C-E ENVIRONMENTAL, INC.

US EPA RECORDS CENTER REGION 5
449302

FINAL REPORT

SITE ASSESSMENT - PHASE II
FORMER DISPOSAL AREA

HYDRA-MATIC PLANT
TOLEDO, OHIO

Prepared for:

HYDRA-MATIC DIVISION OF
GENERAL MOTORS CORPORATION
TOLEDO, OHIO

[illegible]

CONSULTING ENGINEERING

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JULY, 1990

5859-01

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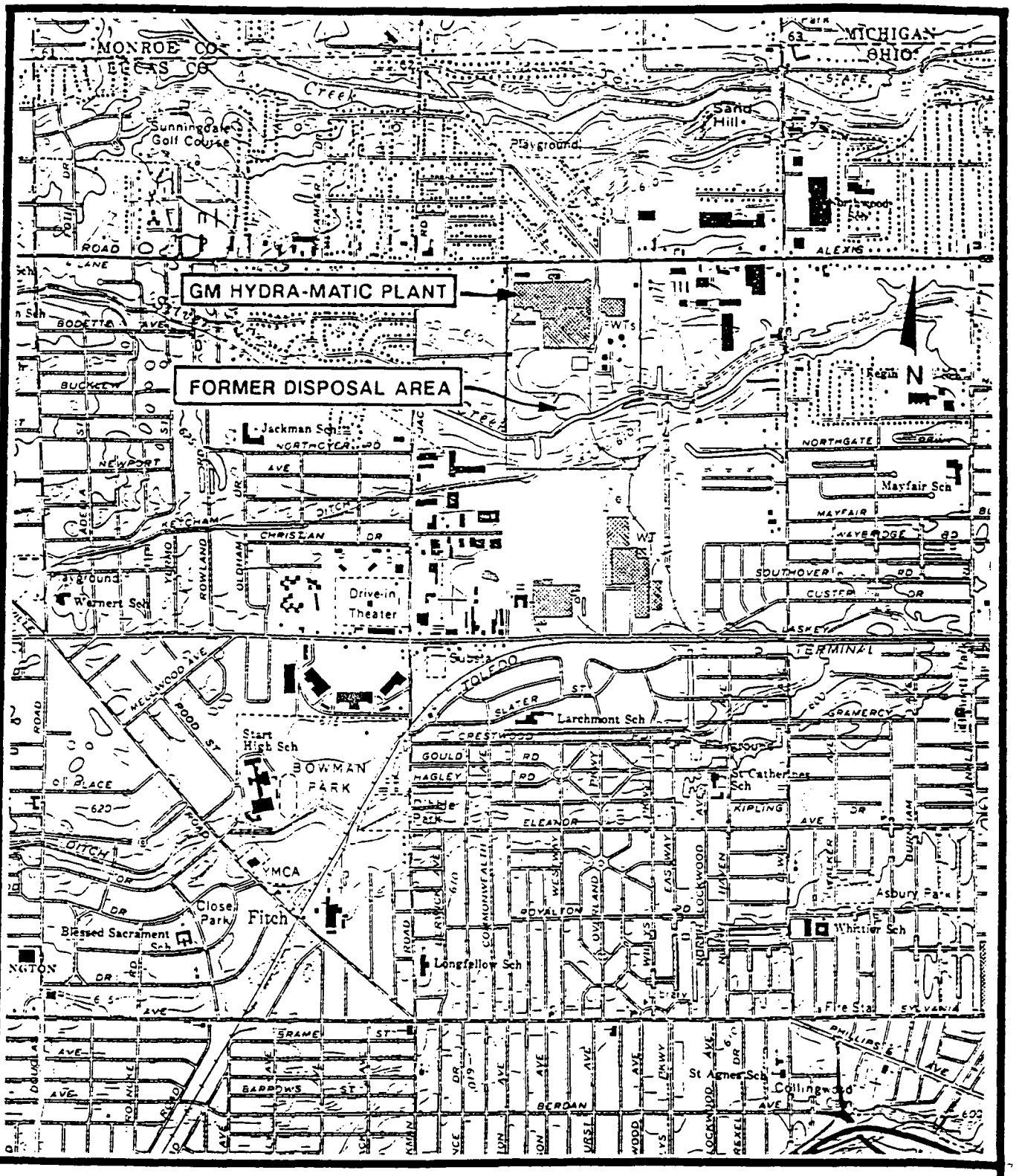
1.0 INTRODUCTION

This report describes Phase II of the site assessment that C-E Environmental, Inc. (C-EE) conducted for the Hydra-matic Division of General Motors Corporation (Hydra-matic) at a former disposal area located at Hydra-matic's facility in Toledo, Ohio (see Figure 1-1).

In late 1988, Hydra-matic discovered that a portion of their Toledo plant site, approximately 5 acres in size, was used in the late 1950s and 1960s as a disposal area (see Figure 1-2). The disposal area appears to be bounded by railroad tracks to the north and east and by the Silver Creek to the south. Hydra-matic owns all of the land abutting this parcel. According to Hydra-matic, open burning of wastes in the disposal area was common practice during its operation. An aerial photograph of the Hydra-matic facility from the late 1950s shows active waste disposal operations at the site.

In addition, fire-fighter training exercises have been carried out on the northern end of the disposal area. Large pieces of equipment were set on fire by igniting fuels on or around the equipment. In the past, paint sludge was reportedly utilized as a fuel.

C-EE conducted a preliminary site assessment (Phase I) at the disposal area and its environs for Hydra-matic in January, 1989. The assessment included a magnetometer survey, soil borings, monitoring well installations, and sampling and analysis. Based on the Phase I findings, it was decided by C-EE and Hydra-matic that an additional phase of investigation, including sampling and analysis, be conducted on-site.



SOURCE: USGS QUADRANGLE
TOLEDO, OH-MI, 1980

SCALE

0 2000 4000 FEET

FIGURE 1-1
SITE LOCATION
GM HYDRA-MATIC
TOLEDO, OHIO

C-E ENVIRONMENTAL, INC.

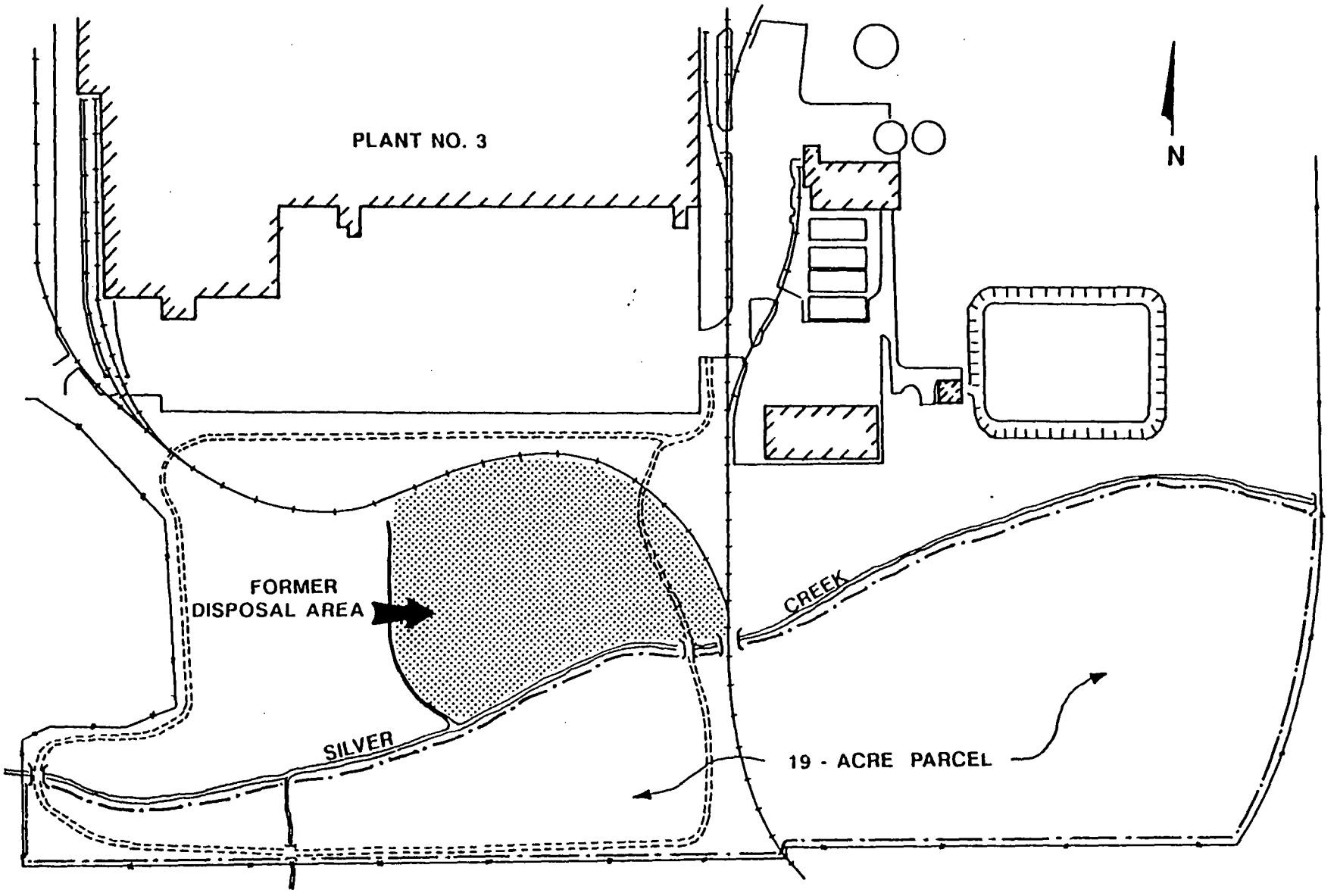


FIGURE 1-2
SITE FEATURES
GM HYDRA-MATIC
TOLEDO, OHIO

C-E ENVIRONMENTAL, INC.

2.0 PROJECT OBJECTIVES

The goal of C-EE's Phase II site assessment was to confirm the results of the first phase of investigation that was conducted by C-EE in January, 1989. The specific objectives of Phase II were as follows:

(a) confirm the presence of polychlorinated biphenyls (PCBs) at specific locations within the disposal area and at the background soil location established during Phase I;

(b) further investigate the impact of the disposal area on sediments in the Silver Creek;

(c) assess if contaminants, carried by ash or surface runoff, were deposited in the ditch immediately bounding the assumed western boundary of the disposal area;

(d) confirm the presence of contaminants in groundwater beneath the disposal area that were detected during Phase I; and

(e) characterize the seepage from the disposal area which is discharging to the Silver Creek.

3.0 FIELD ACTIVITIES

The field activities described in this section were conducted by C-EE on August 22 and 23, 1989. The activities included static water level measurements and groundwater, surface soil/waste, creek sediment, and leachate sampling. Analytical services were provided by Clayton Environmental Consultants (Clayton), Novi, Michigan. In addition, Clayton provided analytical reporting documents presented in the format requested by Hydra-matic (Format I). Appendix A contains Clayton's laboratory analytical reports. Appendix B (bound separately) provides Hydra-matic with Clayton's quality control package.

3.1 GROUNDWATER SAMPLING

During the conduct of Phase I, groundwater directly beneath the disposal area was found to be contaminated with trichloroethene (TCE) and trans-1-2 dichloroethene (DCE). To confirm the presence of these contaminants, C-EE collected groundwater samples from the five on-site monitoring wells on August 22. Prior to sampling, the static water levels and well depths were measured from the top of each well casing. The volume of water standing inside the well casing was calculated, and three water volumes were evacuated from the well (or the well was bailed dry) using a stainless steel bailer. Groundwater temperature, pH, and specific conductance were recorded during purging and just before sampling. These measurements were used to indicate that a representative groundwater sample was being collected. Once these three parameters stabilized, it was assumed that all stagnant water in the well casing had been removed. See Appendix C for field sampling data sheets.

After purging each well, groundwater samples were collected with a stainless steel bailer. Following collection, the samples were submitted to Clayton for analysis of dissolved metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, copper, zinc, and silver) and Hazardous Substance List (HSL) volatiles. The aliquot of each groundwater sample to be analyzed for dissolved metals was pressure-filtered with nitrogen in a 2.4-liter barrel filter using a membrane filter with a 0.45-micron pore size. Following the filtering step, each sample was preserved with nitric acid.

The stainless steel bailer used for sample collection was decontaminated between monitoring well locations with a trisodium phosphate distilled water solution wash and distilled water rinse. The decontamination procedures were verified by submitting a sampler blank to the laboratory for analysis. A sampler blank is a distilled water sample handled and processed in the same manner as a groundwater sample (i.e., it is poured into the bailer and into sample bottles, filtered, and preserved). In addition to the sampler blank, one duplicate sample of MW-1 and one trip blank were submitted for analysis.

3.2 SURFACE SOIL/WASTE SAMPLING

During C-EE's preliminary site assessment, two surface waste samples (HA-1 and HA-2) and one surface soil sample (BS-1) were found to contain the PCB, Arochlor 1248. C-EE's sampling of soil/waste during Phase II was designed to confirm the presence of PCBs at these locations. Pertinent field sampling data sheets can be found in Appendix C.

During Phase I, two samples were collected in charred areas on the disposal area surface (areas where fire-fighting training exercises were formerly carried out). To confirm the presence of PCBs in these charred areas, C-EE collected surface samples (0 to 1 foot) adjacent to Phase I locations HA-1 and HA-2 with a hand-auger; these samples were labelled HA-3 and HA-4.

C-EE also collected two additional surface samples (HA-5 and HA-6) on the disposal area as shown in Figure 3-1. The four surface samples plus one blind PCB sample (supplied by Hydra-matic) were submitted to Clayton for analysis of PCBs.

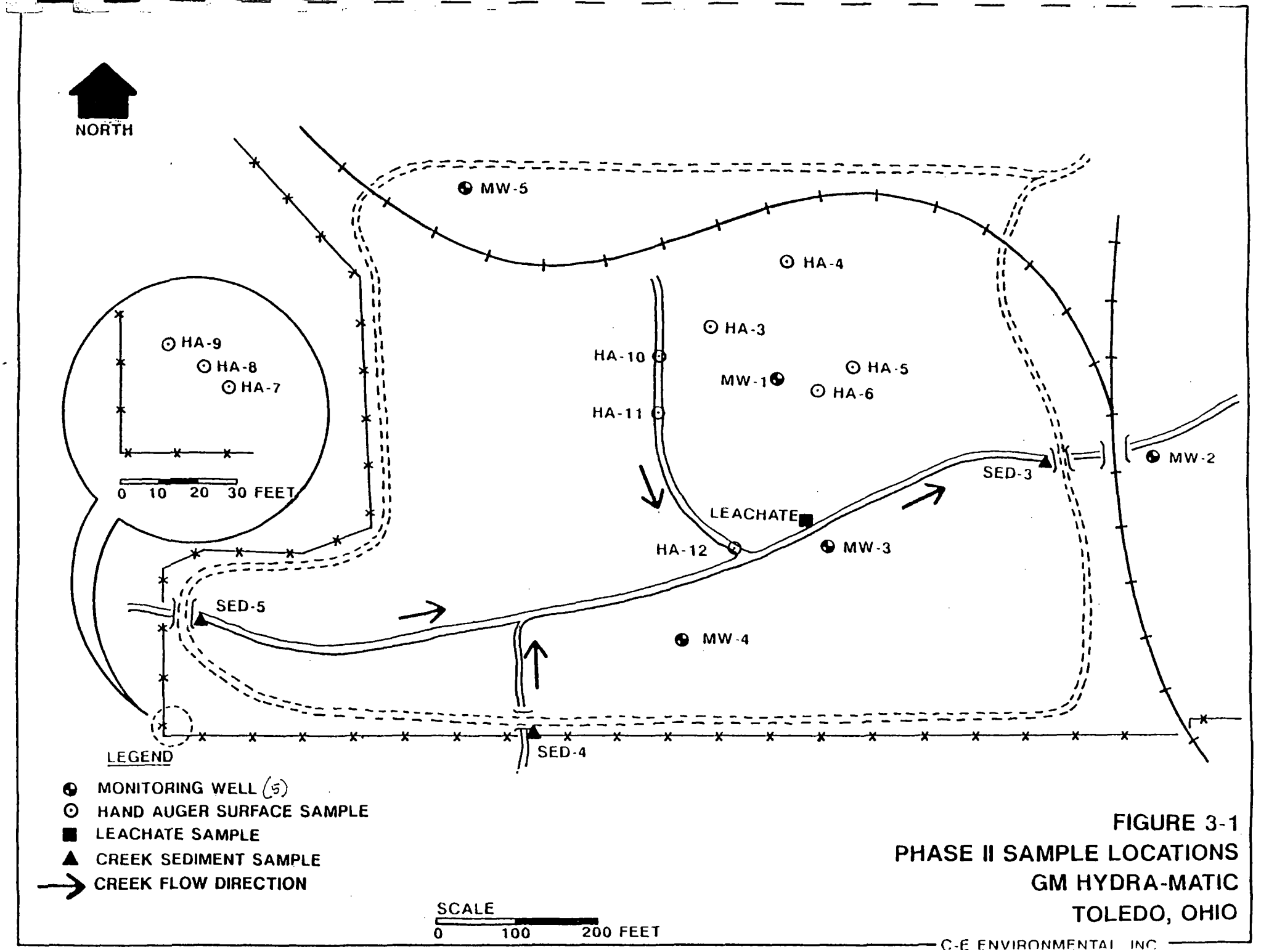


FIGURE 3-1
PHASE II SAMPLE LOCATIONS
GM HYDRA-MATIC
TOLEDO, OHIO

C-E ENVIRONMENTAL, INC.

During Phase I, the PCB Arochlor 1248 was detected in the surface soil sample, BS-1 located in the southwest corner of the study area. C-EE evaluated the horizontal extent of PCB contamination at this location during Phase II by collecting three surface soil samples with a hand-auger at the locations shown in Figure 3-1. The three surface soil samples plus one duplicate sample were submitted to Clayton for analysis of PCBs.

Contaminants from the disposal area, transported by surface runoff, may have been deposited in the ditch that bounds the western edge of the disposal area. During Phase II, C-EE collected three surface soil samples in the ditch with a hand-auger at the locations shown in Figure 3-1 on August 23. The three soil samples plus one duplicate were submitted to Clayton for analysis of HSL volatile and base/neutral semi-volatile organics, PCBs, and total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, copper, zinc, and silver).

3.3 LEACHATE SAMPLING

During the June 13 meeting at the Hydra-matic facility, Hydra-matic personnel identified an area along the southern boundary of the disposal area where seepage was occurring from the side of the disposal area. C-EE originally proposed to collect a sample of this leachate. However, at the time of sample collection, the amount of leachate emanating from the disposal area was insufficient for chemical analysis. C-EE, therefore, collected a sample of the leachate saturated sediments in this area. See Appendix C for all field sampling data sheets.

Following collection, this sample was submitted to the laboratory for analysis of HSL volatile and base/neutral semi-volatile organics and total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, copper, zinc, and silver).

3.4 CREEK SEDIMENT SAMPLING

To assess the impact of the disposal area on sediments in the Silver Creek, C-EE collected three sediment samples at locations both upstream and downstream of the disposal area as shown in Figure 3-1. The samples were collected with a stainless-steel scoop from the top three inches of sediment. See Appendix C for field sampling reports.

Following collection, the samples were submitted to the laboratory for analysis of base/neutral semi-volatile organics and the metals lead and zinc.

4.0 RESULTS

This section summarizes the results of Phase II of the site assessment described in Section 3.0. Analytical results for groundwater, surface soil/waste, leachate, and creek sediment samples are presented.

4.1 DIRECTION OF GROUNDWATER FLOW

As discussed in Section 3.1, static water levels were measured in all five monitoring wells on-site prior to groundwater sampling. Elevation data and static water level measurements obtained on August 22 are included in Table 4-1.

Based upon groundwater and surface water (creek) elevation data, it appears that groundwater beneath the disposal area generally flows southward toward the Silver Creek. On the 19-acre parcel south of the Silver Creek, groundwater tends to flow in a north to northeast direction also towards the creek (Figure 4-1). These general groundwater flow directions confirm the observations made during C-EE's preliminary site assessment conducted in January, 1989.

4.2 GROUNDWATER

In addition to the groundwater samples collected from the five monitoring wells, three additional water samples were submitted for quality control: one duplicate sample from MW-1; one sampler blank; and one trip blank. It should be noted that the VOA vials submitted to Clayton for the duplicate sample from MW-1 (MW-200) froze and broke during laboratory storage and could not be analyzed. Consequently, C-EE requested that Clayton utilize the groundwater sample from MW-1 as the intra-laboratory split sample, required as part of Hydra-matic's requested Format 1 analytical reporting package. Results of the analysis are presented in Tables 4-2 and 4-3. Laboratory analytical reports are included in Appendix A.

TCE was detected at a concentration of 23 parts per billion (ppb) in well MW-1 and at a concentration of 22 ppb in the intra-laboratory split of the groundwater sample from MW-1. (See Table 4-2). DCE was also detected in MW-1 and its intra-laboratory duplicate at concentrations of 54 parts per billion (ppb) and 55 ppb, respectively. These two organic contaminants were detected in groundwater samples collected from MW-1 during Phase I at concentrations of 16 ppb (TCE) and 39 ppb (DCE).

Acetone, a common laboratory contaminant was also detected in all of the groundwater samples submitted, as well as the trip blank. Concentrations of acetone ranged from 10 ppb (MW-100, sampler blank) to 60 ppb (MW-4 and trip blank). It should be noted that acetone was also detected in the laboratory method blank at a concentration of 10 ppb (see Appendix B).

Concentrations of the metals, arsenic, barium, copper, lead, and zinc were detected in some of the groundwater samples submitted (see Table 4-3). With the exception of lead, detected in MW-3, the concentrations reported are below applicable drinking water standards. The concentration of lead in MW-3 was found to be equal to the Maximum Contaminant Level (50 ppb). During Phase I, the lead concentration in MW-3 was found to be less than 20 ppb.

4.3 SURFACE WASTES

C-EE collected four surface waste samples (0 to 1 foot) from areas that were charred on the disposal area surface (HA-3, HA-4, HA-5, and HA-6). In addition to the four hand-auger samples, one blind PCB sample (supplied by Hydra-matic) was submitted to Clayton for analysis of PCBs. Analytical results for these samples are presented in Table 4-4. The laboratory analytical reports are included in Appendix A.

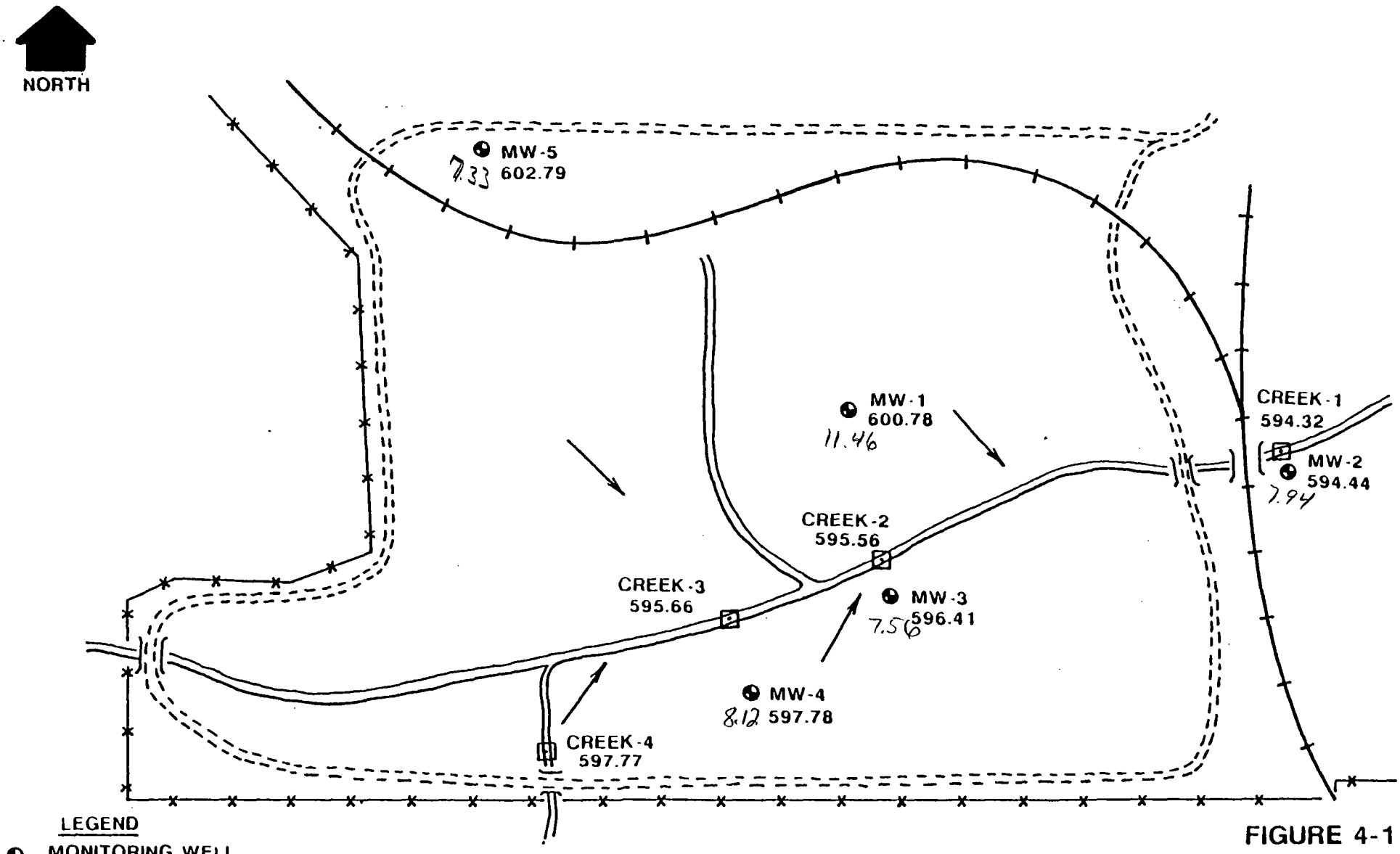
TABLE 4-1

STATIC WATER LEVELS AND ELEVATION DATA
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

WELL NO.	TOP OF CASING ELEVATION	DEPTH TO WATER	STATIC WATER LEVEL ELEVATION	DEPTH TO BOTTOM OF WELL
MW-1	612.24	11.46	600.78	15
MW-2	602.38	7.94	594.44	8.5
MW-3	603.97	7.56	596.41	8.5
MW-4	605.90	8.12	597.78	8.5
MW-5	610.12	7.33	602.79	10

NOTES:

1. All measurements in feet.
2. Elevations referenced to rim of storm sewer manhole Number 15.
3. Water level measurements taken on August 22, 1989.



LEGEND

- MONITORING WELL
- CREEK WATER SURFACE ELEVATION LOCATION
- 602.79 SURFACE/STATIC WATER ELEVATION
- GROUNDWATER FLOW DIRECTION

SCALE

0 100 200 FEET

FIGURE 4-1
GROUNDWATER ELEVATION
AND FLOW DIRECTION MAP
AUGUST 22, 1989
GM HYDRA-MATIC
TOLEDO, OHIO

C-E ENVIRONMENTAL, INC.

TABLE 4-2

VOLATILE ORGANICS IN GROUNDWATER
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

VOLATILE ORGANIC COMPOUNDS	MW-1	MW-1 (LAB DUP)	MW-2	MW-3	MW-4	MW-5	MW-100 (SAMPLER BLANK)	TRIP BLANK
Acetone	20	30	20	40	60	30	10	60
Benzene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromomethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Carbon Disulfide	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Carbon Tetrachloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloroethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Dibromochloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethene (total)	54	55	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Cis-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trans-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Hexanone	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylene Chloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Methyl-2-Pentanone	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Styrene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Toluene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1,1-Trichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trichloroethene	23	22	< 5	< 5	< 5	< 5	< 5	< 5
Vinyl Acetate	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Chloride	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Xylenes (total)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5

Notes:
1. All concentrations are reported as ug/l (ppb).

TABLE 4-3

INORGANICS IN GROUNDWATER
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

TOTAL METALS	MW-1	MW-1 (LAB DUP)	MW-200 (FIELD DUP OF MW-1)	MW-2	MW-3	MW-4	MW-5	MW-100 (SAMPLER BLANK)
ARSENIC	< 0.002	< 0.002	< 0.002	0.006	< 0.002	0.028	0.008	< 0.002
BARIUM	0.13	0.13	0.12	0.18	0.10	0.17	0.23	< 0.05
CADMIUM	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
CHROMIUM	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
COPPER	0.50	0.49	0.07	0.01	0.72	0.94	0.17	0.03
LEAD	< 0.02	< 0.02	< 0.02	< 0.02	0.05	< 0.02	< 0.02	< 0.02
MERCURY	< 0.001	NA	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SELENIUM	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
SILVER	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
ZINC	0.42	0.39	0.14	0.08	0.59	0.62	0.24	< 0.05

Notes:
1. All concentrations in mg/L (ppm).
2. NA - Not analyzed; insufficient volume of sample.

TABLE 4-4

POLYCHLORINATED BIPHENYLS (PCBs) IN WASTES
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

POLYCHLORINATED BIPHENYL COMPOUNDS	HA-3	HA-4	HA-5	HA-6	HA-500 (BLIND QC SAMPLE)
PCB Arochlor-1016	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1221	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1232	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1242	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1248	< 100	< 100	3,500	12,000	< 100
PCB Arochlor-1254	500	2,300	< 200	< 200	< 200
PCB Arochlor-1260	< 200	< 200	< 200	< 200	56,000

Notes:
1. All concentrations are reported as ug/kg (ppb).

The PCB compound, Arochlor 1248, was detected in the surface waste samples HA-5 (3,500 ppb) and HA-6 (12,000 ppb). Arochlor 1254 was detected in surface waste samples HA-3 (500 ppb) and HA-4 (2,300 ppb). HA-3 and HA-4 were collected adjacent to Phase I locations, HA-1 and HA-2, which exhibited concentrations of the Arochlor 1248 of 4,700 and 60,000 ppb, respectively.

Clayton reported a concentration of 56,000 ppb of the Arochlor 1260 for the blind PCB sample (HA-500) provided by Hydra-matic. A representative of Hydra-matic informed C-EE that the true mean concentration for the sample was 78,200 ppb with a standard deviation of $\pm$ 21,000 ppb.

4.4 SURFACE SOILS

C-EE collected a total of six surface soil samples on-site during Phase II of the site assessment. Three were collected in the southwest corner of the adjacent 19-acre parcel (HA-7, HA-8, and HA-9) and three were collected in the ditch that bounds the western edge of the disposal area (HA-10, HA-11 and HA-12). The six samples, including two duplicate samples for quality control (HA-300 and HA-400) were submitted for analysis. Results of the analysis are presented in Tables 4-5 through 4-8. Laboratory analytical reports are included in Appendix A.

Surface soil samples HA-7, HA-8, HA-9, and HA-300 (duplicate of HA-7) all exhibited detectable concentrations of the PCB Arochlor 1248 (see Table 4-5). Concentrations ranged from 500 ppb (HA-7 and HA-300) to 13,000 ppb (HA-9). The same PCB compound was detected in surface soil sample BS-1 (4,300 ppb), collected in the same general area during Phase I.

None of the surface soil samples collected in the ditch contained PCBs (see Table 4-5).

The volatile organic compound, DCE, was detected in the ditch surface soil samples HA-10, HA-400 (duplicate of HA-10), and HA-11 at concentrations ranging from 8 ppb (HA-10) to 16 ppb (HA-400). (See Table 4-6). The common laboratory contaminants acetone and methylene chloride were also detected in the four soil samples. Concentrations of acetone ranged from 30 ppb (HA-11 and HA-12) to 70 ppb (HA-10). Concentrations of methylene chloride ranged from 9 ppb (HA-12) to 20 ppb (HA-10).

Several base/neutral semi-volatile compounds were detected in ditch surface soil sample HA-12 as evidenced in Table 4-7. Those compounds detected in HA-12 were found at concentrations less than 3,300 ppb. No semi-volatile compounds were detected in samples HA-10, HA-400, and HA-11.

Concentrations of metals in soil samples HA-10, HA-400, HA-11, and HA-12 were below or closely approximate those detected in background surface soil sample BS-1, collected during Phase I with the exception of zinc (see Table 4-8). Zinc concentrations in the four soil samples ranged from 24 to 59 parts per million (ppm). Although present at levels above background, these concentrations are not considered significant. Depending on the soils type, concentrations of zinc in soils of southern Michigan can range from 0 to 50 ppm.

4.5 LEACHATE

One sample of leachate saturated sediments emanating from the disposal area was submitted for analysis. Analytical results are presented in Tables 4-6, 4-9, and 4-10. Laboratory analytical reports are included in Appendix A.

Acetone, a common laboratory contaminant, was found in the leachate sample at a concentration of 50 ppm (see Table 4-6). No other volatile compounds were detected in the sample.

TABLE 4-5

POLYCHLORINATED BIPHENYLS (PCBs) IN SOILS
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

POLYCHLORINATED BIPHENYL COMPOUNDS	HA-7	HA-300 (DUP OF HA-7)	HA-8	HA-9	HA-10	HA-400 (DUP OF HA-10)	HA-11	HA-12
PCB Arochlor-1016	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1221	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1232	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1242	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
PCB Arochlor-1248	500	500	2,900	13,000	< 100	< 100	< 100	< 100
PCB Arochlor-1254	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
PCB Arochlor-1260	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200

Notes:
1. All concentrations are reported as ug/kg (ppb).

TABLE 4-6

VOLATILE ORGANICS IN SOIL AND LEACHATE
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

VOLATILE ORGANIC COMPOUNDS	HA-10	HA-400 (DUP OF HA-10)	HA-11	HA-12	LEACHATE
Acetone	70	40	30	30	50
Benzene	< 6	< 6	< 7	< 6	< 8
Bromodichloromethane	< 6	< 6	< 7	< 6	< 8
Bromoform	< 6	< 6	< 7	< 6	< 8
Bromomethane	< 10	< 10	< 10	< 10	< 20
2-Butanone	< 10	< 10	< 10	< 10	< 20
Carbon Disulfide	< 6	< 6	< 7	< 6	< 8
Carbon Tetrachloride	< 6	< 6	< 7	< 6	< 8
Chlorobenzene	< 6	< 6	< 7	< 6	< 8
Chloroethane	< 10	< 10	< 10	< 10	< 20
Chloroform	< 6	< 6	< 7	< 6	< 8
Chloromethane	< 10	< 10	< 10	< 10	< 20
Dibromochloromethane	< 6	< 6	< 7	< 6	< 8
1,1-Dichloroethane	< 6	< 6	< 7	< 6	< 8
1,2-Dichloroethane	< 6	< 6	< 7	< 6	< 8
1,1-Dichloroethene	< 6	< 6	< 7	< 6	< 8
1,2-Dichloroethene (total)	8	16	13	< 6	< 8
1,2-Dichloropropane	< 6	< 6	< 7	< 6	< 8
cis-1,3-Dichloropropene	< 6	< 6	< 7	< 6	< 8
trans-1,3-Dichloropropene	< 6	< 6	< 7	< 6	< 8
Ethylbenzene	< 6	< 6	< 7	< 6	< 8
2-Hexanone	< 10	< 10	< 10	< 10	< 20
Methylene Chloride	20	14	14	9	< 8
4-Methyl-2-Pentanone	< 10	< 10	< 10	< 10	< 20
Styrene	< 6	< 6	< 7	< 6	< 8
1,1,2,2-Tetrachloroethane	< 6	< 6	< 7	< 6	< 8
Tetrachloroethene	< 6	< 6	< 7	< 6	< 8
Toluene	< 6	< 6	< 7	< 6	< 8
1,1,1-Trichloroethane	< 6	< 6	< 7	< 6	< 8
1,1,2-Trichloroethane	< 6	< 6	< 7	< 6	< 8
Trichloroethene	< 6	< 6	< 7	< 6	< 8
Vinyl Acetate	< 10	< 10	< 10	< 10	< 20
Vinyl Chloride	< 10	< 10	< 10	< 10	< 20
Xylenes (total)	< 6	< 6	< 7	< 6	< 8
Total Solids (%)	81	82	76	82	66

Notes:
1. All concentrations are reported as ug/kg (ppb).

TABLE 4-7

BASE/NEUTRAL EXTRACTABLE ORGANICS IN SOILS
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS	HA-10	HA-400 (DUP OF HA-10)	HA-11	HA-12
Acenaphthene	< 800	< 800	< 900	< 800
Acenaphthylene	< 800	< 800	< 900	< 800
Anthracene	< 800	< 800	< 900	< 800
Benzo (a) Anthracene	< 800	< 800	< 900	1,200
Benzo (b) Fluoranthene	< 800	< 800	< 900	1,400
Benzo (k) Fluoranthene	< 800	< 800	< 900	1,700
Benzo (a) Pyrene	< 800	< 800	< 900	1,300
Benzo (g,h,i) Perylene	< 800	< 800	< 900	1,200
Benzyl Alcohol	< 800	< 800	< 900	< 800
Butylbenzylphthalate	< 800	< 800	< 900	< 800
Bis(2-Chloroethyl)Ether	< 800	< 800	< 900	< 800
Bis(2-Chloroethoxy)Methane	< 800	< 800	< 900	< 800
Bis(2-Chloroisopropyl)Ether	< 800	< 800	< 900	< 800
Bis (2-Ethylhexyl) Phthalate	< 800	< 800	< 900	< 800
4-Bromophenyl-Phenylether	< 800	< 800	< 900	< 800
4-Chloroaniline	< 800	< 800	< 900	< 800
2-Chloronaphthalene	< 800	< 800	< 900	< 800
4-Chlorophenyl-Phenylether	< 800	< 800	< 900	< 800
Chrysene	< 800	< 800	< 900	1,500
Dibenzo (a,h) Anthracene	< 800	< 800	< 900	< 800
Dibenzofuran	< 800	< 800	< 900	< 800
Di-n-Butylphthalate	< 800	< 800	< 900	< 800
1,2-Dichlorobenzene	< 800	< 800	< 900	< 800
1,3-Dichlorobenzene	< 800	< 800	< 900	< 800
1,4-Dichlorobenzene	< 800	< 800	< 900	< 800
3,3-Dichlorobenzidine	< 2,000	< 2,000	< 2,000	< 2,000
Diethylphthalate	< 800	< 800	< 900	< 800
Dimethyl Phthalate	< 800	< 800	< 900	< 800
2,4-Dinitrotoluene	< 800	< 800	< 900	< 800
2,6-Dinitrotoluene	< 800	< 800	< 900	< 800
Di-n-Octyl Phthalate	< 800	< 800	< 900	< 800
Fluoranthene	< 800	< 800	< 900	3,300
Fluorene	< 800	< 800	< 900	< 800
Hexachlorobenzene	< 800	< 800	< 900	< 800
Hexacholorobutadiene	< 800	< 800	< 900	< 800
Hexachlorocyclopentadiene	< 800	< 800	< 900	< 800
Hexachloroethane	< 800	< 800	< 900	< 800
Indeno (1,2,3-cd) Pyrene	< 800	< 800	< 900	1,100
Isophorone	< 800	< 800	< 900	< 800
2-Methylnaphthalene	< 800	< 800	< 900	< 800
Naphthalene	< 800	< 800	< 900	< 800
2-Nitroaniline	< 4,000	< 4,000	< 4,000	< 4,000
3-Nitroaniline	< 4,000	< 4,000	< 4,000	< 4,000
4-Nitroaniline	< 4,000	< 4,000	< 4,000	< 4,000
Nitrobenzene	< 800	< 800	< 900	< 800
N-Nitroso-Di-n-Propylamine	< 800	< 800	< 900	< 800
N-Nitrosodiphenylamine	< 800	< 800	< 900	< 800
Phenanthrene	< 800	< 800	< 900	1,700
Pyrene	< 800	< 800	< 900	2,300
1,2,4-Trichlorobenzene	< 800	< 800	< 900	< 800
Total Solids (%)	81	82	76	82

Notes:
1. All concentrations are reported as ug/kg (ppb).

TABLE 4-8

INORGANICS IN SOILS
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

TOTAL METALS	HA-10	HA-400 (DUP OF HA-10)	HA-11	HA-12
ARSENIC	2.0	2.4	2.7	1.0
BARIUM	28	24	26	11
CADMIUM	< 0.2	0.5	< 0.2	0.3
CHROMIUM	5	5	5	2
COPPER	6.7	5.4	9.3	4.0
LEAD	6	5	6	21
MERCURY	< 0.06	< 0.06	< 0.07	0.08
SELENIUM	< 1.0	< 1.0	< 1.1	< 1.0
SILVER	< 0.5	< 0.5	< 0.5	< 0.5
ZINC	29	24	59	28

Notes:
1. All concentrations in ug/g (ppm).
2. NA - Not analyzed.

TABLE 4-9

BASE/NEUTRAL EXTRACTABLE ORGANICS IN CREEK
SEDIMENTS AND DISPOSAL AREA LEACHATE
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS	LEACHATE	SED-3	SED-4	SED-5
Acenaphthene	< 1,000	< 900	< 900	< 1,000
Acenaphthylene	< 1,000	< 900	< 900	< 1,000
Anthracene	< 1,000	< 900	< 900	< 1,000
Benzo (a) Anthracene	< 1,000	1,000	< 900	< 1,000
Benzo (b) Fluoranthene	< 1,000	1,300	< 900	< 1,000
Benzo (k) Fluoranthene	1,000	2,000	1,100	< 1,000
Benzo (a) Pyrene	< 1,000	1,300	< 900	< 1,000
Benzo (g,h,i) Perylene	< 1,000	< 900	< 900	< 1,000
Benzyl Alcohol	< 1,000	< 900	< 900	< 1,000
Butylbenzylphthalate	< 1,000	< 900	< 900	< 1,000
Bis(2-Chloroethyl)Ether	< 1,000	< 900	< 900	< 1,000
Bis(2-Chloroethoxy)Methane	< 1,000	< 900	< 900	< 1,000
Bis(2-Chloroisopropyl)Ether	< 1,000	< 900	< 900	< 1,000
Bis (2-Ethylhexyl) Phthalate	< 1,000	< 900	< 900	< 1,000
4-Bromophenyl-Phenylether	< 1,000	< 900	< 900	< 1,000
4-Chloroaniline	< 1,000	< 900	< 900	< 1,000
2-Chloronaphthalene	< 1,000	< 900	< 900	< 1,000
4-Chlorophenyl-Phenylether	< 1,000	< 900	< 900	< 1,000
Chrysene	1,000	1,500	< 900	< 1,000
Dibenzo (a,h) Anthracene	< 1,000	< 900	< 900	< 1,000
Dibenzofuran	< 1,000	< 900	< 900	< 1,000
Di-n-Butylphthalate	< 1,000	< 900	< 900	< 1,000
1,2-Dichlorobenzene	< 1,000	< 900	< 900	< 1,000
1,3-Dichlorobenzene	< 1,000	< 900	< 900	< 1,000
1,4-Dichlorobenzene	< 1,000	< 900	< 900	< 1,000
3,3-Dichlorobenzidine	< 2,000	< 2,000	< 2,000	< 2,000
Diethylphthalate	< 1,000	< 900	< 900	< 1,000
Dimethyl Phthalate	< 1,000	< 900	< 900	< 1,000
2,4-Dinitrotoluene	< 1,000	< 900	< 900	< 1,000
2,6-Dinitrotoluene	< 1,000	< 900	< 900	< 1,000
Di-n-Octyl Phthalate	< 1,000	< 900	< 900	< 1,000
Fluoranthene	2,000	3,400	1,400	2,000
Fluorene	< 1,000	< 900	< 900	< 1,000
Hexachlorobenzene	< 1,000	< 900	< 900	< 1,000
Hexacholorobutadiene	< 1,000	< 900	< 900	< 1,000
Hexachlorocyclopentadiene	< 1,000	< 900	< 900	< 1,000
Hexachloroethane	< 1,000	< 900	< 900	< 1,000
Indeno (1,2,3-cd) Pyrene	< 1,000	1,000	< 900	< 1,000
Isophorone	< 1,000	< 900	< 900	< 1,000
2-Methylnaphthalene	< 1,000	< 900	< 900	< 1,000
Naphthalene	< 1,000	< 900	< 900	< 1,000
2-Nitroaniline	< 5,000	< 5,000	< 4,000	< 5,000
3-Nitroaniline	< 5,000	< 5,000	< 4,000	< 5,000
4-Nitroaniline	< 5,000	< 5,000	< 4,000	< 5,000
Nitrobenzene	< 1,000	< 900	< 900	< 1,000
N-Nitroso-Di-n-Propylamine	< 1,000	< 900	< 900	< 1,000
N-Nitrosodiphenylamine	< 1,000	< 900	< 900	< 1,000
Phenanthrene	< 1,000	1,700	< 900	< 1,000
Pyrene	2,000	2,800	1,100	1,000
1,2,4-Trichlorobenzene	< 1,000	< 900	< 900	< 1,000
Total Solids (%)	66	71	76	76

Notes:
1. All concentrations are reported as ug/kg (ppb).

TABLE 4-10

INORGANICS IN CREEK SEDIMENTS
AND DISPOSAL AREA LEACHATE
GM HYDRA-MATIC, TOLEDO, OHIO
PHASE II SITE ASSESSMENT STUDY

TOTAL METALS	LEACHATE	LEACHATE (LAB DUP)	SED-3	SED-4	SED-5
ARSENIC	1.5	NA	NA	NA	NA
BARIUM	17	NA	NA	NA	NA
CADMIUM	< 0.3	NA	NA	NA	NA
CHROMIUM	< 3	NA	NA	NA	NA
COPPER	3.7	NA	NA	NA	NA
LEAD	11	NA	15	9	11
MERCURY	< 0.06	< 0.06	NA	NA	NA
SELENIUM	< 1.3	NA	NA	NA	NA
SILVER	< 0.6	NA	NA	NA	NA
ZINC	23	NA	27	19	20

Notes:
1. All concentrations in ug/g (ppm).
2. NA - Not analyzed.

Four base/neutral semi-volatile compounds (benzo(k)fluoranthene, chrysene, fluoranthene, and pyrene) were detected in the leachate sample (see Table 4-9). However, concentrations were less than 2,000 ppb.

Concentration of metals in the leachate sample were all below those expected to be in background soils on-site (see Table 4-10). It should be noted that the laboratory duplicated the leachate sample for mercury analysis to satisfy Hydra-matic's Format 1 analytical reporting requirements. Originally, groundwater sample, MW-1, was selected as the intra-laboratory duplicate sample. However, there was insufficient sample volume to conduct the duplicate mercury analysis on MW-1. C-EE, therefore, elected to have the laboratory conduct a duplicate analysis for mercury for the leachate sample (see Table 4-10).

4.6 CREEK SEDIMENTS

Three creek sediment samples (SED-3, SED-4, and SED-5) were submitted for laboratory analysis. Analytical results are presented in Tables 4-9 and 4-10. The laboratory analytical reports are included in Appendix A.

Several base/neutral semi-volatile compounds were detected in creek sediment sample SED-3 (see Table 4-9). Those detected in the SED-3 sample were at concentrations less than 3,400 ppb. Creek sediment sample SED-4 exhibited concentrations of benzo(k)fluoranthene (1,100 ppb), fluoranthene (1,400 ppb), and pyrene (1,100 ppb). Sample SED-5 also contained concentrations of the base/neutral compounds fluoranthene (2,000 ppb) and pyrene (1,000 ppb).

Concentrations of the metals, lead and zinc, were less than those found in creek sediment samples collected during Phase I (see Table 4-10). Concentrations of lead ranged from 9 ppm (SED-4) to 15 ppm (SED-3). Phase I sediment samples contained concentrations of lead as much as 110 ppm. During Phase II, zinc concentrations ranged from 19 ppm (SED-4) to 27 ppm (SED-3). Phase I sediment samples contained concentrations of zinc up to 79 ppm.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

As evidenced during Phase I of C-EE's site assessment, shallow groundwater directly beneath the waste material in the disposal area contains significant concentrations of TCE and DCE. Based on the results of two groundwater sampling episodes, it appears that groundwater directly beneath the adjacent 19-acre parcel has not been impacted by the disposal area. Although lead was found in MW-3 at 50 ppb (equal to the MCL), the source may not be the disposal area. The groundwater sample collected from MW-3 during Phase I had a lead concentration below the detection limit (20 ppb). At the time when Phase II activities were conducted, shallow groundwater flow in the area south of the creek appeared to be generally northward toward the creek. This gradient would tend to impede contaminants found in the disposal area from migrating to the area south of Silver Creek.

Sampling and analysis of wastes from selected charred areas on the former disposal area surface has confirmed the presence of PCBs in these areas. In addition, PCBs (specifically Arochlor-1248) were again found in surface soil samples in the southwest corner of the 19-acre parcel.

Surface soil samples collected in the ditch which bounds the western end of the disposal area did not contain PCBs. Three of the four samples, however, did exhibit detectable concentrations of DCE. In addition, surface soil sample HA-12, collected closest to the creek/ditch intersection did exhibit concentrations of several base/neutral semi-volatile compounds.

Based on the analysis of leachate-saturated sediments, it appears that leachate emanating from the disposal area at this location is inconsequential relative to delivering contaminants to the Silver Creek. Only traces of base/neutral organic compounds were detected in the sample.

Samples of creek sediment collected at three locations exhibited concentrations of base/neutral semi-volatile compounds. The one sediment sample collected downgradient of the disposal area (SED-3) contained more of the base/neutral semi-volatile compounds and at greater concentrations than the two sediment samples collected upgradient of the disposal area. Based on this observation and the chemical data for waste and surface soil samples taken from the former disposal site, the site may be contributing to the elevated concentrations of semi-volatile compounds in the creek sediment.

5.2 RECOMMENDATIONS

Based on the findings of Phases I and II, further investigation of the former disposal area and contiguous areas is recommended.

Limited excavations of Anomaly B, identified during the Phase I magnetometer survey, should be conducted. The purpose of the excavations would be to verify that the observed magnetic readings are in fact a function of metallic debris, and not buried drums.

Although borings completed at the disposal area during Phase I revealed that the waste exists at shallower depths than expected, C-EE recommends additional borings within the disposal area to confirm that deeper pockets of buried wastes do not exist. These borings will also prove helpful in further characterizing the disposal area contents.

Further assessment of groundwater quality near the disposal area is warranted. The presence of TCE and DCE in the groundwater samples collected in MW-1 during Phases I and II indicate the need for additional monitoring points to assess the source and fate of these contaminants.

Phase II sampling activities have confirmed the presence of PCBs in selected charred areas on the disposal area surface. Further investigative work is warranted to determine the extent of PCB contamination in and near the disposal area. In addition, C-EE's investigation has confirmed the presence of PCBs in surface soils in the southwest corner of the 19-acre parcel. This area is also in need of further investigation to estimate the extent of contamination.

The detection of DCE in surface soil samples collected in the ditch that bounds the western end of the landfill warrants further investigation to determine the source of this contaminant and the extent of DCE contamination within the ditch.

Finally, based on the sampling and analysis of creek sediment samples collected during Phases I and II, it appears that creek sediments have been impacted by the disposal area. The presence of semi-volatile base/neutral compounds in creek sediment samples collected to date will be assessed in conjunction with Hydramatic to determine whether or not further action is required.

APPENDIX A

LABORATORY ANALYTICAL REPORTS

GC/MS VOA SAMPLE DATA

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763117 (E7343)	Date Received:	8/22/89
Sample Identification:	MW-100 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	10	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	<5	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763117 (E7343)	Date Received:	8/22/89
Sample Identification:	MW-100 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763118 (E7349)	Date Received:	8/22/89
Sample Identification:	TRIP BLANK 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	60	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	<5	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763118 (E7349)	Date Received:	8/22/89
Sample Identification:	TRIP BLANK 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763119 (E7350)	Date Received:	8/22/89
Sample Identification:	MW-5 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	30	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	<5	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763119 (E7350)	Date Received:	8/22/89
Sample Identification:	MW-5 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763120 (E7351)	Date Received:	8/22/89
Sample Identification:	MW-2 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	20	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	<5	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763120 (E7351)	Date Received:	8/22/89
Sample Identification:	MW-2 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763121 (E7352)	Date Received:	8/22/89
Sample Identification:	MW-3 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	40	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	<5	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763121 (E7352)	Date Received:	8/22/89
Sample Identification:	MW-3 8-22-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763122 (E7353)	Date Received:	8/22/89
Sample Identification:	MW-4 8-22-89	Date Analyzed:	8/31/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	60	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	<5	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763122 (E7353)	Date Received:	8/22/89
Sample Identification:	MW-4 8-22-89	Date Analyzed:	8/31/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763123 (E7354)	Date Received:	8/22/89
Sample Identification:	MW-1 8-22-89	Date Analyzed:	8/31/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	20	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	54	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	23	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763123 (E7354)	Date Received:	8/22/89
Sample Identification:	MW-1 8-22-89	Date Analyzed:	8/31/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763123D (E7355)	Date Received:	8/22/89
Sample Identification:	MW-1 8-22-89	Date Analyzed:	8/31/89
Analytical Method:	EPA 8240 (modified)		

Volatile Compounds	CONCENTRATION (ug/L)	Limit of Detection (ug/L)
Acetone	30	10
Benzene	<5	5
Bromodichloromethane	<5	5
Bromoform	<5	5
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chloroethane	<10	10
Chloroform	<5	5
Chloromethane	<10	10
Dibromochloromethane	<5	5
1,1-Dichloroethane	<5	5
1,2-Dichloroethane	<5	5
1,1-Dichloroethene	<5	5
1,2-Dichloroethene (total)	55	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
trans-1,3-Dichloropropene	<5	5
Ethyl benzene	<5	5
2-Hexanone	<10	10
Methylene chloride	<5	5
4-Methyl-2-pentanone	<10	10
Styrene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethene	<5	5
Toluene	<5	5
1,1,1-Trichloroethane	<5	5
1,1,2-Trichloroethane	<5	5
Trichloroethene	22	5
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<5	5

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Water	Date Collected:	8/22/89
Lab Number:	763123D (E7355)	Date Received:	8/22/89
Sample Identification:	MW-1 8-22-89	Date Analyzed:	8/31/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)		

Tentatively Identified Compounds	Estimated Concentration (ug/L)
No compounds detected	----

Approximate limit of detection: 5 ug/L.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763186 (E7339)	Date Received:	8/23/89
Sample Identification:	HA-10 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)	Moisture:	19%

Volatile Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acetone	70	10
Benzene	<6	6
Bromodichloromethane	<6	6
Bromoform	<6	6
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<6	6
Carbon tetrachloride	<6	6
Chlorobenzene	<6	6
Chloroethane	<10	10
Chloroform	<6	6
Chloromethane	<10	10
Dibromochloromethane	<6	6
1,1-Dichloroethane	<6	6
1,2-Dichloroethane	<6	6
1,1-Dichloroethene	<6	6
1,2-Dichloroethene (total)	8	6
1,2-Dichloropropane	<6	6
cis-1,3-Dichloropropene	<6	6
trans-1,3-Dichloropropene	<6	6
Ethyl benzene	<6	6
2-Hexanone	<10	10
Methylene chloride	20	6
4-Methyl-2-pentanone	<10	10
Styrene	<6	6
1,1,2,2-Tetrachloroethane	<6	6
Tetrachloroethene	<6	6
Toluene	<6	6
1,1,1-Trichloroethane	<6	6
1,1,2-Trichloroethane	<6	6
Trichloroethene	<6	6
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<6	6

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763186 (E7339)	Date Received:	8/23/89
Sample Identification:	HA-10 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)	Moisture:	19%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
No compounds detected	----

Approximate limit of detection: 6 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763187 (E7340)	Date Received:	8/23/89
Sample Identification:	HA-400 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)	Moisture:	18%

Volatile Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acetone	40	10
Benzene	<6	6
Bromodichloromethane	<6	6
Bromoform	<6	6
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<6	6
Carbon tetrachloride	<6	6
Chlorobenzene	<6	6
Chloroethane	<10	10
Chloroform	<6	6
Chloromethane	<10	10
Dibromochloromethane	<6	6
1,1-Dichloroethane	<6	6
1,2-Dichloroethane	<6	6
1,1-Dichloroethene	<6	6
1,2-Dichloroethene (total)	16	6
1,2-Dichloropropane	<6	6
cis-1,3-Dichloropropene	<6	6
trans-1,3-Dichloropropene	<6	6
Ethyl benzene	<6	6
2-Hexanone	<10	10
Methylene chloride	14	6
4-Methyl-2-pentanone	<10	10
Styrene	<6	6
1,1,2,2-Tetrachloroethane	<6	6
Tetrachloroethene	<6	6
Toluene	<6	6
1,1,1-Trichloroethane	<6	6
1,1,2-Trichloroethane	<6	6
Trichloroethene	<6	6
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<6	6

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763187 (E7340)	Date Received:	8/23/89
Sample Identification:	HA-400 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)	Moisture:	18%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
No compounds detected	----

Approximate limit of detection: 6 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763188 (E7341)	Date Received:	8/23/89
Sample Identification:	HA-11 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)	Moisture:	24%

Volatile Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acetone	30	10
Benzene	<7	7
Bromodichloromethane	<7	7
Bromoform	<7	7
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<7	7
Carbon tetrachloride	<7	7
Chlorobenzene	<7	7
Chloroethane	<10	10
Chloroform	<7	7
Chloromethane	<10	10
Dibromochloromethane	<7	7
1,1-Dichloroethane	<7	7
1,2-Dichloroethane	<7	7
1,1-Dichloroethene	<7	7
1,2-Dichloroethene (total)	13	7
1,2-Dichloropropane	<7	7
cis-1,3-Dichloropropene	<7	7
trans-1,3-Dichloropropene	<7	7
Ethyl benzene	<7	7
2-Hexanone	<10	10
Methylene chloride	14	7
4-Methyl-2-pentanone	<10	10
Styrene	<7	7
1,1,2,2-Tetrachloroethane	<7	7
Tetrachloroethene	<7	7
Toluene	<7	7
1,1,1-Trichloroethane	<7	7
1,1,2-Trichloroethane	<7	7
Trichloroethene	<7	7
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<7	7

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763188 (E7341)	Date Received:	8/23/89
Sample Identification:	HA-11 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)	Moisture:	24%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
No compounds detected	----

Approximate limit of detection: 7 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763189 (E7342)	Date Received:	8/23/89
Sample Identification:	HA-12 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)	Moisture:	18%

Volatile Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acetone	30	10
Benzene	<6	6
Bromodichloromethane	<6	6
Bromoform	<6	6
Bromomethane	<10	10
2-Butanone	<10	10
Carbon disulfide	<6	6
Carbon tetrachloride	<6	6
Chlorobenzene	<6	6
Chloroethane	<10	10
Chloroform	<6	6
Chloromethane	<10	10
Dibromochloromethane	<6	6
1,1-Dichloroethane	<6	6
1,2-Dichloroethane	<6	6
1,1-Dichloroethene	<6	6
1,2-Dichloroethene (total)	<6	6
1,2-Dichloropropane	<6	6
cis-1,3-Dichloropropene	<6	6
trans-1,3-Dichloropropene	<6	6
Ethyl benzene	<6	6
2-Hexanone	<10	10
Methylene chloride	9	6
4-Methyl-2-pentanone	<10	10
Styrene	<6	6
1,1,2,2-Tetrachloroethane	<6	6
Tetrachloroethene	<6	6
Toluene	<6	6
1,1,1-Trichloroethane	<6	6
1,1,2-Trichloroethane	<6	6
Trichloroethene	<6	6
Vinyl acetate	<10	10
Vinyl chloride	<10	10
Xylenes (total)	<6	6

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763189 (E7342)	Date Received:	8/23/89
Sample Identification:	HA-12 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)	Moisture:	18%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
No compounds detected	----

Approximate limit of detection: 6 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763190 (E7343)	Date Received:	8/23/89
Sample Identification:	LEACHATE 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified)	Moisture:	34%

Volatile Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acetone	50	20
Benzene	<8	8
Bromodichloromethane	<8	8
Bromoform	<8	8
Bromomethane	<20	20
2-Butanone	<20	20
Carbon disulfide	<8	8
Carbon tetrachloride	<8	8
Chlorobenzene	<8	8
Chloroethane	<20	20
Chloroform	<8	8
Chloromethane	<20	20
Dibromochloromethane	<8	8
1,1-Dichloroethane	<8	8
1,2-Dichloroethane	<8	8
1,1-Dichloroethene	<8	8
1,2-Dichloroethene (total)	<8	8
1,2-Dichloropropane	<8	8
cis-1,3-Dichloropropene	<8	8
trans-1,3-Dichloropropene	<8	8
Ethyl benzene	<8	8
2-Hexanone	<20	20
Methylene chloride	<8	8
4-Methyl-2-pentanone	<20	20
Styrene	<8	8
1,1,2,2-Tetrachloroethane	<8	8
Tetrachloroethene	<8	8
Toluene	<8	8
1,1,1-Trichloroethane	<8	8
1,1,2-Trichloroethane	<8	8
Trichloroethene	<8	8
Vinyl acetate	<20	20
Vinyl chloride	<20	20
Xylenes (total)	<8	8

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763190 (E7343)	Date Received:	8/23/89
Sample Identification:	LEACHATE 8-23-89	Date Analyzed:	8/30/89
Analytical Method:	EPA 8240 (modified) (Volatile Fraction)	Moisture:	34%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
No compounds detected	----

Approximate limit of detection: 8 ug/kg.

* Results reported on a dry weight basis.

GC/MS BNA SAMPLE DATA

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763186 (F6184)	Date Received:	8/23/89
Sample Identification:	HA-10 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	19%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<800	800
Acenaphthylene	<800	800
Anthracene	<800	800
Benzo(a)anthracene	<800	800
Benzo(b)fluoranthene	<800	800
Benzo(k)fluoranthene	<800	800
Benzo(a)pyrene	<800	800
Benzo(ghi)perylene	<800	800
Benzyl alcohol	<800	800
Benzyl butyl phthalate	<800	800
Bis(2-chloroethyl)ether	<800	800
Bis(2-chloroethoxy)methane	<800	800
Bis(2-chloroisopropyl)ether	<800	800
Bis(2-ethylhexyl)phthalate	<800	800
4-Bromophenyl phenyl ether	<800	800
4-Chloroaniline	<800	800
2-Chloronaphthalene	<800	800
4-Chlorophenyl phenyl ether	<800	800
Chrysene	<800	800
Dibenzo(a,h)anthracene	<800	800
Dibenzofuran	<800	800
Di-n-butylphthalate	<800	800
1,2-Dichlorobenzene	<800	800
1,3-Dichlorobenzene	<800	800
1,4-Dichlorobenzene	<800	800
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<800	800
Dimethyl phthalate	<800	800
2,4-Dinitrotoluene	<800	800
2,6-Dinitrotoluene	<800	800

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763186 (F6184)	Date Received:	8/23/89
Sample Identification:	HA-10 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	19%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<800	800
Fluoranthene	<800	800
Fluorene	<800	800
Hexachlorobenzene	<800	800
Hexachlorobutadiene	<800	800
Hexachlorocyclopentadiene	<800	800
Hexachloroethane	<800	800
Indeno(1,2,3-cd)pyrene	<800	800
Isophorone	<800	800
2-Methylnaphthalene	<800	800
Naphthalene	<800	800
2-Nitroaniline	<4000	4000
3-Nitroaniline	<4000	4000
4-Nitroaniline	<4000	4000
Nitrobenzene	<800	800
N-Nitrosodi-n-propylamine	<800	800
N-Nitrosodiphenylamine	<800	800
Phenanthrene	<800	800
Pyrene	<800	800
1,2,4-Trichlorobenzene	<800	800

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763186 (F6184)	Date Received:	8/23/89
Sample Identification:	HA-10 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/14/89
		Moisture:	19%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	3000
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	40000
Unknown hydrocarbon	400
Unknown ketone	500
Trimethyl hexane	2000
3-Hexene-2,5-dione	1000
Possible ketone	4000
Possible ketone	2000
Unknown hydrocarbon	800
3-Propoxypropyl benzene	3000
Unknown hydrocarbon	1000
Unknown compound	600
Possible 3,4-dihydro-4-methyl-1(2H)naphthalenone	2000
Unknown compound	600
Unknown compound	900
Unknown compound	1000

Approximate limit of detection: 300 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763187 (F6185)	Date Received:	8/23/89
Sample Identification:	HA-400 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	18%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<800	800
Acenaphthylene	<800	800
Anthracene	<800	800
Benzo(a)anthracene	<800	800
Benzo(b)fluoranthene	<800	800
Benzo(k)fluoranthene	<800	800
Benzo(a)pyrene	<800	800
Benzo(ghi)perylene	<800	800
Benzyl alcohol	<800	800
Benzyl butyl phthalate	<800	800
Bis(2-chloroethyl)ether	<800	800
Bis(2-chloroethoxy)methane	<800	800
Bis(2-chloroisopropyl)ether	<800	800
Bis(2-ethylhexyl)phthalate	<800	800
4-Bromophenyl phenyl ether	<800	800
4-Chloroaniline	<800	800
2-Chloronaphthalene	<800	800
4-Chlorophenyl phenyl ether	<800	800
Chrysene	<800	800
Dibenzo(a,h)anthracene	<800	800
Dibenzofuran	<800	800
Di-n-butylphthalate	<800	800
1,2-Dichlorobenzene	<800	800
1,3-Dichlorobenzene	<800	800
1,4-Dichlorobenzene	<800	800
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<800	800
Dimethyl phthalate	<800	800
2,4-Dinitrotoluene	<800	800
2,6-Dinitrotoluene	<800	800

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763187 (F6185)	Date Received:	8/23/89
Sample Identification:	HA-400 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	18%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<800	800
Fluoranthene	<800	800
Fluorene	<800	800
Hexachlorobenzene	<800	800
Hexachlorobutadiene	<800	800
Hexachlorocyclopentadiene	<800	800
Hexachloroethane	<800	800
Indeno(1,2,3-cd)pyrene	<800	800
Isophorone	<800	800
2-Methylnaphthalene	<800	800
Naphthalene	<800	800
2-Nitroaniline	<4000	4000
3-Nitroaniline	<4000	4000
4-Nitroaniline	<4000	4000
Nitrobenzene	<800	800
N-Nitrosodi-n-propylamine	<800	800
N-Nitrosodiphenylamine	<800	800
Phenanthrene	<800	800
Pyrene	<800	800
1,2,4-Trichlorobenzene	<800	800

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763187 (F6185)	Date Received:	8/23/89
Sample Identification:	HA-400 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/14/89
		Moisture:	18%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	3000
3,5-Dimethyl heptane	400
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	50000
Unknown hydrocarbon	300
Unknown ketone	600
Trimethyl hexane	700
3-Hexene-2,5-dione	1000
Possible ketone	5000
Possible ketone	400
Possible ketone	1000
Unknown hydrocarbon	700
3-Propoxypropyl benzene	3000
Unknown compound	900
Unknown hydrocarbon	1000
Possible 3,4-dihydro-4-methyl-1(2H)naphthalenone	2000
Unknown compound	400
Unknown compound	900
Unknown compound	1000

Approximate limit of detection: 300 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763188 (F6186)	Date Received:	8/23/89
Sample Identification:	HA-11 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	24%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<900	900
Acenaphthylene	<900	900
Anthracene	<900	900
Benzo(a)anthracene	<900	900
Benzo(b)fluoranthene	<900	900
Benzo(k)fluoranthene	<900	900
Benzo(a)pyrene	<900	900
Benzo(ghi)perylene	<900	900
Benzyl alcohol	<900	900
Benzyl butyl phthalate	<900	900
Bis(2-chloroethyl)ether	<900	900
Bis(2-chloroethoxy)methane	<900	900
Bis(2-chloroisopropyl)ether	<900	900
Bis(2-ethylhexyl)phthalate	<900	900
4-Bromophenyl phenyl ether	<900	900
4-Chloroaniline	<900	900
2-Chloronaphthalene	<900	900
4-Chlorophenyl phenyl ether	<900	900
Chrysene	<900	900
Dibenzo(a,h)anthracene	<900	900
Dibenzofuran	<900	900
Di-n-butylphthalate	<900	900
1,2-Dichlorobenzene	<900	900
1,3-Dichlorobenzene	<900	900
1,4-Dichlorobenzene	<900	900
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<900	900
Dimethyl phthalate	<900	900
2,4-Dinitrotoluene	<900	900
2,6-Dinitrotoluene	<900	900

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763188 (F6186)	Date Received:	8/23/89
Sample Identification:	HA-11 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	24%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<900	900
Fluoranthene	<900	900
Fluorene	<900	900
Hexachlorobenzene	<900	900
Hexachlorobutadiene	<900	900
Hexachlorocyclopentadiene	<900	900
Hexachloroethane	<900	900
Indeno(1,2,3-cd)pyrene	<900	900
Isophorone	<900	900
2-Methylnaphthalene	<900	900
Naphthalene	<900	900
2-Nitroaniline	<4000	4000
3-Nitroaniline	<4000	4000
4-Nitroaniline	<4000	4000
Nitrobenzene	<900	900
N-Nitrosodi-n-propylamine	<900	900
N-Nitrosodiphenylamine	<900	900
Phenanthrene	<900	900
Pyrene	<900	900
1,2,4-Trichlorobenzene	<900	900

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763188 (F6186)	Date Received:	8/23/89
Sample Identification:	HA-11 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/14/89
		Moisture:	24%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	3000
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	50000
Unknown ketone	900
Trimethyl hexane	2000
3-Hexene-2,5-dione	1000
Possible ketone	5000
Possible ketone	3000
Possible ketone	400
Unknown compound	600
Unknown hydrocarbon	2000
Unknown hydrocarbon	4000
3-Propoxypropyl benzene	5000
Unknown compound	5000
Unknown hydrocarbon	9000
Possible 3,4-dihydro-4-methyl-1(2H)naphthalenone	3000
Unknown compound	3000
Unknown hydrocarbon	2000
Unknown compound	2000
Unknown compound	3000
Possible phthalate	3000
Unknown compound	6000

Approximate limit of detection: 400 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763189 (F6187)	Date Received:	8/23/89
Sample Identification:	HA-12 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	18%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<800	800
Acenaphthylene	<800	800
Anthracene	<800	800
Benzo(a)anthracene	1200	800
Benzo(b)fluoranthene	1400	800
Benzo(k)fluoranthene	1700	800
Benzo(a)pyrene	1300	800
Benzo(ghi)perylene	1200	800
Benzyl alcohol	<800	800
Benzyl butyl phthalate	<800	800
Bis(2-chloroethyl)ether	<800	800
Bis(2-chloroethoxy)methane	<800	800
Bis(2-chloroisopropyl)ether	<800	800
Bis(2-ethylhexyl)phthalate	<800	800
4-Bromophenyl phenyl ether	<800	800
4-Chloroaniline	<800	800
2-Chloronaphthalene	<800	800
4-Chlorophenyl phenyl ether	<800	800
Chrysene	1500	800
Dibenzo(a,h)anthracene	<800	800
Dibenzofuran	<800	800
Di-n-butylphthalate	<800	800
1,2-Dichlorobenzene	<800	800
1,3-Dichlorobenzene	<800	800
1,4-Dichlorobenzene	<800	800
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<800	800
Dimethyl phthalate	<800	800
2,4-Dinitrotoluene	<800	800
2,6-Dinitrotoluene	<800	800

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763189 (F6187)	Date Received:	8/23/89
Sample Identification:	HA-12 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/14/89
		Moisture:	18%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<800	800
Fluoranthene	3300	800
Fluorene	<800	800
Hexachlorobenzene	<800	800
Hexachlorobutadiene	<800	800
Hexachlorocyclopentadiene	<800	800
Hexachloroethane	<800	800
Indeno(1,2,3-cd)pyrene	1100	800
Isophorone	<800	800
2-Methylnaphthalene	<800	800
Naphthalene	<800	800
2-Nitroaniline	<4000	4000
3-Nitroaniline	<4000	4000
4-Nitroaniline	<4000	4000
Nitrobenzene	<800	800
N-Nitrosodi-n-propylamine	<800	800
N-Nitrosodiphenylamine	<800	800
Phenanthrene	1700	800
Pyrene	2300	800
1,2,4-Trichlorobenzene	<800	800

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763189 (F6187)	Date Received:	8/23/89
Sample Identification:	HA-12 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/14/89
		Moisture:	18%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	3000
3,5-Dimethyl heptane	400
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	40000
Unknown ketone	500
Trimethyl hexane	2000
3-Hexene-2,5-dione	1000
Possible ketone	5000
Possible ketone	2000
Unknown compound	400
9,10-Anthracenedione	400
11H-Benzo[a]fluorene	400
Benzo[ghi]fluoranthene	500
Unknown hydrocarbon	600
Hexadecanal	2000
Unknown hydrocarbon	6000
Benzo[e]pyrene	1000
Unknown compound	1000
Unknown hydrocarbon	1000
Unknown compound	400
Unknown compound	400
Unknown hydrocarbon	400
Unknown compound	600

Approximate limit of detection: 300 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763190 (F6218)	Date Received:	8/23/89
Sample Identification:	LEACHATE 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	34%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<1000	1000
Acenaphthylene	<1000	1000
Anthracene	<1000	1000
Benzo(a)anthracene	<1000	1000
Benzo(b)fluoranthene	<1000	1000
Benzo(k)fluoranthene	1000	1000
Benzo(a)pyrene	<1000	1000
Benzo(ghi)perylene	<1000	1000
Benzyl alcohol	<1000	1000
Benzyl butyl phthalate	<1000	1000
Bis(2-chloroethyl)ether	<1000	1000
Bis(2-chloroethoxy)methane	<1000	1000
Bis(2-chloroisopropyl)ether	<1000	1000
Bis(2-ethylhexyl)phthalate	<1000	1000
4-Bromophenyl phenyl ether	<1000	1000
4-Chloroaniline	<1000	1000
2-Chloronaphthalene	<1000	1000
4-Chlorophenyl phenyl ether	<1000	1000
Chrysene	1000	1000
Dibenzo(a,h)anthracene	<1000	1000
Dibenzofuran	<1000	1000
Di-n-butylphthalate	<1000	1000
1,2-Dichlorobenzene	<1000	1000
1,3-Dichlorobenzene	<1000	1000
1,4-Dichlorobenzene	<1000	1000
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<1000	1000
Dimethyl phthalate	<1000	1000
2,4-Dinitrotoluene	<1000	1000
2,6-Dinitrotoluene	<1000	1000

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763190 (F6218)	Date Received:	8/23/89
Sample Identification:	LEACHATE 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	34%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<1000	1000
Fluoranthene	2000	1000
Fluorene	<1000	1000
Hexachlorobenzene	<1000	1000
Hexachlorobutadiene	<1000	1000
Hexachlorocyclopentadiene	<1000	1000
Hexachloroethane	<1000	1000
Indeno(1,2,3-cd)pyrene	<1000	1000
Isophorone	<1000	1000
2-Methylnaphthalene	<1000	1000
Naphthalene	<1000	1000
2-Nitroaniline	<5000	5000
3-Nitroaniline	<5000	5000
4-Nitroaniline	<5000	5000
Nitrobenzene	<1000	1000
N-Nitrosodi-n-propylamine	<1000	1000
N-Nitrosodiphenylamine	<1000	1000
Phenanthrene	<1000	1000
Pyrene	2000	1000
1,2,4-Trichlorobenzene	<1000	1000

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763190 (F6218)	Date Received:	8/23/89
Sample Identification:	LEACHATE 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/16/89
		Moisture:	34%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	4000
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	70000
Unknown ketone	900
Trimethyl hexane	2000
3-Hexene-2,5-dione	1000
Possible ketone	3000
Possible ketone	1000
Possible ketone	2000
Unknown hydrocarbon	900
Unknown hydrocarbon	900
Unknown hydrocarbon	2000
Unknown hydrocarbon	900
Hexadecanal	2000
Unknown hydrocarbon	4000
Benzo[e]pyrene	1000
Octadecenal	2000
Unknown hydrocarbon	4000
Unknown compound	800
Unknown compound	6000
Unknown compound	900
Unknown hydrocarbon	4000
Unknown compound	2000
Unknown compound	8000

Approximate limit of detection: 400 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763192 (F6219)	Date Received:	8/23/89
Sample Identification:	SED-3 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	29%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<900	900
Acenaphthylene	<900	900
Anthracene	<900	900
Benzo(a)anthracene	1000	900
Benzo(b)fluoranthene	1300	900
Benzo(k)fluoranthene	2000	900
Benzo(a)pyrene	1300	900
Benzo(ghi)perylene	<900	900
Benzyl alcohol	<900	900
Benzyl butyl phthalate	<900	900
Bis(2-chloroethyl)ether	<900	900
Bis(2-chloroethoxy)methane	<900	900
Bis(2-chloroisopropyl)ether	<900	900
Bis(2-ethylhexyl)phthalate	<900	900
4-Bromophenyl phenyl ether	<900	900
4-Chloroaniline	<900	900
2-Chloronaphthalene	<900	900
4-Chlorophenyl phenyl ether	<900	900
Chrysene	1500	900
Dibenzo(a,h)anthracene	<900	900
Dibenzofuran	<900	900
Di-n-butylphthalate	<900	900
1,2-Dichlorobenzene	<900	900
1,3-Dichlorobenzene	<900	900
1,4-Dichlorobenzene	<900	900
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<900	900
Dimethyl phthalate	<900	900
2,4-Dinitrotoluene	<900	900
2,6-Dinitrotoluene	<900	900

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763192 (F6219)	Date Received:	8/23/89
Sample Identification:	SED-3 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	29%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<900	900
Fluoranthene	3400	900
Fluorene	<900	900
Hexachlorobenzene	<900	900
Hexachlorobutadiene	<900	900
Hexachlorocyclopentadiene	<900	900
Hexachloroethane	<900	900
Indeno(1,2,3-cd)pyrene	1000	900
Isophorone	<900	900
2-Methylnaphthalene	<900	900
Naphthalene	<900	900
2-Nitroaniline	<5000	5000
3-Nitroaniline	<5000	5000
4-Nitroaniline	<5000	5000
Nitrobenzene	<900	900
N-Nitrosodi-n-propylamine	<900	900
N-Nitrosodiphenylamine	<900	900
Phenanthrene	1700	900
Pyrene	2800	900
1,2,4-Trichlorobenzene	<900	900

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763192 (F6219)	Date Received:	8/23/89
Sample Identification:	SED-3 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/16/89
		Moisture:	29%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	3000
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	60000
Unknown ketone	600
Unknown ketone	800
Trimethyl hexane	900
3-Hexene-2,5-dione	1000
Possible ketone	4000
Possible ketone	2000
Unknown plus molecular sulfur	600
11H-Benzo[a]fluorene	1000
Benzo[ghi]fluoranthene	600
Unknown hydrocarbon	600
Unknown hydrocarbon	800
Unknown hydrocarbon	600
Unknown compound	800
Hexadecanal	1000
Unknown compound	600
Unknown hydrocarbon	2000
Benzo[e]pyrene	1000
Octadecanal	1000
Unknown hydrocarbon	1000
Unknown compound	800
Unknown compound	600

Approximate limit of detection: 400 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763193 (F6220)	Date Received:	8/23/89
Sample Identification:	SED-4 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	24%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<900	900
Acenaphthylene	<900	900
Anthracene	<900	900
Benzo(a)anthracene	<900	900
Benzo(b)fluoranthene	<900	900
Benzo(k)fluoranthene	1100	900
Benzo(a)pyrene	<900	900
Benzo(ghi)perylene	<900	900
Benzyl alcohol	<900	900
Benzyl butyl phthalate	<900	900
Bis(2-chloroethyl)ether	<900	900
Bis(2-chloroethoxy)methane	<900	900
Bis(2-chloroisopropyl)ether	<900	900
Bis(2-ethylhexyl)phthalate	<900	900
4-Bromophenyl phenyl ether	<900	900
4-Chloroaniline	<900	900
2-Chloronaphthalene	<900	900
4-Chlorophenyl phenyl ether	<900	900
Chrysene	<900	900
Dibenzo(a,h)anthracene	<900	900
Dibenzofuran	<900	900
Di-n-butylphthalate	<900	900
1,2-Dichlorobenzene	<900	900
1,3-Dichlorobenzene	<900	900
1,4-Dichlorobenzene	<900	900
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<900	900
Dimethyl phthalate	<900	900
2,4-Dinitrotoluene	<900	900
2,6-Dinitrotoluene	<900	900

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763193 (F6220)	Date Received:	8/23/89
Sample Identification:	SED-4 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	24%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<900	900
Fluoranthene	1400	900
Fluorene	<900	900
Hexachlorobenzene	<900	900
Hexachlorobutadiene	<900	900
Hexachlorocyclopentadiene	<900	900
Hexachloroethane	<900	900
Indeno(1,2,3-cd)pyrene	<900	900
Isophorone	<900	900
2-Methylnaphthalene	<900	900
Naphthalene	<900	900
2-Nitroaniline	<4000	4000
3-Nitroaniline	<4000	4000
4-Nitroaniline	<4000	4000
Nitrobenzene	<900	900
N-Nitrosodi-n-propylamine	<900	900
N-Nitrosodiphenylamine	<900	900
Phenanthrene	<900	900
Pyrene	1100	900
1,2,4-Trichlorobenzene	<900	900

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763193 (F6220)	Date Received:	8/23/89
Sample Identification:	SED-4 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/16/89
		Moisture:	24%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	3000
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	50000
Unknown ketone	800
Unknown ketone	600
Trimethyl hexane	1000
3-Hexene-2,5-dione	1000
Possible ketone	5000
Possible ketone	400
Possible ketone	1000
11H-Benzo[a]fluorene	600
Unknown hydrocarbon	400
Unknown hydrocarbon	600
Unknown hydrocarbon	400
Hexadecanal	600
Unknown compound	600
Unknown hydrocarbon	1000
Benzo[e]pyrene	700
Octadecanal	500
Unknown hydrocarbon	800
Unknown compound	500
Unknown compound	400
Unknown compound	900
Unknown compound	800

Approximate limit of detection: 400 ug/kg.

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763194 (F6221)	Date Received:	8/23/89
Sample Identification:	SED-5 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	30%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Acenaphthene	<1000	1000
Acenaphthylene	<1000	1000
Anthracene	<1000	1000
Benzo(a)anthracene	<1000	1000
Benzo(b)fluoranthene	<1000	1000
Benzo(k)fluoranthene	<1000	1000
Benzo(a)pyrene	<1000	1000
Benzo(ghi)perylene	<1000	1000
Benzyl alcohol	<1000	1000
Benzyl butyl phthalate	<1000	1000
Bis(2-chloroethyl)ether	<1000	1000
Bis(2-chloroethoxy)methane	<1000	1000
Bis(2-chloroisopropyl)ether	<1000	1000
Bis(2-ethylhexyl)phthalate	<1000	1000
4-Bromophenyl phenyl ether	<1000	1000
4-Chloroaniline	<1000	1000
2-Chloronaphthalene	<1000	1000
4-Chlorophenyl phenyl ether	<1000	1000
Chrysene	<1000	1000
Dibenzo(a,h)anthracene	<1000	1000
Dibenzofuran	<1000	1000
Di-n-butylphthalate	<1000	1000
1,2-Dichlorobenzene	<1000	1000
1,3-Dichlorobenzene	<1000	1000
1,4-Dichlorobenzene	<1000	1000
3,3'-Dichlorobenzidine	<2000	2000
Diethyl phthalate	<1000	1000
Dimethyl phthalate	<1000	1000
2,4-Dinitrotoluene	<1000	1000
2,6-Dinitrotoluene	<1000	1000

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763194 (F6221)	Date Received:	8/23/89
Sample Identification:	SED-5 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270	Date Analyzed:	9/16/89
		Moisture:	30%

Base Neutral Compounds	Concentration (ug/kg) *	Limit of Detection (ug/kg)
Di-n-octylphthalate	<1000	1000
Fluoranthene	2000	1000
Fluorene	<1000	1000
Hexachlorobenzene	<1000	1000
Hexachlorobutadiene	<1000	1000
Hexachlorocyclopentadiene	<1000	1000
Hexachloroethane	<1000	1000
Indeno(1,2,3-cd)pyrene	<1000	1000
Isophorone	<1000	1000
2-Methylnaphthalene	<1000	1000
Naphthalene	<1000	1000
2-Nitroaniline	<5000	5000
3-Nitroaniline	<5000	5000
4-Nitroaniline	<5000	5000
Nitrobenzene	<1000	1000
N-Nitrosodi-n-propylamine	<1000	1000
N-Nitrosodiphenylamine	<1000	1000
Phenanthrene	<1000	1000
Pyrene	1000	1000
1,2,4-Trichlorobenzene	<1000	1000

* Results reported on a dry weight basis.

Analytical Results
for
C.E. ENVIRONMENTAL

Clayton Project No. 60056-17

Sample Matrix/Media:	Soil	Date Collected:	8/23/89
Lab Number:	763194 (F6221)	Date Received:	8/23/89
Sample Identification:	SED-5 8-23-89	Date Extracted:	8/31/89
Analytical Method:	EPA 8270 (Semi-Volatile Fraction)	Date Analyzed:	9/16/89
		Moisture:	30%

Tentatively Identified Compounds	Estimated Concentration (ug/kg) *
Unknown ketone	3000
4-Hydroxy-4-methyl-2-pentanone (possible aldol condensation product)	50000
Unknown ketone	800
Unknown ketone	700
Trimethyl hexane	900
3-Hexene-2,5-dione	2000
Possible ketone	6000
Possible ketone	800
Possible ketone	2000
Unknown hydrocarbon	900
11H-Benzo[a]fluorene	500
Unknown hydrocarbon	500
Unknown hydrocarbon	1000
Hexadecanal	2000
Unknown hydrocarbon	2000
Benzo[e]pyrene	1000
Unknown hydrocarbon	500
Octadecanal	1000
Unknown hydrocarbon	3000
Unknown hydrocarbon	1000
Unknown hydrocarbon	500
Unknown compound	700
Unknown compound	800

Approximate limit of detection: 400 ug/kg.

* Results reported on a dry weight basis.

PCB SAMPLE DATA

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763125
Sample No: HA-3 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	<100	100
PCB Aroclor-1254	500	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/08/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 25%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763126
Sample No: HA-4 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	<100	100
PCB Aroclor-1254	2300	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/08/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 17%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763127
Sample No: HA-5 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	3500	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/09/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 24%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763128
Sample No: HA-6 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	12000	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/09/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 27%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763129
Sample No: HA-7 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	500	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/11/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 9%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763130
Sample No: HA-300 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	500	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/08/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 9%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763131
Sample No: HA-8 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	2900	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/08/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 9%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763132
Sample No: HA-9 8-22-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	13000	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/22/98
Date Extracted: 08/31/89
Date of Analysis: 09/11/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 10%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763186
Sample No: HA-10 8-23-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	<100	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/23/98
Date Extracted: 08/31/89
Date of Analysis: 09/08/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 19%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763187
Sample No: HA-400 8-23-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	<100	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/23/98
Date Extracted: 08/31/89
Date of Analysis: 09/07/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 18%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763188
Sample No: HA-11 8-23-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	<100	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/23/98
Date Extracted: 08/31/89
Date of Analysis: 09/11/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 24%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL
Project No: 60056-17
Lab No: 763189
Sample No: HA-12 8-23-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	<100	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	<200	200

Date Received: 08/23/98
Date Extracted: 08/31/89
Date of Analysis: 09/11/89

LOD = Limit of Detection

Analytical Method: U.S. EPA, Test Methods for Evaluating Solid Waste; Physical/ Chemical Methods, SW-846, Third Edition Method 8080 (modified).
Results are reported on a dry weight basis. Moisture = 18%.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Results of Analysis For: C.E. ENVIRONMENTAL

Project No: 60056-17
Lab No: 763191
Sample No: HA-500 8-23-89
Matrix: Soil

COMPOUND NAME	CONCENTRATION (ug/kg)	LOD (ug/kg)
PCB Aroclor-1016	<100	100
PCB Aroclor-1221	<100	100
PCB Aroclor-1232	<100	100
PCB Aroclor-1242	<100	100
PCB Aroclor-1248	<100	100
PCB Aroclor-1254	<200	200
PCB Aroclor-1260	56000	200

Date Received: 08/23/98
Date Extracted: 08/31/89
Date of Analysis: 09/11/89

LOD = Limit of Detection

Analytical Method: U.S.EPA, Test Methods for Evaluating Solid Waste; Physical/Chemical Methods, SW - 846, Third Edition Method 8080 (modified).
Results reported on a dry weight basis. Moisture = 2%.

METALS SAMPLE DATA

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 1

Lab Number: 763117
Sample Description: MW-100 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	<0.002	0.002	EPA 7060	EPA 7060	9-13-89
Barium	<0.05	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	<0.02	0.02	EPA 3010	EPA 7420	9-12-89
Mercury	<0.001	0.001	EPA 7470	EPA 7470	9-11-89
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.03	0.01	EPA 3010	EPA 7210	9-11-89
Zinc	<0.05	0.05	EPA 3010	EPA 7950	9-11-89

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 2

Lab Number: 763119
Sample Description: MW-5 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	0.008	0.002	EPA 7060	EPA 7060	9-13-89
Barium	0.23	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	<0.02	0.02	EPA 3010	EPA 7420	9-12-89
Mercury	<0.001	0.001	EPA 7470	EPA 7470	9-11-89
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.17	0.01	EPA 3010	EPA 7210	9-11-89
Zinc	0.24	0.05	EPA 3010	EPA 7950	9-11-89

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Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 3

Lab Number: 763120
Sample Description: MW-2 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	0.006	0.002	EPA 7060	EPA 7060	9-13-89
Barium	0.18	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	<0.02	0.02	EPA 3010	EPA 7420	9-12-89
Mercury	<0.001	0.001	EPA 7470	EPA 7470	9-11-89
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.01	0.01	EPA 3010	EPA 7210	9-11-89
Zinc	0.08	0.05	EPA 3010	EPA 7950	9-11-89

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 4

Lab Number: 763121
Sample Description: MW-3 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	<0.002	0.002	EPA 7060	EPA 7060	9-13-89
Barium	0.10	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	0.05	0.02	EPA 3010	EPA 7420	9-12-89
Mercury	<0.001	0.001	EPA 7470	EPA 7470	9-11-89
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.72	0.01	EPA 3010	EPA 7210	9-11-89
Zinc	0.59	0.05	EPA 3010	EPA 7950	9-11-89

CLAYTON ENVIRONMENTAL CONSULTANTS INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 5

Lab Number: 763122
Sample Description: MW-4 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	0.028	0.002	EPA 7060	EPA 7060	9-13-89
Barium	0.17	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	<0.02	0.02	EPA 3010	EPA 7420	9-12-89
Mercury	<0.001	0.001	EPA 7470	EPA 7470	9-11-89
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.94	0.01	EPA 3010	EPA 7210	9-11-89
Zinc	0.62	0.05	EPA 3010	EPA 7950	9-11-89

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 6

Lab Number: 763123
Sample Description: MW-1 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	<0.002	0.002	EPA 7060	EPA 7060	9-13-89
Barium	0.13	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	<0.02	0.02	EPA 3010	EPA 7420	9-12-89
Mercury	<0.001	0.001	EPA 7470	EPA 7470	9-11-89
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.50	0.01	EPA 3010	EPA 7210	9-11-89
Zinc	0.42	0.05	EPA 3010	EPA 7950	9-11-89

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 7

Lab Number: 763123 (duplicate)
Sample Description: MW-1 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	<0.002	0.002	EPA 7060	EPA 7060	9-13-89
Barium	0.13	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	<0.02	0.02	EPA 3010	EPA 7420	9-12-89
Mercury *	--	--	--	--	--
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.49	0.05	EPA 3010	EPA 7210	9-11-89
Zinc	0.39	0.05	EPA 3010	EPA 7950	9-11-89

* Insuffient sample was provided for duplicate mercury analysis. As discussed on August 29, Sample "Leachate 8-23-89" (Lab #763190) was prepared in duplicate for mercury.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 8

Lab Number: 763124
Sample Description: MW-200 8-22-89
Matrix: Water
Date Prepared: 8-31-89/Mercury 9-11-89

Analyte	(mg/L)	Limit of Detection (mg/L)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	<0.002	0.002	EPA 7060	EPA 7060	9-13-89
Barium	0.12	0.05	EPA 3010	EPA 7080	9-13-89
Cadmium	<0.002	0.002	EPA 3010	EPA 7130	9-12-89
Chromium	<0.02	0.02	EPA 3010	EPA 7190	9-13-89
Lead	<0.02	0.02	EPA 3010	EPA 7420	9-12-89
Mercury	<0.001	0.001	EPA 7470	EPA 7470	9-11-89
Selenium	<0.002	0.002	EPA 7740	EPA 7740	9-13-89
Silver	<0.005	0.005	EPA 7760	EPA 7760	9-12-89
Copper	0.07	0.05	EPA 3010	EPA 7210	9-11-89
Zinc	0.14	0.05	EPA 3010	EPA 7950	9-11-89

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 9

Lab Number: 763186
Sample Description: HA-10 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mecury 9-11-89
Percent Moisture: 19*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	2.0	1.0	EPA 3050	EPA 7060	9-14-89
Barium	28	5	EPA 3050	EPA 7080	9-13-89
Cadmium	<0.2	0.2	EPA 3050	EPA 7130	9-12-89
Chromium	5	2	EPA 3050	EPA 7190	9-13-89
Lead	6	2	EPA 3050	EPA 7420	9-12-89
Mercury	<0.06	0.06	EPA 7471	EPA 7471	9-11-89
Selenium	<1.0	1.0	EPA 3050	EPA 7740	9-13-89
Silver	<0.5	0.5	EPA 3050	EPA 7760	9-12-89
Copper	6.7	1.0	EPA 3050	EPA 7210	9-11-89
Zinc	29	5	EPA 3050	EPA 7950	9-11-89

* Results are reported on a dry weight basis.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 10

Lab Number: 763187
Sample Description: HA-400 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mercury 9-11-89
Percent Moisture: 18*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	2.4	1.0	EPA 3050	EPA 7060	9-14-89
Barium	24	5	EPA 3050	EPA 7080	9-13-89
Cadmium	0.5	0.2	EPA 3050	EPA 7130	9-12-89
Chromium	5	2	EPA 3050	EPA 7190	9-13-89
Lead	5	2	EPA 3050	EPA 7420	9-12-89
Mercury	<0.06	0.06	EPA 7471	EPA 7471	9-11-89
Selenium	<1.0	1.0	EPA 3050	EPA 7740	9-13-89
Silver	<0.5	0.5	EPA 3050	EPA 7760	9-12-89
Copper	5.4	1.0	EPA 3050	EPA 7210	9-11-89
Zinc	24	5	EPA 3050	EPA 7950	9-11-89

* Results are reported on a dry weight basis.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 11

Lab Number: 763188
Sample Description: HA-11 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mercury 9-11-89
Percent Moisture: 24*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	2.7	1.1	EPA 3050	EPA 7060	9-14-89
Barium	26	5	EPA 3050	EPA 7080	9-13-89
Cadmium	<0.2	0.2	EPA 3050	EPA 7130	9-12-89
Chromium	5	2	EPA 3050	EPA 7190	9-13-89
Lead	6	2	EPA 3050	EPA 7420	9-12-89
Mercury	<0.07	0.07	EPA 7471	EPA 7471	9-11-89
Selenium	<1.1	1.1	EPA 3050	EPA 7740	9-13-89
Silver	<0.5	0.5	EPA 3050	EPA 7760	9-12-89
Copper	9.3	1.1	EPA 3050	EPA 7210	9-11-89
Zinc	59	5	EPA 3050	EPA 7950	9-11-89

* Results are based on a dry weight basis.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 12

Lab Number: 763189
Sample Description: HA-12 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mercury 9-11-89
Percent Moisture: 18*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	1.0	1.0	EPA 3050	EPA 7060	9-14-89
Barium	11	5	EPA 3050	EPA 7080	9-13-89
Cadmium	0.3	0.2	EPA 3050	EPA 7130	9-12-89
Chromium	2	2	EPA 3050	EPA 7190	9-13-89
Lead	21	2	EPA 3050	EPA 7420	9-12-89
Mercury	0.08	0.06	EPA 7471	EPA 7471	9-11-89
Selenium	<1.0	1.0	EPA 3050	EPA 7740	9-13-89
Silver	<0.5	0.5	EPA 3050	EPA 7760	9-12-89
Copper	4.0	1.0	EPA 3050	EPA 7210	9-11-89
Zinc	28	5	EPA 3050	EPA 7950	9-11-89

* Results are reported on a dry weight basis.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 13

Lab Number: 763190
Sample Description: LEACHATE 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mercury 9-11-89
Percent Moisture: 34*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Arsenic	1.5	1.3	EPA 3050	EPA 7060	9-14-89
Barium	17	6	EPA 3050	EPA 7080	9-13-89
Cadmium	<0.3	0.3	EPA 3050	EPA 7130	9-12-89
Chromium	<3	3	EPA 3050	EPA 7190	9-13-89
Lead	11	3	EPA 3050	EPA 7420	9-12-89
Mercury	<0.06	0.06	EPA 7471	EPA 7471	9-11-89
Selenium	<1.3	1.3	EPA 3050	EPA 7740	9-13-89
Silver	<0.6	0.6	EPA 3050	EPA 7760	9-12-89
Copper	3.7	1.3	EPA 3050	EPA 7210	9-11-89
Zinc	23	6	EPA 3050	EPA 7950	9-11-89

* Results are reported on a dry weight basis.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 14

Lab Number: 763190 Duplicate
Sample Description: LEACHATE 8-23-89
Matrix: Soil
Date Prepared: 9-11-89
Percent Moisture: 34*

Analyte	(ug/g)	Limit of Detection (ug/g)	Analytical Method	Preparation Method	Date Analyzed
Mercury	<0.06	0.06	EPA 7471	EPA 7471	9-11-89

* Results are reported on a dry weight basis.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 15

Lab Number: 763192
Sample Description: SED-3 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mercury 9-11-89
Percent Moisture: 29*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Lead	15	2	EPA 3050	EPA 7420	9-12-89
Zinc	27	6	EPA 3050	EPA 7950	9-11-89

* Results are reported on a dry weight basis.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 16

Lab Number: 763193
Sample Description: SED-4 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mercury 9-11-89
Percent Moisture: 24*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Lead	9	2	EPA 3050	EPA 7420	9-12-89
Zinc	19	5	EPA 3050	EPA 7950	9-11-89

* Results are reported on a dry weight basis.

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

Analytical Laboratory Report
for
C.E. ENVIRONMENTAL

Clayton Project No.: 60056-17
Client Project No.: 5859-01

Table 17

Lab Number: 763194
Sample Description: SED-5 8-23-89
Matrix: Soil
Date Prepared: 8-30-89/Mercury 9-11-89
Percent Moisture: 30*

Analyte	(ug/g)	Limit of Detection (ug/g)	Preparation Method	Analytical Method	Date Analyzed
Lead	11	2	EPA 3050	EPA 7420	9-12-89
Zinc	20	6	EPA 3050	EPA 7950	9-11-89

* Results are reported on a dry weight basis.

APPENDIX B

LABORATORY ANALYSIS QUALITY CONTROL DOCUMENTS
(Bound Separately)

APPENDIX C

FIELD SAMPLING DATA SHEETS

EC JORDAN CO.

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT GM-Hydra-matic, Toledo JOB NO 5859-01

STATION NO/LOCATION MW-100 (Sampler Blank) DATE 8-22-89

SKETCH ON BACK YES ☐ NO ☒ PHOTOGRAPHS YES ☐ NO ☒ ROLL NO/EXPOSURE NO —

FIELD DATA

TIME: START — AIR TEMP 85°F

END 0915 WEATHER overcast

WATER DEPTH — ☐ TOP WELL ☐ TOP CASING WELL DEPTH / WELL DIAM. / WELL MATERIAL —

WELL STICK-UP — WELL/CASING — EQUIPMENT USED: stainless steel bailer

— FT. WATER x .163 {2" 4" 6"} x 3 CASING VOLUME = — VOL. PURGE /

FIELD DATA COLLECTION ☐ IN SITU ☐ IN BOTTLE

VOA LEVEL (PPM) AMBIENT /

SAMPLE LOCATION /

HEADSPACE /

SAMPLE PURGE DATA

@ GAL	@ GAL	@ GAL	@ GAL
TEMP °C	TEMP °C	TEMP °C	TEMP °C
SP. COND @25°C	SP. COND @25°C	SP. COND @25°C	SP. COND @25°C
pH	pH	pH	pH
Eh	Eh	Eh	Eh

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
MW-100	2-40ml	GLASS	NO	/	HSL volatiles
MW-100	1-500ml	PLASTIC	YES	HNO3 2ml.	Dissolved Metals
				/	
				/	
				/	
				/	
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS Sampler blank collected before groundwater sampling of on-site wells.

SAMPLER N. Sitton / D. Belan

EC JORDAN CO.

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT GM- Hydra-matic, Toledo JOB NO 5859-01

STATION NO/LOCATION MW-5 DATE 8-22-89

SKETCH ON BACK YES ☐ NO ☒ PHOTOGRAPHS YES ☐ NO ☒ ROLL NO/EXPOSURE NO —

FIELD DATA

TIME: START 0940 AIR TEMP 85°F

6.35 + .98 = END 0950 WEATHER overcast

WATER DEPTH 7.33 ☐ TOP WELL ☒ TOP CASING WELL DEPTH 10' WELL MATERIAL PVC

WELL DIAM. 2"

WELL STICK-UP — WELL/CASING — EQUIPMENT USED stainless steel bailer

2.67 FT. WATER x .163 {2", 4", 6"} x 3 CASING VOLUME = 1.3 VOL. PURGE 1.5 gallons

FIELD DATA COLLECTION ☐ IN SITU ☒ IN BOTTLE

VOA LEVEL (PPM) AMBIENT / SAMPLE LOCATION / HEADSPACE

SAMPLE PURGE DATA

@ 1 GAL	@ 1.5 GAL	@ GAL	@ GAL
TEMP 18.7 °C	TEMP 18.4 °C	TEMP °C	TEMP °C
SP. COND 680 @25°C	SP. COND 687 @25°C	SP. COND @25°C	SP. COND @25°C
pH 6.84	pH 6.44	pH	pH
Eh —	Eh —	Eh	Eh

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
MW-5	2-40ml	GLASS	NO		HSL volatiles
MW-5	1-500ml	PLASTIC	YES	HNO_3 2ml	Dissolved Metals

REMARKS/OBSERVATIONS Water slightly turbid.

SAMPLER N. Whitman / D. Belan

EC JORDAN CO.

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT GM-Hydra-matic, Toledo JOB NO 5859-01

STATION NO/LOCATION MW-2 DATE 8-22-89

SKETCH ON BACK YES ☐ NO ☒ PHOTOGRAPHS YES ☐ NO ☒ ROLL NO/EXPOSURE NO —

FIELD DATA

TIME: START 1000 END 1015 AIR TEMP 85° F WEATHER overcast

6.96 + .98 =

WATER DEPTH 7.94 ☐ TOP WELL ☒ TOP CASING WELL DEPTH 8.5' WELL DIAM. 2" WELL MATERIAL PVC

WELL STICK-UP — WELL/CASING — EQUIPMENT USED stainless steel bailer

0.56 FT. WATER x .163 (2" / 4" / 6") x 3 CASING VOLUME = 0.2 VOL. PURGE 1 gallon

FIELD DATA COLLECTION ☐ IN SITU ☒ IN BOTTLE

VOA LEVEL (PPM) AMBIENT / SAMPLE LOCATION / HEADSPACE

SAMPLE PURGE DATA

@ 0.5 GAL	@ 1 GAL	@ GAL	@ GAL
TEMP 18.0 °C	TEMP 18.8 °C	TEMP °C	TEMP °C
SP. COND 559 @25°C	SP. COND 500 @25°C	SP. COND @25°C	SP. COND @25°C
pH 6.35	pH 6.41	pH	pH
Eh —	Eh —	Eh	Eh

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
MW-2	2-40ml	GLASS	NO		HSL volatiles
MW-2	1-500ml	PLASTIC	YES	HNO3 2ml	Dissolved Metals.

REMARKS/OBSERVATIONS Water turbid.

SAMPLER D. Wittman / D. Belair

EC JORDAN CO.

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT GM Hydra-matic, Toledo JOB NO 5859-01

STATION NO/LOCATION MW-3 DATE 8-22-89

SKETCH ON BACK YES ☐ NO ☒ PHOTOGRAPHS YES ☐ NO ☒ ROLL NO/EXPOSURE NO —

FIELD DATA

TIME: START 1030 AIR TEMP 85°F

END 1045 WEATHER overcast, sprinkling

6.58 + .98 =

WATER DEPTH 7.56 ☐ TOP WELL ☒ TOP CASING WELL DEPTH 8.5' WELL MATERIAL PVC

WELL DIAM. 2"

WELL STICK-UP — WELL/CASING — EQUIPMENT USED stainless steel bailer

0.94 FT. WATER x .163 (2" / 4" / 6") x 3 CASING VOLUME = 0.5 VOL. PURGE 1 gallon

FIELD DATA COLLECTION ☐ IN SITU ☒ IN BOTTLE

VOA LEVEL (PPM) AMBIENT / SAMPLE LOCATION / HEADSPACE

SAMPLE PURGE DATA

@ 0.5 GAL	@ 1 GAL	@ GAL	@ GAL
TEMP 18.8 °C	TEMP 18.6 °C	TEMP °C	TEMP °C
SP. COND 455 @25°C	SP. COND 470 @25°C	SP. COND @25°C	SP. COND @25°C
pH 6.36	pH 6.38	pH	pH
Eh —	Eh —	Eh	Eh

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
MW-3	2-40ml	GLASS	NO		HSL volatiles
MW-3	1-500ml	PLASTIC	YES	HNO_3 2ml	Dissolved Metals

REMARKS/OBSERVATIONS Water very turbid.

SAMPLER D. Dittman / D. Belan

EC JORDAN CO

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT GM Hydra-matic, Toledo JOB NO 5459-01

STATION NO/LOCATION MW-4 DATE 8-22-89

SKETCH ON BACK YES ☐ NO ☒ PHOTOGRAPHS YES ☐ NO ☒ ROLL NO/EXPOSURE NO —

FIELD DATA

TIME: START 1110 AIR TEMP 85°F

END 1115 WEATHER overcast

WATER DEPTH 8.12 (7.14 + .98 =) ☐ TOP WELL ☒ TOP CASING WELL DEPTH 8.5 WELL MATERIAL PVC

WELL DIAM. 2"

WELL STICK-UP — WELL/CASING — EQUIPMENT USED stainless steel bailer

0.38 FT. WATER x .163 (2" / 4" / 6") x 3 CASING VOLUME = 0.19 VOL. PURGE 1 gallon

FIELD DATA COLLECTION ☐ IN SITU ☒ IN BOTTLE

VOA LEVEL (PPM) AMBIENT / SAMPLE LOCATION / HEADSPACE

SAMPLE PURGE DATA

@ 0.5 GAL	@ 1 GAL	@ GAL	@ GAL
TEMP 20 °C	TEMP 19.6 °C	TEMP °C	TEMP °C
SP. COND 918 @25°C	SP. COND 935 @25°C	SP. COND @25°C	SP. COND @25°C
pH 6.01	pH 6.02	pH	pH
Eh —	Eh —	Eh	Eh

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
MW-4	2-40ml	GLASS	NO		HSL vols
MW-4	1-500ml	PLASTIC	YES	HNO3 2ml	Dissolved Metals

REMARKS/OBSERVATIONS Water very turbid, bailed dry after 1 gallon

SAMPLER N. Sutton / D. Belan

ECJORDANCO

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT GM Hydra-matic, Toledo JOB NO 5859-01

STATION NO/LOCATION MW-1 DATE 8-22-89

SKETCH ON BACK YES ☐ NO ☒ PHOTOGRAPHS YES ☐ NO ☒ ROLL NO/EXPOSURE NO —

FIELD DATA

TIME: START 1145 AIR TEMP 80°F

END 1200 WEATHER overcast

WATER DEPTH 10.48+.98= 11.46 ☐ TOP WELL ☒ TOP CASING WELL DEPTH 15' WELL MATERIAL PVC

WELL DIAM. 2"

WELL STICK-UP — WELL/CASING — EQUIPMENT USED stainless steel bailer

3.54 FT. WATER x .163 {2" / 4" / 6"} x 3 CASING VOLUME= 1.7 VOL. PURGE 2 gallons

FIELD DATA COLLECTION ☐ IN SITU ☒ IN BOTTLE

VOA LEVEL(PPM) AMBIENT / SAMPLE LOCATION / HEADSPACE

SAMPLE PURGE DATA

@ 0.5 GAL	@ 1 GAL	@ 1.5 GAL	@ 2 GAL
TEMP 17.1 °C	TEMP 17.4 °C	TEMP 17.9 °C	TEMP 18.0 °C
SP. COND 1186 @25°C	SP. COND 1150 @25°C	SP. COND 1278 @25°C	SP. COND 1137 @25°C
pH 6.44	pH 6.52	pH 6.58	pH 6.56
Eh —	Eh —	Eh —	Eh —

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
MW-1	2-40ml	GLASS	NO		HSL volatiles
MW-1	1-500ml	PLASTIC	YES		Dissolved Metals

REMARKS/OBSERVATIONS Water fairly clear.

SAMPLER D. Sutton / D. Belan

ECJORDANCO

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT GM Hydra-matic, Toledo JOB NO 5859-01

STATION NO/LOCATION MW-200 (Dup. of MW-1) DATE 8-22-89

SKETCH ON BACK YES ☐ NO ☒ PHOTOGRAPHS YES ☐ NO ☒ ROLL NO/EXPOSURE NO —

FIELD DATA

TIME: START — AIR TEMP 80°F

END 1200 WEATHER overcast

WATER DEPTH — ☐ TOP WELL ☐ TOP CASING WELL DEPTH / WELL DIAM. / WELL MATERIAL —

WELL STICK-UP — WELL/CASING — EQUIPMENT USED stainless steel bailer

— FT. WATER x .163 {2" 4" 6"} x 3 CASING VOLUME = — VOL. PURGE /

FIELD DATA COLLECTION ☐ IN SITU ☐ IN BOTTLE

VOA LEVEL (PPM) AMBIENT / SAMPLE LOCATION / HEADSPACE /

SAMPLE PURGE DATA

@ / GAL	@ / GAL	@ / GAL	@ / GAL
TEMP / °C	TEMP / °C	TEMP / °C	TEMP / °C
SP. COND / @25°C	SP. COND / @25°C	SP. COND / @25°C	SP. COND / @25°C
pH /	pH /	pH /	pH /
Eh /	Eh /	Eh /	Eh /

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
MW-200	2-40 ml	GLASS	NO	/	HSL Volatiles
MW-200	1-500 ml	PLASTIC	YES	HNO_3 / 2 ml	Dissolved Metals
				/	
				/	
				/	
				/	
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS Duplicate of MW-1

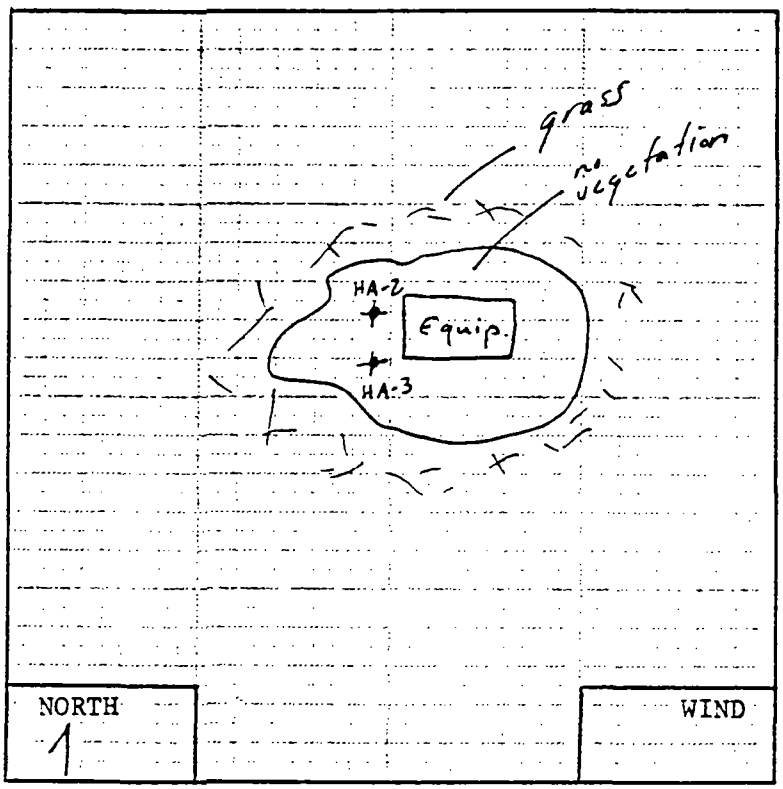
SAMPLER D. Dittman / D. Belan ...

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5859-01 PROJECT NAME GM-HYD-Toledo DATE 8-22-89

SAMPLE TYPE Waste SAMPLE DESIGNATION HA-3 SAMPLE TIME 1220



LOCATION SKETCH

PID METER USED _____

AMBIENT _____ ppm

SAMPLE _____ ppm

HEADSPACE _____ ppm

SAMPLING CREW D. Dithmar
D. Belan

EQUIPMENT USED Hand-auger

☐ SKETCH TO SCALE @ 1"= _____

☒ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Composite from 0-1 ft. Black/rusty colored material, some fine gravel and metal shards.

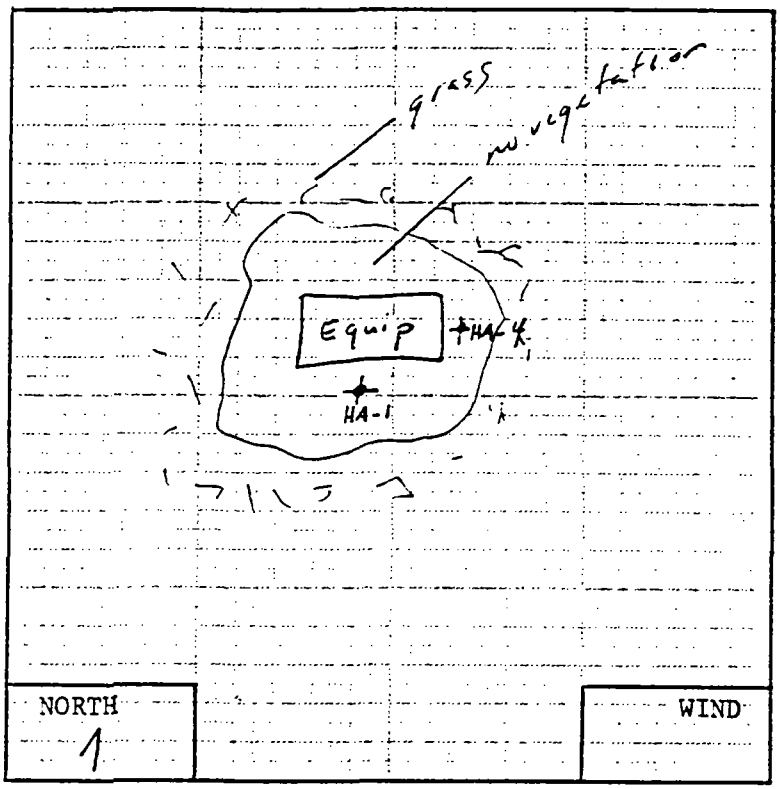
SAMPLED BY D. Dithmar / D. Belan

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5859-01 PROJECT NAME GM-HYD-Toledo DATE 8-22-89

SAMPLE TYPE Waste SAMPLE DESIGNATION HA-4 SAMPLE TIME 1230



LOCATION SKETCH

PID METER USED

AMBIENT ppm

SAMPLE ppm

HEADSPACE ppm

SAMPLING CREW D. Dittmar

D. Belan

EQUIPMENT USED Hand-auger

☐ SKETCH TO SCALE @ 1"= _____

☒ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Composite from 0-1 ft. Black/brown sandy material. Some metal shards and some white powdery material.

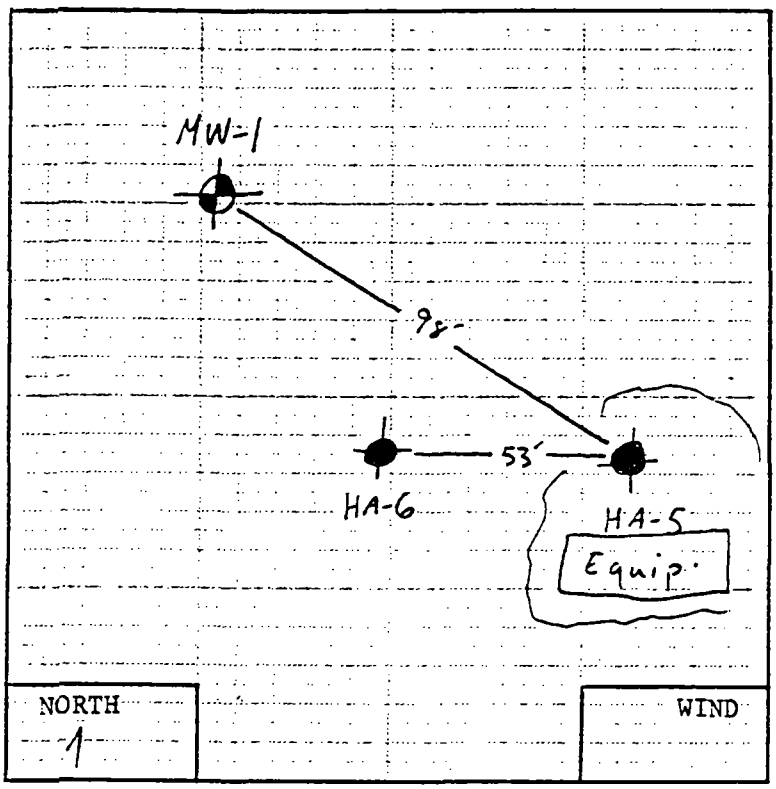
SAMPLED BY D. Dittmar / D. Belan

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5859-01 PROJECT NAME GM-HYD-Toledo DATE 8-22-89

SAMPLE TYPE Waste SAMPLE DESIGNATION HA-5 SAMPLE TIME 1245



LOCATION SKETCH

PID METER USED ____

AMBIENT ____ ppm

SAMPLE ____ ppm

HEADSPACE ____ ppm

SAMPLING CREW D. Dithmar

D. Belan

EQUIPMENT USED Hand-auger

☐ SKETCH TO SCALE @ 1"= ____

☒ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Composite from 0-1 ft. Black/rust colored gravelly material. Material also is oily.

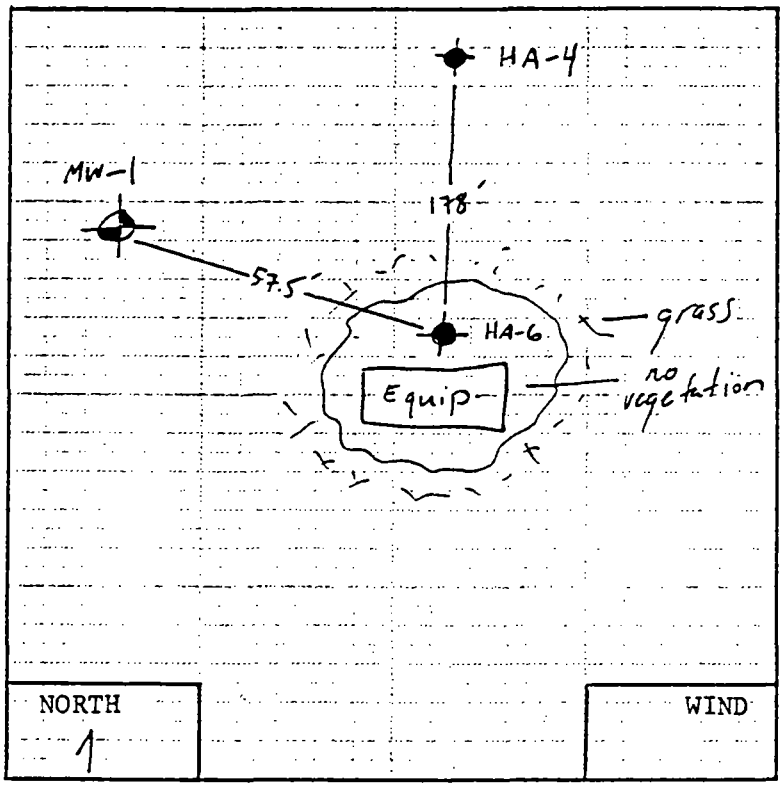
SAMPLED BY D. Dithmar / D. Belan

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5859-01 PROJECT NAME CM-HPD-Toledo DATE 8-22-89

SAMPLE TYPE Waste SAMPLE DESIGNATION HA-6 SAMPLE TIME 1300



LOCATION SKETCH

PID METER USED ~~_____~~

AMBIENT ~~_____~~ ppm

SAMPLE ~~_____~~ ppm

HEADSPACE ~~_____~~ ppm

SAMPLING CREW D. Dittmar

D. Belan

EQUIPMENT USED Hand-auger

☐ SKETCH TO SCALE @ 1"= _____

☒ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Composite from 0-1 ft. Black/rust colored gravelly material.

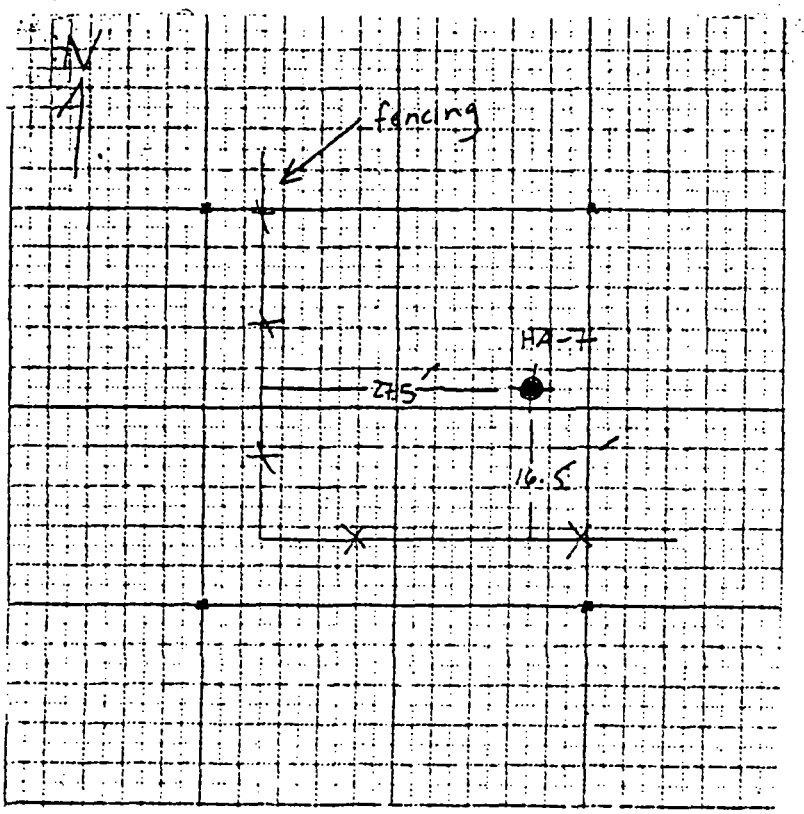
SAMPLED BY D. Dittmar / D. Belan

E.C. JORDAN CO.

SOIL SAMPLING DATA

Project No. 5859-01 Site No. GM-HPD-Toledo

Date 8-22-89 Time Start — Time Finish 1310



SKETCH MAP OF SAMPLE SITE

Sample Component Monitoring

	Surface	Hole
1.	ppm	ppm
2.	ppm	ppm
3.	ppm	ppm
4.	ppm	ppm
5.	ppm	ppm
6.	ppm	ppm

HNU Bulb: 10.2 11.7

Protection Level: B C D

Sampling Crew

1. D. Dittmar
2. D. Belan
3.

Indicate grid point designations @ X: Indicate sample component locations (X) Sketch pertinent features

Sample Designations(s)

HA-7

HA-300 (Duplicate of HA-7)

FIELD PARAMETERS

pH — cond — temp —

Notes: Brown clayey sands w/ trace of fine gravel. (Composite from 0-1 ft.)

N. Dittmar / D. Belan
(signed)

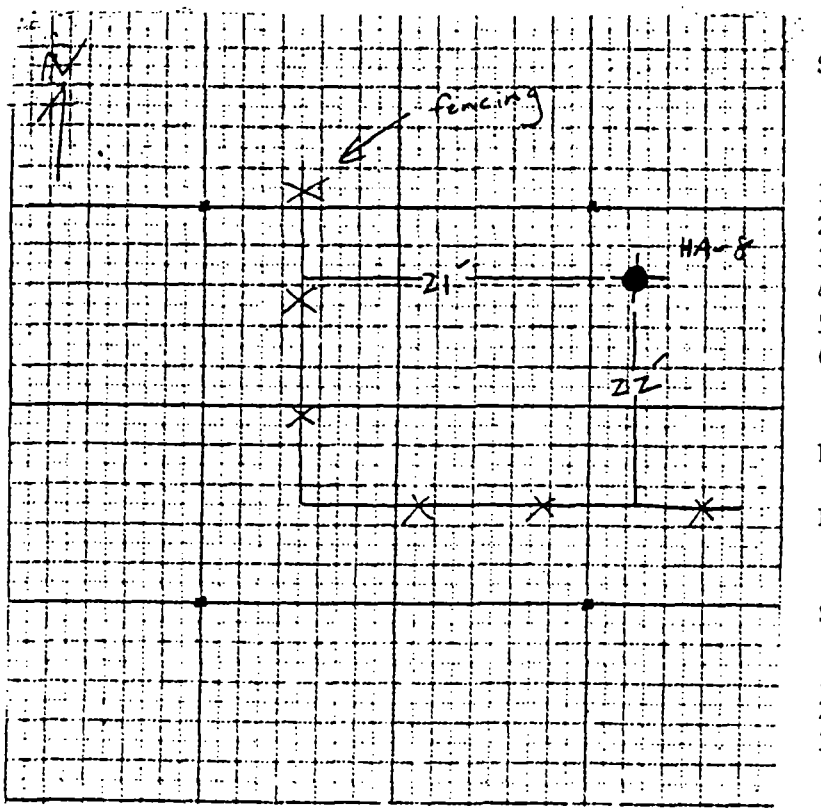
Reference:

E.C. JORDAN CO.

SOIL SAMPLING DATA

Project No. 5859-01 Site No. GM-HPD - Toledo

Date 8-22-89 Time Start — Time Finish 1315



SKETCH MAP OF SAMPLE SITE

Sample Component Monitoring

	Surface	Hole
1.	ppm	ppm
2.	ppm	ppm
3.	ppm	ppm
4.	ppm	ppm
5.	ppm	ppm
6.	ppm	ppm

HNU Bulb: 10.2 11.7

Protection Level: B C (D)

Sampling Crew

1. D. Dittman
2. D. Belan
3.

Indicate grid point designations @ X: Indicate sample component locations (X) Sketch pertinent features

Sample Designations(s)

HA-8

FIELD PARAMETERS

pH — cond — temp —

Notes: Composite from 0-1 ft. Brown clayey sands w/ trace of fine gravel.

D. Dittman / D. Belan
(signed)

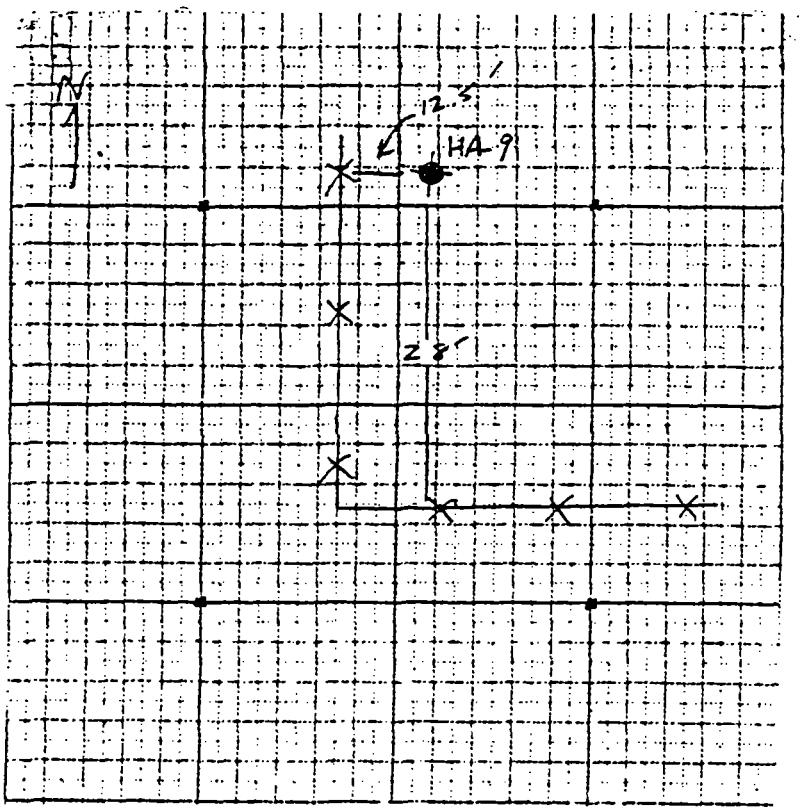
Reference:

E.C. JORDAN CO.

SOIL SAMPLING DATA

Project No. 5859-01 Site No. GM-HYD-Toledo

Date 8-22-89 Time Start — Time Finish 1320



SKETCH MAP OF SAMPLE SITE

Sample Component Monitoring

	Surface	Hole
1.	ppm	ppm
2.	ppm	ppm
3.	ppm	ppm
4.	ppm	ppm
5.	ppm	ppm
6.	ppm	ppm

HNU Bulb: 10.2 11.7

Protection Level: B C D

Sampling Crew

1. D. Belan
2. D. Dittmar
3.

Indicate grid point designations @ X: Indicate sample component locations (X) Sketch pertinent features

Sample Designations(s)

HA-9

FIELD PARAMETERS

pH — cond — temp —

Notes: Composite from 0-1 ft. Brown clayey sands w/ trace of fine gravel.

D. Dittmar / D. Belan
(signed)

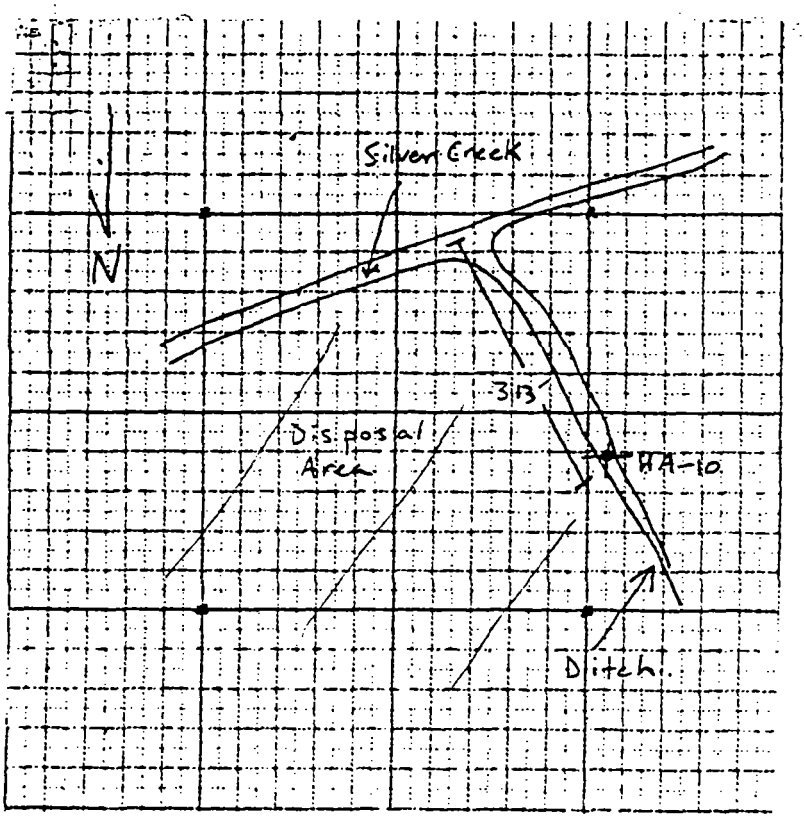
Reference:

E.C. JORDAN CO.

SOIL SAMPLING DATA

Project No. 5859-01 Site No. GM-HYO- Toledo

Date 8-23-89 Time Start — Time Finish 0920



SKETCH MAP OF SAMPLE SITE

Sample Component Monitoring

	Surface	Hole
1.	ppm	ppm
2.	ppm	ppm
3.	ppm	ppm
4.	ppm	ppm
5.	ppm	ppm
6.	ppm	ppm

HNU Bulb: 10.2 11.7

Protection Level: B C (D)

Sampling Crew

1. D. Dittmer
2. D. Belan
3.

Indicate grid point designations @ X: Indicate sample component locations (X) Sketch pertinent features

Sample Designations(s)

HA-10

HA-400 (Duplicate of HA-10)

FIELD PARAMETERS

pH — cond — temp —

Notes: Black, clayey, sandy soil. (Composite from 0-1 ft.)

W. Nitkin / D. Belan
(signed)

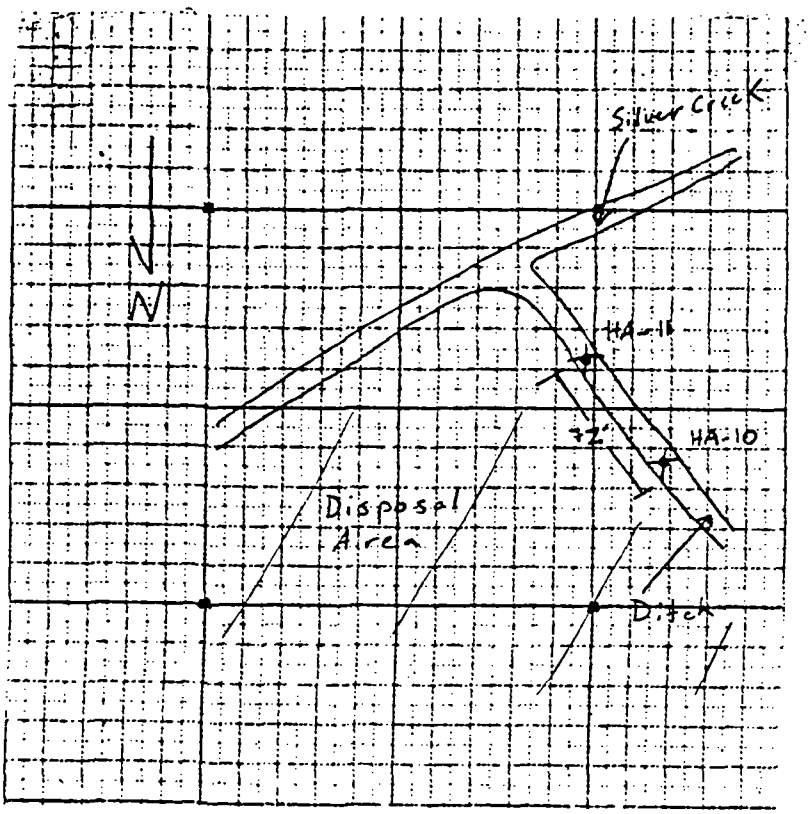
Reference:

E.C. JORDAN CO.

SOIL SAMPLING DATA

Project No. 5859-01 Site No. GM-HYD-Toledo

Date 8-23-89 Time Start — Time Finish 0935



SKETCH MAP OF SAMPLE SITE

Sample Component Monitoring

	Surface	Hole
1.	ppm	ppm
2.	ppm	ppm
3.	ppm	ppm
4.	ppm	ppm
5.	ppm	ppm
6.	ppm	ppm

HNU Bulb: 10.2 11.7

Protection Level: B C (D)

Sampling Crew

1. D. Dittman
2. D. Belan
3.

Indicate grid point designations @ X: Indicate sample component locations (X) Sketch pertinent features

Sample Designations(s)

HA-11

FIELD PARAMETERS

pH — cond — temp —

Notes: Composite from 0-1 ft. Black topsoil (0-6"). 6"-1ft. brown sandy clay. Sample collected adj. to a partially buried 30 gl. drum.

D. Dittman / D. Belan
(signed)

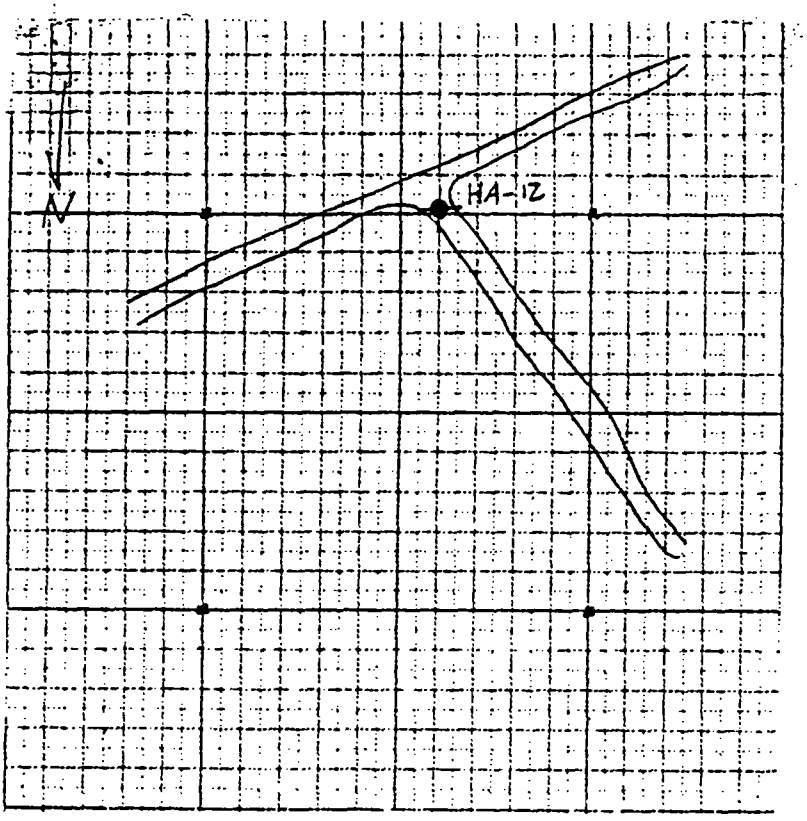
Reference:

E.C. JORDAN CO.

SOIL SAMPLING DATA

Project No. 5859-01 Site No. GM-HPD-Toledo

Date 8-23-89 Time Start — Time Finish 0950



SKETCH MAP OF SAMPLE SITE

Sample Component Monitoring

	Surface	Hole
1.	ppm	ppm
2.	ppm	ppm
3.	ppm	ppm
4.	ppm	ppm
5.	ppm	ppm
6.	ppm	ppm

HNU Bulb: 10.2 11.7

Protection Level: B C (D)

Sampling Crew

1. D. Dittman
2. D. Belan
3.

Indicate grid point designations @ X: Indicate sample component locations (X) Sketch pertinent features

Sample Designations(s)

HA-12

FIELD PARAMETERS

pH — cond — temp —

Notes: Composite from 0-1 ft. Brown sandy soil w/ detritus.

D. Dittman / D. Belan
(signed)

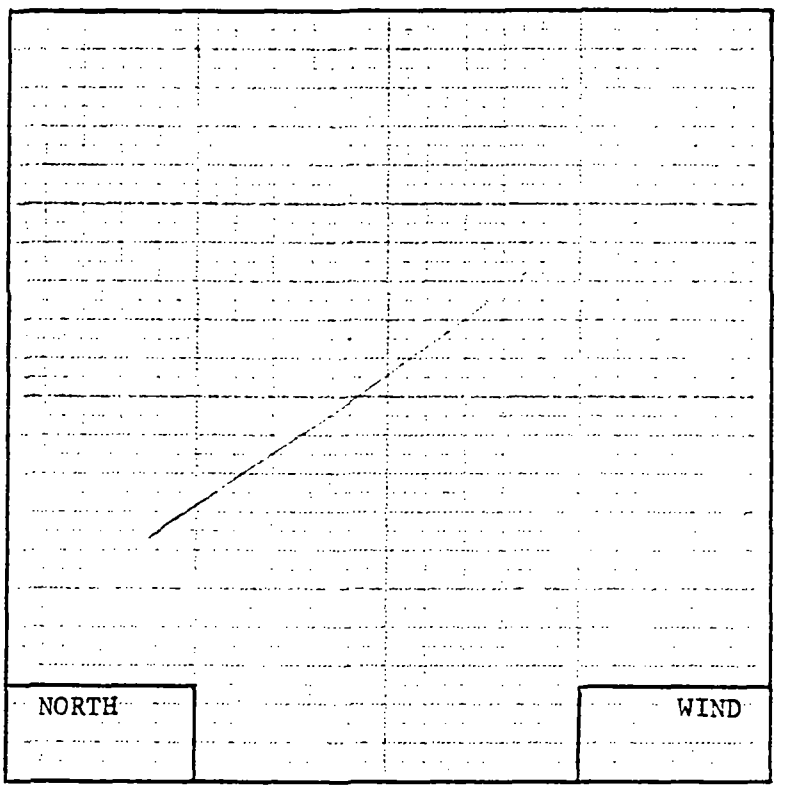
Reference:

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5859-01 PROJECT NAME GM-HYD-Toledo DATE 8-23-89

SAMPLE TYPE Blind PCB sample SAMPLE DESIGNATION HA-500 SAMPLE TIME 1015



LOCATION SKETCH

PID METER USED _____

AMBIENT _____ ppm

SAMPLE _____ ppm

HEADSPACE _____ ppm

SAMPLING CREW _____

EQUIPMENT USED _____

☐ SKETCH TO SCALE @ 1"= _____

☐ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Sample was prepared by one of GM-Hydra-matics contract laboratory to be submitted w/ C-E-E's collected sample lot (QA/QC sample)

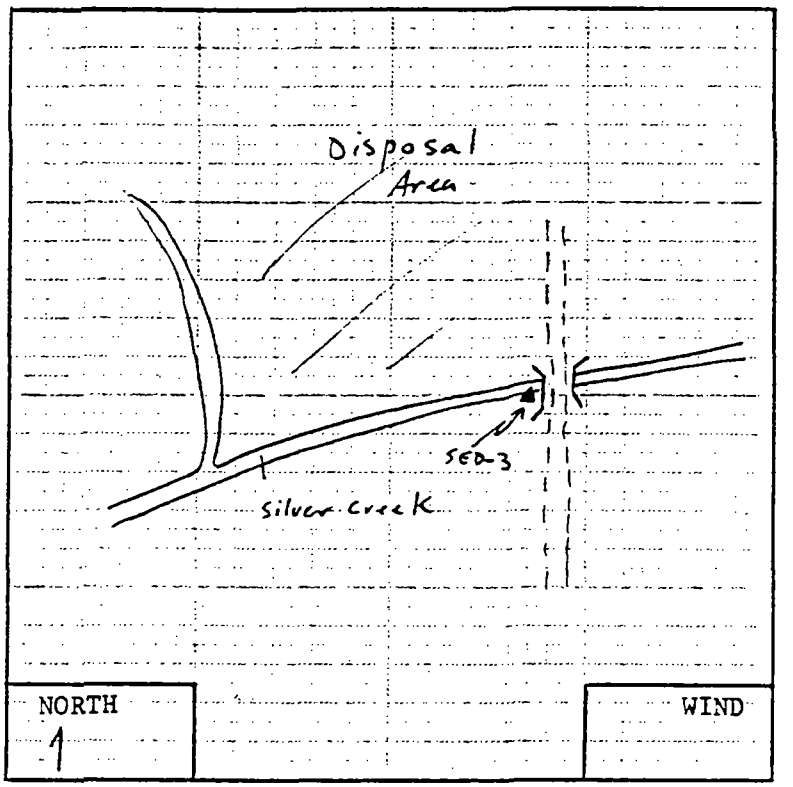
SAMPLED BY _____

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5859-01 PROJECT NAME GM-HYD-Toledo DATE 8-23-89

SAMPLE TYPE Creek Sediment SAMPLE DESIGNATION SED-3 SAMPLE TIME 1040



LOCATION SKETCH

PID METER USED _____

AMBIENT _____ ppm

SAMPLE _____ ppm

HEADSPACE _____ ppm

SAMPLING CREW D. Dittmer
D. Belan

EQUIPMENT USED stainless steel spoon

☐ SKETCH TO SCALE @ 1"= _____

☒ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Collected creek sediment (0-3") @ water/bank interface. Black silty sediment w/ a slight sheen.

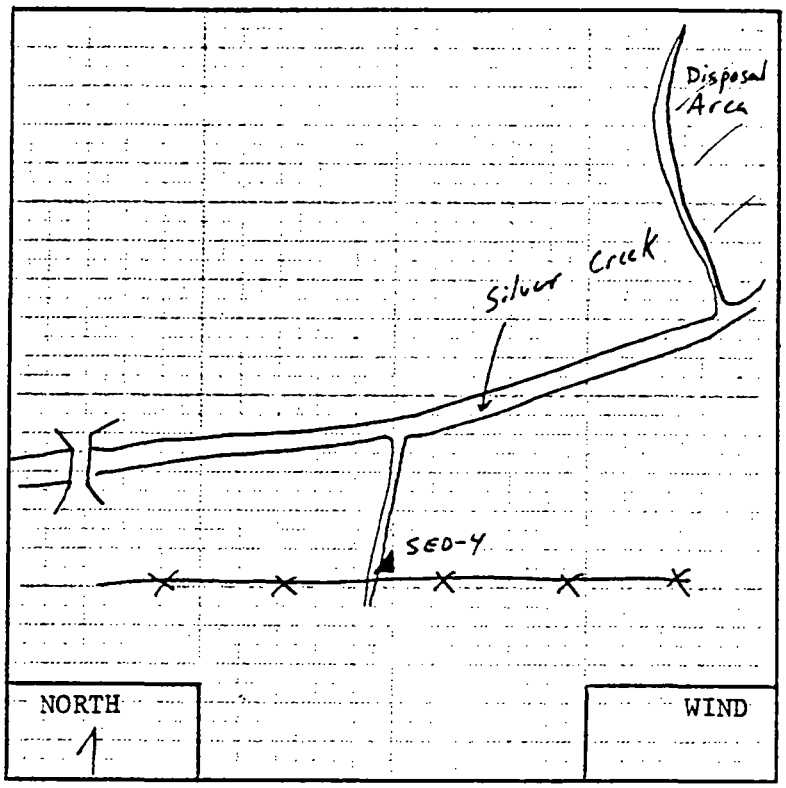
SAMPLED BY D. Dittmer / D. Belan

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5859-01 PROJECT NAME GM-HYD-Toledo DATE 8-23-89

SAMPLE TYPE Creek Sediment SAMPLE DESIGNATION SED-4 SAMPLE TIME 1050



LOCATION SKETCH

PID METER USED _____

AMBIENT _____ ppm

SAMPLE _____ ppm

HEADSPACE _____ ppm

SAMPLING CREW D. Dittman
D. Belan

EQUIPMENT USED Stainless steel spoon

☐ SKETCH TO SCALE @ 1"= _____

☒ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Collected sediment in ditch (0-3") @ the water/bank interface. Black/brown silty sediment. Significant amt. of algae on surface.

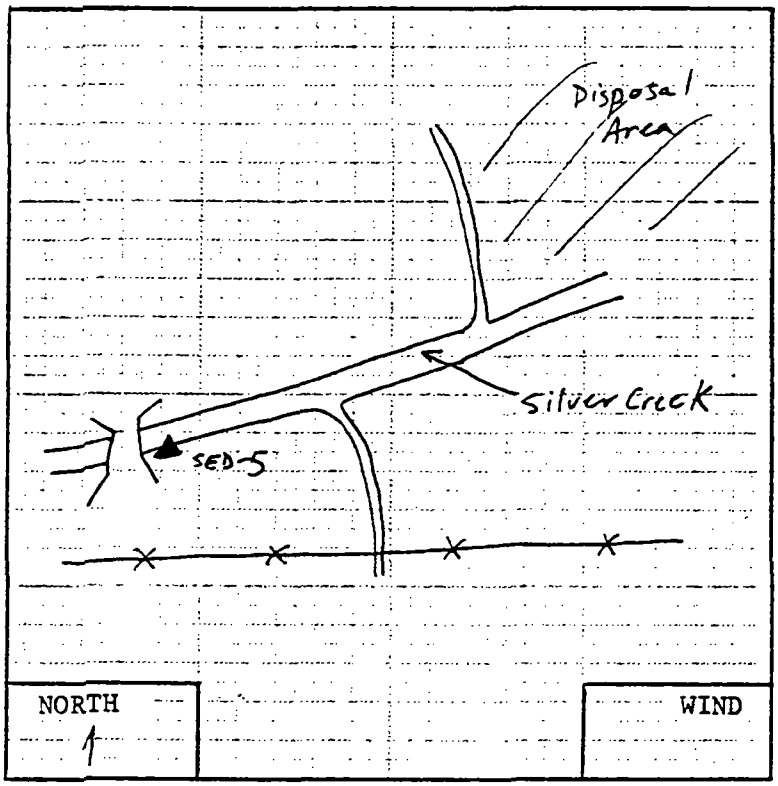
SAMPLED BY D. Dittman / D. Belan

E.C. JORDAN CO.

GRAB SAMPLE DATA SHEET

PROJECT NO. 5459-01 PROJECT NAME OH-HMB-Toledo DATE 8-23-89

SAMPLE TYPE Creek Sediment SAMPLE DESIGNATION SED-5 SAMPLE TIME 1100



LOCATION SKETCH

PID METER USED _____

AMBIENT _____ ppm

SAMPLE _____ ppm

HEADSPACE _____ ppm

SAMPLING CREW D. Dittman
D. Belan

EQUIPMENT USED Stainless steel spoon

☐ SKETCH TO SCALE @ 1"= _____

☒ NO SCALE : USE DIMENSIONS

SAMPLE DESCRIPTION Collected sediment from creek (0-3") @ the water/bank interface. Black/brown silty sediment.

SAMPLED BY D. Dittman / D. Belan