

**SITE INVESTIGATION**

**SOIL, SEDIMENT, AND  
GROUNDWATER SAMPLING**

**VAUGHN LANDFILL  
CSX REAL PROPERTY**

**CSX Transportation  
Greenville, South Carolina**

**March, 1995**

**APPLIED ENGINEERING & SCIENCE, INC.**

**Atlanta, Georgia**



August 17, 1995

Mr. Ralph Roberts  
NG03C4 Power Company  
13339 Hagers Ferry Road  
Huntersville, NC 28078-7929

4365A

Dear Mr. Roberts:

Enclosed as you requested is a copy of the report prepared by Applied Engineering and Science, Inc. (AES) on behalf of CSX Transportation following the site investigation conducted on CSXT property on Bramlette Road in Greenville, South Carolina. The report was submitted to DHEC in March, 1995.

As agreed in our telephone conversation of Monday, August 14, AES will submit the workplan for further investigation of the Bramlette Road site to DHEC before August 25, 1995 and will forward a copy of the workplan to you.

If you have any questions, please call me at (404) 454-1810.

Sincerely,

Dave Butler  
Project Manager

EE  
Enclosure

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## **EXECUTIVE SUMMARY**

CSX Transportation owns several properties west of the City of Greenville, South Carolina which contain trackage, equipment storage buildings, and a small office for crew transfers. Included in these properties is a sixteen acre tract east of the Reedy River along Bramlette Road. Much of the tract lies in the river's floodplain and contains potential wetlands according to the U.S. Army Corps of Engineers.

This sixteen acre tract was used as an unpermitted landfill by Vaughn Construction and Demolition Company of Greenville for over seven years. Materials deposited in the landfill included wood, concrete, brick, metal, plastic, and organic yard waste. Over eight acres of the property were filled to a depth of up to fourteen feet. Landfilling operations were halted in 1994 by order of the South Carolina Department of Health and Environmental Control (SCDHEC) and the U.S. Army Corps of Engineers because the landfill was unpermitted and filling was taking place in a potential wetland.

DHEC requested that CSX conduct a site investigation to determine the impact of the landfill on the soils, surface waters, and groundwater at the site. Applied Engineering and Science, Inc. (AES) was retained by CSX in September 1994 to prepare and execute a workplan for the site investigation. Following approval of the workplan by DHEC in December 1994, AES began coordination of activities for mobilization to the site. Sample collection activities began on February 6, 1995 and were completed on February 21, 1995.

## I. INTRODUCTION

Applied Engineering and Science, Inc. (AES) was retained by CSX Transportation to conduct an environmental investigation of a sixteen acre tract of CSX property in Greenville, South Carolina. The property is the site of an unpermitted landfill in the floodplain of the Reedy River. AES began the investigation in September 1994.

### A. Background

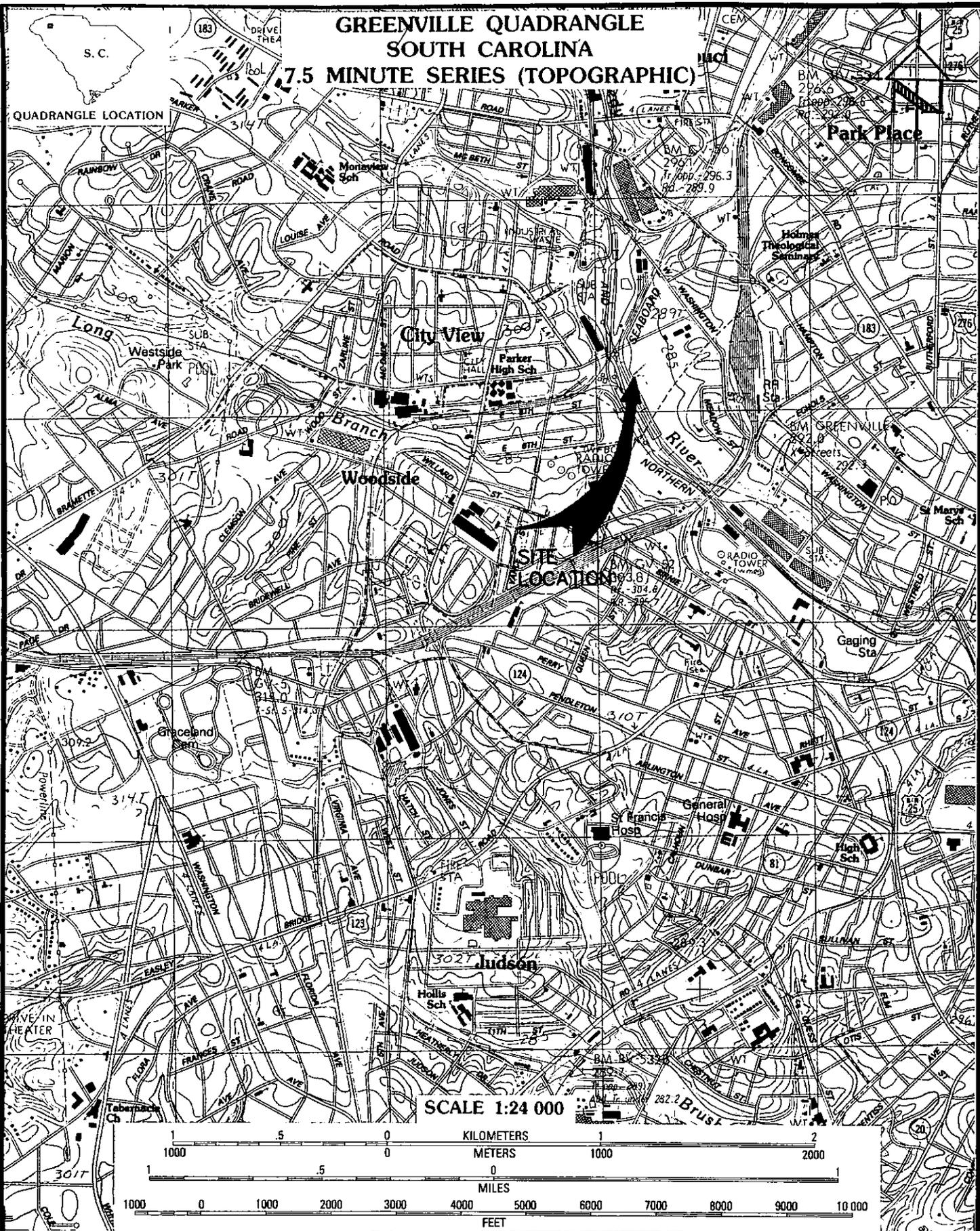
In 1988, Mr. Robert Vaughn of Vaughn Construction and Demolition attempted to purchase approximately sixteen acres of property (the site) from CSX Transportation (CSXT) for the purpose of constructing a solid waste landfill. Figure 1 is a Site Location Map which identifies the location of the property west of the City of Greenville, South Carolina. This section of Greenville (known locally as City View) includes residences, small businesses, schools, and several rail facilities. CSXT owns several properties in the area of Bramlette Road at the Reedy River and maintains an office there for crew transfers and scheduling activities. Figure 2 - Site Plan is a diagram of CSXT properties in the area.

The property which was to have been sold to Mr. Vaughn lies east of the CSXT office and south of Bramlette Road. Figure 2 indicates the position of the landfill and the

GREENVILLE QUADRANGLE  
SOUTH CAROLINA

7.5 MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION



SCALE 1:24 000

SCALE ---  
DWN. BY SKN  
CHK'D. BY GEW  
APPR. BY GEW



Applied  
Engineering &  
Science

SITE LOCATION MAP  
VAUGHN LANDFILL  
CSXT PROPERTY  
GREENVILLE, S.C.

DATE  
OCT., 1994  
DWG. NO.  
4365A  
SHEET NO.

surrounding floodplain. Following the payment of a deposit on the purchase, Mr. Vaughn began landfilling activities in 1988. The property transfer was never completed but landfilling by Vaughn continued, unknown to CSXT officials in Jacksonville, Florida.

### **B. Site Description**

The floodplain and potential wetlands are at an elevation of 285 feet above mean sea level (msl) in the piedmont region of northwestern South Carolina. Approximately seven acres of the site have been filled with debris to an average depth of 10 feet. The fill area has been cut through by a ditch which allows water to flow from the floodplain on the east side of the fill to the floodplain on the west and into the Reedy River. This ditch is located approximately 300 feet from the entrance to the landfill off Bramlette Road. A dirt covered culvert allows vehicle access to the back of the landfill.

Some of the materials noted during a site visit by AES included concrete, bricks, wood, plastic, metals, roofing materials, insulation, and glass. A large portion of the landfill has been covered with a thin layer of soil to allow passage of dump trucks to the rear where dumping continued until recently. The back 100 feet of the fill area is open which allows debris to blow away and is unsightly.

### C. Regulatory Involvement

CSXT officials became aware of the landfilling operations in 1993 when the U.S. Army Corps of Engineers notified CSXT of an unpermitted landfill in a potential wetland on the site. At that time, CSXT ordered Mr. Vaughn to cease landfilling activities and the site was closed.

In a letter dated August 1994 to Mr. Marshall Williams, CSXT Director of Environmental Real Estate Transactions, the South Carolina Department of Health and Environmental Control (DHEC), in conjunction with the Army Corps, requested a work plan to assess the types and extent of contaminants on the property.

CSXT retained Applied Engineering and Science, Inc. (AES) to prepare and implement a workplan to investigate possible impacts from the landfilling and other historical activities. AES submitted the workplan entitled Workplan - Soil, Sediment, and Groundwater Sampling - CSX/Vaughn Landfill - CSX Transportation to DHEC in October 1994. Following a meeting between representatives of CSXT, AES, and DHEC in Greenville in October, an addendum to the workplan was submitted by AES to DHEC on November 7, 1994.

The workplan called for a series of borings to be installed in the landfill to collect soil samples from native soils beneath the fill and groundwater samples from the surficial aquifer. Sediment and surface water samples were also to be collected from the area surrounding the fill. A black, sludge-like material had been reported in the flooded areas around the fill and a sample of the sludge was to be collected and analyzed.

Proposed sample analyses included RCRA metals, volatile organic compounds (VOCs), semi-volatile compounds (semi-VOCs), PCBs, and total petroleum hydrocarbons (TPH).

Equipment for the sample collection activities included a Strataprobe push-type sampling rig, a trackhoe for excavating impenetrable materials, and hand augers for floodplain sampling.

AES received approval from DHEC for the workplan and addendum on December 2, 1994. Approval for groundwater sampling was received on December 6, 1994. Copies of the approval letters are included in Appendix A - Workplan Approval Letters.

## II. FIELD ACTIVITIES

A grid of thirty-three sample locations (as outlined in the workplan) was staked out by AES personnel during the week of February 1, 1995. AES mobilized to the site and began sampling activities on February 6, 1995. Field activities began with the construction of a temporary decon pad for the cleaning of hand augers, Strataprobe rods, stainless steel spoons, and any other equipment used in direct contact with sampled soils or groundwater. The decon pad was constructed of wood and 4-mil black plastic sheeting. Tap water was provided by a hose from the CSX office adjacent to the Site. Deionized water, hydrochloric acid, and isopropanol were kept in stainless steel, pressurized spray cans. Certified clean drums were kept by the pad for the containment of rinse liquids.

The Strataprobe unit was provided by Transglobal Environmental Geochemistry (TEG) from Kennesaw, Georgia. The trackhoe and front-end loader were provided by JB Russell and Sons Construction Company, Inc. (Russell) of Spartanburg, South Carolina. Before sampling activities began, AES held an orientation and health and safety meeting with all personnel. A copy of the health and safety plan is included in Appendix B - Health and Safety Plan.

## A. Landfill Sampling

1. Soils - A total of thirty-four samples was collected from the landfill area. Thirty-three were collected below the fill in native soils. An additional sample was collected from sediments in the drainage ditch which bisects the fill (designated DD001). Soil sample collection was performed by AES with the assistance of either TEG or Russell depending on the type of fill encountered. Generally, TEG assisted with sample collection at the north end of the landfill where the material was relatively easy to penetrate. Russell excavated the more difficult debris at locations toward the south end of the landfill.

Depth of the fill material ranged from eight feet at the north end of the landfill to fourteen feet in the south central portion of the fill. TEG used the Strataprobe push system to advance collection rods through the fill material into the native soils. The lock screw was released and the rods advanced an additional 1.5 feet to allow soils to enter the rods. Within the steel rods, a plastic tube encases the soils. The rods were pulled and the tube with the discrete sample was removed. A 3-inch section of the tube was cut and capped, and labeled for VOC analysis. This method decreased the likelihood of volatile loss from excessive sample handling. The remaining soil was placed in sample containers for poly-chlorinated biphenyls (PCB) and RCRA metals analyses. A small amount of soil was field

screened for volatile content using a 128 Foxboro organic vapor analyzer (OVA) flame ionization detector (FID). Those samples which produced a positive FID reading were sent to the laboratory for VOC analysis. Table 1 - Sample Location Information provides the sample method, depth of sample collection, OVA readings, and analyses performed for each soil sample.

The depth to native soils below the fill was estimated by looking at the edge of the fill closest to the sample location. Generally, a distinct change in rod advancement was noted when the fill was perforated and native soil entered. If, upon retrieval of the rods, a complete soil sample was not produced, the rods were reinserted into the borehole and another sample collected. This happened infrequently when wood or other debris blocked the collection rod.

If TEG could not penetrate the fill material at a sample location or if the location was inaccessible by the Strataprobe vehicle, Russell Construction used the trackhoe to excavate the fill materials down to native soils. A bucket of soil was then removed from which samples were collected with a stainless steel spoon. This method also allowed the inspection of landfill materials. Depth to the native soil surface was measured in each excavation.

TABLE 1  
 SAMPLE LOCATION INFORMATION  
 VAUGHN LANDFILL  
 CSXT PROPERTY  
 GREENVILLE, SOUTH CAROLINA  
 AES, February 1995

LATITUDE 34° 51' 35" LONGTITUDE 82° 24' 50"				
SAMPLE ID	METHOD OF SAMPLE COLLECTION	DEPTH (ft)	FIELD SCREENING OVA (ppm)	ANALYSES PERFORMED
LF001	Russell	9.5	NA	RCRA Metals, PCBs, VOCs
LF002	Russell	6.0	NA	RCRA Metals, PCBs, VOCs
LF003	Russell	10.0	>1,000	RCRA Metals, PCBs, VOCs
LF004	TEG	9.5	300	RCRA Metals, PCBs, VOCs, Semi-VOCs
LF005	TEG	10.0	300	RCRA Metals, PCBs, VOCs
LF006	TEG	9.0	28	RCRA Metals, PCBs, VOCs
LF007	TEG	17.5	7	RCRA Metals, PCBs, VOCs
LF008	TEG	14.0	70	RCRA Metals, PCBs, VOCs
LF009	Russell	14.0	400	RCRA Metals, PCBs, VOCs
LF010	Russell	12.0	400	RCRA Metals, PCBs, VOCs
LF011	Russell	13.5	760	RCRA Metals, PCBs, VOCs
LF012	Russell	8.0	17	RCRA Metals, PCBs, VOCs
LF013	TEG	12.0	0	RCRA Metals, PCBs, VOCs

*For samples beginning with the prefix LF, depths given are from top of fill*

TABLE 1 (cont'd)

LATITUDE 34° 51' 35" LONGITUDE 82° 24' 50"				
SAMPLE ID	METHOD OF SAMPLE COLLECTION	DEPTH (ft)	FIELD SCREENING OVA (ppm)	ANALYSES PERFORMED
LF014	TEG	12.0	NA	RCRA Metals, PCBs, VOCs
LF015	TEG	10.5	NA	RCRA Metals, PCBs, VOCs
LF016	TEG	10.0	NA	RCRA Metals, PCBs, VOCs
LF017	TEG	15.0	<5	RCRA Metals, PCBs, VOCs
LF018	TEG	14.0	30	RCRA Metals, PCBs, VOCs
LF019	Russell	14.0	>1,000	RCRA Metals, PCBs, VOCs
LF020	Russell	12.0	40	RCRA Metals, PCBs, VOCs
LF021	Russell	13.0	22	RCRA Metals, PCBs, VOCs
LF022	Russell	6.0	90	RCRA Metals, PCBs, VOCs
LF023	TEG	11.0	400	RCRA Metals, PCBs, VOCs
LF024	TEG	9.0	32	RCRA Metals, PCBs, VOCs
LF025	TEG	11.5	610	RCRA Metals, PCBs, VOCs
LF026	Russell	8.0	>1,000	RCRA Metals, PCBs, VOCs
LF027	Russell	7.0	>1,000	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
LF028	Russell	10.0	250	RCRA Metals, PCBs, VOCs
LF029	Russell	13.0	140	RCRA Metals, PCBs, VOCs

*For samples beginning with the prefix LF, depths given are from top of fill*

TABLE 1 (cont'd)

LATITUDE 34° 51' 35" LONGTITUDE 82° 24' 50"				
SAMPLE ID	METHOD OF SAMPLE COLLECTION	DEPTH (ft)	FIELD SCREENING OVA (ppm)	ANALYSES PERFORMED
LF030	Russell	14.0	610	RCRA Metals, PCBs, VOCs
LF031	Russell	6.0	0	RCRA Metals, PCBs, VOCs
LF032	Russell	10.0	590	RCRA Metals, PCBs, VOCs
LF033	Russell	11.0	120	RCRA Metals, PCBs, VOCs
DD001	Hand Auger	1.0	10	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
DD002	Hand Auger	1.0	NA	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
WE001	Hand Auger	1.0	100	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
WE002	Hand Auger	1.0	NA	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
WS001	Hand Auger	1.0	NA	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
WS002	Hand Auger	1.0	7	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
WW001	Hand Auger	1.0	NA	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs
WW002	Hand Auger	1.0	NA	RCRA Metals, PCBs, VOCs, TPH, Semi-VOCs

*For samples beginning with the prefix LF, depths given are from top of fill*

Field activities revealed fill materials composed primarily of demolition debris including wood, concrete, bricks, metal, roofing material, plastic, household appliances, yard waste, and fiberglass insulation. The fill also included soil which was apparently used as cover during filling operations. No drums, tanks, cylinders or other containers which may have contained hazardous materials were observed.

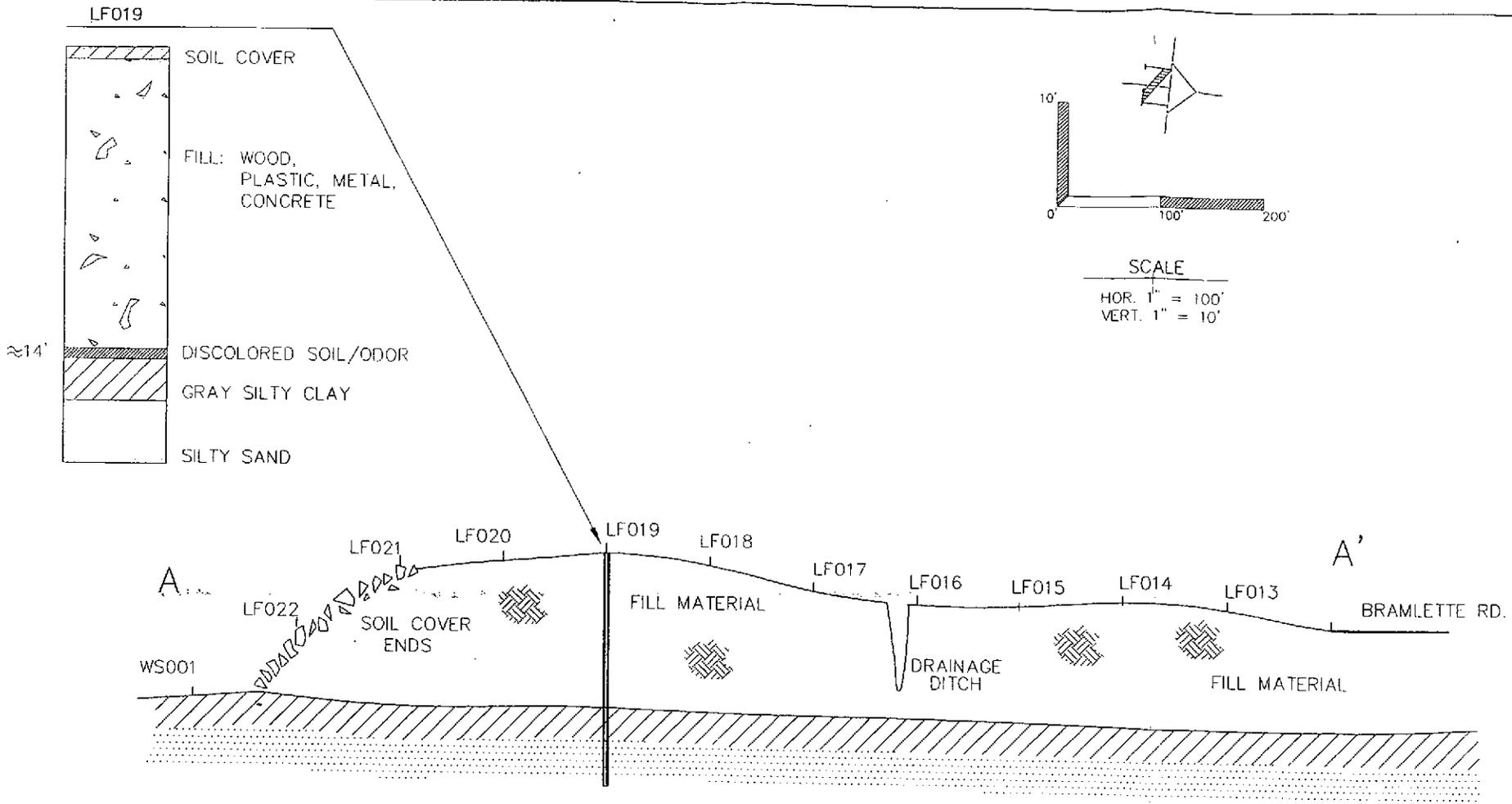
Soils below the fill in several sample locations appeared discolored and oily and exhibited a strong hydrocarbon odor. Several samples contained a thick, black, tarry substance and strong odor. Two areas of visible tars with distinct odors were in the vicinity of:

- 1.) Sample locations LF004 and LF014

- 2.) Sample locations LF027, LF028, LF029, and LF032

Other samples exhibited varying degrees of hydrocarbon odor but did not contain tars or discoloration. Samples collected toward the south end of the fill (LF012, LF021, LF022, LF030, LF031, and LF031) had little or no odor and none of the tarry substance.

Figure 4 - Cross Section A - A' includes a soil profile of LF019 which is typical of the soil types found beneath the fill. The cross section also indicates the thickness of the fill material at ten sample locations along the landfill from north



LEGEND

LF013 — SAMPLE LOCATION

FIGURE 4

SCALE AS SHOWN	NO.	DATE	REVISION	DESCRIPTION
DWN. BY SA				
CHK'D. BY KK				
APPR. BY DB				



Applied  
Engineering &  
Science

Atlanta  
Georgia

CROSS SECTION A-A'  
VAUGHN LANDFILL  
CSXT PROPERTY  
GREENVILLE, SC

DATE  
MAR., 1995

DWG. NO.  
4365A

SHEET NO.

4365ASSA.DWG

to south. Figure 3 contains the cross sectional line A - A' indicating the section of the landfill shown in the diagram.

According to the Soil Conservation Service map for the site, the sandy loams and silty clays of the native soils found in the upper two to three feet belong to the Cartecay and Chewacla series. Both are alluvium found in floodplains and are considered hydric. The presence of hydric soils is one criteria for evaluating potential wetlands. Relatively clean sands were found beneath the clay layers to depths of at least twenty feet.

2. Groundwater - Groundwater samples were collected from seven sample locations in the fill area. Circled sample locations on Figure 3 indicate the location of groundwater samples collected.

Samples LF001(A) and LF003(A) from the southeast end of the fill area, and samples LF027(A), LF029(A), and LF031(A) from the west side of the fill were collected from excavations dug by Russell Construction. TEG assisted with sample collection by the use of a stainless steel screen connected to tubing lowered into the groundwater which entered the excavation. Samples LF023(A) and LF025(A) were collected by driving push rods with the Strataprobe to the water table, pulling back the rods approximately 1 foot, and allowing the infiltration of

groundwater into the borehole. Samples were then collected by AES using a peristaltic pump.

Groundwater removed from LF023(A) contained an oily substance with strong petroleum odor (see photographs, Appendix C). Sample jars filled for analysis became coated with the oil. Depth for collection of LF023(A) was between 16 and 18 feet below the surface of the fill. The sample was analyzed for RCRA metals, PCBs, VOCs, and semi-VOCs. Sample LF025(A) did not contain oil but did have a petroleum odor. LF025(A) was analyzed for RCRA metals, PCBs, and VOCs.

Because of the presence of discolored soils and a coal tar-like odor in the excavated soils, sample LF027(A) was analyzed for Semi-VOCs as well as RCRA metals, PCBs, and VOCs. The remaining groundwater samples were analyzed for RCRA metals, PCBs, and VOCs.

## **B. Floodplain Sampling**

1. Soils - Representatives of DHEC had mentioned the presence of a dark, sludge-like substance in at least one area of the floodplain surrounding the landfill. The workplan called for the collection of at least two samples from the floodplain on

each side of the fill. Using hand augers, AES collected sediment samples from seven locations:

- Two samples were collected from the floodplain east of the fill and designated WE001 and WE002.
- Two samples were collected from the floodplain south of the fill and designated WS001 and WS002.
- Two samples were collected from the floodplain west of the fill and designated WW001 and WW002.

An additional sample was collected from the drainage ditch which lies between the landfill and the CSX office at the northwest corner of the landfill. This sample was designated DD002.

2. Surface Water - Standing water lies in sections of the floodplain, especially during the winter months, primarily to the east and west of the fill material. At the time of field activities in February, standing water was up to 1 foot deep. Potential wetland conditions exist in the area surrounding the landfill; however, no formal wetland delineation has been undertaken on the property. South of the fill, soil conditions were saturated but no standing water was present. Surface water samples were collected at locations WE001, WE002, WW001, and WW002 and are designated with the prefix SW.

Figure 3 indicates the locations of the sediment and surface water samples collected in the floodplain and the ditch. Appendix C - Photographs contains photos of sampling activities, excavations, and landfill debris.

### III. ANALYTICAL RESULTS

Sample analyses were performed by Accura Analytical Laboratory, Inc. of Norcross, Georgia. Samples were shipped daily from Greenville under chain-of-custody packed in iced coolers.

#### A. Landfill - Soils

Thirty-three soil samples were collected from beneath the fill in native soils. An additional sample (DD001) was collected from sediments in the drainage ditch which bisects the fill. Laboratory analyses included RCRA metals, PCBs, and, if soil vapor screening indicated positive results, VOCs. At three locations, LF004, LF027, and DD001 semi-volatile analysis was performed because of the presence of a thick tar-like substance in the samples.

1. RCRA Metals - Table 2 summarizes the results of RCRA metals analysis. Parameters include arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The results are compared to background values for naturally occurring elements (NOE) in the Carolina piedmont.

TABLE 2  
 RCRA METALS ANALYTICAL RESULTS – LANDFILL SOILS  
 VAUGHN LANDFILL  
 CSXT PROPERTY  
 GREENVILLE, SOUTH CAROLINA  
 AES, February 1995

SAMPLE ID	ARSENIC		BARIUM	CADMIUM	CHROMIUM	LEAD	MERCURY	SELENIUM	SILVER
	NOE*	41	300	na	500	<10	1:2	0.6	na
LF001		BDL	132.0	BDL	29.6	101.0	BDL	BDL	BDL
LF002		BDL	105.0	BDL	21.7	51.4	BDL	BDL	BDL
LF003		BDL	91.3	BDL	24.3	50.8	BDL	BDL	BDL
LF004		BDL	67.4	BDL	11.9	16.8	BDL	BDL	BDL
LF005		BDL	165.0	BDL	20.2	25.0	BDL	BDL	BDL
LF006		BDL	164.0	BDL	36.7	112.0	BDL	BDL	BDL
LF007		BDL	19.4	BDL	6.0	13.9	BDL	BDL	BDL
LF008		BDL	128.0	BDL	37.1	76.9	BDL	BDL	BDL
LF009		BDL	118.0	BDL	22.9	51.8	BDL	BDL	BDL
LF010		BDL	104.0	BDL	30.9	69.6	BDL	BDL	BDL
LF011		BDL	145.0	BDL	28.9	76.9	BDL	BDL	BDL
LF012		BDL	87.5	BDL	24.6	105.0	BDL	BDL	BDL
LF013		BDL	226.0	BDL	33.3	52.8	BDL	BDL	BDL
LF014		BDL	209.0	BDL	42.6	68.0	BDL	BDL	BDL
LF015		BDL	132.0	BDL	40.6	64.2	BDL	BDL	BDL
LF016		BDL	86.4	BDL	19.2	143.0	BDL	BDL	BDL
LF017		BDL	237.0	BDL	31.4	45.6	BDL	BDL	BDL
LF018		BDL	118.0	BDL	37.0	63.4	BDL	BDL	BDL
LF019		BDL	33.3	BDL	27.0	147.0	BDL	BDL	BDL
LF020		BDL	178.0	BDL	36.6	148.0	BDL	BDL	BDL
LF021		BDL	63.1	BDL	26.8	53.4	BDL	BDL	BDL
LF022		BDL	53.7	BDL	18.9	35.6	BDL	BDL	5.34
LF023		BDL	149.0	BDL	36.8	99.0	BDL	BDL	BDL
LF024		BDL	557.0	40.4	79.9	1538.0	BDL	BDL	BDL
LF025		BDL	202.0	0.58	33.3	55.6	BDL	BDL	BDL
LF026		BDL	138.0	BDL	35.6	216.0	BDL	BDL	BDL
LF027		BDL	154.0	BDL	24.8	225.0	BDL	BDL	BDL
LF028		BDL	191.0	BDL	30.4	56.1	BDL	BDL	BDL
LF029		BDL	224.0	BDL	38.2	176.0	BDL	BDL	BDL
LF030		BDL	126.0	BDL	38.6	72.8	BDL	BDL	BDL
LF031		BDL	127.0	BDL	20.6	47.9	BDL	BDL	BDL
LF032		BDL	177.0	BDL	38.6	84.6	BDL	BDL	BDL
LF033		BDL	122.0	BDL	31.9	64.2	BDL	BDL	BDL
DD001		BDL	65.4	0.57	13.2	104.0	BDL	BDL	BDL

\* NOE – Concentrations of naturally occurring elements in soils typical of those found in northwestern South Carolina; from "Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States", USGS 1984

BDL – Below method detection limits

Shaded range indicates exceptional concentrations

All concentrations reported in mg/kg

Lead concentrations exceeded background levels (background is <10 mg/kg) in each of the landfill samples and DD001. Concentrations ranged from 13.9 mg/kg to 225 mg/kg in thirty-three of the samples. Lead concentrations in LF024 were reported at 1,538 mg/kg. Other metals concentrations were reported below background levels except for sample LF024. Sample LF024 contained concentrations of barium (557.0 mg/kg), cadmium (40.4 mg/kg), and chromium (79.9 mg/kg) which were higher than the remaining landfill soil samples.

2. PCBs - EPA method 8080 was used for the PCB analysis. PCBs were not detected in the thirty-three landfill soil samples collected.
  
3. VOCs - EPA method 8260 was used for the analysis of volatile organic compounds. Table 3 summarizes the analytical results. Samples with elevated VOC concentrations are shaded. BTEX compounds were detected in twelve of the thirty-three landfill soil samples and DD001. Other compounds detected included acetone, methylene chloride, chlorobenzene, and styrene.

Samples with the highest reported concentrations of BTEX and other volatile compounds included LF004 (benzene 8,300 ug/kg; ethylbenzene 17,000 ug/kg; toluene 16,000 ug/kg; xylenes 28,000 ug/kg), LF005, LF013, LF014 (benzene 210 ug/kg; ethylbenzene 130 ug/kg; toluene 570 ug/kg; xylenes 1,100 ug/kg), LF015,

TABLE 3  
VOLATILE ANALYTICAL RESULTS – LANDFILL SOILS  
VAUGHN LANDFILL  
CSXT PROPERTY  
GREENVILLE, SOUTH CAROLINA  
AES, February 1995

SAMPLE ID	BENZENE (ug/kg)	ETHYLBENZENE (ug/kg)	TOLUENE (ug/kg)	XYLENES (ug/kg)	ACETONE (ug/kg)	METH CHLOR (ug/kg)	CHLOROBENZENE (ug/kg)	STYRENE (ug/kg)
LF001	ND	ND	ND	ND	370	570	ND	ND
LF002	ND	ND	ND	ND	228	190	5	ND
LF003	ND	ND	ND	ND	570	480	ND	ND
LF004	8,300	17,000	16,000	28,000	ND	ND	ND	3,800
LF005	46	53	37	64	100	62	ND	ND
LF006	ND	ND	ND	ND	2,400	ND	ND	ND
LF007	ND	ND	ND	ND	1,000	12	ND	ND
LF008	ND	ND	ND	ND	ND	14	ND	ND
LF009	ND	7	ND	ND	570	270	ND	ND
LF010	ND	ND	ND	ND	1,500	100	ND	ND
LF011	ND	ND	ND	ND	210	200	ND	ND
LF012	ND	ND	ND	ND	230	60	ND	ND
LF013	ND	20	6	110	ND	45	ND	ND
LF014	210	130	570	1,100	ND	ND	ND	420
LF015	100	83	390	590	ND	ND	ND	91
LF016	ND	ND	ND	15	1,700	13	ND	ND
LF017	ND	ND	ND	ND	350	13	ND	ND
LF018	ND	ND	ND	ND	530	ND	ND	ND
LF019	ND	ND	ND	ND	1,100	300	ND	ND
LF020	ND	ND	ND	ND	230	37	ND	ND
LF021	ND	ND	ND	ND	470	100	ND	ND
LF022	ND	ND	ND	ND	ND	140	ND	ND
LF023	ND	ND	6	ND	580	ND	ND	ND
LF024	ND	ND	ND	ND	2,000	125	ND	ND
LF025	ND	650	630	1,200	1,250	800	ND	ND
LF026	ND	ND	ND	ND	130	61	ND	ND
LF027	10	6	ND	24	430	180	ND	ND
LF028	40	120	83	230	500	90	13	ND
LF029*	ND	ND	94	10	280	67	ND	ND
LF030	ND	ND	ND	ND	160	150	ND	ND
LF031	ND	ND	ND	ND	250	74	ND	ND
LF032	ND	590	56	650	300	98	ND	ND
LF033	ND	ND	ND	ND	320	120	ND	ND
DD001	1,100	470	1,700	4,200	ND	ND	ND	810

Shaded ranges indicate sample locations with exceptional VOC concentrations

ND – Not detected

LF025 (ethylbenzene 650 ug/kg; toluene 630 ug/kg; xylenes 1,200 ug/kg), LF027, LF028, LF029, LF032, and DD001 (benzene 1,100 ug/kg; ethylbenzene 470 ug/kg; toluene 1,700 ug/kg; xylenes 4,200 ug/kg). Figure 5 is a diagram of the landfill indicating the sample locations. Shaded areas indicate those samples with elevated VOC concentrations listed above. A rough northeast to southwest band through the fill is apparent.

Acetone and methylene chloride were present in thirty of thirty-three samples. These compounds are often caused by laboratory contamination. However, neither acetone nor methylene chloride was reported in the laboratory blanks. Acetone is also produced naturally by bacteria.

Styrene was reported in four of the landfill samples. This compound is used in the production of resins and coatings. Concentrations ranged from 91 ug/kg in LF015 to 3,800 ug/kg in LF004.

Chlorobenzene was detected in two samples, LF002 (5 ug/kg) and LF028 (13 ug/kg).

4. Semi-VOCs - Samples LF004, LF027, and DD001 were analyzed for semi-volatile organic compounds using EPA method 8270. Table 4 summarizes semi-VOC

**TABLE 4**  
**SEMI-VOLATILE ANALYTICAL RESULTS – SOILS**  
**VAUGHN LANDFILL**  
**CSXT PROPERTY**  
**GREENVILLE, SOUTH CAROLINA**  
**AES, February 1995**

SAMPLE ID	ACENAPHTHENE (ug/g)	ACENAPHTHYLENE (ug/g)	ANTHRACENE (ug/g)	BENZO(A) ANTHRACENE (ug/g)	BENZO(B) FLUORANTHENE (ug/g)	BENZO(G,H,I) PERYLENE (ug/g)	BENZO(K) FLUORANTHENE (ug/g)	CHRYSENE (ug/g)	DIBENZOPURAN (ug/g)	FLUORANTHENE (ug/g)	INDENO(1,2,3-CD) PYRENE (ug/g)	2-METHYLNAPHTHALENE (ug/g)	NAPHTHALENE (ug/g)	PHENANTHRENE (ug/g)	PYRENE (ug/g)
LP004	106,000	570,000	219,000	55,000	ND	ND	84,000	ND	74,000	197,000	ND	1,400,000	44,000	1,000,000	279,000
LP027	ND	30,000	30,000	80,000	230,000	70,000	180,000	90,000	ND	180,000	70,000	ND	ND	50,000	170,000
DD001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DD002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WE001	ND	ND	ND	ND	ND	ND	ND	ND	ND	1400	ND	ND	4,200	6,700	4,300
WE002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WS002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WW001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WW002	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

Shaded ranges indicate compounds commonly associated with coal tar/s and/or coal gasification processes

ND – Not detected

NT – Not tested

analytical results. In samples LF004 and LF027, several compounds were reported at concentrations above one hundred thousand parts per billion. In sample LF004, concentrations for 2-methylnaphthalene and phenanthrene were reported above one million parts per billion. Semi-volatile concentrations were reported below detection limits for sample DD001.

Many of the semi-volatile compounds reported are found in coal tars generated by coal gasification processes. Those compounds commonly found in coal tars and in the waste stream from coal gasification plants are acenaphthylene, anthracene, benzo(a)pyrene, dibenzofuran, fluoranthene, fluorene, 2-methylnaphthalene, phenanthrene, and pyrene.

5. TPH - Table 5 summarizes TPH analytical results for soils and water. One sample from within the landfill was analyzed for TPH using EPA method 9071. Sample DD001, collected in sediments in the drainage ditch which bisects the fill, revealed the presence of oil and grease at a concentration of 120 mg/kg. The remaining TPH analyses were conducted on samples collected within the floodplain (discussed below).

**TABLE 5**  
**TPH ANALYTICAL RESULTS - SOIL AND WATER**  
**VAUGHN LANDFILL**  
**CSXT PROPERTY**  
**GREENVILLE, SOUTH CAROLINA**  
**AES, February 1995**

SAMPLE ID	MATRIX	RESULT
WE001	SOIL	BDL
WE002	SOIL	BDL
WS001	SOIL	BDL
WS002*	SOIL	BDL
WW001	SOIL	BDL
WW002	SOIL	BDL
DD001	SOIL	120 mg/kg
DD002	SOIL	BDL
SWE001*	WATER	40 mg/l
SWE002*	WATER	11 mg/l
SWW001*	WATER	4.5 mg/l
SWW002*	WATER	BDL

\* *Sample analyzed using EPA Method 413.1; remaining samples analyzed using EPA Method 9071*

## B. Landfill - Groundwater

A total of seven groundwater samples was collected in the surficial aquifer below the landfill materials. Groundwater was encountered at or just below the native land surface. Samples were analyzed for VOCs, semi-VOCs, PCBs, and RCRA metals.

1. RCRA Metals - Table 6 summarizes the metals analytical results for the seven samples. Arsenic was detected in sample LF001(A) above the maximum contaminant level (MCL) of 0.05 mg/l set by EPA. Barium was detected in all seven samples below MCLs. Lead levels equaled or exceeded MCLs (0.05 mg/l) in two samples, LF003(A) (0.05 mg/l) and LF029(A) (0.09 mg/l). Cadmium, chromium, mercury, selenium, and silver concentrations were reported below detection limits in all seven samples.
2. VOCs - Table 7 summarizes the results of volatile organic compound analyses for water. No volatile compounds were detected in samples LF001(A) or LF003(A). Benzene, toluene, ethylbenzene, and total xylenes (BTEX) were detected in samples LF023(A), LF025(A), and LF027(A). Benzene exceeded the EPA MCL of 5 ug/l in LF023(A) (770 ug/l), LF025(A) (700 ug/l), and LF027(A) (84 ug/l). Concentrations of ethylbenzene, toluene, and xylenes were below MCLs in the

**TABLE 6**  
**RCRA METALS ANALYTICAL RESULTS – GROUND WATER**  
**VAUGHN LANDFILL**  
**CSXT PROPERTY**  
**GREENVILLE, SOUTH CAROLINA**  
**AES, February 1995**

SAMPLE	ARSENIC	BARIUM	CADMIUM	CHROMIUM	LEAD	MERCURY	SELENIUM	SILVER	
ID	MCLs*	0.05 mg/l	1 mg/l	0.005 mg/l	0.1 mg/l	0.05 mg/l	0.002 mg/l	0.05 mg/l	0.05 mg/l
LF001(A)	0.11	0.12	BDL	BDL	0.04	BDL	BDL	BDL	
LF003(A)	BDL	0.18	BDL	BDL	0.05	BDL	BDL	BDL	
LF023(A)	BDL	0.20	BDL	BDL	0.03	BDL	BDL	BDL	
LF025(A)	BDL	0.14	BDL	BDL	BDL	BDL	BDL	BDL	
LF027(A)	BDL	0.35	BDL	BDL	0.01	BDL	BDL	BDL	
LF029(A)	BDL	0.21	BDL	BDL	0.09	BDL	BDL	BDL	
LF031(A)	BDL	0.13	BDL	BDL	0.04	BDL	BDL	BDL	

*All concentrations reported in mg/l*

*\* MCLs – Maximum Contaminant Levels as proposed by EPA, 1991; adopted by SCDHEC*

*BDL – Below method detection limits*

**TABLE 7**  
**VOLATILE ANALYTICAL RESULTS – WATER**  
**VAUGHN LANDFILL**  
**CSXT PROPERTY**  
**GREENVILLE, SOUTH CAROLINA**  
**AES, February 1995**

SAMPLE ID	BENZENE (ug/l)		ETHYLBENZENE (ug/l)		TOLUENE (ug/l)		XYLENES (ug/l)		STYRENE (ug/l)		ACETONE (ug/l)		TRICHLORO FLUOROMETHANE (ug/l)	
	MCLs*	5 ug/l	700 ug/l	700 ug/l	1,000 ug/l	1,000 ug/l	10,000 ug/l	10,000 ug/l	100 ug/l	100 ug/l	NA	NA	NA	NA
LF001(A)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF003(A)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF023(A)		770	340	460	520	55	ND	140	ND	ND	ND	ND	ND	ND
LF025(A)		700	280	45	250	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF027(A)		84	20	32	58	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF029(A)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17
LF031(A)		ND	5	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND
SWE001		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SWE002		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SWW001		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SWW002		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

*Shaded ranges indicate exceptional VOC concentrations*

*MCLs – Maximum Contaminant Levels per 40 CFR Subpart F 141.50(b)*

*NT – Not tested*

*ND – Not detected*

three samples. Sample LF031(A) contained ethylbenzene and xylenes below MCLs.

Styrene (55 ug/l) was detected in LF023(A) below MCLs. Acetone (140 ug/l) was present in sample LF025(A). Sample LF029(A) contained 17 ug/l trichlorofluoromethane.

Figure 6 is a diagram of the landfill indicating the sample locations. Shaded areas represent those sample locations with groundwater containing elevated volatile organic compounds. These areas form a line along the western edge of the landfill. These elevated concentrations are consistent with the elevated VOC concentrations identified in the landfill soil samples which are highlighted in Figure 5.

3. Semi-VOCs - Table 8 summarizes the results of semi-volatile organic compound analyses. No semi-VOC compounds were detected in samples LF001(A), LF003(A), LF025(A), LF029(A), and LF031(A). Samples LF023(A) and LF027(A) contained several semi-volatile compounds including a number of PAHs associated with coal tars and coal gasification wastes including acenaphthylene, anthracene, benzo(a)pyrene, dibenzofuran, fluoranthene, fluorene, 2-methylnaphthalene, phenanthrene, and pyrene. More compounds were present and at higher concentrations in LF023(A) than in LF027(A). Compounds included

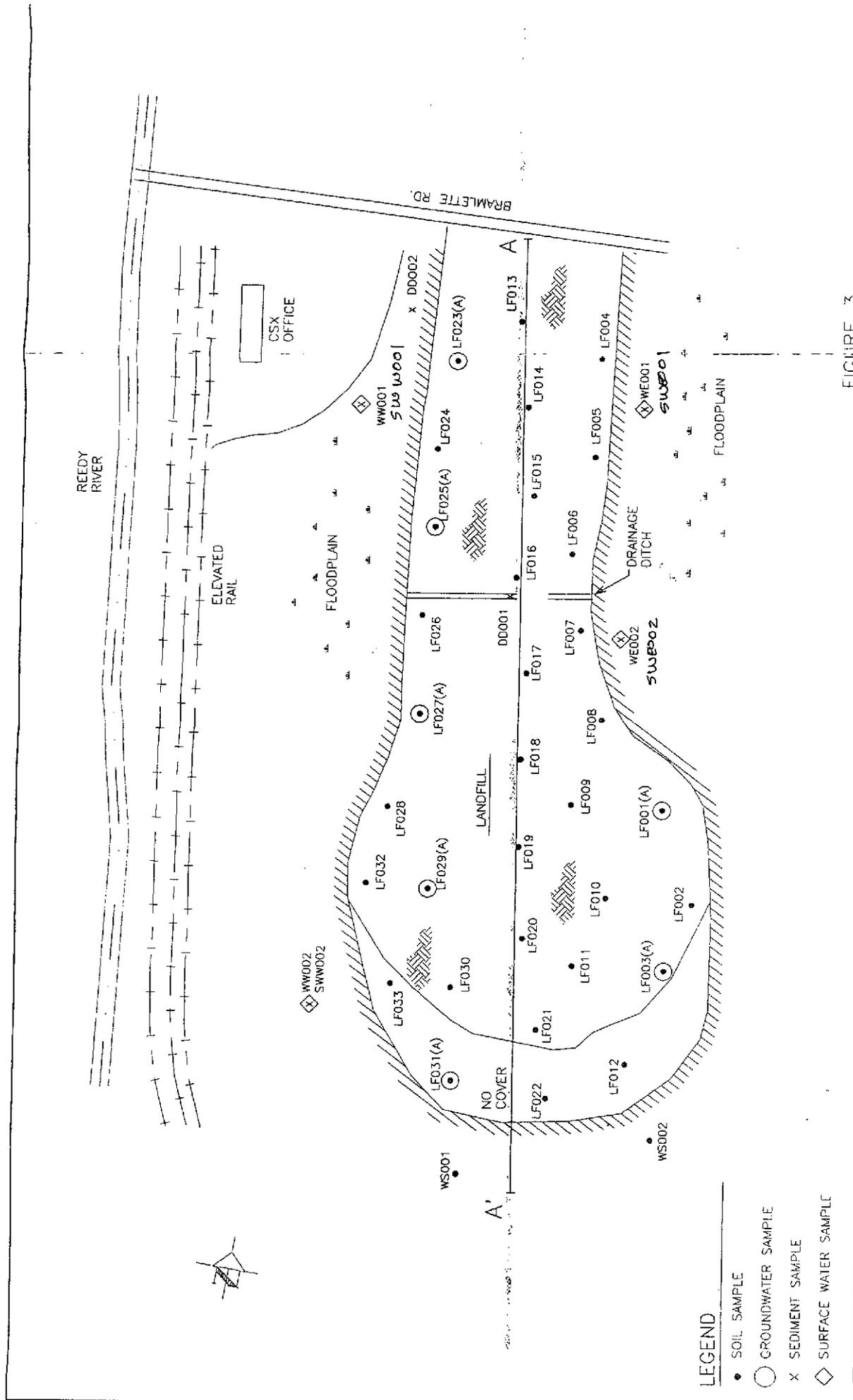
TABLE 8  
SEMI-VOLATILE ANALYTICAL RESULTS - WATER  
VAUGHN LANDFILL  
CSXT PROPERTY  
GREENVILLE, SOUTH CAROLINA  
AES, February 1995

SAMPLE ID	ACENAPHTHENE (ug/l)	ACENAPHTHYLENE (ug/l)	ANTHRACENE (ug/l)	2,4-DIMETHYLPHENOL (ug/l)	BENZO(A)PYRENE (ug/l)	DIBENZOFURAN (ug/l)	FLUORANTHENE (ug/l)	FLUORENE (ug/l)	1-METHYLNAPHTHALENE (ug/l)	4-METHYLPHENOL (ug/l)	NAPHTHALENE (ug/l)	PHENANTHRENE (ug/l)	PYRENE (ug/l)
LF001(A)	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LF003(A)	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LF023(A)	60	500	50	ND	10	40	40	170	1,400	10	2,200	200	60
LF025(A)	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LF027(A)	20	ND	ND	50	ND	ND	ND	10	40	ND	400	10	ND
LS029(A)	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LF031(A)	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
SWE001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SWE002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SWW001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SWW002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Shaded ranges indicate compounds commonly associated with coal tars and/or coal gasification processes

NT - Not tested

ND - Not detected

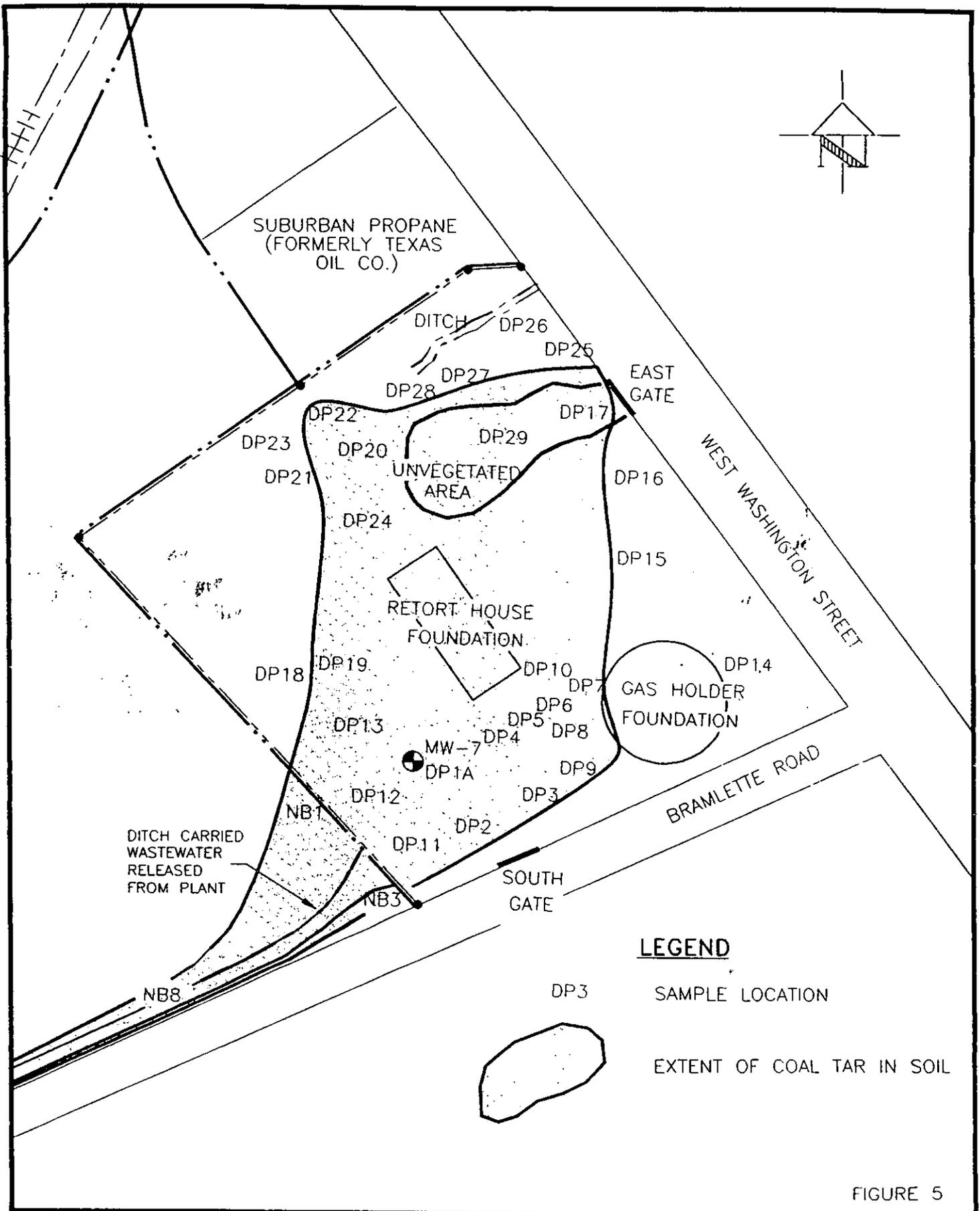


SCALE		NO.		DATE		REVISION		DESCRIPTION	
1" = 100'									
DWN. BY	KMK								
CHK'D. BY	OCC								
APPR. BY	OCC								

<p><b>Applied Engineering &amp; Science</b></p> <p>Atlanta Georgia</p>	<p><b>FIGURE 3</b></p> <p><b>SAMPLE LOCATIONS</b></p> <p><b>SOIL &amp; GROUNDWATER INVESTIGATION</b></p> <p><b>VAUGHN LANDFILL PSXT - GREENVILLE, SC</b></p>	<p>DATE</p> <p>MAR. 1995</p> <p>DWG. NO.</p> <p>4365A</p> <p>SHEET NO.</p>
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4365/SITE2.DWG

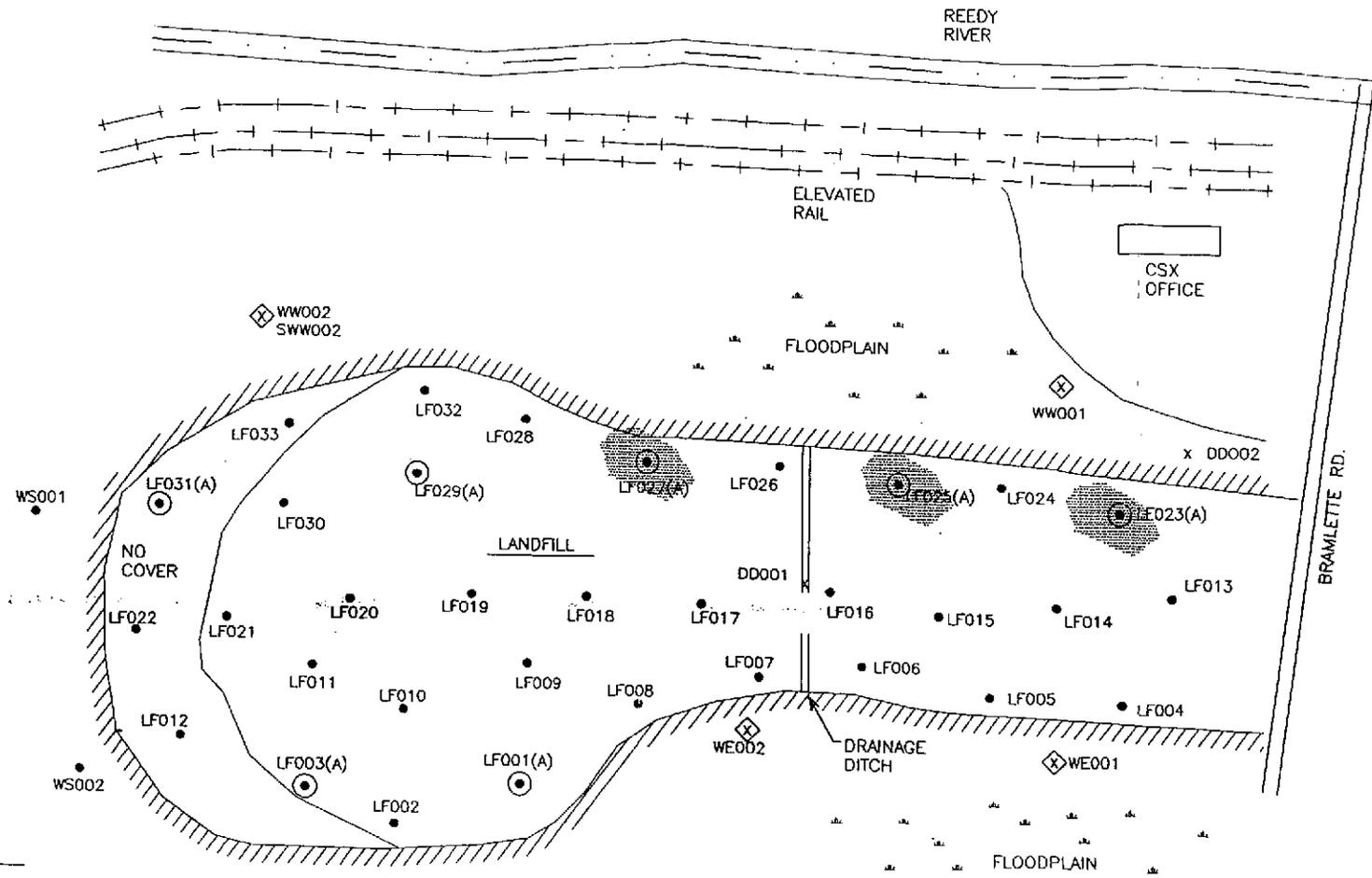
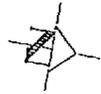


**LEGEND**

- DP3      SAMPLE LOCATION
- EXTENT OF COAL TAR IN SOIL

FIGURE 5

SCALE 1" = 100' DWN. BY DAB CHK'D. BY DAB APPR. BY KMK		<b>Applied Engineering &amp; Science</b>	<b>COAL TAR EXTENT IN SOIL          DUKE POWER SITE          WEST WASHINGTON STREET          GREENVILLE, SOUTH CAROLINA</b>	DATE APR. 1996 DWG. NO. 4365B104 SHEET NO. -
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**LEGEND**

- SOIL SAMPLE
- GROUNDWATER SAMPLE
- x SEDIMENT SAMPLE
- ◇ SURFACE WATER SAMPLE

FIGURE 6

4365 SITE4.DWG

SCALE 1" = 100'		NO.	DATE	REVISION	DESCRIPTION
DWN. BY	KMK				
CHK'D. BY	QCC				
APPR. BY	QCC				



Applied  
Engineering &  
Science  
Atlanta  
Georgia

LOCATIONS W/ELEVATED VOLATILE  
COMPOUNDS - GROUNDWATER  
SOIL & GROUNDWATER INVESTIGATION  
VAUGHN LANDFILL CSXT - GREENVILLE, SC

DATE  
MARCH, 95  
DWG. NO.  
4365A  
SHEET NO.

acenaphthene at 60 ug/l, acenaphthylene at 500 ug/l, fluorene at 170 ug/l, 2-methylnaphthalene at 1,400 ug/l, and naphthalene at 2,200 ug/l.

4. PCBs - PCBs were not detected in groundwater samples collected beneath the landfill.

### **C. Floodplain - Soils**

Potential wetland conditions exist east and west of the fill with standing water present at the time of field operations. The landfill materials slow runoff which flows naturally from east to west into the Reedy River. Dead standing trees east of the fill indicate altered hydrologic conditions caused by the landfill. At the time of this report, no formal wetland delineation had been performed at the Site.

A total of seven soil samples was collected in floodplain deposits on three sides of the landfill; east, south, and west. Those samples collected east of the fill were designated WE001 and WE002. Those collected south of the fill were designated WS001 and WS002, and those collected west of the fill were designated WW001 and WW002. Sample DD002 was collected in a drainage ditch in the northwest corner which separates the landfill from soil fill used in the construction of the CSXT office.

Samples were collected by hand auger to depths of one foot. Soils were silty clay loams and sandy loams containing a high percentage of organic matter. Samples WE001 and WW002 contained a high percentage of tars.

Laboratory analyses included RCRA metals, VOCs, PCBs, semi-VOCs, and TPH. EPA method 413.1 had been specified in the workplan for TPH analysis. Following the discovery of the tar-like substance in several soil samples, Accura Analytical Laboratory suggested the use of EPA method 9071 for TPH analysis to better identify potential coal tar compounds.

1. RCRA Metals - Table 9 includes metals analytical results for the floodplain soil samples. Results are compared to naturally occurring concentrations for the region. Lead concentrations exceeded background levels in each of the samples and were comparable to concentrations reported from the landfill samples. Concentrations for the remaining parameters were reported below background levels or below detection limits.
2. VOCs - Table 10 summarizes analytical results for VOC analysis of the floodplain soil samples. BTEX constituents were reported in samples WE001 (benzene 65 ug/kg; ethylbenzene 340 ug/kg; toluene 150 ug/kg; xylenes 360 ug/kg) and WW002 (benzene 12,000 ug/kg; ethylbenzene 2,600 ug/kg; toluene 18,000 ug/kg; xylenes

**TABLE 9**  
**RCRA METALS ANALYTICAL RESULTS – FLOODPLAIN SOILS**  
**VAUGHN LANDFILL**  
**CSXT PROPERTY**  
**GREENVILLE, SOUTH CAROLINA**  
**AES, February 1995**

SAMPLE	ARSENIC	BARIUM	CADMIUM	CHROMIUM	LEAD	MERCURY	SELENIUM	SILVER	
ID	NOE*	41	300	na	500	<10	1.2	0.6	na
DD002		BDL	221.0	5.74	38.4	177.0	BDL	BDL	BDL
WE001		BDL	138.0	BDL	35.8	63.1	BDL	BDL	BDL
WE002		BDL	70.7	BDL	18.6	54.5	BDL	BDL	BDL
WS001		BDL	106.0	BDL	29.0	94.5	BDL	BDL	BDL
WS002		BDL	78.8	BDL	24.4	46.0	BDL	BDL	BDL
WW001		BDL	139.0	BDL	30.3	51.0	BDL	BDL	BDL
WW002		BDL	87.5	BDL	24.6	105.0	BDL	BDL	BDL

\* NOE – Concentrations of naturally occurring elements in soils typical of those found in northwestern South Carolina;  
from "Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States", USGS 1984

BDL – Below method detection limits

All concentrations reported in mg/kg

**TABLE 10**  
**VOLATILE ANALYTICAL RESULTS – FLOODPLAIN SOILS**  
**VAUGHN LANDFILL**  
**CSXT PROPERTY**  
**GREENVILLE, SOUTH CAROLINA**  
**AES, February 1995**

SAMPLE ID	BENZENE (ug/kg)	ETHYLBENZENE (ug/kg)	TOLUENE (ug/kg)	XYLENES (ug/kg)	ACETONE (ug/kg)	METH CHLOR (ug/kg)	CHLOROBENZENE (ug/kg)	STYRENE (ug/kg)
DD002	ND	ND	ND	ND	ND	14	ND	ND
WE001	65	340	150	360	ND	ND	ND	60
WE002	ND	ND	ND	ND	ND	24	ND	ND
WS001	ND	ND	ND	ND	ND	25	ND	ND
WS002	ND	ND	ND	ND	ND	88	ND	ND
WW001	16	ND	5	ND	120	77	ND	ND
WW002	12,000	2,600	18,000	26,000	ND	ND	ND	8,300

*Shaded ranges indicate sample locations with exceptional VOC concentrations*

*ND – Not detected*

26,000 ug/kg). Styrene was present in samples WE001 (60 ug/kg) and WW002 (8,300 ug/kg). Benzene (16 ug/kg) and toluene (5 ug/kg) were also reported in sample WW001 as was acetone (120 ug/kg). Methylene chloride was reported in the remaining samples at up to 88 ug/kg.

Samples WE001 and WW002 are shaded in Figure 5 along with other samples containing elevated VOC levels. These two samples extend the northeast to southwest line formed by the shaded landfill samples.

3. Semi-VOCs - A summary of semi-volatile results for the floodplain soil samples is included in Table 4. Concentrations were reported below detection limits in each of the seven samples except WE001 which contained fluoranthene (3,400 ug/kg), naphthalene (4,200 ug/kg), phenanthrene (6,700 ug/kg), and pyrene (6,300 ug/kg). Sample WW002 was not analyzed for semi-volatiles.

TPH and PCB concentrations were below detection limits for each of the seven floodplain soil samples.

#### D. Floodplain - Water

Surface water samples were collected in four locations in the floodplain surrounding the landfill at locations corresponding to those at which soil samples were collected. Samples were designated SWE001, SWE002, SWW001, and SWW002. No surface water was present at the south end of the fill; therefore, no water samples were collected. Samples were analyzed for RCRA metals, VOCs, semi-VOCs, PCBs, and TPH. Samples were collected to assess impact to surface waters from leachate from the fill or from other potential sources.

1. RCRA Metals - Table 11 summarizes metal analytical results for the four surface water samples. Barium and mercury concentrations exceeded MCLs in SWW002 (1.94 mg/l and 0.005 mg/l respectively). Lead exceeded MCLs in sample SWW001 (0.23 mg/l). Selenium exceeded MCLs in SWE002 (0.68 mg/l) and SWW001 (0.12 mg/l).
2. TPH - TPH analytical results are included in Table 5. Analysis indicated concentrations of 40 mg/l in SWE001, 11 mg/l in SWE002, and 4.5 mg/l in SWW001. TPH was reported below detection limits in sample SWW002.

**TABLE 11**  
**RCRA METALS ANALYTICAL RESULTS – SURFACE WATER**  
**VAUGHN LANDFILL**  
**CSXT PROPERTY**  
**GREENVILLE, SOUTH CAROLINA**  
**AES, February 1995**

SAMPLE		ARSENIC	BARIUM	CADMIUM	CHROMIUM	LEAD	MERCURY	SELENIUM	SILVER
ID	MCLs*	0.05 mg/l	1 mg/l	0.005 mg/l	0.1 mg/l	0.05 mg/l	0.002 mg/l	0.05 mg/l	0.05 mg/l
SWE001		BDL	0.22	BDL	BDL	0.05	BDL	BDL	BDL
SWE002		BDL	0.88	BDL	BDL	BDL	BDL	0.68	BDL
SWW001		BDL	0.44	BDL	BDL	0.23	BDL	0.12	BDL
SWW002		BDL	1.94	BDL	BDL	BDL	0.005	BDL	BDL

*BDL – Below method detection limits*

*All concentrations reported in mg/l*

*\* MCLs – Maximum Contaminant Levels as proposed by EPA, 1991; adopted by SCDHEC*

VOC, semi-VOC and PCB analyses indicated concentrations below detection limits in each of the four surface water samples.

Appendix D - Laboratory Analytical Results contains copies of the laboratory analytical reports and related documentation.

#### IV. DISCUSSION

Field observations and analytical results indicate the presence of elevated levels of metals, volatile organic compounds, semi-volatile organic compounds, and total petroleum hydrocarbons in the soil, surface water, and groundwater at the site. No PCBs were detected in soil or water samples.

High metals levels, particularly lead, may be the result of upstream industries including locomotive repair shops, construction and welding shops, coal gasification plants, and drum recycling facilities. Floodwaters carrying runoff from these facilities could distribute heavy metals in low lying areas such as the landfill site.

The concentrations discovered at location LF024 are noticeably higher than those of the other landfill soil samples. Materials in the fill could have contributed these concentrations. Metals concentrations in the floodplain soils are consistent with those reported in the landfill soil samples with lead levels exceeding background levels.

Groundwater appears to be largely unaffected by heavy metals. Arsenic was reported in one groundwater sample above the MCL but was not detected in the other six samples. Lead levels slightly exceeded the MCL in two samples. Surface water samples contained levels above MCLs for lead, barium, mercury, and selenium.

No materials, tanks, containers, or substances were observed in the landfill materials which may contribute to the metals contamination discovered. However, a large percentage of the landfill remained unexcavated during the site investigation.

VOC analyses of soil samples revealed the presence of BTEX compounds as well as styrene, acetone, and methylene chloride. Chlorobenzene was identified in one sample. As noted earlier, Figure 5 indicates those sample locations with elevated VOC concentrations. The shaded areas in the diagram form a line trending northeast to southwest from sample location WE001 in the floodplain east of the fill to sample location WW002 in the floodplain southwest of the fill. The line is consistent with soil samples containing a coal tar-like substance and/or strong petroleum odor. Little or no VOC contamination was detected southeast of this line in the landfill or floodplain.

Groundwater samples analyzed for VOCs also indicated the presence of BTEX compounds. Only benzene concentrations exceeded MCLs. Figure 6 illustrates the relation of groundwater VOC contamination to that of VOC impacted soils identified in Figure 5. Two of the three shaded groundwater sample locations in Figure 6 lie within the shaded region of Figure 5 with the remaining location slightly downgradient.

Surface water samples analyzed for VOCs indicated concentrations below detection limits.

Semi-VOC analysis was performed on soil samples LF004, LF027, and DD001 because of the presence of the tar-like substance. Several polyaromatic hydrocarbon (PAH) compounds were reported in the samples at concentrations over 100,000 ppm. Unexpectedly, semi-VOC compounds were not detected in sample DD001. Floodplain sample WE001 also contained semi-volatile compounds. Groundwater samples LF023(A) and LF027(A) were analyzed for semi-VOC compounds because of oils in the water. PAH compounds were identified in both samples. Semi-volatile constituents were identified along the same line as the VOC compounds highlighted in Figure 5.

TPH results indicated levels below detection limits for soil samples except DD001 collected in the drainage ditch flowing through the landfill. Levels in DD001 were reported at 120 mg/kg. TPH analysis conducted on the four floodplain surface water samples indicated concentrations up to 40 mg/l. This may indicate that volatile and semi-volatile compounds in the surface water are volatilizing into the atmosphere leaving the heavier hydrocarbon components. This is supported by the presence of VOC and semi-VOC compounds in the soil at location WE001 and the absence of those compounds in the surface water at the same location. TPH is present in SWE001 at 40 mg/l.

## V. CONCLUSIONS AND RECOMMENDATIONS

Approximately seven acres of floodplain of the Reedy River have been filled with demolition debris and yard waste to a depth of up to 14 feet. Excavations through the fill and borings advanced through the fill into the underlying native soils revealed the presence of a tar-like substance at the fill/soil interface. Additional hand auger samples collected in the surrounding floodplain soils also contained tars.

Laboratory analysis of the samples indicated a band of volatile and semi-volatile contamination in soils trending northeast to southwest through the fill. This band extends from the floodplain northeast of the fill through the northern half of the fill material, through the southwest corner of the fill, and into the floodplain southwest of the landfill.

Groundwater was encountered at or below the native soil surface. Three groundwater samples contained elevated levels of volatile and semi-volatile compounds. Impacted groundwater was found along the west side of the landfill and likely extends west in the suspected downgradient direction toward the Reedy River.

Elevated levels of lead were revealed in soil samples throughout the site. Metals levels in sample LF024 were high compared to levels in the other landfill soil samples. Groundwater metals levels were below MCLs except for arsenic which was slightly over

the MCL in one sample, and lead slightly over the MCL in two samples. Surface water samples contained metals levels which exceeded MCLs.

No sources of metals, VOC, or semi-VOC contamination were identified in the landfill materials. Volatile and semi-volatile compounds appear to be the result of the tar-like substance which lies in native soils below the fill. No source for the tars was found; however, a coal gasification plant operated across Bramlette road northeast of the site until the 1960s. Semi-volatile compounds identified during the landfill investigation are consistent with those produced during coal gasification processes.

AES recommends the installation of monitoring wells to assess the vertical and horizontal extent of groundwater contamination. A minimum of six wells is recommended. Additional soil sampling should be conducted to assess the extent of the tar substance and to assess a possible source. Location LF024 should be excavated to assess the source of heavy metals contamination at that location.

An impermeable cap is *not* recommended for this landfill. Because the water table is at or close to the surface, water flows beneath and through the base of the fill. A cap would not prevent this type of infiltration. However, the south end of the landfill should be covered with clean soil to control odors and vermin, to keep debris from spreading, and to improve appearances. Several other areas should be covered and graded, particularly around the perimeter of the fill.



APPLIED ENGINEERING AND SCIENCE , INC.  
ATLANTA , GEORGIA

**APPENDIX**

**APPENDIX A**

**DHEC WORKPLAN APPROVAL LETTERS**

MEMORANDUM

To: Applied Engineering & Science  
2261 Perimeter Park Drive, Suite 1  
Atlanta, GA 30341

From: Charles Bristow, Hydrogeologist  
Appalachia II EQC

*Charles Bristow*

Date: February 3, 1995

Re: Groundwater Sampling Approval  
CSX/Vaughn Landfill Site  
Dated November 30, 1994

Request to extend sampling approval

As requested, this letter shall serve as an amendment to the above referenced groundwater sampling approval. An additional 60 days is approved to complete the groundwater sampling at the referenced site. All other conditions of the original approval will remain as written.

If you have any questions please call me at 803-241-1090.

GROUNDWATER SAMPLING APPROVAL

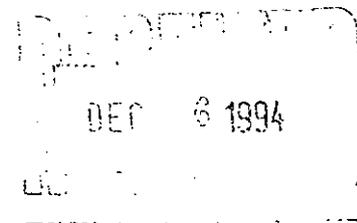
Approval is hereby granted to: Applied Engineering & Science  
2261 Perimeter Park Drive, Suite 1  
Atlanta, GA 30341

Facility: CSX/Vaughn Landfill  
Greenville, South Carolina

For the collection of approximately thirty three ground-water samples in accordance with location, and specifications described in the October, 1994 Work Plan and November 7, 1994 Addendum, except as revised by the conditions below. The samples will be collected from the upper saturated section of the surficial aquifer. Using direct push technology (Geoprobe) and handaugers, for the purpose of assessing environmental impact to the ground water at the referenced site.

Conditions:

- 1) The latitude, longitude and actual sample collection depths will be submitted to the Department within 30 days upon completion of the field work.
- 2) All water quality measurements and analytical data obtained from the sample locations will be submitted to the department within 30 days upon receipt from the laboratory.
- 3) Due to the intent to collect ground-water samples, all drilling must be performed by a South Carolina certified well driller.
- 4) The maximum life of the borings should not exceed 48 hours from the date of sample collection unless the appropriate upgrades are made to comply with South Carolina Standards and Regulations (R.61-71).



South Carolina  
**DHEC**  
Department of Health and Environmental Control

Appalachia II  
Environmental Quality Control  
301 University Ridge, Suite 5800  
Greenville, SC 29601-3677  
803-241-1090 Fax: 803-241-1092

Serving  
Greenville and Pickens Counties

Promoting Health, Protecting the Environment

November 29, 1994

Mr. Dave Butler  
Applied Engineering & Science  
2261 Perimeter Park Drive, Suite 1  
Atlanta, GA 30341

Re: CSX/Vaughn Landfill  
Greenville County

Dear Mr. Butler:

This office has reviewed the Work Plan dated October 1994 and the Addendum dated November 7, 1994 for the above referenced site. The Department concurs with the changes proposed in the Addendum and approves the Work Plan based on these changes. Approval for your groundwater sampling program will be forthcoming from Charles Bristow. Approval must be received prior to the initiation of groundwater sampling.

Please contact this office at least 48 hours prior to the initiation of field activities. If you have any questions, please contact me at (803) 241-1090.

Sincerely,



Mary Anderson  
Environmental Quality Manager

cc: Fred Veal, Corps of Engineers  
Marshall Williams, CSX

**APPENDIX B**

**HEALTH AND SAFETY PLAN**

APPLIED ENGINEERING & SCIENCE, INC.  
HEALTH AND SAFETY PLAN

Project CSX/Vaughn Landfill Project No. 4365A  
Site Address Bramlette Rd Mailing Address \_\_\_\_\_  
City Greenville City JACKSONVILLE  
County Greenville State, Zip FL  
State, Zip South Carolina  
Site Safety Coord. Dave Butler  
Site Contact Pete Kerns/CSX office Phone (803) 222-2161  
Marshall Williams/Jacksonville

Site Description 8 ± acre unpermitted landfill in wetland/  
flood plain east of the Reedy River on Bramlette Rd.

Site History CSX property; used as unpermitted landfill  
by Vaughn Construction Co. Greenville since ~ 1987.  
Fill is primarily demolition & construction debris, some  
yard waste from City View residences.

Site Status Landfill closed; gate locked. AES conducting  
investigation into impacted soils and groundwater.  
ONEC samples revealed toluene

Previous Activities Collection of 6 TPH samples in soils surrounding  
perimeter of LF. Preliminary survey taken to  
define measurements of LF. Sample point grid  
laid out.

## INCIDENT DESCRIPTION

Type:	A) Spill	_____	Release	_____	Other	<u>Landfill</u>
	B) Assessment	<u>✓</u>	Sampling	<u>✓</u>	Emerg Response	_____
	Clean-up	_____	Removal	_____	Other	_____
	C) Urban/Resid	<u>✓</u>	Commercial	_____	Industrial	_____
	Rural/Remote	_____				

## PERSONNEL PHYSICAL SAFETY HAZARDS

Heat/Cold	<u>✓</u>	Noise	<u>✓</u>	Underground Utilities	_____
Overhead Utilities	_____	Heavy Equipment	<u>✓</u>	Slip/Trip/Fall	<u>✓</u>
Confined Spaces	_____	Scaffolds	_____	Explosives	_____
Unguarded Openings (excavations, walls, floors, etc.)	_____			Press. Airlines	_____
Liquids in Open Containers	_____			Ponds/Lagoons	<u>✓</u>
Other	<u>unknown materials in landfill</u>				

## PERSONAL PROTECTIVE EQUIPMENT

TASK TO BE PERFORMED	ANTICIPATED LEVEL OF PROTECTION	COVERALL	GLOVE In/Out	AIR PURIFYING RESPIRATOR Cartridge/Cannister
<u>wetland samples</u>	<u>D</u>	<u>hip waders / rubber gloves</u>		
<u>Land fill samples</u>	<u>D</u>	<u>vinyl gloves, ear protection</u>		

## ANTICIPATED MONITORING

Radiation Meter [ ]	Combustible Gas Indicator [ ]	Flame Ionization Detector <u>✓</u>
Photoionization Detector [ ] eV probe _____	Dräger Tubes [ ] type _____	Other _____

## ANTICIPATED SITE ACTIVITIES

Collection of soil, groundwater, possible sludge, sediment, and surface water samples.

Equipment includes Stratoprobe push type subsurface collection system, Trackhoe for excavating sample locations, if necessary. Wetland samples to be collected by hand.

SITE PLAN

Attach a site plan with the following areas identified by number (if applicable):

- [1] Prevailing wind direction
- [2] Work areas and Hot Zone
- [3] Decontamination Areas/Contamination Reduction Corridor
- [4] Support Zone
- [5] Command Post
- [6] Location of eye wash station
- [7] Location of emergency shower
- [8] First aid station
- [9] Rest areas
- [10] Two or more escape routes (refer to arrows)
- [11] Offsite landmarks
- [12] Problem containment areas
- [13] Topography (rivers, cliffs, etc.)\*
- [14] Roads / air accessibility\*
- [15] Pathways for hazardous dispersions\*

\* OSHA Requirement

ENGINEERING CONTROLS

Trackhoe on site to level and grade pathways  
to sample locations. Fill and grade area around  
each location to provide safe conditions.

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**Note:** This Health and Safety Plan was prepared for work to be conducted by Applied Engineering & Science (AES) personnel and its subcontractors. Use of this plan by AES and its subcontractors is intended to fulfill the OSHA requirements under 29 CFR 1910.120. Items not specifically covered in this plan are included by reference to 29 CFR 1910 and 1926.

**I have read and understand this safety plan.**

*Michael Robinson*

*Paul A. Peltz*

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**EMERGENCY PHONE NUMBERS**

	LOCATION	PHONE	or City View
<b>FIRE</b>	<u>Greenville</u>	<u>911 or 240-4463</u>	<u>232-288</u>
<b>POLICE</b>	<u>Greenville</u>	<u>911 or 271-5333</u>	
<b>AMBULANCE</b>	<u>Greenville</u>	<u>911 or 467-7000</u>	
<b>HOSPITAL</b>	<u>Greenville Memorial 701 Grove Rd</u>	<u>455-7000</u>	
<b>Chemical Trauma Capability</b>	<u>St. Francis Hospital 1 St. Francis Dr.</u>	<u>255-1000</u>	
<b>Directions to Hospital</b>	<u>left on Bramlette from site; Right on SR 123;</u> <u>St. Francis on left after Pendleton Rd.</u>		

**ADDITIONAL EMERGENCY PHONE NUMBERS**

Poison Control Center 1(800) 922-1117

**APPENDIX C**  
**SITE PHOTOGRAPHS**



**PHOTOGRAPH 1**  
**Floodplain Sample Collection; WE001**



**PHOTOGRAPH 2**  
**Landfill Sample Collection; Strataprobe**

SCALE	NONE
DWN. BY	KMK
CHK'D. BY	GEW
APPR. BY	GEW



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**PHOTOGRAPH 3**  
**LF001: Excavation**



**PHOTOGRAPH 4**  
**LF001: Excavated debris**

SCALE	NONE
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**PHOTOGRAPH 5**  
**LF003: Excavation**



**PHOTOGRAPH 6**  
**LF003: Excavated debris**

SCALE	NONE		<b>Applied  Engineering &amp;  Science</b>	<b>PHOTOGRAPHS</b> <b>VAUGHN LANDFILL</b> <b>CSXT - GREENVILLE, SC</b>	DATE	MAR, 1995
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**PHOTOGRAPH 7**  
**LF009: Excavation; Note Vapors Generated by Landfill Heat**



**PHOTOGRAPH 8**  
**LF009: Excavation debris**

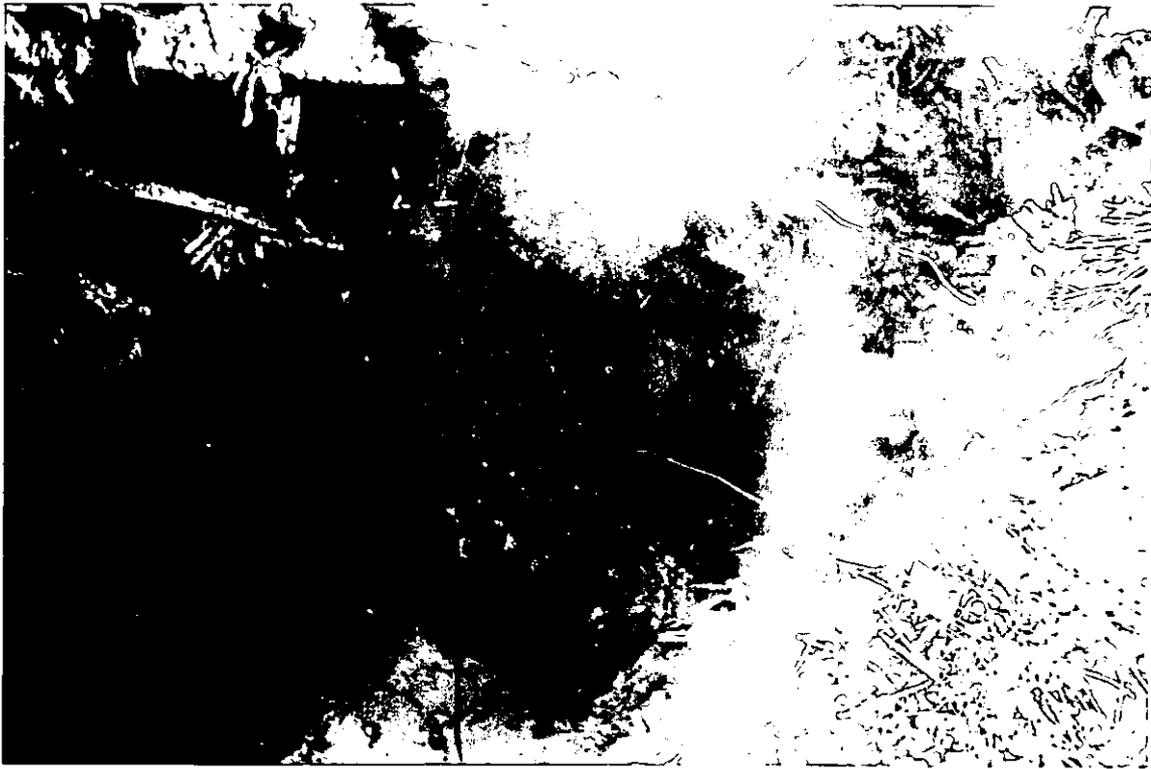
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**PHOTOGRAPH 9**  
**LF010: Excavation**



**PHOTOGRAPH 10**  
**LF010: Excavated debris**

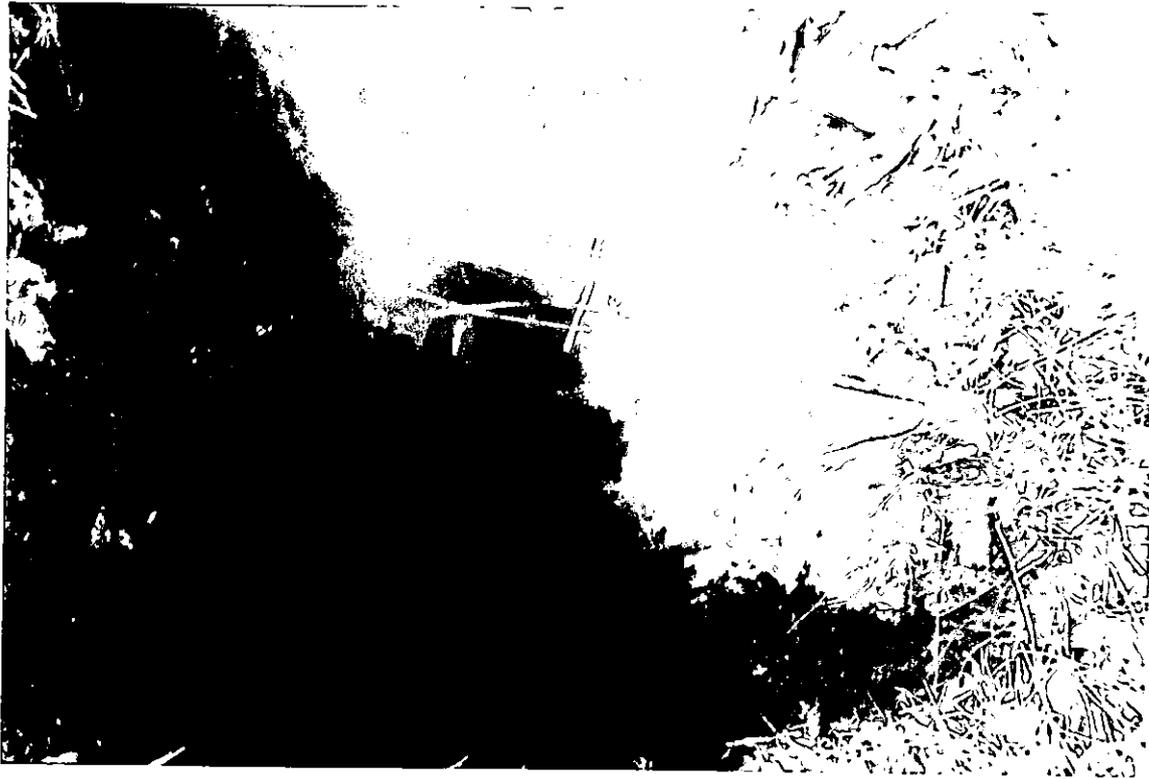
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APPR. BY	GEW



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**PHOTOGRAPH 11**  
**LF011: Excavation**



**PHOTOGRAPH 12**  
**LF011: Excavated debris**

SCALE	NONE		<b>Applied  Engineering &amp;  Science</b>	<b>PHOTOGRAPHS</b> <b>VAUGHN LANDFILL</b> <b>CSXT - GREENVILLE, SC</b>	DATE	MAR, 1995
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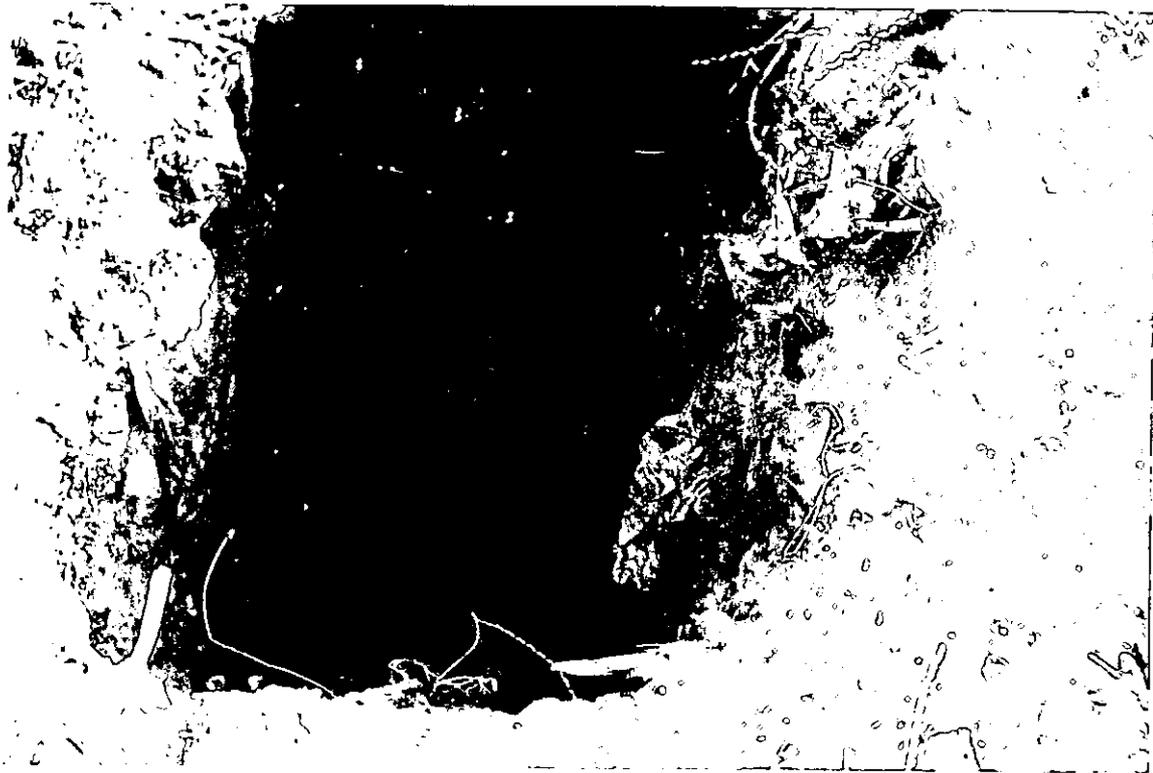


**PHOTOGRAPH 13**  
**LF012: Excavation; note water in excavation**



**PHOTOGRAPH 14**  
**LF012: Excavated debris**

SCALE	NONE		<b>Applied          Engineering &amp;          Science</b>	<b>PHOTOGRAPHS</b> <b>VAUGHN LANDFILL</b> <b>CSXT - GREENVILLE, SC</b>	DATE
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					SHEET NO.



**PHOTOGRAPH 15**  
**LF019: Excavation**



**PHOTOGRAPH 16**  
**LF019: Excavated debris**

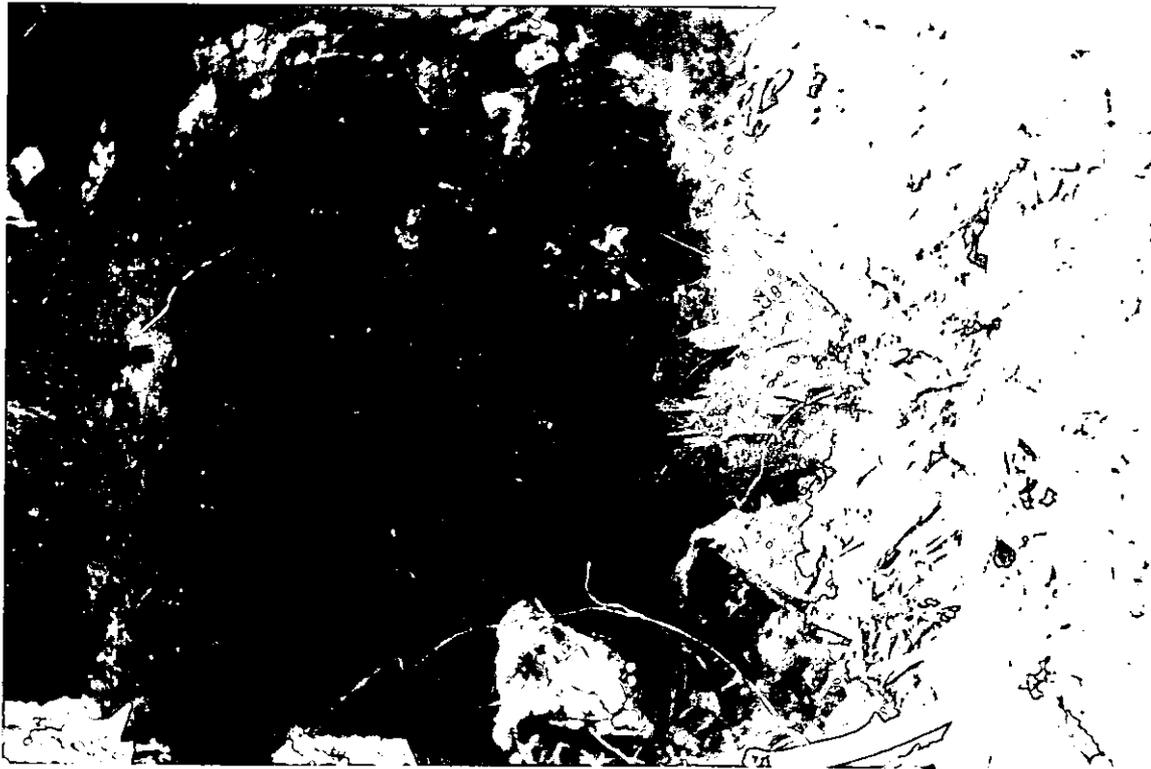
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**PHOTOGRAPH 17**  
**LF020: Excavation**



**PHOTOGRAPH 18**  
**LF020: Excavated debris**

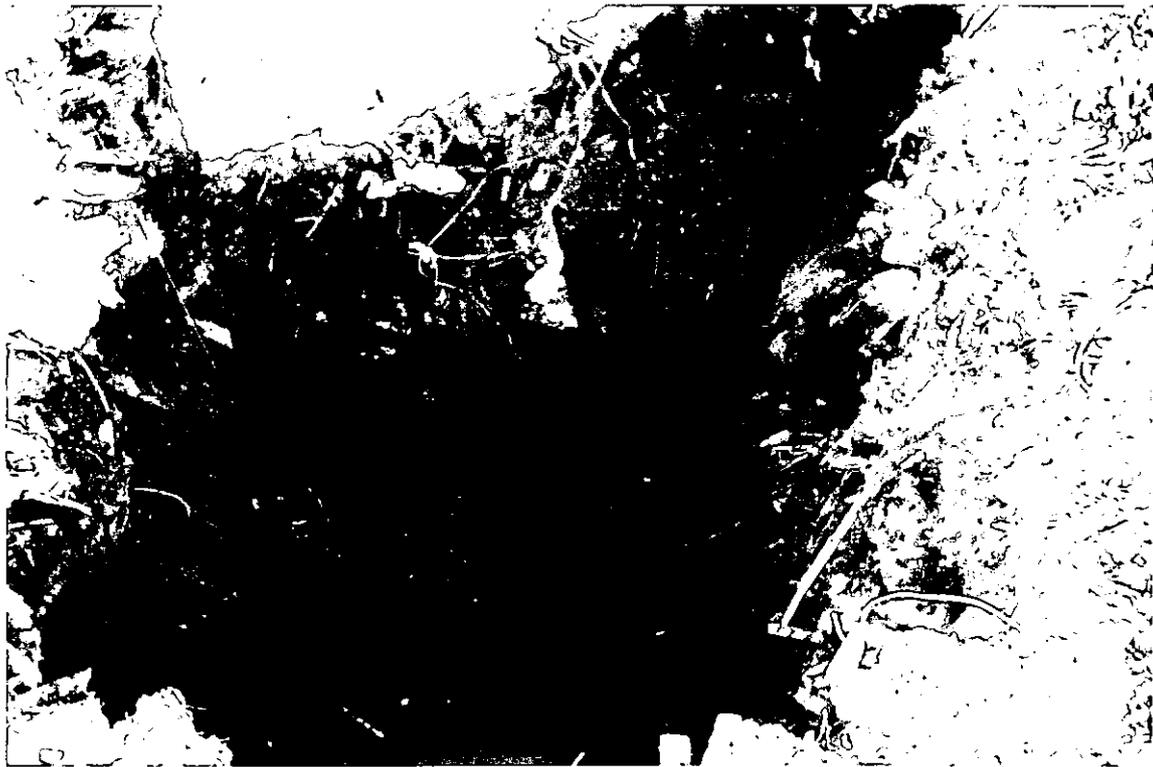
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APPR. BY	GEW



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**PHOTOGRAPH 19**  
**LF021: Excavation**



**PHOTOGRAPH 20**  
**LF021: Excavated debris**

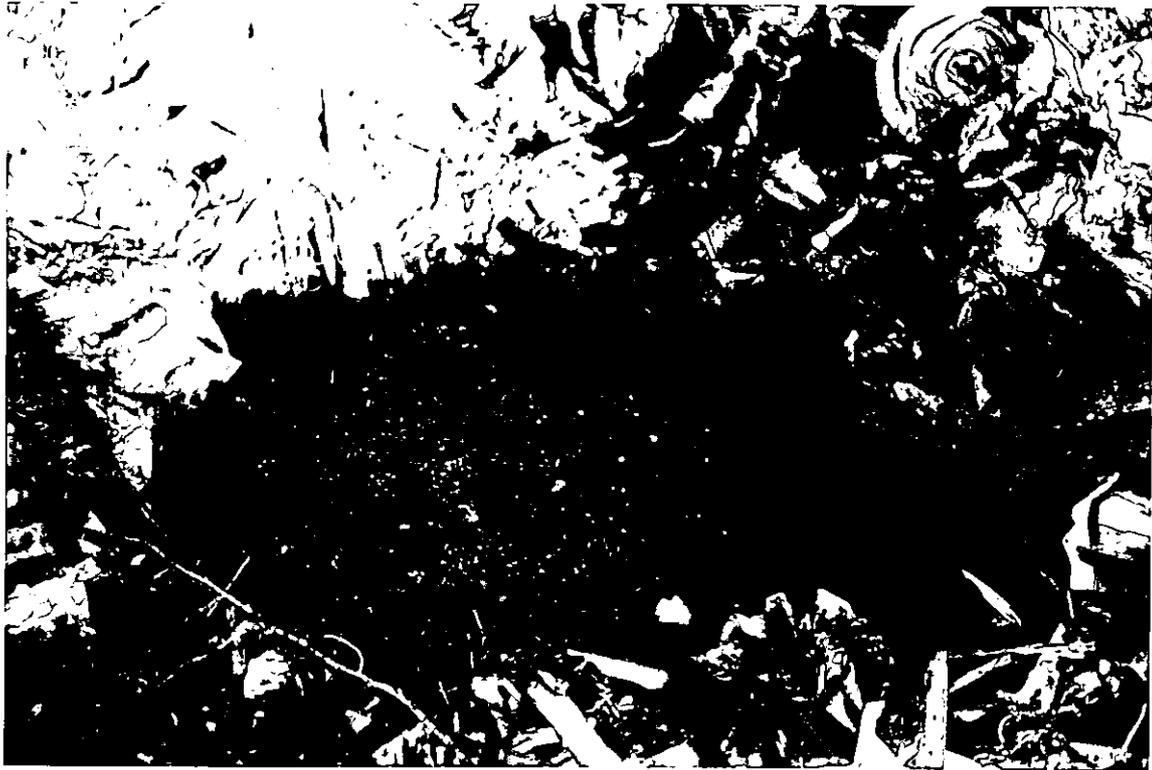
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**PHOTOGRAPH 21**  
**LF022: Excavation**



**PHOTOGRAPH 22**  
**LF022: Excavated debris**

SCALE	NONE
DWN. BY	KMK
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APPR. BY	GEW



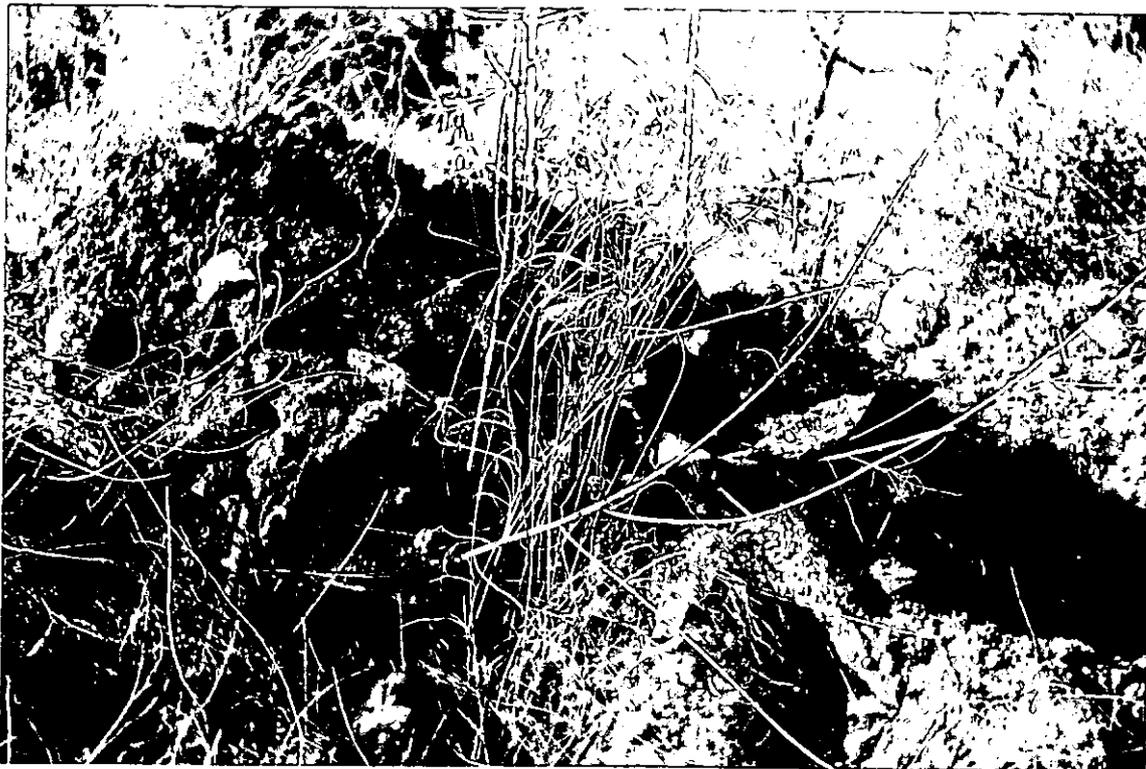
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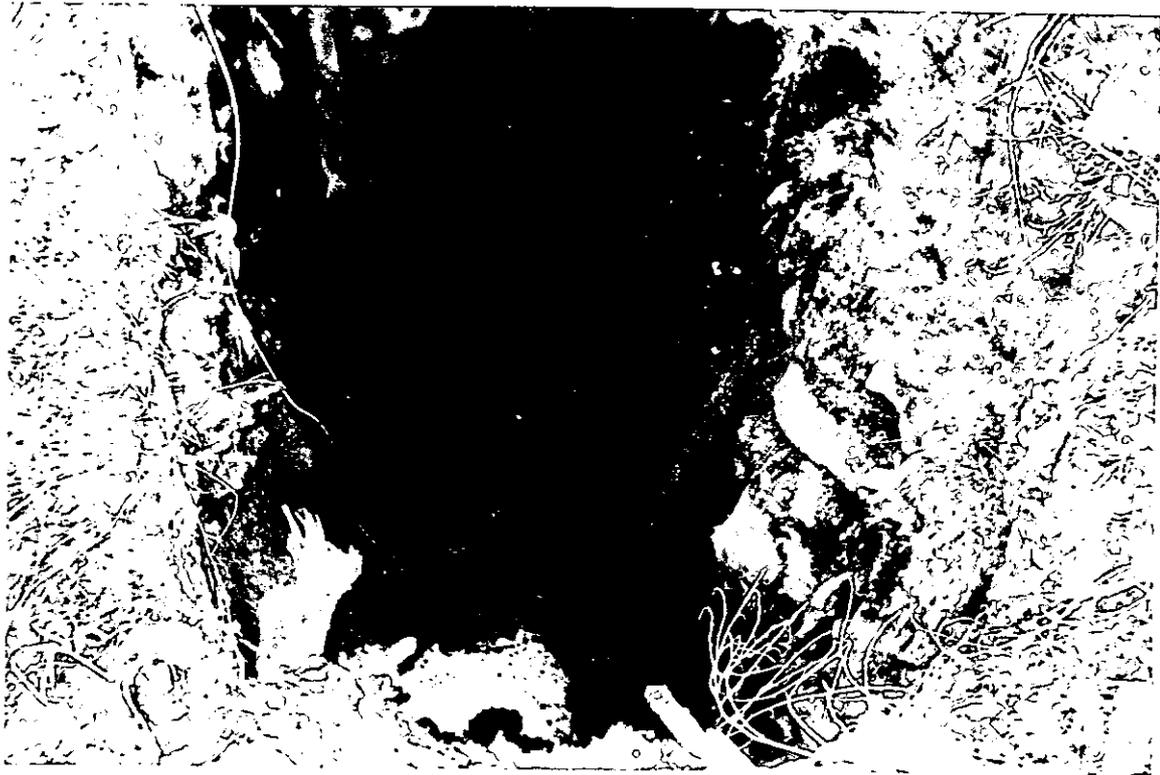


**PHOTOGRAPH 23**  
**LF026: Excavation**



**PHOTOGRAPH 24**  
**LF026: Excavated debris**

SCALE	NONE		Applied Engineering & Science	PHOTOGRAPHS VAUGHN LANDFILL CSXT - GREENVILLE, SC	DATE
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CHK'D. BY	GEW				DWG. NO.
APPR. BY	GEW				4365
					SHEET NO.



**PHOTOGRAPH 25**  
**LF027: Excavation**



**PHOTOGRAPH 26**  
**LF027: Excavated debris**

SCALE	NONE		Applied Engineering & Science	PHOTOGRAPHS VAUGHN LANDFILL CSXT - GREENVILLE, SC	DATE	MAR, 1995
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APPR. BY	GEW					



**PHOTOGRAPH 27**  
**Trackhoe excavating sample location**



**PHOTOGRAPH 28**  
**Typical soil types found below fill; clay, silts**

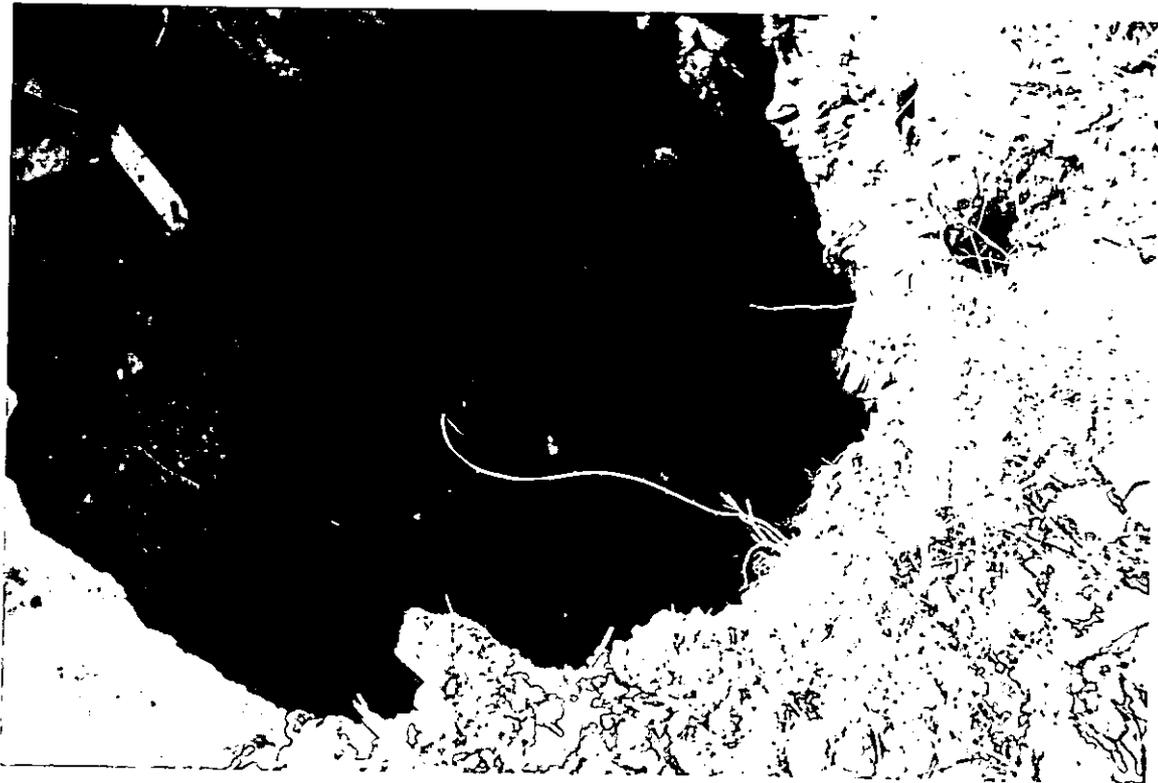
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APPR. BY	GEW



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**PHOTOGRAPH 29**  
**LF028: Excavation**



**PHOTOGRAPH 30**  
**LF028: Excavated debris**

SCALE	NONE
DWN. BY	KMK
CHK'D. BY	GEW
APPR. BY	GEW



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**PHOTOGRAPH 31**  
**LF029: Excavation**



**PHOTOGRAPH 32**  
**LF029: Excavated debris**

SCALE	NONE		<b>Applied          Engineering &amp;          Science</b>	<b>PHOTOGRAPHS</b> <b>VAUGHN LANDFILL</b> <b>CSXT - GREENVILLE, SC</b>	DATE	MAR, 1995
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CHK'D. BY	GEW				SHEET NO.	
APPR. BY	GEW					



**PHOTOGRAPH 33**  
**LF030: Excavation**



**PHOTOGRAPH 34**  
**LF030: Excavated debris**

SCALE	NONE
DWN. BY	KMK
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APPR. BY	GEW



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**PHOTOGRAPH 35**  
**Decon Area**



**PHOTOGRAPH 36**  
**Groundwater collected from LF023;**  
**note oily substance coating container**

SCALE	NONE
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CHK'D. BY	GEW
APPR. BY	GEW



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SHEET NO.	



**PHOTOGRAPH 37**  
**LF031: Excavation**



**PHOTOGRAPH 38**  
**LF031: Excavated debris**

SCALE	NONE
DWN. BY	KMK
CHK'D. BY	GEW
APPR. BY	GEW



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**PHOTOGRAPH 39**  
**LF032: Excavation**



**PHOTOGRAPH 40**  
**LF032: Excavated debris**

SCALE	NONE
DWN. BY	KMK
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APPR. BY	GEW



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SHEET NO.	



**PHOTOGRAPH 41**  
**LF033: Excavation**



**PHOTOGRAPH 42**  
**LF033: Excavated debris**

SCALE	NONE
DWN. BY	KMK
CHK'D. BY	GEW
APPR. BY	GEW



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SHEET NO.	



**PHOTOGRAPH 43**

**WW002: Floodplain sample location; sediments and surface water**



**PHOTOGRAPH 44**

**Landfill debris in floodplain; southwest corner**

SCALE	NONE		<b>Applied Engineering &amp; Science</b>	<b>PHOTOGRAPHS VAUGHN LANDFILL CSXT - GREENVILLE, SC</b>	DATE	MAR, 1995
DWN. BY	KMK				DWG. NO.	4365
CHK'D. BY	GEW				SHEET NO.	
APPR. BY	GEW					

**APPENDIX D**  
**LABORATORY ANALYTICAL DATA**

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29662	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF001	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29662	ANALYZED BY: 02-21-95
STATION #: LF001	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	132
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	29.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	101
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29662 / LF001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	370
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	50	570
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED  
 PQL's were raised because the samples required dilution.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29663	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF002	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*\*Detection limits were raised because the sample required dilution.

*Al R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29663	ANALYZED BY: RH/MD
STATION #: LF002	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	105
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	21.7
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	51.4
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATES OF ANALYSIS: 02-11-95 & 02-13-95  
 LAB I.D. #/STATION #: 29663 / LF002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	228
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	5
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	190
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alvin R. Walten*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-09-95  
LAB I.D. #: 29713  
STATION #: LF003

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7518  
REPORT DATE: 02-23-95  
DATE OF ANALYSIS/BY: 02-16-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29713  
 STATION #: LF006 LF003

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba) †	7440-39-3	200.7	02-21-95	0.50	91.3 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	24.3
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	50.8 †
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Mark R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-20-95  
 LAB I.D. #/STATION #: 29713 / LF003

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	250*	570
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	25*	480
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Alan R. Walters*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-08-95  
LAB I.D. #: 29664  
STATION #: LF004

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7511  
REPORT DATE: 02-22-95  
DATE OF ANALYSIS/BY: 02-15-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

Detection limits were raised because the sample required dilution.



ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29783	ANALYZED BY: RH/MD
STATION #: LF 008	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	128
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	37.1
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	76.9
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: 29783 / LF 008

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	14
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
LAB I.D. #: 29812	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF 009	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(µg/kg)	RESULTS (µg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29783	ANALYZED BY: RH/MD
STATION #: LF 008	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	128
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	37.1
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	76.9
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walton*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: 29783 / LF 008

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	14
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Mark R. Walter*  
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Accura Analytical Laboratory, Inc.  
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Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
LAB I.D. #: 29812	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF 009	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29664	ANALYZED BY: RH/MD
STATION #: LF004	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	2.50	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	0.50	02-21-95	0.50	67.4
Cadmium (Cd)	7440-43-9	0.50	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	2.50	02-21-95	2.50	11.9
Lead (Pb)	7439-92-1	2.50	02-21-95	2.50	16.8
Mercury (Hg)	7439-97-6	1.00	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	2.50	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	2.50	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Mr. R. Walton*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-11-95  
 LAB I.D. #/STATION #: 29664 / LF004

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	50,000	ND
Benzene	71-43-2	2,500	8,300
Bromodichloromethane	75-27-4	2,500	ND
Bromoform	75-25-2	2,500	ND
Bromomethane	74-83-9	2,500	ND
2-Butanone	78-93-3	50,000	ND
Carbon disulfide	75-15-0	2,500	ND
Carbon tetrachloride	56-23-5	2,500	ND
Chlorobenzene	108-90-7	2,500	ND
Chloroethane	75-00-3	2,500	ND
2-Chloroethylvinyl ether	110-75-8	5,000	ND
Chloroform	67-66-3	2,500	ND
Chloromethane	74-87-3	2,500	ND
Dibromochloromethane	124-48-1	2,500	ND
1,2-Dichlorobenzene	95-50-1	2,500	ND
1,3-Dichlorobenzene	541-73-1	2,500	ND
1,4-Dichlorobenzene	106-46-7	2,500	ND
1,1-Dichloroethane	75-34-3	2,500	ND
1,2-Dichloroethane	107-06-2	2,500	ND
1,1-Dichloroethene	75-35-4	2,500	ND
trans-1,2-Dichloroethene	156-60-5	2,500	ND
Cis-1,2-Dichloroethene	156-59-2	2,500	ND
1,2-Dichloropropane	78-87-5	2,500	ND
Cis-1,3-dichloropropene	10061-01-5	2,500	ND
trans-1,3-Dichloropropene	10061-02-6	2,500	ND
Ethylbenzene	100-41-4	2,500	17,000
2-Hexanone	591-78-6	25,000	ND
Methylene chloride	75-09-2	5,000	ND
4-Methyl-2-pentanone	108-10-1	25,000	ND
Styrene	100-42-5	2,500	3,800
1,1,2,2-Tetrachloroethane	79-34-5	2,500	ND
Tetrachloroethene	127-18-4	2,500	ND
Toluene	108-88-3	2,500	16,000
1,1,1-Trichloroethane	71-55-6	2,500	ND
1,1,2-Trichloroethane	79-00-5	2,500	ND
Trichloroethene	79-01-6	2,500	ND
Trichlorofluoromethane	75-69-4	2,500	ND
Vinyl acetate	108-05-4	50,000	ND
Vinyl chloride	75-01-4	2,500	ND
Xylenes (Total)	1330-20-7	2,500	28,000

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Alan R. Walters*

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29664  
 STATION #: LF004

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-13-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)*	RESULTS (µg/kg)
Acenaphthene	83-32-9	33,000	106,000
Acenaphthylene	208-96-8	330,000	570,000
Anthracene	120-12-7	33,000	219,000
Benzidine	92-87-5	166,000	ND
Benzo(a)anthracene	56-55-3	33,000	55,000
Benzo(a)pyrene	50-32-8	33,000	ND
Benzo(b)fluoranthene	205-99-2	33,000	ND
Benzo(g,h,i)perylene	191-24-2	33,000	ND
Benzo(k)fluoranthene	207-08-9	33,000	84,000
Benzoic acid	65-85-0	16,000	ND
Benzyl alcohol	100-51-6	33,000	ND
bis(2-Chloroethoxy)methane	111-91-1	33,000	ND
bis(2-Chloroethyl)ether	111-44-4	33,000	ND
bis(2-Chloroisopropyl)ether	108-60-1	33,000	ND
bis(2-Ethylhexyl)phthalate	117-81-7	33,000	ND
4-Bromophenyl phenyl ether	101-55-3	33,000	ND
Butyl benzyl phthalate	85-68-7	33,000	ND
4-Chloroaniline	106-47-8	33,000	ND
4-Chloro-3-methylphenol	59-50-7	33,000	ND
2-Chloronaphthalene	91-58-7	33,000	ND
2-Chlorophenol	95-57-8	33,000	ND
4-Chlorophenyl phenyl ether	7005-72-3	33,000	ND
Chrysene	218-01-9	33,000	ND
Dibenz(a,h)anthracene	53-70-3	33,000	ND
Dibenzofuran	132-64-9	33,000	74,000
Di-n-butylphthalate	84-74-2	33,000	ND
1,2-Dichlorobenzene	95-50-1	33,000	ND
1,3-Dichlorobenzene	541-73-1	33,000	ND
1,4-Dichlorobenzene	106-46-7	33,000	ND
3,3'-Dichlorobenzidine	91-94-1	66,000	ND
2,4-Dichlorophenol	120-83-2	33,000	ND
Diethylphthalate	84-66-2	33,000	ND
2,4-Dimethylphenol	105-67-9	33,000	ND
Dimethylphthalate	131-11-3	33,000	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

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 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr.Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29664	DATE OF ANALYSIS/BY: 02-13-95/JF
STATION #: LF004	SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L.(µg/kg)*	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	160,000	ND
2,4-Dinitrophenol	51-28-5	160,000	ND
2,4-Dinitrotoluene	121-14-2	33,000	ND
2,6-Dinitrotoluene	606-20-2	33,000	ND
Di-n-octylphthalate	117-84-0	33,000	ND
Fluoranthene	206-44-0	330,000	197,000
Fluorene	86-73-7	33,000	ND
Hexachlorobenzene	118-74-1	33,000	ND
Hexachlorobutadiene	87-68-3	33,000	ND
Hexachlorocyclopentadiene	77-47-4	33,000	ND
Hexachloroethane	67-72-1	33,000	ND
Indeno(1,2,3-cd)pyrene	193-39-5	33,000	ND
Isophorone	78-59-1	33,000	ND
2-Methylnaphthalene	91-57-6	330,000	1,400,000
2-Methylphenol	95-48-7	33,000	ND
4-Methylphenol	106-44-5	33,000	ND
Naphthalene	91-20-3	33,000	44,000
2-Nitroaniline	88-74-4	160,000	ND
3-Nitroaniline	99-09-2	160,000	ND
4-Nitroaniline	100-01-6	160,000	ND
Nitrobenzene	98-95-3	33,000	ND
2-Nitrophenol	88-75-5	33,000	ND
4-Nitrophenol	100-02-7	160,000	ND
N-nitrosodiphenylamine	86-30-6	33,000	ND
N-nitroso-di-n-propylamine	621-64-7	33,000	ND
Pentachlorophenol	87-86-5	160,000	ND
Phenanthrene	85-01-8	330,000	1,000,000
Phenol	108-95-2	33,000	ND
Pyrene	129-00-0	33,000	279,000
1,2,4-Trichlorobenzene	120-82-1	33,000	ND
2,4,5-Trichlorophenol	95-95-4	160,000	ND
2,4,6-Trichlorophenol	88-06-2	33,000	ND

DL=DETECTION LIMIT, ND=NOT DETECTED  
 \*Detection limits were raised due to matrix interferences and the sample required dilution.

*Mr. P. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29665  
 STATION #: LF005

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Mark R. Watts*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29665  
 STATION #: LF005

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	165
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	20.2
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	25.0
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walters*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29782 (Duplicate)	ANALYZED BY: RH/MD
STATION #: LF 007	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	15.6
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	5.32
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	12.1
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
DATES OF ANALYSIS: 02-15-95 & 02-17-95	CHEMIST INITIALS: RR
LAB I.D. #/STATION #: 29782 / LF 007	SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	1,000
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	12
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED  
 \*PQL was raised because the sample required dilution.

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29783	DATE OF ANALYSIS/BY: 02-19-95/JF
STATION #: LF - 008	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alvin R. Webster*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29783  
 STATION #: LF 008

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	128
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	37.1
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	76.9
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: 29783 / LF 008

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	14
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Mark R. Walton*  
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Accura Analytical Laboratory, Inc.  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
LAB I.D. #: 29812	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF 009	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(µg/kg)	RESULTS (µg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
LAB I.D. #: 29812	ANALYZED BY: RH/MD
STATION #: LF 009	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	118
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	22.9
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	51.8
Mercury (Hg)	7439-97-6	245.1	02-14-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent is present in the sample.

  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATES OF ANALYSIS: 02-15-95 & 02-17-95  
 LAB I.D. #/STATION #: 29812 / LF 009

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500	570
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	7*
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	50	270
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*Estimated value due to matrix interferences.

*Al R. Walters*

ACCURA ANALYTICAL LABORATORY, INC.

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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29717	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF010	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29717	ANALYZED BY: RH
STATION #: LF010	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	104 f
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	30.9 f
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	69.6 f
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Welter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATES OF ANALYSIS: 02-17-95 & 02-20-95  
 LAB I.D. #/STATION #: 29717 / LF010

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	1,500**
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	100
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL was raised because the sample required dilution. \*\*Value is over calibration and should be considered an estimate.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29716	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF011	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29716  
 STATION #: LF011

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	145 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	28.9 †
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	76.9 †
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walton*  
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Accura Analytical Laboratory, Inc.  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: 29716 / LF011

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	210
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	200
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Ala R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29721	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF012	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	18.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	18.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	18.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	18.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	18.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	18.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	18.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29721	ANALYZED BY: RH/MD
STATION #: LF012	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	87.5
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	24.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	105
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-22-95  
 LAB I.D. #/STATION #: 29721 / LF012

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	230
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	60
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29666	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF013	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Watten*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29666  
 STATION #: LF013

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	226
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	33.3
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	52.8
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-11-95  
 LAB I.D. #/STATION #: 29666 / LF013

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	GAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	20
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	43
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	6
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	110

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29667	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF014	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29667  
 STATION #: LF014

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	209
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	42.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	68.0
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Harold R. Walter*  
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Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-11-95  
 LAB I.D. #/STATION #: 29667 / LF014

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	500	ND
Benzene	71-43-2	25	210
Bromodichloromethane	75-27-4	25	ND
Bromoform	75-25-2	25	ND
Bromomethane	74-83-9	25	ND
2-Butanone	78-93-3	500	ND
Carbon disulfide	75-15-0	25	ND
Carbon tetrachloride	56-23-5	25	ND
Chlorobenzene	108-90-7	25	ND
Chloroethane	75-00-3	25	ND
2-Chloroethylvinyl ether	110-75-8	50	ND
Chloroform	67-66-3	25	ND
Chloromethane	74-87-3	25	ND
Dibromochloromethane	124-48-1	25	ND
1,2-Dichlorobenzene	95-50-1	25	ND
1,3-Dichlorobenzene	541-73-1	25	ND
1,4-Dichlorobenzene	106-46-7	25	ND
1,1-Dichloroethane	75-34-3	25	ND
1,2-Dichloroethane	107-06-2	25	ND
1,1-Dichloroethene	75-35-4	25	ND
trans-1,2-Dichloroethene	156-60-5	25	ND
Cis-1,2-Dichloroethene	156-59-2	25	ND
1,2-Dichloropropane	78-87-5	25	ND
Cis-1,3-dichloropropene	10061-01-5	25	ND
trans-1,3-Dichloropropene	10061-02-6	25	ND
Ethylbenzene	100-41-4	25	130
2-Hexanone	591-78-6	250	ND
Methylene chloride	75-09-2	50	ND
4-Methyl-2-pentanone	108-10-1	250	ND
Styrene	100-42-5	25	420
1,1,2,2-Tetrachloroethane	79-34-5	25	ND
Tetrachloroethene	127-18-4	25	ND
Toluene	108-88-3	25	570
1,1,1-Trichloroethane	71-55-6	25	ND
1,1,2-Trichloroethane	79-00-5	25	ND
Trichloroethene	79-01-6	25	ND
Trichlorofluoromethane	75-69-4	25	ND
Vinyl acetate	108-05-4	500	ND
Vinyl chloride	75-01-4	25	ND
Xylenes (Total)	1330-20-7	25	1,100

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29668	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF015	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Watten*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-10-95  
LAB I.D. #: 29777  
STATION #: LF - 019

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7530  
REPORT DATE: 02-23-95  
DATE OF ANALYSIS/BY: 02-17-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

  
ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29777  
 STATION #: LF 019

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

RCRA METALS:

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	33.3
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	130
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	27.0
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	147
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: 29777 / LF 019

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	1,100
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	50*	300
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Alan R. Webster*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29668  
 STATION #: LF015

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

RCRA METALS

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	132
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	40.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	64.2
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-11-95  
 LAB I.D. #/STATION #: 29668 / LF015

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	500	ND
Benzene	71-43-2	25	100
Bromodichloromethane	75-27-4	25	ND
Bromoform	75-25-2	25	ND
Bromomethane	74-83-9	25	ND
2-Butanone	78-93-3	500	ND
Carbon disulfide	75-15-0	25	ND
Carbon tetrachloride	56-23-5	25	ND
Chlorobenzene	108-90-7	25	ND
Chloroethane	75-00-3	25	ND
2-Chloroethylvinyl ether	110-75-8	50	ND
Chloroform	67-66-3	25	ND
Chloromethane	74-87-3	25	ND
Dibromochloromethane	124-48-1	25	ND
1,2-Dichlorobenzene	95-50-1	25	ND
1,3-Dichlorobenzene	541-73-1	25	ND
1,4-Dichlorobenzene	106-46-7	25	ND
1,1-Dichloroethane	75-34-3	25	ND
1,2-Dichloroethane	107-06-2	25	ND
1,1-Dichloroethene	75-35-4	25	ND
trans-1,2-Dichloroethene	156-60-5	25	ND
Cis-1,2-Dichloroethene	156-59-2	25	ND
1,2-Dichloropropane	78-87-5	25	ND
Cis-1,3-dichloropropene	10061-01-5	25	ND
trans-1,3-Dichloropropene	10061-02-6	25	ND
Ethylbenzene	100-41-4	25	83
2-Hexanone	591-78-6	250	ND
Methylene chloride	75-09-2	50	ND
4-Methyl-2-pentanone	108-10-1	25	ND
Styrene	100-42-5	25	91
1,1,2,2-Tetrachloroethane	79-34-5	25	ND
Tetrachloroethene	127-18-4	25	ND
Toluene	108-88-3	25	390
1,1,1-Trichloroethane	71-55-6	25	ND
1,1,2-Trichloroethane	79-00-5	25	ND
Trichloroethene	79-01-6	25	ND
Trichlorofluoromethane	75-69-4	25	ND
Vinyl acetate	108-05-4	500	ND
Vinyl chloride	75-01-4	25	ND
Xylenes (Total)	1330-20-7	25	590

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Watten*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29669	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF016	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29669  
 STATION #: LF016

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	86.4
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	19.2
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	143
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Watten*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29669 (Duplicate)	ANALYZED BY: RH/MD
STATION #: LF016	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	74.4
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	15.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	113
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATES OF ANALYSIS: 02-13-95 & 02-14-95  
 LAB I.D. #/STATION #: 29669 / LF016

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	1,700**
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	13
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	15

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL was raised because the sample required dilution. \*\*Value is over calibration and should be considered an estimate.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29670	DATE OF ANALYSIS/BY: 02-09-95/JF
STATION #: LF017	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29670  
 STATION #: LF017

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

RCRA METALS

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	237
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	31.4
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	45.6
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATES OF ANALYSIS: 02-13-95 & 02-14-95  
 LAB I.D. #/STATION #: 29670 / LF017

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	350*
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	13
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*Value is over calibration and should be considered an estimate.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29673	DATE OF ANALYSIS/BY: 02-09-95/JF
STATION #: LF018	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Mark Q. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29673  
 STATION #: LF018

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	118
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	37.0
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	63.4
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Watten*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATES OF ANALYSIS: 02-13-95 & 02-14-95  
 LAB I.D. #/STATION #: 29673 / LF018

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	200	530*
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*Value is over calibration and should be considered an estimate.

*Alvin R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-09-95  
LAB I.D. #: 29718  
STATION #: LF020

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7518  
REPORT DATE: 02-23-95  
DATE OF ANALYSIS/BY: 02-16-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

  
ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-24-95
LAB I.D. #: 29718	ANALYZED BY: RH/MD
STATION #: LF020	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL*
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	178
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	36.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	148
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: 29718 / LF020

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	230
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	37
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-09-95  
LAB I.D. #: 29719  
STATION #: LF021

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7518  
REPORT DATE: 02-23-95  
DATE OF ANALYSIS/BY: 02-16-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

  
ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29719	ANALYZED BY: RH/MD
STATION #: LF021	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	63.1
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	26.8
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	53.4
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29719 (Duplicate)	ANALYZED BY: RH/MD
STATION #: LF021	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	50.6
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	21.0
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	38.3
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan P. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29719 / LF021

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	470
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	100
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan P. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29720	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: LF022	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29720  
 STATION #: LF022

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	53.7
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	18.9
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	35.6
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	5.34

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29720 / LF022

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	500	ND
Benzene	71-43-2	25	ND
Bromodichloromethane	75-27-4	25	ND
Bromoform	75-25-2	25	ND
Bromomethane	74-83-9	25	ND
2-Butanone	78-93-3	500	ND
Carbon disulfide	75-15-0	25	ND
Carbon tetrachloride	56-23-5	25	ND
Chlorobenzene	108-90-7	25	ND
Chloroethane	75-00-3	25	ND
2-Chloroethylvinyl ether	110-75-8	50	ND
Chloroform	67-66-3	25	ND
Chloromethane	74-87-3	25	ND
Dibromochloromethane	124-48-1	25	ND
1,2-Dichlorobenzene	95-50-1	25	ND
1,3-Dichlorobenzene	541-73-1	25	ND
1,4-Dichlorobenzene	106-46-7	25	ND
1,1-Dichloroethane	75-34-3	25	ND
1,2-Dichloroethane	107-06-2	25	ND
1,1-Dichloroethene	75-35-4	25	ND
trans-1,2-Dichloroethene	156-60-5	25	ND
Cis-1,2-Dichloroethene	156-59-2	25	ND
1,2-Dichloropropane	78-87-5	25	ND
Cis-1,3-dichloropropene	10061-01-5	25	ND
trans-1,3-Dichloropropene	10061-02-6	25	ND
Ethylbenzene	100-41-4	25	ND
2-Hexanone	591-78-6	250	ND
Methylene chloride	75-09-2	50	140
4-Methyl-2-pentanone	108-10-1	250	ND
Styrene	100-42-5	25	ND
1,1,2,2-Tetrachloroethane	79-34-5	25	ND
Tetrachloroethene	127-18-4	25	ND
Toluene	108-88-3	25	ND
1,1,1-Trichloroethane	71-55-6	25	ND
1,1,2-Trichloroethane	79-00-5	25	ND
Trichloroethene	79-01-6	25	ND
Trichlorofluoromethane	75-69-4	25	ND
Vinyl acetate	108-05-4	500	ND
Vinyl chloride	75-01-4	25	ND
Xylenes (Total)	1330-20-7	25	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED  
 \*PQL's were raised because the sample required dilution.

*Alan P. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29671  
 STATION #: LF023

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-09-95/JF  
 SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No	D.L. (mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29671  
 STATION #: LF023

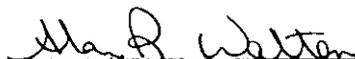
CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	149
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	36.8
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	99.0
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknow interferent was present in the sample.

  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
DATES OF ANALYSIS: 02-13-95 & 02-15-95	CHEMIST INITIALS: RR
LAB I.D. #/STATION #: 29671 / LF023	SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	580
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	6
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL was raised because the sample required dilution.

*Alan P. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29714	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF024.	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Dalton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29714  
 STATION #: LF024

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	25.0*	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	5.0*	557 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	5.0*	40.4
Chromium (Cr)	7440-47-3	200.7	02-21-95	25.0*	79.9 †
Lead (Pb)	7439-92-1	200.7	02-21-95	25.0*	1,538 †
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	25.0	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	25.0*	<DL

DL = DETECTION LIMIT

\*Detection limits were raised due to a high level of Iron present in the sample. \*\*An unknown interferent was present in the sample.

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-20-95  
 LAB I.D. #/STATION #: 29714 / LF024

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	2,000**
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	50*	125
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution. \*\*Value is over calibration and should be considered an estimate.

*Alan R. Walter*

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Accura Analytical Laboratory, Inc.  
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 Phone # (404) 449-8800

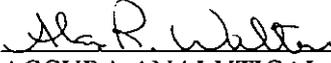
CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29715	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF025	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29715	ANALYZED BY: RH/MD
STATION #: LF025	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	202 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	0.58 †
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	33.3 †
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	55.6 †
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan P. Walter*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-20-95  
 LAB I.D. #/STATION #: 29715 / LF025

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	100	1,250
Benzene	71-43-2	250	ND
Bromodichloromethane	75-27-4	250	ND
Bromoform	75-25-2	250	ND
Bromomethane	74-83-9	250	ND
2-Butanone	78-93-3	5,000	ND
Carbon disulfide	75-15-0	250	ND
Carbon tetrachloride	56-23-5	250	ND
Chlorobenzene	108-90-7	250	ND
Chloroethane	75-00-3	250	ND
2-Chloroethylvinyl ether	110-75-8	500	ND
Chloroform	67-66-3	250	ND
Chloromethane	74-87-3	250	ND
Dibromochloromethane	124-48-1	250	ND
1,2-Dichlorobenzene	95-50-1	250	ND
1,3-Dichlorobenzene	541-73-1	250	ND
1,4-Dichlorobenzene	106-46-7	250	ND
1,1-Dichloroethane	75-34-3	250	ND
1,2-Dichloroethane	107-06-2	250	ND
1,1-Dichloroethene	75-35-4	250	ND
trans-1,2-Dichloroethene	156-60-5	250	ND
Cis-1,2-Dichloroethene	156-59-2	250	ND
1,2-Dichloropropane	78-87-5	250	ND
Cis-1,3-dichloropropene	10061-01-5	250	ND
trans-1,3-Dichloropropene	10061-02-6	250	ND
Ethylbenzene	100-41-4	250	650 †
2-Hexanone	591-78-6	2,500	ND
Methylene chloride	75-09-2	500	800 †
4-Methyl-2-pentanone	108-10-1	2,500	ND
Styrene	100-42-5	250	ND
1,1,2,2-Tetrachloroethane	79-34-5	250	ND
Tetrachloroethene	127-18-4	250	ND
Toluene	108-88-3	250	630 †
1,1,1-Trichloroethane	71-55-6	250	ND
1,1,2-Trichloroethane	79-00-5	250	ND
Trichloroethene	79-01-6	250	ND
Trichlorofluoromethane	75-69-4	250	ND
Vinyl acetate	108-05-4	5,000	ND
Vinyl chloride	75-01-4	250	ND
Xylenes (Total)	1330-20-7	250	1,200

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Al R. Walter*  
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Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29774	DATE OF ANALYSIS/BY: 02-19-95/JF
STATION #: LF - 026	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29774	ANALYZED BY: RH/MD
STATION #: LF 026	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba) <sup>1</sup>	7440-39-3	200.7	02-21-95	0.50	138 d
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	35.6 f
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	216 g
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
DATE OF ANALYSIS: 02-14-95	CHEMIST INITIALS: RR
LAB I.D. #/STATION #: 29774 / LF 026	SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	130
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	61
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
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Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29773	DATE OF ANALYSIS/BY: 02-17-95/JF
STATION #: LF - 027	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*  
ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29773	ANALYZED BY: RH/MD
STATION #: LF 027	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	154
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	24.8
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	225
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alfred R. Walter*  
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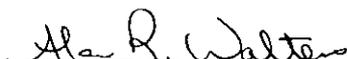
CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
DATE OF ANALYSIS: 02-17-95	ANALYZED BY: JT

**OIL & GREASE (EPA Method 9071):**

AAI #	STATION #	MATRIX	TEST	D.L.	RESULTS	UNITS
29773	LF 027	Soil	Oil & Grease	25	<DL	mg/kg

D.L. = Detection Limit

OTHER INFORMATION: \_\_\_\_\_

  
ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATES OF ANALYSIS: 02-14-95 & 02-17-95  
 LAB I.D. #/STATION #: 29773 / LF 027

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	430 <sub>n</sub>
Benzene	71-43-2	5	10
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	.6
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	180
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	24

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29773  
 STATION #: LF 027

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)*	RESULTS (µg/kg)
Acenaphthene	83-32-9	20,000	ND
Acenaphthylene	208-96-8	20,000	30,000
Anthracene	120-12-7	20,000	30,000
Benzidine	92-87-5	100,000	ND
Benzo(a)anthracene	56-55-3	20,000	80,000
Benzo(a)pyrene	50-32-8	20,000	ND
Benzo(b)fluoranthene	205-99-2	20,000	230,000
Benzo(g,h,i)perylene	191-24-2	20,000	70,000
Benzo(k)fluoranthene	207-08-9	20,000	180,000
Benzoic acid	65-85-0	100,000	ND
Benzyl alcohol	100-51-6	20,000	ND
bis(2-Chloroethoxy)methane	111-91-1	20,000	ND
bis(2-Chloroethyl)ether	111-44-4	20,000	ND
bis(2-Chloroisopropyl)ether	108-60-1	20,000	ND
bis(2-Ethylhexyl)phthalate	117-81-7	20,000	ND
4-Bromophenyl phenyl ether	101-55-3	20,000	ND
Butyl benzyl phthalate	85-68-7	20,000	ND
4-Chloroaniline	106-47-8	20,000	ND
4-Chloro-3-methylphenol	59-50-7	20,000	ND
2-Chloronaphthalene	91-58-7	20,000	ND
2-Chlorophenol	95-57-8	20,000	ND
4-Chlorophenyl phenyl ether	7005-72-3	20,000	ND
Chrysené	218-01-9	20,000	90,000
Dibenz(a,h)anthracene	53-70-3	20,000	ND
Dibenzofuran	132-64-9	20,000	ND
Di-n-butylphthalate	84-74-2	20,000	ND
1,2-Dichlorobenzene	95-50-1	20,000	ND
1,3-Dichlorobenzene	541-73-1	20,000	ND
1,4-Dichlorobenzene	106-46-7	20,000	ND
3,3'-Dichlorobenzidine	91-94-1	40,000	ND
2,4-Dichlorophenol	120-83-2	20,000	ND
Diethylphthalate	84-66-2	20,000	ND
2,4-Dimethylphenol	105-67-9	20,000	ND
Dimethylphthalate	131-11-3	20,000	ND

DL=DETECTION-LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walters*  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29773  
 STATION #: LF 027

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)*	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	100,000	ND
2,4-Dinitrophenol	51-28-5	100,000	ND
2,4-Dinitrotoluene	121-14-2	20,000	ND
2,6-Dinitrotoluene	606-20-2	20,000	ND
Di-n-octylphthalate	117-84-0	20,000	ND
Fluoranthene	206-44-0	20,000	180,000
Fluorene	86-73-7	20,000	ND
Hexachlorobenzene	118-74-1	20,000	ND
Hexachlorobutadiene	87-68-3	20,000	ND
Hexachlorocyclopentadiene	77-47-4	20,000	ND
Hexachloroethane	67-72-1	20,000	ND
Indeno(1,2,3-cd)pyrene	193-39-5	20,000	70,000
Isophorone	78-59-1	20,000	ND
2-Methylnaphthalene	91-57-6	20,000	ND
2-Methylphenol	95-48-7	20,000	ND
4-Methylphenol	106-44-5	20,000	ND
Naphthalene	91-20-3	20,000	ND
2-Nitroaniline	88-74-4	100,000	ND
3-Nitroaniline	99-09-2	100,000	ND
4-Nitroaniline	100-01-6	100,000	ND
Nitrobenzene	98-95-3	20,000	ND
2-Nitrophenol	88-75-5	20,000	ND
4-Nitrophenol	100-02-7	100,000	ND
N-nitrosodiphenylamine	86-30-6	20,000	ND
N-nitroso-di-n-propylamine	621-64-7	20,000	ND
Pentachlorophenol	87-86-5	100,000	ND
Phenanthrene	85-01-8	20,000	50,000
Phenol	108-95-2	20,000	ND
Pyrene	129-00-0	20,000	170,000
1,2,4-Trichlorobenzene	120-82-1	20,000	ND
2,4,5-Trichlorophenol	95-95-4	100,000	ND
2,4,6-Trichlorophenol	88-06-2	20,000	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29775	DATE OF ANALYSIS/BY: 02-19-95/JF
STATION #: LF - 028	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Mar R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29775	ANALYZED BY: RH/MD
STATION #: LF 028	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	191 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	30.4 †
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	56.1 †
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATES OF ANALYSIS: 02-14-95 & 02-15-95  
 LAB I.D. #/STATION #: 29775 / LF 028

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500*	500
Benzene	71-43-2	25*	40
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	13
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	25*	120
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	50*	90
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	83
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	25*	230

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan Q. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29776	DATE OF ANALYSIS/BY: 02-17-95/JF
STATION #: LF - 029	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan P. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-11-95
LAB I.D. #: 29676	DATE OF ANALYSIS/BY: 02-09-95/JF
STATION #: DD001	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan P. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29676  
 STATION #: DD001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	65.4
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	0.57
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	13.2
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	104
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29676 / DD001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	5,000	ND
Benzene	71-43-2	250	1,100
Bromodichloromethane	75-27-4	250	ND
Bromoform	75-25-2	250	ND
Bromomethane	74-83-9	250	ND
2-Butanone	78-93-3	5,000	ND
Carbon disulfide	75-15-0	250	ND
Carbon tetrachloride	56-23-5	250	ND
Chlorobenzene	108-90-7	250	ND
Chloroethane	75-00-3	250	ND
2-Chloroethylvinyl ether	110-75-8	500	ND
Chloroform	67-66-3	250	ND
Chloromethane	74-87-3	250	ND
Dibromochloromethane	124-48-1	250	ND
1,2-Dichlorobenzene	95-50-1	250	ND
1,3-Dichlorobenzene	541-73-1	250	ND
1,4-Dichlorobenzene	106-46-7	250	ND
1,1-Dichloroethane	75-34-3	250	ND
1,2-Dichloroethane	107-06-2	250	ND
1,1-Dichloroethene	75-35-4	250	ND
trans-1,2-Dichloroethene	156-60-5	250	ND
Cis-1,2-Dichloroethene	156-59-2	250	ND
1,2-Dichloropropane	78-87-5	250	ND
Cis-1,3-dichloropropene	10061-01-5	250	ND
trans-1,3-Dichloropropene	10061-02-6	250	ND
Ethylbenzene	100-41-4	250	470
2-Hexanone	591-78-6	2,500	ND
Methylene chloride	75-09-2	500	ND
4-Methyl-2-pentanone	108-10-1	2,500	ND
Styrene	100-42-5	250	810
1,1,2,2-Tetrachloroethane	79-34-5	250	ND
Tetrachloroethene	127-18-4	250	ND
Toluene	108-88-3	250	1,700
1,1,1-Trichloroethane	71-55-6	250	ND
1,1,2-Trichloroethane	79-00-5	250	ND
Trichloroethene	79-01-6	250	ND
Trichlorofluoromethane	75-69-4	250	ND
Vinyl acetate	108-05-4	5,000	ND
Vinyl chloride	75-01-4	250	ND
Xylenes (Total)	1330-20-7	250	4,200

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29676  
 STATION #: DD001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
Acenaphthene	83-32-9	200,000	ND
Acenaphthylene	208-96-8	200,000	ND
Anthracene	120-12-7	200,000	ND
Benzidine	92-87-5	1,000,000	ND
Benzo(a)anthracene	56-55-3	200,000	ND
Benzo(a)pyrene	50-32-8	200,000	ND
Benzo(b)fluoranthene	205-99-2	200,000	ND
Benzo(g,h,i)perylene	191-24-2	200,000	ND
Benzo(k)fluoranthene	207-08-9	200,000	ND
Benzoic acid	65-85-0	1,000,000	ND
Benzyl alcohol	100-51-6	200,000	ND
bis(2-Chloroethoxy)methane	111-91-1	200,000	ND
bis(2-Chloroethyl)ether	111-44-4	200,000	ND
bis(2-Chloroisopropyl)ether	108-60-1	200,000	ND
bis(2-Ethylhexyl)phthalate	117-81-7	200,000	ND
4-Bromophenyl phenyl ether	101-55-3	200,000	ND
Butyl benzyl phthalate	85-68-7	200,000	ND
4-Chloroaniline	106-47-8	200,000	ND
4-Chloro-3-methylphenol	59-50-7	200,000	ND
2-Chloronaphthalene	91-58-7	200,000	ND
2-Chlorophenol	95-57-8	200,000	ND
4-Chlorophenyl phenyl ether	7005-72-3	200,000	ND
Chrysene	218-01-9	200,000	ND
Dibenz(a,h)anthracene	53-70-3	200,000	ND
Dibenzofuran	132-64-9	200,000	ND
Di-n-butylphthalate	84-74-2	200,000	ND
1,2-Dichlorobenzene	95-50-1	200,000	ND
1,3-Dichlorobenzene	541-73-1	200,000	ND
1,4-Dichlorobenzene	106-46-7	200,000	ND
3,3'-Dichlorobenzidine	91-94-1	400,000	ND
2,4-Dichlorophenol	120-83-2	200,000	ND
Diethylphthalate	84-66-2	200,000	ND
2,4-Dimethylphenol	105-67-9	200,000	ND
Dimethylphthalate	131-11-3	200,000	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29676  
 STATION #: DD001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-13-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	1,000,000	ND
2,4-Dinitrophenol	51-28-5	1,000,000	ND
2,4-Dinitrotoluene	121-14-2	200,000	ND
2,6-Dinitrotoluene	606-20-2	200,000	ND
Di-n-octylphthalate	117-84-0	200,000	ND
Fluoranthene	206-44-0	200,000	ND
Fluorene	86-73-7	200,000	ND
Hexachlorobenzene	118-74-1	200,000	ND
Hexachlorobutadiene	87-68-3	200,000	ND
Hexachlorocyclopentadiene	77-47-4	200,000	ND
Hexachloroethane	67-72-1	200,000	ND
Indeno(1,2,3-cd)pyrene	193-39-5	200,000	ND
Isophorone	78-59-1	200,000	ND
2-Methylnaphthalene	91-57-6	200,000	ND
2-Methylphenol	95-48-7	200,000	ND
4-Methylphenol	106-44-5	200,000	ND
Naphthalene	91-20-3	200,000	ND
2-Nitroaniline	88-74-4	1,000,000	ND
3-Nitroaniline	99-09-2	1,000,000	ND
4-Nitroaniline	100-01-6	1,000,000	ND
Nitrobenzene	98-95-3	200,000	ND
2-Nitrophenol	88-75-5	200,000	ND
4-Nitrophenol	100-02-7	1,000,000	ND
N-nitrosodiphenylamine	86-30-6	1,000,000	ND
N-nitroso-di-n-propylamine	621-64-7	1,000,000	ND
Pentachlorophenol	87-86-5	1,000,000	ND
Phenanthrene	85-01-8	1,000,000	ND
Phenol	108-95-2	200,000	ND
Pyrene	129-00-0	200,000	ND
1,2,4-Trichlorobenzene	120-82-1	200,000	ND
2,4,5-Trichlorophenol	95-95-4	1,000,000	ND
2,4,6-Trichlorophenol	88-06-2	200,000	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Harry R. Cobble*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29677	DATE OF ANALYSIS/BY: 02-10-95/JF
STATION #: DD002	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29776  
 STATION #: LF 029

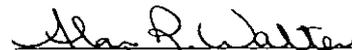
CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba) †	7440-39-3	200.7	02-21-95	0.50	224 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	38.2 †
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	176 †
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.



ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29776 / LF 029

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	280*
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	68
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	67
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	94
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	41
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	10

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*Value is over calibration and should be considered an estimate.

*Alan R. Webster*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29778	DATE OF ANALYSIS/BY: 02-19-95/JF
STATION #: LF - 030	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29778  
 STATION #: LF 030

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	126 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	38.6 †
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	72.8 †
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29778 / LF 030

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	160
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	150
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

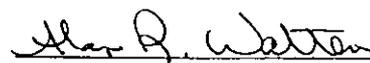
CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29781	DATE OF ANALYSIS/BY: 02-19-95/JF
STATION #: LF - 031	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29781	ANALYZED BY: RH/MD
STATION #: LF 031	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba) †	7440-39-3	200.7	02-21-95	0.50	127 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr) †	7440-47-3	200.7	02-21-95	2.50	20.6 †
Lead (Pb) †	7439-92-1	200.7	02-21-95	2.50	47.9 †
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: 29781 / LF 031

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	250
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	74
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
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Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-11-95
LAB I.D. #: 29676	DATE OF ANALYSIS/BY: 02-09-95/JF
STATION #: DD001	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan P. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29676	ANALYZED BY: RH/MD
STATION #: DD001	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba) †	7440-39-3	200.7	02-21-95	0.50	65.4 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	0.57 †
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	13.2 †
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	104
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Mr. R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29676 / DD001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	5,000	ND
Benzene	71-43-2	250	1,100
Bromodichloromethane	75-27-4	250	ND
Bromoform	75-25-2	250	ND
Bromomethane	74-83-9	250	ND
2-Butanone	78-93-3	5,000	ND
Carbon disulfide	75-15-0	250	ND
Carbon tetrachloride	56-23-5	250	ND
Chlorobenzene	108-90-7	250	ND
Chloroethane	75-00-3	250	ND
2-Chloroethylvinyl ether	110-75-8	500	ND
Chloroform	67-66-3	250	ND
Chloromethane	74-87-3	250	ND
Dibromochloromethane	124-48-1	250	ND
1,2-Dichlorobenzene	95-50-1	250	ND
1,3-Dichlorobenzene	541-73-1	250	ND
1,4-Dichlorobenzene	106-46-7	250	ND
1,1-Dichloroethane	75-34-3	250	ND
1,2-Dichloroethane	107-06-2	250	ND
1,1-Dichloroethene	75-35-4	250	ND
trans-1,2-Dichloroethene	156-60-5	250	ND
Cis-1,2-Dichloroethene	156-59-2	250	ND
1,2-Dichloropropane	78-87-5	250	ND
Cis-1,3-dichloropropene	10061-01-5	250	ND
trans-1,3-Dichloropropene	10061-02-6	250	ND
Ethylbenzene	100-41-4	250	470
2-Hexanone	591-78-6	2,500	ND
Methylene chloride	75-09-2	500	ND
4-Methyl-2-pentanone	108-10-1	2,500	ND
Styrene	100-42-5	250	810
1,1,2,2-Tetrachloroethane	79-34-5	250	ND
Tetrachloroethene	127-18-4	250	ND
Toluene	108-88-3	250	1,700
1,1,1-Trichloroethane	71-55-6	250	ND
1,1,2-Trichloroethane	79-00-5	250	ND
Trichloroethene	79-01-6	250	ND
Trichlorofluoromethane	75-69-4	250	ND
Vinyl acetate	108-05-4	5,000	ND
Vinyl chloride	75-01-4	250	ND
Xylenes (Total)	1330-20-7	250	4,200

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29676  
 STATION #: DD001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)	RESULTS (µg/kg)
Acenaphthene	83-32-9	200,000	ND
Acenaphthylene	208-96-8	200,000	ND
Anthracene	120-12-7	200,000	ND
Benzidine	92-87-5	1,000,000	ND
Benzo(a)anthracene	56-55-3	200,000	ND
Benzo(a)pyrene	50-32-8	200,000	ND
Benzo(b)fluoranthene	205-99-2	200,000	ND
Benzo(g,h,i)perylene	191-24-2	200,000	ND
Benzo(k)fluoranthene	207-08-9	200,000	ND
Benzoic acid	65-85-0	1,000,000	ND
Benzyl alcohol	100-51-6	200,000	ND
bis(2-Chloroethoxy)methane	111-91-1	200,000	ND
bis(2-Chloroethyl)ether	111-44-4	200,000	ND
bis(2-Chloroisopropyl)ether	108-60-1	200,000	ND
bis(2-Ethylhexyl)phthalate	117-81-7	200,000	ND
4-Bromophenyl phenyl ether	101-55-3	200,000	ND
Butyl benzyl phthalate	85-68-7	200,000	ND
4-Chloroaniline	106-47-8	200,000	ND
4-Chloro-3-methylphenol	59-50-7	200,000	ND
2-Chloronaphthalene	91-58-7	200,000	ND
2-Chlorophenol	95-57-8	200,000	ND
4-Chlorophenyl phenyl ether	7005-72-3	200,000	ND
Chrysene	218-01-9	200,000	ND
Dibenz(a,h)anthracene	53-70-3	200,000	ND
Dibenzofuran	132-64-9	200,000	ND
Di-n-butylphthalate	84-74-2	200,000	ND
1,2-Dichlorobenzene	95-50-1	200,000	ND
1,3-Dichlorobenzene	541-73-1	200,000	ND
1,4-Dichlorobenzene	106-46-7	200,000	ND
3,3'-Dichlorobenzidine	91-94-1	400,000	ND
2,4-Dichlorophenol	120-83-2	200,000	ND
Diethylphthalate	84-66-2	200,000	ND
2,4-Dimethylphenol	105-67-9	200,000	ND
Dimethylphthalate	131-11-3	200,000	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29676	DATE OF ANALYSIS/BY: 02-13-95/JF
STATION #: DD001	SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	1,000,000	ND
2,4-Dinitrophenol	51-28-5	1,000,000	ND
2,4-Dinitrotoluene	121-14-2	200,000	ND
2,6-Dinitrotoluene	606-20-2	200,000	ND
Di-n-octylphthalate	117-84-0	200,000	ND
Fluoranthene	206-44-0	200,000	ND
Fluorene	86-73-7	200,000	ND
Hexachlorobenzene	118-74-1	200,000	ND
Hexachlorobutadiene	87-68-3	200,000	ND
Hexachlorocyclopentadiene	77-47-4	200,000	ND
Hexachloroethane	67-72-1	200,000	ND
Indeno(1,2,3-cd)pyrene	193-39-5	200,000	ND
Isophorone	78-59-1	200,000	ND
2-Methylnaphthalene	91-57-6	200,000	ND
2-Methylphenol	95-48-7	200,000	ND
4-Methylphenol	106-44-5	200,000	ND
Naphthalene	91-20-3	200,000	ND
2-Nitroaniline	88-74-4	1,000,000	ND
3-Nitroaniline	99-09-2	1,000,000	ND
4-Nitroaniline	100-01-6	1,000,000	ND
Nitrobenzene	98-95-3	200,000	ND
2-Nitrophenol	88-75-5	200,000	ND
4-Nitrophenol	100-02-7	1,000,000	ND
N-nitrosodiphenylamine	86-30-6	1,000,000	ND
N-nitroso-di-n-propylamine	621-64-7	1,000,000	ND
Pentachlorophenol	87-86-5	1,000,000	ND
Phenanthrene	85-01-8	1,000,000	ND
Phenol	108-95-2	200,000	ND
Pyrene	129-00-0	200,000	ND
1,2,4-Trichlorobenzene	120-82-1	200,000	ND
2,4,5-Trichlorophenol	95-95-4	1,000,000	ND
2,4,6-Trichlorophenol	88-06-2	200,000	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Harold C. Butler*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29677	DATE OF ANALYSIS/BY: 02-10-95/JF
STATION #: DD002	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

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 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29677  
 STATION #: DD002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	EPA 200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	EPA 200.7	02-21-95	0.50	221
Cadmium (Cd)	7440-43-9	EPA 200.7	02-21-95	0.50	5.74
Chromium (Cr)	7440-47-3	EPA 200.7	02-21-95	2.50	38.4
Lead (Pb)	7439-92-1	EPA 200.7	02-21-95	2.50	177
Mercury (Hg)	7439-97-6	EPA 245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	EPA 200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	EPA 200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.



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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-13-95  
 LAB I.D. #/STATION #: 29677 / DD002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	14
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29677  
 STATION #: DD002

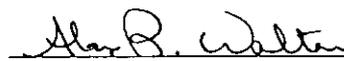
CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)*	RESULTS (µg/kg)
Acenaphthene	83-32-9	3,300	ND
Acenaphthylene	208-96-8	3,300	ND
Anthracene	120-12-7	3,300	ND
Benzidine	92-87-5	16,000	ND
Benzo(a)anthracene	56-55-3	3,300	ND
Benzo(a)pyrene	50-32-8	3,300	ND
Benzo(b)fluoranthene	205-99-2	3,300	ND
Benzo(g,h,i)perylene	191-24-2	3,300	ND
Benzo(k)fluoranthene	207-08-9	3,300	ND
Benzoic acid	65-85-0	16,000	ND
Benzyl alcohol	100-51-6	3,300	ND
bis(2-Chloroethoxy)methane	111-91-1	3,300	ND
bis(2-Chloroethyl)ether	111-44-4	3,300	ND
bis(2-Chloroisopropyl)ether	108-60-1	3,300	ND
bis(2-Ethylhexyl)phthalate	117-81-7	3,300	ND
4-Bromophenyl phenyl ether	101-55-3	3,300	ND
Butyl benzyl phthalate	85-68-7	3,300	ND
4-Chloroaniline	106-47-8	3,300	ND
4-Chloro-3-methylphenol	59-50-7	3,300	ND
2-Chloronaphthalene	91-58-7	3,300	ND
2-Chlorophenol	95-57-8	3,300	ND
4-Chlorophenyl phenyl ether	7005-72-3	3,300	ND
Chrysene	218-01-9	3,300	ND
Dibenz(a,h)anthracene	53-70-3	3,300	ND
Dibenzofuran	132-64-9	3,300	ND
Di-n-butylphthalate	84-74-2	3,300	ND
1,2-Dichlorobenzene	95-50-1	3,300	ND
1,3-Dichlorobenzene	541-73-1	3,300	ND
1,4-Dichlorobenzene	106-46-7	3,300	ND
3,3'-Dichlorobenzidine	91-94-1	6,600	ND
2,4-Dichlorophenol	120-83-2	3,300	ND
Diethylphthalate	84-66-2	3,300	ND
2,4-Dimethylphenol	105-67-9	3,300	ND
Dimethylphthalate	131-11-3	3,300	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29677  
 STATION #: DD002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)*	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	16,000	ND
2,4-Dinitrophenol	51-28-5	16,000	ND
2,4-Dinitrotoluene	121-14-2	3,300	ND
2,6-Dinitrotoluene	606-20-2	3,300	ND
Di-n-octylphthalate	117-84-0	3,300	ND
Fluoranthene	206-44-0	3,300	ND
Fluorene	86-73-7	3,300	ND
Hexachlorobenzene	118-74-1	3,300	ND
Hexachlorobutadiene	87-68-3	3,300	ND
Hexachlorocyclopentadiene	77-47-4	3,300	ND
Hexachloroethane	67-72-1	3,300	ND
Indeno(1,2,3-cd)pyrene	193-39-5	3,300	ND
Isophorone	78-59-1	3,300	ND
2-Methylnaphthalene	91-57-6	3,300	ND
2-Methylphenol	95-48-7	3,300	ND
4-Methylphenol	106-44-5	3,300	ND
Naphthalene	91-20-3	3,300	ND
2-Nitroaniline	88-74-4	16,000	ND
3-Nitroaniline	99-09-2	16,000	ND
4-Nitroaniline	100-01-6	16,000	ND
Nitrobenzene	98-95-3	3,300	ND
2-Nitrophenol	88-75-5	3,300	ND
4-Nitrophenol	100-02-7	16,000	ND
N-nitrosodiphenylamine	86-30-6	3,300	ND
N-nitroso-di-n-propylamine	621-64-7	3,300	ND
Pentachlorophenol	87-86-5	16,000	ND
Phenanthrene	85-01-8	3,300	ND
Phenol	108-95-2	3,300	ND
Pyrene	129-00-0	3,300	ND
1,2,4-Trichlorobenzene	120-82-1	3,300	ND
2,4,5-Trichlorophenol	95-95-4	16,000	ND
2,4,6-Trichlorophenol	88-06-2	3,300	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29674	DATE OF ANALYSIS/BY: 02-09-95/JF
STATION #: WE001	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29674  
 STATION #: WE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	138
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	35.8
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	63.1
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Watten*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29674 / WE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	500	ND
Benzene	71-43-2	25	65
Bromodichloromethane	75-27-4	25	ND
Bromoform	75-25-2	25	ND
Bromomethane	74-83-9	25	ND
2-Butanone	78-93-3	500	ND
Carbon disulfide	75-15-0	25	ND
Carbon tetrachloride	56-23-5	25	ND
Chlorobenzene	108-90-7	25	ND
Chloroethane	75-00-3	25	ND
2-Chloroethylvinyl ether	110-75-8	50	ND
Chloroform	67-66-3	25	ND
Chloromethane	74-87-3	25	ND
Dibromochloromethane	124-48-1	25	ND
1,2-Dichlorobenzene	95-50-1	25	ND
1,3-Dichlorobenzene	541-73-1	25	ND
1,4-Dichlorobenzene	106-46-7	25	ND
1,1-Dichloroethane	75-34-3	25	ND
1,2-Dichloroethane	107-06-2	25	ND
1,1-Dichloroethene	75-35-4	25	ND
trans-1,2-Dichloroethene	156-60-5	25	ND
Cis-1,2-Dichloroethene	156-59-2	25	ND
1,2-Dichloropropane	78-87-5	25	ND
Cis-1,3-dichloropropene	10061-01-5	25	ND
trans-1,3-Dichloropropene	10061-02-6	25	ND
Ethylbenzene	100-41-4	25	340
2-Hexanone	591-78-6	250	ND
Methylene chloride	75-09-2	50	ND
4-Methyl-2-pentanone	108-10-1	250	ND
Styrene	100-42-5	25	60
1,1,2,2-Tetrachloroethane	79-34-5	25	ND
Tetrachloroethene	127-18-4	25	ND
Toluene	108-88-3	25	150
1,1,1-Trichloroethane	71-55-6	25	ND
1,1,2-Trichloroethane	79-00-5	25	ND
Trichloroethene	79-01-6	25	ND
Trichlorofluoromethane	75-69-4	25	ND
Vinyl acetate	108-05-4	500	ND
Vinyl chloride	75-01-4	25	ND
Xylenes (Total)	1330-20-7	25	360

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29674  
 STATION #: WE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)*	RESULTS (µg/kg)
Acenaphthene	83-32-9	3,300	ND
Acenaphthylene	208-96-8	3,300	ND
Anthracene	120-12-7	3,300	ND
Benidine	92-87-5	16,600	ND
Benzo(a)anthracene	56-55-3	3,300	ND
Benzo(a)pyrene	50-32-8	3,300	ND
Benzo(b)fluoranthene	205-99-2	3,300	ND
Benzo(g,h,i)perylene	191-24-2	3,300	ND
Benzo(k)fluoranthene	207-08-9	3,300	ND
Benzoic acid	65-85-0	16,000	ND
Benzyl alcohol	100-51-6	3,300	ND
bis(2-Chloroethoxy)methane	111-91-1	3,300	ND
bis(2-Chloroethyl)ether	111-44-4	3,300	ND
bis(2-Chloroisopropyl)ether	108-60-1	3,300	ND
bis(2-Ethylhexyl)phthalate	117-81-7	3,300	ND
4-Bromophenyl phenyl ether	101-55-3	3,300	ND
Butyl benzyl phthalate	85-68-7	3,300	ND
4-Chloroaniline	106-47-8	3,300	ND
4-Chloro-3-methylphenol	59-50-7	3,300	ND
2-Chloronaphthalene	91-58-7	3,300	ND
2-Chlorophenol	95-57-8	3,300	ND
4-Chlorophenyl phenyl ether	7005-72-3	3,300	ND
Chrysene	218-01-9	3,300	ND
Dibenz(a,h)anthracene	53-70-3	3,300	ND
Dibenzofuran	132-64-9	3,300	ND
Di-n-butylphthalate	84-74-2	3,300	ND
1,2-Dichlorobenzene	95-50-1	3,300	ND
1,3-Dichlorobenzene	541-73-1	3,300	ND
1,4-Dichlorobenzene	106-46-7	3,300	ND
3,3'-Dichlorobenzidine	91-94-1	6,600	ND
2,4-Dichlorophenol	120-83-2	3,300	ND
Diethylphthalate	84-66-2	3,300	ND
2,4-Dimethylphenol	105-67-9	3,300	ND
Dimethylphthalate	131-11-3	3,300	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Mar R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29674  
 STATION #: WE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)*	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	16,000	ND
2,4-Dinitrophenol	51-28-5	16,000	ND
2,4-Dinitrotoluene	121-14-2	3,300	ND
2,6-Dinitrotoluene	606-20-2	3,300	ND
Di-n-octylphthalate	117-84-0	3,300	ND
Fluoranthene	206-44-0	3,300	3,400
Fluorene	86-73-7	3,300	ND
Hexachlorobenzene	118-74-1	3,300	ND
Hexachlorobutadiene	87-68-3	3,300	ND
Hexachlorocyclopentadiene	77-47-4	3,300	ND
Hexachloroethane	67-72-1	3,300	ND
Indeno(1,2,3-cd)pyrene	193-39-5	3,300	ND
Isophorone	78-59-1	3,300	ND
2-Methylnaphthalene	91-57-6	3,300	ND
2-Methylphenol	95-48-7	3,300	ND
4-Methylphenol	106-44-5	3,300	ND
Naphthalene	91-20-3	3,300	4,200
2-Nitroaniline	88-74-4	16,000	ND
3-Nitroaniline	99-09-2	16,000	ND
4-Nitroaniline	100-01-6	16,000	ND
Nitrobenzene	98-95-3	3,300	ND
2-Nitrophenol	88-75-5	3,300	ND
4-Nitrophenol	100-02-7	16,000	ND
N-nitrosodiphenylamine	86-30-6	3,300	ND
N-nitroso-di-n-propylamine	621-64-7	3,300	ND
Pentachlorophenol	87-86-5	16,000	ND
Phenanthrene	85-01-8	3,300	6,700
Phenol	108-95-2	3,300	ND
Pyrene	129-00-0	3,300	6,300
1,2,4-Trichlorobenzene	120-82-1	3,300	ND
2,4,5-Trichlorophenol	95-95-4	16,000	ND
2,4,6-Trichlorophenol	88-06-2	3,300	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Man R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-08-95  
LAB I.D. #: 29675  
STATION #: WE002

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7511  
REPORT DATE: 02-22-95  
DATE OF ANALYSIS/BY: 02-09-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED



ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29675  
 STATION #: WE002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	70.7
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	18.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	54.5
Mercury (Hg)	7439-97-6	245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: 29675 / WE002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	24
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29675  
 STATION #: WE002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)*	RESULTS (µg/kg)
Acenaphthene	83-32-9	3,300	ND
Acenaphthylene	208-96-8	3,300	ND
Anthracene	120-12-7	3,300	ND
Benzidine	92-87-5	3,300	ND
Benzo(a)anthracene	56-55-3	16,600	ND
Benzo(a)pyrene	50-32-8	3,300	ND
Benzo(b)fluoranthene	205-99-2	3,300	ND
Benzo(g,h,i)perylene	191-24-2	3,300	ND
Benzo(k)fluoranthene	207-08-9	3,300	ND
Benzoic acid	65-85-0	16,000	ND
Benzyl alcohol	100-51-6	3,300	ND
bis(2-Chloroethoxy)methane	111-91-1	3,300	ND
bis(2-Chloroethyl)ether	111-44-4	3,300	ND
bis(2-Chloroisopropyl)ether	108-60-1	3,300	ND
bis(2-Ethylhexyl)phthalate	117-81-7	3,300	ND
4-Bromophenyl phenyl ether	101-55-3	3,300	ND
Butyl benzyl phthalate	85-68-7	3,300	ND
4-Chloroaniline	106-47-8	3,300	ND
4-Chloro-3-methylphenol	59-50-7	3,300	ND
2-Chloronaphthalene	91-58-7	3,300	ND
2-Chlorophenol	95-57-8	3,300	ND
4-Chlorophenyl phenyl ether	7005-72-3	3,300	ND
Chrysene	218-01-9	3,300	ND
Dibenz(a,h)anthracene	53-70-3	3,300	ND
Dibenzofuran	132-64-9	3,300	ND
Di-n-butylphthalate	84-74-2	3,300	ND
1,2-Dichlorobenzene	95-50-1	3,300	ND
1,3-Dichlorobenzene	541-73-1	3,300	ND
1,4-Dichlorobenzene	106-46-7	3,300	ND
3,3'-Dichlorobenzidine	91-94-1	6,600	ND
2,4-Dichlorophenol	120-83-2	3,300	ND
Diethylphthalate	84-66-2	3,300	ND
2,4-Dimethylphenol	105-67-9	3,300	ND
Dimethylphthalate	131-11-3	3,300	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Alan R. Walter*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: 29675  
 STATION #: WE002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)*	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	160,000	ND
2,4-Dinitrophenol	51-28-5	160,000	ND
2,4-Dinitrotoluene	121-14-2	3,300	ND
2,6-Dinitrotoluene	606-20-2	3,300	ND
Di-n-octylphthalate	117-84-0	3,300	ND
Fluoranthene	206-44-0	3,300	ND
Fluorene	86-73-7	3,300	ND
Hexachlorobenzene	118-74-1	3,300	ND
Hexachlorobutadiene	87-68-3	3,300	ND
Hexachlorocyclopentadiene	77-47-4	3,300	ND
Hexachloroethane	67-72-1	3,300	ND
Indeno(1,2,3-cd)pyrene	193-39-5	3,300	ND
Isophorone	78-59-1	3,300	ND
2-Methylnaphthalene	91-57-6	3,300	ND
2-Methylphenol	95-48-7	3,300	ND
4-Methylphenol	106-44-5	3,300	ND
Naphthalene	91-20-3	3,300	ND
2-Nitroaniline	88-74-4	6,000	ND
3-Nitroaniline	99-09-2	6,000	ND
4-Nitroaniline	100-01-6	6,000	ND
Nitrobenzene	98-95-3	3,300	ND
2-Nitrophenol	88-75-5	3,300	ND
4-Nitrophenol	100-02-7	1,600	ND
N-nitrosodiphenylamine	86-30-6	3,300	ND
N-nitroso-di-n-propylamine	621-64-7	3,300	ND
Pentachlorophenol	87-86-5	1,600	ND
Phenanthrene	85-01-8	3,300	ND
Phenol	108-95-2	3,300	ND
Pyrene	129-00-0	3,300	ND
1,2,4-Trichlorobenzene	120-82-1	3,300	ND
2,4,5-Trichlorophenol	95-95-4	16,000	ND
2,4,6-Trichlorophenol	88-06-2	3,300	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29723	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: WS001	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	1.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	1.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	1.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29723  
 STATION #: WS001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	106
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	29.0
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	94.5
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29723 / WS001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	25
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Wilton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE REPORT REVISED: 02-28-95  
 LAB I.D. #: 29723  
 STATION #: WS001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 03-06-95  
 DATE OF ANALYSIS/BY: 03-03-95/JF\*  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)	RESULTS (µg/kg)
Acenaphthene	83-32-9	330	ND
Acenaphthylene	208-96-8	330	ND
Anthracene	120-12-7	330	ND
Benzidine	92-87-5	1660	ND
Benzo(a)anthracene	56-55-3	330	ND
Benzo(a)pyrene	50-32-8	330	ND
Benzo(b)fluoranthene	205-99-2	330	ND
Benzo(g,h,i)perylene	191-24-2	330	ND
Benzo(k)fluoranthene	207-08-9	330	ND
Benzoic acid	65-85-0	1600	ND
Benzyl alcohol	100-51-6	330	ND
bis(2-Chloroethoxy)methane	111-91-1	330	ND
bis(2-Chloroethyl)ether	111-44-4	330	ND
bis(2-Chloroisopropyl)ether	108-60-1	330	ND
bis(2-Ethylhexyl)phthalate	117-81-7	330	ND
4-Bromophenyl phenyl ether	101-55-3	330	ND
Butyl benzyl phthalate	85-68-7	330	ND
4-Chloroaniline	106-47-8	330	ND
4-Chloro-3-methylphenol	59-50-7	330	ND
2-Chloronaphthalene	91-58-7	330	ND
2-Chlorophenol	95-57-8	330	ND
4-Chlorophenyl phenyl ether	7005-72-3	330	ND
Chrysene	218-01-9	330	ND
Dibenz(a,h)anthracene	53-70-3	330	ND
Dibenzofuran	132-64-9	330	ND
Di-n-butylphthalate	84-74-2	330	ND
1,2-Dichlorobenzene	95-50-1	330	ND
1,3-Dichlorobenzene	541-73-1	330	ND
1,4-Dichlorobenzene	106-46-7	330	ND
3,3'-Dichlorobenzidine	91-94-1	660	ND
2,4-Dichlorophenol	120-83-2	330	ND
Diethylphthalate	84-66-2	330	ND
2,4-Dimethylphenol	105-67-9	330	ND
Dimethylphthalate	131-11-3	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Sample was extracted 14 days past the EPA recommended holding time.

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE REPORT REVISED: 02-28-95  
 LAB I.D. #: 29723  
 STATION #: WS001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 03-06-95  
 DATE OF ANALYSIS/BY: 03-03-95/JF\*  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	1600	ND
2,4-Dinitrophenol	51-28-5	1600	ND
2,4-Dinitrotoluene	121-14-2	330	ND
2,6-Dinitrotoluene	606-20-2	330	ND
Di-n-octylphthalate	117-84-0	330	ND
Fluoranthene	206-44-0	330	ND
Fluorene	86-73-7	330	ND
Hexachlorobenzene	118-74-1	330	ND
Hexachlorobutadiene	87-68-3	330	ND
Hexachlorocyclopentadiene	77-47-4	330	ND
Hexachloroethane	67-72-1	330	ND
Indeno(1,2,3-cd)pyrene	193-39-5	330	ND
Isophorone	78-59-1	330	ND
2-Methylnaphthalene	91-57-6	330	ND
2-Methylphenol	95-48-7	330	ND
4-Methylphenol	106-44-5	330	ND
Naphthalene	91-20-3	330	ND
2-Nitroaniline	88-74-4	1600	ND
3-Nitroaniline	99-09-2	1600	ND
4-Nitroaniline	100-01-6	1600	ND
Nitrobenzene	98-95-3	330	ND
2-Nitrophenol	88-75-5	330	ND
4-Nitrophenol	100-02-7	1600	ND
N-nitrosodiphenylamine	86-30-6	330	ND
N-nitroso-di-n-propylamine	621-64-7	330	ND
Pentachlorophenol	87-86-5	1600	ND
Phenanthrene	85-01-8	330	ND
Phenol	108-95-2	330	ND
Pyrene	129-00-0	330	ND
1,2,4-Trichlorobenzene	120-82-1	330	ND
2,4,5-Trichlorophenol	95-95-4	1600	ND
2,4,6-Trichlorophenol	88-06-2	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED  
 \*Sample was extracted 14 days past the EPA recommended holding time.

*Harold Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

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Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-10-95  
LAB I.D. #: 29813  
STATION #: WS 002

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7536  
REPORT DATE: 02-22-95  
DATE OF ANALYSIS/BY: 02-16-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*  
ACCURA ANALYTICAL LABORATORY, INC.

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29813  
 STATION #: WS 002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	78.8
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	24.4
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	46.0
Mercury (Hg)	7439-97-6	245.1	02-14-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Al R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: 29813 / WS 002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	88
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walters*

ACCURA ANALYTICAL LABORATORY, INC.

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29813  
 STATION #: WS 002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
Acenaphthene	83-32-9	330	ND
Acenaphthylene	208-96-8	330	ND
Anthracene	120-12-7	330	ND
Benzidine	92-87-5	1660	ND
Benzo(a)anthracene	56-55-3	330	ND
Benzo(a)pyrene	50-32-8	330	ND
Benzo(b)fluoranthene	205-99-2	330	ND
Benzo(g,h,i)perylene	191-24-2	330	ND
Benzo(k)fluoranthene	207-08-9	330	ND
Benzoic acid	65-85-0	1600	ND
Benzyl alcohol	100-51-6	330	ND
bis(2-Chloroethoxy)methane	111-91-1	330	ND
bis(2-Chloroethyl)ether	111-44-4	330	ND
bis(2-Chloroisopropyl)ether	108-60-1	330	ND
bis(2-Ethylhexyl)phthalate	117-81-7	330	ND
4-Bromophenyl phenyl ether	101-55-3	330	ND
Butyl benzyl phthalate	85-68-7	330	ND
4-Chloroaniline	106-47-8	330	ND
4-Chloro-3-methylphenol	59-50-7	330	ND
2-Chloronaphthalene	91-58-7	330	ND
2-Chlorophenol	95-57-8	330	ND
4-Chlorophenyl phenyl ether	7005-72-3	330	ND
Chrysene	218-01-9	330	ND
Dibenz(a,h)anthracene	53-70-3	330	ND
Dibenzofuran	132-64-9	330	ND
Di-n-butylphthalate	84-74-2	330	ND
1,2-Dichlorobenzene	95-50-1	330	ND
1,3-Dichlorobenzene	541-73-1	330	ND
1,4-Dichlorobenzene	106-46-7	330	ND
3,3'-Dichlorobenzidine	91-94-1	660	ND
2,4-Dichlorophenol	120-83-2	330	ND
Diethylphthalate	84-66-2	330	ND
2,4-Dimethylphenol	105-67-9	330	ND
Dimethylphthalate	131-11-3	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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 6017 Financial Drive, Norcross, GA 30071  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29813  
 STATION #: WS 002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	1600	ND
2,4-Dinitrophenol	51-28-5	1600	ND
2,4-Dinitrotoluene	121-14-2	330	ND
2,6-Dinitrotoluene	606-20-2	330	ND
Di-n-octylphthalate	117-84-0	330	ND
Fluoranthene	206-44-0	330	ND
Fluorene	86-73-7	330	ND
Hexachlorobenzene	118-74-1	330	ND
Hexachlorobutadiene	87-68-3	330	ND
Hexachlorocyclopentadiene	77-47-4	330	ND
Hexachloroethane	67-72-1	330	ND
Indeno(1,2,3-cd)pyrene	193-39-5	330	ND
Isophorone	78-59-1	330	ND
2-Methylnaphthalene	91-57-6	330	ND
2-Methylphenol	95-48-7	330	ND
4-Methylphenol	106-44-5	330	ND
Naphthalene	91-20-3	330	ND
2-Nitroaniline	88-74-4	1600	ND
3-Nitroaniline	99-09-2	1600	ND
4-Nitroaniline	100-01-6	1600	ND
Nitrobenzene	98-95-3	330	ND
2-Nitrophenol	88-75-5	330	ND
4-Nitrophenol	100-02-7	1600	ND
N-nitrosodiphenylamine	86-30-6	330	ND
N-nitroso-di-n-propylamine	621-64-7	330	ND
Pentachlorophenol	87-86-5	1600	ND
Phenanthrene	85-01-8	330	ND
Phenol	108-95-2	330	ND
Pyrene	129-00-0	330	ND
1,2,4-Trichlorobenzene	120-82-1	330	ND
2,4,5-Trichlorophenol	95-95-4	1600	ND
2,4,6-Trichlorophenol	88-06-2	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-08-95  
LAB I.D. #: 29678  
STATION #: WW001

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7511  
REPORT DATE: 02-22-95  
DATE OF ANALYSIS/BY: 02-10-95/JF  
SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29678	ANALYZED BY: RH/MD
STATION #: WW001	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	EPA 200.7	02-21-95	2.50	<DL
Barium (Ba) †	7440-39-3	EPA 200.7	02-21-95	0.50	139 †
Cadmium (Cd)	7440-43-9	EPA 200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	EPA 200.7	02-21-95	2.50	30.3 †
Lead (Pb)	7439-92-1	EPA 200.7	02-21-95	2.50	51.0 †
Mercury (Hg)	7439-97-6	EPA 245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	EPA 200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	EPA 200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Mr. R. Walter*  
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 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29678 (Duplicate)	ANALYZED BY: RH/MD
STATION #: WW001	SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	EPA 200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	EPA 200.7	02-21-95	0.50	151
Cadmium (Cd)	7440-43-9	EPA 200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	EPA 200.7	02-21-95	2.50	31.7
Lead (Pb)	7439-92-1	EPA 200.7	02-21-95	2.50	57.8
Mercury (Hg)	7439-97-6	EPA 245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	EPA 200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	EPA 200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan B. Walton*  
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Ph

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29678 / WW001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	120
Benzene	71-43-2	5	16
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	77
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	5
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: 29678	DATE OF ANALYSIS/BY: 02-06-95/JF
STATION #: WW001	SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)*	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	16,000	ND
2,4-Dinitrophenol	51-28-5	16,000	ND
2,4-Dinitrotoluene	121-14-2	3,300	ND
2,6-Dinitrotoluene	606-20-2	3,300	ND
Di-n-octylphthalate	117-84-0	3,300	ND
Fluoranthene	206-44-0	3,300	ND
Fluorene	86-73-7	3,300	ND
Hexachlorobenzene	118-74-1	3,300	ND
Hexachlorobutadiene	87-68-3	3,300	ND
Hexachlorocyclopentadiene	77-47-4	3,300	ND
Hexachloroethane	67-72-1	3,300	ND
Indeno(1,2,3-cd)pyrene	193-39-5	3,300	ND
Isophorone	78-59-1	3,300	ND
2-Methylnaphthalene	91-57-6	3,300	ND
2-Methylphenol	95-48-7	3,300	ND
4-Methylphenol	106-44-5	3,300	ND
Naphthalene	91-20-3	3,300	ND
2-Nitroaniline	88-74-4	16,000	ND
3-Nitroaniline	99-09-2	16,000	ND
4-Nitroaniline	100-01-6	16,000	ND
Nitrobenzene	98-95-3	3,300	ND
2-Nitrophenol	88-75-5	3,300	ND
4-Nitrophenol	100-02-7	16,000	ND
N-nitrosodiphenylamine	86-30-6	3,300	ND
N-nitroso-di-n-propylamine	621-64-7	3,300	ND
Pentachlorophenol	87-86-5	6,000	ND
Phenanthrene	85-01-8	3,300	ND
Phenol	108-95-2	3,300	ND
Pyrene	129-00-0	3,300	ND
1,2,4-Trichlorobenzene	120-82-1	3,300	ND
2,4,5-Trichlorophenol	95-95-4	16,000	ND
2,4,6-Trichlorophenol	88-06-2	3,300	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised due to matrix interferences and the sample required dilution.

*Alfred R. Walters*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29722  
 STATION #: WW002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)*	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	18.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	18.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	18.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	18.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	18.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	18.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	18.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan R. Walter*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29722  
 STATION #: WW002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba) †	7440-39-3	200.7	02-21-95	0.50	87.5
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	24.6
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	105
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL*
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

\*An unknown interferent was present in the sample.

*Alan R. Walter*  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATES OF ANALYSIS: 02-21-95 & 02-22-95  
 LAB I.D. #/STATION #: 29722 / WW02

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)*	RESULTS (ug/kg)
Acetone	67-64-1	5,000	ND
Benzene	71-43-2	250	12,000
Bromodichloromethane	75-27-4	250	ND
Bromoform	75-25-2	250	ND
Bromomethane	74-83-9	250	ND
2-Butanone	78-93-3	5,000	ND
Carbon disulfide	75-15-0	250	ND
Carbon tetrachloride	56-23-5	250	ND
Chlorobenzene	108-90-7	250	ND
Chloroethane	75-00-3	250	ND
2-Chloroethylvinyl ether	110-75-8	500	ND
Chloroform	67-66-3	250	ND
Chloromethane	74-87-3	250	ND
Dibromochloromethane	124-48-1	250	ND
1,2-Dichlorobenzene	95-50-1	250	ND
1,3-Dichlorobenzene	541-73-1	250	ND
1,4-Dichlorobenzene	106-46-7	250	ND
1,1-Dichloroethane	75-34-3	250	ND
1,2-Dichloroethane	107-06-2	250	ND
1,1-Dichloroethene	75-35-4	250	ND
trans-1,2-Dichloroethene	156-60-5	250	ND
Cis-1,2-Dichloroethene	156-59-2	250	ND
1,2-Dichloropropane	78-87-5	250	ND
Cis-1,3-dichloropropene	10061-01-5	250	ND
trans-1,3-Dichloropropene	10061-02-6	250	ND
Ethylbenzene	100-41-4	250	2,600
2-Hexanone	591-78-6	2,500	ND
Methylene chloride	75-09-2	500	ND
4-Methyl-2-pentanone	108-10-1	2,500	ND
Styrene	100-42-5	250	8,300
1,1,2,2-Tetrachloroethane	79-34-5	250	ND
Tetrachloroethene	127-18-4	250	ND
Toluene	108-88-3	500	18,000
1,1,1-Trichloroethane	71-55-6	250	ND
1,1,2-Trichloroethane	79-00-5	250	ND
Trichloroethene	79-01-6	250	ND
Trichlorofluoromethane	75-69-4	250	ND
Vinyl acetate	108-05-4	5,000	ND
Vinyl chloride	75-01-4	250	ND
Xylenes (Total)	1330-20-7	500	26,000

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29784	DATE OF ANALYSIS/BY: 02-13-94/JF
STATION #: LF 001 A	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29729  
 STATION #: LF001A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH  
 SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	0.11
Barium (Ba)	7440-39-3	200.7	02-21-95	0.01	0.12
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.005	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.025	0.04
Mercury (Hg)	7439-97-6	245.1	02-21-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL

DL= DETECTION LIMIT

*Alan R. Wilton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29729/LF001A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29785	DATE OF ANALYSIS/BY: 02-13-94/JF
STATION #: LF 003 A	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29730  
 STATION #: LF003A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH  
 SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.01	0.18
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.01	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.05	0.05
Mercury (Hg)	7439-97-6	245.1	02-21-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL

DL= DETECTION LIMIT

*Alan R. Walter*  
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 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29730/LF003A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

*Alan D. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 28727	DATE OF ANALYSIS/BY: 02-14-95/JF
STATION #: LF023A	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan P. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29727	ANALYZED BY: RH
STATION #: LF023A	SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.01	0.20
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.01	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.05	0.03
Mercury (Hg)	7439-97-6	245.1	02-21-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL
Mercury (Hg)*	7439-97-6	245.1	02-21-95	0.002	<DL

DL= DETECTION LIMIT

\*Duplicate analysis.

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: 29672 / LF023A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)*	RESULTS (ug/l)
Acetone	67-64-1	500	ND
Benzene	71-43-2	25	770
Bromodichloromethane	75-27-4	25	ND
Bromoform	75-25-2	25	ND
Bromomethane	74-83-9	25	ND
2-Butanone	78-93-3	500	ND
Carbon disulfide	75-15-0	250	ND
Carbon tetrachloride	56-23-5	250	ND
Chlorobenzene	108-90-7	250	ND
Chloroethane	75-00-3	250	ND
2-Chloroethylvinyl ether	110-75-8	50	ND
Chloroform	67-66-3	25	ND
Chloromethane	74-87-3	25	ND
Dibromochloromethane	124-48-1	25	ND
1,2-Dichlorobenzene	95-50-1	25	ND
1,3-Dichlorobenzene	541-73-1	25	ND
1,4-Dichlorobenzene	106-46-7	25	ND
1,1-Dichloroethane	75-34-3	25	ND
1,2-Dichloroethane	107-06-2	25	ND
1,1-Dichloroethene	75-35-4	25	ND
trans-1,2-Dichloroethene	156-60-5	25	ND
Cis-1,2-Dichloroethene	156-59-2	25	ND
1,2-Dichloropropane	78-87-5	25	ND
Cis-1,3-dichloropropene	10061-01-5	25	ND
trans-1,3-Dichloropropene	10061-02-6	25	ND
Ethylbenzene	100-41-4	25	340
2-Hexanone	591-78-6	250	ND
Methylene chloride	75-09-2	50	ND
4-Methyl-2-pentanone	108-10-1	250	ND
Styrene	100-42-5	25	55
1,1,2,2-Tetrachloroethane	79-34-5	25	ND
Tetrachloroethene	127-18-4	25	ND
Toluene	108-88-3	25	460
1,1,1-Trichloroethane	71-55-6	25	ND
1,1,2-Trichloroethane	79-00-5	25	ND
Trichloroethene	79-01-6	25	ND
Trichlorofluoromethane	75-69-4	25	ND
Vinyl acetate	108-05-4	500	ND
Vinyl chloride	75-01-4	25	ND
Xylenes (Total)	1330-20-7	25	520

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

\*Detection limits were raised because the sample required dilution.

*Alan P. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

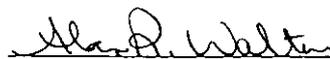
CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29727  
 STATION #: LF023A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	60
Acenaphthylene	208-96-8	200	500
Anthracene	120-12-7	10	50
Benzidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	10
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	40
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	20	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Science & Engineering	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29727	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: LF023A	SAMPLE MATRIX: Water

SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	40
Fluorene	86-73-7	10	170
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	200	1,400
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	10
Naphthalene	91-20-3	200	2,200
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	200
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	60
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 28728	DATE OF ANALYSIS/BY: 02-14-95/JF
STATION #: LF025A	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

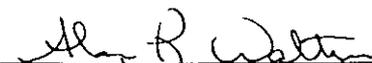
*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-27-95
LAB I.D. #: 29728	ANALYZED BY: RH
STATION #: LF025A	SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-20-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-20-95	0.01	0.14
Cadmium (Cd)	7440-43-9	200.7	02-20-95	0.005	<DL
Chromium (Cr)	7440-47-3	200.7	02-20-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-22-95	0.005	<DL
Mercury (Hg)	7439-97-6	245.1	02-20-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-20-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-20-95	0.05	<DL

DL= DETECTION LIMIT

  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 DATES OF ANALYSIS: 02-21-95 & 02-22-95  
 LAB I.D. #/STATION #: 29728/LF025A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	140
Benzene	71-43-2	25*	700
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	25*	280
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	45
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	250

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

\*PQL's were raised because the sample required dilution.

*Alan R. Walter*

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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: 29786	DATE OF ANALYSIS/BY: 02-14-94/JF
STATION #: LF 027 A	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L.(µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	4.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	4.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	4.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	2.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	2.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	2.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	2.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED



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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-17-95	REPORT DATE: 02-27-95
LAB I.D. #: 29786	ANALYZED BY: RH/MD
STATION #: LF 027 A	SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.01	0.35
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.005	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-22-95	0.005	0.011
Mercury (Hg)	7439-97-6	245.1	02-14-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL

DL= DETECTION LIMIT

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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: 29786 / LF 027 A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	84
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	20
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	32
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	58

PQL = PRACTICAL QUANTITATION LIMIT

ND = NOT DETECTED

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CLIENT: Applied Engineering & Science  
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 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29786  
 STATION #: LF 027 A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D:L (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	20
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benzidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	10	50
Dimethylphthalate	131-11-3	10	ND

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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29786  
 STATION #: LF 027 A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	10
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	40
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	100	400
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	10
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alfred P. Walter*

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29787  
 STATION #: LF 029 A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-14-94/JF  
 SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-17-95	REPORT DATE: 02-23-95
LAB I.D. #: 29787	ANALYZED BY: RH/MD
STATION #: LF 029 A	SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.01	0.21 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.005	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.025	0.09 †
Mercury (Hg)	7439-97-6	245.1	02-14-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL

DL= DETECTION LIMIT

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
DATE OF ANALYSIS: 02-15-95	CHEMIST INITIALS: RR
LAB I.D. #/STATION #: 29787 / LF 029 A	SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	17
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL = PRACTICAL QUANTITATION LIMIT      ND = NOT DETECTED

*Alan R. Walton*  
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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29788  
 STATION #: LF 031 A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-13-94/JF  
 SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-17-95  
 LAB I.D. #: 29788  
 STATION #: LF 031 A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	<DL
Barium (Ba) ‡	7440-39-3	200.7	02-21-95	0.01	0.13 †
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.005	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb) †	7439-92-1	200.7	02-21-95	0.025	0.04 †
Mercury (Hg)	7439-97-6	245.1	02-14-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL

DL= DETECTION LIMIT

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 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: 29788 / LF 031 A

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	--5--
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	18

PQL = PRACTICAL QUANTITATION LIMIT

ND = NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-09-95  
LAB I.D. #: 28725  
STATION #: SWE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7518  
REPORT DATE: 02-23-95  
DATE OF ANALYSIS/BY: 02-14-95/JF  
SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L.( $\mu\text{g/l}$ )	RESULTS ( $\mu\text{g/l}$ )
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

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 STATION #: SWE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH  
 SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.01	0.22
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.01	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.05	0.05
Mercury (Hg)	7439-97-6	245.1	02-21-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL

DL= DETECTION LIMIT

*Alan R. Walter*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29725/SWE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

*Alan R. Webster*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29725  
 STATION #: SWE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	10	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29725  
 STATION #: SWE001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan P. Walters*

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 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 28726	DATE OF ANALYSIS/BY: 02-14-95/JF
STATION #: SWE002 :	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29726	ANALYZED BY: RH
STATION #: SWE002	SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.50*	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.10*	0.88
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.10*	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.50*	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.50*	<DL
Mercury (Hg)	7439-97-6	245.1	02-21-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.50*	0.68
Silver (Ag)	7440-22-4	200.7	02-21-95	0.50*	<DL

DL= DETECTION LIMIT

\*Detection limits were raised due to a high level of Iron present in the sample.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

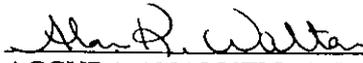
CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29726/SWE002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

  
 ACCURA ANALYTICAL LABORATORY, INC.

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CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29726  
 STATION #: SWE002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benzidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	10	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan P. Walters*  
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CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alma R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-09-95  
LAB I.D. #: 28724  
STATION #: SWW001

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7518  
REPORT DATE: 02-23-95  
DATE OF ANALYSIS/BY: 02-14-95/JF  
SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED



ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: 29724	ANALYZED BY: RH
STATION #: SWW001	SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.01	0.44
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.01	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.05	0.23
Mercury (Hg)	7439-97-6	245.1	02-21-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	0.05	0.12
Silver (Ag)	7440-22-4	200.7	02-21-95	0.05	<DL

DL= DETECTION LIMIT

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
DATE OF ANALYSIS: 02-21-95	CHEMIST INITIALS: RR
LAB I.D. #/STATION #: 29724/SWW001	SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

*Alan R. Walter*  
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Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29724  
 STATION #: SWW001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-20-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benzidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	10	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT,

ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: 29724  
 STATION #: SWW001

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-20-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

  
 ACCURA ANALYTICAL LABORATORY, INC.

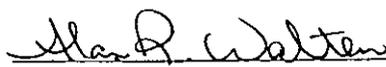
CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-10-95  
LAB I.D. #: 29814  
STATION #: SWW 002

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7536  
REPORT DATE: 02-22-95  
DATE OF ANALYSIS/BY: 02-14-95/JF  
SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

  
ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
LAB I.D. #: 29814	ANALYZED BY: RH/MD
STATION #: SWW 002	SAMPLE MATRIX: Water

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-21-95	0.50*	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.10*	1.94
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.10*	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	0.50*	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	0.50*	<DL
Mercury (Hg)	7439-97-6	245.1	02-16-95	0.002	0.005
Selenium (Se)	7782-49-2	200.7	02-21-95	0.50*	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	0.50*	<DL

DL = DETECTION LIMIT

\*Detection limits were raised because the sample required dilution.

*Alan R. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: 29814  
 STATION #: SWW 002

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 625):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benzidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	10	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
LAB I.D. #: 29814	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: SWW 002	SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
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Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-09-95  
DATE OF ANALYSIS: 02-22-95

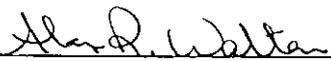
CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7518  
REPORT DATE: 02-23-95  
ANALYZED BY: JT

**OIL & GREASE (EPA Method 413.1):**

AAL #	STATION #	MATRIX	TEST	D.L.	RESULTS	UNITS
29724	SWW 001	Water	Oil & Grease	0.5	4.5	mg/l
29725	SWE 001	Water	Oil & Grease	0.5	40	mg/l
29726	SWE 002	Water	Oil & Grease	0.5	11	mg/l

D.L. = Detection Limit

OTHER INFORMATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

  
ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
DATE OF ANALYSIS: 02-17-95	ANALYZED BY: JT

**TOTAL PETROLEUM HYDROCARBONS (EPA Method 413.1):**

AAL #	STATION #	MATRIX	TEST	D.L.	RESULTS	UNITS
29813	WS 002	Soil	Total Petroleum Hydrocarbons	25	<DL	mg/kg
29814	SWW 002	Water	Total Petroleum Hydrocarbons	0.5	<DL	mg/l

D.L. = Detection Limit

  
ACCURA ANALYTICAL LABORATORY, INC.

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 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE REPORT REVISED: 02-28-95	REPORT DATE: 03-03-95
DATE OF ANALYSIS: 03-01-95	ANALYZED BY: JT

**OIL & GREASE (EPA Method 9071):**

AAL #	STATION #	MATRIX	TEST	D.L.	RESULTS	UNITS
29722	WW002	Soil	Oil & Grease	25	<DL	mg/kg
29723	WS001	Soil	Oil & Grease	25	<DL	mg/kg

D.L. = Detection Limit

OTHER INFORMATION: \_\_\_\_\_

*Ala R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

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 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
DATE OF ANALYSIS: 02-21-95	ANALYZED BY: JT

**OIL & GREASE (EPA Method 9071):**

AAL #	STATION #	MATRIX	TEST	D.L.	RESULTS	UNITS
29674	WE001	Soil	Oil & Grease	10	<DL	mg/kg
29675	WE002	Soil	Oil & Grease	10	<DL	mg/kg
29676	DD001	Soil	Oil & Grease	10	120	mg/kg
29677	DD002	Soil	Oil & Grease	10	<DL	mg/kg
29678	WW001	Soil	Oil & Grease	10	<DL	mg/kg
Blank	-----	Soil	Oil & Grease	10	<DL	mg/kg

D.L. = Detection Limit

OTHER INFORMATION: \_\_\_\_\_

*Alan P. Walters*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

QA/QC

01.7.95 3

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-17-95	REPORT DATE: 02-23-95
LAB I.D. #: Blank	ANALYZED BY: RH/MD
STATION #: -----	SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-20-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-20-95	0.01	<DL
Cadmium (Cd)	7440-43-9	200.7	02-20-95	0.005	<DL
Chromium (Cr)	7440-47-3	200.7	02-20-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-20-95	0.025	<DL
Mercury (Hg)	7439-97-6	245.1	02-14-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-20-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-20-95	0.05	<DL

DL= DETECTION LIMIT

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: Blank	ANALYZED BY: RH/MD
STATION #: -----	SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	<DL
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	<DL
Mercury (Hg)	7439-97-6	245.1	02-16-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL= DETECTION LIMIT

*Mark R. Walter*

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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: Blank	DATE OF ANALYSIS/BY: 02-13-94/JF
STATION #: -----	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L.(µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
LAB I.D. #: Blank	DATE OF ANALYSIS/BY: 02-16-95/JF
STATION #: -----	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan D. Walton*

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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan P. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)	RESULTS (µg/kg)
Acenaphthene	83-32-9	330	ND
Acenaphthylene	208-96-8	330	ND
Anthracene	120-12-7	330	ND
Benzidine	92-87-5	1660	ND
Benzo(a)anthracene	56-55-3	330	ND
Benzo(a)pyrene	50-32-8	330	ND
Benzo(b)fluoranthene	205-99-2	330	ND
Benzo(g,h,i)perylene	191-24-2	330	ND
Benzo(k)fluoranthene	207-08-9	330	ND
Benzoic acid	65-85-0	1600	ND
Benzyl alcohol	100-51-6	330	ND
bis(2-Chloroethoxy)methane	111-91-1	330	ND
bis(2-Chloroethyl)ether	111-44-4	330	ND
bis(2-Chloroisopropyl)ether	108-60-1	330	ND
bis(2-Ethylhexyl)phthalate	117-81-7	330	ND
4-Bromophenyl phenyl ether	101-55-3	330	ND
Butyl benzyl phthalate	85-68-7	330	ND
4-Chloroaniline	106-47-8	330	ND
4-Chloro-3-methylphenol	59-50-7	330	ND
2-Chloronaphthalene	91-58-7	330	ND
2-Chlorophenol	95-57-8	330	ND
4-Chlorophenyl phenyl ether	7005-72-3	330	ND
Chrysene	218-01-9	330	ND
Dibenz(a,h)anthracene	53-70-3	330	ND
Dibenzofuran	132-64-9	330	ND
Di-n-butylphthalate	84-74-2	330	ND
1,2-Dichlorobenzene	95-50-1	330	ND
1,3-Dichlorobenzene	541-73-1	330	ND
1,4-Dichlorobenzene	106-46-7	330	ND
3,3'-Dichlorobenzidine	91-94-1	660	ND
2,4-Dichlorophenol	120-83-2	330	ND
Diethylphthalate	84-66-2	330	ND
2,4-Dimethylphenol	105-67-9	330	ND
Dimethylphthalate	131-11-3	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	1600	ND
2,4-Dinitrophenol	51-28-5	1600	ND
2,4-Dinitrotoluene	121-14-2	330	ND
2,6-Dinitrotoluene	606-20-2	330	ND
Di-n-octylphthalate	117-84-0	330	ND
Fluoranthene	206-44-0	330	ND
Fluorene	86-73-7	330	ND
Hexachlorobenzene	118-74-1	330	ND
Hexachlorobutadiene	87-68-3	330	ND
Hexachlorocyclopentadiene	77-47-4	330	ND
Hexachloroethane	67-72-1	330	ND
Indeno(1,2,3-cd)pyrene	193-39-5	330	ND
Isophorone	78-59-1	330	ND
2-Methylnaphthalene	91-57-6	330	ND
2-Methylphenol	95-48-7	330	ND
4-Methylphenol	106-44-5	330	ND
Naphthalene	91-20-3	330	ND
2-Nitroaniline	88-74-4	1600	ND
3-Nitroaniline	99-09-2	1600	ND
4-Nitroaniline	100-01-6	1600	ND
Nitrobenzene	98-95-3	330	ND
2-Nitrophenol	88-75-5	330	ND
4-Nitrophenol	100-02-7	1600	ND
N-nitrosodiphenylamine	86-30-6	330	ND
N-nitroso-di-n-propylamine	621-64-7	330	ND
Pentachlorophenol	87-86-5	1600	ND
Phenanthrene	85-01-8	330	ND
Phenol	108-95-2	330	ND
Pyrene	129-00-0	330	ND
1,2,4-Trichlorobenzene	120-82-1	330	ND
2,4,5-Trichlorophenol	95-95-4	1600	ND
2,4,6-Trichlorophenol	88-06-2	330	ND

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CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benzidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	10	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan B. Walton*

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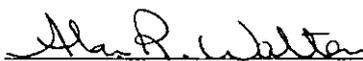
CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7530  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
DATES OF ANALYSIS: 02-14-95 thru 02-17-95	ANALYZED BY: RR

DAILY QA/QC: VOA (8260) SURROGATE PERCENT RECOVERY

SOILS

AAL SAMPLE NUMBER	1,2-Dichloroethane-d4 Surrogate Ranges 55-151	Toluene-d8 Surrogate Ranges 72-125	4-Bromofluorobenzene Surrogate Ranges 66-125
Blank	105	102	99
Blank	121	106	100
Blank	115	110	106
29773 (1:2)	119	116	123
29773 (1:1)	121	107	116
29773 (1:1)	114	99	125
29774	123	109	123
29775 (1:1)	130	112	124
29775 (1:5)	108	90	88
29776 (1:1)	95	99	123
29777 (1:1)	106	78	106
29777 (1:5)	120	96	97
29778 (1:1)	98	94	111
29779	114	95	98
29780	140	94	104
29781	108	93	91
29782 (1:1)	109	94	89
29782 (1:5)	113	100	88
29783	115	96	111

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
DATE OF ANALYSIS: 02-15-95	ANALYZED BY: RR

**DAILY QA/QC: VOA (8260) SURROGATE PERCENT RECOVERY**

**WATER**

AAL SAMPLE NUMBER	1,2-Dichloroethane-d4 Surrogate Ranges 71-136	Toluene-d8 Surrogate Ranges 79-121	4-Bromofluorobenzene Surrogate Ranges 85-121
Blank	121	106	100
29786	127	108	94
29787	111	94	90
29788	120	99	94

  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
SAMPLE ID #: 29973	DATE OF ANALYSIS/BY: 02-21-95/JF
SAMPLE MATRIX: Soil	

**DAILY QA/QC: BNA (8270) SURROGATE PERCENT RECOVERY RESULTS:**

AAE SAMPLE #	2-FLUOROPHENOL (25-121)	PHENOL-D6 (24-113)	NITROBENZENE-D5 (23-120)	2-FLUOROBIPHENYL (30-115)	2,4,6-TRIBROMOPHENOL (19-122)	P-TEREPHENYL-D14 (18-137)
Blank	100	102	95	110	103	111
29773	*	*	*	*	*	*

\*Surrogate recoveries not present because of dilution required on sample.

*Alan P. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7530
DATE RECEIVED: 02-10-95	REPORT DATE: 02-23-95
SAMPLE ID #: 29786	DATE OF ANALYSIS/BY: 02-21-95/JF
SAMPLE MATRIX: Water	

**DAILY QA/QC: BNA (8270) SURROGATE PERCENT RECOVERY RESULTS:**

AAL SAMPLE #	2-FLUOROPHENOL (21-100)	PHENOL-D6 (10-94)	NITROBENZENE-D5 (35-114)	2-FLUOROBIPHENYL (43-116)	2,4,6-TRIBROMOPHENOL (10-123)	p-TERPHEHYL-D14 (33-141)
Blank	70	45	92	105	106	111
29786	77	53	86	82	111	66

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: 29731/RB - 1

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	11
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL = PRACTICAL QUANTITATION LIMIT ND = NOT DETECTED

*Mark Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: Extraction Blank	DATE OF ANALYSIS/BY: 02-14-95/JF
STATION #: -----	SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
LAB I.D. #: Extraction Blank	DATE OF ANALYSIS/BY: 02-15-95/JF
STATION #: -----	SAMPLE MATRIX: Water

**PCB (EPA Method 808):**

COMPOUNDS	CAS No.	D.L. (mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

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 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: Extraction Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	20	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: Extraction Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan D. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: Extraction Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	20	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan D. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Science & Engineering  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: Extraction Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 DATE OF ANALYSIS/BY: 02-16-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan P. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH  
 SAMPLE MATRIX: Water

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/l)	RESULTS (mg/l)
Arsenic (As)	7440-38-2	200.7	02-20-95	0.05	<DL
Barium (Ba)	7440-39-3	200.7	02-20-95	0.01	<DL
Cadmium (Cd)	7440-43-9	200.7	02-20-95	0.01	<DL
Chromium (Cr)	7440-47-3	200.7	02-20-95	0.05	<DL
Lead (Pb)	7439-92-1	200.7	02-20-95	0.05	<DL
Mercury (Hg)	7439-97-6	245.1	02-21-95	0.002	<DL
Selenium (Se)	7782-49-2	200.7	02-20-95	0.05	<DL
Silver (Ag)	7440-22-4	200.7	02-20-95	0.05	<DL

DL= DETECTION LIMIT

  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-09-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	<DL
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	<DL
Mercury (Hg)	7439-97-6	245.1	02-20-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

*Ala. R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
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 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walker*  
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CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
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1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-21-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
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1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan P. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-22-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Water

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/l)	RESULTS (ug/l)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
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1,3-Dichlorobenzene	541-73-1	5	ND
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1,2-Dichloroethane	107-06-2	5	ND
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2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

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 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 02-23-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
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4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
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Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	-5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
DATES OF ANALYSIS: 02-17-95 thru 02-22-95	ANALYZED BY: RR

DAILY QA/QC: VOA (8260) SURROGATE PERCENT RECOVERY

SOILS

AAL SAMPLE NUMBER	1,2-Dichloroethane-d4 Surrogate Ranges 55-151	Toluene-d8 Surrogate Ranges 72-125	4-Bromofluorobenzene Surrogate Ranges 66-125
Blank	110	106	105
Blank	111	100	103
Blank	113	102	99
29712 (1:1)	113	98	121
29712 (1:50)	113	103	105
29713 (1:25)	133	113	124
29714 (1:5)	106	95	100
29715 (1:50)	112	103	104
29716 (1:1)	110	97	125
29717 (1:5)	116	103	110
29717 (1:1)	114	103	111
29718 (1:1)	115	101	122
29719 (1:5)	139	120	119
29720 (1:5)	109	103	107
29721	115	105	103
29722 (1:50)	105	102	100
29722 (1:100)	120	108	100
29723	117	97	124
Blank	119	107	114

*Alan D. Walter*  
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CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
DATES OF ANALYSIS: 02-21-95 & 02-22-95	ANALYZED BY: RR

**DAILY QA/QC: VOA (8260) SURROGATE PERCENT RECOVERY**

**WATER**

AAL SAMPLE NUMBER	1,2-Dichloroethane-d4 Surrogate Ranges 71-136	Toluene-d8 Surrogate Ranges 79-121	4-Bromofluorobenzene Surrogate Ranges 85-121
Blank	113	102	99
29724	113	107	110
29725	117	106	107
29726	117	110	101
29728 (1:1)	109	103	101
29729	111	110	110
29730	104	101	112
29731	108	103	106
Blank	109	107	114
29728 (1:5)	121	112	100

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CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE RECEIVED: 02-09-95	REPORT DATE: 02-23-95
DATE OF ANALYSIS/BY: 02-20-95/JF	SAMPLE MATRIX: Water

**DAILY QA/QC: BNA (8270) SURROGATE PERCENT RECOVERY RESULTS:**

AAL SAMPLE #	2-FLUOROPHENOL (21-100)	PHENOL-D6 (10-94)	NITROBENZENE-D5 (35-114)	2-FLUOROBIPHENYL (43-116)	2,4,6-TRIBROMOPHENOL (10-123)	P-TERPHENYL-D14 (33-141)
Blank	70	45	92	105	106	111
Blank	100	102	95	110	103	111
29724	75	73	107	112	86	75
29725	73	52	100	100	105	37
29726	30	23	101	98	56	99
29727	76	57	372*	112	113	80

\*Outside acceptance limits due to matrix interferences.

*Alan R. Walter*  
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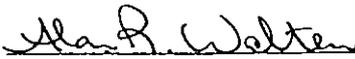
CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-10-95  
LAB I.D. #: Extraction Blank  
STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
LAB PROJECT #: 7536  
REPORT DATE: 02-22-95  
DATE OF ANALYSIS/BY: 02-15-95/JF  
SAMPLE MATRIX: Water

**PCB (EPA Method 608):**

COMPOUNDS	GAS No.	D.L.(µg/l)	RESULTS (µg/l)
PCB-1016 (Aroclor 1016)	12674-11-2	2.0	ND
PCB-1221 (Aroclor 1221)	1104-28-2	2.0	ND
PCB-1232 (Aroclor 1232)	11141-16-5	2.0	ND
PCB-1242 (Aroclor 1242)	53469-21-9	1.0	ND
PCB-1248 (Aroclor 1248)	12672-29-6	1.0	ND
PCB-1254 (Aroclor 1254)	11097-69-1	1.0	ND
PCB-1260 (Aroclor 1260)	11096-82-5	1.0	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

  
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 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: Extraction Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 625):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
Acenaphthene	83-32-9	10	ND
Acenaphthylene	208-96-8	10	ND
Anthracene	120-12-7	10	ND
Benzidine	92-87-5	50	ND
Benzo(a)anthracene	56-55-3	10	ND
Benzo(a)pyrene	50-32-8	10	ND
Benzo(b)fluoranthene	205-99-2	10	ND
Benzo(g,h,i)perylene	191-24-2	10	ND
Benzo(k)fluoranthene	207-08-9	10	ND
Benzoic acid	65-85-0	50	ND
Benzyl alcohol	100-51-6	10	ND
bis(2-Chloroethoxy)methane	111-91-1	10	ND
bis(2-Chloroethyl)ether	111-44-4	10	ND
bis(2-Chloroisopropyl)ether	108-60-1	10	ND
bis(2-Ethylhexyl)phthalate	117-81-7	10	ND
4-Bromophenyl phenyl ether	101-55-3	10	ND
Butyl benzyl phthalate	85-68-7	10	ND
4-Chloroaniline	106-47-8	10	ND
4-Chloro-3-methylphenol	59-50-7	10	ND
2-Chloronaphthalene	91-58-7	10	ND
2-Chlorophenol	95-57-8	10	ND
4-Chlorophenyl phenyl ether	7005-72-3	10	ND
Chrysene	218-01-9	10	ND
Dibenz(a,h)anthracene	53-70-3	10	ND
Dibenzofuran	132-64-9	10	ND
Di-n-butylphthalate	84-74-2	10	ND
1,2-Dichlorobenzene	95-50-1	10	ND
1,3-Dichlorobenzene	541-73-1	10	ND
1,4-Dichlorobenzene	106-46-7	10	ND
3,3'-Dichlorobenzidine	91-94-1	20	ND
2,4-Dichlorophenol	120-83-2	10	ND
Diethylphthalate	84-66-2	10	ND
2,4-Dimethylphenol	105-67-9	10	ND
Dimethylphthalate	131-11-3	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Ala R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: Extraction Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-15-95/JF  
 SAMPLE MATRIX: Water

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 625):**

COMPOUNDS	CAS No.	D.L. (µg/l)	RESULTS (µg/l)
4,6-Dinitro-2-methylphenol	534-52-1	50	ND
2,4-Dinitrophenol	51-28-5	50	ND
2,4-Dinitrotoluene	121-14-2	10	ND
2,6-Dinitrotoluene	606-20-2	10	ND
Di-n-octylphthalate	117-84-0	10	ND
Fluoranthene	206-44-0	10	ND
Fluorene	86-73-7	10	ND
Hexachlorobenzene	118-74-1	10	ND
Hexachlorobutadiene	87-68-3	10	ND
Hexachlorocyclopentadiene	77-47-4	10	ND
Hexachloroethane	67-72-1	10	ND
Indeno(1,2,3-cd)pyrene	193-39-5	10	ND
Isophorone	78-59-1	10	ND
2-Methylnaphthalene	91-57-6	10	ND
2-Methylphenol	95-48-7	10	ND
4-Methylphenol	106-44-5	10	ND
Naphthalene	91-20-3	10	ND
2-Nitroaniline	88-74-4	50	ND
3-Nitroaniline	99-09-2	50	ND
4-Nitroaniline	100-01-6	50	ND
Nitrobenzene	98-95-3	10	ND
2-Nitrophenol	88-75-5	10	ND
4-Nitrophenol	100-02-7	50	ND
N-nitrosodiphenylamine	86-30-6	10	ND
N-nitroso-di-n-propylamine	621-64-7	10	ND
Pentachlorophenol	87-86-5	50	ND
Phenanthrene	85-01-8	10	ND
Phenol	108-95-2	10	ND
Pyrene	129-00-0	10	ND
1,2,4-Trichlorobenzene	120-82-1	10	ND
2,4,5-Trichlorophenol	95-95-4	50	ND
2,4,6-Trichlorophenol	88-06-2	10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walters*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: Blank / ----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: Blank / ----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-10-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7536  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RH/MD  
 SAMPLE MATRIX: Soil

**RCRA METALS:**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	200.7	02-21-95	0.50	<DL
Cadmium (Cd)	7440-43-9	200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	200.7	02-21-95	2.50	<DL
Lead (Pb)	7439-92-1	200.7	02-21-95	2.50	<DL
Mercury (Hg)	7439-97-6	245.1	02-14-95	1.00	<DL
Selenium (Se)	7782-49-2	200.7	02-21-95	2.50	<DL
Silver (Ag)	7440-22-4	200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

*Alan R. Wilton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
CLIENT CONTACT: Mr. Dave Butler  
DATE RECEIVED: 02-10-95  
SAMPLE ID #: 29814  
SAMPLE MATRIX: Water

CLIENT PROJECT: Csx (Vaughn Landfill)  
LAB PROJECT #: 7536  
REPORT DATE: 02-22-95  
DATE OF ANALYSIS/BY: 02-16-95/JF

**DAILY QA/QC: BNA (8270) SURROGATE PERCENT RECOVERY RESULTS:**

QA/QC SAMPLE #	2-FLUOROPHENOL (21-100)	PHENOL-D6 (10-94)	NITROBENZENE-D5 (35-114)	2-FLUOROBIPHENYL (43-116)	2,4,6-TRIBROMOPHENOL (10-123)	P-TERPHENYL-D14 (33-141)
Blank	70	45	92	105	106	111
29814	79	58	100	95	107	52

  
ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7536
DATE RECEIVED: 02-10-95	REPORT DATE: 02-22-95
DATES OF ANALYSIS: 02-15-95 & 02-14-95	ANALYZED BY: RR

**DAILY QA/QC: VOA (8260) SURROGATE PERCENT RECOVERY**

**SOILS**

AAL SAMPLE NUMBER	1,2-Dichloroethane-d4 Surrogate Ranges 55-151	Toluene-d8 Surrogate Ranges 72-125	4-Bromofluorobenzene Surrogate Ranges 66-125
Blank	121	106	100
Blank	110	107	106
29812 (1:1)	151	102	133*
29813	115	85	106
29812 (1:5)	111	97	115

\*Outside acceptance limits due to matrix interferences.

*Alex R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: 02-21-95  
 SAMPLE MATRIX: Soil

**RCRA METALS**

COMPOUNDS	CAS No.	EPA METHOD	DATE OF ANALYSIS	D.L. (mg/kg)	RESULTS (mg/kg)
Arsenic (As)	7440-38-2	EPA 200.7	02-21-95	2.50	<DL
Barium (Ba)	7440-39-3	EPA 200.7	02-21-95	0.50	<DL
Cadmium (Cd)	7440-43-9	EPA 200.7	02-21-95	0.50	<DL
Chromium (Cr)	7440-47-3	EPA 200.7	02-21-95	2.50	<DL
Lead (Pb)	7439-92-1	EPA 200.7	02-21-95	2.50	<DL
Mercury (Hg)	7439-97-6	EPA 245.1	02-17-95	1.00	<DL
Selenium (Se)	7782-49-2	EPA 200.7	02-21-95	2.50	<DL
Silver (Ag)	7440-22-4	EPA 200.7	02-21-95	2.50	<DL

DL = DETECTION LIMIT

*Ala R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: Blank	DATE OF ANALYSIS/BY: 02-09-95/JF
STATION #: -----	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L. (mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
LAB I.D. #: Blank	DATE OF ANALYSIS/BY: 02-14-95/JF
STATION #: -----	SAMPLE MATRIX: Soil

**PCB (EPA Method 8080):**

COMPOUNDS	CAS No.	D.L.(mg/kg)	RESULTS (mg/kg)
PCB-1016 (Aroclor 1016)	12674-11-2	0.10	ND
PCB-1221 (Aroclor 1221)	1104-28-2	0.10	ND
PCB-1232 (Aroclor 1232)	11141-16-5	0.10	ND
PCB-1242 (Aroclor 1242)	53469-21-9	0.10	ND
PCB-1248 (Aroclor 1248)	12672-29-6	0.10	ND
PCB-1254 (Aroclor 1254)	11097-69-1	0.10	ND
PCB-1260 (Aroclor 1260)	11096-82-5	0.10	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-11-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-13-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-14-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alta R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-15-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

**VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):**

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Al R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

Accura Analytical Laboratory, Inc.  
 6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATE OF ANALYSIS: 02-17-95  
 LAB I.D. #/STATION #: Blank / -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 CHEMIST INITIALS: RR  
 SAMPLE MATRIX: Soil

VOLATILE ORGANIC COMPOUNDS (EPA Method 8260):

COMPOUNDS	CAS No.	PQL (ug/kg)	RESULTS (ug/kg)
Acetone	67-64-1	100	ND
Benzene	71-43-2	5	ND
Bromodichloromethane	75-27-4	5	ND
Bromoform	75-25-2	5	ND
Bromomethane	74-83-9	5	ND
2-Butanone	78-93-3	100	ND
Carbon disulfide	75-15-0	5	ND
Carbon tetrachloride	56-23-5	5	ND
Chlorobenzene	108-90-7	5	ND
Chloroethane	75-00-3	5	ND
2-Chloroethylvinyl ether	110-75-8	10	ND
Chloroform	67-66-3	5	ND
Chloromethane	74-87-3	5	ND
Dibromochloromethane	124-48-1	5	ND
1,2-Dichlorobenzene	95-50-1	5	ND
1,3-Dichlorobenzene	541-73-1	5	ND
1,4-Dichlorobenzene	106-46-7	5	ND
1,1-Dichloroethane	75-34-3	5	ND
1,2-Dichloroethane	107-06-2	5	ND
1,1-Dichloroethene	75-35-4	5	ND
trans-1,2-Dichloroethene	156-60-5	5	ND
Cis-1,2-Dichloroethene	156-59-2	5	ND
1,2-Dichloropropane	78-87-5	5	ND
Cis-1,3-dichloropropene	10061-01-5	5	ND
trans-1,3-Dichloropropene	10061-02-6	5	ND
Ethylbenzene	100-41-4	5	ND
2-Hexanone	591-78-6	50	ND
Methylene chloride	75-09-2	10	ND
4-Methyl-2-pentanone	108-10-1	50	ND
Styrene	100-42-5	5	ND
1,1,2,2-Tetrachloroethane	79-34-5	5	ND
Tetrachloroethene	127-18-4	5	ND
Toluene	108-88-3	5	ND
1,1,1-Trichloroethane	71-55-6	5	ND
1,1,2-Trichloroethane	79-00-5	5	ND
Trichloroethene	79-01-6	5	ND
Trichlorofluoromethane	75-69-4	5	ND
Vinyl acetate	108-05-4	100	ND
Vinyl chloride	75-01-4	5	ND
Xylenes (Total)	1330-20-7	5	ND

PQL=PRACTICAL QUANTITATION LIMIT,

ND=NOT DETECTED

*Alan P. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)	RESULTS (µg/kg)
Acenaphthene	83-32-9	330	ND
Acenaphthylene	208-96-8	330	ND
Anthracene	120-12-7	330	ND
Benzidine	92-87-5	1660	ND
Benzo(a)anthracene	56-55-3	330	ND
Benzo(a)pyrene	50-32-8	330	ND
Benzo(b)fluoranthene	205-99-2	330	ND
Benzo(g,h,i)perylene	191-24-2	330	ND
Benzo(k)fluoranthene	207-08-9	330	ND
Benzoic acid	65-85-0	1600	ND
Benzyl alcohol	100-51-6	330	ND
bis(2-Chloroethoxy)methane	111-91-1	330	ND
bis(2-Chloroethyl)ether	111-44-4	330	ND
bis(2-Chloroisopropyl)ether	108-60-1	330	ND
bis(2-Ethylhexyl)phthalate	117-81-7	330	ND
4-Bromophenyl phenyl ether	101-55-3	330	ND
Butyl benzyl phthalate	85-68-7	330	ND
4-Chloroaniline	106-47-8	330	ND
4-Chloro-3-methylphenol	59-50-7	330	ND
2-Chloronaphthalene	91-58-7	330	ND
2-Chlorophenol	95-57-8	330	ND
4-Chlorophenyl phenyl ether	7005-72-3	330	ND
Chrysene	218-01-9	330	ND
Dibenz(a,h)anthracene	53-70-3	330	ND
Dibenzofuran	132-64-9	330	ND
Di-n-butylphthalate	84-74-2	330	ND
1,2-Dichlorobenzene	95-50-1	330	ND
1,3-Dichlorobenzene	541-73-1	330	ND
1,4-Dichlorobenzene	106-46-7	330	ND
3,3'-Dichlorobenzidine	91-94-1	660	ND
2,4-Dichlorophenol	120-83-2	330	ND
Diethylphthalate	84-66-2	330	ND
2,4-Dimethylphenol	105-67-9	330	ND
Dimethylphthalate	131-11-3	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walter*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 DATE OF ANALYSIS/BY: 02-10-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	1600	ND
2,4-Dinitrophenol	51-28-5	1600	ND
2,4-Dinitrotoluene	121-14-2	330	ND
2,6-Dinitrotoluene	606-20-2	330	ND
Di-n-octylphthalate	117-84-0	330	ND
Fluoranthene	206-44-0	330	ND
Fluorene	86-73-7	330	ND
Hexachlorobenzene	118-74-1	330	ND
Hexachlorobutadiene	87-68-3	330	ND
Hexachlorocyclopentadiene	77-47-4	330	ND
Hexachloroethane	67-72-1	330	ND
Indeno(1,2,3-cd)pyrene	193-39-5	330	ND
Isophorone	78-59-1	330	ND
2-Methylnaphthalene	91-57-6	330	ND
2-Methylphenol	95-48-7	330	ND
4-Methylphenol	106-44-5	330	ND
Naphthalene	91-20-3	330	ND
2-Nitroaniline	88-74-4	1600	ND
3-Nitroaniline	99-09-2	1600	ND
4-Nitroaniline	100-01-6	1600	ND
Nitrobenzene	98-95-3	330	ND
2-Nitrophenol	88-75-5	330	ND
4-Nitrophenol	100-02-7	1600	ND
N-nitrosodiphenylamine	86-30-6	330	ND
N-nitroso-di-n-propylamine	621-64-7	330	ND
Pentachlorophenol	87-86-5	1600	ND
Phenanthrene	85-01-8	330	ND
Phenol	108-95-2	330	ND
Pyrene	129-00-0	330	ND
1,2,4-Trichlorobenzene	120-82-1	330	ND
2,4,5-Trichlorophenol	95-95-4	1600	ND
2,4,6-Trichlorophenol	88-06-2	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Al R. Watten*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE RECEIVED: 02-08-95  
 DATES OF ANALYSIS: 02-11-95 thru 02-15-95

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7511  
 REPORT DATE: 02-22-95  
 ANALYZED BY: RR

DAILY QA/QC: VOA (8260) SURROGATE PERCENT RECOVERY

SOILS

AAL SAMPLE NUMBER	1,2-Dichloroethane-d4 Surrogate Ranges 55-151	Toluene-d8 Surrogate Ranges 72-125	4-Bromofluorobenzene Surrogate Ranges 66-125
Blank	112	104	104
Blank	111	107	105
Blank	105	102	99
Blank	121	106	100
29662	121	107	107
29663 (1:1)	118	88	107
29664 (1:500)	112	101	105
29665 (1:1)	111	102	112
29666	125	101	113
29667 (1:5)	116	103	102
29668 (1:5)	115	93	102
29669 (1:5)	119	105	112
29670 (1:1)	110	101	103
29671 (1:5)	105	96	90
29673 (1:2)	115	102	103
29674 (1:5)	117	99	104
29675	99	93	111
29676 (1:50)	112	104	97
29677	111	99	116
29678	132	104	139*
29663 (1:1)	112	96	112
29669 (1:1)	115	94	111
29670 (1:1)	114	95	112
29671 (1:1)	112	93	101
29673 (1:1)	111	96	116
Blank	115	110	106

\*Outside acceptance limits due to matrix interferences.

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
DATE OF ANALYSIS: 02-14-95	ANALYZED BY: RR

**DAILY QA/QC: VOA (8260) SURROGATE PERCENT RECOVERY**

**WATER**

AAL SAMPLE NUMBER	1,2-Dichloroethane-d4 Surrogate Ranges 71-136	Toluene-d8 Surrogate Ranges 79-121	4-Bromofluorobenzene Surrogate Ranges 85-121
Blank	105	102	99
29672	103	87	83

*Alan R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7511
DATE RECEIVED: 02-08-95	REPORT DATE: 02-22-95
DATE OF ANALYSIS/BY: 02-14-95/JF	SAMPLE MATRIX: Soil

**DAILY QA/QC: BNA (8270) SURROGATE PERCENT RECOVERY RESULTS:**

AAL SAMPLE #	2-FLUOROPHENOL (25:121)	PHENOL-D6 (24:113)	NITROBENZENE-D5 (23:120)	2-FLUOROBIPHENYL (30:115)	2,4,6-TRIBROMOPHENOL (19:122)	P-TERPHENYL-D14 (18:137)
Blank	75	74	71	81	72	82
29664	*	*	*	*	*	*
29674	*	*	*	*	*	*
29675	*	*	*	*	*	*
29676	*	*	*	*	*	*
29677	*	*	*	*	*	*
29678	*	*	*	*	*	*

\*Surrogate recoveries not present because of dilution required on samples.

*Alan R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE REPORT REVISED: 02-28-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 03-06-95  
 DATE OF ANALYSIS/BY: 02-28-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No	D.L. (µg/kg)	RESULTS (µg/kg)
Acenaphthene	83-32-9	330	ND
Acenaphthylene	208-96-8	330	ND
Anthracene	120-12-7	330	ND
Benzidine	92-87-5	1660	ND
Benzo(a)anthracene	56-55-3	330	ND
Benzo(a)pyrene	50-32-8	330	ND
Benzo(b)fluoranthene	205-99-2	330	ND
Benzo(g,h,i)perylene	191-24-2	330	ND
Benzo(k)fluoranthene	207-08-9	330	ND
Benzoic acid	65-85-0	1600	ND
Benzyl alcohol	100-51-6	330	ND
bis(2-Chloroethoxy)methane	111-91-1	330	ND
bis(2-Chloroethyl)ether	111-44-4	330	ND
bis(2-Chloroisopropyl)ether	108-60-1	330	ND
bis(2-Ethylhexyl)phthalate	117-81-7	330	ND
4-Bromophenyl phenyl ether	101-55-3	330	ND
Butyl benzyl phthalate	85-68-7	330	ND
4-Chloroaniline	106-47-8	330	ND
4-Chloro-3-methylphenol	59-50-7	330	ND
2-Chloronaphthalene	91-58-7	330	ND
2-Chlorophenol	95-57-8	330	ND
4-Chlorophenyl phenyl ether	7005-72-3	330	ND
Chrysene	218-01-9	330	ND
Dibenz(a,h)anthracene	53-70-3	330	ND
Dibenzofuran	132-64-9	330	ND
Di-n-butylphthalate	84-74-2	330	ND
1,2-Dichlorobenzene	95-50-1	330	ND
1,3-Dichlorobenzene	541-73-1	330	ND
1,4-Dichlorobenzene	106-46-7	330	ND
3,3'-Dichlorobenzidine	91-94-1	660	ND
2,4-Dichlorophenol	120-83-2	330	ND
Diethylphthalate	84-66-2	330	ND
2,4-Dimethylphenol	105-67-9	330	ND
Dimethylphthalate	131-11-3	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Alan R. Walton*

ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science  
 CLIENT CONTACT: Mr. Dave Butler  
 DATE REPORT REVISED: 02-28-95  
 LAB I.D. #: Blank  
 STATION #: -----

CLIENT PROJECT: CSX (Vaughn Landfill)  
 LAB PROJECT #: 7518  
 REPORT DATE: 03-06-95  
 DATE OF ANALYSIS/BY: 02-28-95/JF  
 SAMPLE MATRIX: Soil

**SEMI-VOLATILE ORGANIC ANALYSIS DATA: TARGET COMPOUND LIST (EPA Method 8270):**

COMPOUNDS	CAS No.	D.L. (µg/kg)	RESULTS (µg/kg)
4,6-Dinitro-2-methylphenol	534-52-1	1600	ND
2,4-Dinitrophenol	51-28-5	1600	ND
2,4-Dinitrotoluene	121-14-2	330	ND
2,6-Dinitrotoluene	606-20-2	330	ND
Di-n-octylphthalate	117-84-0	330	ND
Fluoranthene	206-44-0	330	ND
Fluorene	86-73-7	330	ND
Hexachlorobenzene	118-74-1	330	ND
Hexachlorobutadiene	87-68-3	330	ND
Hexachlorocyclopentadiene	77-47-4	330	ND
Hexachloroethane	67-72-1	330	ND
Indeno(1,2,3-cd)pyrene	193-39-5	330	ND
Isophorone	78-59-1	330	ND
2-Methylnaphthalene	91-57-6	330	ND
2-Methylphenol	95-48-7	330	ND
4-Methylphenol	106-44-5	330	ND
Naphthalene	91-20-3	330	ND
2-Nitroaniline	88-74-4	1600	ND
3-Nitroaniline	99-09-2	1600	ND
4-Nitroaniline	100-01-6	1600	ND
Nitrobenzene	98-95-3	330	ND
2-Nitrophenol	88-75-5	330	ND
4-Nitrophenol	100-02-7	1600	ND
N-nitrosodiphenylamine	86-30-6	330	ND
N-nitroso-di-n-propylamine	621-64-7	330	ND
Pentachlorophenol	87-86-5	1600	ND
Phenanthrene	85-01-8	330	ND
Phenol	108-95-2	330	ND
Pyrene	129-00-0	330	ND
1,2,4-Trichlorobenzene	120-82-1	330	ND
2,4,5-Trichlorophenol	95-95-4	1600	ND
2,4,6-Trichlorophenol	88-06-2	330	ND

DL=DETECTION LIMIT, ND=NOT DETECTED

*Mar. R. Walton*  
 ACCURA ANALYTICAL LABORATORY, INC.

CLIENT: Applied Engineering & Science	CLIENT PROJECT: CSX (Vaughn Landfill)
CLIENT CONTACT: Mr. Dave Butler	LAB PROJECT #: 7518
DATE REPORT REVISED: 02-28-95	REPORT DATE: 03-06-95
SAMPLE ID #: 29723	DATE OF ANALYSIS/BY: 03-03-95/JF
SAMPLE MATRIX: Soil	

**DAILY QA/QC: BNA (8270) SURROGATE PERCENT RECOVERY RESULTS:**

AAL SAMPLE #	2-FLUOROPHENOL (25-121)	PHENOL-D6 (24-113)	NITROBENZENE-D5 (23-120)	2-FLUOROBIPHENYL (30-115)	2,4,6-TRIBROMOPHENOL (19-122)	P-TERPHENYL-D14 (18-137)
Blank	55	61	56	72	75	69
29723	67	74	70	99	98	111

*Mr. R. Walter*  
 ACCURA ANALYTICAL LABORATORY, INC.



ACCURA ANALYTICAL LABORATORY, INC.  
Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800 Fax # (404) 449-5477

CHAIN OF CUSTODY

Company Name: Applied Engineering + Science Inc  
 Address: 2261 Perimeter Park Dr. Atlanta GA 30341  
 Contact Name: Dave Butler  
 Contact Phone #: (404) 454-1810 Fax #: (404) 454-1816  
 Project Name: CSX/Vaughn Landfill  
 Client Project #: 4365A  
 Client P.O. # \_\_\_\_\_

For Laboratory Use Only

Custody Seal: (Y) N

QC Level: N 1 2 3 4

Entered into LIMS: \_\_\_\_\_

Sample Condition: Excellent

Page 1 OF 2  
 Init/Temp: 3m 4 1/2  
 AAL Project #: 7530

Samplers: (signature) Dave Butler  
 Samplers: (printed) Dave Butler

Station #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Station Location:	No. of Containers	ANALYSIS					Remarks	AAL #
								PCRA Metals	DCC	TPH (9071)	VOC	Semi VOC		
						Landfill	2	✓	✓	✓	✓			29773
LF027	2-9-95 1000		✓	S		Landfill	2	✓	✓	✓	✓			29774
LF026	" 1015		✓	S		"	2	✓	✓	✓	✓			29775
LF028	" 1045		✓	S		"	2	✓	✓	✓	✓			29776
LF029	" 1140		✓	S		"	2	✓	✓	✓	✓			29777
LF019	" 1205		✓	S		"	2	✓	✓	✓	✓			29778
LF030	" 1235		✓	S		"	2	✓	✓	✓	✓			29779
LF033	" 1255		✓	S		"	2	✓	✓	✓	✓			29780
LF032	" 1315		✓	S		"	2	✓	✓	✓	✓			29781
LF031	" 1330		✓	S		"	2	✓	✓	✓	✓			29782
LF007	" 1400		✓	S		"	2	✓	✓	✓	✓			29783
LF008	" 1610		✓	S		"	2	✓	✓	✓	✓			29782

Relinquished By: Dave Butler Date / Time: 2-9-95 1830

Received By: \_\_\_\_\_ Date / Time: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date / Time: \_\_\_\_\_

Received At Laboratory By: Braune Date / Time: 2-10-95 1050

Special Requirements Or Remarks: \_\_\_\_\_

Turnaround Time Requested: \_\_\_\_\_



# ACCURA ANALYTICAL LABORATORY, INC.

Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071  
 Phone # (404) 449-8800 Fax # (404) 449-5477

## CHAIN OF CUSTODY

Company Name: Applied Engineering + Science  
 Address: 2261 Perimeter Park Dr.  
 Contact Name: Dave Butler  
 Contact Phone # (404) 454-1810 Fax # (404) 454-1816  
 Project Name: CSX / Vaughn Landfill  
 Client Project # 4365A  
 Client P.O. # \_\_\_\_\_

For Laboratory Use Only  
 Custody Seal: (Y) N Page 2 OF 2  
 QC Level: N 1 2 3 4 Init/Temp: 3m 4E  
 Entered into LIMS: \_\_\_\_\_ AAL Project # 7530  
 Sample Condition: Excellent

Samplers: (signature) Dave Butler  
 Samplers: (printed) Dave Butler

Station #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Station Location:	No. of Containers	ANALYSIS				Remarks	AAL #
								PCB	RCRA Metals	VOC	Semi-VOC		
LF002 A	2-8-95 1630		✓	W	-	landfill	1	1				29784	<del>29783</del>
LF003 A	2-8-95 1700		✓	W	-	"	1	1				29785	<del>29784</del>
LF027 A	2-9-95 0935		✓	W	-	"	5	1	1	2	1	29786	<del>29785</del>
LF029 A	" 1010		✓	W	-	"	4	1	1	2		29787	<del>29786</del>
LF031 A	" 1035		✓	W	-	"	4	1	1	2		29788	<del>29787</del>

Relinquished By: Dave Butler Date / Time: 2-9-95 1830  
 Received By: \_\_\_\_\_ Date / Time: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date / Time: \_\_\_\_\_  
 Received At Laboratory By: R. Moore #1... B. D. 7 Date / Time: 2-10-95 1050  
 Special Requirements Or Remarks: \_\_\_\_\_  
 Turnaround Time Requested: \_\_\_\_\_



# ANALYTICAL SERVICES, INC.

ENVIRONMENTAL MONITORING & LABORATORY ANALYSIS

110 TECHNOLOGY PARKWAY • NORCROSS GEORGIA 30092

(404) 734-4200 • FAX (404) 734-4201

## CHAIN OF CUSTODY RECORD

CLIENT NAME				PROJECT NAME				PROJECT NUMBER				PURCHASE ORDER NO.			
Applied Engineering + Science				CSX/Vaughn Landfill				4365 A				FOR LAB USE ONLY			
CLIENT ADDRESS AND PHONE NUMBER				ANALYSES REQUESTED				LAB ID							
2261 Perimeter Park Dr. Suite 1 Atlanta, GA 30341 404 454 1810				RCRA Metals PCBs VOCs Semi-VOCs TPA				LAB ID							
PROJECT MANAGER				COPY TO (if applicable)				LAB #							
Dave Butler															
REQUESTED COMPLETION DATE				SAMPLING REQUIREMENTS				PROJECT NO.							
2/21/95				SCWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>											
SAMPLE ID				# OF CONTAINERS				ACK							
								VERIFIED							
DATE				TIME				QUOTE #							
								RS							
COMPL				GRA				NO. OF SAMP							
								PG							
SOIL				SAMPLER				OF							
SAMPLE DESCRIPTIONS				REMARKS/ADDITIONAL INFORMATION											
LF001	2-7-95	1615	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29662		
LF002	"	1635	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29663		
LF004	"	1530	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29664		
LF005	"	1430	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29665		
LF013	2-6-95	1145	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29666		
LF014	"	1235	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29667		
LF015	"	1530	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29668		
LF016	"	1555	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29669		
LF017	2/7/95	0900	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29670		
LF023	"	1000	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29671		
LF023A	"	1045	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29672		
LF018	"	1720	✓	✓	2	✓	✓	✓	✓	✓	✓	✓	29673		
WE001	"	1355	✓	✓	3	✓	✓	✓	✓	✓	✓	✓	29674		
WE002	"	1430	✓	✓	3	✓	✓	✓	✓	✓	✓	✓	29675		
DD001	"	1510	✓	✓	3	✓	✓	✓	✓	✓	✓	✓	29676		

SAMPLED BY AND TITLE				RELINQUISHED BY				DATE/TIME				HAZWRAP/NEESA Y N			
Dave Butler PM				Dave Butler				2-7-95 1830				OC LEVEL 1 2 3			
RECEIVED BY:				RELINQUISHED BY:				DATE/TIME				COC			
												ICE			
RECEIVED BY:				RELINQUISHED BY:				DATE/TIME				ANA REQ			
												TEMP			
RECEIVED BY LAB:				SAMPLE SHIPPED VIA				AIR BILL #				CUST SEAL			
				UPS BUS FED-EX HAND OTHER								PH			
REMARKS				ENTERED INTO LIMS				REVIEWED				SAMPLE COND.			







CHAIN OF CUSTODY RECORD

CLIENT NAME <i>Applied Engineering + Science</i>				# OF CONTAINERS	PROJECT NAME <i>CSX/Vaughn Landfill</i>		PROJECT NUMBER <i>4365A</i>		LAB ID	PURCHASE ORDER NO.				
CLIENT ADDRESS AND PHONE NUMBER <i>2761 Perimeter Park Dr. Atlanta, GA 30341</i>					ANALYSES REQUESTED						FOR LAB USE ONLY			
PROJECT MANAGER <i>Dave Butler</i>		COPY TO (if applicable)			RCRA Metals	PCBS	VOCs	Semi-VOCs		TPH	413.1	LAB #		
REQUESTED COMPLETION DATE <i>2/22/95</i>		SAMPLING REQUIREMENTS SDWA NPDES RCRA OTHER <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		PROJECT NO. <i>7518</i>										
SAMPLE ID	DATE	TIME	C O M P	G R A B	S O I L	SAMPLE DESCRIPTIONS			ACK VERIFIED					
									QUOTE # RS					
									NO. OF SAMP PG OF					
										REMARKS/ADDITIONAL INFORMATION				
									29712					
									29713					
									29714					
									29715					
									29716					
									29717					
									29718					
									29719					
									29720					
									29721					
									29722					
									29723					
SAMPLED BY AND TITLE <i>Dave Butler PM</i>				DATE/TIME <i>2-8-95 1700</i>		RELINQUISHED BY <i>Dave Butler</i>		DATE/TIME <i>2-8-95 1900</i>		HAZWRAP/NEESA Y N				
RECEIVED BY: <i>FED-EX</i>				DATE/TIME		RELINQUISHED BY: <i>FED-EX</i>		DATE/TIME		QC LEVEL 1 2 3				
RECEIVED BY:				DATE/TIME		RELINQUISHED BY:		DATE/TIME		COC ICE				
RECEIVED BY LAB: <i>Gene, Mind 07</i>				DATE/TIME <i>2-9-95 1145</i>		SAMPLE SHIPPED VIA UPS BUS <u>FED-EX</u> HAND OTHER		AIR BILL #		ANA REQ TEMP				
REMARKS										CUST SEAL PH				
										SAMPLE COND.				
										ENTERED INTO LIMS				
										COC REVIEWED				





ACCURA ANALYTICAL LABORATORY, INC.  
Environmental Analytical Services

6017 Financial Drive, Norcross, GA 30071  
Phone # (404) 449-8800 Fax # (404) 449-3477

CHAIN OF CUSTODY

Company Name: Applied Engineering & Science  
 Address: 2261 Perimeter Park Dr.  
 Contact Name: Dave Butler  
 Contact Phone # (404) 454-1810 Fax # (404) 454-1816  
 Project Name: CSX/Vaughn Landfill  
 Client Project # 4365A  
 Client P.O. # \_\_\_\_\_

**For Laboratory Use Only**  
 Custody Seal: Y N Page 1 OF 1  
 QC Level: N 1 2 3 4 Init/Temp: 3m 42  
 Entered into LIMS: \_\_\_\_\_ AAL Project # 7536  
 Sample Condition: \_\_\_\_\_

Samplers: (signature) Dave Butler Samplers: (printed) Dave Butler

Station #	Sample Date / Time	Comp	Grab	Matrix	Preserved	Station Location:	No. of Containers	ANALYSIS					Remarks	AAL #
								RCRA Metal	PCB	VOC	T.P.H	Semi VOC		
LF009	2-10-95/1100	✓	S			landfill	2	✓	✓	✓				29812
WSC02	2-10/1130	✓	S			wetland south	3	✓	✓	✓				29813
SWW002	2-10/1215	✓	W			surface water wetland west	4	✓	✓	✓	✓			29814

Relinquished By: Dave Butler Date / Time: 2-10-95/1530  
 Received By: \_\_\_\_\_ Date / Time: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date / Time: \_\_\_\_\_  
 Received At Laboratory By: K. L. O. C. Date / Time: 2-10-95 1538  
 Special Requirements Or Remarks: \_\_\_\_\_  
 Turnaround Time Requested: Standard