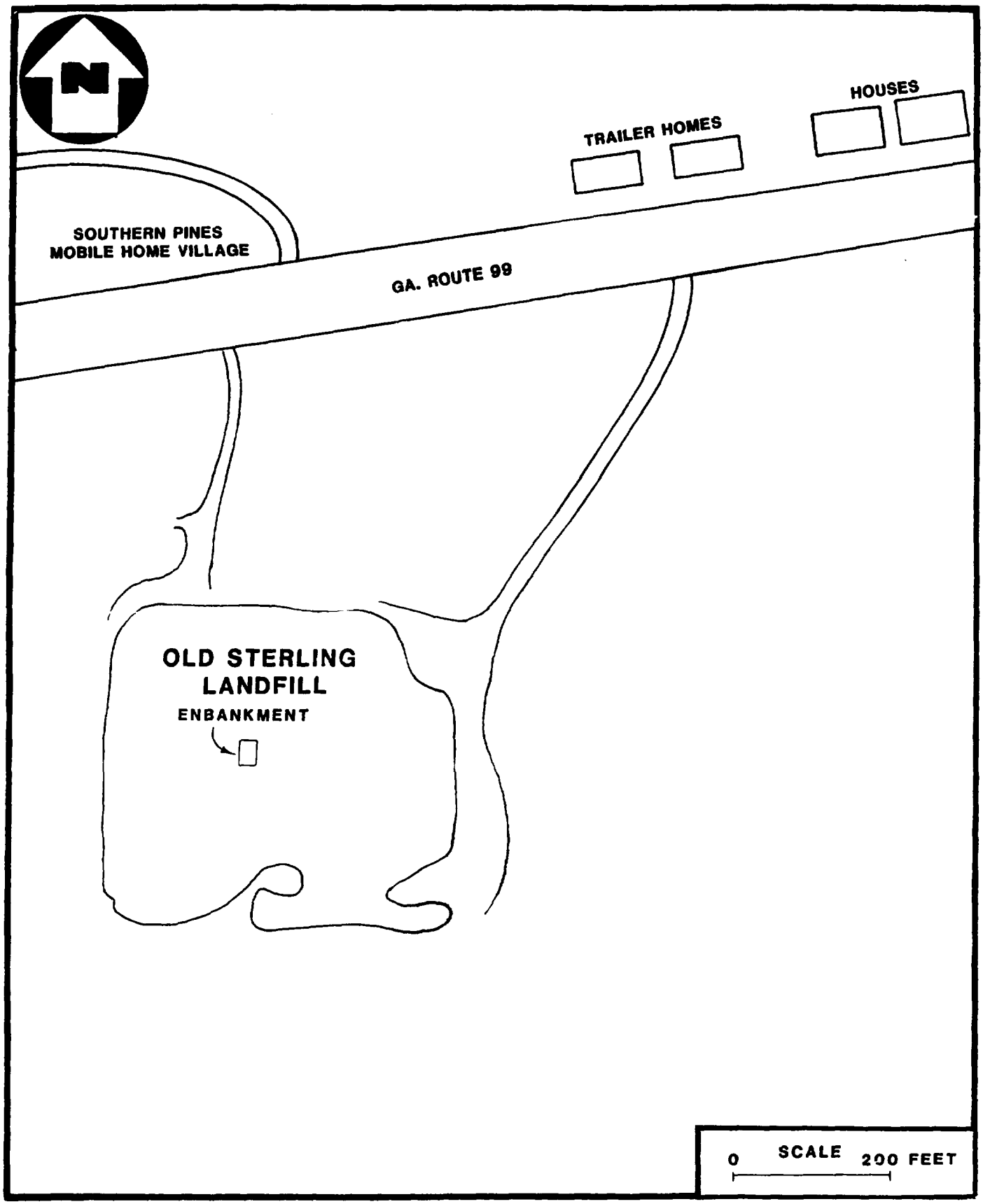


BASE MAP IS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE, STERLING, GEORGIA, 1978.

SITE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE

NUS CORPORATION



SITE LAYOUT MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 2

NUS CORPORATION

indicates that Hercules deposited 265,000 cubic feet of mixed organics, inorganics, solvents, and trash in the landfill. Hercules reported that less than 2 percent of this volume could be considered hazardous (Ref. 7). The state reported that approximately 4,900 tons of pesticides with an estimated 1 percent of toxaphene were also deposited in the landfill (Ref. 1).

3.0 REGIONAL POPULATIONS AND ENVIRONMENTS

3.1 POPULATION AND LAND USE

3.1.1 Demography

The Old Sterling Landfill is located in a sparsely populated area of Highway 99 near Sterling. The population of Brunswick, the county seat, is 17,605. The population of Glynn County is 54,981 (Ref. 8). A house count shows approximately 940 homes within 3 miles of the landfill. The total population within a 4-mile radius is estimated at 6,800 (Appendix A). There are approximately 350 residents within 1 mile and approximately 760 residents between 1 and 2 miles from the landfill (Appendix A). The population within the 2- to 3-mile radius is 2,470 (Appendix A), and the population within the 3- to 4-mile radius is 1,263 (Ref. 9).

3.1.2 Land Use

The landfill has been closed, and the property is currently used as a private hunting preserve. The surrounding properties are residences and tree farms. The landfill property is unfenced (Ref. 2). The closest residence is located approximately 500 feet north of the landfill. There are several residences along Highway 99 north of the landfill (Ref. 2). There are no schools in the immediate vicinity. Although the ranges of at least 10 endangered or threatened species include the landfill area, no critical habitats are designated in Glynn County (Ref. 10). There are several wetland areas throughout the 4-mile radius. A subdivision or trailer park is located 0.5 mile east of the landfill. The area is known as Camp Squawchee or Touchstone Ridge (Appendix A) (Ref. 8).

3.2 SURFACE WATER

3.2.1 Climatology

The climate of Glynn County is warm and humid with warm to hot, humid summers and cool, damp winters. The earliest freeze in Glynn County usually occurs in early December, and the latest freeze usually occurs at the end of February. The county generally experiences approximately 300 frost-free

days each year. The average annual precipitation for the county is 52 inches per year. Net precipitation is 7 inches (Ref. 11). The 1-year, 24-hour rainfall is 4 inches (Ref. 12).

3.2.2 Overland Drainage

The area surrounding the landfill is very flat. The surface water draining from the landfill most likely collects in low areas and percolates into the ground. Any remaining water trends south overland for 0.7 mile and enters an unnamed canal. The canal trends south for 1.8 miles and enters Burnett Creek, which flows southwest for 3.2 miles and enters Cowpen Creek. Cowpen Creek continues south for 0.4 mile and enters the Turtle River, which trends southeast for 9.5 miles. The Turtle River terminates in the Brunswick River, which trends east for about 3 miles and discharges into St Simons Sound. Some channels exist which connect the rivers on this pathway with other rivers in the area (Appendix A).

3.2.3 Potentially Affected Water Bodies

There are no surface water intakes within 15 miles downstream of the site (Ref. 13). Although the ranges of at least 10 endangered or threatened species include the landfill area, no critical habitats are designated in Glynn County (Refs. 10, 14). The rivers in this area support a significant amount of commercial fishing (Ref. 15). Due to the topography of the landfill and surrounding area, surface water would generally percolate into the ground.

3.3 GROUNDWATER

3.3.1 Hydrogeology

Glynn County lies within the Atlantic Coastal Plain Physiographic Province. In the Brunswick area, there are three distinct aquifer systems. These consist of the surficial or water-table aquifer, the water-bearing units in the Miocene sediments that act as one aquifer, and the Upper Floridan aquifer (also known as the principal artesian aquifer) (Ref. 16, p. 183).

Pleistocene to Recent age sediments comprise the surficial aquifer system (Ref. 17, p. E9). These sediments consist primarily of sand, gravel, and thin layers of clay extending from the surface to a depth of approximately 40 to 50 feet below land surface (bls). Layers of pure sand or clay are generally no more than a few inches thick. Layers of sand-clay mixtures are usually less than 5 feet thick (Ref. 16, pp. 185, 188). Medium-grained sand at depths of 12 to 17 feet and 35 to 50 feet furnish

most of the water in the aquifer with yields of approximately 5 to 20 gallons per minute (gpm) (Ref. 17, p. E22). The surficial aquifer receives recharge directly from rainfall, which percolates through the sediments to the shallow water table (Ref. 16, p. 185). Brunswick lies along the Atlantic Coast and flow direction in the surficial aquifer appears to be tidally influenced.

The surficial aquifer is underlain by a thick series of Miocene age clays and sandy clays with lens-shaped bodies of sand, gravel, and thin carbonate layers. Beneath the site area, the unconsolidated Miocene sediments are approximately 450 feet thick. Upper Miocene gravelly sand and thin limestone beds form the system of Miocene aquifers They yield sufficient water for domestic and small industrial needs. Domestic supplies of up to 20 to 50 gpm can be obtained throughout Glynn County from wells that are 100 to 180 feet deep (Ref. 17, p. E23). These aquifers receive recharge directly from rainfall where they outcrop and from percolation of water from the overlying water-table aquifer system (Ref. 18, p. 152). Logs from domestic wells drilled in the Sterling area show the presence of a 15- to 20-foot thick clay layer which occurs approximately 120 feet bls (Ref. 19). Due to the limited amount of subsurface data, it is not known if the clay layer is continuous over the 2-mile site radius.

The Miocene aquifer system is hydraulically separated from the underlying Upper Floridan aquifer by thick sequences of dense, greenish gray, sandy clay of the Hawthorn Group ranging from 40 to 160 feet (Refs. 16, p. 185; 17, p. E10). These low-permeability sediments act as confining layers that prevent or retard the upward movement of artesian water from the Upper Floridan aquifer, as well as the downward movement of water from the overlying aquifers (Ref. 16, p. E11).

The Upper Floridan aquifer underlies most of the Georgia coastal plain and consists of limestones of early Miocene and Oligocene age, as well as the Ocala Limestone of late Eocene age. The Oligocene Series consists of phosphatic, sandy, fossiliferous, slightly dolomitic limestone. The sand is fine- to medium-grained, and black, polished phosphate pebbles are common. The Ocala Limestone is a porous, recrystallized, white to gray, bryozoan limestone. The pore spaces consist mostly of solution cavities. Caverns ranging from 2 to 7 feet in height are also present (Ref. 17, pp. E11, E12). While these solution cavities are normally indicative of karst topography, they are deep enough so that there is no surface expression of karst features (such as a sinkhole) in this area. These sediments form a continuous bed of limestone that is water bearing throughout its extent (Refs. 17, p. E25; 18, p. 70). In the site area, the top of the aquifer is found at a depth of approximately 500 feet bls, and the aquifer is approximately 530 feet thick (Ref. 16, pp. E11, E12).

In the coastal areas of Georgia, nearly all the groundwater is pumped from the Upper Floridan aquifer. Heavy pumping has created a cone of depression around Brunswick with flow in the aquifer toward the center of the cone (Figure 3). Because the Upper Floridan aquifer in the coastal area is confined and far from its recharge area, the aquifer is not influenced by local rainfall (Ref. 18, p. 108).

Sedimentary rocks of the Claiborne Group underlie the Upper Floridan aquifer. The upper portion of the Claiborne Group is a hard, dense, cherty, dolomitic limestone present at approximately 1,030 feet bls. This low-permeability unit acts as a confining layer between the freshwater in the Upper Floridan aquifer and the brackish water that occurs below this confining layer (Ref. 17, p. E13).

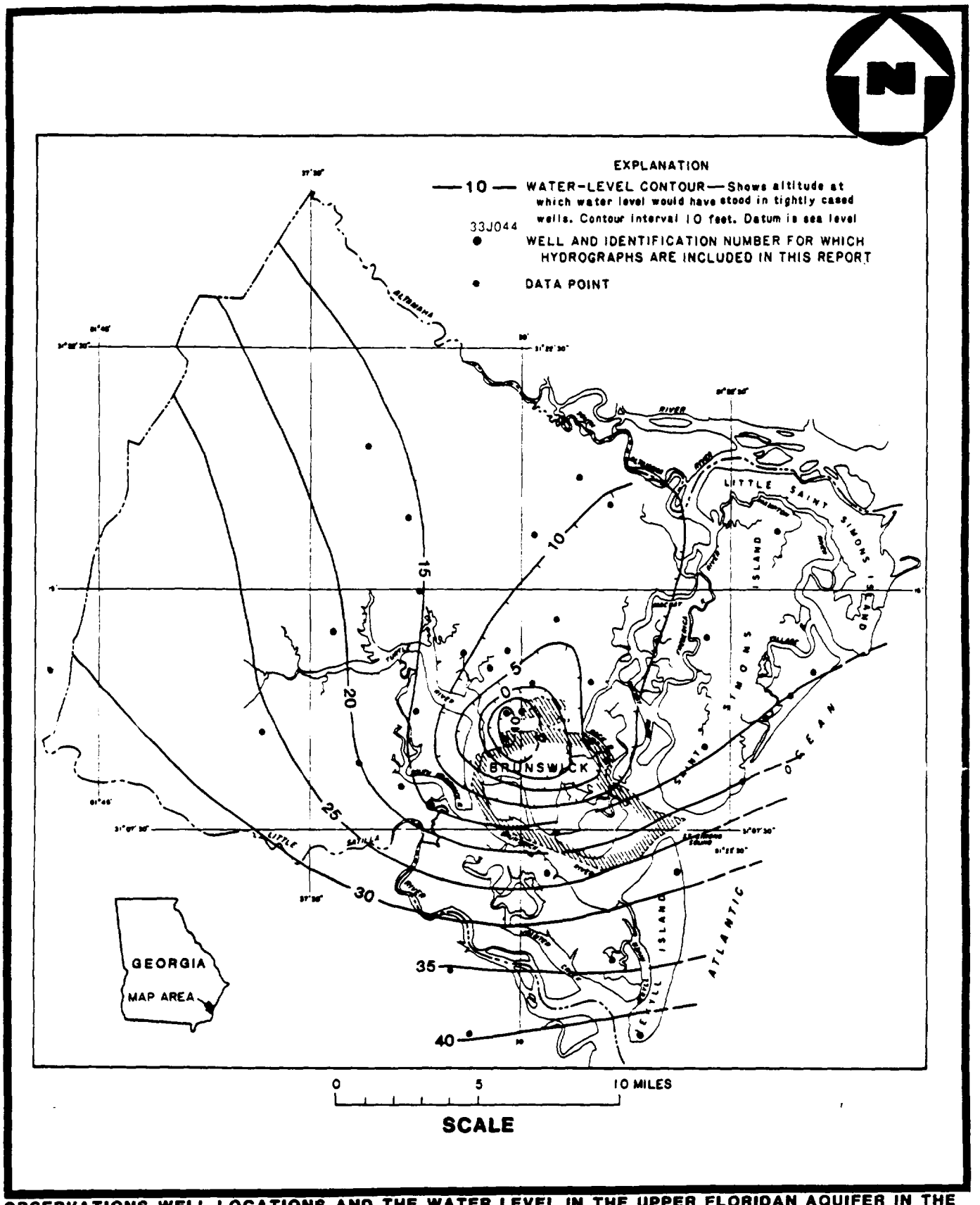
3.3.2 Aquifer Use

The surficial aquifer generally occurs in two water-bearing zones, one between approximately 12 to 17 feet bls, and one between 35 to 50 feet bls. Water yields of 5 to 20 gpm can be obtained from this aquifer, which is suitable for small domestic supplies (Ref. 17, p. E22). Domestic and small industrial wells are completed in sediments of the Hawthorn Group at depths of 140 to 500 feet bls and can produce water at rates between 2 to 500 gpm, with the deep wells giving the higher yields (Refs. 16, p. 187-189; 19).

The water needs of communities within 4 miles of the landfill are either served by the Brunswick Water System, the Glynn County Water System, or by private wells. The Brunswick Water System obtains its water from wells that are located more than 4 miles from the landfill (Ref. 20, Appendix A). The Glynn County Water System supplies about 110 connections from three wells. These wells are about 750 feet deep, and all are within 4 miles of the facility. The closest county well is 2.1 miles southeast of the landfill and serves 100 of the county's connections (Ref. 21, Appendix A). The remaining 10 connections are served by the other two county wells (Ref. 21). A house count shows approximately 940 homes within 3 miles of the landfill which are not served by one of the municipal water systems (Refs. 2, 18, 20, Appendix A). It is estimated that 95 percent of these homes obtain their water from wells cased to 120 feet bls or more. No shallow dug wells are still in use in this area (Ref. 19). The nearest private well is located 500 feet north of the landfill (Ref. 2, Appendix A).

3.4 SUMMARY OF POTENTIALLY AFFECTED POPULATIONS AND ENVIRONMENTS

The groundwater pathway is the main concern since groundwater is used for drinking, commercial, and industrial supplies. The county water system's wells are within 4 miles of the landfill. The closest



OBSERVATIONS WELL LOCATIONS AND THE WATER LEVEL IN THE UPPER FLORIDAN AQUIFER IN THE BRUNSWICK AREA, OCTOBER 1986. (REF. 22).

OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 3

NUS CORPORATION

county well is 2.1 miles southeast of the landfill. Also, it is estimated that 940 homes within 3 miles of the landfill are not served by a municipal water system (Ref. 2, Appendix A). The nearest private well is located 500 feet north of the landfill (Appendix A). Surface water in the landfill area is not of concern because runoff from the site most likely percolates into the ground.

The air and onsite pathways are not of concern because no significant amount of contaminants were present in surface soils.

4.0 FIELD INVESTIGATION

4.1 FIELD ANALYTICAL SUPPORT PROJECT

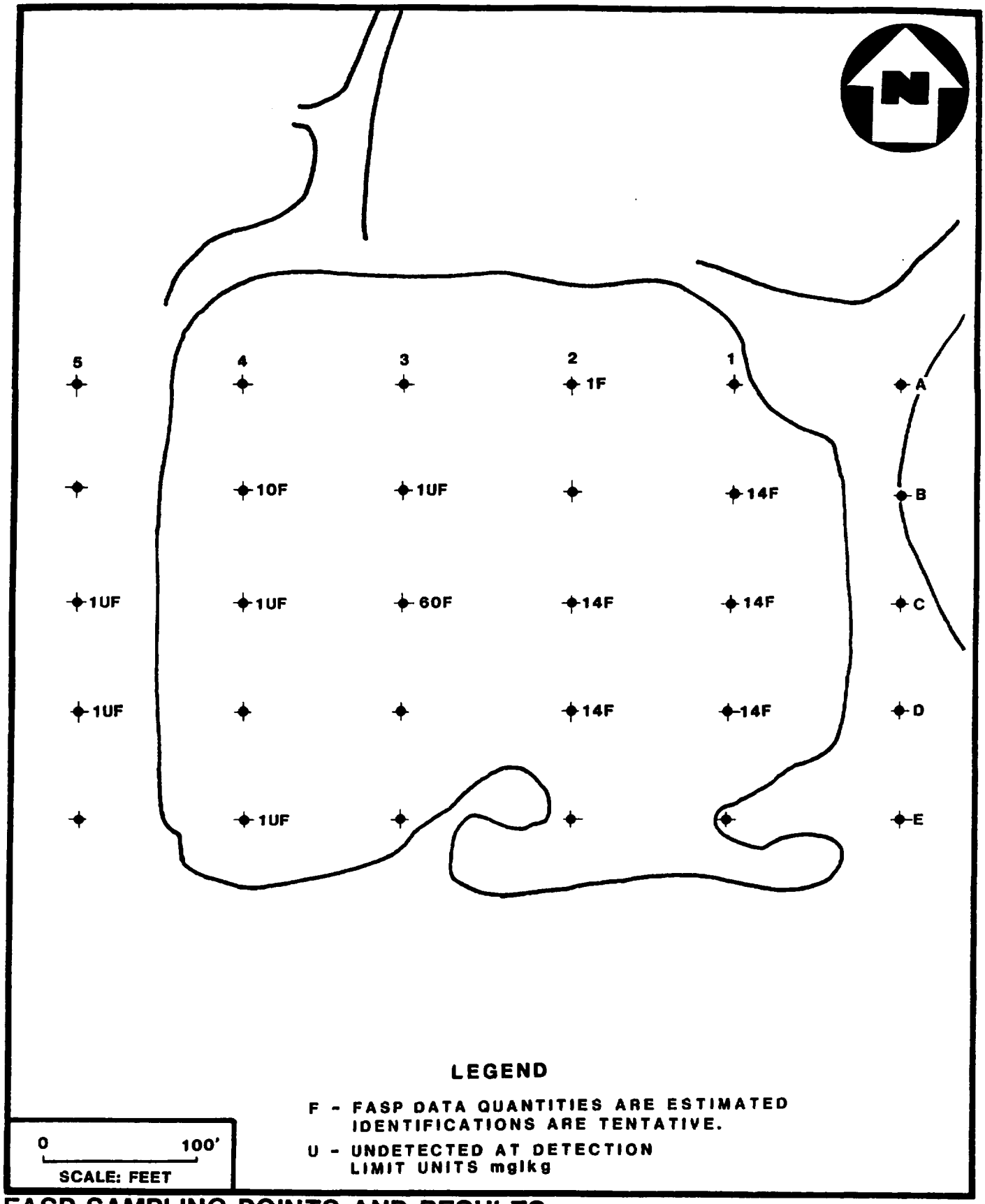
The Field Analytical Support Project (FASP) was employed at this site to assist in determining locations for collected samples to be analyzed under the Contract Laboratory Program (CLP). A mobile laboratory was set up and operated near the site. Since historical information indicated that toxaphene, an organic chlorinated compound was disposed of at this landfill, soil samples were screened by FASP for an indication of the presence of these compounds.

Prior to the FASP screening, a sampling grid was laid out at the landfill. The size of the grid was 400 by 500 feet with an approximate distance of 100 feet between sampling points. Thirteen samples were collected and analyzed during the FASP screening. Samples were collected at depths varying from 0 to 5 feet below land surface (bls). The FASP screening results indicated a specific area of chlorinated organic compound contamination at the landfill as illustrated in Figure 4 (Ref. 5). Eight of the 13 samples collected during the FASP screening were found to be contaminated. FASP screening data indicated the area near the loading embankment contained the highest concentrations of chlorinated organic compounds in the subsurface soil (Ref. 5). CLP sampling points OS-SS-02, OS-SB-02, and OS-TW-02 were moved to this area. Subsequent CLP analytical data revealed that toxaphene was present in the subsurface soil (Appendix C).

Data generated during the FASP screening are not intended to support listing or any enforcement action. The primary purpose was to help direct CLP sampling activities. Secondarily, the screening data has been used, with supporting CLP analytical results, to help characterize the landfill as to extent of contamination. Screening data was also used to support health and safety decisions, such as requirements for personal protective equipment. FASP methodology is described in Appendix B.

4.2 CONTRACT LABORATORY PROGRAM SAMPLE COLLECTION

The following discussion pertains to samples collected for analysis under the CLP.



FASP SAMPLING POINTS AND RESULTS
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 4

NUS CORPORATION

4.2.1 Sample Collection Methodology

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3 and 4 of the Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division, April 1, 1986

4.2.2 Split Samples

Split samples were offered to Robert S. Hicks Jr., District Forester, Georgia-Pacific Corporation. The samples were declined (Ref. 5).

4.2.3 Description of Samples and Sample Locations

Sixteen environmental samples were collected during the inspection: one private well sample, four surface soil samples, one waste sample, four subsurface soil samples, one leachate sample, and five temporary well samples. Samples were collected on site to establish the types of contaminants present. A surface, subsurface, and groundwater sample were taken from four landfill locations: surface and subsurface on the westside, the southwest corner, the southside, and the eastside, respectively. The soil surface and subsurface background samples were collected from a location north of the landfill, adjacent to Highway 99. Offsite samples were collected next to the road, near the gate to the landfill, and across Highway 99 at the nearest residence. Sample code descriptions and rationale are presented in Table 1 and Figure 5, respectively. Subsurface soil samples were collected at depths of 3 to 5 feet. Water at the temporary well locations was encountered at 3 to 5 feet bls (Ref. 5). The offsite private well is approximately 146 feet deep and upgradient of the landfill (Ref. 5). The waste sample OS-WS-05, which had a jelly-like appearance and consistency and gray in color, was collected on the east side near the edge of the landfill. The leachate sample, the same substance as the waste, was also collected at this location.

4.2.4 Field Measurements

Several field measurements were recorded for all of the groundwater samples collected including temperatures of the samples at the time of collection, pH, and conductivity. Field measurements for the water samples are provided in Table 2.

TABLE 1

SAMPLE CODES, DESCRIPTIONS, AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Description	Rationale
OS-PW-01	Groundwater sample taken from private residence north of landfill, depth of well is 146 feet.	To determine the presence or absence of contaminants in the Floridan aquifer.
OS-SS-01	Background sample taken from a location north of landfill adjacent to Hwy 99 and access road. Sample collected between 0 to 4 inches bls.	To establish background parameters.
OS-SS-02	Source sample taken from area near embankment area identified by FASP Sample #3C as contaminated. Sample collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SS-03	Source sample taken from area located southwest of the landfill. Sample collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SS-04	Source sample taken from area south of landfill. Collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-WS-05	Waste sample collected from the east side of the landfill. Substance had jelly-like appearance. Collected 0 to 4 inches bls.	To determine the presence or absence of contaminants.
OS-SB-01	Background sample taken from same location as OS-SS-01. Saturated soil collected 3 to 5 feet bls.	To determined background subsurface soil conditions.
OS-SB-02	Source sample identified by FASP as a contaminated area. Saturated soil collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-SB-03	Source sample from same hole as OS-SS-03. Saturated soil collected between 3 to 4 feet bls.	To determine the presence or absence of contaminants.

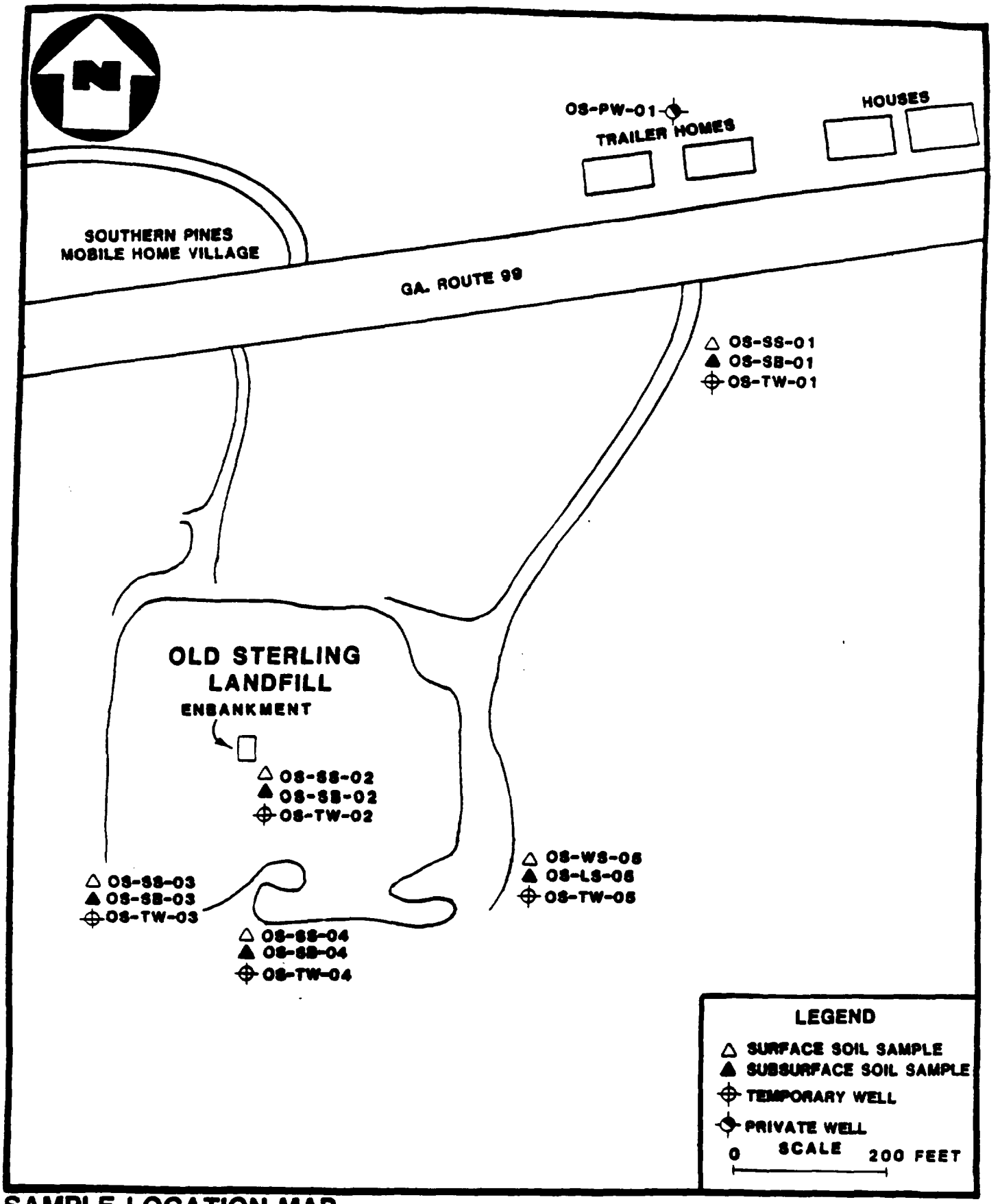
OS - Old Sterling Landfill
PW - Groundwater, Private Well
SS - Surface Soil
WS - Waste Sample
SB - Subsurface Soil
LS - Leachate Sample
TW - Groundwater, Temporary Well

TABLE 1

SAMPLE CODES, DESCRIPTIONS, AND RATIONALE
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Description	Rationale
OS-SB-04	Source sample from same location as OS-SS-04. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-LS-05	Leachate sample collected from material leaching from ground near OS-WS-05	To determine the presence or absence of contaminants.
OS-TW-01	Groundwater sample collected upgradient from the landfill at the same location as OS-SS-01 and OS-SB-01. Collected 3 to 5 feet bls.	To establish background parameters.
OS-TW-02	Groundwater sample collected from area identified by FASP. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-03	Groundwater sample collected from same location as OS-TW-03. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-04	Groundwater sample collected from same location as OS-SS-04. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.
OS-TW-05	Groundwater sample taken from same location as OS-WS-05. Collected 3 to 5 feet bls.	To determine the presence or absence of contaminants.

OS - Old Sterling Landfill
PW - Groundwater, Private Well
SS - Surface Soil
WS - Waste Sample
SB - Subsurface Soil
LS - Leachate Sample
TW - Groundwater, Temporary Well



SAMPLE LOCATION MAP
OLD STERLING LANDFILL
STERLING, GEORGIA

FIGURE 5

NUS CORPORATION

TABLE 2

FIELD MEASUREMENTS
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

Sample Code	Date (1989)	Time (hrs)	Temp. (°C)	pH	Conductivity (umhos/cm)
OS-PW-01	10/17	1055	23	7.0	250
OS-TW-01	10/16	1230	25	6.1	95
OS-TW-02	10/17	1300	27	6.5	850
OS-TW-03	10/17	1130	26	6.0	200
OS-TW-04	10/17	1000	24	6.9	680
OS-TW-05	10/17	NO	NO	NO	NO

OS - Old Sterling Landfill
PW - Private Well
TW - Temporary Well
NO - Not Obtained

4.3 CONTRACT LABORATORY PROGRAM SAMPLE ANALYSIS

The following discussions pertain to samples analyzed under the CLP.

4.3.1 Analytical Support and Methodology

All samples collected were analyzed under the Contract Laboratory Program (CLP) and analyzed for all parameters listed in the Target Compound List (TCL). Organic analysis of soil and water samples was performed by Aquatec, Inc., ETC, Toxicon & ESD, Athens, Georgia. Inorganic analysis of soil and water samples was performed by Southwest Labs of Oklahoma.

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; revised June 1, 1985 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

4.3.2 Analytical Data Quality

All analytical data were subject to a quality assurance review as described in the EPA, Environmental Services Division laboratory data guidelines. In the tables, some of the concentrations of the organic and inorganic parameters have been flagged with a "J". This indicates that the qualitative analysis was acceptable, but the quantitative value has been estimated. A few other compounds are flagged with an "N" indicating that they were detected based on the presumptive evidence of their presence. This means that the compound was tentatively identified, and its detection cannot be used as positive identification to its presence. The complete analytical data sheets are presented in Appendix C.

4.3.3 Presentation of Analytical Results

Throughout the following discussion of analytical results, the concentrations of some of the contaminants detected have been described as "significant". This means that the concentration was either three times that found in the background sample or it was three times the minimum quantitation limit of the background sample (MQL).

Sixteen samples, including a waste sample and a leachate sample, were collected and analyzed. Sample analyses detected several inorganic constituents of concern in three groundwater samples collected on site. Sample OS-TW-02 had an estimated concentration of 38 ug/l lead (12.7 times MQL), 230 ug/l manganese (17.7 times background), and 15 ug/l vanadium (3.75 times MQL). Sample OS-TW-04 contained 7 ug/l selenium (3.5 times MQL), and sample OS-TW-05 contained 190 ug/l barium (7.9 times background) and 510 ug/l manganese (39 times background). No significant concentrations of inorganic constituents were found in the soil samples. Inorganic analytical results can be found in Tables 3, 4, and 5.

Significant concentrations of organic constituents were found in one subsurface soil sample, two groundwater samples, and the leachate sample. Toxaphene, a pesticide reportedly disposed of at the landfill, was found in the subsurface soil sample, OS-SB-02, at a concentration of 150,000 ug/kg (714 times MQL). Other contaminants found in this sample were two tentatively identified compounds with a total estimated concentration of 11,000 ug/kg and 18 unidentified compounds having a total estimated concentration of 20,000 ug/kg. In the groundwater sample, OS-TW-02, 15 tentatively identified organic compounds with a total estimated concentration of 99,530 ug/l were detected. Some of these compounds are terpenes or derivatives of terpenes, which occur in wood and wood tar products. The second groundwater sample, OS-TW-05, contained small, estimated concentrations of six tentatively identified compounds. The leachate sample, OS-LS-05, contained several compounds associated with soaps and cleaning agents. Organic analytical results can be found in Tables 6, 7, and 8.

4.4 SUMMARY OF FIELD INVESTIGATION

The compound of major concern found at the landfill was toxaphene. Toxaphene was reported to be disposed of at the landfill. The FASP results showed an area of chlorinated organic compound contamination. This area was FASP location 3C. The FASP concentration was 60 mg/kg (Figure 4). A CLP sample, OS-SB-02, was collected from the same location. The amount detected in sample OS-SB-02 was 150,000 mg/kg for toxaphene. The CLP finding confirmed the FASP finding of organic contamination. Both results confirm that toxaphene was disposed of at the site. Barium, lead, manganese, selenium, and vandium were also found in groundwater samples.

TABLE 3

SUMMARY OF INORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

	Private Well	Upgradient	Onsite			
PARAMETERS (ug/l)	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
ALUMINUM	-	9900	12,000	15,000	1900	12,000
BARIUM	12	24	56	41	21	190
CALCIUM	64,000	1800	180,000	22,000	35,000	140,000
CHROMIUM	-	12	14	14	-	8
IRON	320J	920J	13,000J	1300J	260J	38,000J
LEAD	-	3U	38J	-	-	-
MAGNESIUM	2800	740	18,000	6100	9500	11,000
MANGANESE	61	13	230	16	-	510
MERCURY	-	0.2J	-	-	-	-
NICKEL	-	10U	26	-	-	-
POTASSIUM	1000	410	6700	7500	19,000	38,000
SELENIUM	-	2U	-	-	7	-
SODIUM	9000	11,000	31,000	8200	120,000	150,000
VANADIUM	-	4U	15	7	6	8

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 4

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (mg/kg)	Background	Onsite		
	OS-SB-01	OS-SB-02	OS-SB-03	OS-SB-04
ALUMINUM	3500	3800	4300	4900
BARIUM	40J	3.2	2.2	5.4
CALCIUM	400	230	-	-
CHROMIUM	4.5	2.6	4	3.6
IRON	380J	290J	270J	650J
MAGNESIUM	32	37	38	120
MANGANESE	2.6	1.4	-	3.2
VANADIUM	10	1.9	-	2.2

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 5

SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

	Background	Onsite				
PARAMETERS (mg/kg)	OS-SS-01	OS-SS-02	OS-SS-03	OS-SS-04	Waste OS-WS-05	Leachate OS-LS-05
ALUMINUM	3700	3400	4600	6000	700	3400
BARIUM	12	2.3	6.7	14	7.3	5.8
CALCIUM	150	220	92	86	13,000	1520
CHROMIUM	5.2	2.9	2.6	2.9	1.4	2.5
COPPER	50UJ	-		8.9J	1.8	8.2J
IRON	6000J	290J	1400J	1800J	480	840J
LEAD	9.3J	-	-	-	-	23J
MAGNESIUM	120	52	110	170	350	220
MANGANESE	53	1.3	4.7	12	8.6	6.2
SODIUM	70U	20	-	-	14,000	14,000
VANADIUM	3U	-	2.9	3.6	2	2.1
ZINC	7U	-	-	-	5.2	-
STRONTIUM	NA	NA	NA	NA	19	NA
TITANIUM	NA	NA	NA	NA	31	NA

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
NA Not Analyzed
U Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 6

SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/l)	Private Well	Upgradient	Onsite			
	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
PURGEABLE COMPOUNDS						
CARBON DISULFIDE	-	5U	-	-	-	21
CARENE[1]			600JN			
DIMETHYMETHYLENEHIPTADIENE[1]			200JN			
ETHYL BENZENE	-	5U	30J			-
ETHYLDIMETHYLBENZENE[1]			3000JN			
TRIMETHYLBICYCLOHEPTANONE[1]			700JN			
UNIDENTIFIED COMPOUNDS/NO[1]		-	3000J 3	-	-	-
EXTRACTABLE COMPOUNDS						
PHENOL	-	10U	-	4J	-	-
N-NITROSODIPHENLYAMINE/DIPHENYLAMINE	-	10U	-	-	-	19
PINENE[1]			5000JN			
CAMPHENE[1]			2000JN			
TRIMETHYLBICYCLOHEPTANE[1]			40,000JN/2			
METHYL(METHYLETHYL)OXABICYCLOHEPTANE[1]			4000JN			
METHYL(METHYLETHYL)BENZENE[1]			10,000JN			

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit.
1 Tentatively identified compound (TIC) This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined

TABLE 6

SUMMARY OF ORGANIC ANALYTICAL RESULTS
GROUNDWATER SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/l)	Private Well	Upgradient	Onsite			
	OS-PW-01	OS-TW-01	OS-TW-02	OS-TW-03	OS-TW-04	OS-TW-05
CINEOLE[1]			3000JN			
DIMETHYLBICYCLOHEPTANONE[1]			2000JN			
CAMPHOR[1]			20,000JN			
TRIMETHYLBICYCLOHEPTANOL[1]			8000JN			
METHYL(METHYLETHYL)PHENOL[1]			1000JN			
TETRAMETHYLBUTYLPHENOL[1]						9JN
BENZOTHIAZOLONE[1]						50JN
TRIMETHYLHEXANOIC ACID[1]						20JN
OXYBISBENZENE[1]						20JN
TETRAMETHYLPHENANTHRENE[1]						20JN
UNIDENTIFIED COMPOUNDS/NO[1]	-	-	10,000J/4		-	40J/2

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

TABLE 7

SUMMARY OF ORGANIC ANALYTICAL RESULTS
SUBSURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/kg)	Background	Onsite		
	OS-SB-01	OS-SB-02	OS-SB-03	OS-SB-04
PURGEABLE COMPOUNDS				
TOLUENE	10U	5J		3J
TRIMETHYLBICYCLOHEPTANE[1]		1000JN		
EXTRACTABLE COMPOUNDS				
OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENECARBOXALDEHYDE[1]		10,000JN		
UNIDENTIFIED COMPOUNDS/NO[1]	-	20,000J 18	-	-
PESTICIDE\PCB COMPOUNDS				
TOXAPHENE	210U	150,000		-

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit.
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

TABLE 8

SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES
OLD STERLING LANDFILL
STERLING, GLYNN COUNTY, GEORGIA

PARAMETERS (ug/kg)	Background	Onsite				
	OS-SS-01	OS-SS-02	OS-SS-03	OS-SS-04	Waste OS-SS-05	Leachate OS-LS-05
PURGEABLE COMPOUNDS						
CHLOROFORM	3J	-	-	-	-	-
METHYL ISOBUTYL KETONE	17U	-			-	12J
TOLUENE	90	-	15	11	-	-
TRIMETHYLBICYCLOHEPTANE[1]						20JN
EXTRACTABLE COMPOUNDS						
(3-AND/OR 4-)METHYLPHENOL	350U	-			-	89J
HEXANOIC ACID[1]						500JN
HEXADECANOIC ACID[1]						2000JN
OCTADECANOIC ACID[1]						700JN
DIHYDROBENZODIOXEPIN[1]						800JN
OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE CARBOXYLIC ACID METHYLESTER[1]		200JN				
UNIDENTIFIED COMPOUNDS/NO	-	-	600J/1	1000J/1	-	10,000J/9

- Material analyzed for but not detected above minimum quantitation limit
J Estimated value
N Presumptive evidence of presence of material
U Material was analyzed for but not detected. The number is the minimum quantitation limit.
1 Tentatively identified compound (TIC). This compound not on CLP Target Compound List (TCL) and is reported only as detected in individual samples; MQL not determined.

5.0 SUMMARY

The groundwater pathway is of primary concern due to the number of homes in the area that use groundwater. Also, the county's water system wells are located within the 4-mile radius of the site. Analytical results of samples collected during the field investigation indicated groundwater and soil contamination at Old Sterling Landfill. The air and onsite pathways are not of concern since no contaminants were found significantly above background in surface soils. It is estimated that approximately 940 homes are not served by a municipal water system and are using private wells.

Contaminants were present in leachate, subsurface soil, and groundwater samples. A subsurface soil sample, OS-SB-02, contained an elevated concentration of toxaphene at 714 times the MQL of the background sample. This sample result supports file material information stating that toxaphene was disposed of at the landfill. Toxaphene is a suspected human carcinogen. The following heavy metals were detected in groundwater samples: barium, lead, manganese, selenium, and vanadium; no toxic organic contaminants were found. Based on the potential for migration of contaminants to the aquifer of concern, it is recommended that a Listing Site Investigation be conducted at Old Sterling Landfill.

REFERENCES

1. Potential Hazardous Waste Site Identification and Preliminary Assessment (EPA Form T2070-2) for Old Sterling Landfill. Filed by Jennifer Kaduck, Georgia Department of Natural Resources, January 15, 1980.

2. NUS Field Logbook No. F4-1279 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of facility reconnaissance, March 3, 1989.

3. Robert Howe, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

4. Morgan Cantrell, Georgia Environmental Protection Division, Municipal Solid Waste Management, telephone conversation with Geoffrey Carton, March 22, 1989. Subject: Hazardous materials at the Old Sterling Landfill.

5. NUS Corporation Field Logbook No. F4-1738 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of Phase II, Screening Site Inspection, October 16, 1989.

6. Olin Chancy, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the Old Sterling Landfill.

7. EPA Notification of Hazardous Waste Site (EPA Form 8900-1) for Hercules Incorporated, Brunswick, Georgia. Filed by K.T. Horton, Hercules, Inc., May 29, 1981.

8. Brunswick Golden Isles Chamber of Commerce, Brunswick and Vicinity (1980), scale 1:250,000.

9. U.S. Environmental Protection Agency, Graphical Exposure Modeling System (GEMS) Data Base, compiled from U.S. Bureau of the Census data (1980).

10. U.S. Fish and Wildlife Service, Atlantic Coast Ecological Inventory, Georgia (1980), scale 1:250,000.

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

12. U.S. Department of Commerce, Rainfall Frequency Atlas of the United States, Technical Paper No. 40 (Washington, D.C.: GPO, 1961), p. 93.

13. Brenda Pittman, Environmental Protection Division, telephone conversation with Walter Riley, NUS Corporation, April 27, 1990. Subject: Intakes within 15 miles of Sterling.

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

15. Nelson Johnson, National National Marine Fisheries Service, U. S. Department of Commerce, letter to Bob Donaghue, NUS Corporation, February 10, 1989. Subject: Transmittal of preliminary fish landings data.

16. Thomas Watson, "Aquifer Potential of the Shallow Sediments of the Coastal Area of Georgia," in Proceedings of the Second Symposium on the Geology of the Southeastern Coastal Plain, Information Circular 53 (1982), pp. 183-194.

17. Robert Wait, Geology and Occurrence of Fresh and Brackish Ground Water in Glynn County, Georgia, Geological Survey Water-Supply Paper 1613-E (Washington, D.C.: GPO, 1965), pp. E9-E26.

18. J.S. Clarke, et al. Ground-Water Data for Georgia, Open-File Report 87-376 (Doraville, Georgia, 1987), pp. 70-177.

19. Gerald Nix, Nix Well Drilling, telephone conversation with Geoffrey Carton, NUS Corporation, March 23, 1989. Subject: Wells in the Sterling area.

20. NUS Corporation Field Logbook No. F4-1282 for LCP Chemicals, Inc., TDD No. F4-8902-27. Documentation of facility reconnaissance, March 3, 1989.

21. Ralph Thurston, Superintendent, Glynn County Water Department, telephone conversation with Geoffrey Carton, NUS Corporation, April 20, 1989. Subject: County water service and well locations.

APPENDIX A

OVERSIZED

DOCUMENT

APPENDIX B

ORGANIC SCREENING PROTOCOLS

February 1988

NUS FIT IV

Edited by:

John Morrow
FASP Group Leader

Approved by:

Murray Warner, P.E.
Regional Project Mgr.

DRAFT

METHOD: Pesticide/PCB Quick Indicator Screen

RAPID SCREEN FOR INDICATIONS OF ORGANOCHLORINE PESTICIDES AND PCBs

Note: This method is based on SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS. Most sections of that method apply to this method.

1.0 SCOPE AND APPLICATION

1.1 This method describes the very rapid screening of water and soil/sediment samples for indications of organochlorine pesticides and polychlorinated biphenyls (PCBs). It is not intended to identify compounds, but to provide a very rapid, gross estimate of total chlorinated organic compounds.

1.2 Results are reported as "Total Chlorinated Organic Compounds, Estimated."

1.3 This method utilizes solvent extraction and gas chromatography (GC).

1.4 Detection limits vary widely with compounds and sample matrices. If required, detections limits should be determined for individual compounds, projects or sample groups.

1.5 Data generated by this method are not appropriate for listing or enforcement purposes. Data may be useful to provide indications of relative contamination, for selection of samples for standard EPA (CLP) analysis or to help characterize a site, supported by CLP data.

1.6 This method is recommended for use only by, or under the close supervision of, experienced residue analysts.

2.0 SUMMARY OF METHOD

Samples are solvent extracted. (Hexane is used for organochlorine compounds.) The extracts are analyzed by GC, using fused silica capillary column(s) and electron capture detector (ECD) or electrolytic conductivity detector (ElCD, Hall). Results are calculated from total area (excluding surrogates) and reported as "Total Chlorinated Organic Compounds, Estimated."

DRAFT

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

3.2 Interferences by phthalate esters can pose major problems in pesticide determinations when using the electron capture detector (ECD). Common plastics contain varying amounts of phthalates. Interferences from phthalates can best be minimized by avoiding contact with any plastic materials. The interference from phthalate esters can be completely eliminated with a microcoulometric or electrolytic conductivity detector (ElCD, Hall).

4.0 APPARATUS AND MATERIALS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

4.1 Gas chromatograph

4.1.1 **Gas Chromatograph:** [no changes]

4.1.2 **Column:** DB-1, 5 m x 530 um, fused silica capillary, (J & W Scientific, or equivalent).

4.1.3 **Detector(s):** Electron capture (ECD) or halogen-specific (i.e., electrolytic conductivity, ElCD, Hall).

5.0 REAGENTS

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

6.0 SAMPLE STORAGE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

DRAFT

7.0 PROCEDURE

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following changes:

7.4 Gas chromatographic analysis:

7.4.1 Recommended GC conditions:

Column oven temperature	230 °C
Injection port temperature	250 °C
Detector temperature	350 °C
Carrier gas	Helium
Carrier gas flow rate	5 - 10 ml/min
ECD purge (make-up) gas	5% methane:95% argon (P-5)
P-5 flow rate	40 - 70 ml/min

These conditions can be expected to result in total run times of about 5 minutes.

7.4.2 The GC conditions described will result in very poor separation of components. Do not expect to identify individual compounds by this method.

7.4.3 Inject 1 to 2 ul of extract. The use of an autosampler is highly recommended, to achieve reasonable precision at small injection volumes. See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, for injection sequence.

7.5 Calculations

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, with the following modifications:

To some extent, detector response varies among analytes. If a specific analyte is being targeted at a given site, calibration may be performed for this analyte. Otherwise calibrate with aldrin. Calculate response factor (RF) as the ratio of amount injected divided by total area:

$$RF = \text{Amount/area}$$

DRAFT

For all samples, tabulate total area and surrogate area. Calculate net area by subtracting surrogate area from total area, and tabulate. Calculate "Total chlorinated organic compounds, estimated", as follows:

$$\text{Total} = \text{RF} \times (\text{Net area})$$

$$\text{Net area} = \text{Total area} - \text{Surrogate area}$$

Inform the data user that estimates will vary among analytes, and flag all data "F", field screening data: all quantities estimated, all ID's tentative.

8.0 QUALITY CONTROL

See SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS.

9.0 METHOD PERFORMANCE

New method - no data available.

10.0 REFERENCES

1. SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS, FIT 4 ORGANIC SCREENING PROTOCOLS, February 1988.

2. U. S. EPA SW-846, "Test Methods for Evaluating Solid Waste", Methods 8000, 8080; Revision 0, September 1988.

ADAPTED FROM:

ENVIRONMENTAL PROTECTION AGENCY

REGION IV, ATHENS, GA 30613

SCREENING METHOD FOR EXTRACTABLE ORGANIC COMPOUNDS

1.0 SCOPE AND APPLICATION

1.1 This method describes the rapid screening of water and soil/sediment samples to determine if extractable organic compounds are present. It is designed to identify tentatively a small group of extractable organic compounds (see Tables 1, 2, and 3) that are commonly found at hazardous waste sites.

1.2 All other compounds detected are reported with a retention time and an estimated concentration range.

1.3 This method utilizes gas chromatography.

1.4 Estimated detection limits fro the extractable organics are 5-1000 ug/l (ppb) for water and 0.5-100 ug/g (ppm) for soil/sediment. See Tables 1 and 2 for more details.

1.5 Data generated by this method allows only rapid evaluation of a site. It is used to determine if sampling for complete analyses by standard EPA analytical methods is warranted and where the samples should be taken. The data should not be used for ranking a site or for enforcement purposes since only limited quality control procedures are required and the reported data is qualified as estimated.

2.0 SUMMARY OF METHOD

Samples are solvent extracted; hexane is used for organochlorine pesticides and polychlorinated biphenyls (PCBs) and methylene chloride is used for base/neutral/acids (BNAs). Soil/sediment samples are extracted by liquid-solid extraction and water samples by liquid-liquid extraction. The extracts are analyzed by gas chromatographs equipped with fused silica capillary columns and flameionization and electron capture detectors.

TABLE 1

EXTRACTABLE COMPOUNDS FOR SCREENING ANALYSIS

Compounds	Retention Time min.	Water Quantitation Limit ug/L
Phenol	5:24	100
Naphthalene	9:31	100
Acenaphthene	14:50	100
Pentachlorophenol	18:54	1000
Phenanthrene	19:17	100
Di-n-butylphthalate	21:28	200
Fluoranthene	22:59	100
Pyrene	23:39	200
p-Terphenyl*	24:20	
Chrysene	27:34	500
Bis (2-ethylhexyl) phthalate	28:06	500

EC DETECTABLE COMPOUNDS

Aldrin*		
Aroclor 1260	multipeak	25

* Surrogate compound

TABLE 2

ESTIMATED DETECTION LIMITS FOR EXTRACTABLES

Detector/Compound Type	Water ug/L (ppb)	Sediment/Soil ug/g (ppm)
Flameionization detector		
Polyaromatic hydrocarbons	100-5000	10-500
Phenols	100-10000	10-1000
Other non-halogenated compounds	100-5000	10-500
Electron capture detector		
Aroclor 1260	25	2.5
Most halogenated compounds	5	0.5
Organosulfur, phosphorus, nitrogen or oxygen compounds	50	5

3.0 INTERFERENCES

3.1 Solvents, reagents, glassware and other processing hardware may yield discrete artifacts and/or interferences to sample analyses. Method blanks must be run to demonstrate that the materials are interference-free under the conditions of the analysis.

4.0 APPARATUS AND MATERIALS

4.1 Gas chromatograph: An analytical system complete with a temperature programmable gas chromatograph and all required accessories including analytical columns, gases, detector and printer/plotter capable of retention time labeling of peaks and providing peak height or peak area measurements.

4.1.1 Column: 30m x 0.53 mm ID DB-5,1 micron film thickness, fused-silica capillary column (FSCC) (J&W Scientific or equivalent).

4.1.2 Detector 1: Flameionization detector
Optional detector - Photoionization.

4.1.3 Detector 2: Electron capture detector.

4.2 Balance: Top loading, capable of accurately weighing 0.1 g.

4.3 Glass scintillation vials: At least 20 mL, with screw cap and Teflon or aluminum foil liner. Glass culture tubes with screw caps and Teflon liners may be substituted for water extraction.

4.4 Spatula: Stainless steel or Teflon.

4.5 Serological glass pipets: 5 and 25 ml, disposable.

4.6 Pasteur glass pipets: 1 ml, disposable.

4.7 Bench top centrifuge: (optional) and holders for 20 ml culture tubes. May be used for breaking emulsions.

5.0 REAGENTS

5.1 Sodium sulfate: anhydrous, reagent grade, heated at 400°C for 4 hr., collected in a desiccator and stored in a glass bottle. Baker anhydrous powder, catalog #73898 or equivalent.

5.2 Methylene chloride, hexane: pesticide residue quality or equivalent.

5.3 Sulfuric acid: 1:1 mix equal volume of concentrated sulfuric acid (ACS) with distilled or distilled, deionized water.

5.4 Stock solutions: Commercially prepared stock standards can be used at any concentration if they are certified by the manufacturer or by an independent source.

5.4.1 Prepare stock standard solutions at a concentration of 1.00 ug/ul by dissolving 0.0100 g of assayed reference material in methanol and diluting to volume in a 10 ml volumetric flask. (It may be necessary to use 5-10 percent toluene to dissolve all compounds.) Larger volumes can be used at the convenience of the analyst. When compound purity is assayed to be 96% or greater, the weight can be used without correction to calculate the concentration of the stock standard.

5.4.2 Transfer the stock standard solutions into Teflon-sealed screw-cap bottles. Store at 4°C and protect from light. Stock standards should be checked frequently for signs of degradation or evaporation, especially just prior to preparing calibration standards.

5.4.3 Stock standard solutions must be replaced after six months, or sooner if comparison with check standards indicates a problem.

5.5 Calibration standard: A calibration standard mixture is prepared by dilution of the stock standards. Secondary dilutions may be necessary. The mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml (per compound). The PCB calibration standard is in hexane at a concentration of 0.010 ng/ul for aldrin and 0.25 ng/uL for Aroclor 1260.

5.6 Surrogate standard: The surrogate is p-terphenyl for BNA's and aldrin for PCBs. A stock surrogate solution in methanol should be prepared as described in Paragraph 5.1. The BNA surrogate standard spiking solution is prepared from the stock at a concentration of 500 ug/1 mL in methanol. The PCB surrogate standard spiking solution contains 0.2 ug/1 mL of aldrin in methanol.

5.7 Matrix spike standard: A matrix spike standard is prepared from the appropriate stock solutions as outlined in Paragraph 5.1. The extractable organic mixture contains all BNA compounds in Table 1 at a concentration of 10 ug/ml ~~mL~~ (per compound) in methanol. The pesticide mixture contains 100 ng/ml of each of the sixteen listed pesticides (Table 3).

5.8 Reagent Water: Reagent water is defined as water in which an interferent is not observed at the method detection limit (MDL) of the parameters of interest.

6.0 SAMPLE STORAGE

6.1 The sample must be iced or refrigerated (4°C) from time of collection until extraction.

6.2 All samples must be extracted within 7 days and completely analyzed within 30 days of collection based on sample stability. However, the contract may require a shorter turnaround of data, based on site resampling requirements.

7.0 PROCEDURE

7.1 All samples and standard solutions must be allowed to warm to ambient temperature before analysis. The following procedures show preparation of two extracts for each sample. These two preparations are identical, except for the extraction solvents. Methylene Chloride is used for BNAs, to be detected by FID or PID. Hexane is used for pesticides/PCBs, to be detected by ECD. To prepare extracts for both detectors, perform only a single hexane extraction for each sample. (Do not run methylene chloride on ECD!)

7.2 Extractation of Water

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

```
** PROJECT NO. 90-011    SAMPLE NO. 40534  SAMPLE TYPE. LEACHATE    PROG FLEM: NSF    COLLECTED BY: W RILEY          **
** SOURCE. OLD STERLING LANDFIL                                     CITY: STERLING              ST: GA                **
** STATION ID: LS-05                                                COLLECTION START: 10/17/89  1315   STOP. 00/00/00 **
** CASE.NO.: 12944          SAS NO.:                                D. NO.: Q518                MD NO: Q518           **
**
```

ANALYTICAL RESULTS UG/KG

10000J	9 UNIDENTIFIED COMPOUNDS
500JN	HEXANOIC ACID
2000JN	HEXADECANOIC ACID
700JN	OCTADECANOIC ACID
800JN	DIHYDROBENZODIOXEPIN

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

7.2.1 Pipet two, 15 ml portions of a water sample into two 20 mL disposable tubes. Label one BNA and the other PCB. Add 150 uL of the appropriate surrogate standard to each sample.

7.2.1.1 For the BNA extraction, acidify the sample to pH<2 using sulfuric acid. Add 1.5 mL of methylene chloride, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the lower layer (methylene chloride). Transfer it to a 2 mL GC vial.

7.2.1.2 For the PCB extraction, add 1.5 mL of hexane, cap and shake the vial for 2 minutes. Allow the layers to separate. If an emulsion forms, centrifuge for a few minutes to break it. Use a Pasteur disposable pipet to withdraw about 1 mL of the upper (Hexane) layer. Transfer it to a 2 mL GC vial.

7.2.2 Pipet two 15 mL portions of reagent water into separate 20 mL disposable tubes for the BNA and PCB blanks. Also select a sample to be used as a matrix spike and pipet two portions as for blanks. Add 150 uL or the appropriate surrogate standard to each blank and spike and 150 uL of the appropriate matrix spike to the spike samples. Then proceed with extraction as outlined in 7.2.1.1 and 7.2.1.2.

7.3 <u>Extraction of soil/sediment</u>

7.3.1 Transfer two 2 g portions (record weight to the nearest 0.1g) of sample to separate 20 mL scintillation vials. Wipe the mouth of the vial with a tissue to remove any sample material and record the exact weight of sample taken. Cap the vial before proceeding with the next sample to avoid any cross contamination.

7.3.2 Add 2 g of anhydrous sodium sulfate to the sample in each 20 mL vial and mix well. Additional sodium sulfate (up to 2 g) may be added, to achieve a "free-flowing powder."

7.3.3 Transfer two 2 g portions of anhydrous sodium sulfate into separate 20 mL scintillation vials for BNA and PCB blanks. Also select a sample expected to be relatively low or free of organic contaminants to be used as the matrix spike sample. Set up two, 2 g portions as for the blank and mix with 2 g of sodium sulfate. Add 1 mL of the appropriate surrogate standard to each blank and spike and 1 mL of the appropriate matrix spike to the spike samples.

7.3.4 Immediately add 10.0 mL of solvent to the sample, spike or blanks. Mix throughly (vortex) for 2 minutes.
BNAs: methylene chloride
PCBs: hexane

7.4 Analysis by Gas Chromatography

7.4.1 Recommended GC conditions:

	FTD	ECD
Initial column temperature	60°c	60°C
Initial column holding time	2 min.	2 min.
Column temperature program	8°C/min.	8°C/min.
Final column temperature	280°C	280°C
Final column holding time	16 min.	4 min.
Onjection port temperature	250°C	230°C
Detector temperature	250°C	350°C
Carrier gas flow rate	0.7-1 cm/sec	0.7-1 cm/sec
Carrier gas	helium	helium
Make up gas		95% argon/5% methane

7.4.2 See Figures 1, 2, 3 and 4 for chromatograms. The chromatograms for Aroclors 1242 and 1254 are included to assist in the identification of PCBs.

7.4.3 Inject 4 ul of sample extract. Extracts should be injected in the following sequence:

#1 Reagent blank

#2 Calibration standard

#3 Matrix spike

#4-13 Sample extracts

#14 Solvent blank

#15-24 Sample extracts

#25 Solvent blank*

#26 Calibration standard*

* If less then 20 samples are analyzed in a day, this QC required after the last sample extract.

GC/ECD extracts must be diluted or re-plotted so that the majority of peaks are on scale. This is required so that the PCB pattern is recognizable. No dilutions are required for extracts analyzed by GC/FID unless >50% of the chromatogram is off scale.

7.4.4 Calculate and report results on the data reporting sheet. If extract dilutions are made, record the size of the dilution.

7.5 Calculations

7.5.1 External standard calibration is used for the calculation of the compounds of interest. The concentration of each Table 1 analyte may be determined by the following formulas:

7.5.1.1 Aqueous sample

Concentration (ug/L) = $[(A)(V_t)(D)] / [(V_1)(V_s)]$ where:

A = Detected amount of material injected, ng.

V_1 = Volume of extract injected, ul.

D = Dilution factor if dilution was made on the sample prior to analysis. If no dilution made, D = 1, and is dimensionless.

V_t = Volume of total extract, uL.

V_s = Volume of sample extracted, mL.

7.5.2 Nonaqueous samples

concentration (ug/g) = $[(A)(V_t)(D)] / [(V_1)(W)]$ where:

W = Wet weight of sample extracted, in mg.

A, Vt, D and Vi have the same difinition as for aqueous samples.

7.5.3 Report results without correction for recovery data. Soil/sediment will be reported on a wet weight basis.

7.5.4 Unknown compound concentrations are estimated by using p-terphenyl response for BNAs or aldrin response for ECD compounds.

7.5.5 Report up to maximum of fifteen BNA extractable unknowns and fifteen ECD unknowns. Choose the fifteen that are the highest apparent concentration

8.0 QUALITY CONTROL

8.1 A reagent blank and matrix spike must be extracted with each set of samples, with a maximum of 20 samples per set.

8.2 All samples, blanks, standards and spikes must be spiked with a surrogate standard containing p-terphenyl for the BNA extracts and aldrin for the PCB extracts. Calculate recovery after analysis. If recovery is not within the range of 50-150%, another portion of smple must be analyzed. Report all surrogate data on the appropriate form. If the surrogate recovery still exceeds the ± 50% limits on the second analysis, report the data and footnote that surrogate data was high or low.

8.3 A reagent blank and calibration standard must be analyzed each day at the beginning of the GC analysis sequence. Include a solvent blank after every 10 sample extracts and again at the end of the sequence along with a calibration standard. The maximum number of sample extracts per sequence is 20.

8.3.1 The reagent and solvent blanks must be free of all analytes in Table 1.

8.3.2 The response of the most sensitive analyte inthe calibration standard (50 ng/analyte) must be greater than 30% of full scale.

TABLE 3

ORGANOCHLORINE PESTICIDES

(EPA METHOD 608)

Solutions All .1 mg/ml (100 ug/ml)	5 ml Solutions CAT. NO.
Aldrin	F89S
Dieldrin	F90S
p,p'-DDT	F92S
p,p'-DDE	F93S
p,p'-DDD	F94S
Endosulfan I	F202S
Endosulfan II	F203S
Endosulfan sulfate	F97S
Endrin	F98S
Endrin aldehyde	F99S
Heptachlor	F100S
Heptachlor epoxide	F101S
a-BHC	F102S
b-BHC	F103S
g-BHC	F104S
d-BHC	F105S

APPENDIX C

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: PW-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1655 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q520

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
5U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

EXTRACTABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID. PW-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1655 STOP: 00/00/00

CASE NO : 12944 SAS NO.: D. NO.: Q520

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: PW-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1655 STOP: 00/00/00
D. NUMBER: Q520

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1300 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q517

UG/L	ANALYTICAL RESULTS
500U	PHENOL
500UJ	BIS(2-CHLOROETHYL) ETHER
500U	2-CHLOROPHENOL
500U	1,3-DICHLOROBENZENE
500U	1,4-DICHLOROBENZENE
500U	BENZYL ALCOHOL
500U	1,2-DICHLOROBENZENE
500U	2-METHYLPHENOL
500U	BIS(2-CHLOROISOPROPYL) ETHER
500U	(3-AND/OR 4-)METHYLPHENOL
500U	N-NITROSODI-N-PROPYLAMINE
500U	HEXACHLOROETHANE
500U	NITROBENZENE
500U	ISOPHORONE
500U	2-NITROPHENOL
500U	2,4-DIMETHYLPHENOL
2500U	BENZOIC ACID
500U	BIS(2-CHLOROETHOXY) METHANE
500U	2,4-DICHLOROPHENOL
500U	1,2,4-TRICHLOROBENZENE
500U	NAPHTHALENE
500UJ	4-CHLOROANILINE
500U	HEXACHLOROBUTADIENE
500U	4-CHLORO-3-METHYLPHENOL
500U	2-METHYLNAPHTHALENE
500U	HEXACHLOROCYCLOPENTADIENE (HCCP)
500U	2,4,6-TRICHLOROPHENOL
2500U	2,4,5-TRICHLOROPHENOL
500U	2-CHLORONAPHTHALENE
2500U	2-NITROANILINE
500U	DIMETHYL PHTHALATE
500U	ACENAPHTHYLENE
500U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
2500UJ	3-NITROANILINE
500U	ACENAPHTHENE
2500U	2,4-DINITROPHENOL
2500U	4-NITROPHENOL
500U	DIBENZOFURAN
500U	2,4-DINITROTOLUENE
500U	DIETHYL PHTHALATE
500U	4-CHLOROPHENYL PHENYL ETHER
500U	FLUORENE
2500UJ	4-NITROANILINE
2500U	2-METHYL-4,6-DINITROPHENOL
500U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
500U	4-BROMOPHENYL PHENYL ETHER
500U	HEXACHLOROBENZENE (HCB)
2500U	PENTACHLOROPHENOL
500U	PHENANTHRENE
500U	ANTHRACENE
500U	DI-N-BUTYLPHTHALATE
500U	FLUORANTHENE
500U	PYRENE
500U	BENZYL BUTYL PHTHALATE
1000UJ	3,3'-DICHLOROBENZIDINE
500U	BENZO(A)ANTHRACENE
500U	CHRYSENE
500U	BIS(2-ETHYLHEXYL) PHTHALATE
500U	DI-N-OCTYLPHTHALATE
500U	BENZO(B AND/OR K)FLUORANTHENE
500U	BENZO-A-PYRENE
500UJ	INDENO (1,2,3-CD) PYRENE
500U	DIBENZO(A,H)ANTHRACENE
500U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q517 MD NO: Q517 **

ANALYTICAL RESULTS UG/L

5000JN	PINENE
2000JN	CAMPHENE
40000JN	TRIMETHYLBICYCLOHEPTANE (2 ISOMERS)
4000JN	METHYL(METHYLETHYL)OXABICYCLOHEPTANE
10000JN	METHYL(METHYLETHYL)BENZENE
3000JN	CINEOLE
2000JN	DIMETHYLBICYCLOHEPTANONE
20000JN	CAMPHOR
8000JN	TRIMETHYLBICYCLOHEPTANOL
1000JN	METHYL(METHYLETHYL)PHENOL
10000J	4 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START. 10/17/89 1300 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. D. NUMBER: Q517

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.10U	ALPHA-BHC	1.0U	METHOXYCHLOR
0.10U	BETA-BHC	0.20U	ENDRIN KETONE
0.10U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
0.10U	GAMMA-BHC (LINDANE)	1.0U	GAMMA-CHLORDANE /2
0.10U	HEPTACHLOR	1.0U	ALPHA-CHLORDANE /2
0.10U	ALDRIN	2.0U	TOXAPHENE
0.10U	HEPTACHLOR EPOXIDE	1.0U	PCB-1016 (AROCLOR 1016)
0.10U	ENDOSULFAN I (ALPHA)	1.0U	PCB-1221 (AROCLOR 1221)
0.20U	DIELDRIN	1.0U	PCB-1232 (AROCLOR 1232)
0.20U	4,4'-DDE (P,P'-DDE)	1.0U	PCB-1242 (AROCLOR 1242)
0.20U	ENDRIN	1.0U	PCB-1248 (AROCLOR 1248)
0.20U	ENDOSULFAN II (BETA)	2.0U	PCB-1254 (AROCLOR 1254)
0.20U	4,4'-DDD (P,P'-DDD)	2.0U	PCB-1260 (AROCLOR 1260)
0.20U	ENDOSULFAN SULFATE		
0.20U	4,4'-DDT (P,P'-DDT)		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-03

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1130 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q514

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1130 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q514

UG/L	ANALYTICAL RESULTS
4J	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFILL CITY: STERLING ST: GA
STATION ID: TW-03 COLLECTION START. 10/17/89 1130 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: D. NUMBER: Q514

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC	0.50U	METHOXYCHLOR
0.050U	BETA-BHC	0.10U	ENDRIN KETONE
0.050U	DELTA BHC		CHLORDANE (TECH. MIXTURE) /1
0.050U	GAMMA-BHC (LINDANE)	0.50U	GAMMA-CHLORDANE /2
0.050U	HEPTACHLOR	0.50U	ALPHA-CHLORDANE /2
0.050U	ALDRIN	1.0U	TOXAPHENE
0.050U	HEPTACHLOR EPOXIDE	0.50U	PCB-1016 (AROCLOR 1016)
0.050U	ENDOSULFAN I (ALPHA)	0.50U	PCB-1221 (AROCLOR 1221)
0.10U	DIELDRIN	0.50U	PCB-1232 (AROCLOR 1232)
0.10U	4,4'-DDE (P,P'-DDE)	0.50U	PCB-1242 (AROCLOR 1242)
0.10U	ENDRIN	0.50U	PCB-1248 (AROCLOR 1248)
0.10U	ENDOSULFAN II (BETA)	1.0U	PCB-1254 (AROCLOR 1254)
0.10U	4,4'-DDD (P,P'-DDD)	1.0U	PCB-1260 (AROCLOR 1260)
0.10U	ENDOSULFAN SULFATE		
0.10U	4,4'-DDT (P,P'-DDT)		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 C11 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10U	ACETONE
5U	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5U	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5U	DIBROMOCHLOROMETHANE
5U	1,1,2-TRICHLOROETHANE
5U	BENZENE
5U	TRANS-1,3-DICHLOROPROPENE
5U	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1000 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q511

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: TW-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1000 STOP: 00/00/00
D NUMBER: Q511

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID: TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q519

UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE
10U	BROMOMETHANE
10U	VINYL CHLORIDE
10U	CHLOROETHANE
5U	METHYLENE CHLORIDE
10UJ	ACETONE
21	CARBON DISULFIDE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
5U	1,1-DICHLOROETHANE
5U	1,2-DICHLOROETHENE (TOTAL)
5U	CHLOROFORM
5U	1,2-DICHLOROETHANE
10U	METHYL ETHYL KETONE
5U	1,1,1-TRICHLOROETHANE
5U	CARBON TETRACHLORIDE
10U	VINYL ACETATE
5U	BROMODICHLOROMETHANE

UG/L	ANALYTICAL RESULTS
5U	1,2-DICHLOROPROPANE
5UJ	CIS-1,3-DICHLOROPROPENE
5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
5UJ	DIBROMOCHLOROMETHANE
5UJ	1,1,2-TRICHLOROETHANE
6U	BENZENE
5UJ	TRANS-1,3-DICHLOROPROPENE
5UJ	BROMOFORM
10U	METHYL ISOBUTYL KETONE
10U	METHYL BUTYL KETONE
5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5UJ	1,1,2,2-TETRACHLOROETHANE
5U	TOLUENE
5U	CHLOROBENZENE
5U	ETHYL BENZENE
5U	STYRENE
5U	TOTAL XYLENES

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1515 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q519

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50UJ	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
19	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID: TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00
CASE NO.: 12944 SAS NO.: D. NO.: Q519 MD NO: Q519

ANALYTICAL RESULTS UG/L

40J	2 UNIDENTIFIED COMPOUNDS
9JN	TETRAMETHYLBUTYLPHENOL
50JN	BENZOTHIAZOLONE
20JN	TRIMETHYLHEXANOIC ACID
20JN	OXYBISBENZENE
20JN	TETRAMETHYLPHENANTHRENE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PESTICIDES/PCB'S DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA
SOURCE:
STATION ID: TW-05
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1515 STOP: 00/00/00
D NUMBER: Q519

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA-BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/08/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 103 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID. 03-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY. R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START. 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
8.1U	CHLOROMETHANE
8.1U	VINYL CHLORIDE
8.1U	BROMOMETHANE
8.1U	CHLOROETHANE
8.1U	TRICHLOROFLUOROMETHANE
8.1U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
81U	ACETONE
81U	CARBON DISULFIDE
8.1U	METHYLENE CHLORIDE
8.1U	TRANS-1,2-DICHLOROETHENE
8.1U	1,1-DICHLOROETHANE
81U	VINYL ACETATE
8.1U	CIS-1,2-DICHLOROETHENE
8.1U	2,2-DICHLOROPROPANE
81U	METHYL ETHYL KETONE
8.1U	BROMOCHLOROMETHANE
8.1U	CHLOROFORM
8.1U	1,1,1-TRICHLOROETHANE
8.1U	1,1-DICHLOROPROPENE
8.1U	CARBON TETRACHLORIDE
8.1U	1,2-DICHLOROETHANE
8.1U	BENZENE
8.1U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8.1U	1,2-DICHLOROPROPANE
8.1U	DIBROMOMETHANE
8.1U	BROMODICHLOROMETHANE

MG/KG	ANALYTICAL RESULTS
8.1U	CIS-1,3-DICHLOROPROPENE
81U	METHYL ISOBUTYL KETONE
8.1U	TOLUENE
8.1U	TRANS-1,3-DICHLOROPROPENE
8.1U	1,1,2-TRICHLOROETHANE
8.1U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8.1U	1,3-DICHLOROPROPANE
81U	METHYL BUTYL KETONE
8.1U	DIBROMOCHLOROMETHANE
8.1U	CHLOROBENZENE
16U	1,1,1,2-TETRACHLOROETHANE
8.1U	ETHYL BENZENE
8.1U	(M- AND/OR P-)XYLENE
8.1U	O-XYLENE
16U	STYRENE
8.1U	BROMOFORM
16U	BROMOBENZENE
8.1U	1,1,2,2-TETRACHLOROETHANE
16U	1,2,3-TRICHLOROPROPANE
16U	O-CHLOROTOLUENE
16U	P-CHLOROTOLUENE
16U	1,3-DICHLOROBENZENE
16U	1,4-DICHLOROBENZENE
16U	1,2-DICHLOROBENZENE
	PERCENT MOISTURE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/21/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY: R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
94UA	BIS(2-CHLOROETHYL) ETHER
94UA	BIS(2-CHLOROISOPROPYL) ETHER
94UA	N-NITROSODI-N-PROPYLAMINE
94UA	HEXACHLOROETHANE
94UA	NITROBENZENE
94UA	ISOPHORONE
94UA	BIS(2-CHLOROETHOXY) METHANE
94UA	1,2,4-TRICHLOROBENZENE
94UA	NAPHTHALENE
94UA	4-CHLOROANILINE
94UA	HEXACHLOROBUTADIENE
94UA	2-METHYLNAPHTHALENE
94UA	HEXACHLOROCYCLOPENTADIENE (HCCP)
94UA	2-CHLORONAPHTHALENE
94UA	2-NITROANILINE
94UA	DIMETHYL PHTHALATE
94UA	ACENAPHTHYLENE
94UA	2,6-DINITROTOLUENE
94UA	3-NITROANILINE
94UA	ACENAPHTHENE
94UA	DIBENZOFURAN
94UA	2,4-DINITROTOLUENE
94UA	DIETHYL PHTHALATE
94UA	FLUORENE
94UA	4-CHLOROPHENYL PHENYL ETHER
94UA	4-NITROANILINE
94UA	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
94UA	4-BROMOPHENYL PHENYL ETHER
94UA	HEXACHLOROBENZENE (HCB)
94UA	PHENANTHRENE
94UA	ANTHRACENE
94UA	DI-N-BUTYLPHTHALATE

MG/KG	ANALYTICAL RESULTS
94UA	FLUORANTHENE
94UA	PYRENE
94UA	BENZYL BUTYL PHTHALATE
94UA	3,3'-DICHLOROBENZIDINE
94UA	BENZO(A)ANTHRACENE
94UA	CHRYSENE
94UA	BIS(2-ETHYLHEXYL) PHTHALATE
94UA	DI-N-OCTYLPHTHALATE
94UA	BENZO(B AND/OR K)FLUORANTHENE
94UA	BENZO-A-PYRENE
94UA	INDENO (1,2,3-CD) PYRENE
94UA	DIBENZO(A,H)ANTHRACENE
94UA	BENZO(GHI)PERYLENE
94UA	PHENOL
94UA	2-CHLOROPHENOL
200UA	BENZYL ALCOHOL
94UA	2-METHYLPHENOL
94UA	(3-AND/OR 4-)METHYLPHENOL
94UA	2-NITROPHENOL
94UA	2,4-DIMETHYLPHENOL
200UA	BENZOIC ACID
94UA	2,4-DICHLOROPHENOL
94UA	4-CHLORO-3-METHYLPHENOL
94UA	2,4,6-TRICHLOROPHENOL
94UA	2,4,5-TRICHLOROPHENOL
200UA	2,4-DINITROPHENOL
200UA	4-NITROPHENOL
94UA	2,3,4,6-TETRACHLOROPHENOL
200UA	2-METHYL-4,6-DINITROPHENOL
200UA	PENTACHLOROPHENOL
NA	PERCENT MOISTURE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

PURGEABLE ORGANICS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: LS-05 COLLECTION START. 10/17/89 1315 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q518

UG/KG	ANALYTICAL RESULTS
36U	CHLOROMETHANE
36U	BROMOMETHANE
36U	VINYL CHLORIDE
36U	CHLOROETHANE
30U	METHYLENE CHLORIDE
200UJ	ACETONE
18U	CARBON DISULFIDE
18U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
18U	1,1-DICHLOROETHANE
18U	1,2-DICHLOROETHENE (TOTAL)
18U	CHLOROFORM
18U	1,2-DICHLOROETHANE
50U	METHYL ETHYL KETONE
18U	1,1,1-TRICHLOROETHANE
18U	CARBON TETRACHLORIDE
36U	VINYL ACETATE
18U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
18U	1,2-DICHLOROPROPANE
18U	CIS-1,3-DICHLOROPROPENE
18U	TRICHLOROETHENE(TRICHLOROETHYLENE)
18U	DIBROMOCHLOROMETHANE
18U	1,1,2-TRICHLOROETHANE
18U	BENZENE
18U	TRANS-1,3-DICHLOROPROPENE
18U	BROMOFORM
12J	METHYL ISOBUTYL KETONE
36U	METHYL BUTYL KETONE
18U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
18U	1,1,2,2-TETRACHLOROETHANE
18U	TOLUENE
18U	CHLOROBENZENE
18U	ETHYL BENZENE
18U	STYRENE
18U	TOTAL XYLENES
61	PERCENT MOISTURE

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
**  PROJECT NO. 90-011    SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE    PROG FLEM: NSF   COLLECTED BY: W RILEY          **
**  SOURCE: OLD STERLING LANDFILL                                    CITY: STERLING              ST: GA             **
**  STATION ID: LS-05                                                COLLECTION START: 10/17/89  1315   STOP: 00/00/00  **
**  CASE NO.: 12944          SAS NO.:                                D. NO.: Q518                MD NO: Q518        **
**
```

ANALYTICAL RESULTS UG/KG

20JN TRIMETHYLBICYCLOHEPTANE

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID. LS-05 COLLECTION START 10/17/89 1315 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: 0518

UG/KG	ANALYTICAL RESULTS
600U	PHENOL
600UJ	BIS(2-CHLOROETHYL) ETHER
600U	2-CHLOROPHENOL
600U	1,3-DICHLOROBENZENE
600U	1,4-DICHLOROBENZENE
600U	BENZYL ALCOHOL
600U	1,2-DICHLOROBENZENE
600U	2-METHYLPHENOL
600U	BIS(2-CHLOROISOPROPYL) ETHER
89J	(3-AND/OR 4-)METHYLPHENOL
600U	N-NITROSODI-N-PROPYLAMINE
600U	HEXACHLOROETHANE
600U	NITROBENZENE
600U	ISOPHORONE
600U	2-NITROPHENOL
600U	2,4-DIMETHYLPHENOL
2900U	BENZOIC ACID
600U	BIS(2-CHLOROETHOXY) METHANE
600U	2,4-DICHLOROPHENOL
600U	1,2,4-TRICHLOROBENZENE
600U	NAPHTHALENE
600UJ	4-CHLOROANILINE
600U	HEXACHLOROBUTADIENE
600U	4-CHLORO-3-METHYLPHENOL
600U	2-METHYLNAPHTHALENE
600U	HEXACHLOROCYCLOPENTADIENE (HCCP)
600U	2,4,6-TRICHLOROPHENOL
2900U	2,4,5-TRICHLOROPHENOL
600U	2-CHLORONAPHTHALENE
2900U	2-NITROANILINE
600U	DIMETHYL PHTHALATE
600U	ACENAPHTHYLENE
600U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2900UJ	3-NITROANILINE
600U	ACENAPHTHENE
2900U	2,4-DINITROPHENOL
2900U	4-NITROPHENOL
600U	DIBENZOFURAN
600U	2,4-DINITROTOLUENE
600U	DIETHYL PHTHALATE
600U	4-CHLOROPHENYL PHENYL ETHER
600U	FLUORENE
2900U	4-NITROANILINE
2900U	2-METHYL-4,6-DINITROPHENOL
600U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
600U	4-BROMOPHENYL PHENYL ETHER
600U	HEXACHLOROBENZENE (HCB)
2900U	PENTACHLOROPHENOL
600U	PHENANTHRENE
600U	ANTHRACENE
600U	DI-N-BUTYLPHTHALATE
600U	FLUORANTHENE
600U	PYRENE
600U	BENZYL BUTYL PHTHALATE
1200UJ	3,3'-DICHLOROBENZIDINE
600U	BENZO(A)ANTHRACENE
600U	CHRYSENE
600U	BIS(2-ETHYLHEXYL) PHTHALATE
600U	DI-N-OCTYLPHTHALATE
600U	BENZO(B AND/OR K)FLUORANTHENE
600U	BENZO-A-PYRENE
600UJ	INDENO (1,2,3-CD) PYRENE
600U	DIBENZO(A,H)ANTHRACENE
600U	BENZO(GHI)PERYLENE
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE
SOURCE: OLD STERLING LANDFIL
STATION ID: LS-05
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1315 STOP: 00/00/00
D. NUMBER: Q518

UG/KG	ANALYTICAL RESULTS
15U	ALPHA-BHC
15U	BETA-BHC
15U	DELTA-BHC
15U	GAMMA-BHC (LINDANE)
15U	HEPTACHLOR
15U	ALDRIN
15U	HEPTACHLOR EPOXIDE
15U	ENDOSULFAN I (ALPHA)
29U	DIELDRIN
29U	4,4'-DDE (P,P'-DDE)
29U	ENDRIN
29U	ENDOSULFAN II (BETA)
29U	4,4'-DDD (P,P'-DDD)
29U	ENDOSULFAN SULFATE
29U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
150U	METHOXYCHLOR
29U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
150U	GAMMA-CHLORDANE /2
150U	ALPHA-CHLORDANE /2
290U	TOXAPHENE
150U	PCB-1016 (AROCLOR 1016)
150U	PCB-1221 (AROCLOR 1221)
150U	PCB-1232 (AROCLOR 1232)
150U	PCB-1242 (AROCLOR 1242)
150U	PCB-1248 (AROCLOR 1248)
290U	PCB-1254 (AROCLOR 1254)
290U	PCB-1260 (AROCLOR 1260)
45	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-01

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1150 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q507

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
30U	METHYLENE CHLORIDE
20U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
20	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-01 COLLECTION START: 10/16/89 1150 STOP: 00/00/00 **
**
** CASE NO.: 12944 SAS NO.: D. NO.: 0507 **

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
860UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID. SB-01
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1150 STOP: 00/00/00
D. NUMBER: Q507

UG/KG	ANALYTICAL RESULTS
10U	ALPHA-BHC
10U	BETA-BHC
10U	DELTA-BHC
10U	GAMMA-BHC (LINDANE)
10U	HEPTACHLOR
10U	ALDRIN
10U	HEPTACHLOR EPOXIDE
10U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
100U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
100U	GAMMA-CHLORDANE /2
100U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
100U	PCB-1016 (AROCLOR 1016)
100U	PCB-1221 (AROCLOR 1221)
100U	PCB-1232 (AROCLOR 1232)
100U	PCB-1242 (AROCLOR 1242)
100U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
20U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
5J	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS PURGEABLE ORGANICS - DATA REPORT

```
** PROJECT NO. 90-011   SAMPLE NO. 40532  SAMPLE TYPE: SOIL     PROG ELEM: NSF   COLLECTED BY: W RILEY       **
** SOURCE: OLD STERLING LANDFIL                                 CITY: STERLING               ST: GA         **
** STATION ID: SB-02                                            COLLECTION START: 10/17/89  1215  STOP: 00/00/00 **
** CASE.NO.: 12944          SAS NO.:                            D. NO.: Q516                MD NO: Q516     **
```

ANALYTICAL RESULTS UG/KG

1000JN	TRIMETHYLBICYCLOHEPTANE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1215 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q516

UG/KG	ANALYTICAL RESULTS
380U	PHENOL
380UJ	BIS(2-CHLOROETHYL) ETHER
380U	2-CHLOROPHENOL
380U	1,3-DICHLOROBENZENE
380U	1,4-DICHLOROBENZENE
380U	BENZYL ALCOHOL
380U	1,2-DICHLOROBENZENE
380U	2-METHYLPHENOL
380U	BIS(2-CHLOROISOPROPYL) ETHER
380U	(3-AND/OR 4-)METHYLPHENOL
380U	N-NITROSODI-N-PROPYLAMINE
380U	HEXACHLOROETHANE
380U	NITROBENZENE
380U	ISOPHORONE
380U	2-NITROPHENOL
380U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
380U	BIS(2-CHLOROETHOXY) METHANE
380U	2,4-DICHLOROPHENOL
380U	1,2,4-TRICHLOROBENZENE
380U	NAPHTHALENE
380UJ	4-CHLOROANILINE
380U	HEXACHLOROBUTADIENE
380U	4-CHLORO-3-METHYLPHENOL
380U	2-METHYLNAPHTHALENE
380U	HEXACHLOROCYCLOPENTADIENE (HCCP)
380U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5 TRICHLOROPHENOL
380U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
380U	DIMETHYL PHTHALATE
380U	ACENAPHTHYLENE
380U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
380U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
380U	DIBENZOFURAN
380U	2,4-DINITROTOLUENE
380U	DIETHYL PHTHALATE
380U	4-CHLOROPHENYL PHENYL ETHER
380U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
380U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U	4-BROMOPHENYL PHENYL ETHER
380U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
380U	PHENANTHRENE
380U	ANTHRACENE
380U	DI-N-BUTYLPHTHALATE
380U	FLUORANTHENE
380U	PYRENE
380U	BENZYL BUTYL PHTHALATE
760UJ	3,3'-DICHLOROBENZIDINE
380U	BENZO(A)ANTHRACENE
380U	CHRYSENE
380U	BIS(2-ETHYLHEXYL) PHTHALATE
380U	DI-N-OCTYLPHTHALATE
380U	BENZO(B AND/OR K)FLUORANTHENE
380U	BENZO-A-PYRENE
380UJ	INDENO (1,2,3-CD) PYRENE
380U	DIBENZO(A,H)ANTHRACENE
380U	BENZO(GHI)PERYLENE
13	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL	CITY: STERLING ST: GA
STATION ID: SB-02	COLLECTION START: 10/17/89 1215 STOP: 00/00/00
CASE NO.: 12944 SAS NO.:	D. NO.: Q516 MD NO: Q516

ANALYTICAL RESULTS UG/KG

10000JN	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE CARBOXALDEHYDE
20000J	18 UNIDENTIFIED COMPOUNDS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

```
** PROJECT NO. 90 011    SAMPLE NO  40532  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY
** SOURCE: OLD STERLING LANDFIL                                      CITY: STERLING                 ST: GA
** STATION ID. S6-02                                                 COLLECTION START 10/17/89  1215   STOP: 00/00/00
** CASE NUMBER: 12944          SAS NUMBER.                           D. NUMBER: 0516
```

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
460U	ALPHA-BHC	4600U	METHOXYCHLOR
460U	BETA-BHC	920U	ENDRIN KETONE
460U	DELTA BHC		CHLORDANE (TECH. MIXTURE) /1
460U	GAMMA-BHC (LINDANE)	4600U	GAMMA-CHLORDANE /2
460U	HEPTACHLOR	4600U	ALPHA-CHLORDANE /2
460U	ALDRIN	150000U	TOXAPHENE
460U	HEPTACHLOR EPOXIDE	4600U	PCB-1016 (AROCLOR 1016)
460U	ENDOSULFAN I (ALPHA)	4600U	PCB-1221 (AROCLOR 1221)
920U	DIELDRIN	4600U	PCB-1232 (AROCLOR 1232)
920U	4,4'-DDE (P,P'-DDE)	4600U	PCB-1242 (AROCLOR 1242)
920U	ENDRIN	4600U	PCB-1248 (AROCLOR 1248)
920U	ENDOSULFAN II (BETA)	9200U	PCB-1254 (AROCLOR 1254)
920U	4,4'-DDD (P,P'-DDD)	9200U	PCB-1260 (AROCLOR 1260)
920U	ENDOSULFAN SULFATE	13	PERCENT MOISTURE
920U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES

*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. SO 011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q513

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30U	ACETONE
10UJ	CARBON DISULFIDE
10U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10UJ	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
10U	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID. SB-03

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q513

UG/KG	ANALYTICAL RESULTS
450U	PHENOL
450U	BIS(2-CHLOROETHYL) ETHER
450U	2-CHLOROPHENOL
450U	1,3-DICHLOROBENZENE
450U	1,4-DICHLOROBENZENE
450UJ	BENZYL ALCOHOL
450U	1,2-DICHLOROBENZENE
450U	2-METHYLPHENOL
450U	BIS(2-CHLOROISOPROPYL) ETHER
450U	(3-AND/OR 4-)METHYLPHENOL
450U	N-NITROSODI-N-PROPYLAMINE
450U	HEXACHLOROETHANE
450U	NITROBENZENE
450U	ISOPHORONE
450U	2-NITROPHENOL
450U	2,4-DIMETHYLPHENOL
2200UJ	BENZOIC ACID
450U	BIS(2-CHLOROETHOXY) METHANE
450U	2,4-DICHLOROPHENOL
450U	1,2,4-TRICHLOROBENZENE
450U	NAPHTHALENE
450U	4-CHLOROANILINE
450U	HEXACHLOROBUTADIENE
450U	4-CHLORO-3-METHYLPHENOL
450U	2-METHYLNAPHTHALENE
450U	HEXACHLOROCYCLOPENTADIENE (HCCP)
450U	2,4,6-TRICHLOROPHENOL
2200U	2,4,5-TRICHLOROPHENOL
450U	2-CHLORONAPHTHALENE
2200U	2-NITROANILINE
450U	DIMETHYL PHTHALATE
450U	ACENAPHTHYLENE
450U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2200U	3-NITROANILINE
450U	ACENAPHTHENE
2200U	2,4-DINITROPHENOL
2200U	4-NITROPHENOL
450U	DIBENZOFURAN
450U	2,4-DINITROTOLUENE
450U	DIETHYL PHTHALATE
450U	4-CHLOROPHENYL PHENYL ETHER
450U	FLUORENE
2200UJ	4-NITROANILINE
2200U	2-METHYL-4,6-DINITROPHENOL
450U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
450U	4-BROMOPHENYL PHENYL ETHER
450U	HEXACHLOROBENZENE (HCB)
2200U	PENTACHLOROPHENOL
450U	PHENANTHRENE
450U	ANTHRACENE
450U	DI-N-BUTYLPHTHALATE
450U	FLUORANTHENE
450U	PYRENE
450U	BENZYL BUTYL PHTHALATE
890UJ	3,3'-DICHLOROBENZIDINE
450U	BENZO(A)ANTHRACENE
450U	CHRYSENE
450U	BIS(2-ETHYLHEXYL) PHTHALATE
450U	DI-N-OCTYLPHTHALATE
450U	BENZO(B AND/OR K)FLUORANTHENE
450U	BENZO-A-PYRENE
450UJ	INDENO (1,2,3-CD) PYRENE
450U	DIBENZO(A,H)ANTHRACENE
450U	BENZO(GHI)PERYLENE
26	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SB-03 COLLECTION START: 10/17/89 1050 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER: D NUMBER: Q513 **

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC	110U	METHOXYCHLOR
11U	BETA-BHC	22U	ENDRIN KETONE
11U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
11U	GAMMA-BHC (LINDANE)	110U	GAMMA-CHLORDANE /2
11U	HEPTACHLOR	110U	ALPHA-CHLORDANE /2
11U	ALDRIN	2200U	TOXAPHENE
11U	HEPTACHLOR EPOXIDE	110U	PCB-1016 (AROCLOR 1016)
11U	ENDOSULFAN I (ALPHA)	110U	PCB-1221 (AROCLOR 1221)
22U	DIELDRIN	110U	PCB-1232 (AROCLOR 1232)
22U	4,4'-DDE (P,P'-DDE)	110U	PCB-1242 (AROCLOR 1242)
22U	ENDRIN	110U	PCB-1248 (AROCLOR 1248)
22U	ENDOSULFAN II (BETA)	220U	PCB-1254 (AROCLOR 1254)
22U	4,4'-DDD (P,P'-DDD)	220U	PCB-1260 (AROCLOR 1260)
22U	ENDOSULFAN SULFATE	26	PERCENT MOISTURE
22U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-04

CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0930 STOP: 00/00/00

D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
20U	CHLOROMETHANE
20U	BROMOMETHANE
20U	VINYL CHLORIDE
20U	CHLOROETHANE
20U	METHYLENE CHLORIDE
20UJ	ACETONE
10U	CARBON DISULFIDE
10U	1,1 DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	1,1-DICHLOROETHANE
10U	1,2-DICHLOROETHENE (TOTAL)
10U	CHLOROFORM
10U	1,2-DICHLOROETHANE
20U	METHYL ETHYL KETONE
10U	1,1,1-TRICHLOROETHANE
10U	CARBON TETRACHLORIDE
20U	VINYL ACETATE
10U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
10U	1,2-DICHLOROPROPANE
10U	CIS-1,3-DICHLOROPROPENE
10U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	DIBROMOCHLOROMETHANE
10U	1,1,2-TRICHLOROETHANE
10U	BENZENE
10U	TRANS-1,3-DICHLOROPROPENE
10U	BROMOFORM
20U	METHYL ISOBUTYL KETONE
20U	METHYL BUTYL KETONE
10U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	1,1,2,2-TETRACHLOROETHANE
3J	TOLUENE
10U	CHLOROBENZENE
10U	ETHYL BENZENE
10U	STYRENE
10U	TOTAL XYLENES
22	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID. SB-04

PROG ELEM: NSF COLLECTED BY W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q510

UG/KG	ANALYTICAL RESULTS
430U	PHENOL
430U	BIS(2-CHLOROETHYL) ETHER
430U	2-CHLOROPHENOL
430U	1,3-DICHLOROBENZENE
430U	1,4-DICHLOROBENZENE
430UJ	BENZYL ALCOHOL
430U	1,2-DICHLOROBENZENE
430U	2-METHYLPHENOL
430U	BIS(2-CHLOROISOPROPYL) ETHER
430U	(3-AND/OR 4-)METHYLPHENOL
430U	N-NITROSODI-N-PROPYLAMINE
430U	HEXACHLOROETHANE
430U	NITROBENZENE
430U	ISOPHORONE
430U	2-NITROPHENOL
430U	2,4-DIMETHYLPHENOL
2100UJ	BENZOIC ACID
430U	BIS(2-CHLOROETHOXY) METHANE
430U	2,4-DICHLOROPHENOL
430U	1,2,4-TRICHLOROBENZENE
430U	NAPHTHALENE
430U	4-CHLOROANILINE
430U	HEXACHLOROBUTADIENE
430U	4-CHLORO-3-METHYLPHENOL
430U	2-METHYLNAPHTHALENE
430U	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	2,4,6-TRICHLOROPHENOL
2100U	2,4,5-TRICHLOROPHENOL
430U	2-CHLORONAPHTHALENE
2100U	2-NITROANILINE
430U	DIMETHYL PHTHALATE
430U	ACENAPHTHYLENE
430U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
2100U	3-NITROANILINE
430U	ACENAPHTHENE
2100U	2,4-DINITROPHENOL
2100U	4-NITROPHENOL
430U	DIBENZOFURAN
430U	2,4-DINITROTOLUENE
430U	DIETHYL PHTHALATE
430U	4-CHLOROPHENYL PHENYL ETHER
430U	FLUORENE
2100UJ	4-NITROANILINE
2100U	2-METHYL-4,6-DINITROPHENOL
430U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	4-BROMOPHENYL PHENYL ETHER
430U	HEXACHLOROBENZENE (HCB)
2100U	PENTACHLOROPHENOL
430U	PHENANTHRENE
430U	ANTHRACENE
430U	DI-N-BUTYLPHTHALATE
430U	FLUORANTHENE
430U	PYRENE
430U	BENZYL BUTYL PHTHALATE
870UJ	3,3'-DICHLOROBENZIDINE
430U	BENZO(A)ANTHRACENE
430U	CHRYSENE
430U	BIS(2-ETHYLHEXYL) PHTHALATE
430U	DI-N-OCTYLPHTHALATE
430U	BENZO(B AND/OR K)FLUORANTHENE
430U	BENZO-A-PYRENE
430UJ	INDENO (1,2,3-CD) PYRENE
430U	DIBENZO(A,H)ANTHRACENE
430U	BENZO(GHI)PERYLENE
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SB-04
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0930 STOP: 00/00/00
D NUMBER: Q510

UG/KG	ANALYTICAL RESULTS
11U	ALPHA-BHC
11U	BETA-BHC
11U	DELTA BHC
11U	GAMMA-BHC (LINDANE)
11U	HEPTACHLOR
11U	ALDRIN
11U	HEPTACHLOR EPOXIDE
11U	ENDOSULFAN I (ALPHA)
21U	DIELDRIN
21U	4,4'-DDE (P,P'-DDE)
21U	ENDRIN
21U	ENDOSULFAN II (BETA)
21U	4,4'-DDD (P,P'-DDD)
21U	ENDOSULFAN SULFATE
21U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
110U	METHOXYCHLOR
21U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
110U	GAMMA-CHLORDANE /2
110U	ALPHA-CHLORDANE /2
210U	TOXAPHENE
110U	PCB-1016 (AROCLOR 1016)
110U	PCB-1221 (AROCLOR 1221)
110U	PCB-1232 (AROCLOR 1232)
110U	PCB-1242 (AROCLOR 1242)
110U	PCB-1248 (AROCLOR 1248)
210U	PCB-1254 (AROCLOR 1254)
210U	PCB-1260 (AROCLOR 1260)
24	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q506

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30UJ	ACETONE
8U	CARBON DISULFIDE
8U	1,1 DICHLOROETHENE(1,1-DICHLOROETHYLENE)
8U	1,1-DICHLOROETHANE
8U	1,2-DICHLOROETHENE (TOTAL)
8U	CHLOROFORM
8U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
8U	1,1,1-TRICHLOROETHANE
8U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
8U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
8U	1,2-DICHLOROPROPANE
8U	CIS-1,3-DICHLOROPROPENE
8U	TRICHLOROETHENE(TRICHLOROETHYLENE)
8U	DIBROMOCHLOROMETHANE
8U	1,1,2-TRICHLOROETHANE
8U	BENZENE
8U	TRANS-1,3-DICHLOROPROPENE
8U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
8U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
8U	1,1,2,2-TETRACHLOROETHANE
90	TOLUENE
8U	CHLOROBENZENE
8U	ETHYL BENZENE
8U	STYRENE
8U	TOTAL XYLENES
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 1120 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q506

UG/KG	ANALYTICAL RESULTS
350U	PHENOL
350UJ	BIS(2-CHLOROETHYL) ETHER
350U	2-CHLOROPHENOL
350U	1,3-DICHLOROBENZENE
350U	1,4-DICHLOROBENZENE
350U	BENZYL ALCOHOL
350U	1,2-DICHLOROBENZENE
350U	2-METHYLPHENOL
350U	BIS(2-CHLOROISOPROPYL) ETHER
350U	(3-AND/OR 4-)METHYLPHENOL
350U	N-NITROSODI-N-PROPYLAMINE
350U	HEXACHLOROETHANE
350U	NITROBENZENE
350U	ISOPHORONE
350U	2-NITROPHENOL
350U	2,4-DIMETHYLPHENOL
1700U	BENZOIC ACID
350U	BIS(2-CHLOROETHOXY) METHANE
350U	2,4-DICHLOROPHENOL
350U	1,2,4-TRICHLOROBENZENE
350U	NAPHTHALENE
350UJ	4-CHLOROANILINE
350U	HEXACHLOROBUTADIENE
350U	4-CHLORO-3-METHYLPHENOL
350U	2-METHYLNAPHTHALENE
350U	HEXACHLOROCYCLOPENTADIENE (HCCP)
350U	2,4,6-TRICHLOROPHENOL
1700U	2,4,5-TRICHLOROPHENOL
350U	2-CHLORONAPHTHALENE
1700U	2-NITROANILINE
350U	DIMETHYL PHTHALATE
350U	ACENAPHTHYLENE
350U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1700UJ	3-NITROANILINE
350U	ACENAPHTHENE
1700U	2,4-DINITROPHENOL
1700U	4-NITROPHENOL
350U	DIBENZOFURAN
350U	2,4-DINITROTOLUENE
350U	DIETHYL PHTHALATE
350U	4-CHLOROPHENYL PHENYL ETHER
350U	FLUORENE
1700UJ	4-NITROANILINE
1700U	2-METHYL-4,6-DINITROPHENOL
350U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
350U	4-BROMOPHENYL PHENYL ETHER
350U	HEXACHLOROBENZENE (HCB)
1700U	PENTACHLOROPHENOL
350U	PHENANTHRENE
350U	ANTHRACENE
350U	DI-N-BUTYLPHTHALATE
350U	FLUORANTHENE
350U	PYRENE
350U	BENZYL BUTYL PHTHALATE
690UJ	3,3'-DICHLOROBENZIDINE
350U	BENZO(A)ANTHRACENE
350U	CHRYSENE
350U	BIS(2-ETHYLHEXYL) PHTHALATE
350U	DI-N-OCTYLPHTHALATE
350U	BENZO(B AND/OR K)FLUORANTHENE
350U	BENZO-A-PYRENE
350UJ	INDENO (1,2,3-CD) PYRENE
350U	DIBENZO(A,H)ANTHRACENE
350U	BENZO(GHI)PERYLENE
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-01
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/16/89 1120 STOP: 00/00/00
D. NUMBER: Q506

UG/KG	ANALYTICAL RESULTS
8.4U	ALPHA-BHC
8.4U	BETA-BHC
8.4U	DELTA-BHC
8.4U	GAMMA-BHC (LINDANE)
8.4U	HEPTACHLOR
8.4U	ALDRIN
8.4U	HEPTACHLOR EPOXIDE
8.4U	ENDOSULFAN I (ALPHA)
17U	DIELDRIN
17U	4,4'-DDE (P,P'-DDE)
17U	ENDRIN
17U	ENDOSULFAN II (BETA)
17U	4,4'-DDD (P,P'-DDD)
17U	ENDOSULFAN SULFATE
17U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
84U	METHOXYCHLOR
17U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
84U	GAMMA-CHLORDANE /2
84U	ALPHA-CHLORDANE /2
170U	TOXAPHENE
84U	PCB-1016 (AROCLOR 1016)
84U	PCB-1221 (AROCLOR 1221)
84U	PCB-1232 (AROCLOR 1232)
84U	PCB-1242 (AROCLOR 1242)
84U	PCB-1248 (AROCLOR 1248)
170U	PCB-1254 (AROCLOR 1254)
170U	PCB-1260 (AROCLOR 1260)
5	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
17U	CHLOROMETHANE
17U	BROMOMETHANE
17U	VINYL CHLORIDE
17U	CHLOROETHANE
20U	METHYLENE CHLORIDE
17UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
17U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
17U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
17U	METHYL ISOBUTYL KETONE
17U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
9U	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
7	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-02

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1200 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q515

UG/KG	ANALYTICAL RESULTS
370U	PHENOL
370UJ	BIS(2-CHLOROETHYL) ETHER
370U	2-CHLOROPHENOL
370U	1,3-DICHLOROBENZENE
370U	1,4-DICHLOROBENZENE
370U	BENZYL ALCOHOL
370U	1,2-DICHLOROBENZENE
370U	2-METHYLPHENOL
370U	BIS(2-CHLOROISOPROPYL) ETHER
370U	(3-AND/OR 4-)METHYLPHENOL
370U	N-NITROSODI-N-PROPYLAMINE
370U	HEXACHLOROETHANE
370U	NITROBENZENE
370U	ISOPHORONE
370U	2-NITROPHENOL
370U	2,4-DIMETHYLPHENOL
1800U	BENZOIC ACID
370U	BIS(2-CHLOROETHOXY) METHANE
370U	2,4-DICHLOROPHENOL
370U	1,2,4-TRICHLOROBENZENE
370U	NAPHTHALENE
370UJ	4-CHLOROANILINE
370U	HEXACHLOROBUTADIENE
370U	4-CHLORO-3-METHYLPHENOL
370U	2-METHYLNAPHTHALENE
370U	HEXACHLOROCYCLOPENTADIENE (HCCP)
370U	2,4,6-TRICHLOROPHENOL
1800U	2,4,5-TRICHLOROPHENOL
370U	2-CHLORONAPHTHALENE
1800U	2-NITROANILINE
370U	DIMETHYL PHTHALATE
370U	ACENAPHTHYLENE
370U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1800UJ	3-NITROANILINE
370U	ACENAPHTHENE
1800U	2,4-DINITROPHENOL
1800U	4-NITROPHENOL
370U	DIBENZOFURAN
370U	2,4-DINITROTOLUENE
370U	DIETHYL PHTHALATE
370U	4-CHLOROPHENYL PHENYL ETHER
370U	FLUORENE
1800U	4-NITROANILINE
1800U	2-METHYL-4,6-DINITROPHENOL
370U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
370U	4-BROMOPHENYL PHENYL ETHER
370U	HEXACHLOROBENZENE (HCB)
1800U	PENTACHLOROPHENOL
370U	PHENANTHRENE
370U	ANTHRACENE
370U	DI-N-BUTYLPHTHALATE
370U	FLUORANTHENE
370U	PYRENE
370U	BENZYL BUTYL PHTHALATE
730UJ	3,3'-DICHLOROBENZIDINE
370U	BENZO(A)ANTHRACENE
370U	CHRYSENE
370U	BIS(2-ETHYLHEXYL) PHTHALATE
370U	DI-N-OCTYLPHTHALATE
370U	BENZO(B AND/OR K)FLUORANTHENE
370U	BENZO-A-PYRENE
370UJ	INDENO (1,2,3-CD) PYRENE
370U	DIBENZO(A,H)ANTHRACENE
370U	BENZO(GHI)PERYLENE
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-02 COLLECTION START: 10/17/89 1200 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q515 MD NO: Q515 **
**   **
*** ***

ANALYTICAL RESULTS UG/KG

200JN	OCTAHYDRODIMETHYL(METHYLETHYL)PHENANTHRENE-CARBOXYLIC ACID METHYLESTER

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID. SS-02
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1200 STOP: 00/00/00
D NUMBER: Q515

UG/KG	ANALYTICAL RESULTS
8.9U	ALPHA-BHC
8.9U	BETA-BHC
8.9U	DELTA-BHC
8.9U	GAMMA-BHC (LINDANE)
8.9U	HEPTACHLOR
8.9U	ALDRIN
8.9U	HEPTACHLOR EPOXIDE
8.9U	ENDOSULFAN I (ALPHA)
18U	DIELDRIN
18U	4,4'-DDE (P,P'-DDE)
18U	ENDRIN
18U	ENDOSULFAN II (BETA)
18U	4,4'-DDD (P,P'-DDD)
18U	ENDOSULFAN SULFATE
18U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
89U	METHOXYCHLOR
18U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
89U	GAMMA-CHLORDANE /2
89U	ALPHA-CHLORDANE /2
180U	TOXAPHENE
89U	PCB-1016 (AROCLOR 1016)
89U	PCB-1221 (AROCLOR 1221)
89U	PCB-1232 (AROCLOR 1232)
89U	PCB-1242 (AROCLOR 1242)
89U	PCB-1248 (AROCLOR 1248)
180U	PCB-1254 (AROCLOR 1254)
180U	PCB-1260 (AROCLOR 1260)
10	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-03

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
20U	METHYLENE CHLORIDE
30U	ACETONE
9UJ	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9UJ	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
15	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
14	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90 011 SAMPLE NO 28 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SS 03

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 1 17/89 1045 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q512

UG/KG	ANALYTICAL RESULTS
390U	PHENOL
390U	BIS(2-CHLOROETHYL) ETHER
390U	2-CHLOROPHENOL
390U	1,3-DICHLOROBENZENE
390U	1,4-DICHLOROBENZENE
390UJ	BENZYL ALCOHOL
390U	1,2-DICHLOROBENZENE
390U	2-METHYLPHENOL
390U	BIS(2-CHLOROISOPROPYL) ETHER
390U	(3-AND/OR 4-)METHYLPHENOL
390U	N-NITROSODI-N-PROPYLAMINE
390U	HEXACHLOROETHANE
390U	NITROBENZENE
390U	ISOPHORONE
390U	2-NITROPHENOL
390U	2,4-DIMETHYLPHENOL
1900UJ	BENZOIC ACID
390U	BIS(2-CHLOROETHOXY) METHANE
390U	2,4-DICHLOROPHENOL
390U	1,2,4-TRICHLOROBENZENE
390U	NAPHTHALENE
390U	4-CHLOROANILINE
390U	HEXACHLOROBUTADIENE
390U	4-CHLORO-3-METHYLPHENOL
390U	2-METHYLNAPHTHALENE
390U	HEXACHLOROCYCLOPENTADIENE (HCCP)
390U	2,4,6-TRICHLOROPHENOL
1900U	2,4,5-TRICHLOROPHENOL
390U	2-CHLORONAPHTHALENE
1900U	2-NITROANILINE
390U	DIMETHYL PHTHALATE
390U	ACENAPHTHYLENE
390U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1900U	3-NITROANILINE
390U	ACENAPHTHENE
1900U	2,4-DINITROPHENOL
1900U	4-NITROPHENOL
390U	DIBENZOFURAN
390U	2,4-DINITROTOLUENE
390U	DIETHYL PHTHALATE
390U	4-CHLOROPHENYL PHENYL ETHER
390U	FLUORENE
1900UJ	4-NITROANILINE
1900U	2-METHYL-4,6-DINITROPHENOL
390U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	4-BROMOPHENYL PHENYL ETHER
390U	HEXACHLOROBENZENE (HCB)
1900U	PENTACHLOROPHENOL
390U	PHENANTHRENE
390U	ANTHRACENE
390U	DI-N-BUTYLPHTHALATE
390U	FLUORANTHENE
390U	PYRENE
390U	BENZYL BUTYL PHTHALATE
780UJ	3,3'-DICHLOROBENZIDINE
390U	BENZO(A)ANTHRACENE
390U	CHRYSENE
390U	BIS(2-ETHYLHEXYL) PHTHALATE
390U	DI-N-OCTYLPHTHALATE
390U	BENZO(B AND/OR K)FLUORANTHENE
390U	BENZO-A-PYRENE
390UJ	INDENO (1,2,3-CD) PYRENE
390U	DIBENZO(A,H)ANTHRACENE
390U	BENZO(GHI)PERYLENE
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS - DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q512 MD NO: Q512 **

ANALYTICAL RESULTS UG/KG

600J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: D. NUMBER: Q512

UG/KG	ANALYTICAL RESULTS
9.4U	ALPHA-BHC
9.4U	BETA-BHC
9.4U	DELTA-BHC
9.4U	GAMMA-BHC (LINDANE)
9.4U	HEPTACHLOR
9.4U	ALDRIN
9.4U	HEPTACHLOR EPOXIDE
9.4U	ENDOSULFAN I (ALPHA)
19U	DIELDRIN
19U	4,4'-DDE (P,P'-DDE)
19U	ENDRIN
19U	ENDOSULFAN II (BETA)
19U	4,4'-DDD (P,P'-DDD)
19U	ENDOSULFAN SULFATE
19U	4,4'-DDT (P,P'-DDT)

UG/KG	ANALYTICAL RESULTS
94U	METHOXYCHLOR
19U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
94U	GAMMA-CHLORDANE /2
94U	ALPHA-CHLORDANE /2
1900U	TOXAPHENE
94U	PCB-1016 (AROCLOR 1016)
94U	PCB-1221 (AROCLOR 1221)
94U	PCB-1232 (AROCLOR 1232)
94U	PCB-1242 (AROCLOR 1242)
94U	PCB-1248 (AROCLOR 1248)
1900U	PCB-1254 (AROCLOR 1254)
1900U	PCB-1260 (AROCLOR 1260)
15	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PURGEABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04

CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00

D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
18U	CHLOROMETHANE
18U	BROMOMETHANE
18U	VINYL CHLORIDE
18U	CHLOROETHANE
30U	METHYLENE CHLORIDE
18UJ	ACETONE
9U	CARBON DISULFIDE
9U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
9U	1,1-DICHLOROETHANE
9U	1,2-DICHLOROETHENE (TOTAL)
9U	CHLOROFORM
9U	1,2-DICHLOROETHANE
18U	METHYL ETHYL KETONE
9U	1,1,1-TRICHLOROETHANE
9U	CARBON TETRACHLORIDE
18U	VINYL ACETATE
9U	BROMODICHLOROMETHANE

UG/KG	ANALYTICAL RESULTS
9U	1,2-DICHLOROPROPANE
9U	CIS-1,3-DICHLOROPROPENE
9U	TRICHLOROETHENE(TRICHLOROETHYLENE)
9U	DIBROMOCHLOROMETHANE
9U	1,1,2-TRICHLOROETHANE
9U	BENZENE
9U	TRANS-1,3-DICHLOROPROPENE
9U	BROMOFORM
18U	METHYL ISOBUTYL KETONE
18U	METHYL BUTYL KETONE
9U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
9U	1,1,2,2-TETRACHLOROETHANE
11	TOLUENE
9U	CHLOROBENZENE
9U	ETHYL BENZENE
9U	STYRENE
9U	TOTAL XYLENES
11	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q509

UG/KG	ANALYTICAL RESULTS
360U	PHENOL
360UJ	BIS(2-CHLOROETHYL) ETHER
360U	2-CHLOROPHENOL
360U	1,3-DICHLOROBENZENE
360U	1,4-DICHLOROBENZENE
360U	BENZYL ALCOHOL
360U	1,2-DICHLOROBENZENE
360U	2-METHYLPHENOL
360U	BIS(2-CHLOROISOPROPYL) ETHER
360U	(3-AND/OR 4-)METHYLPHENOL
360U	N-NITROSODI-N-PROPYLAMINE
360U	HEXACHLOROETHANE
360U	NITROBENZENE
360U	ISOPHORONE
360U	2-NITROPHENOL
360U	2,4-DIMETHYLPHENOL
1700U	BENZOIC ACID
360U	BIS(2-CHLOROETHOXY) METHANE
360U	2,4-DICHLOROPHENOL
360U	1,2,4-TRICHLOROBENZENE
360U	NAPHTHALENE
360UJ	4-CHLOROANILINE
360U	HEXACHLOROBUTADIENE
360U	4-CHLORO-3-METHYLPHENOL
360U	2-METHYLNAPHTHALENE
360U	HEXACHLOROCYCLOPENTADIENE (HCCP)
360U	2,4,6-TRICHLOROPHENOL
1700U	2,4,5-TRICHLOROPHENOL
360U	2-CHLORONAPHTHALENE
1700U	2-NITROANILINE
360U	DIMETHYL PHTHALATE
360U	ACENAPHTHYLENE
360U	2,6-DINITROTOLUENE

UG/KG	ANALYTICAL RESULTS
1700UJ	3-NITROANILINE
360U	ACENAPHTHENE
1700U	2,4-DINITROPHENOL
1700U	4-NITROPHENOL
360U	DIBENZOFURAN
360U	2,4-DINITROTOLUENE
360U	DIETHYL PHTHALATE
360U	4-CHLOROPHENYL PHENYL ETHER
360U	FLUORENE
1700UJ	4-NITROANILINE
1700U	2-METHYL-4,6-DINITROPHENOL
360U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
360U	4-BROMOPHENYL PHENYL ETHER
360U	HEXACHLOROBENZENE (HCB)
1700U	PENTACHLOROPHENOL
360U	PHENANTHRENE
360U	ANTHRACENE
360U	DI-N-BUTYLPHTHALATE
360U	FLUORANTHENE
360U	PYRENE
360U	BENZYL BUTYL PHTHALATE
720UJ	3,3'-DICHLOROBENZIDINE
360U	BENZO(A)ANTHRACENE
360U	CHRYSENE
360U	BIS(2-ETHYLHEXYL) PHTHALATE
360U	DI-N-OCTYLPHTHALATE
360U	BENZO(B AND/OR K)FLUORANTHENE
360U	BENZO-A-PYRENE
360UJ	INDENO (1,2,3-CD) PYRENE
360U	DIBENZO(A,H)ANTHRACENE
360U	BENZO(GHI)PERYLENE
8	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA

12/07/89

MISCELLANEOUS EXTRACTABLE COMPOUNDS DATA REPORT

PROJECT NO: 90-011	SAMPLE NO: 40505	SAMPLE TYPE: SOIL	PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFILL			CITY: STERLING ST: GA
STATION ID: SS-04			COLLECTION START: 10/17/89 0920 STOP: 00/00/00
CASE NO.: 12944	SAS NO.:		D. NO.: Q509 MD NO: Q509

ANALYTICAL RESULTS UG/KG

1000J 1 UNIDENTIFIED COMPOUND

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 0920 STOP: 00/00/00
D NUMBER: Q509

UG/KG	ANALYTICAL RESULTS	UG/KG	ANALYTICAL RESULTS
8.7U	ALPHA-BHC	87U	METHOXYCHLOR
8.7U	BETA-BHC	17U	ENDRIN KETONE
8.7U	DELTA-BHC		CHLORDANE (TECH. MIXTURE) /1
8.7U	GAMMA-BHC (LINDANE)	87U	GAMMA-CHLORDANE /2
8.7U	HEPTACHLOR	87U	ALPHA-CHLORDANE /2
8.7U	ALDRIN	1700U	TOXAPHENE
8.7U	HEPTACHLOR EPOXIDE	87U	PCB-1016 (AROCLOR 1016)
8.7U	ENDOSULFAN I (ALPHA)	87U	PCB-1221 (AROCLOR 1221)
17U	DIELDRIN	87U	PCB-1232 (AROCLOR 1232)
17U	4,4'-DDE (P,P'-DDE)	87U	PCB-1242 (AROCLOR 1242)
17U	ENDRIN	87U	PCB-1248 (AROCLOR 1248)
17U	ENDOSULFAN II (BETA)	170U	PCB-1254 (AROCLOR 1254)
17U	4,4'-DDD (P,P'-DDD)	170U	PCB-1260 (AROCLOR 1260)
17U	ENDOSULFAN SULFATE	8	PERCENT MOISTURE
17U	4,4'-DDT (P,P'-DDT)		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*******************************************************************************************************
**   PROJECT NO. 90-011   SAMPLE NO. 40521  SAMPLE TYPE. GROUNDWA     PROG ELEM: NSF   COLLECTED BY: W RILEY          **
**   SOURCE. OLD STERLING LANDFIL                                      CITY: STERLING              ST: GA              **
**   STATION ID: PB-01                                                 COLLECTION START: 10/16/89  0830   STOP. 00/00/00 **
**   CASE.NO.: 12944          SAS NO.:                                 D. NO.:                     MD NO: Q505         **
**                                                                                                                     **
*******************************************************************************************************
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q508 MD NO: Q508 **

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. [illegible] SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDF CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START: 10/17/89 1300 STOP: 00/00/00
CASE NO: 12944 NO: D. NO: Q517 MD NO: Q517

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.   12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*****************************************************************************************************
**   PROJECT NO. 90-011   SAMPLE NO. 40530  SAMPLE TYPE. GROUNDWA    PROG ELEM: NSF   COLLECTED BY: W RILEY        **
**   SOURCE. OLD STERLING LANDFIL                                    CITY: STERLING           ST: GA               **
**   STATION ID: TW-03                                               COLLECTION START: 10/17/89  1130   STOP. 00/00/00 **
**   CASE.NO.: 12944          SAS NO.:                               D. NO.: Q514              MD NO: Q514         **
**                                                                                                                  **
*****************************************************************************************************
```

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-04 COLLECTION START: 10/17/89 1000 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q511 MD NO: Q511 **

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: CITY: STERLING ST: GA **
** STATION ID: TW-05 COLLECTION START: 10/17/89 1515 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q519 MD NO: Q519 **
** **
*** ***

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

PESTICIDES/PCB'S DATA REPORT

PROJECT NO. 90 011 SAMPLE NO. 40542 SAMPLE TYPE: GROUNDWA
SOURCE: OLD STERLING LANDFIL
STATION ID: T6-01
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/16/89 0830 STOP: 00/00/00
D NUMBER: Q505

UG/L	ANALYTICAL RESULTS
0.050U	ALPHA-BHC
0.050U	BETA-BHC
0.050U	DELTA BHC
0.050U	GAMMA-BHC (LINDANE)
0.050U	HEPTACHLOR
0.050U	ALDRIN
0.050U	HEPTACHLOR EPOXIDE
0.050U	ENDOSULFAN I (ALPHA)
0.10U	DIELDRIN
0.10U	4,4'-DDE (P,P'-DDE)
0.10U	ENDRIN
0.10U	ENDOSULFAN II (BETA)
0.10U	4,4'-DDD (P,P'-DDD)
0.10U	ENDOSULFAN SULFATE
0.10U	4,4'-DDT (P,P'-DDT)

UG/L	ANALYTICAL RESULTS
0.50U	METHOXYCHLOR
0.10U	ENDRIN KETONE
	CHLORDANE (TECH. MIXTURE) /1
0.50U	GAMMA-CHLORDANE /2
0.50U	ALPHA-CHLORDANE /2
1.0U	TOXAPHENE
0.50U	PCB-1016 (AROCLOR 1016)
0.50U	PCB-1221 (AROCLOR 1221)
0.50U	PCB-1232 (AROCLOR 1232)
0.50U	PCB-1242 (AROCLOR 1242)
0.50U	PCB-1248 (AROCLOR 1248)
1.0U	PCB-1254 (AROCLOR 1254)
1.0U	PCB-1260 (AROCLOR 1260)

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.
*C-CONFIRMED BY GCMS 1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

EXTRACTABLE ORGANICS DATA REPORT

PROJECT NO. 30 011 SAMPLE NO. 30014 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFILL CITY: STERLING ST: GA
STATION ID: TB 01 COLLECTION START 10/16/89 0830 STOP: 00/00/00

CASE NO.: 12944 SAS NO.: D. NO.: Q505

UG/L	ANALYTICAL RESULTS
10U	PHENOL
10UJ	BIS(2-CHLOROETHYL) ETHER
10U	2-CHLOROPHENOL
10U	1,3-DICHLOROBENZENE
10U	1,4-DICHLOROBENZENE
10U	BENZYL ALCOHOL
10U	1,2-DICHLOROBENZENE
10U	2-METHYLPHENOL
10U	BIS(2-CHLOROISOPROPYL) ETHER
10U	(3-AND/OR 4-)METHYLPHENOL
10U	N-NITROSODI-N-PROPYLAMINE
10U	HEXACHLOROETHANE
10U	NITROBENZENE
10U	ISOPHORONE
10U	2-NITROPHENOL
10U	2,4-DIMETHYLPHENOL
50U	BENZOIC ACID
10U	BIS(2-CHLOROETHOXY) METHANE
10U	2,4-DICHLOROPHENOL
10U	1,2,4-TRICHLOROBENZENE
10U	NAPHTHALENE
10UJ	4-CHLOROANILINE
10U	HEXACHLOROBUTADIENE
10U	4-CHLORO-3-METHYLPHENOL
10U	2-METHYLNAPHTHALENE
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)
10U	2,4,6-TRICHLOROPHENOL
50U	2,4,5-TRICHLOROPHENOL
10U	2-CHLORONAPHTHALENE
50U	2-NITROANILINE
10U	DIMETHYL PHTHALATE
10U	ACENAPHTHYLENE
10U	2,6-DINITROTOLUENE

UG/L	ANALYTICAL RESULTS
50UJ	3-NITROANILINE
10U	ACENAPHTHENE
50U	2,4-DINITROPHENOL
50U	4-NITROPHENOL
10U	DIBENZOFURAN
10U	2,4-DINITROTOLUENE
10U	DIETHYL PHTHALATE
10U	4-CHLOROPHENYL PHENYL ETHER
10U	FLUORENE
50U	4-NITROANILINE
50U	2-METHYL-4,6-DINITROPHENOL
10U	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
10U	4-BROMOPHENYL PHENYL ETHER
10U	HEXACHLOROBENZENE (HCB)
50U	PENTACHLOROPHENOL
10U	PHENANTHRENE
10U	ANTHRACENE
10U	DI-N-BUTYLPHTHALATE
10U	FLUORANTHENE
10U	PYRENE
10U	BENZYL BUTYL PHTHALATE
20UJ	3,3'-DICHLOROBENZIDINE
10U	BENZO(A)ANTHRACENE
10U	CHRYSENE
10U	BIS(2-ETHYLHEXYL) PHTHALATE
10U	DI-N-OCTYLPHTHALATE
10U	BENZO(B AND/OR K)FLUORANTHENE
10U	BENZO-A-PYRENE
10UJ	INDENO (1,2,3-CD) PYRENE
10U	DIBENZO(A,H)ANTHRACENE
10U	BENZO(GHI)PERYLENE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.
12/07/89

PURGEABLE ORGANICS DATA REPORT

*** ***
** PROJECT NO. 90 011 SAMPLE NO. 40541 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TB-01 COLLECTION START: 10/16/89 0830 STOP: 00/00/00 **
** **
** CASE NO.: 12944 SAS NO.: D. NO.: Q505 **
*** ***

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
10U	CHLOROMETHANE	5U	1,2-DICHLOROPROPANE
10U	BROMOMETHANE	5U	CIS-1,3-DICHLOROPROPENE
10U	VINYL CHLORIDE	5U	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	CHLOROETHANE	5U	DIBROMOCHLOROMETHANE
5U	METHYLENE CHLORIDE	5U	1,1,2-TRICHLOROETHANE
10U	ACETONE	5U	BENZENE
5U	CARBON DISULFIDE	5U	TRANS-1,3-DICHLOROPROPENE
5U	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)	5U	BROMOFORM
5U	1,1-DICHLOROETHANE	10U	METHYL ISOBUTYL KETONE
5U	1,2-DICHLOROETHENE (TOTAL)	10U	METHYL BUTYL KETONE
5U	CHLOROFORM	5U	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
5U	1,2-DICHLOROETHANE	5U	1,1,2,2-TETRACHLOROETHANE
10U	METHYL ETHYL KETONE	5U	TOLUENE
5U	1,1,1-TRICHLOROETHANE	5U	CHLOROBENZENE
5U	CARBON TETRACHLORIDE	5U	ETHYL BENZENE
10U	VINYL ACETATE	5U	STYRENE
5U	BROMODICHLOROMETHANE	5U	TOTAL XYLENES

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

*** ***

** PROJECT NO. 90-011 SAMPLE NO. 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q520 MD NO: Q520 **
** **

*** ***

RESULTS	UNITS	PARAMETER
.01U	MG/L	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFILL CITY: STERLING ST: GA **
** STATION ID: SB-04 COLLECTION START: 10/17/89 0930 STOP: 00/00/00 **
** CASE NO.: 12944 SAS NO.: D. NO.: Q510 MD NO: Q510 **

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
***********************************************************************************************
**  PROJECT NO. 90-011   SAMPLE NO. 40522  SAMPLE TYPE: SOIL        PROG ELEM: NSF   COLLECTED BY: W RILEY   **
**  SOURCE: OLD STERLING LANDFIL                                    CITY: STERLING          ST: GA          **
**  STATION ID: SS-01                                               COLLECTION START: 10/16/89  1120   STOP: 00/00/00  **
**  CASE NO.: 12944          SAS NO.:                               D. NO.: Q506           MD NO: Q506      **
**                                                                                                          **
***********************************************************************************************
```

RESULTS	UNITS	PARAMETER
1.1U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFILL CITY: STERLING ST: GA
STATION ID: SS-02 COLLECTION START: 10/17/89 1200 STOP: 00/00/00
CASE NO.: 12944 SAS NO.: D. NO.: Q515 MD NO: Q515

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 12/07/89

SPECIFIED ANALYSIS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00 **
** CASE.NO.: 12944 SAS NO.: D. NO.: Q512 MD NO: Q512 **

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
********************************************************************************************
**  PROJECT NO. 90-011   SAMPLE NO. 40525  SAMPLE TYPE: SOIL      PROG ELEM: NSF   COLLECTED BY: W RILEY      **
**  SOURCE: OLD STERLING LANDFIL                                  CITY: STERLING             ST: GA           **
**  STATION ID: SS-04                                             COLLECTION START: 10/17/89  0920  STOP: 00/00/00  **
**  CASE NO.: 12944          SAS NO.:                             D. NO.: Q509               MD NO: Q509      **
**                                                                                                            **
********************************************************************************************
```

RESULTS	UNITS	PARAMETER
1.3U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*****************************************************************************************************
**   PROJECT NO. 90-011   SAMPLE NO. 40522  SAMPLE TYPE: SOIL      PROG ELEM: NSF   COLLECTED BY: W RILEY         **
**   SOURCE: OLD STERLING LANDFIL                                   CITY: STERLING              ST: GA              **
**   STATION ID: SB-01                                              COLLECTION START: 10/16/89  1150   STOP: 00/00/00 **
**   CASE NO.: 12944          SAS NO.:                              D. NO.: Q507               MD NO: Q507          **
**                                                                                                                  **
*****************************************************************************************************
```

RESULTS	UNITS	PARAMETER
.900U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40532 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SB-02 COLLECTION START: 10/17/89 1215 STOP: 00/00/00
CASE NO.: 12944 SAS NO.: D. NO.: Q516 MD NO: Q516

RESULTS	UNITS	PARAMETER
1.4U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

SPECIFIED ANALYSIS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40520 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFILL
STATION ID: SB-03
CASE NO.: 12944 SAS NO.:

PROG ELEM: NSF COLLECTED BY: W RILEY
CITY: STERLING ST: GA
COLLECTION START: 10/17/89 1050 STOP: 00/00/00
D. NO.: 0513 MD NO: 0513

RESULTS	UNITS	PARAMETER
1.6U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/17/89

SPECIFIED ANALYSIS DATA REPORT

*** ***
** PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE PROG ELEM: NSF COLLECTED BY: P FRANKLIN **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE COLLECTION START: 10/12/89 1448 STOP: 00/00/00 **
** **
*** ***

RESULTS	UNITS	PARAMETER
0.20	MG/KG	CYANIDE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA. 12/07/89

SPECIFIED ANALYSIS DATA REPORT

```
*****************************************************************************************************
**  PROJECT NO. 90-011    SAMPLE NO. 40534  SAMPLE TYPE: LEACHATE     PROG ELEM: NSF   COLLECTED BY: W RILEY        **
**  SOURCE: OLD STERLING LANDFILL                                      CITY: STERLING               ST: GA          **
**  STATION ID: LS-05                                                  COLLECTION START: 10/17/89  1315  STOP: 00/00/00 **
**  CASE NO.: 12944           SAS NO.:                                 D. NO.: Q518               MD NO: Q518     **
**                                                                                                                   **
*****************************************************************************************************
```

RESULTS	UNITS	PARAMETER
2.7U	MG/KG	CYANIDE

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO 40536 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID. PW-01 COLLECTION START: 10/17/89 1655 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: 0520

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
50U	ALUMINUM	61	MANGANESE
30U	ANTIMONY	0.2UJ	MERCURY
4UJ	ARSENIC	10U	NICKEL
12	BARIUM	1000	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
64000	CALCIUM	9000	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	2U	VANADIUM
320J	IRON	3U	ZINC
2UJ	LEAD		
2800	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

11/28/89

METALS DATA REPORT

PROJECT NO. 90-133 SAMPLE NO. 40511 SAMPLE TYPE: WASTE
SOURCE: OLD STERLING LANDFIL
STATION ID: OS-WS-05 WASTE SAMPLE SOUTH SIDE

PROG ELEM: NSF COLLECTED BY: R FRANKLIN
CITY: STERLING ST: GA
COLLECTION START: 10/12/89 1448 STOP: 00/00/00

MG/KG	ANALYTICAL RESULTS
1.0U	SILVER
3.0U	ARSENIC
NA	BORON
[redacted]	
0.50U	BERYLLIUM
0.50U	CADMIUM
1.0U	COBALT
[redacted]	
1.0U	MOLYBDENUM
2.0U	NICKEL
4.0U	LEAD
3.0U	ANTIMONY
4.0U	SELENIUM
2.5U	TIN
[redacted]	
5.0U	TELLURIUM
[redacted]	
10U	THALLIUM
[redacted]	
1.0U	YTTRIUM
[redacted]	
NA	ZIRCONIUM
NA	MERCURY
[redacted]	MANGANESE

MG/KG	ANALYTICAL RESULTS
[redacted]	
2000U	POTASSIUM
NA	PERCENT MOISTURE

REMARKS
DATA REPORTED ON WET WEIGHT BASIS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40534 SAMPLE TYPE: LEACHATE PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: LS-05 COLLECTION START: 10/17/89 1315 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q518

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	6.2	MANGANESE
20UJ	ANTIMONY	0.22UJ	MERCURY
1.8U	ARSENIC	4.3U	NICKEL
5.8	BARIUM	140U	POTASSIUM
0.43U	BERYLLIUM	0.89U	SELENIUM
1.7UJ	CADMIUM	0.86U	SILVER
1520	CALCIUM	14000	SODIUM
2.5	CHROMIUM	NA	THALLIUM
2.1U	COBALT	NA	TIN
8.2J	COPPER	2.1	VANADIUM
840J	IRON	20U	ZINC
23J	LEAD	56	PERCENT MOISTURE
220	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40523 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY. W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SB-01 COLLECTION START. 10/16/89 1150 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q507

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3500	ALUMINUM	2.6	MANGANESE
70J	ANTIMONY	0.11UJ	MERCURY
0.99U	ARSENIC	2.3U	NICKEL
4U	BARIUM	80U	POTASSIUM
0.23U	BERYLLIUM	0.5U	SELENIUM
0.93UJ	CADMIUM	0.46U	SILVER
40U	CALCIUM	70U	SODIUM
4.5	CHROMIUM	1.2U	THALLIUM
1.2U	COBALT	NA	TIN
30UJ	COPPER	1U	VANADIUM
380J	IRON	3U	ZINC
5UJ	LEAD	23	PERCENT MOISTURE
32	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90 011   SAMPLE NO. 40532   SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID. SB-02
CASE NUMBER: 12944   SAS NUMBER:

PROG ELEM: NSF   COLLECTED BY: W RILEY
CITY: STERLING   ST: GA
COLLECTION START: 10/17/89 1215   STOP: 00/00/00
MD NUMBER: Q516

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3800	ALUMINUM	1.4	MANGANESE
6.6UJ	ANTIMONY	0.11UJ	MERCURY
0.88U	ARSENIC	2.2U	NICKEL
3.2	BARIUM	80U	POTASSIUM
0.22U	BERYLLIUM	0.44U	SELENIUM
0.88UJ	CADMIUM	0.44U	SILVER
230	CALCIUM	80U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
5UJ	COPPER	1.9	VANADIUM
290J	IRON	20U	ZINC
5UJ	LEAD	14	PERCENT MOISTURE
37	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE   *NA-NOT ANALYZED   *NAI-INTERFERENCES   *J-ESTIMATED VALUE   *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN   *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40529 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SB-03
CASE NUMBER: 12944 SAS NUMBER.

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 1050 STOP: 00/00/00
MD NUMBER: Q513

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4300	ALUMINUM	1.1U	MANGANESE
8UJ	ANTIMONY	0.09UJ	MERCURY
1.1U	ARSENIC	2.7U	NICKEL
2.2	BARIUM	86U	POTASSIUM
0.27U	BERYLLIUM	0.54U	SELENIUM
1.1UJ	CADMIUM	0.54U	SILVER
50U	CALCIUM	70U	SODIUM
4	CHROMIUM	7.1U	THALLIUM
1.3U	COBALT	NA	TIN
1UJ	COPPER	1U	VANADIUM
270J	IRON	0.8U	ZINC
3UJ	LEAD	30	PERCENT MOISTURE
38	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40526 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID. S8-04 COLLECTION START. 10/17/89 0930 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. MU NUMBER: Q510

ANALYTICAL RESULTS

MG/KG	
4900	ALUMINUM
6UJ	ANTIMONY
0.83U	ARSENIC
5.4	BARIUM
0.18U	BERYLLIUM
0.72UJ	CADMIUM
30U	CALCIUM
3.6	CHROMIUM
0.9U	COBALT
7UJ	COPPER
650J	IRON
4UJ	LEAD
120	MAGNESIUM

ANALYTICAL RESULTS

MG/KG	
3.2	MANGANESE
0.110J	MERCURY
1.8U	NICKEL
58U	POTASSIUM
1U	SELENIUM
0.36U	SILVER
70U	SODIUM
1U	THALLIUM
NA	TIN
2.2	VANADIUM
3U	ZINC
23	PERCENT MOISTURE

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

** PROJECT NO. 90-011 SAMPLE NO. 40522 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY. W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: SS-01 COLLECTION START: 10/16/89 1120 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q506 **

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3700	ALUMINUM	53	MANGANESE
6.3UJ	ANTIMONY	0.11UJ	MERCURY
0.69U	ARSENIC	2.1U	NICKEL
12	BARIUM	67U	POTASSIUM
0.21U	BERYLLIUM	0.34U	SELENIUM
0.83UJ	CADMIUM	0.42U	SILVER
150	CALCIUM	70U	SODIUM
5.2	CHROMIUM	0.86U	THALLIUM
1U	COBALT	NA	TIN
50UJ	COPPER	3U	VANADIUM
6000J	IRON	7U	ZINC
9.3J	LEAD	05	PERCENT MOISTURE
120	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40531 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-02 COLLECTION START. 10/17/89 1200 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q515

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
3400	ALUMINUM	1.3	MANGANESE
6.4UJ	ANTIMONY	0.11UJ	MERCURY
0.86U	ARSENIC	2.1U	NICKEL
2.3	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	0.43U	SELENIUM
0.85UJ	CADMIUM	0.42U	SILVER
230	CALCIUM	20	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
2U	COBALT	NA	TIN
5UJ	COPPER	1U	VANADIUM
290J	IRON	3U	ZINC
2U	LEAD	08	PERCENT MOISTURE
52	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40528 SAMPLE TYPE: SOIL PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: SS-03 COLLECTION START: 10/17/89 1045 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q512

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
4600	ALUMINUM	4.7	MANGANESE
6.3UJ	ANTIMONY	0.11UJ	MERCURY
0.9U	ARSENIC	2.1U	NICKEL
6.7	BARIUM	70U	POTASSIUM
0.21U	BERYLLIUM	1U	SELENIUM
0.84UJ	CADMIUM	0.42U	SILVER
92	CALCIUM	100U	SODIUM
2.6	CHROMIUM	1.1U	THALLIUM
1.1U	COBALT	NA	TIN
6UJ	COPPER	2.9	VANADIUM
1400J	IRON	4U	ZINC
3UJ	LEAD	13	PERCENT MOISTURE
110	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40525 SAMPLE TYPE: SOIL
SOURCE: OLD STERLING LANDFIL
STATION ID: SS-04
CASE NUMBER: 12944 SAS NUMBER:

PROG ELEM: NSF COLLECTED BY. W RILEY
CITY: STERLING ST: GA
COLLECTION START. 10/17/89 0920 STOP: 00/00/00
MD NUMBER: Q509

MG/KG	ANALYTICAL RESULTS	MG/KG	ANALYTICAL RESULTS
6000	ALUMINUM	12	MANGANESE
60J	ANTIMONY	0.11UJ	MERCURY
0.85U	ARSENIC	1.9U	NICKEL
14	BARIUM	70U	POTASSIUM
0.19U	BERYLLIUM	0.42U	SELENIUM
0.76UJ	CADMIUM	0.38U	SILVER
86	CALCIUM	20U	SODIUM
2.9	CHROMIUM	1.1U	THALLIUM
0.95U	COBALT	NA	TIN
8.9J	COPPER	3.6	VANADIUM
1800J	IRON	3U	ZINC
3UJ	LEAD	09	PERCENT MOISTURE
170	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO 40521 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID. FB-01 COLLECTION START. 10/16/89 0830 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q505

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
70U	ALUMINUM	4U	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
5U	BARIUM	330U	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1900	CALCIUM	300U	SODIUM
2U	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
7U	COPPER	2U	VANADIUM
47J	IRON	3U	ZINC
2UJ	LEAD		
430	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40524 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-01 COLLECTION START: 10/16/89 1230 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q508

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
9900	ALUMINUM	13	MANGANESE
30U	ANTIMONY	0.2U	MERCURY
4UJ	ARSENIC	10U	NICKEL
24	BARIUM	410	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
1800	CALCIUM	11000	SODIUM
12	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
30U	COPPER	4U	VANADIUM
920J	IRON	13U	ZINC
3UJ	LEAD		
740	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

PROJECT NO. 90-011 SAMPLE NO. 40533 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-02 COLLECTION START. 10/17/89 1300 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q517

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12000	ALUMINUM	230	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	26	NICKEL
56	BARIUM	6700	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
180000	CALCIUM	31000	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
40U	COPPER	15	VANADIUM
13000J	IRON	150U	ZINC
38J	LEAD		
18000	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

12/07/89

METALS DATA REPORT

** PROJECT NO. 90-011 SAMPLE NO. 40530 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY **
** SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA **
** STATION ID: TW-03 COLLECTION START: 10/17/89 1130 STOP: 00/00/00 **
** CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q514 **

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
15000	ALUMINUM	16	MANGANESE
30U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
41	BARIUM	7500	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
22000	CALCIUM	8200	SODIUM
14	CHROMIUM	5U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	7	VANADIUM
1300J	IRON	13U	ZINC
7UJ	LEAD		
6100	MAGNESIUM		

REMARKS

REMARKS

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90-011 SAMPLE NO. 40527 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: OLD STERLING LANDFIL CITY: STERLING ST: GA
STATION ID: TW-04 COLLECTION START: 10/17/89 1000 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER: MD NUMBER: Q511

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
1900	ALUMINUM	4U	MANGANESE
40U	ANTIMONY	0.20J	MERCURY
4UJ	ARSENIC	10U	NICKEL
21	BARIUM	19000	POTASSIUM
1U	BERYLLIUM	7	SELENIUM
4U	CADMIUM	2U	SILVER
35000	CALCIUM	120000	SODIUM
2U	CHROMIUM	50U	THALLIUM
5U	COBALT	NA	TIN
20U	COPPER	6	VANADIUM
260J	IRON	60U	ZINC
3UJ	LEAD		
9500	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-REGION IV ESD, ATHENS, GA.

METALS DATA REPORT 12/07/89

PROJECT NO. 90 011 SAMPLE NO. 40535 SAMPLE TYPE: GROUNDWA PROG ELEM: NSF COLLECTED BY: W RILEY
SOURCE: CITY: STERLING ST: GA
STATION ID. TW-05 COLLECTION START. 10/17/89 1515 STOP: 00/00/00
CASE NUMBER: 12944 SAS NUMBER. MD NUMBER: Q519

UG/L	ANALYTICAL RESULTS	UG/L	ANALYTICAL RESULTS
12000	ALUMINUM	510	MANGANESE
30U	ANTIMONY	0.40J	MERCURY
4UJ	ARSENIC	10U	NICKEL
190	BARIUM	38000	POTASSIUM
1U	BERYLLIUM	2U	SELENIUM
4U	CADMIUM	2U	SILVER
140000	CALCIUM	150000	SODIUM
8	CHROMIUM	50U	THALLIUM
7U	COBALT	NA	TIN
20U	COPPER	8	VANADIUM
38000J	IRON	140U	ZINC
30UJ	LEAD		
11000	MAGNESIUM		

REMARKS ***REMARKS***

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES *J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN *L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM QUANTITATION LIMIT.
*R-QC INDICATES THAT DATA UNUSABLE. COMPOUND MAY OR MAY NOT BE PRESENT. RESAMPLING AND REANALYSIS IS NECESSARY FOR VERIFICATION.

APPENDIX D

EPA

Potential Hazardous Waste Site

Site Inspection Report

Site Inspection Report

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980416939

II. SITE NAME AND LOCATION

01 SITE NAME: Old Sterling land fill
02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: Old Hwy 99
03 CITY: Sterling
04 STATE: GA
05 ZIP CODE: 31520
06 COUNTY: Glynn
07 COUNTY CODE:
08 CONG DIST:
09 COORDINATES: LATITUDE 31 16 18 | LONGITUDE 81 31 53
10 TYPE OF OWNERSHIP (Check one): [X] A. PRIVATE [ ] B. FEDERAL ____ [ ] C. STATE [ ] D. COUNTY [ ] E. MUNICIPAL [ ] F. OTHER ____ [ ] G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 11 16 89 (MONTH DAY YEAR)
02 SITE STATUS: [ ] ACTIVE [X] INACTIVE
03 YEARS OF OPERATION: 1969 (BEGINNING YEAR) 1979 (ENDING YEAR) ___ UNKNOWN
04 AGENCY PERFORMING INSPECTION (Check all that apply): [ ] A. EPA [X] B. EPA CONTRACTOR NUS Corp [ ] C. MUNICIPAL [ ] D. MUNICIPAL CONTRACTOR ____ [ ] E. STATE [ ] F. STATE CONTRACTOR ____ [ ] G. OTHER ____

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Walter Riley	Project Manager	NUS	(404) 938-7710
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO
Roger Franklin	Sampling Team	NUS	(404) 938-7710
Ron Young	Sampling Team	NUS	(404) 938-7710
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one): [X] PERMISSION [ ] WARRANT
18 TIME OF INSPECTION: 0900
19 WEATHER CONDITIONS: Warm + Sunny

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Mario Villamarzo	EPA	(404) 347-5065

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Walter Riley		NUS Corp	404/938-7710	02 07 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D18 349939

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [X] C. SLUDGE
- [ ] D. OTHER _____ (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 49

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	49	tons	
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
CCC	Toxaphene	8001-35-2	Landfill	159000	ppm

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: GA
02 SITE NUMBER: D980494692

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: 10/16/90) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Groundwater samples had low concentrations of lead, barium selenium, cadmium and manganese.

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: 10/16/90) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Strontium and titanium present in waste sample at low concentration.

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: 10/16/90) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

There is no significant contamination

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE: 10/16/90) [ ] POTENTIAL [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: 6 (Acres) 04 NARRATIVE DESCRIPTION

Surface, subsurface soils have metal and organic contamination, contamination is not significant.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Insignificant low levels of lead Barium Selenium and Ethylbenzene were detected in ground water, but in the surficial aquifer.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980496939

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

Unknown

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids/Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

06 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 940 homes are not served by the municipal water system.

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980496999

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	49	TONS
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE: 4.3 acres

07 COMMENTS
265,000 cubic feet of mixed organics, inorganic, solvents, and Trash

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKES, LINERS, BARRIERS, ETC.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS
Vehicle traffic limited by Gate at Entrance. Property posted. The waste is not exposed.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Like material.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D980496939

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☒
NON-COMMUNITY	C.	D.

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F.

03 DISTANCE TO SITE
A. [illegible] (mi)
B. ____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Adequate other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 3300
03 DISTANCE TO NEAREST DRINKING WATER WELL: .1 (mi)

04 DEPTH TO GROUNDWATER: 5 (ft)
05 DIRECTION OF GROUNDWATER FLOW: South
06 DEPTH TO AQUIFER OF CONCERN: 120 (ft)
07 POTENTIAL YIELD OF AQUIFER: 720,000 (gpm)
08 SOLE SOURCE AQUIFER: ☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including casings, depth, and location relative to population and buildings)
Wells are cased to a depth of 120 feet or more

10 RECHARGE AREA
☐ YES
☐ NO
COMMENTS

11 DISCHARGE AREA
☐ YES
☐ NO
COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Unnamed Canal	☐	.7 (mi)
Burnett Creek	☐	2.5 (mi)
Cowpens Creek	☐	5.7 (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE: A. 322 (NO. OF PERSONS)
TWO (2) MILES OF SITE: B. 1022 (NO. OF PERSONS)
THREE (3) MILES OF SITE: C. 29500 (NO. OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: .1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 292

04 DISTANCE TO NEAREST OFF-SITE BUILDING: .1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
the is approximately 92 homes within the one mile radius of old Sterling Landfills

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: D983049939

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☒ A. 10^{-6} - 10^{-8} cm/sec ☐ B. 10^{-4} - 10^{-6} cm/sec ☐ C. 10^{-4} - 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) ☒ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
140 (ft)	3-5 (ft)	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
7 (in)	4 (in)	0 %	—	0 %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. 1,8 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

10,5 (mi)

ENDANGERED SPECIES: Black Skimmer, Leggor tract/Sea turtle, Brown pelicans

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. _____ (mi)	B. .1 (mi)	C. ½ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The old sterling landfill and surrounding area is fairly flat. The site is a cleared area overgrown with weeds and tall grass. The surrounding area is mostly pinetrees. A manmade embankment was located in the southwest quadrant of the landfill.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
LA	D980[illegible]

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	6	Southwest Labs of Ok., Broken Arrow, Ok.	1/90
SURFACE WATER		+ Aquatec Inc. of Burlington Vt. & ETC Tarrson, La.	
WASTE	1	ESD Athens, GA	1/9/90
AIR			
RUNOFF			
SPILL			
SOIL	8	Southwest Labs of Ok., Broken Arrow, Aquatec, Inc	1/4/90
VEGETATION		ETC Tarrson, Baton Rouge LA.	
OTHER	1	" "	1/9/90

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH	
Temperature	
Conductance	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF NUS Corporation

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS NUS Corporation Files

V. OTHER FIELD DATA COLLECTED

VI. SOURCES OF INFORMATION

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D 9[illegible]

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Ga Pacific Corp	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Rt. #1 Box 634	

05 CITY	06 STATE	07 ZIP CODE
Hartense	GA	31543

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER
GA Pacific Corp.	

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
133 Peachtree St. N.W.	

12 CITY	13 STATE	14 ZIP CODE
Atlanta	GA	30313

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
GA	D 1 COUN. 7 39

II. CURRENT OPERATOR		OPERATOR'S PARENT COMPANY	
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER		

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)		PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)	
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	09 [illegible]

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE / 07 ZIP CODE	

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	D 980 [illegible]

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION NA	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	02 DATE	03 AGENCY

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: DGS049693 9

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
GA	D980491939

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

File Material

EPA FORM 2070-13 (7-81)

SEP 27 1989
4WD-SISB

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Doug Roberto
Senior Counsel
Georgia-Pacific Corporation
133 Peachtree Street
Atlanta, Georgia 30303

FILE

RE: Old Sterling Landfill
EPA ID GAD980496939
Old Highway 99
Sterling, Georgia

Dear Mr. Roberto:

The United States Environmental Protection Agency (EPA), pursuant to the authority and requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42, U.S.C. 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act (SARA), Public Law 99-499, is planning to conduct an investigation of the above-referenced site. Old Sterling Landfill is located off of Old Highway 99, Sterling, Georgia. EPA has reason to believe that there may be a release or threat of a release of hazardous substances from the site into the surrounding environment. The purpose of the investigation is to determine the nature and extent of contamination at the site and to determine what, if any, further response action would be appropriate.

As per the telephone conversation on September 25, 1989, with you, EPA was granted permission for access to your property beginning on or about October 16, 1989, and continuing through the completion of the investigation on or about October 20, 1989. Activities to be conducted during the investigation may include:

1. Inspect, sketch, and photograph the premises;

2. Collect surface and subsurface soil samples;

3. Collect groundwater and subsurface water samples;

4. Collect sediment samples;

5. Conduct air monitoring;

ACCESS LETTER

6. Transportation of equipment onto and about the site as necessary to accomplish the activities above, including trucks and sampling equipment.

The above sampling activity will be conducted by personnel from EPA Region IV's Field Investigation Team (FIT). Mr. Geoffrey Carton of FIT will contact you prior to the actual site visit to make final arrangements and note any changes.

Split samples will be made available if requested. However, you will be required to furnish your own laboratory analyses.

If you have any questions, please contact me at (404) 347-5065. Your cooperation in this matter is appreciated.

Sincerely,

Mario E. Villamarzo, Jr.
Environmental Engineer
Site Assessment Section, WD

cc: Geoffrey Carton, NUS

4WD-SAS

9/26

VILLAMARZO

4WD-SAS

9/26

KUMAR

MV:aa:09/26/89:DOC ACCESS1A DISK A:X5065

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WD-SISB

JUN 15 1989

Mr. John Taylor
Land Protection Branch
Georgia Environmental Protection Division
205 Butler Street, SW
Atlanta, Georgia 30334

RE: EPA Preliminary Assessment and Screening
Site Investigations for CERCLA sites in Georgia.

Dear Mr. Taylor:

Forwarded for your information are copies of Preliminary Assessments (PAs) and Screening Site Investigations (SSIs) prepared by EPA for CERCLA sites located in the State of Georgia. All preliminary Hazardous Ranking System (HRS) scores and scoring documentation have been removed from the reports.

Following is a list of the records being provided:

Koppers Company	GAD075866418	SSI phase I
Pastures Various	GAD980729271	SSI phase I
Smith C.O. Farm/ Ganon Property	GAD980559298	SSI phase I
Ralston Purina Co.	GAD003269883	SSI phase I
Old Sterling Landfill	GAD980496939	SSI phase I
Owens Illinois, Inc. Plant #10	GAD003295243	SSI phase I
Payco Pallet and Drum Site	GAD980710552	SSI phase I
Latex Construction Co.	GAD980803696	SSI phase I

The status of each site is indicated on each report.

Should you have any questions or comments, please contact me at (404) 347-5065.

Sincerely yours,

Mario E. Villamarzo
Georgia Project Officer

cc: Murray Warner

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WM-GP

FEB 13 1990

Old Stanley Farm
GAD 980496939
Sterling, GA

Bailey B. Standard
Route 11, Box 662
Brunswick, Georgia 31520

Dear Mr. Standard:

On October 17, 1989, your well water was sampled by the Environmental Protection Agency (EPA) as part of an investigation into possible ground-water contamination in the area. The results from this investigation have been forwarded to our office. This letter is to inform you of the results from the analysis of your well water sample.

The sample collected from your well was analyzed for metals, pesticides/PCBs, and extractable and volatile organic compounds. There were no constituents detected which exceed EPA's National Primary Drinking Water Regulation or any other health-based criteria. As such, use of your well water should not result in any adverse health effects.

EPA also has National Secondary Drinking Water Regulations (NSDWR) which relate to the aesthetic quality (i.e., taste, odor, color) of drinking water. The NSDWRs for iron and manganese are 300 ug/l (micrograms per liter) and 50 ug/l, respectively. The concentrations detected in your well water sample were 320 ug/l of iron and 61 ug/l of manganese. These concentrations should not result in any adverse health effects, but may result in some aesthetic problems such as water fixture staining.

If you have any questions or if we can be of any further assistance, please call Mr. Glenn Adams of my staff at 404/347-3866.

Sincerely,

James S. Kutzman

James S. Kutzman, Chief
Ground-Water Protection Branch

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET N.E.
ATLANTA, GEORGIA 30365

4WD-SISB

Mr. John Taylor
Land Protection Branch
Georgia Environmental Protection Division
205 Butler Street, SW
Atlanta, Georgia 30334

RE: EPA Preliminary Assessment and Screening
Site Investigations for CERCLA sites in Georgia.

Dear Mr. Taylor:

Forwarded for your information are copies of Preliminary Assessments (PAs) and Screening Site Investigations (SSIs) prepared by EPA for CERCLA sites located in the State of Georgia. All preliminary Hazardous Ranking System (HRS) scores and scoring documentation have been removed from the reports.

Following is a list of the records being provided:

Koppers Company	GAD075866418	SSI phase I
Pastures Various	GAD980729271	SSI phase I
Smith C.O. Farm/ Ganon Property	GAD980559298	SSI phase I
Ralston Purina Co.	GAD003269883	SSI phase I
Old Sterling Landfill	GAD980496939	SSI phase I
Owens Illinois, Inc. Plant #10	GAD003295243	SSI phase I
Payco Pallet and Drum Site	GAD980710552	SSI phase I
Latex Construction Co.	GAD980803696	SSI phase I

The status of each site is indicated on each report.

Should you have any questions or comments, please contact me at (404) 347-5065.

Sincerely yours,

MEV 6/14/89

Mario E. Villamarzo
Georgia Project Officer

cc: Murray Warner

MV:aa:Doc Taylor3:6/8/89:5065

YELLOW

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to:
Mr. Doug Roberto
Senior Counsel
Georgia-Pacific Corporation
133 Peachtree Street
Atlanta, Georgia 30303

4. Article Number
P478 663 911

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery
9-29-89

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Feb. 1986 **DOMESTIC RETURN RECEIPT**

access letter

Old Sterling Landfill

Sterling Georgia

ACCESS INFORMATION SHEET

Site Name:	Old Sterling Landfill	**FIT Project Manager:**	Walter Riley
Site Address:	Old Hwy. 99	**FIT State Coordinator:**	Geoff Carton
	Sterling, GA 31520	**EPA Contact:**	Mario Villamarzo
		Field Date:	Week of October 6, 1989
EPA ID #:	GAD980496939	**TDD Number:**	F4-8902-46

	File Information	Verification
Facility Owner/Operator **Address** **Phone No.** **Principal Contact**	Buffalo Hunting Club currently leases property. GA-Pacific will be responsible for all contact with the club.	
Landowner **Address** **Phone No.** **Principal Contact (if different from above)**	Georgia Pacific Corporation P. O. Box 860 Brunswick, GA 31521 (912) 264-5022 Andrew "Drew" Shirley	
Date of Information	September 6, 1989	

Date Access Required (3 weeks prior to field date)		**Date Information Submitted to EPA**	9/8/89

Comments: Property tentatively identified as Sterling-Wright Tract, Sectional 2, Compartment 4. Tom Stevens, GA-Pacific, Atlanta (521-5080) will probably contact EPA.

NUS CORPORATION
1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

COMPLETE
ENG. Klucas
Recmd SSI II
5/23/89

received
MAY 17 1989
DISB/S AS

C-586-5-9-108

May 16, 1989

Mr. A.R. Hanke
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Subject: Screening Site Inspection, Phase I
Old Sterling Landfill
Sterling, Glynn County, Georgia
EPA No. GAD980496939
TDD No. F4-8902-46

Dear Mr. Hanke:

FIT 4 conducted Phase I of a Screening Site Inspection at the Old Sterling Landfill in Sterling, Glynn County, Georgia. Phase I included a review of EPA and state file material, completion of a target survey, and a drive-by reconnaissance of the facility.

The Old Sterling Landfill is a sanitary landfill located in a sparsely populated area (Refs. 1, 2). The landfill has been closed and the property is currently used as a private hunting preserve. The surrounding properties are residential and tree farms. The landfill property is unfenced (Ref. 2).

The county operated the landfill from about 1969 through 1979 on leased land (Ref 3). The landfill was permitted by the state in 1976 and was officially closed in 1980 (Ref. 4). The property is currently owned by Georgia Pacific. The fill area is between 6 and 10 acres in size. It was created in an abandoned borrow pit with an original depth of about 10 feet. In order to fill the pit, it was necessary to operate a pump to remove groundwater (Ref. 3).

One Glynn County Public Works official reports that only yard wastes (i.e., tree limbs and leaves) were accepted at the landfill (Ref. 3). However, another county official reported that garbage and an occasional car were deposited in the landfill (Ref. 5). A state official reported that he had observed an orange, granular material (which took on a jelly-like consistency when wet) being placed into the landfill. He also confirmed that waste from the Hercules plant in Brunswick was deposited in the landfill (Ref. 4). File material indicates that Hercules deposited 265,000 cubic feet of mixed organics, inorganics, solvents, and trash in the landfill. Hercules reported that less than 2 percent of this volume could be considered hazardous (Ref. 6). The state reported that approximately 49 tons of toxaphene was deposited in the landfill (Ref. 1).

The facility is located in the Coastal Plain Physiographic Province in Glynn County, Georgia. This area has a humid climate with a net annual precipitation of 7 inches (Ref. 7). Precipitation is heaviest during the period of June through September and lightest from November through January (Ref. 8, p. 56). Geology in the area consists of sedimentary deposits ranging in composition from dense limestone to compact clays to a loose sand and shell material that overlies faulted Paleozoic igneous

and metamorphic basement rocks. In the site area these Cretaceous and younger sedimentary deposits are approximately 4,500 feet thick and are the source of groundwater in the area (Refs. 9, p. 9; 10, p. E25). Water occurs in these units as an unconfined, water-table aquifer and under confined (artesian) conditions (Ref. 10, pp. E21-22).

Stratigraphy in the site area, in descending order, consists of unconsolidated surficial sand deposits; the gravely sand and thin limestone beds of post-Hawthorne Formation Rocks; the sand, clay and limestone beds of the Hawthorne Formation; the undifferentiated limestones of Eocene and Oligocene age (principal artesian aquifer); and the undifferentiated Cretaceous age rocks (Refs. 9, pp. 9-19; 10, pp. E22-26). Generally, wells completed in formations at depths greater than 50 feet below land surface (bls) will flow under artesian conditions (Ref. 10, p. E22).

Three aquifers underlie this facility: the unconsolidated surficial water-table aquifer; the confined sands and micaceous clays of a limestone bed of the Hawthorne Formation; the confined limestones and dolomites of the early Miocene and Oligocene age rocks, and the confined Ocala Limestone (Refs. 10, pp. E24-25; 11, pp. 3,6). The aquifer of concern consists of the Miocene and Oligocene rocks and the Ocala Limestone. Collectively these units are known as the "principal artesian aquifer" in the site area (Ref. 10, p. E25).

Water in the surficial aquifer generally occurs in two zones, one from approximately 12 to 17 feet bls, and one from 35 to 50 feet bls. Yields of 5 to 20 gallons per minute (gpm) can be obtained from this aquifer and it is suitable for small domestic supplies (Ref. 10, p. E22). A confining layer of late Miocene age clayey silt, which is approximately 120 to 150 feet thick, underlies the surficial aquifer and separates it from the underlying Hawthorne Formation (Refs. 11, p. 76-78; 12, pp. 210-220). Domestic and small industrial wells are completed in the Hawthorne Formation at depths of 100 to 500 feet bls and can yield from 20 to 500 gpm with the deeper wells giving the higher yields. This formation is underlain by a hard limestone approximately 60 to 400 feet thick that separates it from the underlying principle artesian aquifer (Refs. 11, p. 78; 12, pp. 210-220). This aquifer system contains two water-bearing zones, one at approximately 500 to 760 feet bls and one at 860 to 1,000 feet bls. In some places, this lower zone may extend to 1,700 feet bls (Refs. 10, pp. E25-26; 11, p. 78). This aquifer system is underlain by a dense dolomite that separates it from an underlying zone of brackish water. Current pumpage in the principle artesian aquifer has caused upward leakage of the brackish water through a local porous part of the dolomitic confining bed (Ref. 11, p. 1).

The water needs of communities within 4 miles of the landfill are either served by the Brunswick Water System, the Glynn County Water System or by private wells. The Brunswick Water System obtains its water from wells more than 4 miles from the landfill (Refs. 13, 14). The county system supplies about 110 connections from three wells. The wells are about 750 feet deep (Ref. 14). All of the wells are within 4 miles of the facility. The closest well is 2.1 miles southeast of the landfill and serves 100 of the county's connections (Refs. 13, 15). The remaining 10 connections are served by the other 2 county wells (Ref. 15). A house count shows approximately 940 homes within 3 miles of the landfill which are not served by one of the municipal water systems (Refs. 2, 13, 14, 16). It is estimated that 95 percent of these homes obtain their water from wells cased to 120 feet or more. No dug wells are still in use in this area (Ref. 17). The nearest private well is located 500 feet north of the landfill (Refs. 2, 13).

The area surrounding the landfill is very flat. The majority of surface water draining from the landfill most likely collects in low areas and percolates into the ground. Any remaining water trends south overland for 0.7 mile and enters an unnamed canal. The canal trends south for 1.8 miles and enters Burnett Creek, which flows southwest for 3.2 miles and enters Cowpen Creek. Cowpen Creek continues south for 0.4 mile and enters the Turtle River, which trends southeast for 9.5 miles. Turtle River terminates in the Brunswick River, which trends east for about 3 miles and discharges into St. Simons Sound. Some channels exist which connect the rivers on this pathway with other rivers in the area (Ref. 13). The rivers in this area support a significant amount of commercial fishing (Ref. 18). Although the ranges of at least 10 endangered or threatened species include the landfill area, no critical habitats are designated in Glynn County (Refs. 19, 20).

FIT 4 recommends that Phase II of this screening site inspection be conducted at the Old Sterling Landfill because of the quantity and nature of wastes disposed of on site and the proximity of drinking water wells.

Very truly yours,

Geoffrey Carton
Project Manager

Approved

GC/gwn

Enclosures (____)

cc: Ken Lucas

REFERENCES

1. Potential Hazardous Waste Site Identification and Preliminary Assessment (EPA Form 2070-2) for Old Sterling Landfill. Filed by Jennifer Kaduck, Georgia Department of Natural Resources, January 15, 1980.

2. NUS Field Logbook No. F4-1279 for Old Sterling Landfill, TDD No. F4-8902-46. Documentation of facility reconnaissance, March 3, 1989.

3. Robert Howe, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the old Sterling Landfill.

4. Morgan Cantrell, Georgia Environmental Protection Division, Municipal Solid Waste Management, telephone conversation with Geoffrey Carton, March 22, 1989. Subject: Hazardous materials at Old Sterling Landfill.

5. Olin Chancy, Glynn County Department of Public Works, telephone conversation with Geoffrey Carton, NUS Corporation, March 17, 1989. Subject: Operations at the old Sterling Landfill.

6. EPA Notification of Hazardous Waste Site (EPA Form 8900-1) for Hercules Incorporated, Brunswick, Georgia. Filed by K.T. Horton, Hercules, Inc., May 29, 1981.

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

8. U.S. Department of Agriculture, Soil Conservation Service, "Soil Survey of Camden and Glynn Counties, Georgia," Table 1.

9. Stephen Herrick and Robert Vorhis, "Subsurface Geology of the Georgia Coastal Plain," Information Circular 25 (Atlanta, Georgia: U.S. Geological Survey, 1963), pp. 9-19.

10. Robert Wait, "Geology and Occurrence of Fresh and Brackish Ground Water in Glynn County, Georgia," Geological Survey Water-Supply Paper 1613-E (Washington, D.C.: GPO, 1965), pp. E22-E26.

11. Robert L. Wait and Dean O. Gregg, "Hydrology and Chloride Contamination of the Principal Artesian Aquifer in Glynn County, Georgia," (Atlanta, Georgia: Georgia Department of Natural Resources, 1973), pp. 1,3,5,76,78.

12. Stephen Herrick, "Well Logs of the Coastal Plain of Georgia," Bulletin Number 70 (Atlanta, Georgia: Georgia Geological Survey, 1961), pp. 210-220.

13. U.S. Geological Survey, 7.5 minute series Topographic Quadrangle Maps of Georgia: Brunswick East 1979, Brunswick West 1979, Dover Bluff 1979, Jekyll Island 1979, Sterling 1978, scale 1:24,000.

14. NUS Field Logbook No. F4-1282 for LCP Chemicals Inc,, TDD No. F4-8902-27. Documentation of facility reconnaissance, March 3, 1989.

15. Ralph Thurston, Superintendent, Glynn County Water Department, telephone conversation with Geoffrey Carton, NUS Corporation, April 20, 1989. Subject: County water service and well locations.

16. Zandra Miles, Glynn County Health Department, telephone conversation with Geoffrey Carton, NUS Corporation, April 20, 1989. Subject: Developments and wells in the Sterling area.

17. Gerald Nix, Nix Well Drilling, telephone conversation with Geoffrey Carton, NUS Corporation, March 23, 1989. Subject: Wells in the Sterling area.

18. Nelson Johnson, National National Marine Fisheries Service, U. S. Department of Commerce, letter to Bob Donahue, NUS Corporation, February 10, 1989. Subject: Transmittal of preliminary fish landings data.

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

20. U.S. Fish and Wildlife Service, Atlantic Coast Ecological Inventory Map of Georgia (1980): Brunswick, scale 1:250,000.

RCRA/NPL POLICY QUESTIONNAIRE FOR INITIAL SCREENING

Site Name: Old Sterling Landfill

City: Sterling State: Georgia

EPA I.D. Number: GAD980496939

Type of Facility: Generator____ Transporter____ Disposal ✓
Treatment____ Storage (more than 90 days)____

I. RCRA APPLICABILITY	yes	no
Has this facility treated, stored or disposed of a RCRA hazardous waste since Nov. 19, 1980?	___	✓
Has a RCRA Facility Assessment (RFA) been performed on this site?	___	___
Does the facility have a RCRA operating or post-closure permit? If so, date issued _____	___	___
Did the facility file a RCRA Part A application?	___	___
If so:		
1) Does the facility currently have interim status?	___	___
2) Did the facility withdraw its interim status?	___	___
3) Is the facility a known or possible protective filer?	___	___
Is the facility a late (after Nov. 19, 1980) or non-filer that has been identified by EPA or the State?	___	___

STOP HERE IF ALL ANSWERS TO QUESTIONS IN SECTION I ARE NO

II. FINANCIAL STATUS		
Is the facility owned by an entity that has filed for bankruptcy under federal or State laws?	___	___

III. RCRA ENFORCEMENT STATUS		
Has the facility lost authorization to operate or had its interim status revoked?	___	___
Has the facility been involved in any other RCRA enforcement action?	___	___

RECONNAISSANCE CHECKLIST FOR HRS2 CONCERNS

Instructions: Obtain as much "up front" information as possible prior to conducting fieldwork. Complete the form in as much detail as you can, providing attachments as necessary. Cite the source for all information obtained.

Site name: Old Sterling Landfill
City, County, State: Sterling, Glynn County, Georgia
EPA ID No.: GAD 980496939
Person responsible for form: G. Carton
Date: April 28, 1988

Air Pathway

Describe any potential air emission sources onsite:
Waste may be exposed

Identify any sensitive environments within 4 miles:
Coastal wetlands

Identify the maximally exposed individual (nearest residence or regularly occupied building - workers do count): Residents 500 feet North of landfill

Groundwater Pathway

Identify any areas of karst terrain:
N/A

Identify additional population due to consideration of wells completed in overlying aquifers to the AOC: The Shallow aquifer may be used but no wells were found which draw from it.

Do significant targets exist between 3 and 4 miles from the site?
There are four additional wells but the population served is most likely under 10,000.

Is the AOC a sole source aquifer according to Safe Drinking Water Act? (i.e. is the site located in Dade, Broward, Volusia, Putnam, or Flager County, Florida)
NO

Surface Water Pathway

Are there intakes located on the extended 15-mile migration pathway?

No

Are there recreational areas, sensitive environments, or human food chain targets (fisheries) along the extended pathway? Yes, commercial fishing.

Onsite Exposure Pathway

Is there waste or contaminated soil onsite at 2 feet below land surface or higher?

Unknown

Is the site accessible to non-employees (workers do not count)?

Yes, property is no fenced.

Are there residences, schools, or daycare centers onsite or in close proximity?

There are residences nearby.

Are there barriers to travel (e.g., a river) within one mile?

No

HAZARD RANKING SYSTEM SCORING SUMMARY

FOR

OLD STERLING LANDFILL
EPA SITE NUMBER GAD980496939
STERLING
GLYNN COUNTY, GA
EPA REGION: 4

SCORE STATUS: IN PREPARATION

SCORED BY GEOFFREY CARTON
OF NUS CORPORATION
ON 03/23/89

DATE OF THIS REPORT: 05/16/89
DATE OF LAST MODIFICATION: 05/16/89

GROUND WATER ROUTE SCORE :	41.90
SURFACE WATER ROUTE SCORE:	7.27
AIR ROUTE SCORE :	0.00
MIGRATION SCORE :	24.58

HRS GROUND WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ROUTE CHARACTERISTICS			
DEPTH TO WATER TABLE	140 FEET		
DEPTH TO BOTTOM OF WASTE	10 FEET		
DEPTH TO AQUIFER OF CONCERN	130 FEET	1	2
PRECIPITATION	52.0 INCHES		
EVAPORATION	45.0 INCHES		
NET PRECIPITATION	7.0 INCHES	2	2
PERMEABILITY	1.0X10-7 CM/SEC	0	0
PHYSICAL STATE		3	3
TOTAL ROUTE CHARACTERISTICS SCORE:			7
3. CONTAINMENT		3	3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:TOXAPHENE			18
WASTE QUANTITY CUBIC YDS	9815		
DRUMS	0		
GALLONS	0		
TONS	0		
TOTAL	9815 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
GROUND WATER USE		3	9
DISTANCE TO NEAREST WELL	500 FEET		
AND	MATRIX VALUE .	35	35
TOTAL POPULATION SERVED	3572 PERSONS		
NUMBER OF HOUSES	940		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			44

GROUND WATER ROUTE SCORE (Sgw) = 41.90

HRS SURFACE WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ROUTE CHARACTERISTICS			
SITE LOCATED IN SURFACE WATER	NO		
SITE WITHIN CLOSED BASIN	NO		
FACILITY SLOPE	1.0 %		
INTERVENING SLOPE	1.0 %	0	0
24-HOUR RAINFALL	3.5 INCHES	3	3
DISTANCE TO DOWN-SLOPE WATER	3600 FEET	2	4
PHYSICAL STATE	3		3
TOTAL ROUTE CHARACTERISTICS SCORE:			10
3. CONTAINMENT	3		3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE: TOXAPHENE			18
WASTE QUANTITY CUBIC YDS	9815		
DRUMS	0		
GALLONS	0		
TONS	0		
TOTAL	9815 CU. YDS	3	3
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
SURFACE WATER USE		2	6
DISTANCE TO SENSITIVE ENVIRONMENTS		0	0
COASTAL WETLANDS	12900 FEET		
FRESHWATER WETLANDS	NONE		
CRITICAL HABITAT	NONE		
DISTANCE TO STATIC WATER	> 3 MILES		
DISTANCE TO WATER SUPPLY INTAKE	> 3 MILES		
AND	MATRIX VALUE	0	0
TOTAL POPULATION SERVED	0		
NUMBER OF HOUSES	0		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			6

SURFACE WATER ROUTE SCORE (Ssw) = 7.27

HRS AIR ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0

2. WASTE CHARACTERISTICS

REACTIVITY:

MATRIX VALUE

INCOMPATIBILITY

TOXICITY

WASTE QUANTITY CUBIC YARDS
DRUMS
GALLONS
TONS

TOTAL

TOTAL WASTE CHARACTERISTICS SCORE: N/A

3. TARGETS

POPULATION WITHIN 4-MILE RADIUS
- 0 to 0.25 mile
- 0 to 0.50 mile
- 0 to 1.0 mile
- 0 to 4.0 miles

DISTANCE TO SENSITIVE ENVIRONMENTS
- COASTAL WETLANDS
- FRESH-WATER WETLANDS
- CRITICAL HABITAT

DISTANCE TO LAND USES
- COMMERCIAL/INDUSTRIAL
- PARK/FOREST/RESIDENTIAL
- AGRICULTURAL LAND
- PRIME FARMLAND
- HISTORIC SITE WITHIN VIEW?

TOTAL TARGETS SCORE: N/A

AIR ROUTE SCORE (Sa) = 0.00

HAZARD RANKING SYSTEM SCORING CALCULATIONS
FOR
SITE: OLD STERLING LANDFILL
AS OF 05/16/89

GROUND WATER ROUTE SCORE

ROUTE CHARACTERISTICS		7
CONTAINMENT	X	3
WASTE CHARACTERISTICS	X	26
TARGETS	X	44

= 24024 /57,330 X 100 = 41.90 = S_{gw}

SURFACE WATER ROUTE SCORE

ROUTE CHARACTERISTICS		10
CONTAINMENT	X	3
WASTE CHARACTERISTICS	X	26
TARGETS	X	6

= 4680 /64,350 X 100 = 7.27 = S_{sw}

AIR ROUTE SCORE

OBSERVED RELEASE 0 /35,100 X 100 = 0.00 = S_{air}

SUMMARY OF MIGRATION SCORE CALCULATIONS

	S	S^2
GROUND WATER ROUTE SCORE (S_{gw})	41.90	1755.61
SURFACE WATER ROUTE SCORE (S_{sw})	7.27	52.85
AIR ROUTE SCORE (S_{air})	0.00	0.00
$S^2_{gw} + S^2_{sw} + S^2_{air}$		1808.46
$\sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}$		42.53
$S_M = \sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}/1.73$		24.58

M.2 - SITE MAINTENANCE FORM

EPA ID : GAD980496939

SITE NAME: OLD STERLING LANDFILL SOURCE: N

STREET : OLD HWY 99 E OF HWY 341 CONG DIST: 01

CITY : STERLING ZIP: 31520

CNTY NAME: GLYNN CNTY CODE : 127

LATITUDE : 31/12/00.0 LONGITUDE : 081/30/18.0

LL-SOURCE: R LL-ACCURACY:

SMSA : HYDRO UNIT: 03070203

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N

NPL IND: N NPL LISTING DATE: NPL DELISTING DATE:

SITE/SPILL IDS:

RPM NAME: UNASSIGNED RPM PHONE: 404-347-2234

SITE CLASSIFICATION: SITE APPROACH:

DIOXIN TIER: REG FLD1: REG FLD2:

RESP TERM: PENDING ( ) NO FURTHER ACTION ( )

ENF DISP: NO VIABLE RESP PARTY ( ) VOLUNTARY RESPONSE ( )
ENFORCED RESPONSE ( ) COST RECOVERY ( )

SITE DESCRIPTION:

ACTION: _

PENDING (_) NO FURTHER ACTION (_)

M.2 - PROGRAM MAINTENANCE FORM

ACTION: _

SITE: OLD STERLING LANDFILL

EPA ID: GAD980496939 PROGRAM CODE: H01 PROGRAM TYPE:

PROGRAM QUALIFIER: ALIAS LINK :

PROGRAM NAME: SITE EVALUATION

DESCRIPTION:

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: OLD STERLING LANDFILL
PROGRAM: SITE EVALUATION

EPA ID: GAD980496939 PROGRAM CODE: H01 EVENT TYPE: DS1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: E * _ ___ _ *

EVENT NAME: DISCOVERY STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START:	__/__/__	__/__/__	__/__/__
COMP :	COMP :	COMP : 11/01/79	__/__/__	__/__/__	__/__/__

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	_____	_____	__	___

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: OLD STERLING LANDFILL
PROGRAM: SITE EVALUATION

EPA ID: GAD980496939 PROGRAM CODE: H01 EVENT TYPE: PA1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: * _ ___ _ *

EVENT NAME: PRELIMINARY ASSESSMENT STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START: 01/01/80	* __/__/__	__/__/__	__/__/__ *
COMP :	COMP :	COMP : 01/01/80	* __/__/__	__/__/__	__/__/__ *

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	* _____	_____	__	___ *

M.2 - COMMENT MAINTENANCE FORM

SITE: OLD STERLING LANDFILL

EPA ID: GAD980496939

COM NO	COMMENT	ACTION
001	GAS000001092 -THIS SITE FORMERLY IN	
	CLUDED IN 1979 WASTE DISPOSAL SITE	
002	SURVEY DIRECTORY. IT IS ESTIMATED T	
	HAT LESS THAN 2% OF TOTAL WOULD	
003	BE CLASSIFIED AS HAZARDOUS WASTE, W	
	ITH BY FAR THE LARGEST PORTION	
004	BEING SLUDGES HAZARDOUS ONLY BECAUS	
	ES OF FLASH POINT BELOW 140 F.	
005	FROM 1969 TO 1975.	
006	FACILITY CONTACT--P.J. LUNSFORD, EN	
	VIROMENTAL COORDINATOR.	
007	(912) 265-3550	

M.2 - REGIONAL UTILITY MAINTENANCE FORM

SITE: OLD STERLING LANDFILL

EPA ID: GAD980496939

REG CODE: L141-01

DESCRIPTION: D- TOXAPLYENE/X-4,5,6,7,13/B INSPECTED 80/01/17

DATE1:

DATE2:

DATE3:

FREE FIELD: 32CDX0ABA

* ACTION: _
* _____
* _____
* __/__/__
* __/__/__
* __/__/__
* _____

EPA Notification of Hazardous Waste Site

United States Environmental Protection Agency
Washington DC 20460

R

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

810609

GAS000001092

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: Hercules Incorporated
Street: Cook and L Streets
City: Brunswick State: GA Zip Code: 31521

B Site Location:

Enter the common name (if known) and actual location of the site.

GAD980496939

Name of Site: Old Sterling Landfill
Street: 1.5 miles East of Highway 341 on "Old Highway 99"
City: Sterling County: Glynn State: GA Zip Code: 31520

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): P. J. Lunsford, Environmental Coordinator
Phone: (912) 265-3550

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1969 To (Year): 1975

E Waste Type: Choose the option you prefer to complete

Option I: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☒ Organics
2. ☒ Inorganics
3. ☒ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☒ Other (Specify) Trash, rubble

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☒ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

RECEIVED
EPA/REGION IV
JUN 9 3 21 PM '81
ENFORCEMENT DIVISION

000535

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

Notification of Hazardous Waste Site — Side Two

F Waste Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☒ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet 265,000 (*)

gallons

Total Facility Area

square feet

acres 15

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

This site formerly included in 1979 Waste Disposal Site Survey Directory.

(*) It is estimated that less than 2% of total would be classified as hazardous waste, with by far the largest portion being sludges hazardous only because of flash point below 140°F.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name K. T. Horton, Resident Manager

Street Cook and L Streets

City Brunswick State GA Zip Code 31521

Signature [signature] Date 5/29/81

☐ Owner, Present
☐ Owner, Past
☒ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (to be assigned by Hq)
4	639

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

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

I. SITE IDENTIFICATION

A. SITE NAME: Old Sterling Landfill

B. STREET *(or other identifier)*: Old Hwy. 99

C. CITY: Sterling

D. STATE: GA

E. ZIP CODE: 31520

F. COUNTY NAME: Glynn

G. OWNER/OPERATOR *(if known)*
1. NAME: Glynn County
2. TELEPHONE NUMBER: –

H. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☒ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION
Closed sanitary landfill – never permitted

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*
EPD files

K. DATE IDENTIFIED *(mo., day, & yr.)*
prior to 1975

L. PRINCIPAL STATE CONTACT
1. NAME: Moses N. McCall, Chief, Land Protection Branch, EPD
2. TELEPHONE NUMBER: 404/656-2833

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM
☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION
☐ 1. NO ACTION NEEDED *(no hazard)*
☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☒ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: 2nd qtr. FY 80
b. WILL BE PERFORMED BY: I & HWCU
☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION
1. NAME: Jennifer Kaduck
2. TELEPHONE NUMBER: 404/656-2833
3. DATE *(mo., day, & yr.)*: 1-15-80

III. SITE INFORMATION

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

B. IS GENERATOR ON SITE?
☒ 1. NO ☐ 2. YES *(specify generator's four-digit SIC Code)*

C. AREA OF SITE *(in acres)*
~ 30

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE *(deg.–min.–sec.)*
2. LONGITUDE *(deg.–min.–sec.)*

E. ARE THERE BUILDINGS ON THE SITE?
☒ 1. NO ☐ 2. YES *(specify)*:

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

Closed municipal sanitary landfill

V. WASTE RELATED INFORMATION

A. WASTE TYPE

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

B. WASTE CHARACTERISTICS

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

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

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

No

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT 4,900	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE tons	UNIT OF MEASURE	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			X (4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify):		
			toxaphene ≃ 1%		

 Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

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

toxaphene

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

none

VI. HAZARD DESCRIPTION

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

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT *(specify)*: None
- [ ] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7 RCRA STORER
- [ ] 8 RCRA TREATER
- [ ] 9 RCRA DISPOSER
- [ ] 10. OTHER *(specify)*:

B. IN COMPLIANCE?

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

4. WITH RESPECT TO *(list regulation name & number)*: Rules & Regs for Solid Waste Mgt. 391-3-4

VIII. PAST REGULATORY ACTIONS

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

IX. INSPECTION ACTIVITY *(past or on-going)*

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

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Inspection	1-17-80	EPD	Visual inspection

X. REMEDIAL ACTIVITY *(past or on-going)*

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

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

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

JE S NOV 16 '82

EPA POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION | SITE NUMBER *(to be assigned by Hq)*

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

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

GAD980496939 GLYNN
OLD STERLING LANDFILL
E. OF HWY 341 ON OLD HWY 99
STERLING GA 31520
LUNSFORD, P.J., ENV COORD 9122653550

ON
(for other identifier)

E. ZIP CODE | F. COUNTY NAME

2. TELEPHONE NUMBER

H. TYPE OF OWNERSHIP

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

I. SI

"103-C NOTIFICATION" DATE: 810609

J. HO JIM SETZER
PHONE: 404-656-2833

K. DATE IDENTIFIED *(mo., day, & yr.)*

L. P
1.

2. TELEPHONE NUMBER

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

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

B. RECOMMENDATION

☒ 1. NO ACTION NEEDED *(no hazard)*

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

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

☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME | 2. TELEPHONE NUMBER | 3. DATE *(mo., day, & yr.)* 82 05 01

III. SITE INFORMATION

A. SITE STATUS

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

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

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

B. IS GENERATOR ON SITE?

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

C. AREA OF SITE *(in acres)*

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE *(deg.-min.-sec.)*
2. LONGITUDE *(deg.-min.-sec.)*

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☐ 2. YES *(specify)*:

T2070-2 (10-79)

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1 UNKNOWN ☐ 2 LIQUID ☐ 3 SOLID ☐ 4 SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

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

☐ 10. OTHER (*specify*): _____

C. WASTE CATEGORIES

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

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

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

 Continue On Page 3

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER *(to be assigned by Hq)*

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

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

I. SITE IDENTIFICATION

A. SITE NAME: OLD STERLING LANDFILL

B. STREET *(or other identifier)*: OLD HWY 99

C. CITY: STERLING

D. STATE: GA

E. ZIP CODE: 31520

F. COUNTY NAME: GLYNN

G. OWNER/OPERATOR *(if known)*
1. NAME: GLYNN COUNTY
2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☒ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION
CLOSED SANITARY LANDFILL - NEVER PERMITTED

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*
EPD FILES

K. DATE IDENTIFIED *(mo., day, & yr.)*
PRIOR TO 1975

L. PRINCIPAL STATE CONTACT
1. NAME: MOSES N. McCALL
2. TELEPHONE NUMBER: 404 656-2833

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM
☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☒ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION
☒ 1. NO ACTION NEEDED *(no hazard)*
☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION
1. NAME: JENNIFER KADUCK (JIM USSERY) 9/1/82
2. TELEPHONE NUMBER: 404 656 2833
3. DATE *(mo., day, & yr.)*: 1-15-80

III. SITE INFORMATION

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

B. IS GENERATOR ON SITE?
☒ 1. NO ☐ 2. YES *(specify generator's four-digit SIC Code)*:

C. AREA OF SITE *(in acres)*
~ 30

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE *(deg.—min.—sec.)*
2. LONGITUDE *(deg.—min.—sec.)*

E. ARE THERE BUILDINGS ON THE SITE?
☒ 1. NO ☐ 2. YES *(specify)*:

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

CLOSED MUNICIPAL SANITARY LANDFILL

V. WASTE RELATED INFORMATION

A. WASTE TYPE

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

B. WASTE CHARACTERISTICS

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

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

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

NO

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT 4,900	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE TONS	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			X (4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify) TOXAPHENE ≈ 1%		

 Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION *(continued)*

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

TOXAPHENE

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

NONE

VI. HAZARD DESCRIPTION

	A. TYPE OF HAZARD	B. POTENTIAL HAZARD *(mark 'X')*	C. ALLEGED INCIDENT *(mark 'X')*	D. DATE OF INCIDENT *(mo., day, yr.)*	E. REMARKS
A	1. NO HAZARD				
B	2. HUMAN HEALTH				POSSIBLE THRU VERTICAL & HORIZONTAL LEACHATE MOVEMENT
C	3. NON-WORKER INJURY/EXPOSURE				
D	4. WORKER INJURY	X			"
E	5. CONTAMINATION OF WATER SUPPLY	X			"
F	6. CONTAMINATION OF FOOD CHAIN	X			"
G	7. CONTAMINATION OF GROUND WATER	X			"
H	8. CONTAMINATION OF SURFACE WATER				
I	9. DAMAGE TO FLORA/FAUNA				
J	10. FISH KILL				
K	11. CONTAMINATION OF AIR				
L	12. NOTICEABLE ODORS				
M	13. CONTAMINATION OF SOIL	X			"
N	14. PROPERTY DAMAGE				
O	15. FIRE OR EXPLOSION				
P	16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
Q	17. SEWER, STORM DRAIN PROBLEMS				
R	18. EROSION PROBLEMS				
S	19. INADEQUATE SECURITY				
T	20. INCOMPATIBLE WASTES				
U	21. MIDNIGHT DUMPING				
V	22. OTHER *(specify)*:				

 Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT *(specify)*: NONE
- [ ] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER *(specify)*:

B. IN COMPLIANCE?

- [X] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN
- 4. WITH RESPECT TO *(list regulation name & number)*: R & R FOR SOLID WASTE MGT 391-3-9

VIII. PAST REGULATORY ACTIONS

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

IX. INSPECTION ACTIVITY *(past or on-going)*

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

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION
INSPECTION	1-17-80	EPD	VISUAL INSPECTION

X. REMEDIAL ACTIVITY *(past or on-going)*

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

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

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

OVERSIZED

DOCUMENT