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CHEMICAL CONTAMINATION
at the
SHPACK LANDFILL
Norton/Attleboro, Massachusetts

TDD #: F1-8205-01

Site Name: Shpack Landfill

Address: Norton/Attleboro, Massachusetts

Owner: Town of Norton and Attleboro Landfill, Inc.

Principal Contact at Site: David Opatka, Norton Town Hall

Telephone: (617) 285-6301

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FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES

FIT PROJECT

TASK REPORT TO THE ENVIRONMENTAL PROTECTION AGENCY CONTRACT NO. 68-01-6056

CHEMICAL CONTAMINATION
at the
SHPACK LANDFILL
Norton/Attleboro, Massachusetts

6 December 1982
TDD No. F1-8205-01

DRAFT

Prepared by: Ecology and Environment, Inc.
Field Investigation Team (FIT)
Region 1

Submitted to: John Hackler

ecology and environment, inc.

International Specialists in the Environmental Sciences

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Contributors

Ecology and Environment, Inc.
Region 1 Field Investigation Team

TDD # F1-8205-01

Chemical Contamination
at the
Shpack Landfill
Norton/Attleboro, Massachusetts

The following Region 1 Field Investigation Team members made major contributions to this study in the capacities noted:

Project Manager	-	David K. Cook
Geologist	-	David K. Cook
Chemist	-	John Panaro

SECTION 1 - INTRODUCTION

1.1 PURPOSE OF STUDY

The purpose of this study is to identify the presence of and extent of chemical contamination at the Shpack Landfill in coordination with the Department of Energy's (DOE) radiological evaluation of the site.

1.2 OBJECTIVES

The objectives of the study are as follows:

- Acquisition and analysis of soil and groundwater samples during and after the installation of DOE peripheral monitoring wells.
- Analysis of groundwater samples from DOE on-site boreholes.

SECTION 2 - SITE HISTORY

The Shpack Landfill is eight acres in area and is located in the Townships of Norton and Attleboro, Massachusetts, approximately 35 miles southwest of Boston, Massachusetts. Five and one-half acres are located in Norton and are presently owned by the Town of Norton. This property was previously owned by Mrs. Isadore Shpack. The remaining two and one-half acres are located in Attleboro and are owned by Attleboro Landfill, Inc. The site is bordered on the north by Union Road and Peckham Street, on the west by the Town of Attleboro sanitary landfill, on the east by Chartley Swamp and the McGinn residence (formerly owned by Shpack) and on the south by Chartley Swamp (Figures 1 and 2).

The landfill was developed by progressive filling of a portion of swamp with domestic and industrial wastes (1). Dumping began in late 1946 and continued until 1965 when the site was closed by court order. The area is sparsely populated. However, a shallow (12 feet) drinking water well is located 150 feet from the site.

A radiological survey was conducted at the site during October and November 1978 by the Department of Energy (DOE) because the site was suspected of containing uranium materials which were derived from operations performed under contract to the Atomic Energy Commission (AEC). The results of the DOE survey indicate the presence of radioactive materials throughout the landfill. The distribution of above-background radiation is uneven and spotty, both horizontally and vertically, and extends into the groundwater in many cases. No above-background radiation has been detected in off-site wells. However, contamination has moved into the edge of Chartley Swamp. The primary radioactive contaminants present are ^{226}Ra , ^{238}U and ^{235}U . The radium and uranium occur independently of each other. The radium is associated with glass beads and rings suggesting industrial wastes as the source. Uranium occurs as metal alloy, yellow crystalline compound (carnotite) and as a contaminant mixed with soil. The presence of ^{236}U suggests reprocessed reactor fuel as the source of a portion of the uranium on site.

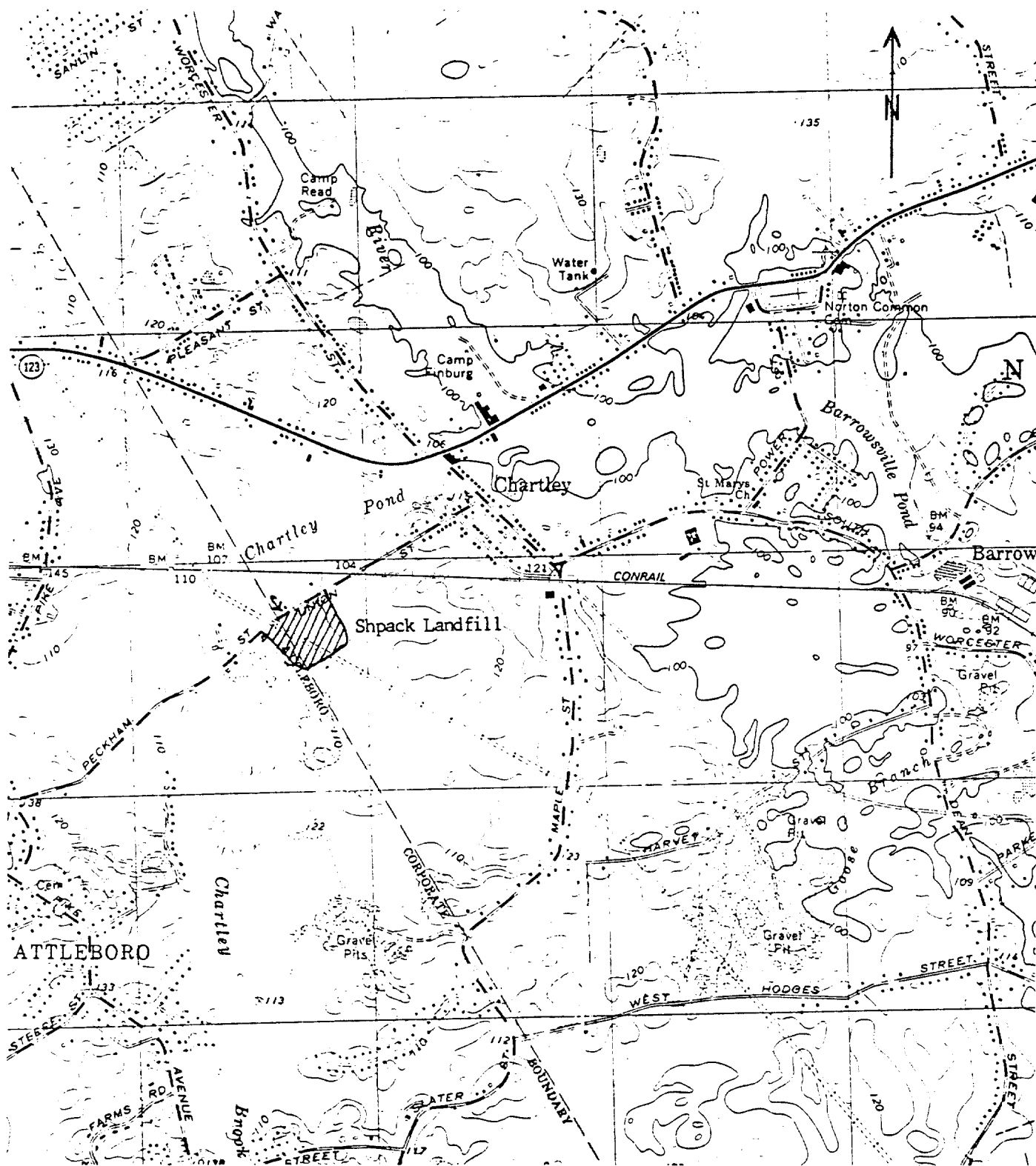


FIGURE 1: Locus Map
 Shpack Landfill, Norton/Attleboro, MA
 Scale: 1:25000
 From U.S.G.S. Topographic Quadrangle Map
 Norton, MA

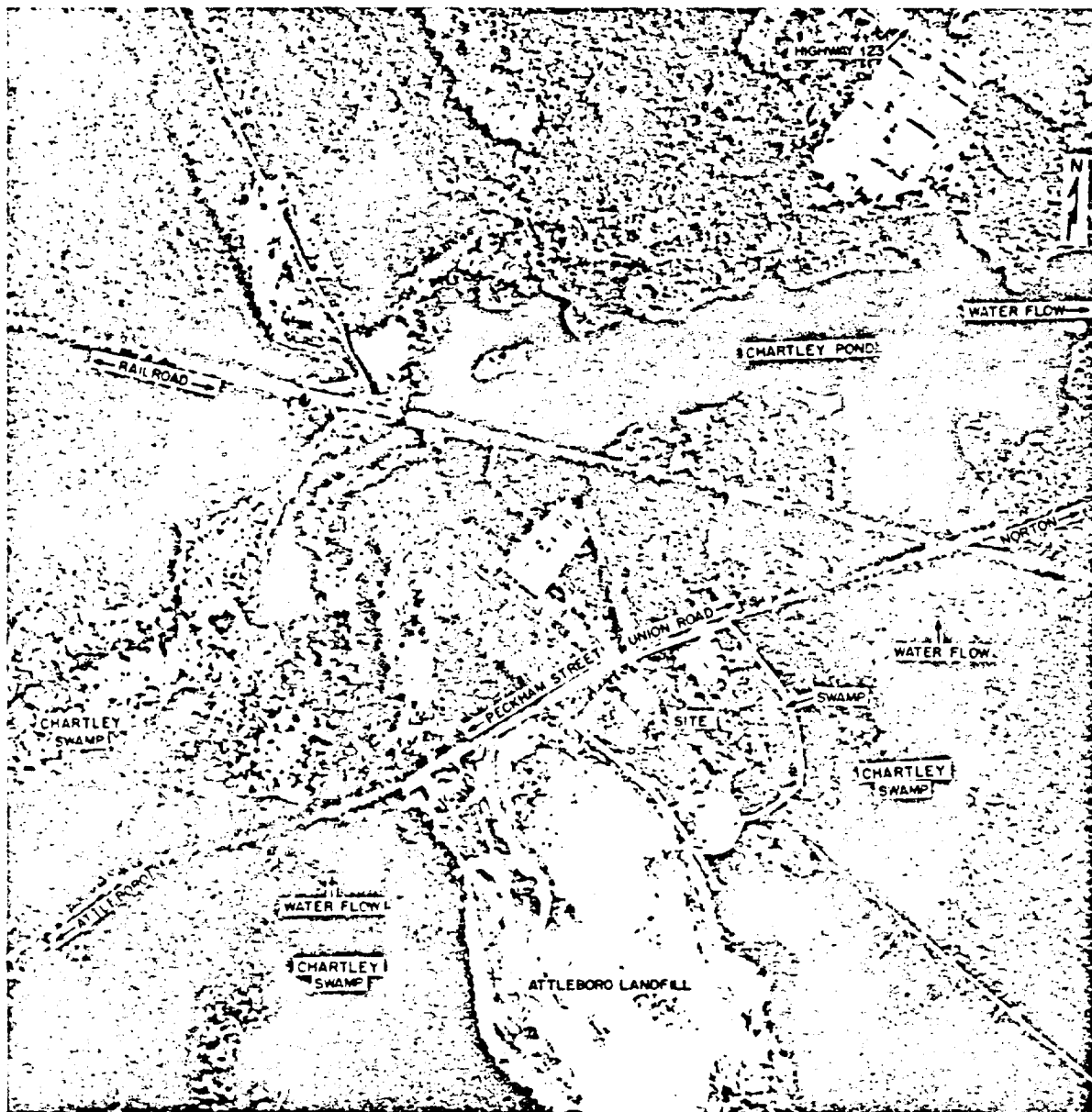


FIGURE 2: Aerial View of the Shpack
Landfill and Surrounding Area,
September 1979.
(ORNL-Photo 1203A-81)
Scale 1:7000

Section 2: Site History - Continued

In March, 1980, eight soil samples were collected by the Massachusetts Department of Environmental Quality Engineering (DEQE) and analyzed for heavy metals at the Lawrence Experiment Station laboratory. The maximum metal concentrations noted were as follows (See Appendix A for the complete analytical results):

Lead	3055 ppb	Cadmium	54 ppb
Arsenic	18 ppb	Nickel	301,318 ppb
Chromium	3060 ppb	Zinc	56,497 ppb
Copper	36170 ppb		

The Town of Norton Conservation Commission subsequently sent a letter to the EPA requesting assistance in evaluating the chemical hazards present on site. The DEQE returned to the site on 5 November 1980 and collected three water samples from shallow (2-2 1/2 ft.) on-site bore holes (exact locations were not available). These were analyzed at the Lawrence Experiment Station for volatile organics.

The results are as follows:

<u>Sample #</u>	<u>Compounds</u>	<u>ppb</u>
001A	1,1 dichloroethane	1.9
Collector; White	t-1,2-dichloroethylene	14.4
Date; october 7, 1980	Trichloroethylene	1.6
	Tetrachloroethylene	5.6
002A		
Collector; White	t-1,2-dichloroethylene	32000
Date; October 10, 1980	Trichloroethylene	13000
	Tetrachloroethylene	19000
003A		
Collector; White	t-1,2-dichloroethylene	2.0
Date; October 10, 1980	Trichloroethylene	2.0
	Benzene	>1.0

Section 2: Site History - Continued

The analysis of sample 002A (See page 2-4) indicates that the Shpack Site may have been used for the disposal of chemical wastes. Volatile organics had previously been detected in ten monitoring wells associated with the Attleboro Landfill. Figure 3 shows the locations of the ten Attleboro Landfill wells and Table 1 summarizes the analytical data for these wells. The leaching of volatile organics from the Attleboro Landfill may contribute to groundwater contamination under the Shpack site, but the presence of 64,000 ppb of volatiles in the shallow on-site sample 002A suggests that the major source of groundwater contamination is the Shpack property.

In June, 1981, the Town of Norton purchased the site from Mrs. Shpack, and the DOE fenced in the site and agreed to install peripheral monitoring wells.

Ecology and Environment, Inc. (E & E) was tasked by the EPA In May 1982 to perform a chemical characterization of the site in coordination with further radiological characterization by the DOE. This report presents the results of the chemical characterization performed between May and September 1982.

Figures 24 through 36 are photographs showing the topography and the types of waste materials disposed of on the site.

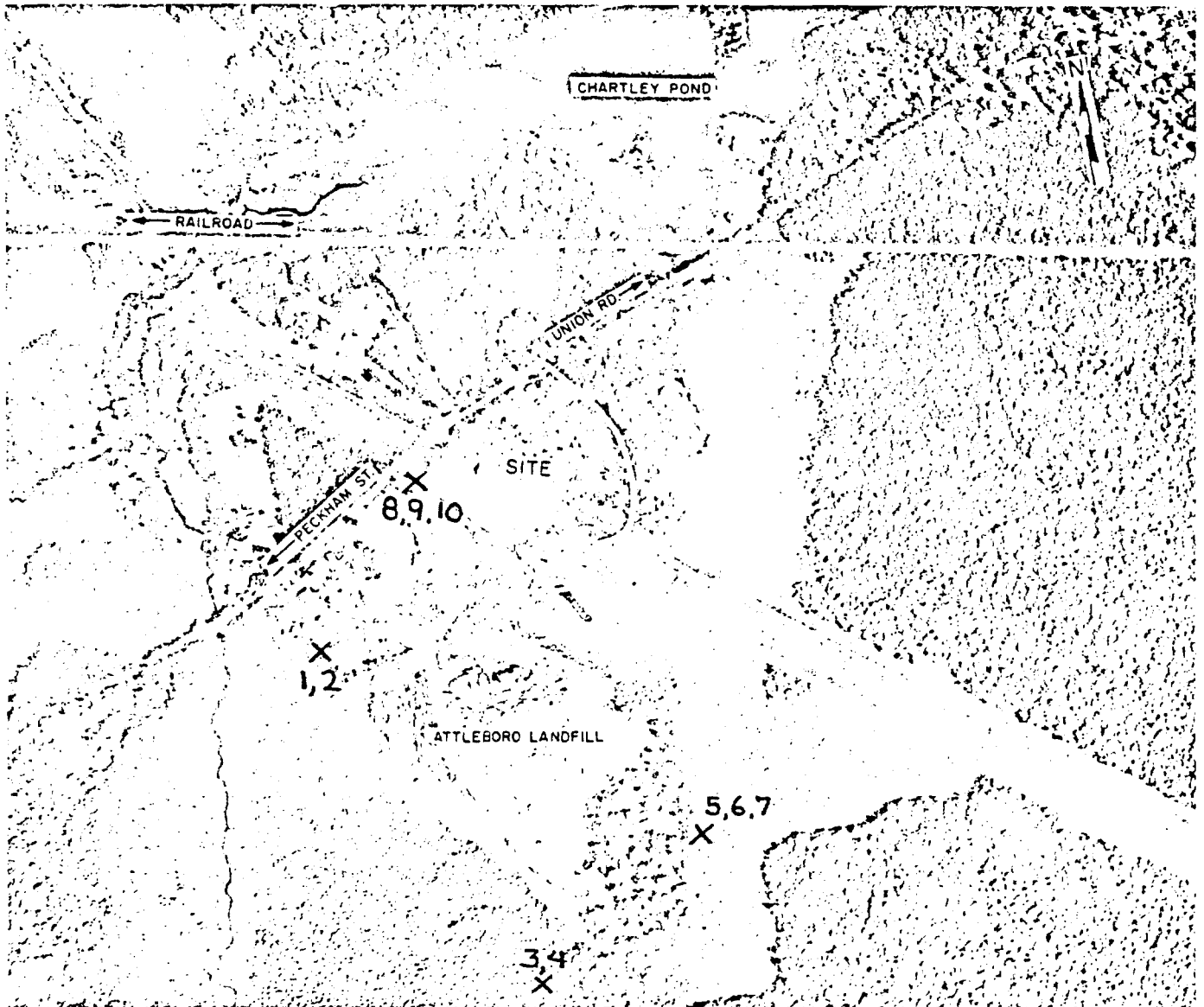


FIGURE 3: Approximate Locations of the
Attleboro Landfill Monitoring Wells
(ORNL-Photo 3282-81, August 1971)
Scale 1:7000

TABLE 1

Attleboro Landfill Monitoring Wells

Volatile Organics Analysis by GC/MS (ppb)

Compounds	----- W E L L # -----									
	1	2	3	4	5	6	7	8	9	10
dichlorodifluoromethane	ND	ND	ND	ND	28	ND	ND	ND	ND	36
vinyl chloride	ND	ND	ND	ND	460	36	ND	ND	ND	ND
chloroethane	ND	ND	ND	ND	ND	ND	32	ND	ND	ND
methylene chloride	*	*	*	16	*	11	16	*	*	*
1,1-dichloroethane	ND	ND	*	ND	15	12	75	ND	ND	ND
trans-1,2-dichloroethylene	ND	ND	8	ND	360	190	21	**	*	ND
chloroform	ND	**	ND	ND	*	*	ND	**	ND	**
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	**	ND	ND	ND
1,1,1-trichloroethane	*	ND	ND	*	ND	*	*	**	**	**
bromodichloromethane	ND	ND	ND	ND	**	ND	ND	ND	ND	ND
trichloroethylene	ND	ND	**	ND	*	ND	ND	**	*	ND
benzene	ND	ND	ND	ND	*	*	*	ND	ND	ND
tetrachloroethylene	ND	ND	**	ND	*	ND	ND	ND	ND	ND
toluene	ND	ND	ND	*	*	25	35	**	ND	ND
ethyl benzene	ND	ND	ND	ND	ND	10	33	ND	ND	**

Analyzed on 21 February 1980 by Massachusetts DEQE

* = 1-9 µg/l

** = <1 µg/l

ND = Not detected

SECTION 3 - METHODS AND PROCEDURES

3.1 MONITORING WELL INSTALLATIONS

Seven peripheral monitoring wells were installed by Warren George Drillers of Jersey City, New Jersey, subcontractor to Bechtel National. Bechtel National is the subcontractor to the Department of Energy (DOE) to manage the evaluation of radiological waste disposal sites. The locations of the wells are shown in Figure 4.

The wells were installed using a truck-mounted rig. Augering and drive and wash drilling methods were employed for overburden, and diamond coring (BX) was used for bedrock. All screen and casing was two-inch inside diameter stainless steel. Figure 5 shows a schematic cross-section of the monitoring wells installed at the Shpack Landfill. Two of the seven wells are screened in bedrock (OW1 and OW7), the remainder are screened in the overburden. See Appendix B for well logs of the newly installed peripheral monitoring wells. Table 2 contains relevant data for the wells.

Table 2. Peripheral Monitoring Well Data, Shpack Landfill, Norton/Attleboro, Massachusetts.

Well #	Depth (ft-MSL)	Depth of Screen (ft-MSL)	Depth of Water Table (ft-MSL) 8/20/82	Depth to Bedrock (ft-MSL)	Surveyed Ground Elevation* (ft-MSL)
OW1	57	58-60	103.33	72	107.08
OW2	80	85-87	103.07	80**	104.45
OW3	80	91-93	103.23	89	105.40
OW4	75	79-81	103.43	78	105.47
OW5	77	82-84	103.30	80	105.88
OW6	81	85-87	103.53	81**	104.53
OW7	52	56-58	103.39	79	105.56

* Surveyed by Schofield Brothers, Inc.

** Refusal, bedrock not confirmed

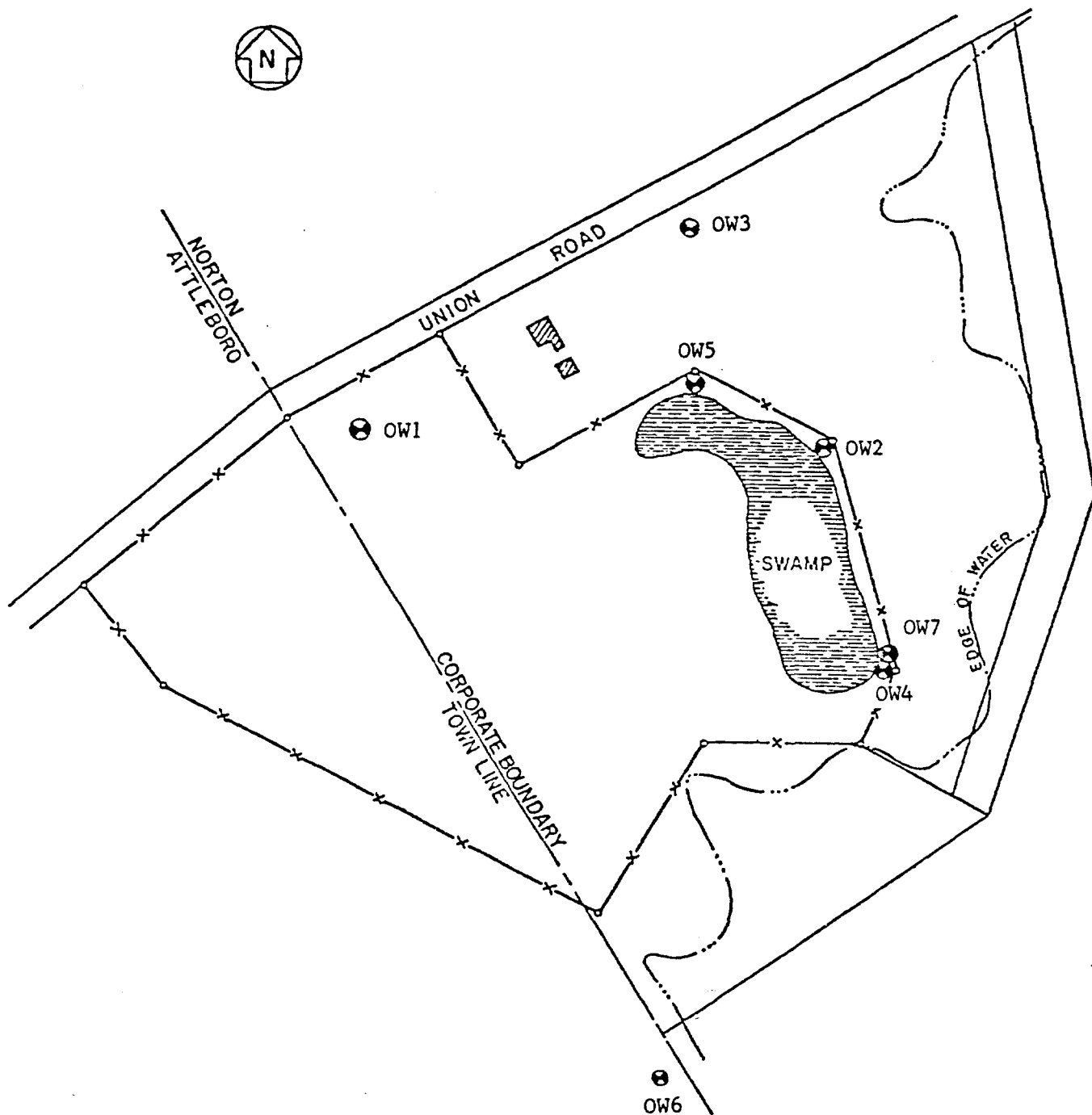


FIGURE 4: Locations of Peripheral
Monitoring Wells - Shpack Landfill
Base Map from Reference 1.
Scale 1:4000

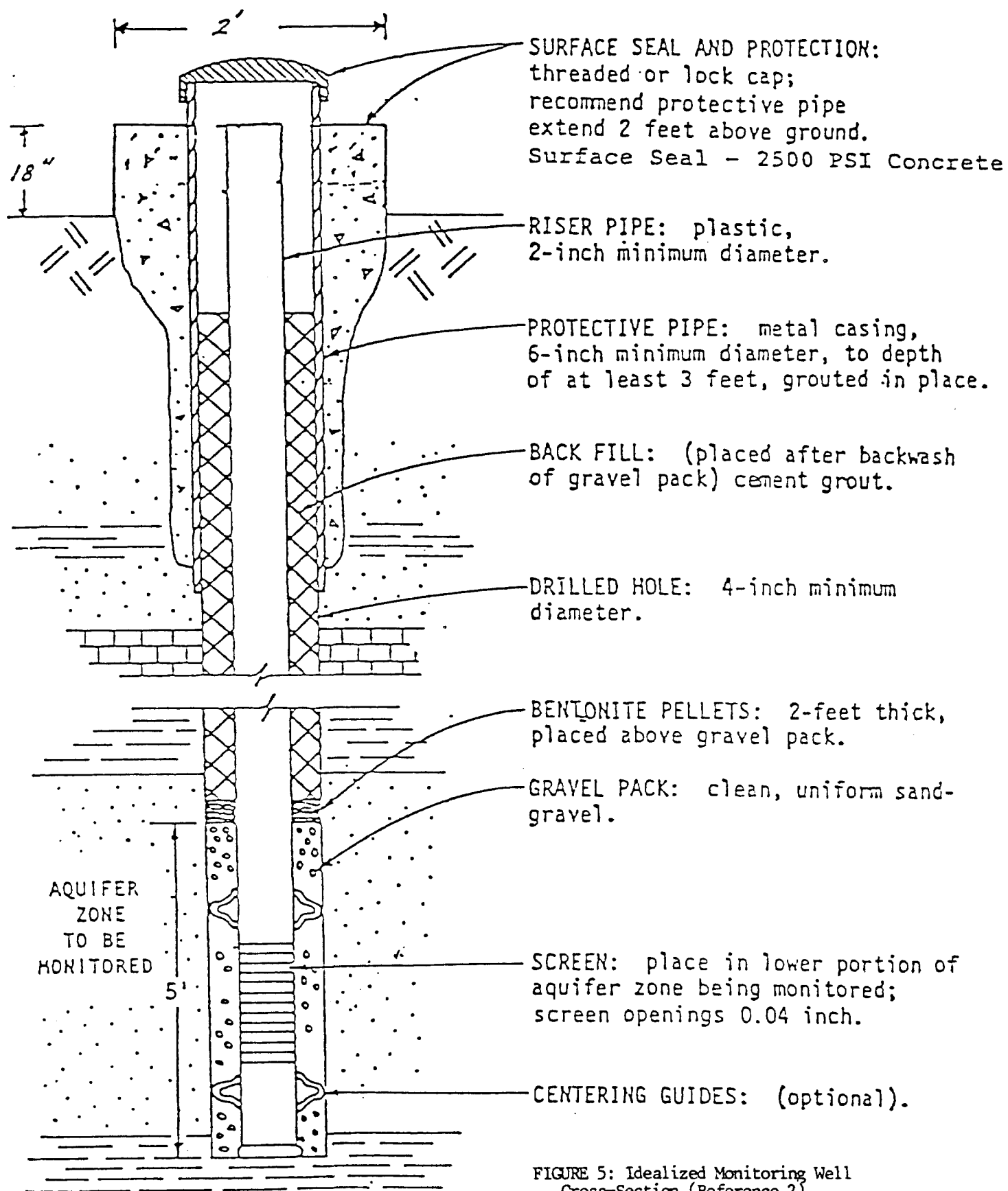


FIGURE 5: Idealized Monitoring Well Cross-Section (Reference 2)

Section 3: Methods and Procedures - continued

3.2 BOREHOLE DRILLING

Forty-six boreholes were drilled on site by Warren George Drillers of Jersey City, New Jersey. The boreholes, which ranged in depth from 5 to 16 feet, were drilled using a hollow stem auger (4" I.D.). The holes were kept open with four-inch I.D. solid PVC Pipe. Figure 6 shows the locations of the boreholes, and Table 3 gives the available relevant data for the boreholes.

3.3 SAMPLING AND ANALYSIS METHODS

Several rounds of sampling and analysis of groundwater were performed by E & E during and after the installation of the peripheral monitoring wells and on-site boreholes.

3.3.1 Sampling and OVA Analysis During Installation of Peripheral Wells (8/9/82 to 8/26/82)

Split spoon samples were taken at five-foot intervals during the installation of the peripheral monitoring wells. A small amount of soil was taken from each split spoon and placed in a 40 ml volatile organic analysis (VOA) septum vial. A sample of the head-space vapor was then extracted from each vial with a syringe and injected into the column of a Foxboro Model 128 Organic Vapor Analyzer (OVA). Samples were analyzed on site within one hour of collection time. A chromatogram was run for each sample. Chromatograms of standards were run daily for comparison with monitoring well analyses.

3.3.2 Priority Pollutant Sampling and Analyses of Peripheral Monitoring Wells (8/30/82)

A priority pollutant sample was collected from each of the seven peripheral monitoring wells plus the McGinn well. The McGinn well is a 24-inch diameter, hand-dug well approximately 15 feet deep and located just northeast of the site. It supplies drinking water to the McGinn residence. Three or more static volumes were purged from each well except OW7 and the McGinn well using a hand suction pump. Only one volume was purged from OW7 because of its extremely slow rate of recharge. No purging was attempted of the McGinn well due to its large static volume, but it is assumed that the well is used regularly by the McGinn family. Samples for analysis were subsequently bailed from each well using a stainless steel bailer. The bailer was decontaminated between wells by rinsing with water followed by methanol followed by water.

OW3

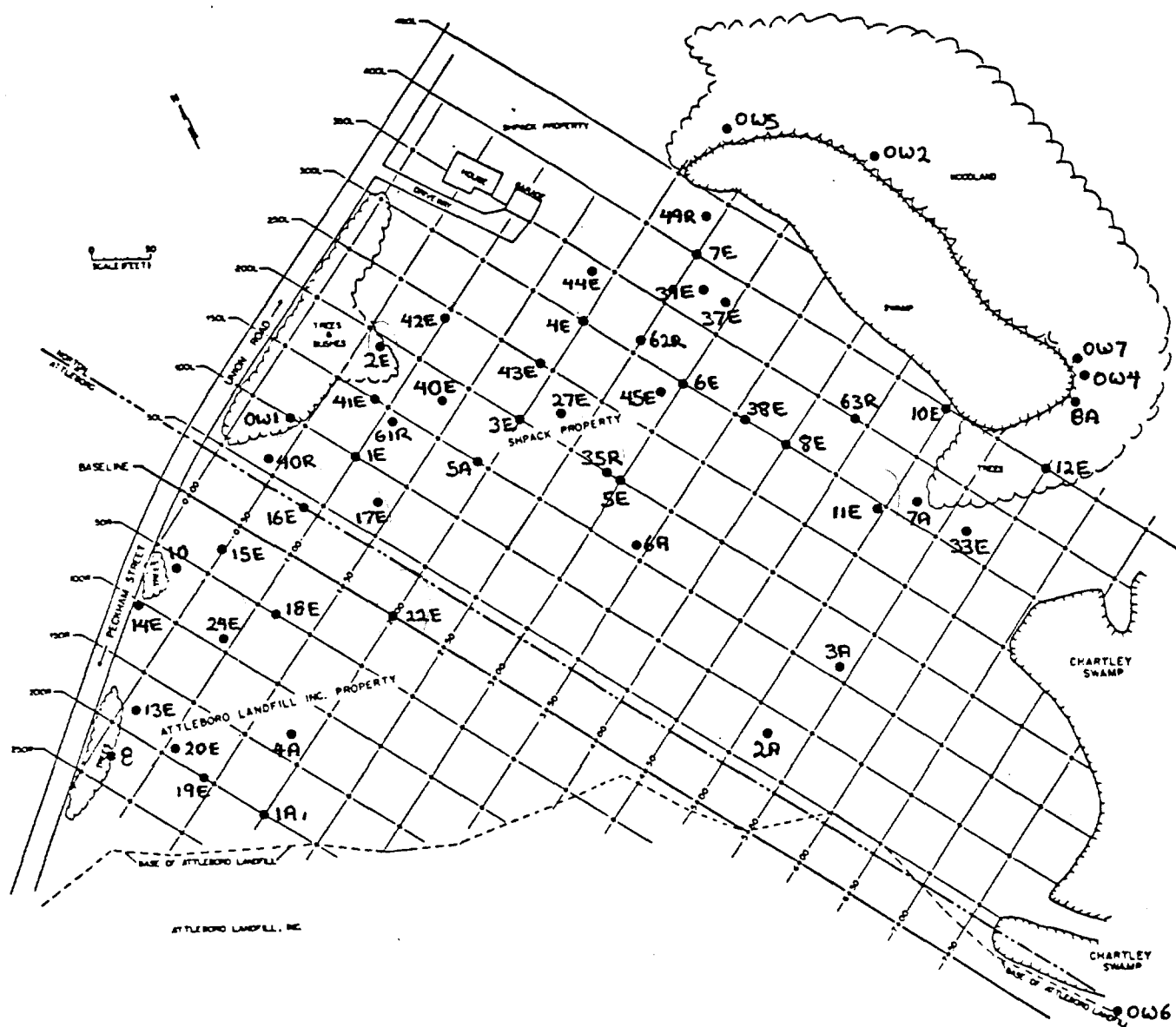


FIGURE 6: Locations of On-Site
Boreholes - Shpack Landfill
(Base Map from Reference 1)

TABLE 3
On-site Borehole Data

Shpack Landfill
 Norton/Attleboro, Massachusetts

<u>Hole #</u>	<u>Coordinates</u> (See Figure 6)	<u>Date Drilled</u>	<u>Depth</u> (in ft.)
40R	S 35 E 60	8/30/82	14.5
61R	S110 E140	8/30/82	12
35R	S285 E200	8/31/82	15
3E	S200 E200	8/31/82	NA
1E	S100 E100	8/31/82	15
11E	S496 E296	8/31/82	14
5E	S300 E200	9/01/82	15
6E	S300 E300	9/01/82	NA
12E	S600 E400	9/01/82	NA
7E	S300 E400	9/01/82	NA
4E	S200 E300	9/02/82	8
49R	S285 E430	9/02/82	15
10E	S500 E400	9/02/82	NA
8E	S400 E300	9/02/82	15
63R	S435 E348	9/02/82	10
2E	S 70 E190	9/03/82	14
20E	S106 W194	9/03/82	15
19E	S145 W200	9/03/82	NA
24E	S 90 W 90	9/07/82	NA
62R	S250 E320	9/07/82	NA
17E	S132 E 75	9/07/82	NA
16E	S 80 E 40	9/07/82	NA
27E	S225 E220	9/07/82	NA
13E	S 60 W180	9/08/82	13
40E	S135 E180	9/08/82	8
42E	S100 E240	9/08/82	5
45E	S280 E280	9/09/82	16
14E	S 20 W100	9/09/82	15
18E	S120 W 50	9/09/82	13
22E	S200 E 0	9/09/82	10
38E	S360 E300	9/09/82	14
15E	S 45 W 25	9/09/82	15
41E	S 85 E150	9/09/82	NA
37E	S340 E380	9/10/82	13
39E	S320 E380	9/10/82	10
43E	S180 E250	9/10/82	5
44E	S180 E340	9/10/82	8.5
33E	S520 E320	9/14/82	NA
1A	S200 W200	9/14/82	NA
2A	S520 E 80	9/15/82	NA
3A	S540 E160	9/15/82	NA
4A	S180 W140	9/15/82	NA
5A	S180 E150	9/15/82	NA
6A	S340 E160	9/15/82	NA
7A	S520 E320	9/16/82	NA
8A	S590 E460	9/16/82	NA

Section 3: Methods and Procedures - continued

Each priority pollutant sample consisted of:

Two 1/2 gallon brown glass bottles for extractibles.

One 1 liter polyethylene bottle for metals.

Two 40 ml VOA vials for volatile organics.

Metals samples were preserved with 1.5 ml of concentrated nitric acid. Samples were immediately placed in a Coleman cooler filled with ice and shipped within 24 hours to National Laboratory Contract facilities (JTC Environmental Consultants, Inc. for metals and S-Cubed for organics). For quality control purposes, a duplicate sample from Well OW4 and a blank consisting of organic free water from the New England Regional Laboratory were included for analysis.

All samples were screened for radioactivity prior to being shipped to contract laboratories. Screening was performed by Bechtel National, Inc. using a 2" x2" NaI crystal and a shielded pancake geometry GM Model HP 210 tube (See Appendix C for radiation screening data).

3.3.3 Sampling and OVA Analysis of On-site Boreholes (8/30/82 - 9/16/82)

A groundwater sample was bailed from each of the 46 on-site boreholes using a stainless steel bailer which was lowered down the hollow-stem auger. All samples were collected immediately after completion of drilling. The bailer was decontaminated between each sampling effort as described in 3.3.2. Analyses were performed within 24 hours of sampling using the OVA as described in 3.3.1.

3.3.4 Priority Pollutant Sampling and Analyses of On-site Boreholes (9/20/82)

The following thirteen locations were selected for priority pollutant sampling and analysis based on the OVA analyses (3.3.3):

2E	19E	27E	40R	63R
11E	22E	35R	43R	
17E	24E	38E	49R	

Section 3: Methods and Procedures - continued

Samples were bailed with a stainless steel bailer lowered down the temporary PVC casing installed immediately after augering. All other procedures were the same as described in 3.3.2. The duplicate sample for this group was taken from borehole 49R. The National Laboratory Contract facilities used for these samples were Mead Compuchem for organics analyses and JTC Environmental Consultants, Inc. for metals analyses.

SECTION 4 - SITE GEOLOGY

The Shpack Landfill is located in the northwestern portion of the Narragansett Basin. The bedrock unit under the site is the Rhode Island Formation consisting of feldspathic sandstone, shale, siltstone and pebble to boulder conglomerate. The peripheral monitoring well logs (Appendix B) indicate the presence of 20 to 35 feet of glacial deposits consisting of stratified sands and gravelly sand overlying unstratified till. A thin layer (2 inches) of peat was present at the ground surface. However, no confining layer of peat, clay or tight basal till was detected under the site. As a result, only one aquifer appears to be present under the site. This conclusion is contrary to the prior assumption (Ref. 1) that two aquifers might be present, one in bedrock and one in overburden. The fact that the water table elevation is the same in wells OW4 (which is screened in overburden) and OW7 (which is screened in bedrock) supports the presence of only one aquifer.

Figure 7 is a plot of the water table elevations as measured on 17 September 1982. The water table measurements vary less than 1/2 inch throughout the landfill. This indicates that the entire area is a discharge area. No dominant direction of groundwater movement through the site can be determined from this data.

Additional groundwater data were presented in Reference 1. Table 4 is reproduced from that document and the reader is directed to the table footnotes. Note that the borehole identification numbers are different than those used in Figure 6. The water table elevation data from Table 4 are plotted in Figure 8 and possible directions of groundwater flow are indicated. It appears from this data that a primary direction of groundwater flow from the site may be toward well OW4.

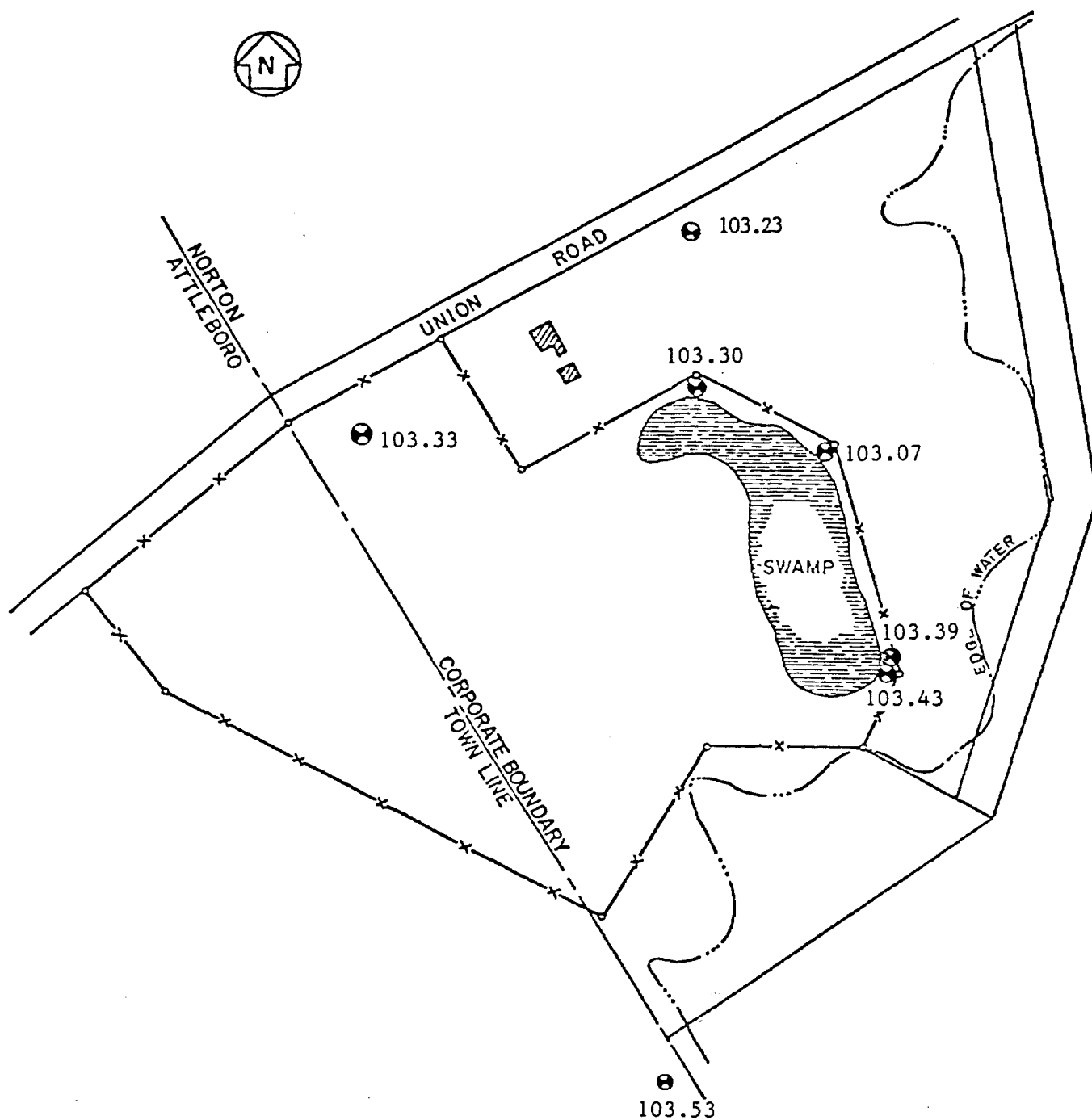


FIGURE 7: Water Table Elevations (ft.MSL)
Measured 17 September 1982
Scale 1:4000
Base Map from Reference 1

TABLE 4: Ground Surface and Water
Table Elevations
Shpack Landfill (Reference 1)

Drill-Hole Identifier	Estimated ^a Relative Elevation	Observed ^b Depth of Water	Relative Water-Table Elevation	Drill-Hole Identifier	Estimated ^a Relative Elevation	Observed ^b Depth to Water	Relative Water-Table Elevation	Drill-Hole Identifier	Estimated ^a Relative Elevation	Observed ^b Depth of Water	Relative Water-Table Elevation
7	97.5	3	94.5	28	98.8	6	92.8	48	96.	2.5	93.5
8	98.4	3	95.4	29	97.5	5	92.5	49	96.8	4	92.8
9	98.5	4	94.5	30	98.9	6	92.9	50	96.	3	93
10	98.8	4	94.8	31	95.3	1.5	93.8	51	97.7	6	91.7
11	99.5	6	93.5	32	95.0	1	94.0	52	97.3	6.5	90.8
12	90.3	6	92.3	33	97.4	1.5	95.9	53	96.7	8	88.7
13	95.8	4	91.8	34	95.2	1	94.2	54	95.0	1.5	93.5
14	96.4	3	93.4	35	94.7	1	93.7	55	95.0	5	90.
15	97.0	3.5	93.5	36	94.5	1.5	93.0	56	96.2	5	91.2
17	98.3	4.5	93.8	37	94.7	1.5	93.2	57	93.8	2	91.8
18	96.4	3	93.4	38	95.2	2	93.2	59	98.	8	90
19	100	8	92	39	95.6	3.5	92.1	60	97.4	13	84.4
20	99.2	6	93.2	40	97.0	3.5	93.5	61	97.2	3	94.2
21	99.3	7	92.3	41	96.4	3.5	92.9	62	96.6	2.5	94.1
22	98.5	4.5	94.0	42	95.	2	93	63	95.7	1.5	94.2
23	96.5	4	92.5	43	90.	6.5	91.5	ADM0	98.0	9	91.0
24	98.5	4.5	94.0	44	96.5	4.5	92.0	ADM9	96.8	4	92.8
25	95.8	4	91.8	45	97.1	4.5	92.6	ADM10	96.5	4.5	92.0
26	95.0	3.5	91.5	46	95.7	2.5	93.2				
27	95.5	1.5	94.	47	95.8	3	92.8				

This estimate is based upon a topographic map of the Shpack site prepared by Freeman Engineering. The assumed datum is 100.0' at the top of a concrete post in the center of the landfill area.

The depth to water was measured after the sample drill hole was completed, prior to re-filling. It is likely that the water level in the hole had not yet risen to the equilibrium depth in many cases. Thus these observation should be considered as only approximate. The depth to water is probably overestimated in general.

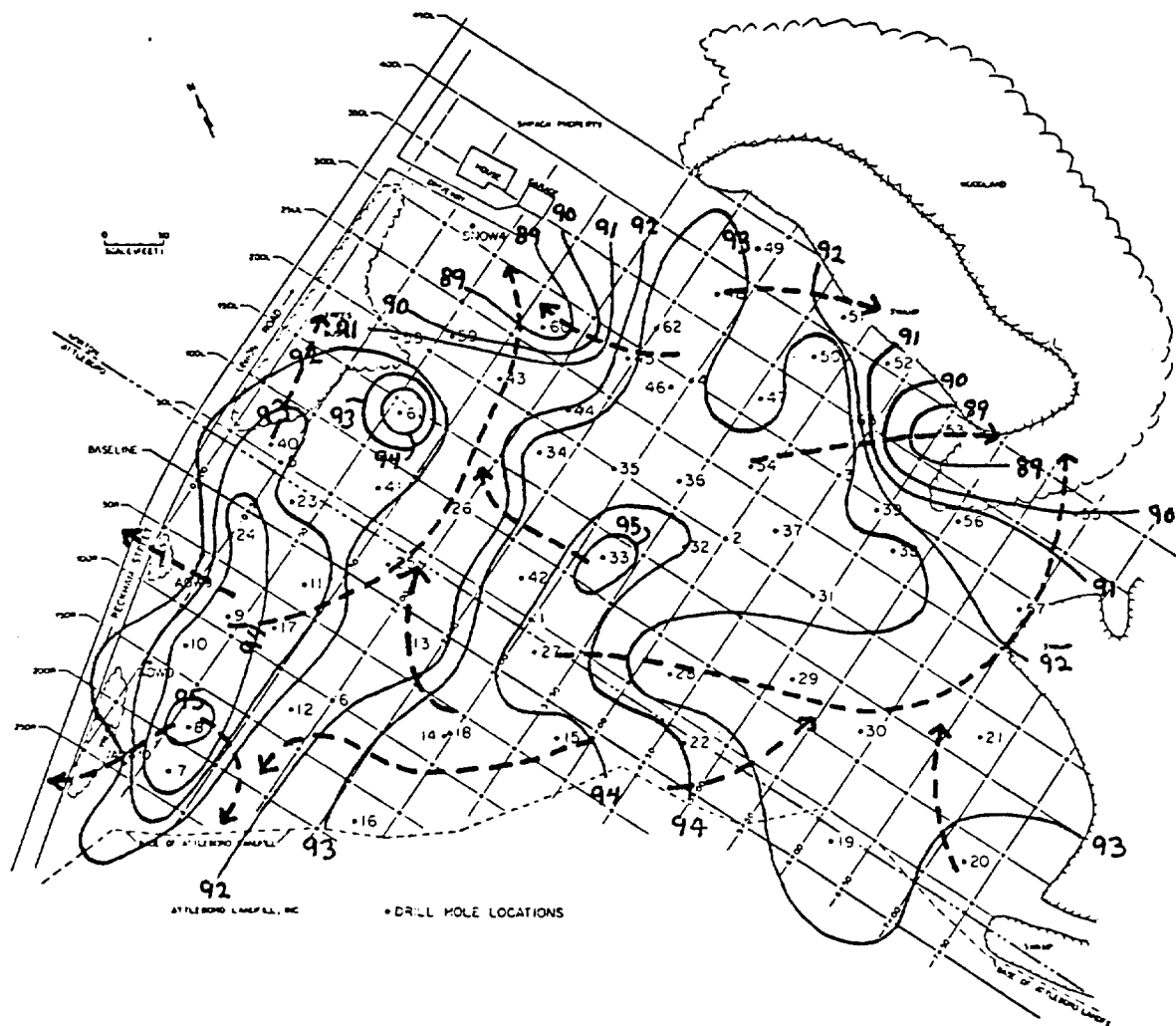


FIGURE 8: Water Table Contour Map
 Constructed from Table 4 Data with
 Possible Directions of Groundwater
 Movement (Dashed Arrows)
 Base Map from Reference 1
 (ORNL-DW. 81-20504)

Section 4: Site Geology - continued

Figure 9 is a topographic map of the site constructed from data contained in Table 4. Significant features of this map are a low area in the center of the site and a low area to the southeast of the site.

Figure 10 is a preliminary bedrock surface contour map derived from the peripheral monitoring well logs (Appendix B). The wide spacing and limited number of the data points are inadequate to produce a refined map.

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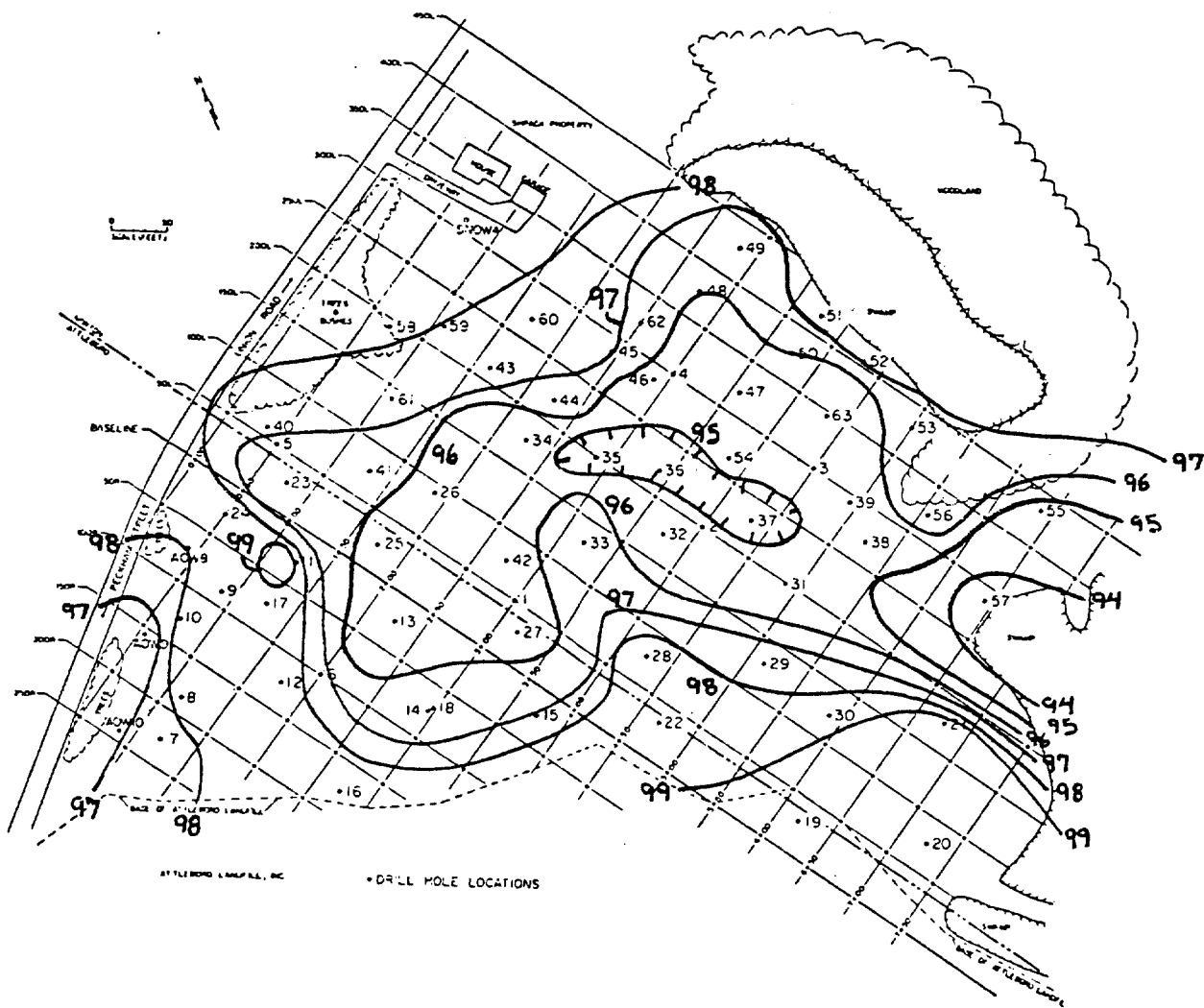


FIGURE 9: Topographic Contour Map
Constructed from Table 4 Data.
Base Map from Reference 1
(ORNL-DWG. 81-20504)

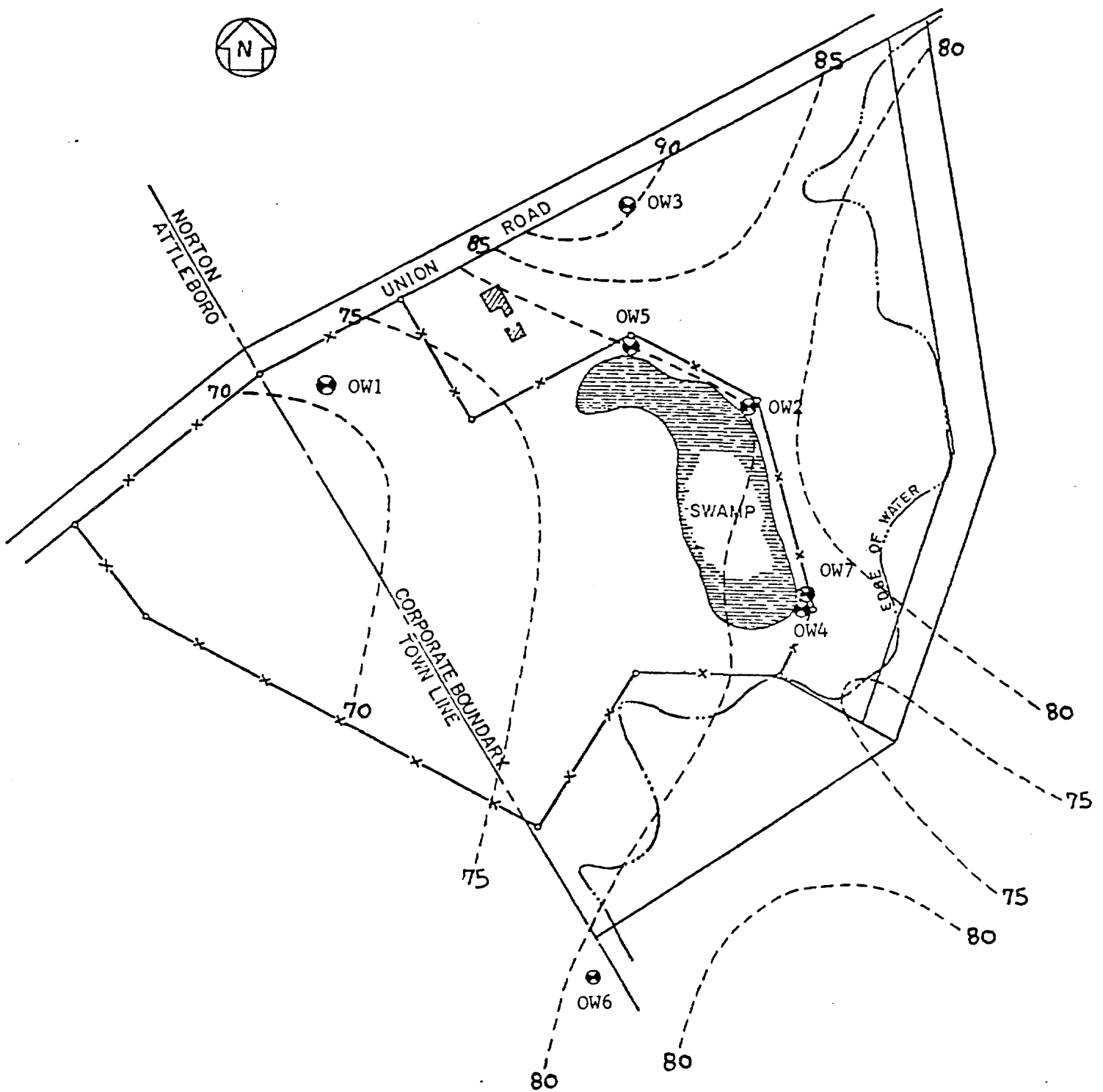


FIGURE 10: Bedrock Contour Map
 Constructed from Peripheral
 Monitoring Well Data
 Base Map from Reference 2

SECTION 5 - ANALYTICAL RESULTS

5.1 OVA ANALYSES PERFORMED DURING THE INSTALLATION OF THE PERIPHERAL MONITORING WELLS.

The purpose of this round of sampling was to tentatively identify any contaminants present in the peripheral wells and to determine the vertical extent of the contamination. Several contaminants were tentatively identified at low levels (<25 ppb) as follows:

- OW1 - ethyl benzene
- OW2 - nothing detected
- OW3 - tetrachloroethylene, toluene, ethyl benzene
- OW4 - ethyl benzene
- OW5 - trichloroethylene
- OW6 - nothing detected
- OW7 - nothing detected

Fifty to 100 ppb of trichloroethylene were detected in well OW4 at the bedrock/overburden interface. All other wells contained the low levels of contamination indicated above throughout the vertical extent of drilling.

5.2 PRIORITY POLLUTANT ANALYSES OF PERIPHERAL MONITORING WELL SAMPLES.

Tables 5A and 5B contain the results of the priority pollutant analyses of groundwater from the seven peripheral monitoring wells and the McGinn well. Appendix D contains the Analysis Data Sheets.

5.3 OVA ANALYSES OF ON-SITE BOREHOLE SAMPLES.

Table 6 contains the results of the OVA analyses of groundwater samples taken from 45 of the 46 on-site boreholes (Borehole 42E was dry at the time of sampling). All compounds were identified using only one column (T-12) on the OVA, therefore all identifications are tentative. All concentrations are based on relative peak height and are approximate.

TABLE 5A

Results of Priority Pollutant Analyses of Peripheral Monitoring Wells
Shpack Landfill

Organic Compounds (ppb)

Contaminant	----- W E L L # -----							
	OW1	OW2	OW3	OW4	OW4 (Dupl.)	OW5	OW6	OW7 McGinn
phenol	ND	ND	ND	ND	ND	ND	<10	ND
bis(2-ethylhexyl)phthalate	12	ND	<10	<10	<10	<10	<10	136
di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	<10	ND
benzene	ND	ND	ND	ND	ND	ND	<10	ND
1,1-dichloroethane	ND	<10	ND	<10	<10	<10	<10	ND
chloroethane	ND	ND	ND	<10	<10	<10	<10	ND
chloroform	ND	ND	ND	ND	ND	ND	<10	ND
1,1-dichloroethylene	ND	ND	ND	<10	<10	ND	ND	ND
1,2-trans-dichloroethylene	<10	ND	<10	665	638	<10	<10	<10
methylene chloride	<10	<10	<10	<10	<10	<10	13	<10
trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND
toluene	<10	<10	ND	<10	<10	<10	<10	<10
trichloroethylene	<10	ND	ND	<10	<10	<10	ND	ND
vinyl chloride	ND	ND	ND	26	14	<10	ND	ND

Analyzed October 1982 by Systems, Science and Software (S-Cubed)

ND = Not detected

TABLE 5B

Results of Priority Pollutant Analyses of Peripheral Monitoring Wells
Shpack Landfill

Inorganic Compounds (ppb)

Metal (detection limit)	----- W E L L # -----								
	OW1	OW2	OW3	OW4	OW4 (Dupl.)	OW5	OW6	OW7	McGinn
aluminum (10)	ND	3950	ND	390	570	ND	380	180	4120
chromium (5)	ND	ND	ND	ND	15	ND	ND	ND	15
barium (20)	1290	140	44	112	125	79	324	97	130
beryllium (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND
cobalt (5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
copper (5)	ND	ND	ND	ND	ND	ND	ND	ND	185
iron (5)	610	23600	1960	27400	29800	3640	60400	2250	6400
nickel (15)	ND	40	39	39	50	32	31	146	48
manganese (5)	760	1920	4300	3430	3450	610	12400	729	460
zinc (10)	128	63	134	75	128	75	28	104	524
boron (100)	ND	ND	ND	ND	ND	ND	140	ND	ND
vanadium (50)	ND	ND	ND	ND	ND	ND	ND	ND	ND
silver (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND
arsenic (5)	2	5	ND	8	6	6	4	8	2
antimony (5)	ND	ND	ND	ND	21	ND	11	ND	ND
selenium (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND
thallium (5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
mercury (0.2)	ND	ND	ND	ND	ND	1	ND	ND	0.3
tin (10)	ND	ND	ND	11	25	11	62	15	13
cadmium (1)	ND	ND	15	ND	ND	ND	ND	ND	ND
lead (5)	132	12	51	24	63	12	ND	6	194

Analyzed October 1982 by J. T. C. Environmental Consultants

ND = Not detected

TABLE 6

Results of OVA Analyses of On-site Borehole Samples
Shpack Landfill
(ppb)

Borehole #	Methyl Ethyl Ketone	Toluene	Tri-chloroethylene	Tetra-chloroethylene	Trans-1,2-dichloroethylene	Ethyl Benzene	Unknown
1A	ND	ND	ND	ND	ND	ND	ND
2A	ND	ND	ND	ND	ND	ND	ND
3A	ND	ND	<25	ND	ND	ND	ND
4A	ND	50	ND	500	ND	ND	ND
5A	ND	ND	200	ND	100	ND	100
6A	ND	ND	ND	ND	ND	ND	ND
7A	ND	ND	ND	ND	ND	ND	ND
8A	ND	ND	ND	ND	ND	ND	ND
1E	ND	ND	1000	ND	ND	ND	500
2E	ND	ND	ND	50	ND	100	3000
3E	ND	ND	<25	ND	ND	ND	ND
4E	ND	ND	ND	ND	ND	ND	ND
5E	ND	ND	100	ND	ND	ND	ND
6E	ND	ND	800	ND	ND	ND	ND
7E	ND	ND	3000	ND	50	ND	ND
8E	ND	ND	800	ND	500	ND	ND
10E	ND	ND	100	ND	ND	ND	ND
11E	ND	ND	300	ND	ND	ND	ND
12E	ND	ND	200	ND	ND	ND	ND
13E	ND	ND	ND	ND	ND	ND	50
14E	ND	<25	ND	ND	ND	ND	ND
15E	ND	ND	500	50	ND	ND	ND
16E	ND	ND	1000	ND	ND	ND	ND
17E	ND	ND	3000	1000	25	ND	50
18E	ND	ND	100	ND	ND	ND	ND
19E	ND	ND	2000	1000	ND	ND	ND
20E	ND	ND	50	ND	ND	ND	ND
22E	ND	<25	ND	200	ND	ND	ND
24E	ND	ND	500	ND	ND	ND	50
27E	ND	ND	50	ND	50	ND	ND
33E	ND	ND	ND	ND	ND	ND	ND
37E	ND	ND	3000	ND	ND	ND	ND
38E	ND	ND	6000	ND	ND	ND	100
39E	ND	ND	5000	ND	ND	ND	ND
40E	ND	ND	ND	ND	ND	ND	ND
41E	ND	ND	300	ND	ND	ND	ND
42E	- D R Y H O L E -						
43E	1000	100	ND	ND	ND	ND	ND
44E	ND	ND	ND	50	ND	ND	50
45E	ND	ND	ND	50	ND	ND	ND
35R	ND	ND	700	ND	5000	ND	500
40R	ND	ND	<25	ND	ND	ND	ND
49R	ND	ND	4000	ND	100	ND	100
61R	ND	ND	ND	ND	ND	ND	<25
62R	ND	ND	2000	ND	ND	ND	ND
63R	ND	ND	800	ND	ND	ND	ND

ND = Not Detected

Section 5: Analytical Results - continued

Figures 11 through 16 are plots of the concentrations of trichloroethylene, tetrachloroethylene, trans-1,2-dichloroethylene, methyl ethyl ketone, toluene and ethyl benzene as estimated from the OVA chromatograms. Figure 17 is a plot of total volatile organics including the unknowns as noted in Table 6. It is appropriate to contour the OVA data as all boreholes were drilled to similar depths using the same techniques and all samples were collected and analyzed using the same methods.

5.4 PRIORITY POLLUTANT ANALYSES OF GROUNDWATER FROM SELECTED ON-SITE BOREHOLES.

Tables 7A, 7B and 7C contain the results of the priority pollutant analyses of groundwater from the 13 on-site boreholes listed in 3.3.4. Appendix E contains the Analysis Data Sheets. Figure 18 is a map of all priority pollutant sampling locations including 13 on-site boreholes, 7 peripheral monitoring wells and the McGinn well. Figures 19 through are individual plots of the priority pollutant metals and organics present on the Shpack Site.

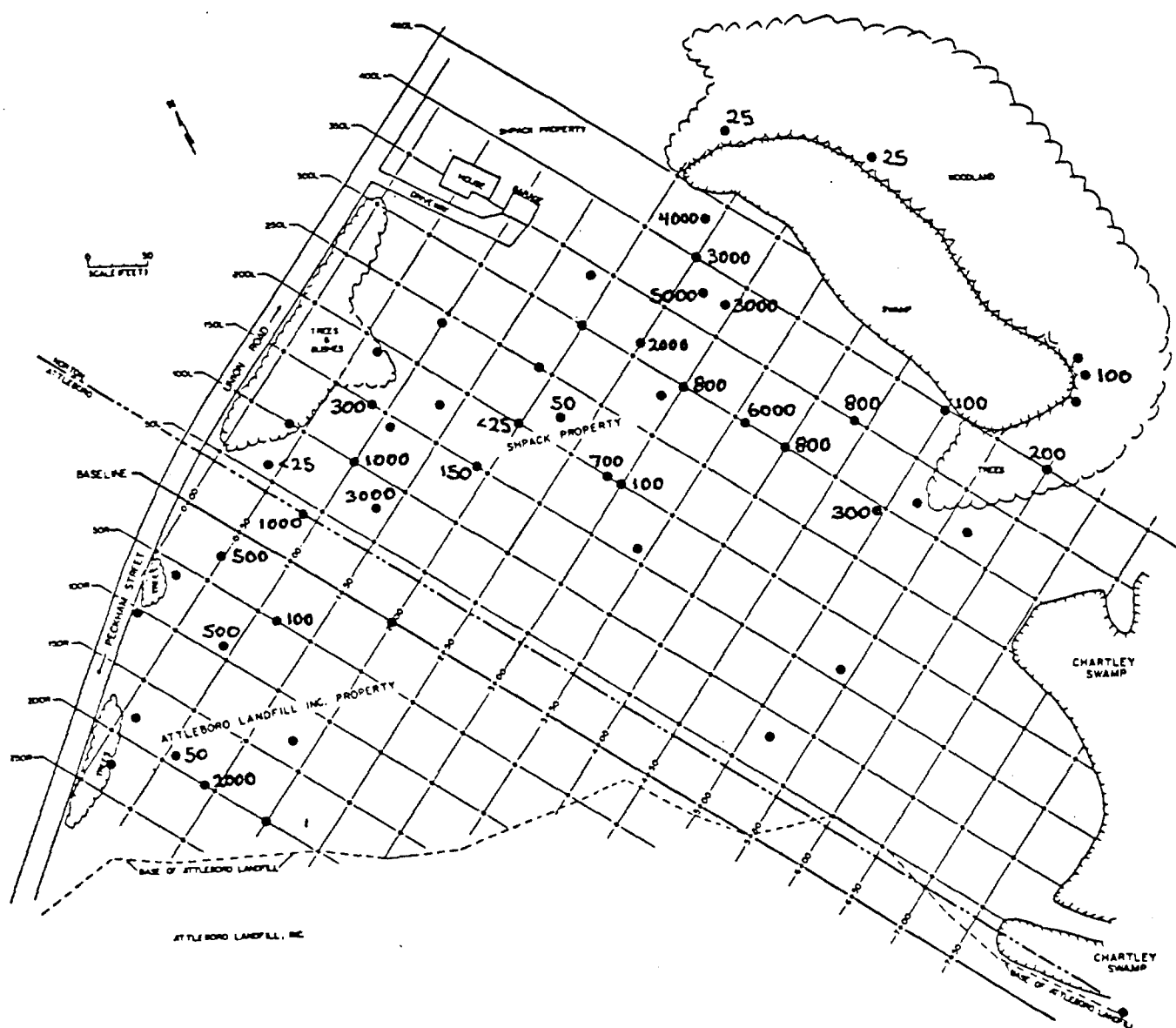


FIGURE 11: Plot of the Detected Levels of Trichloroethylene (ppb)-
 OVA Analyses of On-Site Borehole Samples.
 Where No Value is Indicated - Compound Not Detected
 (Base Map from Reference 1; ORNL-DWG. 81-20500)

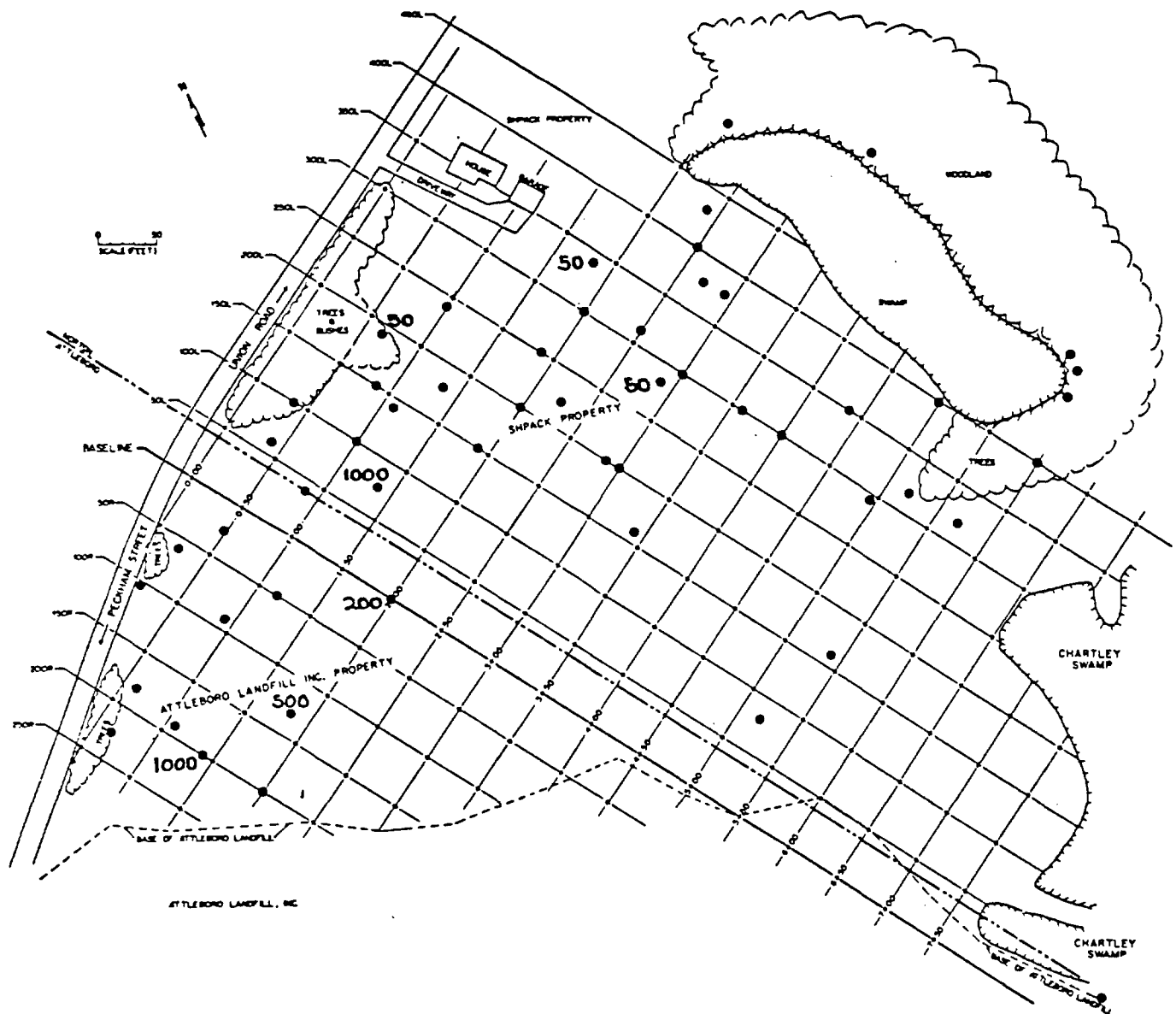


FIGURE 12: Plot of the Detected Levels of Tetrachloroethylene (ppb)-
 OVA Analyses of On-Site Borehole Samples.
 Where No Value is Indicated - Compound Not Detected
 (Base Map from Reference 1; ORNL-DWG. 81-20500)

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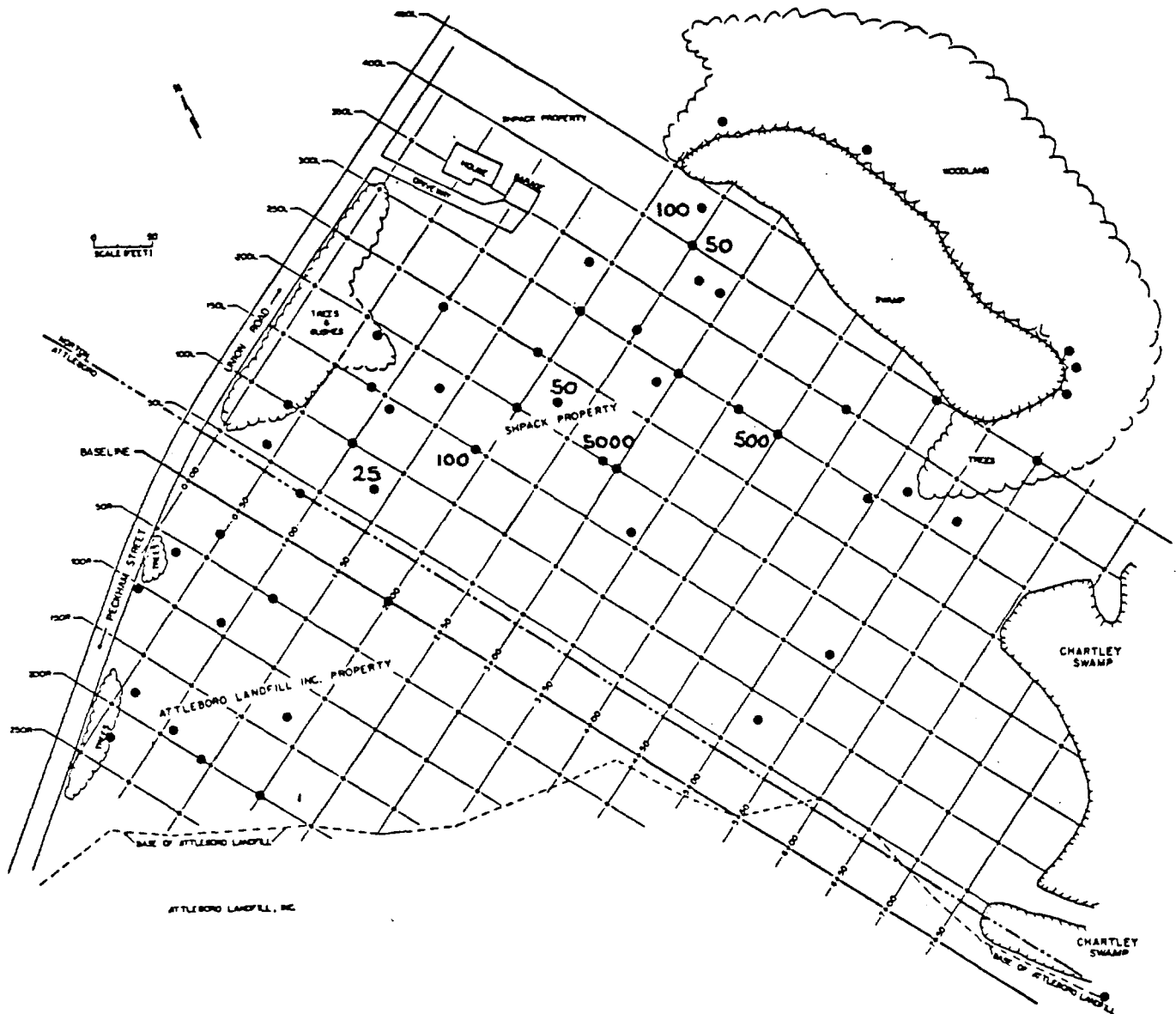


FIGURE 13: Plot of the Detected Levels of 1,2-trans-dichloroethylene (ppb)-
OVA Analyses of On-Site Borehole Samples.
Where No Value is Indicated - Compound Not Detected
(Base Map from Reference 1; ORNL-DWG. 81-20500)

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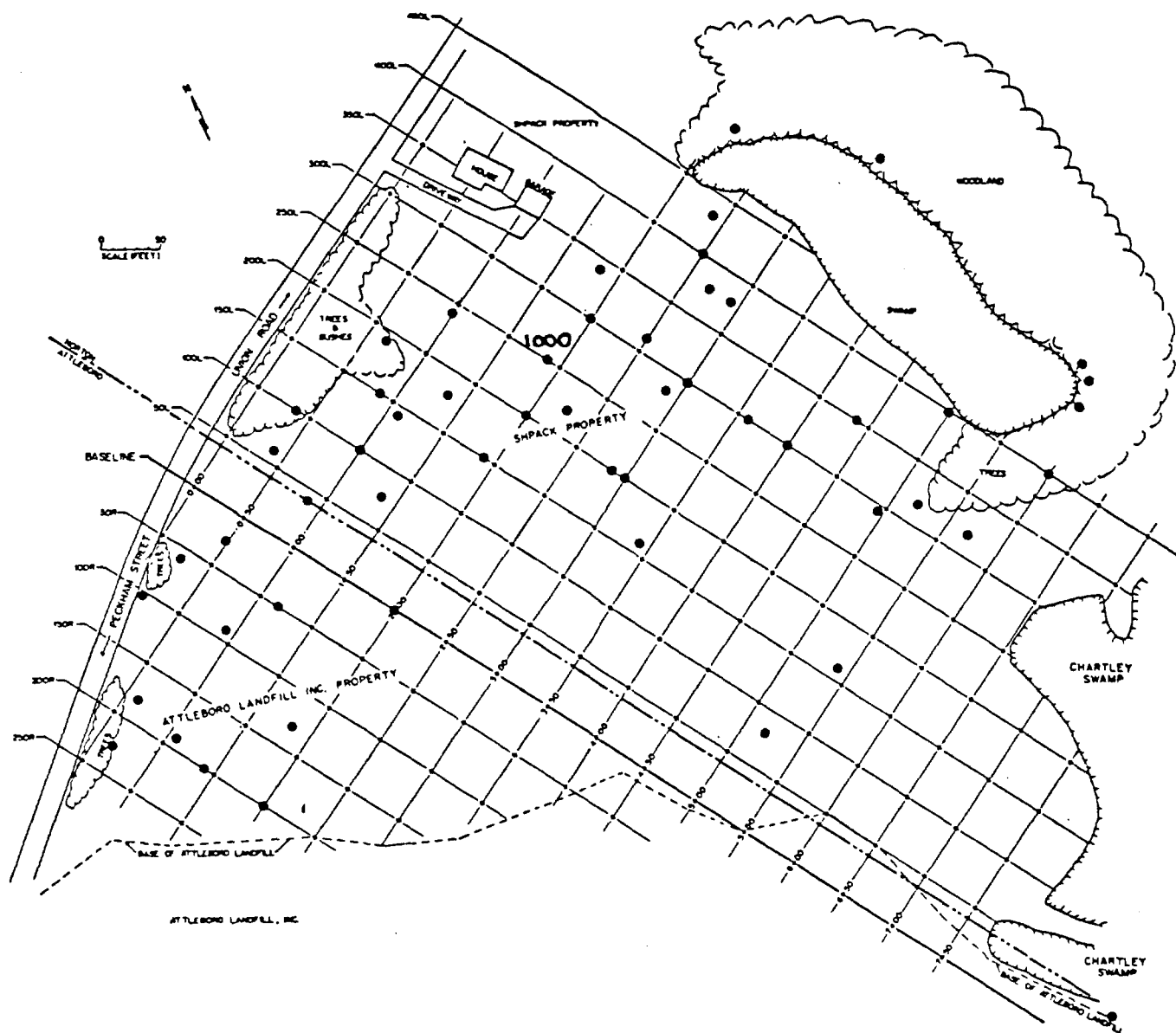


FIGURE 14: Plot of the Detected Levels of Methyl Ethyl Ketone (ppb)-
OVA Analyses of On-Site Borehole Samples.
Where No Value is Indicated.- Compound Not Detected
(Base Map from Reference 1; ORNL-DWG. 81-20500)

DRAFT

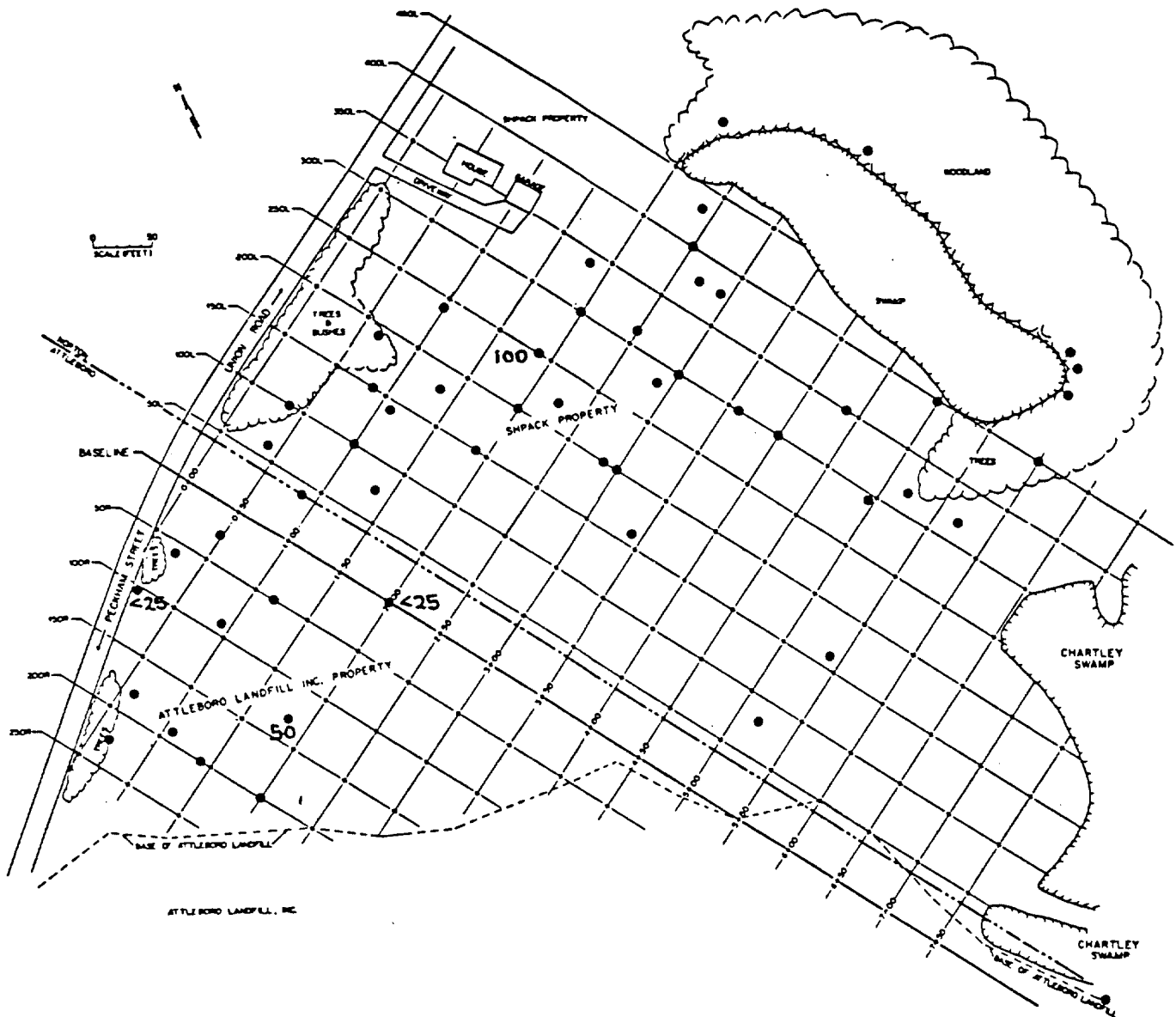


FIGURE 15: Plot of the Detected Levels of Toluene (ppb)-
OVA Analyses of On-Site Borehole Samples.
Where No Value is Indicated - Compound Not Detected
(Base Map from Reference 1; ORNL-DWG. 81-20500)

DRAFT

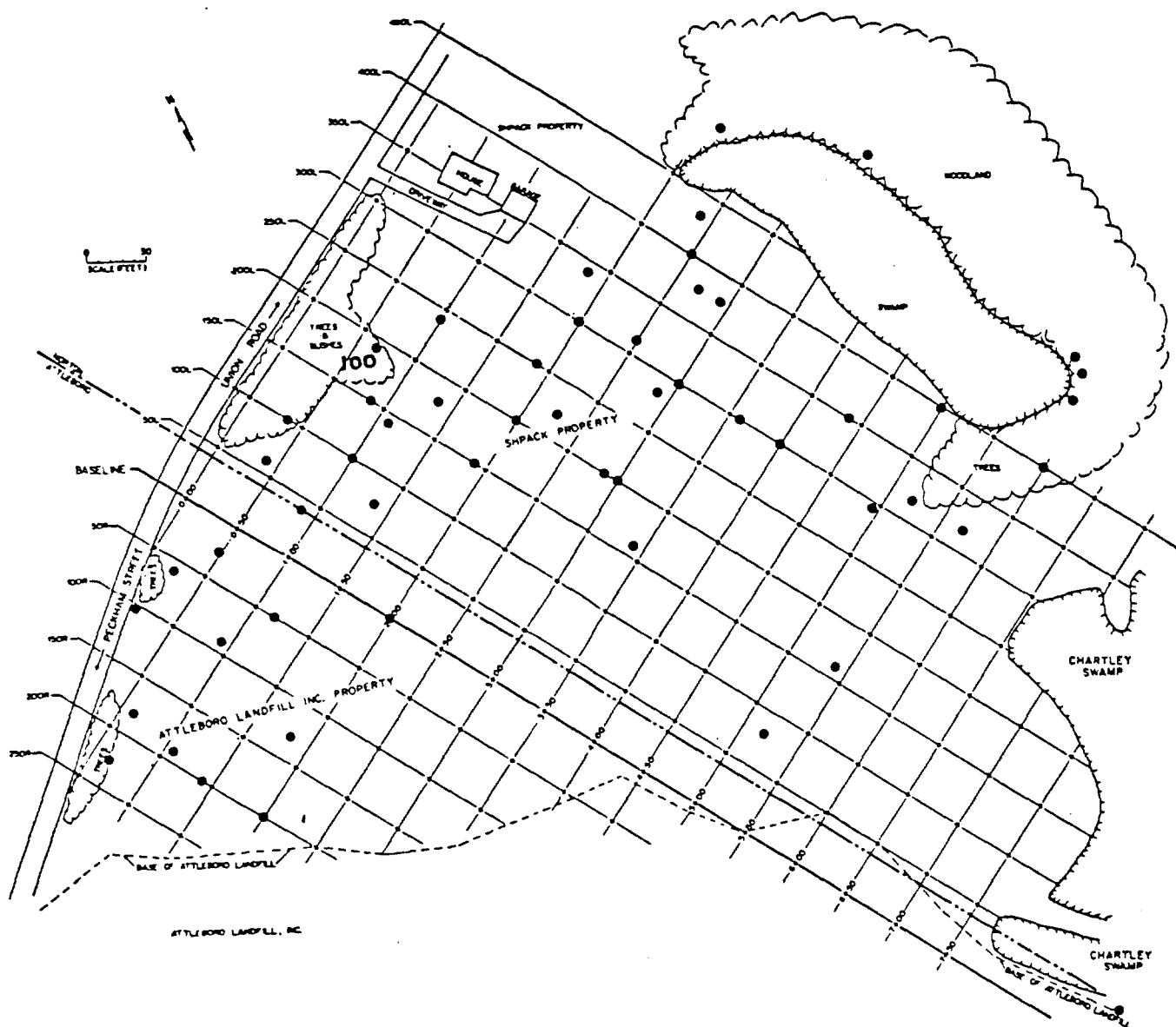


FIGURE 16: Plot of the Detected Levels of Ethyl Benzene (ppb)-
OVA Analyses of On-Site Borehole Samples.
Where No Value is Indicated - Compound Not Detected
(Base Map from Reference 1; ORNL-DWG. 81-20500)

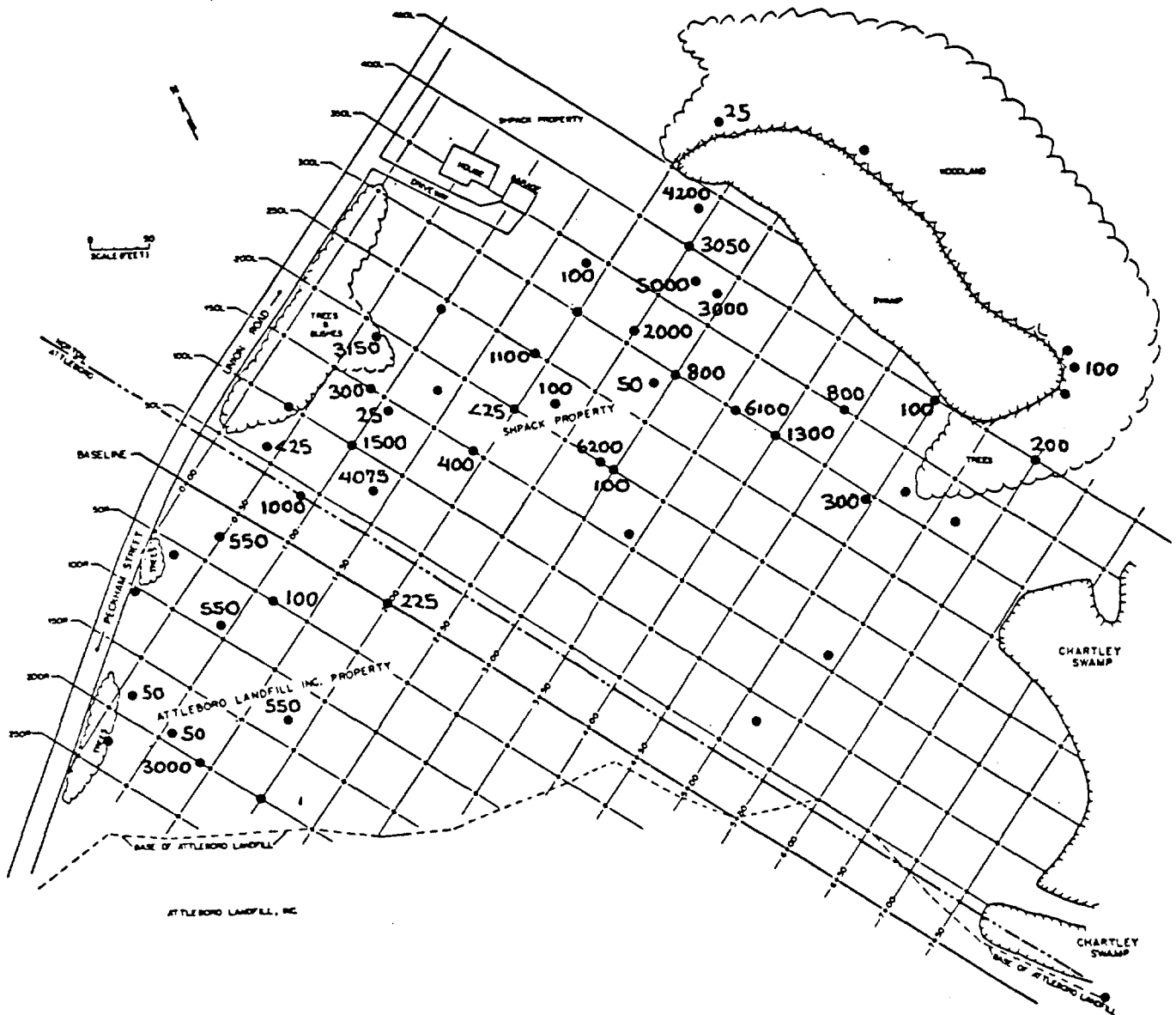


FIGURE 17: Plot of the Detected Levels of Total Volatile Organics (ppb)-
OVA Analyses of On-Site Borehole Samples.
Where No Value is Indicated - Compound Not Detected
(Base Map from Reference 1; ORNL-DWG. 81-20500)

TABLE 7A
Priority Pollutant Analyses of On-site Borehole Samples
(Concentrations in ppb) - Organics

ORGANIC COMPOUND	B O R E H O L E N U M B E R														E & E (Blank)
	17E	2E	49R	49R* (Dupl)	38E*	27E	22E	63R	11E	24E	19E	40R	43E	35R*	
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND
Bis(2-Ethyl Hexyl) Phthalate	ND	ND	ND	ND	ND	<20	93	ND	ND	ND	ND	ND	ND	<20	ND
Di-N-Butyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20	ND	<20	ND	ND	ND
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<40	ND
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<40	ND
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	54	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	54	ND	ND	<5	ND	<5	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	<5	ND	ND	ND	ND	51	ND	ND	58	ND	ND	ND	ND
1,1-Dichloroethylene	18	ND	43	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND
1,2-trans-Dichloroethylene	10000	15	65000	46000	39000	100	<5	1100	29	150	5200	<5	ND	28000	ND
Methylene Chloride	<5	<5	360	560	ND	<5	<5	<5	ND	<5	<5	<5	<5	ND	<5
Tetrachloroethylene	ND	ND	170	ND	2400	ND	ND	ND	ND	ND	ND	ND	ND	740	ND
Toluene	<5	12	ND	ND	ND	<5	ND	ND	ND	7	10	13	ND	ND	ND
Trichloroethylene	600	180	23000	30000	27000	14	<5	760	10	65	73	ND	ND	72000	ND
Vinyl Chloride	150	<5	190	ND	ND	28	5	45	22	<5	1200	ND	ND	3800	ND
Total Volatile Organics	10776	215	88861	75400	68400	164	17	1974	61	230	6549	21	4	104540	4

Analyzed September 1982 by Mead Computchem.

* Sample diluted prior to analysis; detection limits 100 to 200 times greater than those for undiluted sample.

ND Not detected.

TABLE 7B

Priority Pollutant Analyses of On-site Borehole Samples
(Concentrations in ppb) - Metals

METAL (Detection Limit)	B O R E H O L E N U M B E R													E & E (Blank)				
	17E	2E	49R (Dupl)	49R	38E	27E	22E	(Dupl)		63R	63R	11E	24E	19E	40R	43E	35R	E & E (Blank)
Aluminum (10)	7100	14000	4200	1600	9800	760	37900	1160	1200	16500	23000	11900	16200	23600	13300			ND
Chromium (5)	45	61	94	47	81	51	260	43	40	88	220	92	31	89	210			33
Barium (20)	710	520	3200	3400	960	1700	2500	660	570	2000	3500	1200	1300	3800	2300			85
Beryllium (1)	2	9	1	ND	17	1	7	ND	ND	10	15	4	8	10	4			ND
Cobalt (5)	6	42	22	11	47	55	37	6	7	204	56	12	17	16	49			ND
Copper (5)	1350	1900	4000	700	4000	200	1500	500	550	5650	650	2650	200	350	1050			ND
Iron (5)	25900	10900	47700	24200	160000	36500	103500	2600	2300	22700	326000	28900	7800	51800	147000			ND
Nickel (15)	410	560	5590	780	2260	730	5170	180	170	4570	19700	430	130	2050	2590			ND
Manganese (5)	960	3460	20700	7950	4150	4990	3990	1510	1510	11090	10560	1290	1910	3910	5370			ND
Zinc (10)	3060	4180	2360	1520	6700	3750	25600	800	830	13100	10200	1280	1470	3680	6350			ND
Boron (100)	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	200	ND	ND	ND	ND			ND
Vanadium (50)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND
Silver (1)	7	ND	14	9	1	13	8	10	10	4	17	4	9	6	7			6
Arsenic (5)	48	69	39	27	93	55	200	49	48	120	240	55	48	210	110			ND
Antimony (5)	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND			ND
Selenium (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND
Thallium (5)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND
Mercury (0.2)	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND			1
Tin (10)	29	37	40	24	80	60	140	15	19	70	114	28	30	85	81			ND
Cadmium (1)	9	14	7	4	74	24	63	3	3	197	72	134	5	22	34			ND
Lead (5)	820	530	260	89	1040	57	7400	49	67	1020	2560	820	65	400	1090			ND

Analyzed October 1982 by J. T. C. Environmental Consultants

ND = Not Detected

TABLE 7C

Priority Pollutant Analyses of On-site Borehole Samples
(Concentrations in ppb) - Non-priority and Tentatively Identified Organics

	B O R E H O L E N U M B E R												E & E (Blank)		
	17E	2E	49R	49R	38E	27E	22E	63R	11E	24E	19E	40R		43E	35R
				(Dupl)											
Hydroxyl Methyl Pentanone	120	170	130	NA	51	ND	ND	ND	ND	37	ND	ND	13	42	ND
Methyl Heptanol	ND	ND	25	NA	ND	ND	ND	ND	ND	ND	ND	46	ND	ND	ND
Cycloheptatriene	ND	49	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Octane	ND	ND	9	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	NA	ND	ND	ND	2400	ND	ND	ND	2800	ND	ND	ND
Propene	ND	ND	11	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<100	ND	8	<100
Methyl Benzene	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND
Dichlorotrifluoroethane	ND	ND	86	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane	ND	ND	790	NA	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	71	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	160	ND	9000	140
Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexanone	7	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	1100	ND	3200	NA	140	64	ND	160	ND	ND	ND	22	ND	1500	ND
Methyl Dichlorobutane	ND	22	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dioxane	ND	59	ND	NA	29	ND	18	12	ND	ND	ND	ND	ND	73	ND
Ethyl Hexanol	ND	18	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND
Dimethyl Benzene	ND	ND	ND	NA	ND	ND	ND	ND	ND	8	ND	ND	ND	ND	ND
Hexanoic Acid	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND
Methyl Pentanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	<100
Dimethyl Benzenebutanoic Acid	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethyl Heptadecane	ND	ND	ND	NA	ND	ND	34	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethyl Butene	ND	24	ND	NA	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetramethyl Heptadecane	ND	ND	ND	NA	ND	230	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Formamide	ND	ND	280	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Tentative (<80% Purity)	580	38	220	NA	3185	19780	437	ND	56	116	10	ND	12	206	18

• 0W3

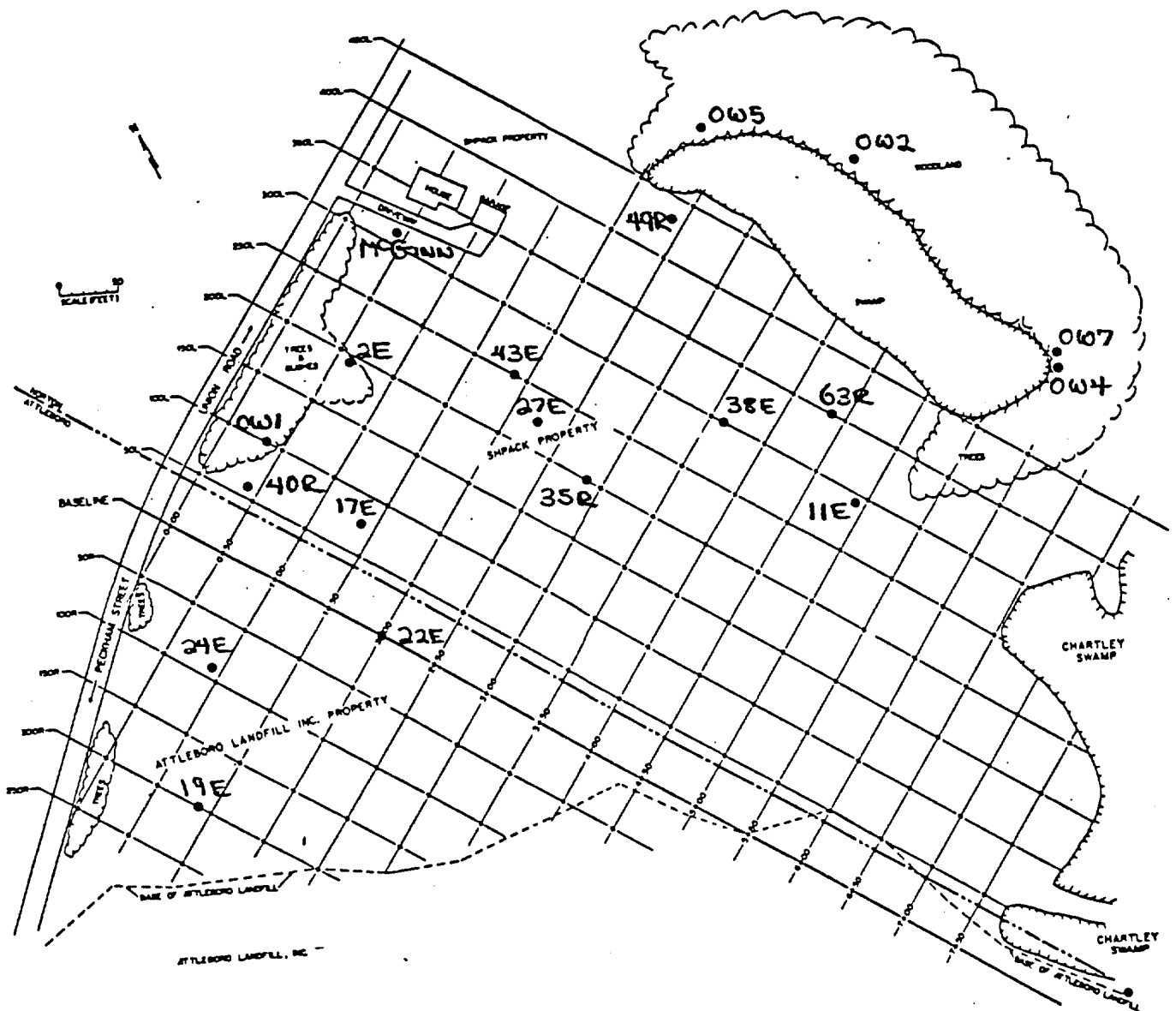


FIGURE 18: Map of Priority Pollutant Sampling Locations (Base Map from Reference 1; ORNL-81-20500)

•ND

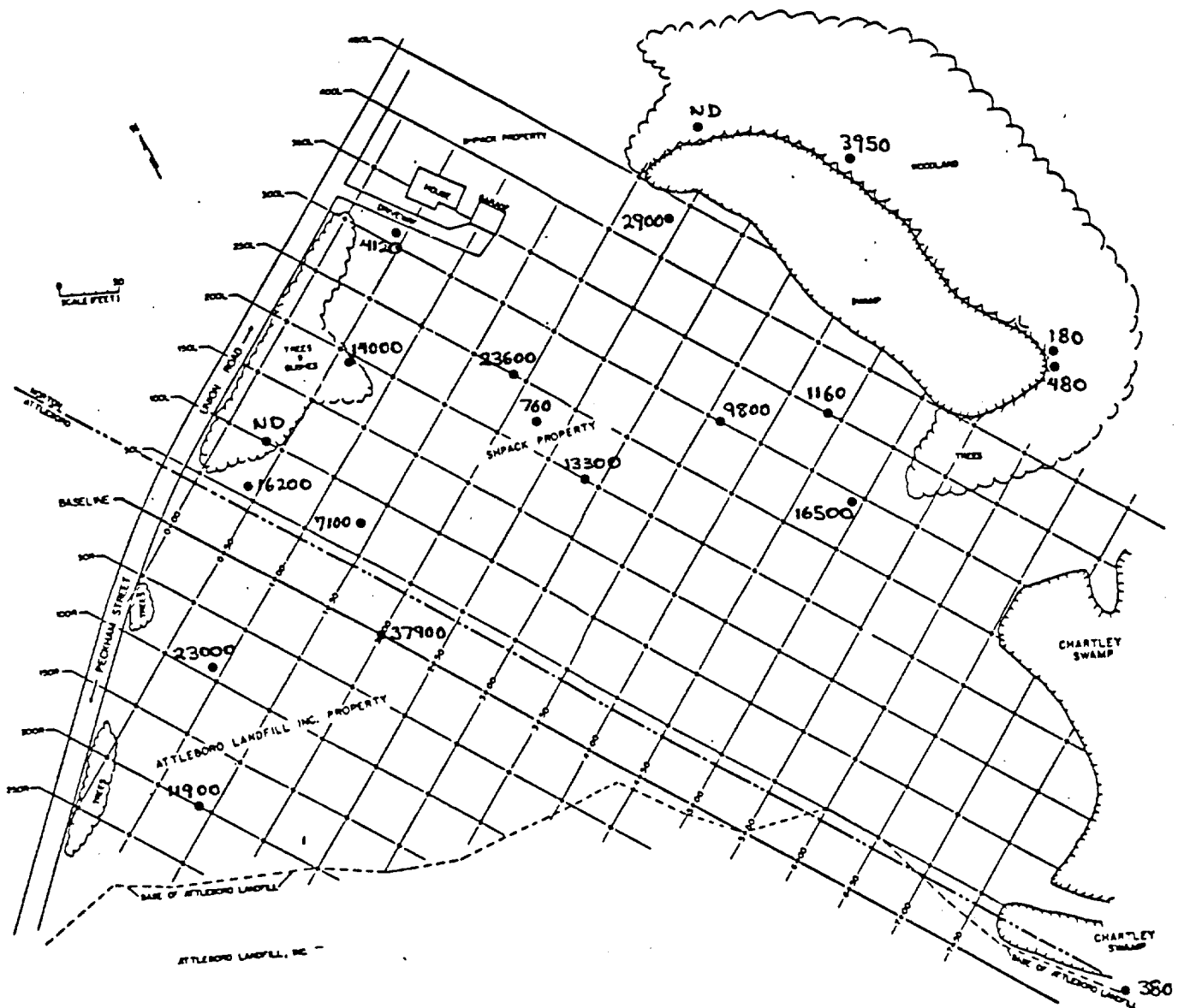


FIGURE 19: Plot of the Detected Levels of Aluminum (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

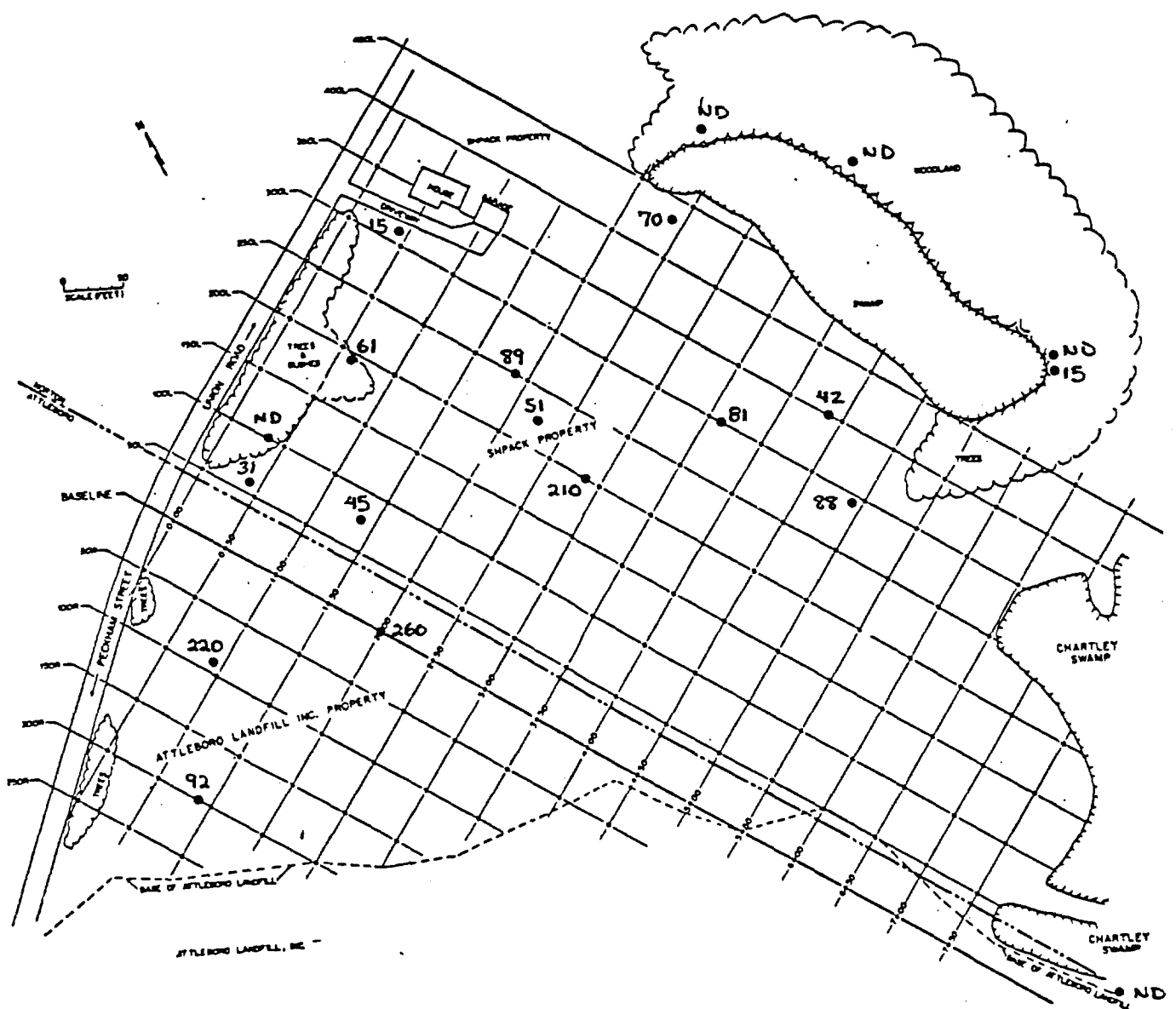


FIGURE 20: Plot of the Detected Levels of Chromium (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

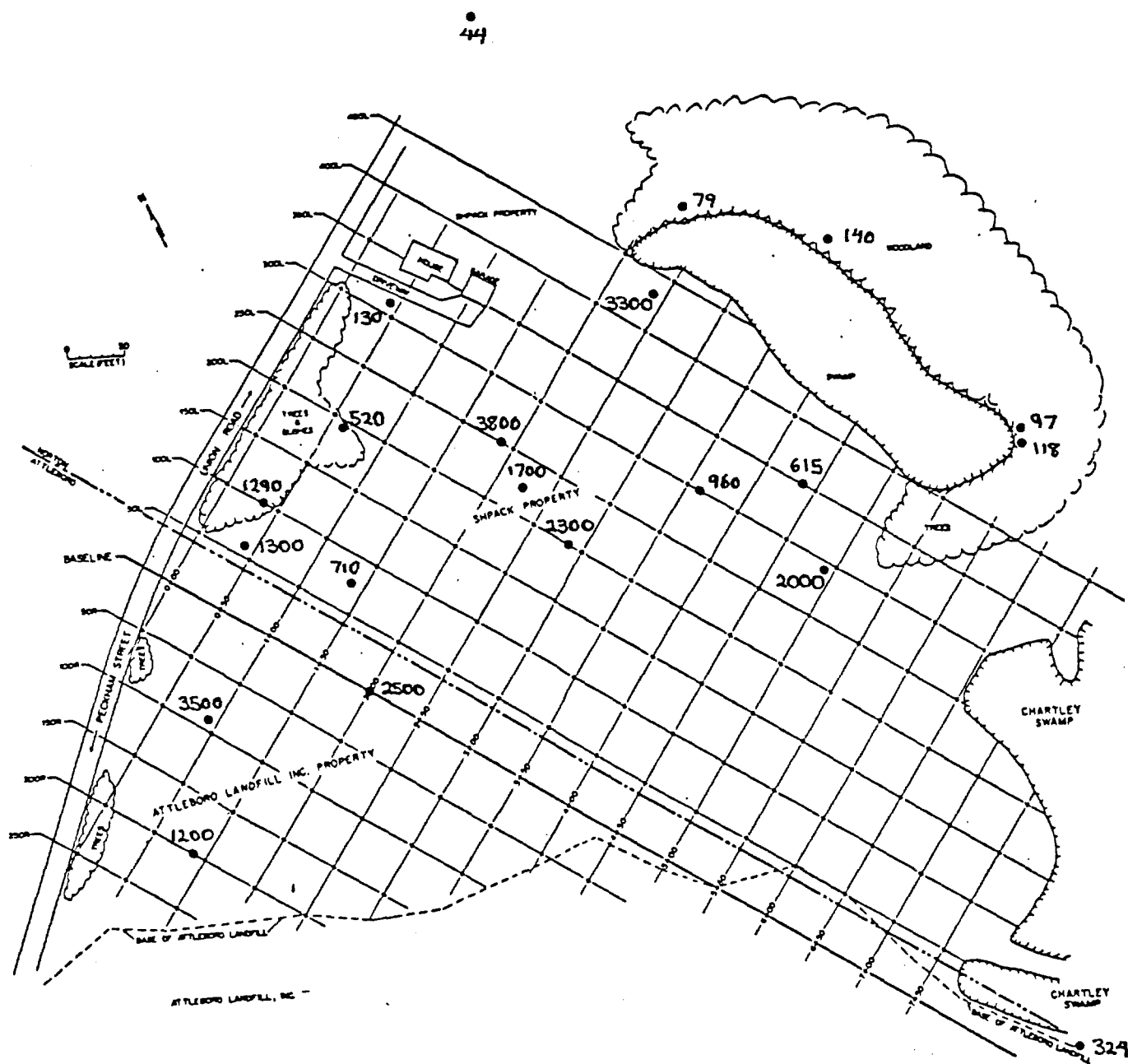


FIGURE 21: Plot of the Detected Levels of Barium (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

• ND

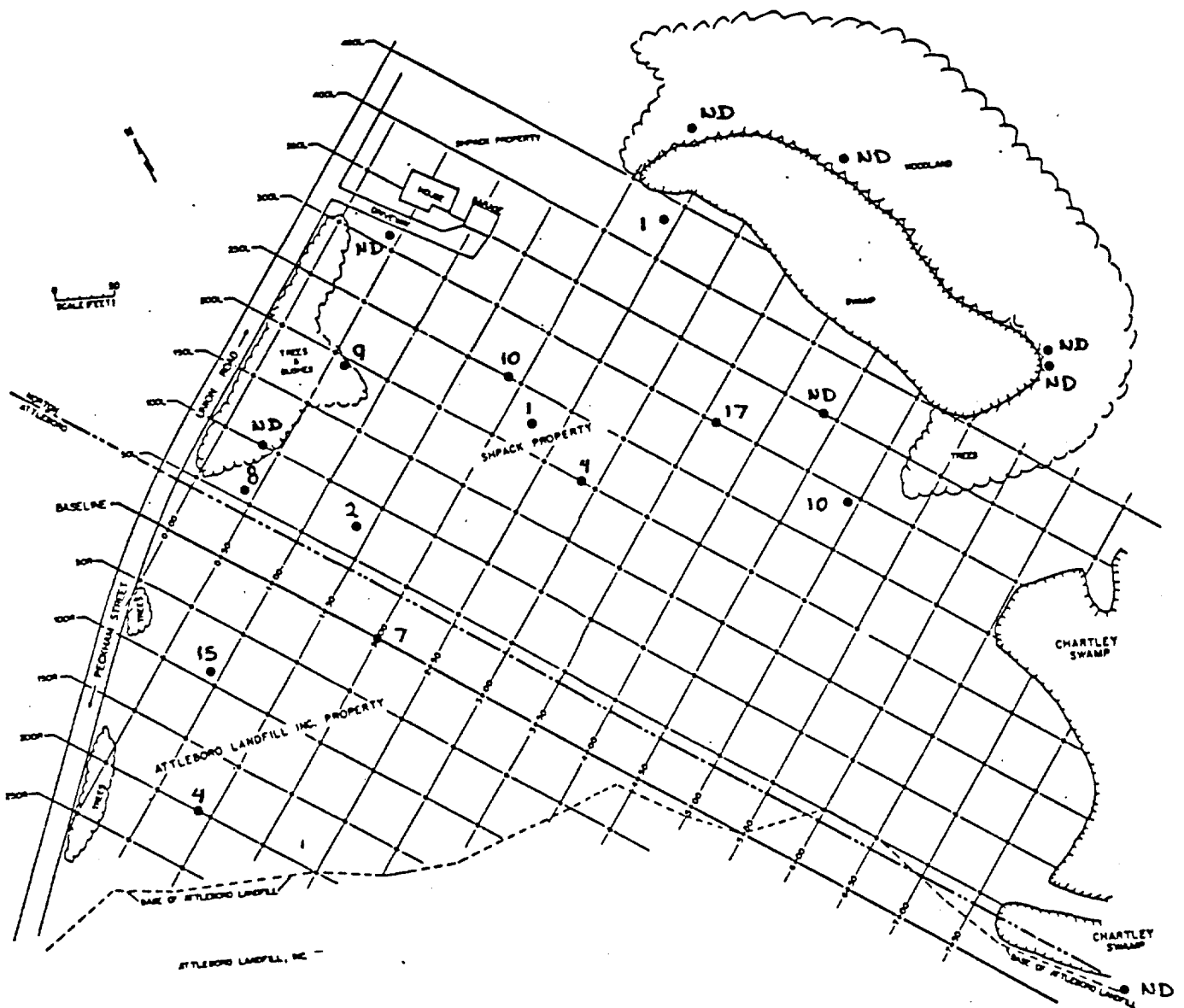


FIGURE 22: Plot of the Detected Levels of Beryllium (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

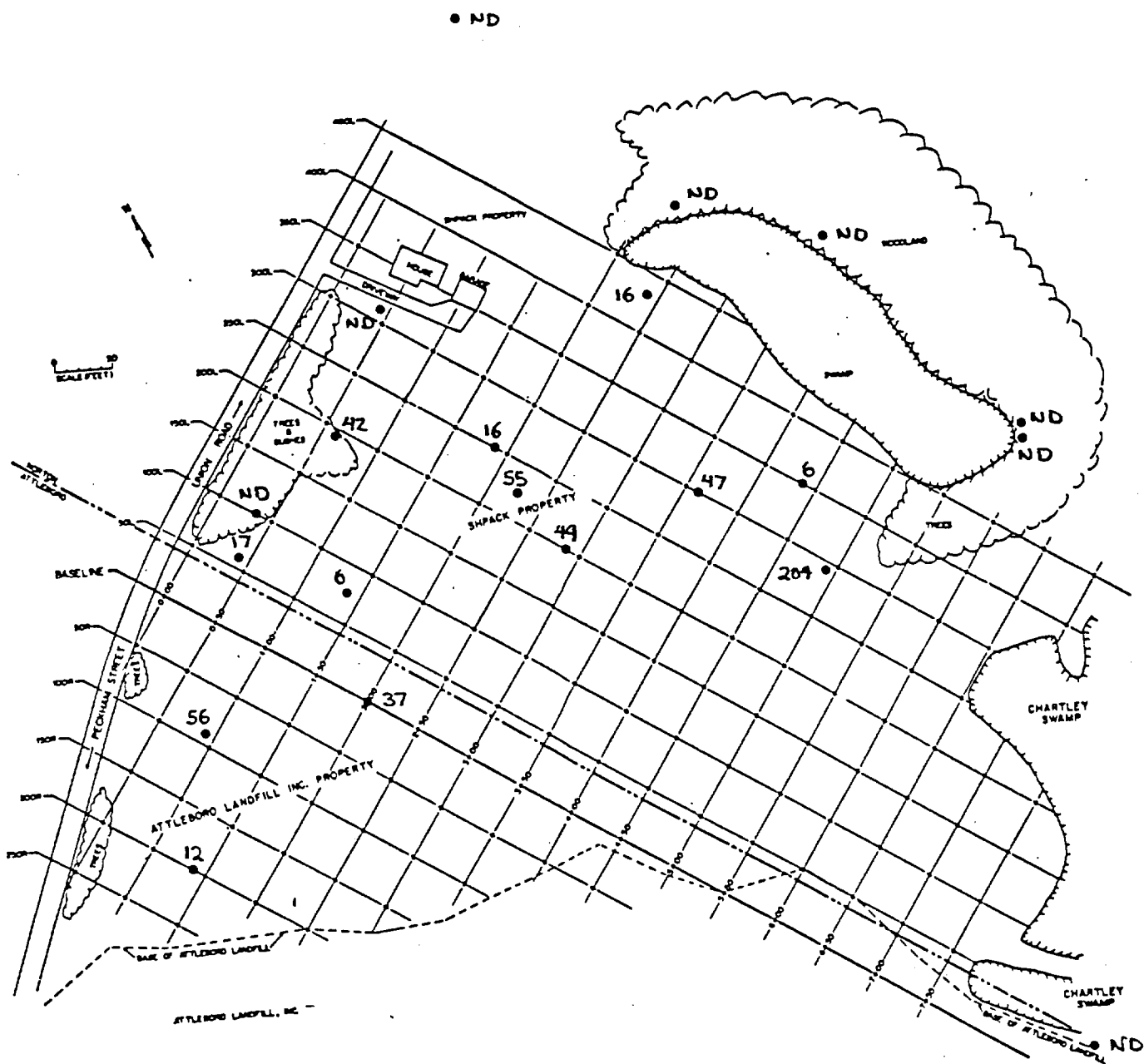


FIGURE 23: Plot of the Detected Levels of
Cobalt (ppb)-Priority Pollutant Analyses
of On-site Borehole Samples
(Base Map from Ref.1; ORNL-DWG. 81-20500)

• ND

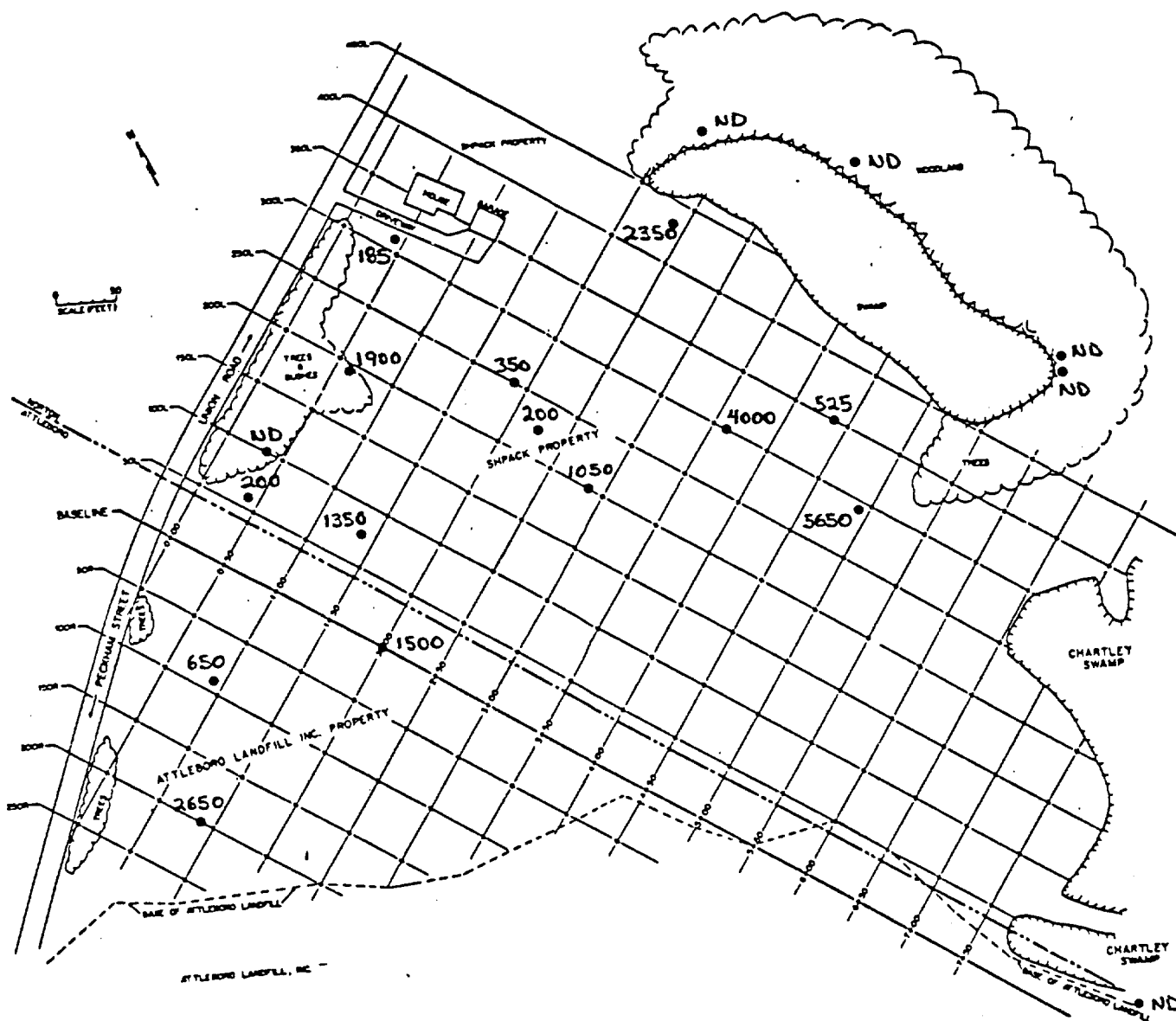
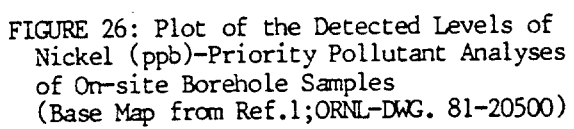


FIGURE 24: Plot of the Detected Levels of Copper (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1;ORNL-DWG. 81-20500)



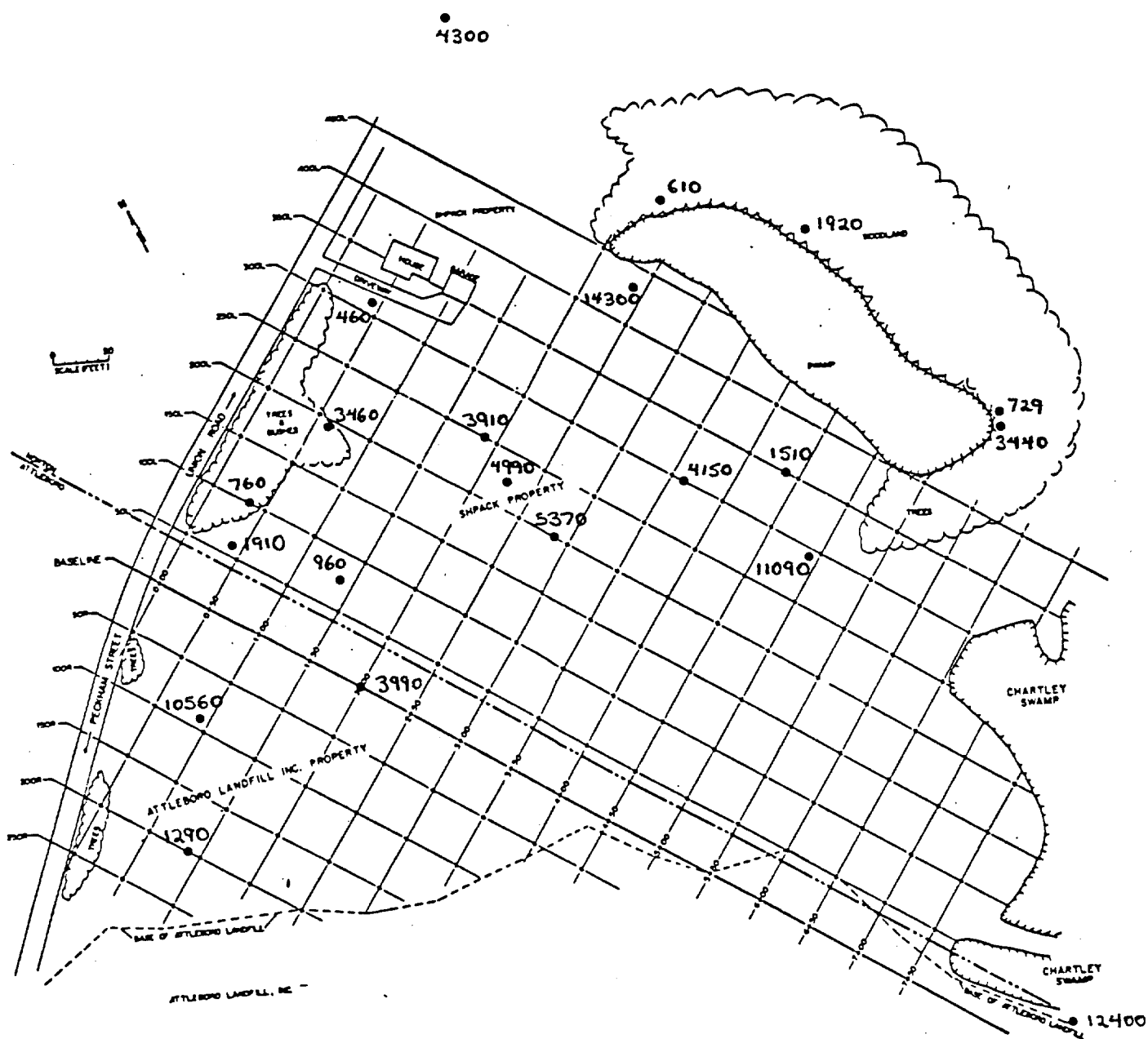


FIGURE 27: Plot of the Detected Levels of Manganese (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1;ORNL-DWG. 81-20500)

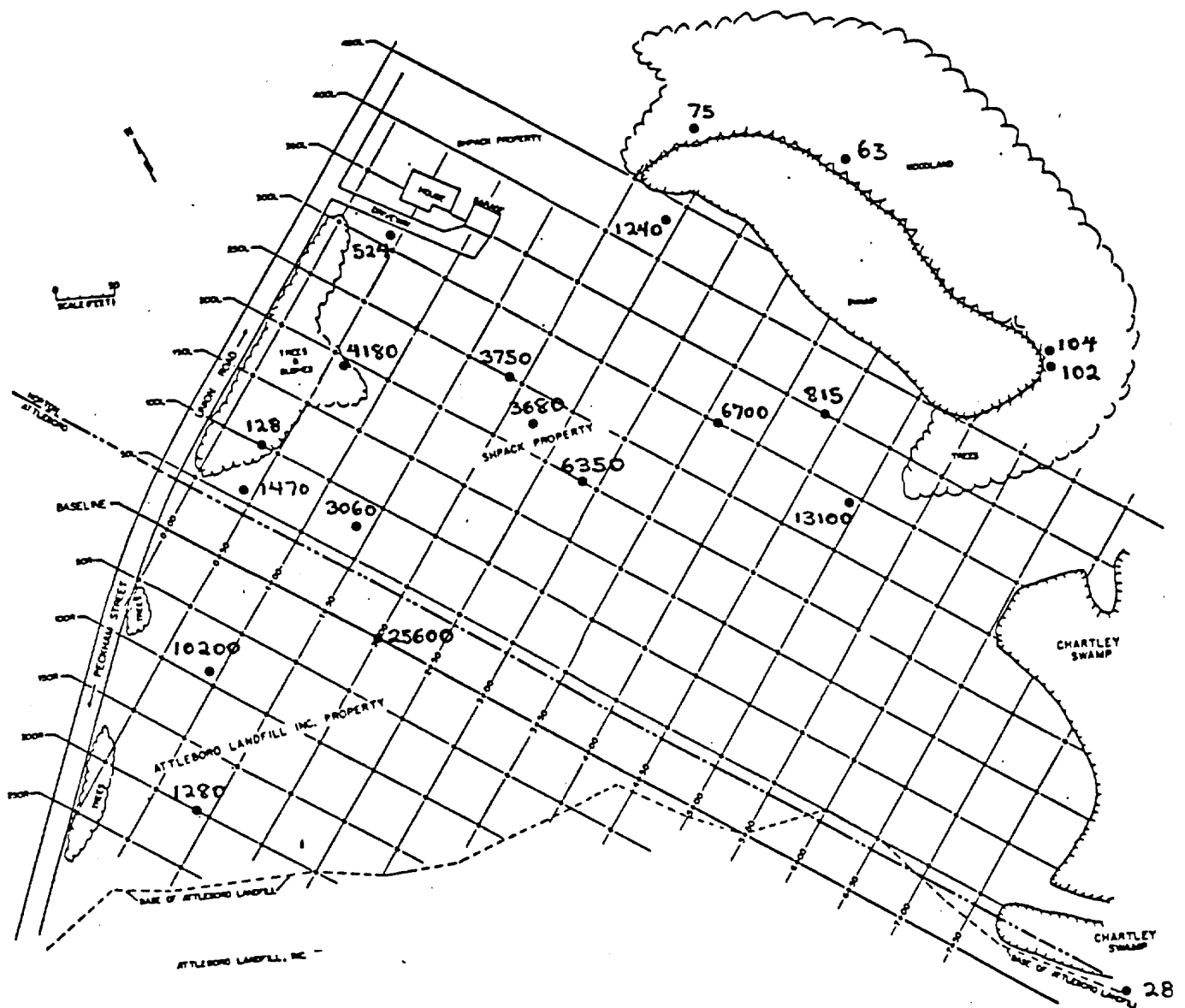


FIGURE 28: Plot of the Detected Levels of Zinc (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

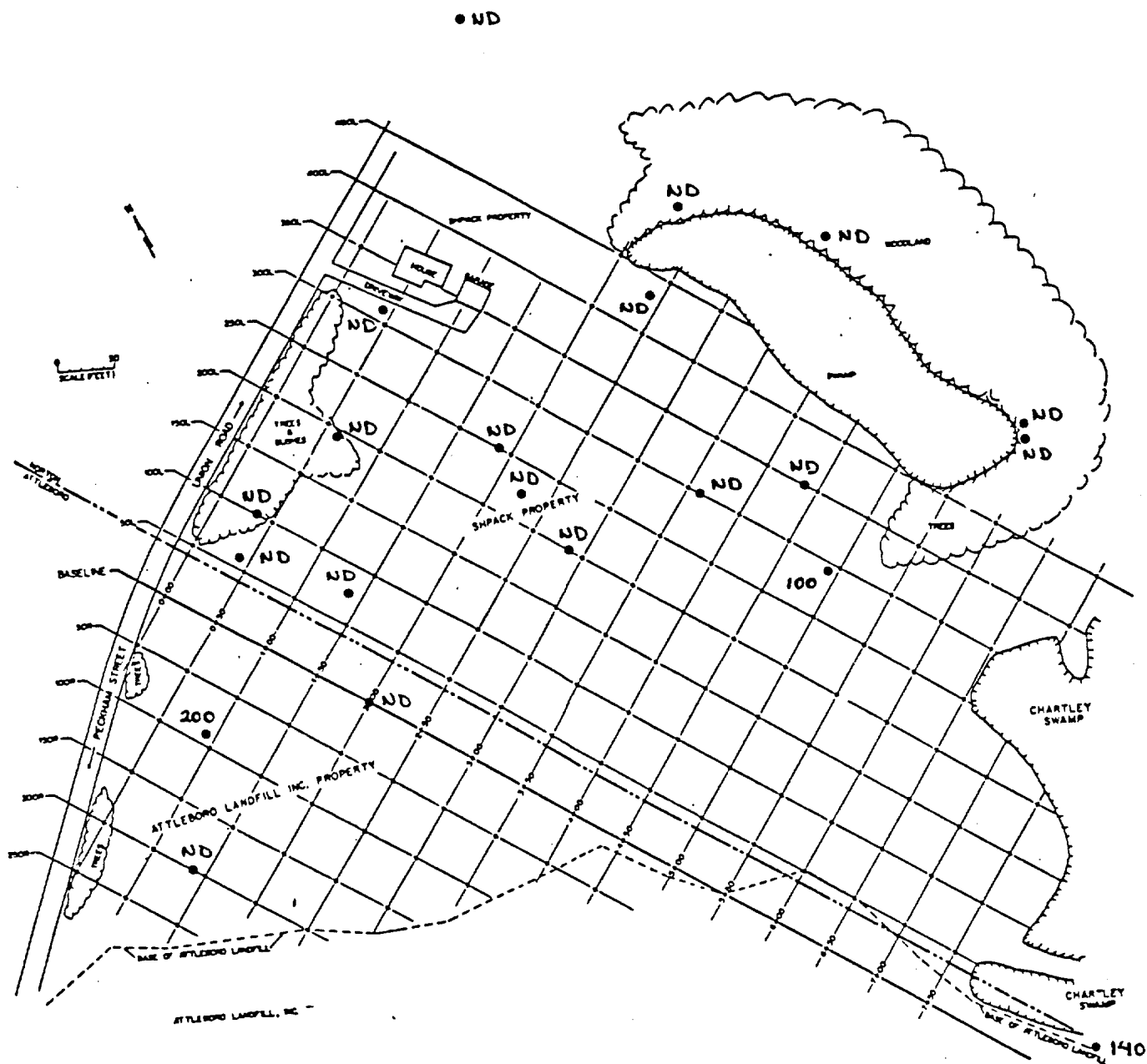


FIGURE 29: Plot of the Detected Levels of Boron (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1;ORNL-DWG. 81-20500)

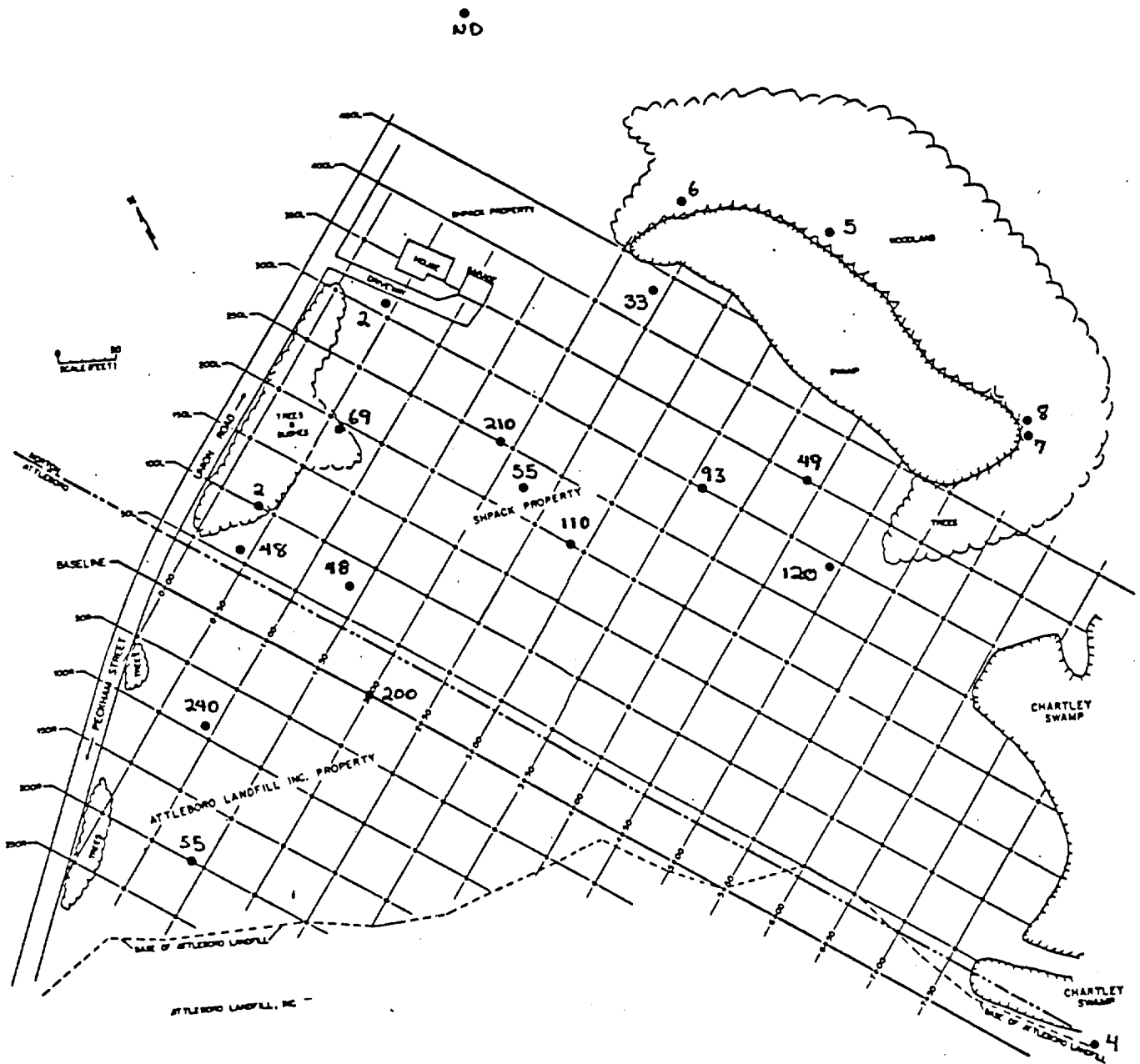


FIGURE 31: Plot of the Detected Levels of Arsenic (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1;ORNL-DWG. 81-20500)

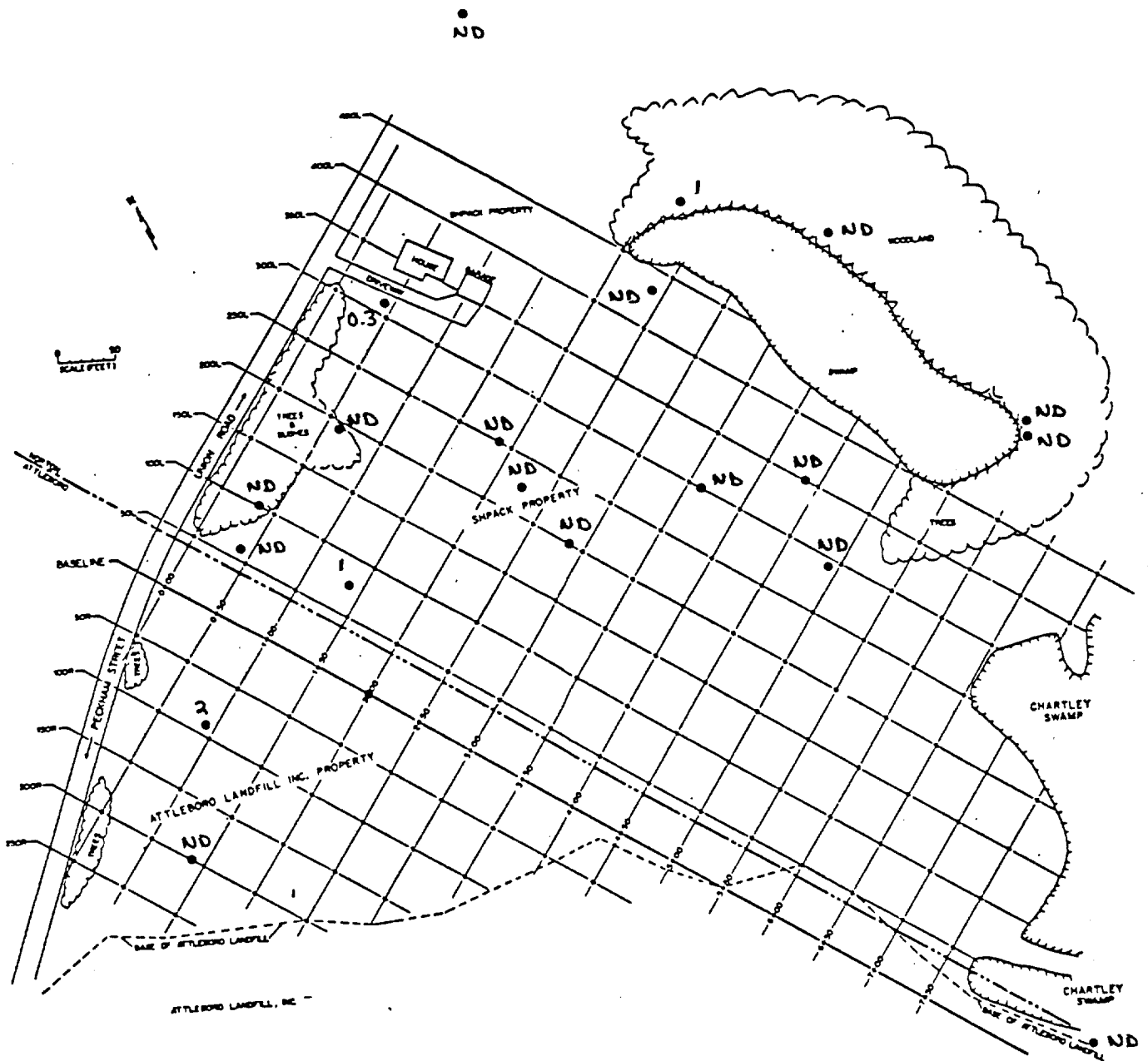


FIGURE 33: Plot of the Detected Levels of Mercury (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1;ORNL-DWG. 81-20500)

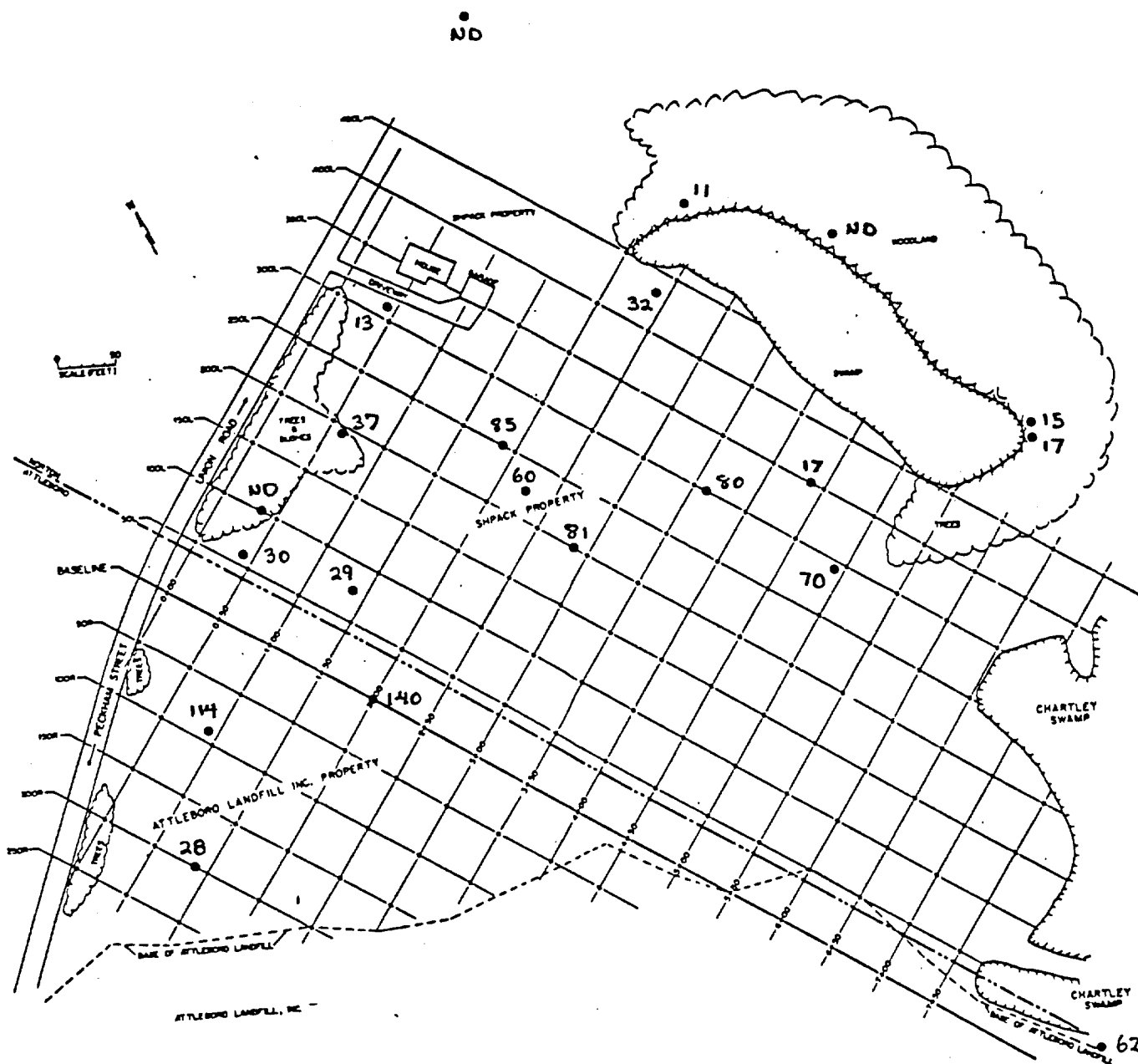


FIGURE 34: Plot of the Detected Levels of Tin (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

5-32

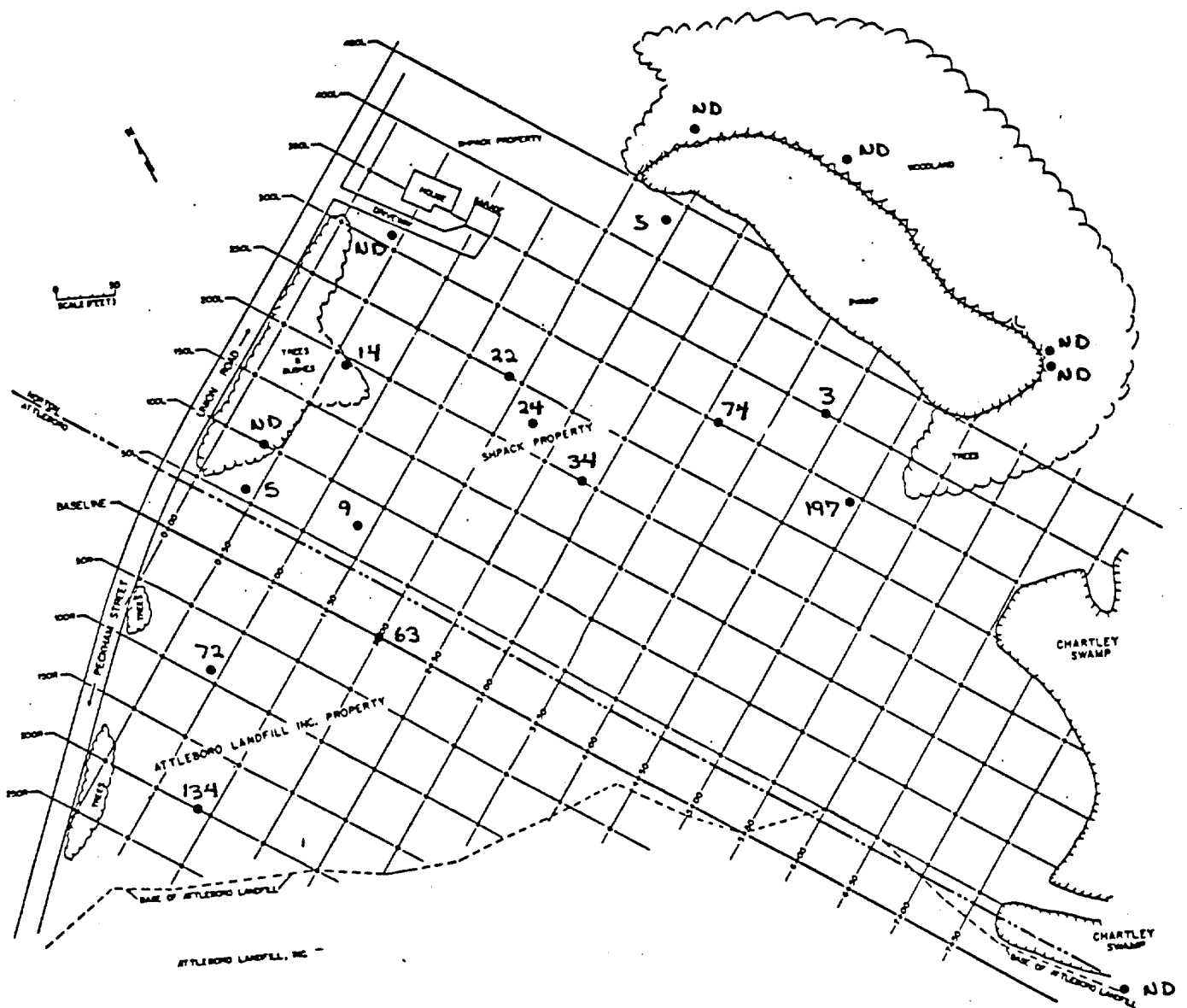


FIGURE 35: Plot of the Detected Levels of Cadmium (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

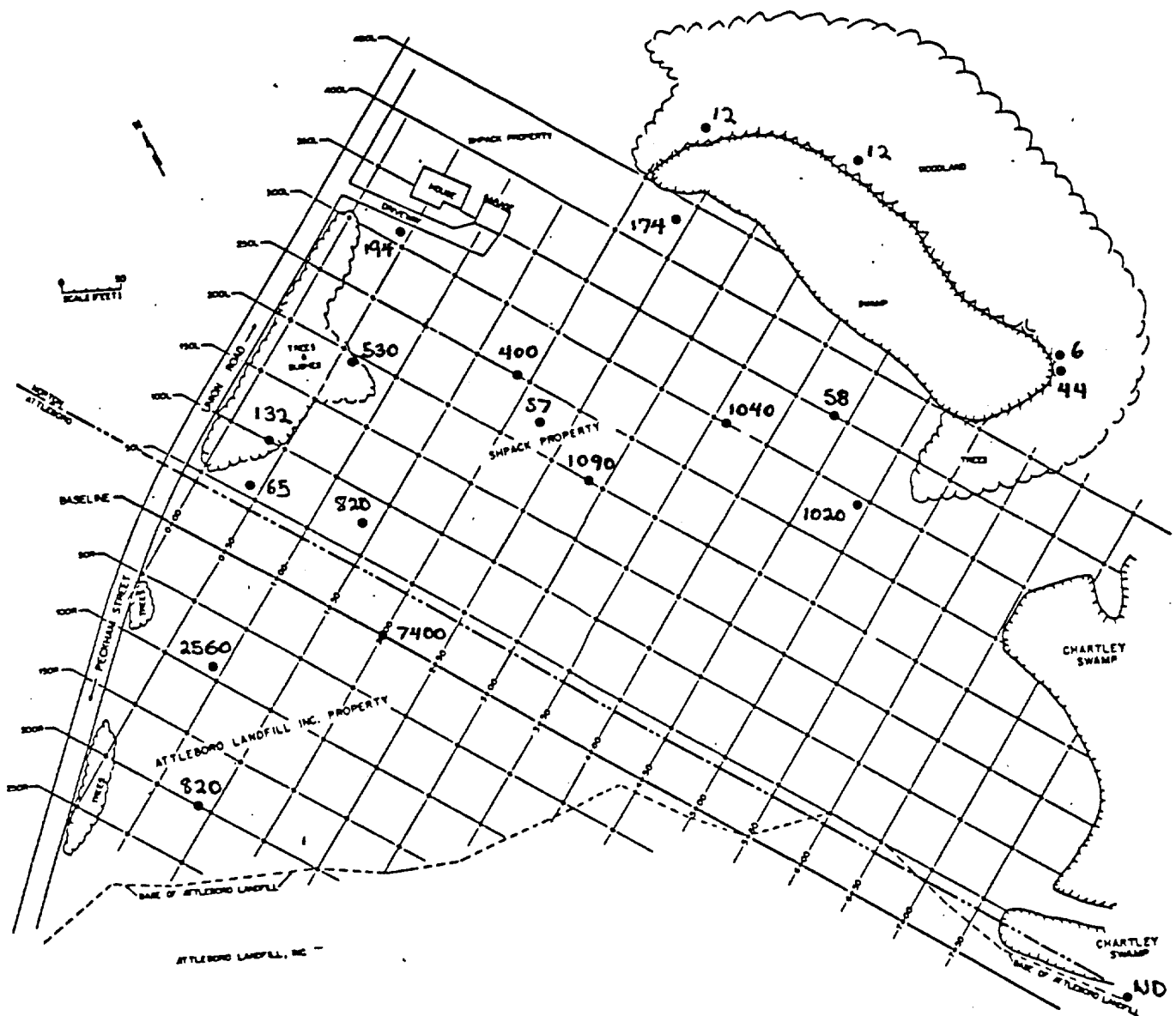


FIGURE 36: Plot of the Detected Levels of Lead (ppb)-Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

• <10

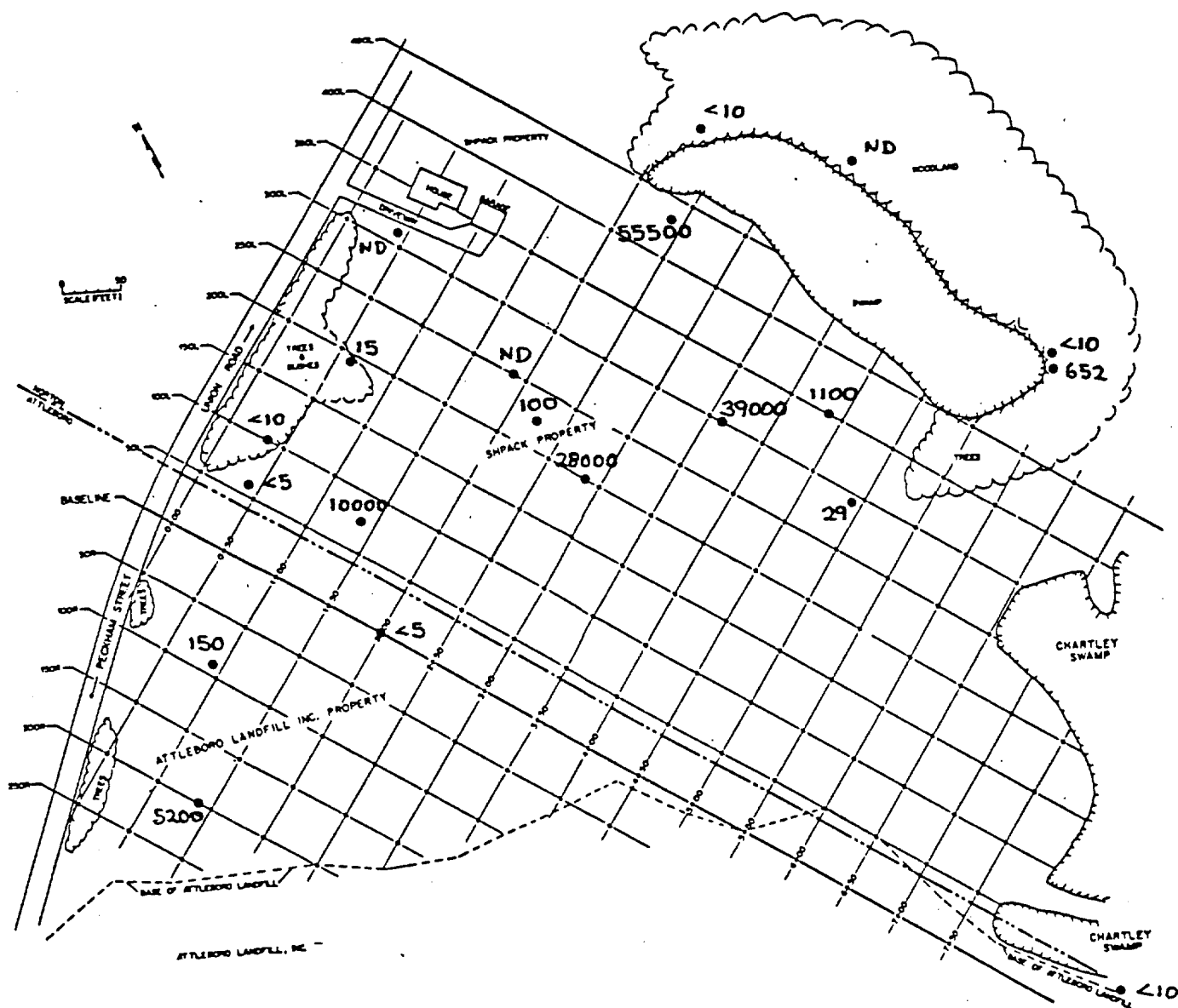


FIGURE 37: Plot of the Detected Levels of
1,2-Trans-Dichloroethylene (ppb)-
Priority Pollutant Analyses of On-site
Borehole Samples
(Base Map from Ref.1;ORNL-DWG. 81-20500)

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1200

OW1

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC29

SAMPLE ID: A1200
LAB ID: A1200A
DATE EXTRACTED: 09/02/82
DATE INJECTED: 09/15/82
STD. ID: 09/14/82
CONC. FACTOR: 869

SAMPLE ID: A1200
LAB ID: A1200BN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/20/82
STD. ID: 09/14/82
CONC. FACTOR: 719

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
24A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
37A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
79A	2,4-DINITROPHENOL	N/D
80A	4,6-DINITRO-O-CRESOL	N/D
64A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1200
LAB ID: A1200BN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/20/82
STD. ID: 09/14/82
CONC. FACTOR: 719

	BASE/NEUTRAL COMPOUNDS	UG/L
3	ACENAPHTHENE	N/D
3	BENZIDINE	N/D
8B	1,2,4-TRICHLOROBENZENE	N/D
9B	HEXACHLOROBENZENE	N/D
2B	HEXACHLOROETHANE	N/D
18B	BIS(2-CHLOROETHYL) ETHER	N/D
7B	2-CHLORONAPHTHALENE	N/D
13B	1,2-DICHLOROBENZENE	N/D
26B	1,3-DICHLOROBENZENE	N/D
27B	1,4-DICHLOROBENZENE	N/D
11B	3,3'-DICHLOROBENZIDINE	N/D
15B	2,4-DINITROTOLUENE	N/D
17B	2,6-DINITROTOLUENE	N/D
18B	1,2-DIPHENYLHYDRAZINE	N/D
18B	FLUORANTHENE	N/D
4CB	4-CHLOROPHENYL PHENYL ETHER	N/D

	BASE/NEUTRAL COMPOUNDS	UG/L
41B	4-BROMOPHENYL PHENYL ETHER	N/D
42B	BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B	BIS(2-CHLOROETHOXY) METHANE	N/D
52B	HEXACHLOROBUTADIENE	N/D
53B	HEXACHLOROCYCLOPENTA DIENE	N/D
54B	ISOPHORONE	N/D
55B	NAPHTHALENE	N/D
56B	NITROBENZENE	N/D
61B	N-NITROSODIMETHYLAMINE	N/D
62B	N-NITROSODIPHENYLAMINE	N/D
63B	N-NITROSO-N-PROPYLA MINE	N/D
66B	BIS(2-ETHYLHEXYL)PHTHA LATE	12.2
67B	BUTYL BENZYL PHTHALATE	N/D
68B	DI-N-BUTYL PHTHALATE	N/D
69B	DI-N-OCTYL PHTHALATE	N/D
70B	DIETHYL PHTHALATE	N/D
71B	DIMETHYL PHTHALATE	N/D
72B	BENZO(A)ANTHRACENE	N/D
73B	BENZO(A)PYRENE	N/D
74B	3,4-BENZOFUORANTHENE	N/D
75B	BENZO(K)FLUORANTHENE	N/D
76B	CHRYSENE	N/D
77B	ACENAPHTHYLENE	N/D
78B	ANTHRACENE	N/D
79B	BENZO(GH)PERYLENE	N/D
80B	FLUORENE	N/D
81B	PHENANTHRENE	N/D
82B	DIBENZO(A,H)ANTHRACENE	N/D
83B	INDENO(1,2,3-CD)PYRENE	N/D
84B	PYRENE	N/D
129B	2,3,7,8-TETRACHLORODI BENZO-P-DIOXIN	N/D

Sample Number

A1200

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1200

LAB ID: A1200V

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordan	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

VOLATILE COMPOUNDS

UG/L

2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	N/D
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLORO ETHANE	N/D
16V	CHLOROETHANE	N/D
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLORO ETHYLENE	*
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROP YLENE	N/D
34V	CIS-1,3-DICHLOROPROPYL ENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	N/D
50V	DICHLOROFLUORO METHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	*
87V	TRICHLOROETHYLENE	*
88V	VINYL CHLORIDE	N/D

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A 1200

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	73.6	100	74
D ₈ -Toluene	VOA	94.0	100	94
2-Fluorophenol	Acid	32.9	100	33
D ₅ -Phenol	Acid	37.1	100	37
2-Fluorobiphenyl	BN	55.5	100	56
D ₅ -Nitrobenzene	BN	31.0	100	31
D ₈ -Naphthalene	BN	64.2	100	64

B. TENTATIVELY IDENTIFIED COMPOUNDS

#	YES	COMPOUND NAME	Fraction	% Maximum Score Attained	
				Mass Matching Routine	Fit (Security)
1.	9869	1-PROPENE, 1,3-DICHLORO-(2)	BN	89	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

2/15/00

Sample Number

A1200 R

ORGANICS ANALYSIS DATA SHEET

OWI

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC 29

SAMPLE ID: A1200R

LAB ID: A1200RA

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/15/82

STD. ID: 09/14/82

CONC. FACTOR: 645

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
2A	P-CHLORO-M-CRESOL	N/D
4A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
4A	2,4-DIMETHYLPHENOL	N/D
7A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
3A	4,6-DINITRO-O-CRESOL	N/D
4A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1200R

LAB ID: A1200RBN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/20/82

STD. ID: 09/14/82

CONC. FACTOR: 645

BASE/NEUTRAL COMPOUNDS	UG/L
1B ACENAPHTHENE	N/D
5 BENZIDINE	N/D
8 1,2,4-TRICHLOROBENZENE	N/D
9B HEXACHLOROBENZENE	N/D
17B HEXACHLOROETHANE	N/D
1 B BIS(2-CHLOROETHYL) ETHER	N/D
20B 2-CHLORONAPHTHALENE	N/D
2 B 1,2-DICHLOROBENZENE	N/D
16B 1,3-DICHLOROBENZENE	N/D
17B 1,4-DICHLOROBENZENE	N/D
13 3,3'-DICHLOROBENZIDINE	N/D
13 2,4-DINITROTOLUENE	N/D
13 2,6-DINITROTOLUENE	N/D
13 1,2-DIPHENYLHYDRAZINE	N/D
13 FLUORANTHENE	N/D
4E 4-CHLOROPHENYL PHENYL ETHER	N/D

SAMPLE ID: A1200R

LAB ID: A1200RBN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/20/82

STD. ID: 09/14/82

CONC. FACTOR: 645

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTADIENE	N/D
54B ISOPHORONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	11.4
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	N/D
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFLUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GHI)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
83B INDENO(1,2,3-CD)PYRENE	N/D
84B PYRENE	N/D
129B 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A1200R

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1200R

LAB ID: A1200RV

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

	VOLATILE COMPOUNDS	UG/L
2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	N/D
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	N/D
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	*
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
6V	METHYL BROMIDE	N/D
7V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
9V	TRICHLOROFLUOROMETHANE	N/D
0V	DICHLORODIFLUOROMETHANE	N/D
1V	CHLORODIBROMOMETHANE	N/D
5V	TETRACHLOROETHYLENE	N/D
6V	TOLUENE	*
87V	TRICHLOROETHYLENE	*
8V	VINYL CHLORIDE	N/D

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDE	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS, SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A 1200 R

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	99.7	100	100
D ₈ -Toluene	VOA	95.8	100	96
2-Fluorophenol	Acid	44.3	100	44
D ₅ -Phenol	Acid	54.3	100	54
2-Fluorobiphenyl	BN	59.2	100	59
D ₅ -Nitrobenzene	BN	26.0	100	26
D ₈ -Naphthalene	BN	64.7	100	65

B. TENTATIVELY IDENTIFIED COMPOUNDS

SBS #	COMPOUND NAME	Fraction	% Maximum Score Attained	
			Mass Matching Routine	Fit (specify)
1. 19663	1,2-BENZISOTHIAZOLE-3-	Acid	75	
2.	PROPANOIC ACID			
3. 15406	1,2-BENZENEDICARBOXYLIC ACID	"	90	
4.	DITSOCTYLESTER			
5. 748	PROPANE, 1,2,3-TRICHLORO-	BN	77	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

2/15/00

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1197

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	84.0	100	84
D ₈ -Toluene	VOA	88.2	100	88
2-Fluorophenol	Acid	37.8	100	38
D ₅ -Phenol	Acid	55.4	100	55
2-Fluorobiphenyl	BN	57.9	100	58
D ₅ -Nitrobenzene	BN	66.3	100	66
D ₈ -Naphthalene	BN	19.1	100	19

B. TENTATIVELY IDENTIFIED COMPOUNDS

RES #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine (Specify)
1. 24888	6,9-OCTADECADIYNOIC ACID	ACID	90
2.	METHYLESTER		
3. 9810	1-PROPENE, 1,3-DICHLORO-(E)	BN	98
4. 20354	THIENDI[2,3-B]PYRIDINE 3-CHLORO-	"	92
5. 1133	PENTANE, 2-BROMO-	"	87
6. 21487	1H-BENZIMIDAZOL-4-OL, 5-	"	86
7.	METHOXY-1-(PHENYL METHYL)-		
8. 17318	5-TRIAZOL[4,3-A]PYRAZINE	"	87
9.	3-METHYL-		
10. 6576	BENZENE, 1-CHLORO-2-PHENOXY	"	80
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

2/15/00

4.2 Attleboro Landfill Incorporated (ALI)

ALI, which is still an active landfill, apparently did not accept the same types of wastes as were disposed at the Shpack Landfill. Apparently, dumping at ALI during the early stages of the landfill was more discriminatory than that at the Shpack Landfill. ALI is currently not permitted to accept hazardous wastes. However, the nature of material disposed at landfills in general tends to include a broad spectrum of wastes. GHR collected two samples of fill from ALI in an area which had been undisturbed for more than six years. These samples were subjected to the EP-TOX procedure (U.S. EPA, 43 FR 58956, December 18, 1978) and the extract analyzed for metals. Results of the analysis are as follows:

<u>Element</u>	<u>Fill Sample - Test Pit C</u>	<u>Fill Sample - Test Pit B</u>
Silver	<2 ug/L	<2 ug/L
Arsenic	<5 ug/L	<5 ug/L
Barium	<200 ug/L	<200 ug/L
Beryllium	3.8 ug/L	<2.5 ug/L
Cadmium	2300 ug/L	70 ug/L
Chromium	<10 ug/L	<10 ug/L
Copper	70 ug/L	1000 ug/L
Mercury	<0.1 ug/L	<0.1 ug/L
Nickel	63 mg/L	46 mg/L
Lead	<10 ug/L	60 ug/L
Tin	<10 ug/L	<10 ug/L
Selenium	<5 ug/L	<5 ug/L
Tellurium	<10 ug/L	<10 ug/L
Zinc	193 mg/L	40 mg/L

The above analyses indicate that the extract of these fill samples contained relatively high levels of cadmium, nickel, and zinc. The cadmium level is in excess of the RCRA value established for EP-TOX leachate and although levels for nickel and zinc are not established under RCRA, they also are considered high for an extract.

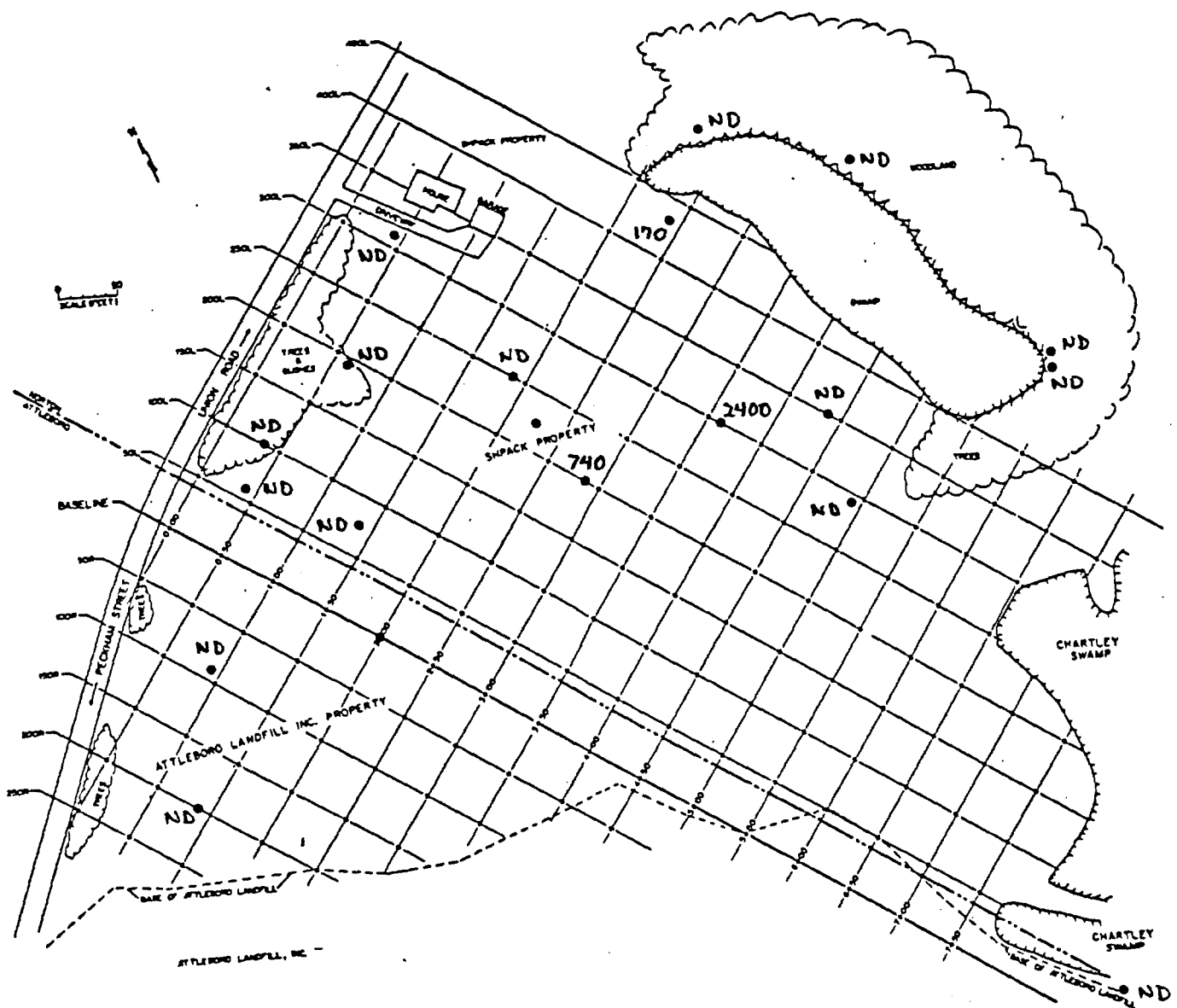


FIGURE 38: Plot of the Detected Levels of Tetrachloroethylene (ppb)- Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1;ORNL-DWG. 81-20500)

5-36

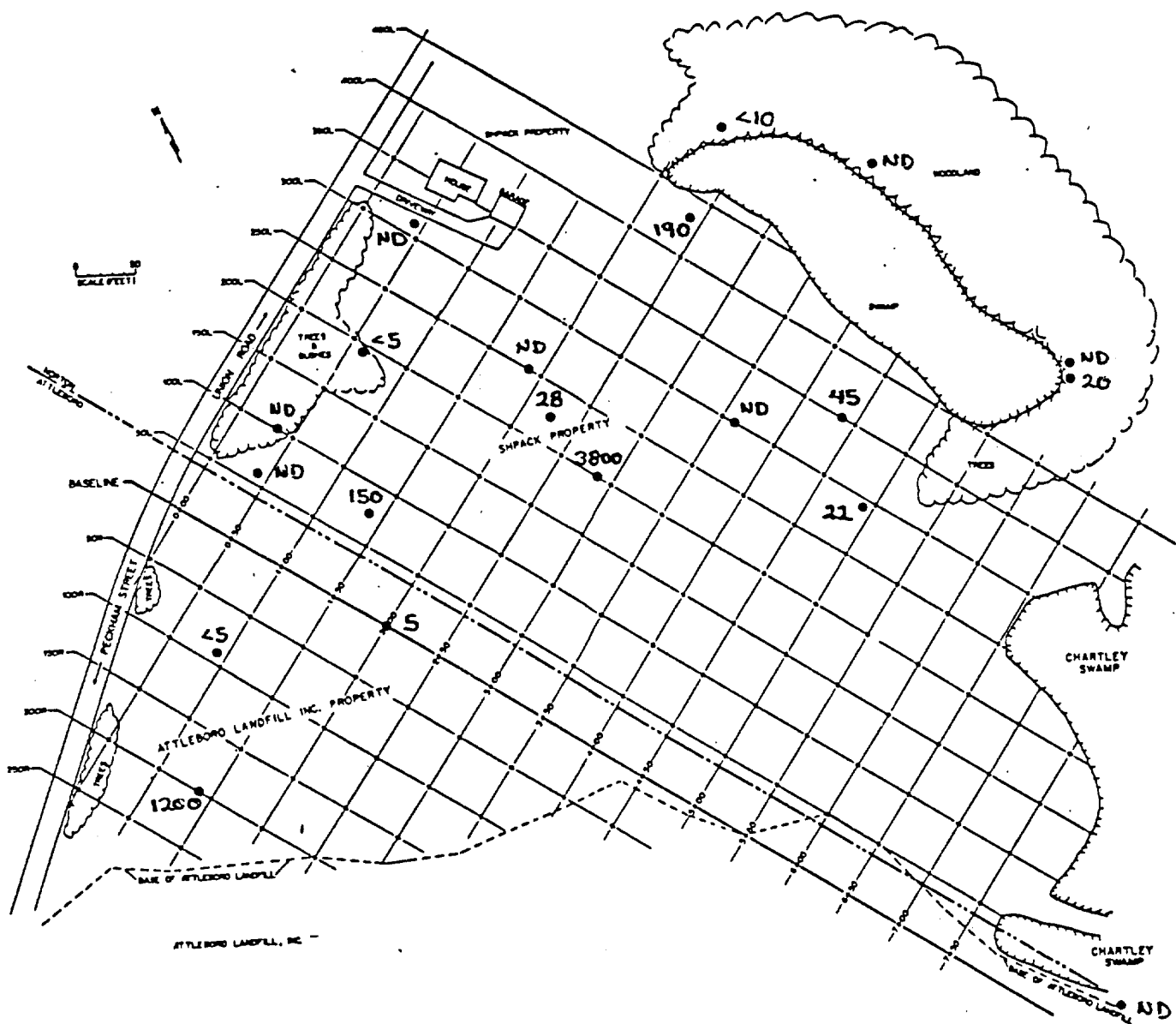


FIGURE 40: Plot of the Detected Levels of Vinyl Chloride (ppb)- Priority Pollutant Analyses of On-site Borehole Samples (Base Map from Ref.1; ORNL-DWG. 81-20500)

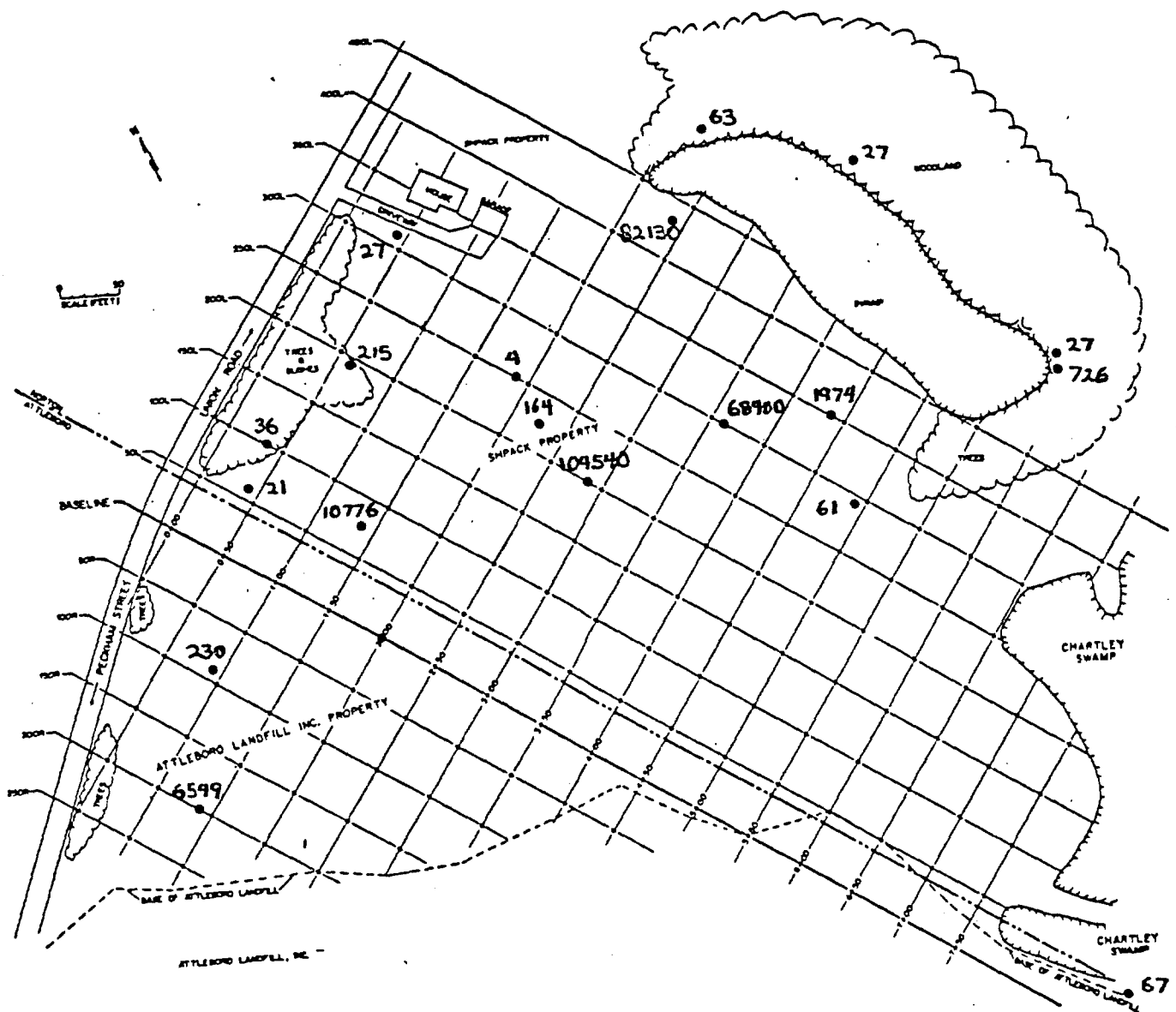


FIGURE 41: Plot of the Detected Levels of
Total Volatile Organics (ppb)- Priority
Pollutant Analyses of On-site Borehole
Samples
(Base Map from Ref.1; ORNL-DWG. 81-20500)

SECTION 6 - REFERENCES

1. Oak Ridge National Laboratory. Radiological Survey of the Shpack Landfill, Norton, Massachusetts. DOE/EV-0005/31, ORNL-5799. December 1981.
2. Bechtel Civil and Minerals, Inc. Technical Specifications for Perimeter Subsurface Investigation, Shpack Landfill. Job 14501-000-25AD41. May 1982.

APPENDIX A

DEQE Analyses - Metals

25 March 1980

MEMORANDUM

To: Jeffrey E. Gould

From: Ronald J. White

Date: March 31, 1980

Attention: William J. Marhoffer, Glen Gilmore

Re: Attleboro (TNT)
Attleboro Landfill
Shapack Property
(Hazardous Waste Disposal)

The writer and Gerald Monte of the Solid Waste Division of D.E.Q.E. inspected and sampled the area described above on March 25, 1980.

Upon arrival at the site the writer and Mr. Monte met with Joseph Grimaldi (Morton Health Agent), James Mooney (Attleboro Board of Health), David Rich (Morton Water Department), and David Opatka (Morton Conservation Commission).

The writer and Mr. Monte were given a brief history of the subject site by the town officials and then proceeded to obtain soil and water samples at and around the site. A total of eight soil samples of various materials and water samples were taken about the subject site as outlined on the attached sketch.

The area under the powerlines and areas in close proximity to this area contained scrap rubber hoses, burnt material, a few 55 gallon drums, and various areas of soil having colors and consistencies of a black adhesive tar substance, oil soaked soil, white powdery substances, a bright orange paint-like substance, and a bright yellow-orange stratified soil.

The area directly behind the Shapack House contained approximately 300-400 55 gallon drums in various states of decay (99% of the drums were empty), broken ceramic pieces under which the soil appeared oil contaminated, several areas of a hard tar cover material, and an area of soil having a dull green color and having a sludge consistency.

Soil samples were taken of representative areas of possible contamination (as outlined) and water samples were taken at the Shapack well, the landfill firepond, an upstream culvert south of the landfill, and at Union Road in Morton downstream from the landfill and swamp as it flows to Chartley Pond.

All samples taken were given to the Lawrence Experiment Station for analysis.

RJW:pd

RECEIVED
AUG 18 1980

FIREPOND

X 005

X 002

POWER LINES

X 004

X 001

X 003

WETLANDS

X 006

X 008

X 007

X 001 - 008

SOIL

SAMPLE

file c

DIVISION OF ENVIRONMENTAL QUALITY ENGINEERING

LAWRENCE EXPERIMENT STATION

ATTLEBORO/NORTON

WASTE WATER ANALYSIS (mg. per liter)

Shapack Site

Collector:

R. White

SOURCE A Sediment Sample, Top soil No. 002
SOURCE B Grease Sample, No. 001
SOURCE C
SOURCE D
SOURCE E
SOURCE F

	A	B	C	D	E
SAMPLE NO.	R79212	R79213			
DATE OF COLLECTION	3/25/80	3/25			
TIME OF COLLECTION	10:40	10:30			
DATE RECEIVED	3/25/80	3/25			
COD					
BOD					
pH					
ALKALINITY, TOTAL					
LEAD	2,825				
SUSPENDED SOLIDS					
ARSENIC	3.4				
TOTAL SOLIDS					
CHROMIUM	1,506				
COPPER	2,825	This sample supports combustion and appears to be similar to waste grease.			
% VOL.	13.3				
TOTAL KJELDHAL - N					
AMMONIA - N					
CADMIUM	10.5				
NITRATE - N					
TOTAL P					
NICKEL	301,318				
TOTAL COLIFORM					
FECAL COLIFORM					
CHLORIDE					
ZINC	55,497				

file copy

DIVISION OF ENVIRONMENTAL QUALITY ENGINEERING

LAWRENCE EXPERIMENT STATION
WASTE WATER ANALYSIS (mg. per liter)
Collector:

ATTLEBORO/NORTON

R. White

Shapack site

SOURCE A Sediment Sample - Top Soil No. 008
SOURCE B " " " " No. 007
SOURCE C " " " " No. 006
SOURCE D " " " " No. 005
SOURCE E " " " " No. 004
SOURCE F " " " " No. 003

	A	B	C	D	E	
SAMPLE NO.	R79206	R79207	R79208	R79209	R79210	R79211
DATE OF COLLECTION	3/25/80					
TIME OF COLLECTION	12:30	12:15	12:00	11:15	11:00	10:5
DATE RECEIVED	3/25/80					
COD						
BOD						
pH						
ALKALINITY, TOTAL						
ZINC	6,440	969	86.	17,970	17.4	13,00
SUSPENDED SOLIDS						
ARSENIC	18	3.7	14.8	4.3	0.4	2.3
TOTAL SOLIDS						
COPPER	7,872	36,170	306	3,230	7.9	2,636
% Vol.	62.4	5.6	16.9	46.3	93.3	8.8
CHROMIUM	895	71	3,060	306	4.3	52
TOTAL KJELDAHL - N						
AMMONIA - N						
CADMIUM	27	6.1	4.3	54	0.00	10.1
NITRATE - N						
TOTAL P						
LEAD	716	155	67	3,055	6.3	2,636
TOTAL COLIFORM						
FECAL COLIFORM						
CHLORIDE						
NICKEL	8,945	103,350	52	71,675	32	60,837

APPENDIX B

Well Logs - Peripheral Monitoring Wells

ECOLOGY AND ENVIRONMENT, INC.
30 East Cummings Park
Woburn, MA 01801

Well Log # SHP 1
Project Name Shpack Well Surv
Project # FL-8205-01
Date Prepared 9/7/82
Prepared By D. Cook

Depth, Ft. (M)	Soil Description Blow Counts/6"
0-2	Organic material 2-3-2-2
5-7	Light Br silt, trace of pebbles → T, F sand 31-36-21-21
10-12	T, F sand, trace of silt 16-15-16-28
15	Till (T silt, cobbles, trace of clay) 100/5"
20-22	Till (T silt, cobbles, trace of clay) less cobbles, more clay 28-21-24-23
25-27	Till (T silt, cobbles, trace of clay) less cobbles, more clay 18-87-39-53
30-32	Till (T silt, cobbles, trace of clay) less cobbles, more clay (gray) → T silty sand 22-48-51
35	Refusal-bedrock 20/0

Well No. OW-1
Location Shpack Landfill,
Norton, MA
Owner DOE
Ground Elev. 107.08
Driller Warren George, Inc.
Drilling Completed 8/12/82
Type of Rig Truck Mounted
----- WELL DATA -----
Well Diam. 2" ID Stainless
Depth 50'
Screen Diam. 2" ID
Screen Setting 47-49'
Screen Type Stainless Steel Wir
0.01" Slot
Well Type Monitoring
Static Water Level 103.33
Date Measured 9/17/82
----- WATER QUALITY -----
Samples Taken Yes X No
No. of Samples 5
Type of Samples Priority
Pollutant

Date Sampled 8/30/82
Samplers Cook, Panaro
Will be Analyzed for
129 Priority Pollutants

REMARKS

Drilling managed by Bechtel
National

SOIL DESCRIPTION ABBREVIATIONS

Trace 0-10%	C-Coarse	Br-brown
Some 10-40%	M-Medium	Bl-black
And 40-50%	F-Fine	Y-yellow
		T-tan
		Gr-grey
		R-red

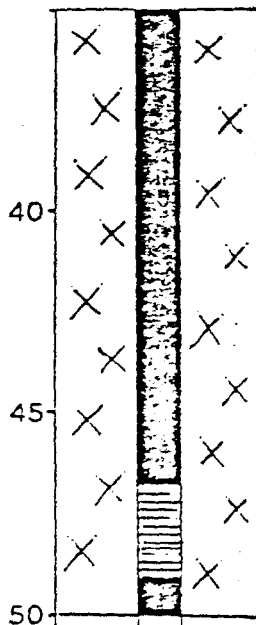
ECOLOGY AND ENVIRONMENT, INC.
30 East Cummings Park
Woburn, MA 01801

Well Log # SHP 1
Project Name Shpack Well Survey
Project # TDD F1-8205-01
Date Prepared 9/7/82
Prepared By D. Cook

Depth, Ft. (M)

Soil Description
Blow Counts/6"

Well No. OW-1 (Page 2)
Location _____



Bedrock-gray, metamorphased
sandstone

Owner _____
Ground Elev. _____
Driller _____
Drilling Completed _____
Type of Rig Truck Mounted
----- WELL DATA -----
Well Diam. ID
Depth _____
Screen Diam. ID
Screen Setting _____
Screen Type 0.01" Slot
Well Type Monitoring
Static Water Level _____
Date Measured _____
----- WATER QUALITY -----
Samples Taken Yes _____ No _____
No. of Samples _____
Type of Samples _____

Date Sampled _____
Samplers _____
Will be Analyzed for _____

REMARKS

SOIL DESCRIPTION ABBREVIATIONS
Trace 0-10% C-Coarse Br-brown
Some 10-40% M-Medium Bl-black
And 40-50% F-Fine Y-yellow
T-tan
Gr-grey
R-red

recycled paper
recycled paper

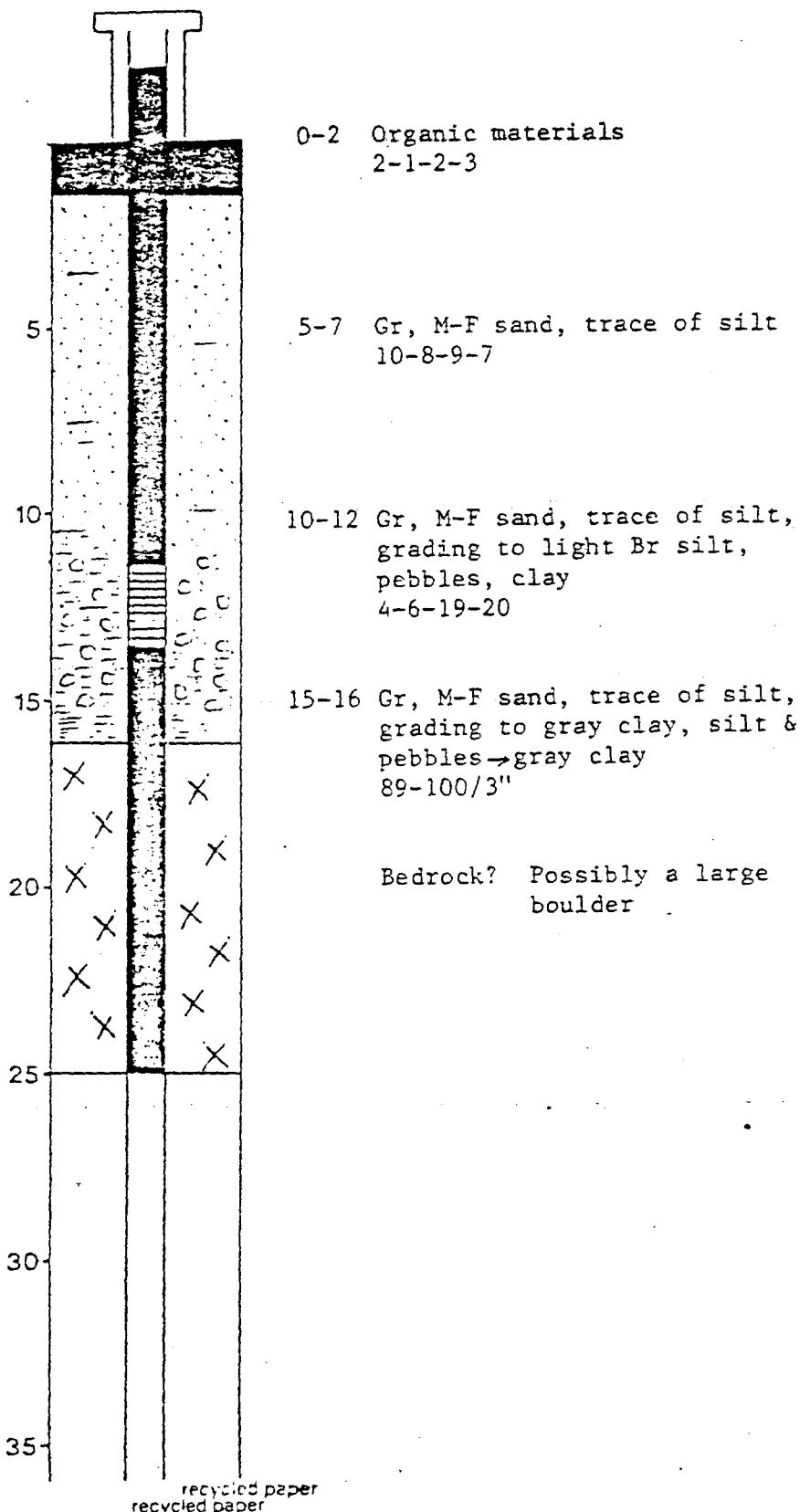
ECOLOGY AND ENVIRONMENT, INC.

Well Log # SHP 3
Project Name Shpack Well Surv
Project # F1-8205-01
Date Prepared 8/8/82
Prepared By D. Cook

Well No. OW-3
Location Shpack Landfill,
Norton, MA

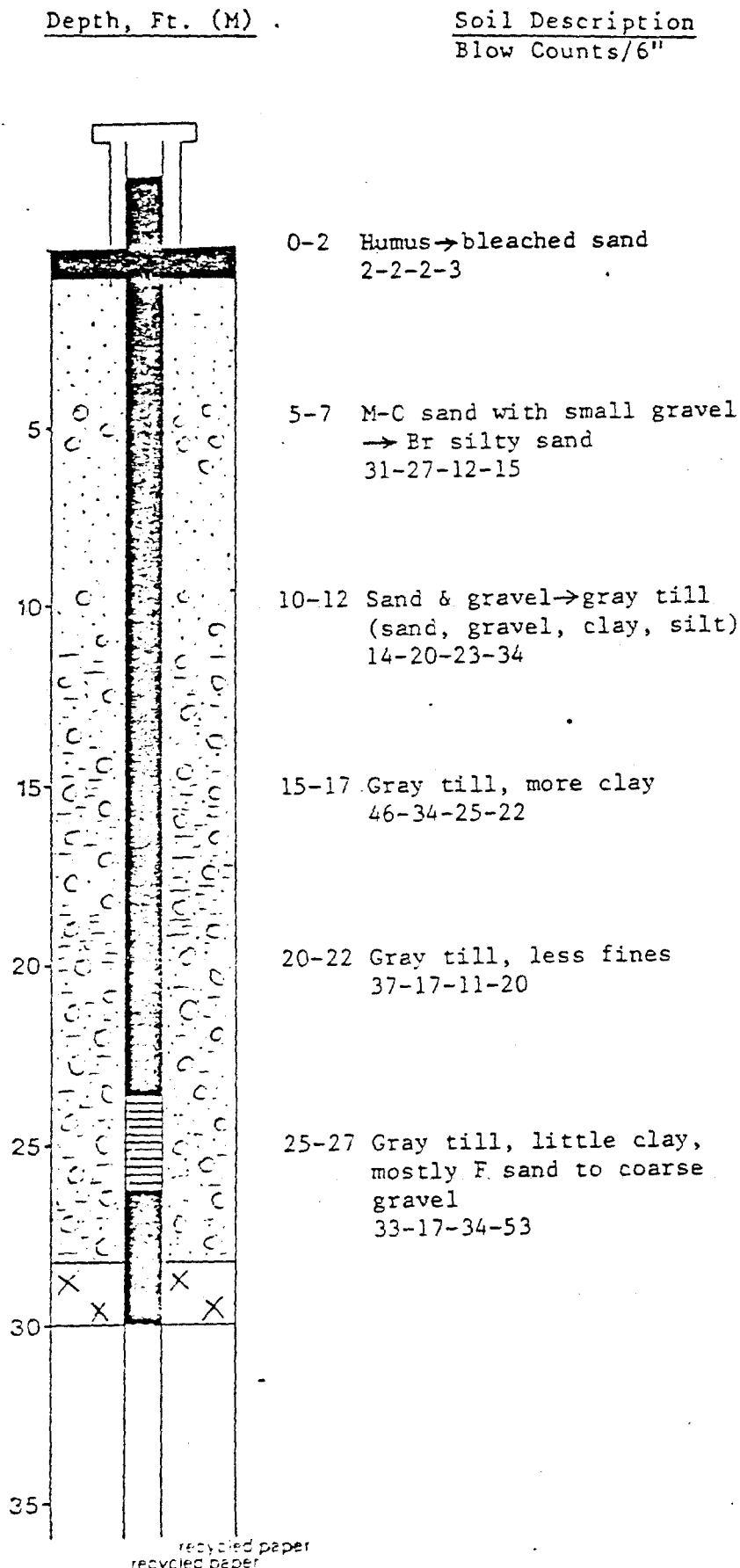
Date Sampled 8/30/82
 Samplers Cook, Panaro
 Will be Analyzed for _____
129 Priority Pollutants

Trace 0-10%	C-Coarse	Br-brown
Some 10-40%	M-Medium	Bl-black
And 40-50%	F-Fine	Y-yellow
		T-tan
		Gr-grey
		R-red



ECOLOGY AND ENVIRONMENT, INC.
30 East Cummings Park
Woburn, MA 01801

Well Log # SHP 4
Project Name Shpack Well Surv
Project # FL-8205-01
Date Prepared 9/8/82
Prepared By D. Cook



Well No. OW-4
Location Shpack Landfill
Norton, MA
Owner DOE
Ground Elev. 105.47
Driller Warren George, Inc.
Drilling Completed 8/20/82
Type of Rig Truck Mounted
----- WELL DATA -----
Well Diam. 2" ID
Depth 30'
Screen Diam. 2" ID
Screen Setting 24-26'
Screen Type Stainless Steel Wi:
0.01" Slot
Well Type Monitoring
Static Water Level 103.43
Date Measured 9/17/82
----- WATER QUALITY -----
Samples Taken Yes x No
No. of Samples 5
Type of Samples Priority
Pollutants
Date Sampled 8/30/82
Samplers Cook, Panaro
Will be Analyzed for
129 Priority Pollutants

REMARKS

Drilling managed by Bechtel
National

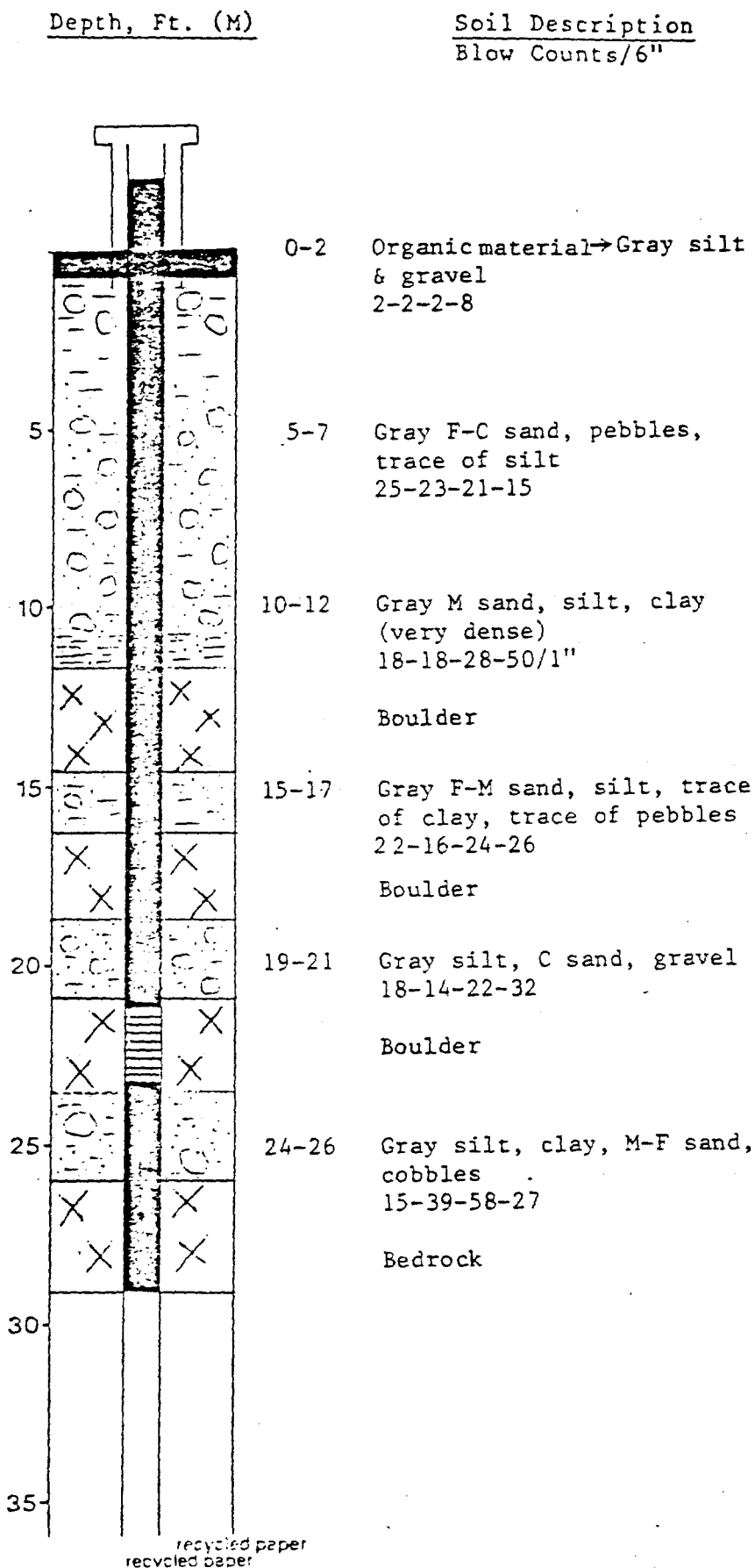
SOIL DESCRIPTION ABBREVIATIONS

Trace 0-10% C-Coarse Br-brown
Some 10-40% M-Medium Bl-black
And 40-50% F-Fine Y-yellow
T-tan
Gr-grey
R-red

ecology and environment, inc.
ecology and environment

ECOLOGY AND ENVIRONMENT, INC.
30 East Cummings Park
Woburn, MA 01801

Well Log # SHP 5
Project Name Shpack Well Surv
Project # Fl-8205-01
Date Prepared 9/8/82
Prepared By D. Cook



Well No. OW-5
Location Shpack Landfill
Norton, MA
Owner DOE
Ground Elev. 105.88
Driller Warren George, Inc.
Drilling Completed 8/17/82
Type of Rig Truck Mounted
----- WELL DATA -----
Well Diam. 2" ID Stainless
Depth 29'
Screen Diam. 2" ID
Screen Setting 21.5-23.5'
Screen Type Stainless Steel Wir
0.01" Slot
Well Type Monitoring
Static Water Level 103.3
Date Measured 9/17/82
----- WATER QUALITY -----
Samples Taken Yes x No
No. of Samples 5
Type of Samples Priority
Pollutant

Date Sampled 8/30/82
Samplers Cook, Panaro
Will be Analyzed for
129 Priority Pollutants

REMARKS

Drilling managed by Bechtel
National

SOIL DESCRIPTION ABBREVIATIONS

Trace 0-10%	C-Coarse	Br-brown
Some 10-40%	M-Medium	Bl-black
And 40-50%	F-Fine	Y-yellow
		T-tan
		Gr-grey
		R-red

ECOLOGY AND ENVIRONMENT, INC.
30 East Cummings Park
Woburn, MA 01801

Well Log # SHP 6
Project Name Shpack Well Sur
Project # FL-8205-01
Date Prepared 9/8/82
Prepared By D. Cook

Depth, Ft. (M)

Soil Description
Blow Counts/6"

Well No. OW-6

Location Shpack Landfill
Attleborough, MA

Owner DOE

Ground Elev. 104.53

Driller Warren George, Inc.

Drilling Completed 8/25/82

Type of Rig Truck Mounted

----- WELL DATA -----

Well Diam. 2" ID Stainless

Depth 24'

Screen Diam. 2" ID

Screen Setting 17.7-19.7

Screen Type Stainless Steel W
0.01" Slot

Well Type Monitoring

Static Water Level 103.53

Date Measured 9/17/82

----- WATER QUALITY -----

Samples Taken Yes x No

No. of Samples 5

Type of Samples Priority
Pollutant

Date Sampled 8/30/82

Samplers Cook, Panaro

Will be Analyzed for

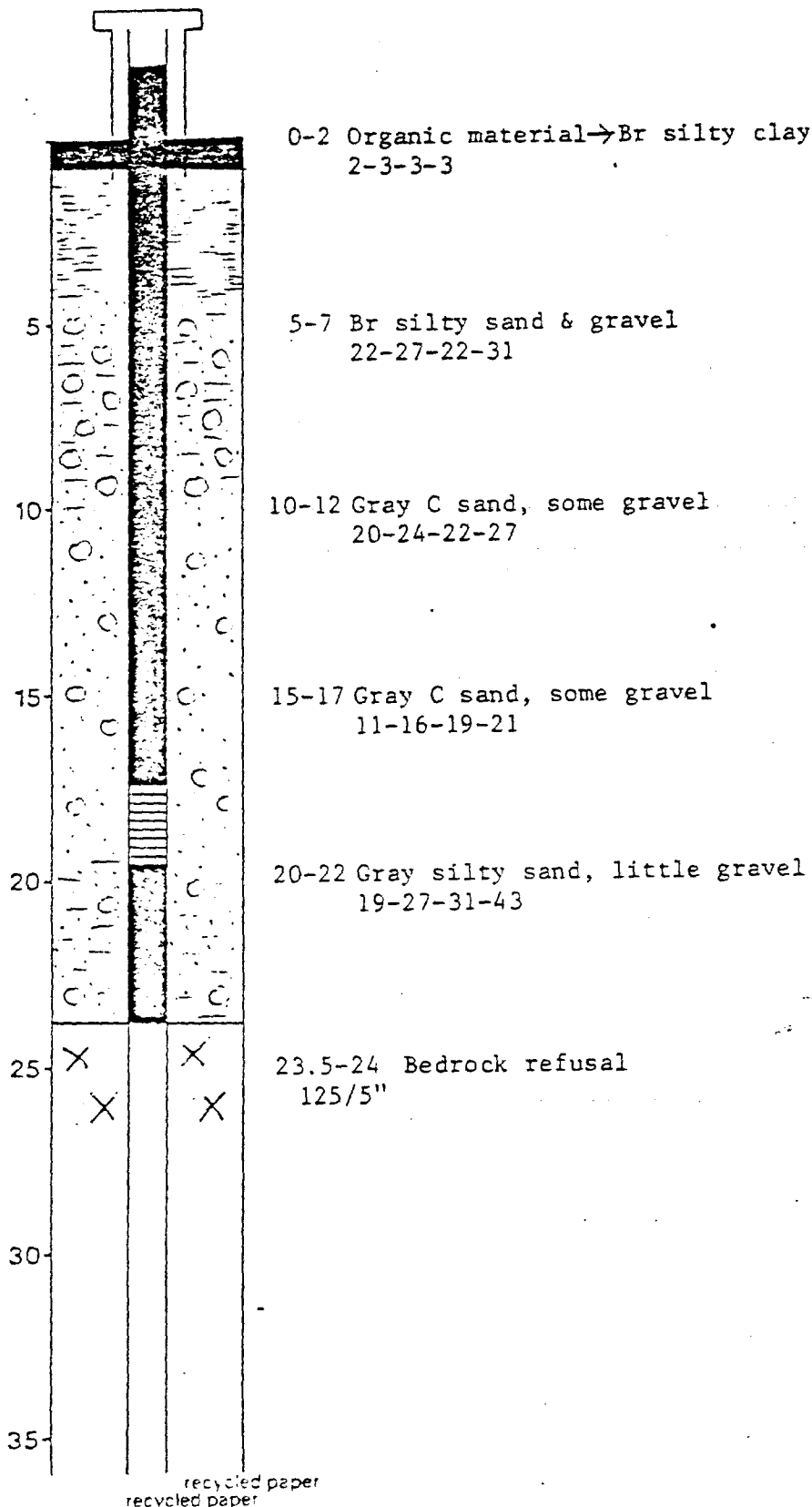
129 Priority Pollutants

REMARKS

Drilling managed by Bechtel
National

SOIL DESCRIPTION ABBREVIATIONS

Trace 0-10% C-Coarse Br-brown
Some 10-40% M-Medium Bl-black
And 40-50% F-Fine Y-yellow
T-tan
Gr-grey
R-red



ECOLOGY AND ENVIRONMENT, INC.
30 East Cummings Park
Woburn, MA 01801

Well Log # SHP 7
Project Name Shpack Well Survey
Project # F1-8205-01
Date Prepared 9/8/82
Prepared By D. Cook

Depth, Ft. (M)

Soil Description
Blow Counts/6"

Well No. OW-7
Location Shpack Landfill
Norton, MA

Owner DOE
Ground Elev. 105.56
Driller Warren George, Inc.
Drilling Completed 8/23/82
Type of Rig Truck Mounted

----- WELL DATA -----
Well Diam. 2" ID
Depth 53.6'
Screen Diam. 2" ID Stainless
Screen Setting 47.3-49.3'
Screen Type Stainless Steel Wire
0.01" Slot

Well Type Monitoring
Static Water Level 103.39
Date Measured 9/17/82

----- WATER QUALITY -----
Samples Taken Yes x No
No. of Samples 5
Type of Samples Priority
Pollutants

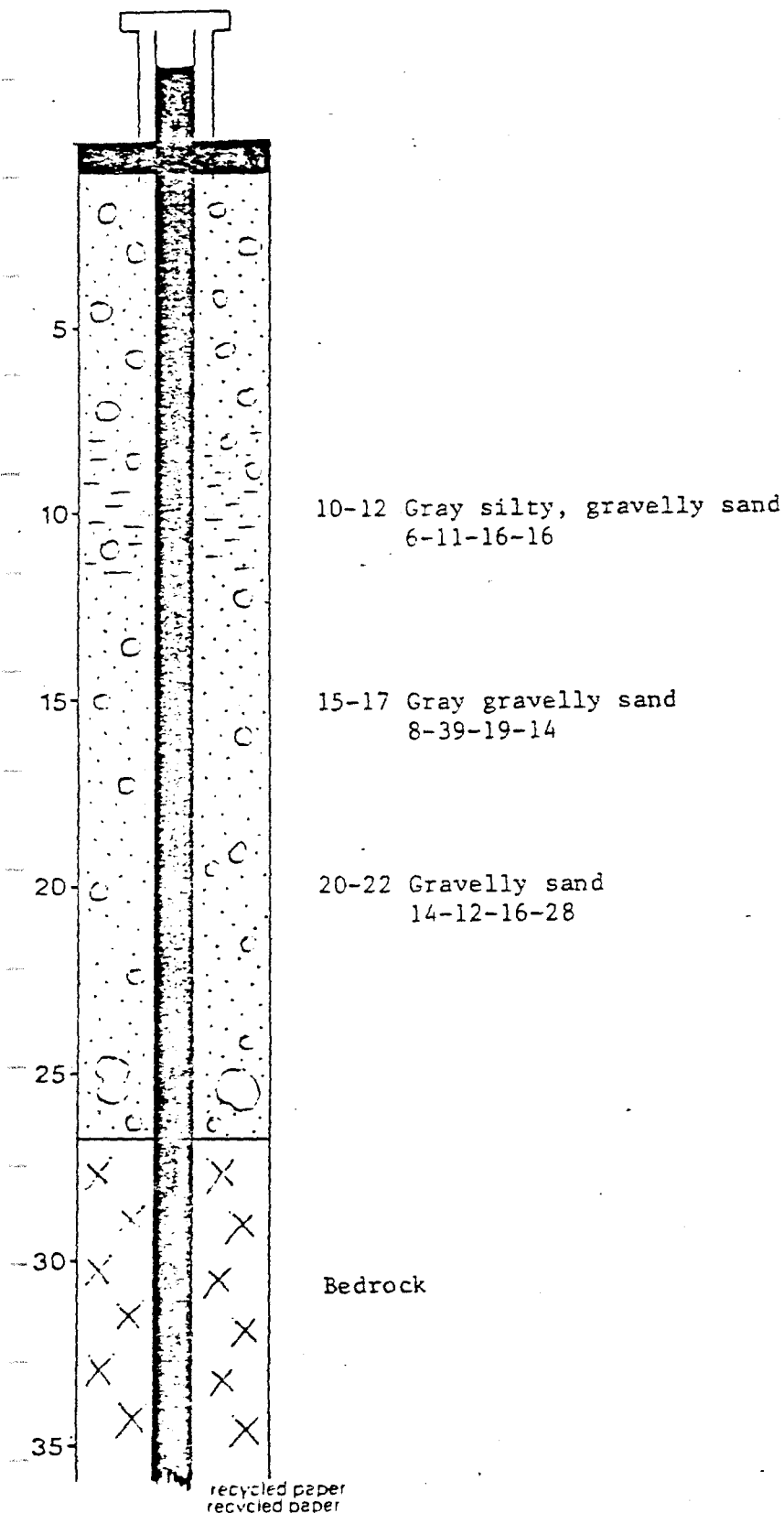
Date Sampled 8/30/82
Samplers Cook, Panaro
Will be Analyzed for
129 Priority Pollutants

REMARKS

Drilling managed by Bechtel
National

SOIL DESCRIPTION ABBREVIATIONS

Trace 0-10% C-Coarse Br-brown
Some 10-40% M-Medium Bl-black
And 40-50% F-Fine Y-yellow
T-tan
Gr-grey
R-red



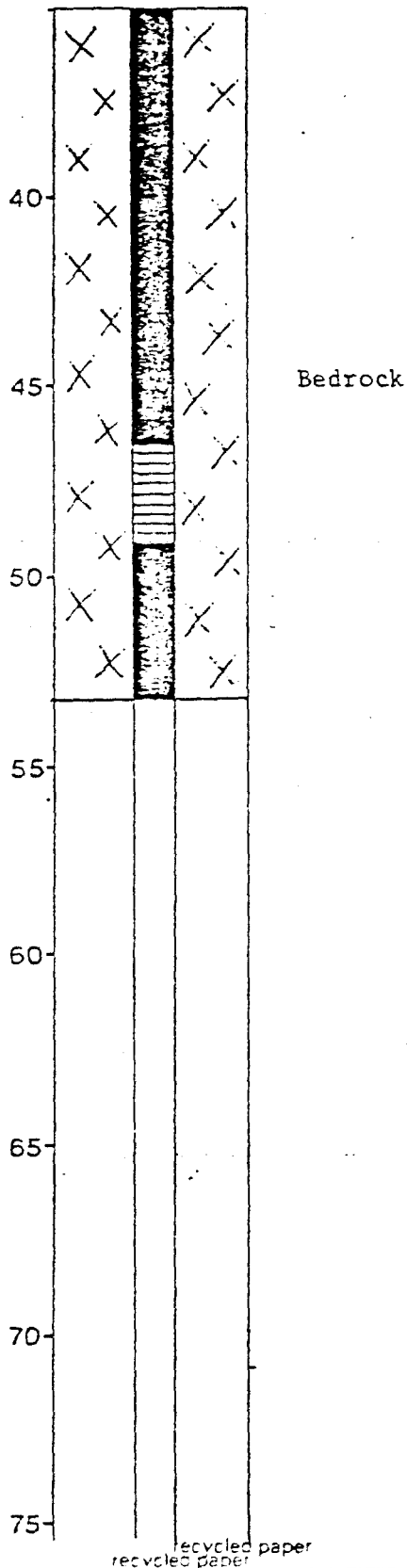
ECOLOGY AND ENVIRONMENT, INC.
30 East Cummings Park
Woburn, MA 01801

Well Log # SHP 7
Project Name _____
Project # TDD F1-
Date Prepared _____
Prepared By _____

Depth, Ft. (M)

Soil Description
Blow Counts/6"

Well No. OW-7 (Page 2)
Location _____



Owner _____
Ground Elev. _____
Driller _____
Drilling Completed _____
Type of Rig Truck Mounted
----- WELL DATA -----
Well Diam. ID
Depth _____
Screen Diam. ID
Screen Setting _____
Screen Type 0.01" Slot
Well Type Monitoring
Static Water Level _____
Date Measured _____
----- WATER QUALITY -----
Samples Taken Yes No
No. of Samples _____
Type of Samples _____

Date Sampled _____
Samplers _____
Will be Analyzed for _____

REMARKS

SOIL DESCRIPTION ABBREVIATIONS
Trace 0-10% C-Coarse Br-brown
Some 10-40% M-Medium Bl-black
And 40-50% F-Fine Y-yellow
T-tan
Gr-grey
R-red

APPENDIX C

Radiation Screening Data
Priority Pollutant Samples

Shpack Landfill

Bechtel National, Inc.

Engineers - Constructors

Oak Ridge Office
Jackson Plaza Tower
800 Oak Ridge Turnpike
Oak Ridge, Tennessee

Mail Address: P. O. Box 350, Oak Ridge, TN 37830



September 2, 1982

Ecology and Environment, Inc.
30 Cummings Park
Woburn, Massachusetts 01801

Attention: D. Cook

Gentlemen:

The priority pollutant samples collected at the Shpack Landfill on August 30, 1982 were screened for radioactivity using a 2"x2" NaI crystal and a shielded pancake geometry M model HP210 tube held in contact with the surface with each container. Data collected are listed below:

<u>Well</u>	<u>2x2 NaI</u>	<u>HP 210</u>
OW1	5928 CPM	30 CPM
OW2	5912 CPM	28 CPM
OW3	6024 CPM	26 CPM
OW4	5794 CPM	38 CPM
OW5	6026 CPM	32 CPM
OW6	6128 CPM	32 CPM
OW7	6142 CPM	38 CPM

Attleboro Landfill Wells

#8	6088 CPM	38 CPM
#9 (not uncovered)		
#10	6040 CPM	32 CPM

Background 7,000 - 5,000 CPM

*CPM = Counts Per Minute

AT YOUR REQUEST, A SAMPLE OF MR. MCGINN'S WELL WATER WAS
SO SCREENED AND WAS NOTED TO BE WITHIN THE BACKGROUND
RANGE.

A handwritten signature in cursive script, appearing to read "D. W. Williams".

Bechtel National, Inc.

Engineers — Constructors

Oak Ridge Office
Jackson Plaza Tower
800 Oak Ridge Turnpike
Oak Ridge, Tennessee

Mail Address: P. O. Box 350, Oak Ridge, TN 37830



September 21, 1982

Ecology and Environment Inc.
30 Cummings Park
Woburn, Massachusetts 01801

ATTENTION: D. Cook

Gentlemen:

The 13 priority pollutant samples collected at the Shpack Landfill on September 20, 1982 were screened for radioactivity using a 2" x 2" NaI crystal and a shielded pancake geometry GII model HP210 tube held in contact with the surface with each container. Data collected are listed below:

<u>Drill Hole</u>	<u>2 x 2 NaI</u>	<u>HP 210</u>
19E	7724 CPM	Maximum
24E	6740 CPM	count 35 or
40R	7080 CPM	less
35R	6214 CPM	
38E	6202 CPM	
27E	6072 Case 1	
49R	6090 CPM	
2E	6104 CPM	
17E	5900 CPM	
43E	8148 CPM	
22E	7676 Case 2	
11E	7914 CPM	
63R	7752 CPM	
49R -duplicate	7212 CPM	

Background 7,000 - 10,000 *readings taken at different location
CPM-Counts per Minutes

Background 50 for HP 210

A handwritten signature in black ink, appearing to read "Peter Williams".
Peter Williams

APPENDIX D

Priority Pollutant Analyses
Peripheral Monitoring Wells

Shpack Landfill

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8864

OW 1

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260
LAB SAMPLE ID. NO. 70-0013 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)		<u>ug/l or mg/kg</u> (circle one)
1. Aluminum	<u>[ND B]</u>	10. Zinc	<u>128</u>
2. Chromium	<u>ND B</u>	11. Boron	<u>ND</u>
3. Barium	<u>1290</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>ND</u>
5. Cobalt	<u>ND</u>		
6. Copper	<u>ND</u>		
7. Iron	<u>610 C 780</u>		
8. Nickel	<u>ND</u>		
9. Manganese	<u>760</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)		<u>ug/l or mg/kg</u> (circle one)
1. Arsenic	<u>[1.9]</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>ND</u>	6. Tin	<u>ND</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>ND</u>
4. Thallium	<u>ND</u>	8. Lead	<u>132</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - not applicable

DW White 10-1-82

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1197

OW 2

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC 29

SAMPLE ID: A1197

LAB ID: A1197A

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/14/82

STD. ID: 09/14/82

CONC. FACTOR: 909

SAMPLE ID: A1197

LAB ID: A1197BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/24/82

STD. ID: 09/14/82

CONC. FACTOR: 1098

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
24A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
37A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
60A	4,6-DINITRO-O-CRESOL	N/D
64A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1197

LAB ID: A1197BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/24/82

STD. ID: 09/14/82

CONC. FACTOR: 1098

BASE/NEUTRAL COMPOUNDS	UG/L
1 ACENAPHTHENE	N/D
2 BENZIDINE	N/D
3B 1,2,4-TRICHLOROBENZENE	N/D
7B HEXACHLOROBENZENE	N/D
15B HEXACHLOROETHANE	N/D
18B BIS(2-CHLOROETHYL) ETHER	N/D
21B 2-CHLORONAPHTHALENE	N/D
22B 1,2-DICHLOROBENZENE	N/D
26B 1,3-DICHLOROBENZENE	N/D
27B 1,4-DICHLOROBENZENE	N/D
29B 3,3'-DICHLOROBENZIDINE	N/D
35B 2,4-DINITROTOLUENE	N/D
36B 2,6-DINITROTOLUENE	N/D
38B 1,2-DIPHENYLHYDRAZINE	N/D
57B FLUORANTHENE	N/D
108B 4-CHLOROPHENYL PHENYL ETHER	N/D

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTA DIENE	N/D
54B ISOPHORONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	N/D
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	N/D
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GHI)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
83B INDENO(1,2,3-CD)PYRENE	N/D
84B PYRENE	N/D
129B 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A1197

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems. Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1197

LAB ID: A1197V

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

VOLATILE COMPOUNDS

UG/L

2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	*
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	N/D
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	N/D
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	N/D
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	*
87V	TRICHLOROETHYLENE	N/D
88V	VINYL CHLORIDE	N/D

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordan	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8861

OW 2

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260
LAB SAMPLE ID. NO. 70-0010 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	3950 C	10. Zinc	63
2. Chromium	ND B	11. Boron	ND
3. Barium	140	12. Vanadium	ND
4. Beryllium	ND	13. Silver	ND
5. Cobalt	ND		
6. Copper	ND		
7. Iron	23,600 C 23,600		
8. Nickel	40		
9. Manganese	1,920		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	14.8 J	5. Mercury	ND
2. Antimony	ND	6. Tin	ND
3. Selenium	ND	7. Cadmium	ND B
4. Thallium	ND	8. Lead	12

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	NA
2. Cyanide	NA
3. Sulfide	NA

COMMENTS: NA - not applicable

Michael 10-1-02

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1199

ow 3

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC 29

SAMPLE ID: A1199

LAB ID: A1199A

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/14/82

STD. ID: 09/14/82

CONC. FACTOR: 571

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
24A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
57A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
60A	4,6-DINITRO-O-CRESOL	N/D
64A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1199

LAB ID: A1199BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/24/82

STD. ID: 09/14/82

CONC. FACTOR: 636

BASE/NEUTRAL COMPOUNDS	UG/L
1B ACENAPHTHENE	N/D
5B BENZIDINE	N/D
8B 1,2,4-TRICHLOROBENZENE	N/D
9B HEXACHLOROBENZENE	N/D
12B HEXACHLOROETHANE	N/D
18B BIS(2-CHLOROETHYL) ETHER	N/D
20B 2-CHLORONAPHTHALENE	N/D
25B 1,2-DICHLOROBENZENE	N/D
26B 1,3-DICHLOROBENZENE	N/D
7B 1,4-DICHLOROBENZENE	N/D
3B 3,3'-DICHLOROBENZIDINE	N/D
35B 2,4-DINITROTOLUENE	N/D
5B 2,6-DINITROTOLUENE	N/D
7B 1,2-DIPHENYLHYDRAZINE	N/D
9B FLUORANTHENE	N/D
40B 4-CHLOROPHENYL PHENYL ETHER	N/D

SAMPLE ID: A1199

LAB ID: A1199BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/24/82

STD. ID: 09/14/82

CONC. FACTOR: 636

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTADIENE	N/D
54B ISOPHORONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	*
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	N/D
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFLUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GH)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
83B INDENO(1,2,3-CD)PYRENE	N/D
84B PYRENE	N/D
129B 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A1199

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1199

LAB ID: A1199V

DATE EXTRACTED: _____

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

	VOLATILE COMPOUNDS	UG/L
2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	N/D
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	N/D
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	*
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	N/D
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	N/D
87V	TRICHLOROETHYLENE	N/D
88V	VINYL CHLORIDE	N/D

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1199

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	87.6	100	88
D ₈ -Toluene	VOA	93.8	100	94
2-Fluorophenol	Acid	8.69	100	9
D ₅ -Phenol	Acid	8.82	100	9
2-Fluorobiphenyl	BN	51.7	100	52
D ₅ -Nitrobenzene	BN	25.1	100	25
D ₈ -Naphthalene	BN	34.4	100	34

B. TENTATIVELY IDENTIFIED COMPOUNDS

RES #	COMPOUND NAME	Fraction	% Maximum Score Attained	
			Mass Matching Routine	FIT (specify)
1. 9810	1-PROPENE, 1,3-DICHLORO-(E)-	BN	95	
2. 12184	1H-DIPYRIDO[2,3-B:3',2'	"	75	
3.	DIPYRROLE			
4. 21487	1H-BENZIMIDAZOL-4-OL, 5-	"	86	
5.	METHOXY-1-(PHENYLMETHYL)-			
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

2/15/00

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260

LAB SAMPLE ID. NO. 70-0012 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>ND B7</u>	10. Zinc	<u>134</u>
2. Chromium	<u>ND B</u>	11. Boron	<u>ND</u>
3. Barium	<u>[44]</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>ND</u>
5. Cobalt	<u>ND</u>		
6. Copper	<u>ND</u>		
7. Iron	<u>196DC 2130</u>		
8. Nickel	<u>[39]</u>		
9. Manganese	<u>4,300</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>ND</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>ND</u>	6. Tin	<u>ND</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>15C</u>
4. Thallium	<u>ND</u>	8. Lead	<u>51</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - not applicable

Shute 10-1-82

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA 8863 D

MA 8862 D

OW 3

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants

CASE NO. 1260

LAB SAMPLE ID. NO. 70-0012

QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Aluminum	<u>[ND B]</u>
2. Chromium	<u>ND B</u>
3. Barium	<u>[37]</u>
4. Beryllium	<u>ND</u>
5. Cobalt	<u>ND</u>
6. Copper	<u>ND</u>
7. Iron	<u>2,040 2,210</u>
8. Nickel	<u>[37]</u>
9. Manganese	<u>4,350</u>

	<u>ug/l or mg/l</u> (circle one)
10. Zinc	<u>116</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>ND</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Arsenic	<u>ND</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l or mg/kg</u> (circle one)
5. Mercury	<u>MA 8862</u>
6. Tin	<u>ND</u>
7. Cadmium	<u>ND</u>
8. Lead	<u>49</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - not applicable

G. White 10-1-82

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1195

OW4

LABORATORY NAME Systems. Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC29

SAMPLE ID: A1195

LAB ID: A1195A

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/14/82

STD. ID: 09/14/82

CONC. FACTOR: 869

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
24A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
57A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
60A	4,6-DINITRO-O-CRESOL	N/D
64A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1195

LAB ID: A1195BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/17/82

STD. ID: 09/14/82

CONC. FACTOR: 775

	BASE/NEUTRAL COMPOUNDS	UG/L
B	ACENAPHTHENE	N/D
B	BENZIDINE	N/D
8B	1,2,4-TRICHLOROBENZENE	N/D
9B	HEXACHLOROBENZENE	N/D
2B	HEXACHLOROETHANE	N/D
18B	BIS(2-CHLOROETHYL) ETHER	N/D
CP	2-CHLORONAPHTHALENE	N/D
5B	1,2-DICHLOROBENZENE	N/D
26B	1,3-DICHLOROBENZENE	N/D
27B	1,4-DICHLOROBENZENE	N/D
8E	3,3'-DICHLOROBENZIDINE	N/D
5B	2,4-DINITROTOLUENE	N/D
5B	2,6-DINITROTOLUENE	N/D
7E	1,2-DIPHENYLHYDRAZINE	N/D
9B	FLUORANTHENE	N/D
4CB	4-CHLOROPHENYL PHENYL ETHER	N/D

SAMPLE ID: A1195

LAB ID: A1195BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/17/82

STD. ID: 09/14/82

CONC. FACTOR: 775

	BASE/NEUTRAL COMPOUNDS	UG/L
41B	4-BROMOPHENYL PHENYL ETHER	N/D
42B	BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B	BIS(2-CHLOROETHOXY) METHANE	N/D
52B	HEXACHLOROBUTADIENE	N/D
53B	HEXACHLOROCYCLOPENTADIENE	N/D
54B	ISOPHORONE	N/D
55B	NAPHTHALENE	N/D
56B	NITROBENZENE	N/D
61B	N-NITROSODIMETHYLAMINE	N/D
62B	N-NITROSODIPHENYLAMINE	N/D
63B	N-NITROSO-N-PROPYLAMINE	N/D
66B	BIS(2-ETHYLHEXYL) PHTHALATE	*
67B	BUTYL BENZYL PHTHALATE	N/D
68B	DI-N-BUTYL PHTHALATE	N/D
69B	DI-N-OCTYL PHTHALATE	N/D
70B	DIETHYL PHTHALATE	N/D
71B	DIMETHYL PHTHALATE	N/D
72B	BENZO(A)ANTHRACENE	N/D
73B	BENZO(A)PYRENE	N/D
74B	3,4-BENZOFUORANTHENE	N/D
75B	BENZO(K)FLUORANTHENE	N/D
76B	CHRYSENE	N/D
77B	ACENAPHTHYLENE	N/D
78B	ANTHRACENE	N/D
79B	BENZO(GHI)PERYLENE	N/D
80B	FLUORENE	N/D
81B	PHENANTHRENE	N/D
82B	DIBENZO(A,H)ANTHRACENE	N/D
83B	INDENO(1,2,3-CD)PYRENE	N/D
84B	PYRENE	N/D
129B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A1195

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1195

LAB ID: A1195V

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

VOLATILE COMPOUNDS

UG/L

2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	*
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	*
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	*
30V	1,2-TRANS-DICHLOROETHYLENE	665
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFUOROMETHANE	N/D
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	*
87V	TRICHLOROETHYLENE	*
88V	VINYL CHLORIDE	25.7

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1195

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	80.3	100	80
D ₈ -Toluene	VOA	92.4	100	92
2-Fluorophenol	Acid	2.68	100	3
D ₅ -Phenol	Acid	2.00	100	2
2-Fluorobiphenyl	BN	53.3	100	53
D ₄ -Nitrobenzene	BN	7.99	100	10
D ₈ -Naphthalene	BN	φ	100	φ

B. TENTATIVELY IDENTIFIED COMPOUNDS

RES #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine	Fit (specify)
1. 2063	ETHANE, 1,2-DICHLORO-1,1,2-	VOA	98	
2.	TRIFLUORO-			
3. 11657	PENTANE, 3-ETHYL-2,2-DIMETHYL	"	87	
4. 24888	6,9-OCTADECADYNOIC ACID	ACID	86	
5.	METHYLESTER			
6. 679	FORMAMIDE, N-METHYL-N-PHENYL	"	89	
7. 2788	1-PROPENE, 1,3-DICHLORO	BN	96	
8. 20354	THIENO[2,3-B]PYRIDINE 3-CHLORO-	"	89	
9. 10278	CARBONIC ACID, DINEOPENTYLESTER	"	70	
10. 2040	BENZENE, CHLORO PENTAFLUORO-	"	74	
11. 4401	BENZOYLCHLORIDE, 2-METHYL-	"	84	
12. 1409	3-PYRIDINE CARBOXAMIDE, N-METHYL-	"	74	
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

2/15/00

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8859

OW4

INORGANICS ANALYSIS DATA SHEET

LAB NAME JK Environmental Consultants

CASE NO. 1260

LAB SAMPLE ID. NO. 70-0008

QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>390C</u>
2. Chromium	<u>ND B</u>
3. Barium	<u>112</u>
4. Beryllium	<u>ND</u>
5. Cobalt	<u>ND</u>
6. Copper	<u>ND</u>
7. Iron	<u>27,400 C</u> <u>27,600</u>
8. Nickel	<u>[39]</u>
9. Manganese	<u>3,430</u>

	<u>ug/l</u> or mg/kg (circle one)
10. Zinc	<u>75</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>ND</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>[7.6]</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l</u> or mg/kg (circle one)
5. Mercury	<u>ND</u>
6. Tin	<u>[11]</u>
7. Cadmium	<u>ND B</u>
8. Lead	<u>24</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - Not Applicable

Delwite 90-1-82

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1253

OW4 Dux

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC 29

SAMPLE ID: A1253
LAB ID: A1253A
DATE EXTRACTED: 09/02/82
DATE INJECTED: 09/15/82
STD. ID: 09/14/82
CONC. FACTOR: 571

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
2A	P-CHLORO-M-CRESOL	N/D
4A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
4A	2,4-DIMETHYLPHENOL	N/D
7A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
29A	2,4-DINITROPHENOL	N/D
1A	4,6-DINITRO-O-CRESOL	N/D
4A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1253
LAB ID: A1253BN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/24/82
STD. ID: 09/14/82
CONC. FACTOR: 628

BASE/NEUTRAL COMPOUNDS	UG/L
1B ACENAPHTHENE	N/D
3 BENZIDINE	N/D
62 1,2,4-TRICHLOROBENZENE	N/D
9B HEXACHLOROBENZENE	N/D
2B HEXACHLOROETHANE	N/D
1B BIS(2-CHLOROETHYL) ETHER	N/D
25B 2-CHLORONAPHTHALENE	N/D
13B 1,2-DICHLOROBENZENE	N/D
26B 1,3-DICHLOROBENZENE	N/D
27B 1,4-DICHLOROBENZENE	N/D
13B 3,3'-DICHLOROBENZIDINE	N/D
13B 2,4-DINITROTOLUENE	N/D
3 2,6-DINITROTOLUENE	N/D
1B 1,2-DIPHENYLHYDRAZINE	N/D
1B FLUORANTHENE	N/D
40B 4-CHLOROPHENYL PHENYL ETHER	N/D

SAMPLE ID: A1253
LAB ID: A1253BN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/24/82
STD. ID: 09/14/82
CONC. FACTOR: 628

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTADIENE	N/D
54B ISOPHORONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	#
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	N/D
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFLUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GHI)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
83B INDENO(1,2,3-CD)PYRENE	N/D
84B PYRENE	N/D
129B 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A 1253

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems. Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1253

LAB ID: A1253V

DATE EXTRACTED: _____

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordan	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

VOLATILE COMPOUNDS

UG/L

2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	*
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	*
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	*
30V	1,2-TRANS-DICHLOROETHYLENE	638
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	N/D
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	*
87V	TRICHLOROETHYLENE	*
88V	VINYL CHLORIDE	14.0

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1253

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	76.8	100	77
D ₈ -Toluene	VOA	84.3	100	84
2-Fluorophenol	Acid	15.8	100	16
D ₅ -Phenol	Acid	26.9	100	27
2-Fluorobiphenyl	BN	55.1	100	55
D ₅ -Nitrobenzene	BN	40.9	100	41
D ₆ -Naphthalene	BN	62.7	100	63

B. TENTATIVELY IDENTIFIED COMPOUNDS

Lab #	COMPOUND NAME	Fraction	% Maximum Score Attained	
			Mass Matching Routine	Fit (specify)
1. 20533	1-PENTANOL, 4-METHYL-2-PROPYL-	BN	59	
2. 10709	2-HEXANOL, 5-METHYL-5-PHENYL-	"	86	
3. 16050	4-HEXEN-2-YN-1-ONE, 1-PHENYL-5-(1-PIPERIDINYL)-	"	64	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

Sample No.
MA8866

INORGANICS ANALYSIS DATA SHEET

OW4 Dugl

LAB NAME JTC Environmental Consultants CASE NO. 1260

LAB SAMPLE ID. NO. 70-0015 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>570 C</u>	10. Zinc	<u>128</u>
2. Chromium	<u>15 C</u>	11. Boron	<u>ND</u>
3. Barium	<u>125</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>ND</u>
5. Cobalt	<u>ND</u>		
6. Copper	<u>ND</u>		
7. Iron	<u>29,800 C. 30,000</u>		
8. Nickel	<u>50</u>		
9. Manganese	<u>3,450</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>15.5</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>21</u>	6. Tin	<u>25</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>ND B</u>
4. Thallium	<u>ND</u>	8. Lead	<u>63</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - not applicable

Shute 10-1-8

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1198

OWS

LABORATORY NAME Systems. Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. RC 29

SAMPLE ID: A1198
LAB ID: A1198A
DATE EXTRACTED: 09/02/82
DATE INJECTED: 09/14/82
STD. ID: 09/14/82
CONC. FACTOR: 645

SAMPLE ID: A1198
LAB ID: A1198BN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/27/82
STD. ID: 09/14/82
CONC. FACTOR: 671

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
2A	P-CHLORO-M-CRESOL	N/D
4A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
24A	2,4-DIMETHYLPHENOL	N/D
7A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
1A	4,6-DINITRO-O-CRESOL	N/D
4A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1198
LAB ID: A1198BN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/27/82
STD. ID: 09/14/82
CONC. FACTOR: 671

	BASE/NEUTRAL COMPOUNDS	UG/L
1B	ACENAPHTHENE	N/D
5	BENZIDINE	N/D
8	1,2,4-TRICHLOROBENZENE	N/D
9B	HEXACHLOROBENZENE	N/D
17B	HEXACHLOROETHANE	N/D
1 B	BIS(2-CHLOROETHYL) ETHER	N/D
20B	2-CHLORONAPHTHALENE	N/D
2 B	1,2-DICHLOROBENZENE	N/D
26B	1,3-DICHLOROBENZENE	N/D
27B	1,4-DICHLOROBENZENE	N/D
2 B	3,3'-DICHLOROBENZIDINE	N/D
3 B	2,4-DINITROTOLUENE	N/D
7 B	2,6-DINITROTOLUENE	N/D
13	1,2-DIPHENYLHYDRAZINE	N/D
3 B	FLUORANTHENE	N/D
4B	4-CHLOROPHENYL PHENYL ETHER	N/D

	BASE/NEUTRAL COMPOUNDS	UG/L
41B	4-BROMOPHENYL PHENYL ETHER	N/D
42B	BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B	BIS(2-CHLOROETHOXY) METHANE	N/D
52B	HEXACHLOROBUTADIENE	N/D
53B	HEXACHLOROCYCLOPENTADIENE	N/D
54B	ISOPHORONE	N/D
55B	NAPHTHALENE	N/D
56B	NITROBENZENE	N/D
61B	N-NITROSODIMETHYLAMINE	N/D
62B	N-NITROSODIPHENYLAMINE	N/D
63B	N-NITROSO-N-PROPYLAMINE	N/D
66B	BIS(2-ETHYLHEXYL) PHTHALATE	N/D
67B	BUTYL BENZYL PHTHALATE	N/D
68B	DI-N-BUTYL PHTHALATE	N/D
69B	DI-N-OCTYL PHTHALATE	N/D
70B	DIETHYL PHTHALATE	N/D
71B	DIMETHYL PHTHALATE	N/D
72B	BENZO(A)ANTHRACENE	N/D
73B	BENZO(A)PYRENE	N/D
74B	3,4-BENZOFUORANTHENE	N/D
75B	BENZO(K)FLUORANTHENE	N/D
76B	CHRYSENE	N/D
77B	ACENAPHTHYLENE	N/D
78B	ANTHRACENE	N/D
79B	BENZO(GHI)PERYLENE	N/D
80B	FLUORENE	N/D
81B	PHENANTHRENE	N/D
82B	DIBENZO(A,H)ANTHRACENE	N/D
83B	INDENO(1,2,3-CD)PYRENE	N/D
84B	PYRENE	N/D
129B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A1198

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1198

LAB ID: A1198V

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

	VOLATILE COMPOUNDS	UG/L
2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	*
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	*
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	*
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	N/D
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	*
87V	TRICHLOROETHYLENE	*
88V	VINYL CHLORIDE	*

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordan	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1198

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	27.7	100	88
D ₈ -Toluene	VOA	93.3	100	93
2-Fluorophenol	Acid	31.0	100	31
D ₅ -Phenol	Acid	43.7	100	44
2-Fluorobiphenyl	BN	63.2	100	63
D ₅ -Nitrobenzene	BN	57.9	100	58
D ₈ -Naphthalene	BN	66.9	100	67

B. TENTATIVELY IDENTIFIED COMPOUNDS

YES #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1. 2788	1-PROPENE, 1,3-DICHLORO-	BN	94
2. 2502	IMIDOPTCARBONIMIDICDIAMIDE	"	73
3.	N-(4-CHLOROPHENYL)-N'-(1-		
4.	METHYLETHYL)-		
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

2/15/00

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260
LAB SAMPLE ID. NO. 70-0611 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>[ND B]</u>	10. Zinc	<u>75</u>
2. Chromium	<u>ND B</u>	11. Boron	<u>ND</u>
3. Barium	<u>[79]</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>ND</u>
5. Cobalt	<u>ND</u>		
6. Copper	<u>ND</u>		
7. Iron	<u>3640 C 3,810</u>		
8. Nickel	<u>[32]</u>		
9. Manganese	<u>610</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>[5.6]</u>	5. Mercury	<u>1.0</u>
2. Antimony	<u>ND</u>	6. Tin	<u>[11]</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>ND B</u>
4. Thallium	<u>ND</u>	8. Lead	<u>12</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - not applicable

Shwbl 10-1-82

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1252

OW 6

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC29

SAMPLE ID: A1252

AB ID: A1252A

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/14/82

TD. ID: 09/14/82

CONC. FACTOR: 909

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
4A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
7A	2-NITROPHENOL	N/D
3A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
7A	4,6-DINITRO-O-CRESOL	N/D
4A	PENTACHLOROPHENOL	N/D
65A	PHENOL	*

SAMPLE ID: A1252

LAB ID: A1252BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/20/82

STD. ID: 09/14/82

CONC. FACTOR: 641

BASE/NEUTRAL COMPOUNDS	UG/L
1B ACENAPHTHENE	N/D
52 BENZIDINE	N/D
8 1,2,4-TRICHLOROBENZENE	N/D
9B HEXACHLOROBENZENE	N/D
12B HEXACHLOROETHANE	N/D
1 B BIS(2-CHLOROETHYL) ETHER	N/D
20B 2-CHLORONAPHTHALENE	N/D
27B 1,2-DICHLOROBENZENE	N/D
2 B 1,3-DICHLOROBENZENE	N/D
27B 1,4-DICHLOROBENZENE	N/D
28B 3,3'-DICHLOROBENZIDINE	N/D
3 B 2,4-DINITROTOLUENE	N/D
30B 2,6-DINITROTOLUENE	N/D
1 1,2-DIPHENYLHYDRAZINE	N/D
17B FLUORANTHENE	N/D
1 B 4-CHLOROPHENYL PHENYL ETHER	N/D

SAMPLE ID: A1252

LAB ID: A1252BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/20/82

STD. ID: 09/14/82

CONC. FACTOR: 641

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTADIENE	N/D
54B ISOPHORONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	*
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	*
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GHI)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
83B INDENO(1,2,3-CD)PYRENE	N/D
84B PYRENE	N/D
129B 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A 1252

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1252

LAB ID: A1252V

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordan	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

VOLATILE COMPOUNDS UG/L

2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	*
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	*
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	*
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	*
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	*
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	12.8
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	N/D
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	*
87V	TRICHLOROETHYLENE	N/D
88V	VINYL CHLORIDE	N/D

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1252

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
0 ₆ -Benzene	VOA	75.9	100	76
0 ₈ -Toluene	VOA	102	100	102
2-Fluorophenol	Acid	1.0	100	1
0 ₅ -Phenol	Acid	2.4	100	2
2-Fluorobiphenyl	BN	60.2	100	60
0 ₆ -Nitrobenzene	BN	39.2	100	39
0 ₆ -Naphthalene	BN	66.6	100	67

B. TENTATIVELY IDENTIFIED COMPOUNDS

YES #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine Fit (specify)
1. 8274	NONANOIC ACID, 7-METHYL, METHYL	ACID	91
2.	ESTER		
3. 4664	PENTANE, 3-ETHYL-2,4-DIMETHYL	"	92
4. 20534	1-PROPANOL, 2-METHYL-2-	"	92
5.	(2-METHYL-2-PROPENYL) CYCL		
6. 7883	CYCLOPENTANE, 4,4,3-TRIMETHYL	"	90
7. 22769	2(3H)-FURANONE, 5(2,5-	"	87
8.	DIMETHYLPHENYL -		
9. 336	BICYCLO[2.2.1]HEPTAN-2-ONE	BW	91
10.	1,7,7-TRIMETHYL -		
11. 5066	CYCLOHEPTATRIENYLUM IODIDE	"	92
12. 12288	14-1,3-DIAZEPINE, 4,5,6,2-	"	92
13.	TETRAHYDRO-2-METHYL		
14.			
15.			
16.			
17.			
18.			
19.			
20.			

2/15/00

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260

LAB SAMPLE ID. NO. 70-0014 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>380 C</u>	10. Zinc	<u>28</u>
2. Chromium	<u>ND B</u>	11. Boron	<u>140</u> ~~ND~~
3. Barium	<u>324</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>ND</u>
5. Cobalt	<u>ND</u>		
6. Copper	<u>ND</u>		
7. Iron	<u>60,400 C</u> ~~62,600~~		
8. Nickel	<u>[31]</u>		
9. Manganese	<u>12,400</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>[3.9]</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>[11]</u>	6. Tin	<u>62</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>ND</u>
4. Thallium	<u>ND</u>	8. Lead	<u>ND</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - not applicable

Shaw 10-1-

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1196

007

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC 29

SAMPLE ID: A1196

LAB ID: A1196A

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/14/82

STD. ID: 09/14/82

CONC. FACTOR: 588

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
24A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
57A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
6A	4,6-DINITRO-O-CRESOL	N/D
64A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1196

LAB ID: A1196BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/27/82

STD. ID: 09/14/82

CONC. FACTOR: 591

BASE/NEUTRAL COMPOUNDS	UG/L
1B ACENAPHTHENE	N/D
5B BENZIDINE	N/D
8B 1,2,4-TRICHLOROBENZENE	N/D
9B HEXACHLOROBENZENE	N/D
12B HEXACHLOROETHANE	N/D
1B BIS(2-CHLOROETHYL) ETHER	N/D
20B 2-CHLORONAPHTHALENE	N/D
27B 1,2-DICHLOROBENZENE	N/D
28B 1,3-DICHLOROBENZENE	N/D
27B 1,4-DICHLOROBENZENE	N/D
24B 3,3'-DICHLOROBENZIDINE	N/D
3E 2,4-DINITROTOLUENE	N/D
3-B 2,6-DINITROTOLUENE	N/D
1,2-DIPHENYLHYDRAZINE	N/D
3B FLUORANTHENE	N/D
4B 4-CHLOROPHENYL PHENYL ETHER	N/D

SAMPLE ID: A1196

LAB ID: A1196BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/27/82

STD. ID: 09/14/82

CONC. FACTOR: 591

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTADIENE	N/D
54B ISOPHORONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	136
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	N/D
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFLUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GH)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
83B INDENO(1,2,3-CD)PYRENE	N/D
84B PYRENE	N/D
129B 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A 1196

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1196

LAB ID: A1196V

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

PESTICIDES

ug/l

89P aldrin ND

90P dieldrin ND

91P chlordane ND

92P 4,4'-DDT ND

93P 4,4'-DDE ND

94P 4,4'-DDD ND

95P α -endosulfan ND96P β -endosulfan ND

97P endosulfan sulfate ND

98P endrin ND

99P endrin aldehyde ND

100P heptachlor ND

101P heptachlor epoxide ND

102P α -BHC ND103P β -BHC ND104P γ -BHC ND105P δ -BHC ND

106P PC3-1242 ND

107P PC3-1254 ND

108P PC3-1221 ND

109P PC3-1232 ND

110P PC3-1248 ND

111P PC3-1260 ND

112P PC3-1016 ND

113P toxaphene ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

VOLATILE COMPOUNDS

UG/L

2V ACROLEIN N/D

3V ACRYLONITRILE N/D

4V BENZENE N/D

6V CARBON TETRACHLORIDE N/D

7V CHLOROBENZENE N/D

10V 1,2-DICHLOROETHANE N/D

11V 1,1,1-TRICHLOROETHANE N/D

13V 1,1-DICHLOROETHANE N/D

14V 1,1,2-TRICHLOROETHANE N/D

15V 1,1,2,2-TETRACHLORO N/D

ETHANE

16V CHLOROETHANE N/D

17V BIS(CHLOROMETHYL)ETHER N/D

19V 2-CHLOROETHYL VINYL N/D

ETHER

23V CHLOROFORM N/D

29V 1,1-DICHLOROETHYLENE N/D

30V 1,2-TRANS-DICHLORO *

ETHYLENE

32V 1,2-DICHLOROPROPANE N/D

33V TRANS-1,3-DICHLOROPROP N/D

YLENE

34V CIS-1,3-DICHLOROPROPYL N/D

ENE

38V ETHYLBENZENE N/D

44V METHYLENE CHLORIDE *

45V METHYL CHLORIDE N/D

46V METHYL BROMIDE N/D

47V BROMOFORM N/D

48V DICHLOROBROMOMETHANE N/D

49V TRICHLOROFLUOROMETHANE N/D

50V DICHLORODIFLUORO N/D

METHANE

51V CHLORODIBROMOMETHANE N/D

85V TETRACHLOROETHYLENE N/D

86V TOLUENE *

87V TRICHLOROETHYLENE N/D

88V VINYL CHLORIDE N/D

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1196

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₂ -Benzene	VOA	81.5	100	82
D ₈ -Toluene	VOA	88.1	100	88
2-Fluorophenol	Acid	28.2	100	28
D ₅ -Phenol	Acid	24.7	100	25
2-Fluorobiphenyl	BN	66.7	100	67
D ₅ -Nitrobenzene	BN	39.8	100	40
D ₈ -Naphthalene	BN	73.5	100	74

B. TENTATIVELY IDENTIFIED COMPOUNDS

IES #	COMPOUND NAME	Fraction	% Maximum Score Attained	
			Mass Matching Routine	Fit (specify)
1. 2440	BENZENEBUTANOICACID, 2,5-	ACID	81	
2.	DIMETHYL- GAMMA. - OXO -			
3. 15406	1,2 - BENZENEDICARBOXYLICACID	"	91	
4.	DIISOOCTYLESTER			
5. 1112	ACETONITRILE, CULORO	BN	92	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

2/15/00

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260

LAB SAMPLE ID. NO. 70-0009 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>180C</u>	10. Zinc	<u>104</u>
2. Chromium	<u>NDB</u>	11. Boron	<u>ND</u>
3. Barium	<u>[97]</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>ND</u>
5. Cobalt	<u>ND</u>		
6. Copper	<u>ND</u>		
7. Iron	<u>2250C 2400</u>		
8. Nickel	<u>146</u>		
9. Manganese	<u>729</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>[7.6]</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>ND</u>	6. Tin	<u>[15]</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>NDB</u>
4. Thallium	<u>ND</u>	8. Lead	<u>6.5</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - not applicable

White 10-1-82

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1254

MCGINN

LABORATORY NAME Systems. Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC29

SAMPLE ID: A1254

LAB ID: A1254A

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/15/82

STD. ID: 09/14/82

CONC. FACTOR: 625

SAMPLE ID: A1254

LAB ID: A1254BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/27/82

STD. ID: 09/14/82

CONC. FACTOR: 566

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
24A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
57A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
60A	4,6-DINITRO-O-CRESOL	N/D
4A	PENTACHLOROPHENOL	N/D
55A	PHENOL	N/D

SAMPLE ID: A1254

LAB ID: A1254BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/27/82

STD. ID: 09/14/82

CONC. FACTOR: 666

	BASE/NEUTRAL COMPOUNDS	UG/L
1B	ACENAPHTHENE	N/D
5B	BENZIDINE	N/D
8	1,2,4-TRICHLOROBENZENE	N/D
9B	HEXACHLOROBENZENE	N/D
12B	HEXACHLOROETHANE	N/D
3E	BIS(2-CHLOROETHYL) ETHER	N/D
20B	2-CHLORONAPHTHALENE	N/D
25B	1,2-DICHLOROBENZENE	N/D
5B	1,3-DICHLOROBENZENE	N/D
27B	1,4-DICHLOROBENZENE	N/D
28B	3,3'-DICHLOROBENZIDINE	N/D
5B	2,4-DINITROTOLUENE	N/D
5B	2,6-DINITROTOLUENE	N/D
8	1,2-DIPHENYLHYDRAZINE	N/D
9B	FLUORANTHENE	N/D
1B	4-CHLOROPHENYL PHENYL ETHER	N/D

	BASE/NEUTRAL COMPOUNDS	UG/L
41B	4-BROMOPHENYL PHENYL ETHER	N/D
42B	BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B	BIS(2-CHLOROETHOXY) METHANE	N/D
52B	HEXACHLOROBUTADIENE	N/D
53B	HEXACHLOROCYCLOPENTADIENE	N/D
54B	ISOPHORONE	N/D
55B	NAPHTHALENE	N/D
56B	NITROBENZENE	N/D
61B	N-NITROSODIMETHYLAMINE	N/D
62B	N-NITROSODIPHENYLAMINE	N/D
63B	N-NITROSO-N-PROPYLAMINE	N/D
66B	BIS(2-ETHYLHEXYL)PHTHALATE	N/D
67B	BUTYL BENZYL PHTHALATE	N/D
68B	DI-N-BUTYL PHTHALATE	N/D
69B	DI-N-OCTYL PHTHALATE	N/D
70B	DIETHYL PHTHALATE	N/D
71B	DIMETHYL PHTHALATE	N/D
72B	BENZO(A)ANTHRACENE	N/D
73B	BENZO(A)PYRENE	N/D
74B	3,4-BENZOFLUORANTHENE	N/D
75B	BENZO(K)FLUORANTHENE	N/D
76B	CHRYSENE	N/D
77B	ACENAPHTHYLENE	N/D
78B	ANTHRACENE	N/D
79B	BENZO(GHI)PERYLENE	N/D
80B	FLUORENE	N/D
81B	PHENANTHRENE	N/D
82B	DIBENZO(A,H)ANTHRACENE	N/D
83B	INDENO(1,2,3-CD)PYRENE	N/D
84B	PYRENE	N/D
129B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A 1254

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1254

LAB ID: A1254V

DATE EXTRACTED: _____

DATE INJECTED: 09/10/82

ID. ID: 09/01/82

QNC. FACTOR: 1.0

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

VOLATILE COMPOUNDS

UG/L

21	ACROLEIN	N/D
21	ACRYLONITRILE	N/D
21	BENZENE	N/D
21	CARBON TETRACHLORIDE	N/D
21	CHLOROBENZENE	N/D
22V	1,2-DICHLOROETHANE	N/D
22V	1,1,1-TRICHLOROETHANE	N/D
23V	1,1-DICHLOROETHANE	N/D
24V	1,1,2-TRICHLOROETHANE	N/D
25V	1,1,2,2-TETRACHLOROETHANE	N/D
26V	CHLOROETHANE	N/D
27V	BIS(CHLOROMETHYL)ETHER	N/D
27V	2-CHLOROETHYL VINYL ETHER	N/D
28V	CHLOROFORM	N/D
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	N/D
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	*
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
52V	TETRACHLOROETHYLENE	N/D
53V	TOLUENE	*
54V	TRICHLOROETHYLENE	N/D
55V	VINYL CHLORIDE	N/D

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS SCIENCE AND SOFTWARE

QC Report No:

Sample Number

A1254

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	85.3	100	85
D ₈ -Toluene	VOA	92.4	100	92
2-Fluorophenol	Acid	45.0	100	45
D ₆ -Phenol	Acid	52.8	100	53
2-Fluorobiphenyl	BN	72.4	100	72
D ₆ -Nitrobenzene	BN	48.0	100	48
D ₆ -Naphthalene	BN	88.2	100	88

B. TENTATIVELY IDENTIFIED COMPOUNDS

IES #	COMPOUND NAME	Fraction	% Maximum Score Attained	
			Mass Matching Routines	Fit (specify)
1.	645 1,1'-BICYCLOHEXYL	BN	89	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

2/15/00

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8867

MCGINIS

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260

LAB SAMPLE ID. NO. 70-0016 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Aluminum	4,120 C	10. Zinc	524
2. Chromium	15 C	11. Boron	ND
3. Barium	130	12. Vanadium	ND
4. Beryllium	ND	13. Silver	ND
5. Cobalt	ND		
6. Copper	185		
7. Iron	6,400 C 6,600		
8. Nickel	48		
9. Manganese	460		

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Arsenic	11.7	5. Mercury	0.3
2. Antimony	ND	6. Tin	13
3. Selenium	ND	7. Cadmium	ND B
4. Thallium	ND	8. Lead	194

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	NA
2. Cyanide	NA
3. Sulfide	NA

COMMENTS: NA - not applicable

W. White 10-1-8-

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1255

BLANK

LABORATORY NAME Systems, Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC 29

SAMPLE ID: A1255

LAB ID: A1255A

DATE EXTRACTED: 09/02/82

DATE INJECTED: 09/15/82

S.D. ID: 09/14/82

CONC. FACTOR: 606

SAMPLE ID: A1255

LAB ID: A1255BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/24/82

STD. ID: 09/14/82

CONC. FACTOR: 751

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
22A	P-CHLORO-M-CRESOL	N/D
23A	2-CHLOROPHENOL	N/D
31A	2,4-DICHLOROPHENOL	N/D
34A	2,4-DIMETHYLPHENOL	N/D
5A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	N/D
59A	2,4-DINITROPHENOL	N/D
6A	4,6-DINITRO-O-CRESOL	N/D
6A	PENTACHLOROPHENOL	N/D
65A	PHENOL	N/D

SAMPLE ID: A1255

LAB ID: A1255BN

DATE EXTRACTED: 09/01/82

DATE INJECTED: 09/24/82

S.D. ID: 09/14/82

CONC. FACTOR: 751

BASE/NEUTRAL COMPOUNDS	UG/L
1B ACENAPHTHENE	N/D
5 BENZIDINE	N/D
3 1,2,4-TRICHLOROBENZENE	N/D
9B HEXACHLOROBENZENE	N/D
13B HEXACHLOROETHANE	N/D
13B BIS(2-CHLOROETHYL) ETHER	N/D
22B 2-CHLORONAPHTHALENE	N/D
23B 1,2-DICHLOROBENZENE	N/D
16B 1,3-DICHLOROBENZENE	N/D
17B 1,4-DICHLOROBENZENE	N/D
18B 3,3'-DICHLOROBENZIDINE	N/D
19B 2,4-DINITROTOLUENE	N/D
20B 2,6-DINITROTOLUENE	N/D
21B 1,2-DIPHENYLHYDRAZINE	N/D
22B FLUORANTHENE	N/D
23B 4-CHLOROPHENYL PHENYL ETHER	N/D

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTADIENE	N/D
54B ISOPHOPONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	N/D
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	N/D
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GHI)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
83B INDENO(1,2,3-CD)PYRENE	N/D
84B PYRENE	N/D
129B 2,3,7,8-TETRACHLLOPODI BENZO-P-DIOXIN	N/D

Sample Number

A1255

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1255

LAB ID: A1255V

DATE EXTRACTED:

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

PESTICIDES

ug/l

89P	aldrin	ND
90P	dieldrin	ND
91P	chlordan	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	NC
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	ND
113P	toxaphene	ND

DIOXINS

1298 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

VOLATILE COMPOUNDS

UG/L

2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	N/D
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	N/D
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
13V	1,1-DICHLOROETHANE	N/D
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	N/D
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	*
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	N/D
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
38V	ETHYLBENZENE	N/D
44V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
46V	METHYL BROMIDE	N/D
47V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	*
50V	DICHLORODIFLUOROMETHANE	N/D
51V	CHLORODIBROMOMETHANE	N/D
85V	TETRACHLOROETHYLENE	N/D
86V	TOLUENE	*
87V	TRICHLOROETHYLENE	N/D
88V	VINYL CHLORIDE	N/D

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name:

SYSTEMS AND SOFTWARE

QC Report No:

Sample Number

A1255

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
D ₆ -Benzene	VOA	85.2	100	85
D ₈ -Toluene	VOA	97.0	100	97
2-Fluorophenol	Acid	55.5	100	56
D ₅ -Phenol	Acid	30.0	100	30
2-Fluorobiphenyl	BN	61.0	100	61
D ₅ -Nitrobenzene	BN	46.9	100	47
D ₈ -Naphthalene	BN	34.1	100	34

B. TENTATIVELY IDENTIFIED COMPOUNDS

IES #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine	Fit (Specify)
1. 73	*24A-(D ₄)2-CHLOROPHENOL	Acid	97	
2. 10734	1,3-CYCLOPENTANEDICAR, 2-BROMO-	"	79	
3. 11533	CYCLOPENTANECARBOXYLIC ACID	"	92	
4.	ETHYLENE ESTER			
5. 2779	CYCLOHEXANE, CHLORO-	BN	85	
6. 408	1-PROPENE, 2,3-DICHLORO-	"	91	
7. 9730	1,2-BENZISOTHAZOLE, 3-CHLORO-	"	84	
8. 16819	ETHER, HEXYLPHENYL	"	65	
9. 3903	ARIZIDINE, 1-PHENYL-	"	74	
10. 10950	4H-1-BENZOPYRAN-4-ONE	"	48	
11.	2-(2,6-DIMETHOXYPHENYL)-			
12.	5,6-DIMETHOXY-			
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

2/15/00

INORGANICS ANALYSIS DATA SHEET

E+E BLANK

LAB NAME JTC Environmental Consultants CASE NO. 1260
LAB SAMPLE ID. NO. 70-0017 QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>[ND B]</u>
2. Chromium	<u>ND B</u>
3. Barium	<u>[34]</u>
4. Beryllium	<u>ND</u>
5. Cobalt	<u>ND</u>
6. Copper	<u>ND</u>
7. Iron	<u>ND B</u>
8. Nickel	<u>ND</u>
9. Manganese	<u>ND B</u>

	<u>ug/l</u> or mg/kg (circle one)
10. Zinc	<u>34</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>ND</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>ND</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l</u> or mg/kg (circle one)
5. Mercury	<u>ND</u>
6. Tin	<u>ND</u>
7. Cadmium	<u>ND</u>
8. Lead	<u>ND</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - not applicable

J. White 10-1-82

ORGANICS ANALYSIS DATA SHEET

Sample Number

A1252S

S³ SPIKE

LABORATORY NAME Systems. Science and Software

LAB SAMPLE ID NO. _____

QC REPORT NO. QC 29

SAMPLE ID: A1252S
LAB ID: A1252SA
DATE EXTRACTED: 09/02/82
DATE INJECTED: 09/14/82
STD. ID: 09/14/82
CONC. FACTOR: 555

ACID	COMPOUNDS	UG/L
21A	2,4,6-TRICHLOROPHENOL	N/D
2A	P-CHLORO-M-CRESOL	*
1A	2-CHLOROPHENOL	26.5
31A	2,4-DICHLOROPHENOL	N/D
24A	2,4-DIMETHYLPHENOL	N/D
1A	2-NITROPHENOL	N/D
58A	4-NITROPHENOL	99.0
59A	2,4-DINITROPHENOL	N/D
A	4,6-DINITRO-O-CRESOL	N/D
61A	PENTACHLOROPHENOL	45.5
65A	PHENOL	21.2

SAMPLE ID: A1252S
LAB ID: A1252SBN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/20/82
STD. ID: 09/14/82
CONC. FACTOR: 671

BASE/NEUTRAL COMPOUNDS	UG/L
1B ACENAPHTHENE	86.3
5 BENZIDINE	N/D
8C 1,2,4-TRICHLOROBENZENE	64.1
9B HEXACHLOROBENZENE	N/D
17B HEXACHLOROETHANE	N/D
1 B BIS(2-CHLOROETHYL) ETHER	N/D
24B 2-CHLORONAPHTHALENE	N/D
2 E 1,2-DICHLOROBENZENE	N/D
26B 1,3-DICHLOROBENZENE	N/D
27B 1,4-DICHLOROBENZENE	46.0
2 B 3,3'-DICHLOROBENZIDINE	N/D
30B 2,4-DINITROTOLUENE	120
3 2,6-DINITROTOLUENE	N/D
26 1,2-DIPHENYLHYDRAZINE	N/D
3 B FLUORANTHENE	N/D
40B 4-CHLOROPHENYL PHENYL ETHER	N/D

SAMPLE ID: A1252S
LAB ID: A1252SBN
DATE EXTRACTED: 09/01/82
DATE INJECTED: 09/20/82
STD. ID: 09/14/82
CONC. FACTOR: 671

BASE/NEUTRAL COMPOUNDS	UG/L
41B 4-BROMOPHENYL PHENYL ETHER	N/D
42B BIS(2-CHLOROISOPROPYL) ETHER	N/D
43B BIS(2-CHLOROETHOXY) METHANE	N/D
52B HEXACHLOROBUTADIENE	N/D
53B HEXACHLOROCYCLOPENTADIENE	N/D
54B ISOPHORONE	N/D
55B NAPHTHALENE	N/D
56B NITROBENZENE	N/D
61B N-NITROSODIMETHYLAMINE	N/D
62B N-NITROSODIPHENYLAMINE	N/D
63B N-NITROSO-N-PROPYLAMINE	N/D
66B BIS(2-ETHYLHEXYL)PHTHALATE	*
67B BUTYL BENZYL PHTHALATE	N/D
68B DI-N-BUTYL PHTHALATE	30.2
69B DI-N-OCTYL PHTHALATE	N/D
70B DIETHYL PHTHALATE	N/D
71B DIMETHYL PHTHALATE	N/D
72B BENZO(A)ANTHRACENE	N/D
73B BENZO(A)PYRENE	N/D
74B 3,4-BENZOFLUORANTHENE	N/D
75B BENZO(K)FLUORANTHENE	N/D
76B CHRYSENE	N/D
77B ACENAPHTHYLENE	N/D
78B ANTHRACENE	N/D
79B BENZO(GHI)PERYLENE	N/D
80B FLUORENE	N/D
81B PHENANTHRENE	N/D
82B DIBENZO(A,H)ANTHRACENE	N/D
93B INDENO(1,2,3-CD)PYRENE	N/D
84P PYRENE	76.7
129B 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN	N/D

Sample Number

A1252S

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Systems, Science and Software

LAB. SAMPLE ID NO. _____

QC REPORT NO. _____

SAMPLE ID: A1252S

LAB ID: A1252SV

DATE EXTRACTED: _____

DATE INJECTED: 09/10/82

STD. ID: 09/01/82

CONC. FACTOR: 1.0

	VOLATILE COMPOUNDS	UG/L
2V	ACROLEIN	N/D
3V	ACRYLONITRILE	N/D
4V	BENZENE	31.4
6V	CARBON TETRACHLORIDE	N/D
7V	CHLOROBENZENE	34.1
10V	1,2-DICHLOROETHANE	N/D
11V	1,1,1-TRICHLOROETHANE	N/D
3V	1,1-DICHLOROETHANE	*
14V	1,1,2-TRICHLOROETHANE	N/D
15V	1,1,2,2-TETRACHLOROETHANE	N/D
16V	CHLOROETHANE	*
17V	BIS(CHLOROMETHYL)ETHER	N/D
19V	2-CHLOROETHYL VINYL ETHER	N/D
23V	CHLOROFORM	*
29V	1,1-DICHLOROETHYLENE	N/D
30V	1,2-TRANS-DICHLOROETHYLENE	*
32V	1,2-DICHLOROPROPANE	N/D
33V	TRANS-1,3-DICHLOROPROPYLENE	N/D
34V	CIS-1,3-DICHLOROPROPYLENE	N/D
8V	ETHYLBENZENE	N/D
4V	METHYLENE CHLORIDE	*
45V	METHYL CHLORIDE	N/D
6V	METHYL BROMIDE	N/D
7V	BROMOFORM	N/D
48V	DICHLOROBROMOMETHANE	N/D
49V	TRICHLOROFLUOROMETHANE	N/D
5V	DICHLORODIFLUOROMETHANE	N/D
1V	CHLORODIBROMOMETHANE	N/D
5V	TETRACHLOROETHYLENE	N/D
6V	TOLUENE	36.7
37V	TRICHLOROETHYLENE	N/D
38V	VINYL CHLORIDE	N/D

PESTICIDES

ug/l

89P	aldrin	1.6
90P	dieldrin	3.8
91P	chlordan	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	α -endosulfan	ND
96P	β -endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	3.3
101P	heptachlor epoxide	ND
102P	α -BHC	ND
103P	β -BHC	ND
104P	γ -BHC	ND
105P	δ -BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1250	ND
112P	PCB-1016	UP
113P	toxaphene	ND

DIOXINS

129B 2,3,7,8-tetrachlorodibenzo-p-dioxin ND

* Less than 10 ug/l
(pesticides less than 5 ug/l)

ND = Not detected

ORGANICS ANALYSIS DATA SHEET - Page 3

Lab Name: SYSTEMS SCIENCE AND SOFTWARE

QC Report No: _____

Sample Number
A1252S

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only)	
			Spike Added (ug/l)	% Recovery
O ₂ -Benzene	VOA	81.5	100	82
O ₈ -Toluene	VOA	93.4	100	93
2-Fluorophenol	Acid	11.3	100	11
O ₅ -Phenol	Acid	18.5	100	19
2-Fluorobiphenyl	BN	57.8	100	58
O ₂ -Nitrobenzene	BN	53.2	100	53
O ₈ -Naphthalene	BN	65.1	100	65

B. TENTATIVELY IDENTIFIED COMPOUNDS

IES #	COMPOUND NAME	Fraction	% Maximum Score Attained	
			Mass Matching Routine	FIT (specify)
1. 6018	HEXANOIC ACID, 4-METHYL-, METHYL ACID		97	
2.	ESTER			
3. 13614	4-HEPTANOL, 2-METHYL-	"	84	
4. 8372	ACETALDEHYDE, DI-SEC-BUTYLACETAL	"	93	
5. 7883	CYCLOPENTANE, 1,1,3-TRIMETHYL-	"	87	
6. 524	1,3-ISOBENZOFIRANDIONE	"	91	
7. 22769	2(3H)-FIRANDONE, 5-(2,5-DIMETHYLPHENYL)-	"	87	
8.				
9. 336	BICYCLO[2.2.1]HEPTAN-2-ONE	BN	89	
10.	1,7,7-TRIMETHYL-			
11. 645	1,1'-BICYCLOHEXYL	"	92	
12. 5066	CYCLOHEPTATRIENYLUM, IONIDE	"	94	
13. 19242	CYCLOPROPANE, 1-BUTYL-1-METHYL-2-PROPYL-	"	74	
14.				
15.				
16.				
17.				
18.				
19.				
20.				

2/15/00

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1260

LAB SAMPLE ID. NO. QC REPORT NO. 2

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>[76]</u>	10. Zinc	<u>ND</u>
2. Chromium	<u>15</u>	11. Boron	<u>ND</u>
3. Barium	<u>ND</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>ND</u>
5. Cobalt	<u>ND</u>		
6. Copper	<u>ND</u>		
7. Iron	<u>ND 170</u>		
8. Nickel	<u>ND</u>		
9. Manganese	<u>ND [4.0]</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>NA</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>ND</u>	6. Tin	<u>ND</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>2.2</u>
4. Thallium	<u>ND</u>	8. Lead	<u>ND</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - not applicable

Slidell 10-1-82

APPENDIX E

Laboratory Data Sheets
Priority Pollutant Analyses
of
On-Site Borehole Samples

NOT 1st QA note

(~~1st~~ pg)

Sample Number

A1261

LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem

Lab Sample ID No. 20300

Case Number 1318

QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1261

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20300

QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U <i>more present</i>
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	18 5U <i>14+</i>
(30V)	156-60-5	1,2-trans-dichloroethene	10,000 5U <i>20</i>
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis,1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U <i>20</i>
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	15 5U <i>20</i>
(87V)	79-01-6	trichloroethene	100 5U <i>20</i>
(88V)	75-01-4	vinyl chloride	150 5U <i>20</i>

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A12161

LOW LEVEL LIQUID

Laboratory Name Head CompuChemCase Number 1318Lab Sample ID No. 20300QC Report No. 122-19, 124-18, 126-19Multiply Detection limits by 1 ☐ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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ORGANICS ANALYSIS DATA SHEET - Page 4

LAB NAME: MEAD COMPU/CHEM

LAB SAMPLE I.D. # 20300

EPA
SAMPLE #

C# 1348-A1261

17E

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	% PURITY	ESTIMATE CONC. (ug/g)	EV
1	211	109-99-9	<i>tetrahydro furan</i>	VOA	96.7	71	
2				VOA			
3				VOA			
4				VOA			
5				VOA			
6				VOA			
7				VOA			
8				VOA			
9				VOA			
10				VOA			

MEAD COMPUCHEN ORGANICS ANALYSIS DATA SHEET

PAGE 4

LAB SAMPLE I.D. # 020300

SAMPLE # 1318-B1261

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: GH020300A08

17E

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	PURITY %	ESTIMATED CONC. (UG/G) OR (UG/L)
1	394	79-01-6	ETHENE, TRICHLORO-	93.5	1100. (EU)
2	614	123-42-2	2-PENTANONE, 4-HYDROXY-4-METHYL-	35.9	120.5C
3	697	108-94-1	CYCLOHEXANONE	84.5	7.0

2.000

LAB NAME: HEAD COMPU/CHEM

LAB SAMPLE I.D. # 20300

EPA
SAMPLE #

C#1318 "A1261"

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/g)	EV
4	1622		Search Results < 8000 Ret	FSCC		16	
5	1779		"	FSCC		62	
6	1923		"	FSCC		25	
7	1972		"	FSCC		11	
8	2012		"	FSCC		15	
9	2083		"	FSCC		19	
10	2160		"	FSCC		23	
11	2259		"	FSCC		32	
12	2372		"	FSCC		120	
13	2509		"	FSCC		73	
14	2567		"	FSCC		19	
15	2675		"	FSCC		76	
16	2881		"	FSCC		23	
17	3107		"	FSCC		8.7	
18	3136		"	FSCC		13	
19	3742		"	FSCC		40	
20	3184		"	FSCC		10	
				FSCC			
				FSCC			
				FSCC			

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8869

(17E)

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cons.

CASE NO. 1318

LAB SAMPLE ID. NO. 70-0045

QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Aluminum	<u>7100</u>
2. Chromium	<u>45</u>
3. Barium	<u>710</u>
4. Beryllium	<u>[2.1]</u>
5. Cobalt	<u>[6.5]</u>
6. Copper	<u>1,350</u>
7. Iron	<u>25,900 C</u>
8. Nickel	<u>410</u>
9. Manganese	<u>960</u>

	<u>ug/l or mg/kg</u> (circle one)
10. Zinc	<u>3060 C</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>[6.9]</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Arsenic	<u>48</u> ~~ND~~ ~~NA~~
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l or mg/kg</u> (circle one)
5. Mercury	<u>1.4 C</u>
6. Tin	<u>29</u>
7. Cadmium	<u>8.6</u>
8. Lead	<u>820</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - NOT Applicable

D/White 10-26-80

Sample Number
A1262
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem
Lab Sample ID No. 20301

Case Number 1318
QC Report No. 122-19, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11--91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1262

LOW LEVEL LIQUID

S.E.

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20301

QC Report No. 122-18, 124-18, 126-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	15 ~~5U~~ KH
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	LT ~~5U~~ KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	12 ~~5U~~ KH
(87V)	79-01-6	trichloroethene	180 ~~5U~~ KH
(88V)	75-01-4	vinyl chloride	LT ~~5U~~ KH

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbendisulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A12102

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No. 20301

QC Report No.

122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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LAB SAMPLE I.D. # 020301

SAMPLE # A4262

25

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: NB

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	PURITY 2 (%)	ESTIMATED CONC. (UG/G) OR (UG/L)
1	328	123-91-1	1,4-DIOXANE	91.5	59.
2	347	-	SEARCH RESULTS < 80% PURITY	---	10.
3	371	23010-02-8	1-BUTENE, 2-(CHLOROMETHYL)-	91.0	24.
4	436	544-25-2	1,3,5-CYCLOHEPTATRIENE	97.3	49.
5	544	507-45-9	BUTANE, 2,3-DICHLORO-2-METHYL-	82.3	22.
6	587	123-42-2	2-PENTANONE, 4-HYDROXY-4-METHYL-	96.5	170.95
7	949	104-76-7	1-HEXANOL, 2-ETHYL-	88.4	18.

2.860

LAB SAMPLE I.D. # 020301

SAMPLE # A1262

210

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: NB

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	² PURITY (%)	ESTIMATED CONC. (UG/G) OR (UG/L)
~~18~~	~~3049~~	~~- -~~	~~SEARCH RESULTS < 80% PURITY~~	~~---~~	~~23.~~
~~29~~	~~3118~~	~~- -~~	~~SEARCH RESULTS < 80% PURITY~~	~~---~~	~~5.1~~
~~4~~	~~3154~~	~~- -~~	~~SEARCH RESULTS < 80% PURITY~~	~~---~~	~~3.7~~
~~4~~	~~3483~~	~~- -~~	~~SEARCH RESULTS < 80% PURITY~~	~~---~~	~~4.3~~
~~5~~	~~3756~~	~~- -~~	~~SEARCH RESULTS < 80% PURITY~~	~~---~~	~~5.1~~
2.860					

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8870

(2E)

INORGANICS ANALYSIS DATA SHEET

LAB NAME ITT Environmental Cons.

CASE NO. 1318

LAB SAMPLE ID. NO. 70-0046

QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>14,000</u>
2. Chromium	<u>61</u>
3. Barium	<u>520</u>
4. Beryllium	<u>[9.1]</u>
5. Cobalt	<u>[42]</u>
6. Copper	<u>slw lot 1900</u>
7. Iron	<u>10,900C</u>
8. Nickel	<u>560</u>
9. Manganese	<u>3460</u>

	<u>ug/l</u> or mg/kg (circle one)
10. Zinc	<u>4180C</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>ND</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>69</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l</u> or mg/kg (circle one)
5. Mercury	<u>ND/B</u>
6. Tin	<u>37</u>
7. Cadmium	<u>14</u>
8. Lead	<u>530</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - NOT Applicable

W. P. 10-26-82

Sample Number
A1263
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem
Lab Sample ID No. 20302

Case Number 1318
QC Report No. 122-18, 124-18, 126-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodl-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1263

LOW LEVEL LIQUID

492

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20302

QC Report No. 127-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES D = 1000:1

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	40 ~~5U~~ KH
(13V)	75-34-3	1,1-dichloroethane	54 ~~5U~~ KH
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	LT ~~5U~~ KH
(29V)	75-35-4	1,1-dichloroethene	43 ~~5U~~ KH
(30V)	156-60-5	1,2-trans-dichloroethene	6500 ~~5U~~ KH(D)
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	310 ~~5U~~ KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	3U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	170 ~~5U~~ KH
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	23000 ~~5U~~ KH
(88V)	75-01-4	vinyl chloride	190 ~~5U~~ KH

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

detection limit
100% those
listed
OK

65000 D

exceedingly rare
run 2 times (once)
at full strength
- can't find
that run in this
package

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1263

LOW LEVEL LIQUID

4912

Laboratory Name Mead CompuChem
Lab Sample ID No. 20302Case Number 1318
QC Report No. 122-18, 124-18, 126-19Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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MEAD COMPUCHEM ORGANICS ANALYSIS DATA SHEET

LAB SAMPLE I.D. # 020302

PAGE 4

SAMPLE # 1318-01203

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: GH020302A08

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	PURITY %	ESTIMATED CONC. (UG/G) OR (UG/L)
1	394	79-01-6	ETHENE, TRICHLORO-	91.8	3200.
2	524	68-12-2	FORMAMIDE, N,N-DIMETHYL-	99.1	280.
3	616	123-42-2	2-PENTANONE, 4-HYDROXY-4-METHYL-	95.7	130.50
4	640	625-25-2	2-HEPTANOL, 2-METHYL-	86.9	25.
5	1492	1072-16-8	OCTANE, 2,7-DIMETHYL-	83.4	6.6
6	1628	-	SEARCH RESULTS < 80% PURITY	---	15.
7	1788	-	SEARCH RESULTS < 80% PURITY	---	130.
8	1932	-	SEARCH RESULTS < 80% PURITY	---	64.
	3.080				

MEAD COMPUCHEM ORGANICS ANALYSIS DATA SHEET

PAGE 4

LAB SAMPLE I.D. # 020302

SAMPLE # 1308-A1263

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: U0A5

1112

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	PURITY ² (%V)	ESTIMATED CONC. (UG/G) OR (UG/L)
1.	53	115-07-1	1-PROPENE	89.0	11.
	75		SEARCH RESULTS < 80% PURITY		100.
2.	145	- -	SEARCH RESULTS < 80% PURITY		11.
3.	201	354-23-4	ETHANE,1,2-DICHLORO-1,1,2-TRIFLUORO-	92.2	85.
4.	241	76-13-1	ETHANE,1,1,2-TRICHLORO-1,2,2-TRIFLUORO-	90.6	790.
	274	71-55-6	ETHANE,1,1,1-TRICHLORO-	90.7	53.
	448	127-18-4	ETHENE,TETRACHLORO-	97.3	07.
	471	98-06-4	08-TOLUENE	09.7	61.

1.000

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8871

49R

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Cons.

CASE NO. 1318

LAB SAMPLE ID. NO. 70-0047

QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Aluminum	<u>4200</u>
2. Chromium	<u>94</u>
3. Barium	<u>3200</u>
4. Beryllium	<u>[1.3]</u>
5. Cobalt	<u>[22]</u>
6. Copper	<u>4,000</u>
7. Iron	<u>47,700 C</u>
8. Nickel	<u>5,590</u>
9. Manganese	<u>20,700</u>

	<u>ug/l or mg/kg</u> (circle one)
10. Zinc	<u>2360 C</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>14. [7.27]</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Arsenic	<u>39</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l or mg/kg</u> (circle one)
5. Mercury	<u>ND B</u>
6. Tin	<u>40</u>
7. Cadmium	<u>6.8</u>
8. Lead	<u>260</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - Not Applicable

Handwritten signature

Sample Number
A1269
LOW LEVEL LIQUID
412 Dupl

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem
Lab Sample ID No. 20308

Case Number 1318
QC Report No. 122-18, 124-19, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11--91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	di benzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1269

LOW LEVEL LIQUID

TIR. Day 1

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No.

20308

QC Report No. 122-18, 124-18, 126-18

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	30000 5U ~~5U~~ DRC
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-35-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U ~~5U~~ KH
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5605U KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U 30000 DRC
(88V)	75-01-4	vinyl chloride	5U

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonyl sulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

Sample diluted
200:1
detection limit
should be 10000
values listed

46000

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1269

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No. 20308

QC Report No. 122-18, 124-18, 126-18

Multiply Detection limits by 1 ☐ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.
MA8877

49R
DuPL.

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318
LAB SAMPLE ID. NO. 70-0053 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)		<u>ug/l or mg/kg</u> (circle one)
1. Aluminum	<u>1,600</u>	10. Zinc	<u>1520C</u>
2. Chromium	<u>47</u>	11. Boron	<u>ND</u>
3. Barium	<u>3400</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>[8.8]</u>
5. Cobalt	<u>[11]</u>		
6. Copper	<u>700</u>		
7. Iron	<u>24,200C</u>		
8. Nickel	<u>780</u>		
9. Manganese	<u>7950</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)		<u>ug/l or mg/kg</u> (circle one)
1. Arsenic	<u>27</u>	5. Mercury	<u>ND B</u>
2. Antimony	<u>ND</u>	6. Tin	<u>24</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>3.7</u>
4. Thallium	<u>ND</u>	8. Lead	<u>89</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - Not Applicable

W. Stube 10-26-82

Sample Number
A1264
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Head CompuChem
Lab Sample ID No. 20303

Case Number 1318
QC Report No. 122-18, 124-18, 126-18

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1264

LOW LEVEL LIQUID

331

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20303

QC Report No. 122-18, 124-18, 126-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES D = 100:1

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	3000 D ^u
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis,1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	2400 5U D ^u
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	27000 5U D ^u
(88V)	75-01-4	vinyl chloride	5U

Detection limits
for VOA's are
100x those
listed as
"---U"
- A9706

39,000. D

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1264

LOW LEVEL LIQUID

2512

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20303

QC Report No. 122-18, 124-18, 126-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-35-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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LAB SAMPLE I.D. # 020303

SAMPLE # 1318-01264

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: VOA

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	PURITY PURITY	ESTIMATED CONC. (UG/G) OR (UG/L)
1	241	76-13-1	ETHANE,1,1,2-TRICHLORO-1,2,2-TRIFLUORO-	94.2	1300.
2	246	- -	SEARCH RESULTS < 80% PURITY	---	1500.

99.999

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1267

LOW LEVEL LIQUID

22E

Laboratory Name - Mead CompuChem

Case Number 1318

Lab Sample ID No. 20306

QC Report No. 122-15, 124-18, 126-9

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP#	CAS#		ug/l
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINS

ug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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LAB NAME: MEAD COMBUI/CHEM

LAB SAMPLE I.D. # 20306

EPA
SAMPLE #

C#1318 - A1267

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/g)
1	325	123-91-1	1,4 DIBROMIDE	FSCC	92	18
2	141	104-34-3	BENZENE 1,3 Dimethyl	FSCC	96	4.4
3	726	—	SEARCH Results 680% PURITY	FSCC		4.4
4	1888	—	"	FSCC		46
5	1450	1834-37-1	HEPTADECANE 2,6,10,14-TETRAMETHYL	FSCC	82	39
6	2212	—	SEARCH Results 2.6, 10, 14-TETRAMETHYL	FSCC		6.3
7	2856	—	"	FSCC		35
8	3016	—	"	FSCC		26
9	3037	—	"	FSCC		26
10	3128	—	"	FSCC		88
11	3242	—	"	FSCC		14
12	3264	—	"	FSCC		21
13	3462	—	"	FSCC		56
14	3445	—	"	FSCC		39
15	3699	—	"	FSCC		47
16	3963	—	"	FSCC		22
				FSCC		
				FSCC		
				FSCC		

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.
MA8875

22E

INORGANICS ANALYSIS DATA SHEET

LAB NAME JR Environmental Consultants CASE NO. 1318

LAB SAMPLE ID. NO. 70-0051 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>37,900</u>	10. Zinc	<u>25,600</u>
2. Chromium	<u>260</u>	11. Boron	<u>ND</u>
3. Barium	<u>2520</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>7.2</u> ~~[7.2] OK~~	13. Silver	<u>18.47</u>
5. Cobalt	<u>[37]</u>		
6. Copper	<u>1,500</u>		
7. Iron	<u>103,500 C</u>		
8. Nickel	<u>5,170</u>		
9. Manganese	<u>3990</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>200</u>	5. Mercury	<u>ND B</u>
2. Antimony	<u>ND</u>	6. Tin	<u>140</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>63</u>
4. Thallium	<u>ND</u>	8. Lead	<u>7400</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - NOT APPLICABLE

Shut 10-26-82

Sample Number

A1268

LOW LEVEL LIQUID

632

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem
Lab Sample ID No. 20307

Case Number 1318
QC Report No. 123-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11--91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A12608

LOW LEVEL LIQUID

Laboratory Name Meed CompuChem

Case Number 1318

Lab Sample ID No. 20307

QC Report No. 122-18, 124-18, 124-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	LT 5U KH
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	51 5U KH
(29V)	75-35-4	1,1-dichloroethene	9.8 5U KH
(30V)	156-60-5	1,2-trans-dichloroethene	100 5U KH Q
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	LT 5U KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	760 5U KH
(88V)	75-01-4	vinyl chloride	45 5U

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1268

LOW LEVEL LIQUID

E312

Laboratory Name Head CompuChemCase Number 1318Lab Sample ID No. 20307QC Report No. 122-18, 124-18, 126-19Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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LAB NAME: MEAD, COMPU/CHEM

LAB SAMPLE I.D. # 26367

EPA
SAMPLE #

C11318-A1268

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/g)
1	323	110-82-7	Cyclohexane	FSCC	82	2400
2	381	79-01-6	Trichloroethene	FSCC	94	160
3	396	123-91-1	1,1,1-Dioxane	FSCC	93	12
4				FSCC		
5				FSCC		
6				FSCC		
7				FSCC		
8				FSCC		
9				FSCC		
10				FSCC		
11				FSCC		
12				FSCC		
13				FSCC		
14				FSCC		
15				FSCC		
16				FSCC		
17				FSCC		
18				FSCC		
19				FSCC		
20				FSCC		

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8876

63R

INORGANICS ANALYSIS DATA SHEET

LAB NAME ITE Environmental Consultants CASE NO. 1318
LAB SAMPLE ID. NO. 70-0052 QC REPORT NO. 5

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>1,160</u>	10. Zinc	<u>800 C</u>
2. Chromium	<u>43</u>	11. Boron	<u>ND</u>
3. Barium	<u>660</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>10</u>
5. Cobalt	<u>[6.0]</u>		
6. Copper	<u>500</u>		
7. Iron	<u>2,600 C</u>		
8. Nickel	<u>180</u>		
9. Manganese	<u>1570</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>49</u>	5. Mercury	<u>ND B</u>
2. Antimony	<u>ND</u>	6. Tin	<u>[157]</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>3.1</u>
4. Thallium	<u>ND</u>	8. Lead	<u>49</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - not applicable

D. White 10-26-82

Sample Number

A1270

LOW LEVEL LIQUID

11E

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20309

QC Report No. 122-18, 124-18, 126-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-56-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11--91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodl-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A 1270

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 80309

QC Report No. 122-18, 124-18, 126-14

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U KH 29
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis,1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	10 5U KH
(88V)	75-01-4	vinyl chloride	22 5U KH

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1270

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No. 20309

QC Report No.

Multiply Detection Limits by 1 ☐ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(1298)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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HEAD COMPUCHEN ORGANICS ANALYSIS DATA SHEET

PAGE 4

L68 SAMPLE 1.0. # 026309

SAMPLE # 1305-81270

111

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS ANALYTICAL FRACTION: F50C

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	PURITY 2	ESTIMATED CONC. (UG/G) OR (UG/L)
1	356	-	SEARCH RESULTS < 80% PURITY	---	36.
2	409	-	SEARCH RESULTS < 80% PURITY	---	9.0
3	718	-	SEARCH RESULTS < 80% PURITY	---	8.2
4	1789	-	SEARCH RESULTS < 80% PURITY	---	3.4

1.000

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318
LAB SAMPLE ID. NO. 70-0054 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>16,500</u>	10. Zinc	<u>13,100 C</u>
2. Chromium	<u>88</u>	11. Boron	<u>100</u>
3. Barium	<u>2000</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>10</u>	13. Silver	<u>[3.6]</u>
5. Cobalt	<u>204</u>		
6. Copper	<u>5,650</u>		
7. Iron	<u>22,700 C</u>		
8. Nickel	<u>4,570</u>		
9. Manganese	<u>11,090</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>120</u>	5. Mercury	<u>ND B</u>
2. Antimony	<u>20</u>	6. Tin	<u>70</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>197</u>
4. Thallium	<u>ND</u>	8. Lead	<u>1020</u>

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - Not Applicable

Shub 10-26-

Sample Number
A1271
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Head CompuChem
Sample ID No. 20310

Case Number 1318
QC Report No. 122-18,124-18,121-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

F I -	CAS#		ug/l
(1A)	88-06-2	2,4,6-trichlorophenol	20U
(2A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(4A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(9A)	51-88-5	2,4-dinitrophenol	100U
(3A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(5A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

	65-85-0	benzoic acid	200U
	95-48-7	2-methylphenol	20U
	108-39-4	4-methylphenol	20U
	95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

	1B)	83-32-9	acenaphthene	20U
	(5B)	92-87-5	benzidine	80U
	(8B)	120-82-1	1,2,4-trichlorobenzene	20U
	9B)	118-74-1	hexachlorobenzene	20U
	(12B)	67-72-1	hexachloroethane	20U
	(18B)	111-44-4	bis(2-chloroethyl)ether	20U
	10B)	91-58-7	2-chloronaphthalene	20U
	(5B)	95-50-1	1,2-dichlorobenzene	20U
	(26B)	541-73-1	1,3-dichlorobenzene	20U
	(7B)	106-46-7	1,4-dichlorobenzene	20U
	(8B)	91-94-1	3,3'-dichlorobenzidine	40U
	(35B)	121-14-2	2,4-dinitrotoluene	40U
	(36B)	606-20-2	2,6-dinitrotoluene	40U
			1,2-diphenylhydrazine	
	(37B)	122-66-7	(as azobenzene)	40U
	(9B)	206-44-0	fluoranthene	20U
	(10B)	7005-72-3	4-chlorophenyl phenylether	20U
	(11B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

	62-53-3	aniline	20U
	100-51-6	benzyl alcohol	40U
	106-47-8	4-chloroaniline	100U
	132-64-9	dibenzofuran	20U
	91-57-6	2-methylnaphthalene	40U
	88-74-4	2-nitroaniline	200U
	99-09-2	3-nitroaniline	200U
	100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1271

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No.

20310

QC Report No.

122-18, 124-18, 126-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	1000
(3V)	107-13-1	acrylonitrile	1000
(4V)	71-43-2	benzene	50
(6V)	56-23-5	carbon tetrachloride	50
(7V)	108-90-7	chlorobenzene	50
(10V)	107-06-2	1,2-dichloroethane	50
(11V)	71-55-6	1,1,1-trichloroethane	50
(13V)	75-34-3	1,1-dichloroethane	50
(14V)	79-00-5	1,1,2-trichloroethane	50
(15V)	79-34-5	1,1,2,2-tetrachloroethane	50
(16V)	75-00-3	chloroethane	50
(19V)	110-75-8	2-chloroethylvinyl ether	50
(23V)	67-66-3	chloroform	50
(29V)	75-35-4	1,1-dichloroethene	50
(30V)	156-60-5	1,2-trans-dichloroethene	50
(32V)	78-87-5	1,2-dichloropropane	50
(33V)	10061-02-6	trans-1,3-dichloropropene	50
	10061-01-05	cis,1,3-dichloropropene	100
(38V)	100-41-4	ethylbenzene	50
(44V)	75-09-2	methylene chloride	LT 50 KH
(45V)	74-87-3	chloromethane	50
(46V)	74-83-9	bromomethane	50
(47V)	75-25-2	bromoform	50
(48V)	75-27-4	bromodichloromethane	50
(49V)	75-69-4	fluorotrichloromethane	50
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	50
(85V)	127-18-4	tetrachloroethene	50
(86V)	108-86-3	toluene	50
(87V)	79-01-6	trichloroethene	50
(88V)	75-01-4	vinyl chloride	50

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	LT 1000 KH
78-93-3	2-butanone	2000
75-15-0	carbonyldisulfide	100
519-78-6	2-hexanone	140 334 KH
108-10-1	4-methyl-2-pentanone	LT 100 KH
100-42-5	styrene	50
108-05-4	vinyl acetate	100
95-47-6	o-xylene	50

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1271

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number

Lab Sample ID No.

20310

QC Report No.

1318
172-18, 174-18, 174-19Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(125B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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LAB NAME: MEAD COMPLY/CHEM

LAB SAMPLE I.D. # 20310

EPA
SAMPLE #

C01378-01271

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/g)
1	354		Search Results <80% Purity	FSCC		10
2	548	507-45-9	2,3-Dichloro-2-methyl Butane	FSCC	87	2.0
3	646	108-38-3	1,3-Dimethyl Benzene	FSCC	99	4.9
4	677	34970-77-7	2-Methyl Cyclopentanol	FSCC	81	1.7
5	693	108-38-3	1,3-Dimethyl Benzene	FSCC	90	1.6
6	730		Search Results <80% Purity	FSCC		6.4
7	963		↓	FSCC		1.6
8	977		↓	FSCC		*
9				FSCC		
10				FSCC		
11				FSCC		
12				FSCC		
13				FSCC		
14				FSCC		
15				FSCC		
16				FSCC		
17				FSCC		
18				FSCC		
19				FSCC		
20				FSCC		

* NO AREA GIVEN

Sample No.

MA8879

E+E
BLANK

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318
LAB SAMPLE ID. NO. 70-0055 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	ND	10. Zinc	ND B
2. Chromium	33	11. Boron	ND
3. Barium	[85]	12. Vanadium	ND
4. Beryllium	ND	13. Silver	[5.7]
5. Cobalt	ND		
6. Copper	ND		
7. Iron	ND B		
8. Nickel	ND		
9. Manganese	ND		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	ND	5. Mercury	1.2 C
2. Antimony	ND	6. Tin	ND
3. Selenium	ND	7. Cadmium	ND
4. Thallium	NA	8. Lead	ND

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	NA
2. Cyanide	NA
3. Sulfide	NA

COMMENTS:

NA - NOT applicable

[Signature]
10-26-80

Sample Number
A1272
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem
Lab Sample ID No. 00329

Case Number 1318
QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
31A)	122-83-2	2,4-dichlorophenol	20U
34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
58A)	100-02-7	4-nitrophenol	200U
59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
8B)	120-82-1	1,2,4-trichlorobenzene	20U
9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
18B)	111-44-4	bis(2-chloroethyl)ether	20U
20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
37B)	122-66-7	(as azobenzene)	40U
39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1272

LOW LEVEL LIQUID

DATE

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 50329

QC Report No. 122-19, 124-19, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U ~~50~~ ^{150.}
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	LT ~~5U~~ ⁵⁰
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	7.2 ~~50~~ ^{65.}
(87V)	79-01-6	trichloroethene	6.5 ~~50~~ ^{65.}
(88V)	75-01-4	vinyl chloride	LT ~~5U~~ ⁵⁰

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1272

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20329

QC Report No. 122-19, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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MEAD COMPUCHEM ORGANICS ANALYSIS DATA SHEET

PAGE 4

LAB SAMPLE I.D. # 020329

SAMPLE # 1382-21272

DATE

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: FSCC

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	<i>28</i> PURITY (UG/G) OR (UG/L)	ESTIMATED CONC. (UG/G) OR (UG/L)
1	564	123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	95.3	37.
2	617	108-38-3	BENZENE,1,3-DIMETHYL-	95.9	7.9
3	701	- -	SEARCH RESULTS < 80% PURITY	---	6.3
4	1794	84-66-2	1,2-BENZENEDICARBOXYLICACID,DIETHYLESTER	89.6	2.1
5	2125	- -	SEARCH RESULTS < 80% PURITY	---	1.9
6	2342	- -	SEARCH RESULTS < 80% PURITY	---	3.6
7	2452	- -	SEARCH RESULTS < 80% PURITY	---	1.9
8	2547	- -	SEARCH RESULTS < 80% PURITY	---	3.0
9	2637	- -	SEARCH RESULTS < 80% PURITY	---	5.5
10	2724	- -	SEARCH RESULTS < 80% PURITY	---	11.
11	2778	- -	SEARCH RESULTS < 80% PURITY	---	6.3
12	2808	- -	SEARCH RESULTS < 80% PURITY	---	12.
13	2889	- -	SEARCH RESULTS < 80% PURITY	---	14.
14	2976	- -	SEARCH RESULTS < 80% PURITY	---	4.5
15	3007	- -	SEARCH RESULTS < 80% PURITY	---	26.
16	3063	- -	SEARCH RESULTS < 80% PURITY	---	11.
17	3174	- -	SEARCH RESULTS < 80% PURITY	---	5.0
18	3306	- -	SEARCH RESULTS < 80% PURITY	---	4.5

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Sample No.

MA8880

24E

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318

LAB SAMPLE ID. NO. 70-0056

QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Aluminum	<u>23,000</u>
2. Chromium	<u>220</u>
3. Barium	<u>3500</u>
4. Beryllium	<u>15</u>
5. Cobalt	<u>56</u>
6. Copper	<u>650</u>
7. Iron	<u>326,000 c</u>
8. Nickel	<u>19,700</u>
9. Manganese	<u>10,560</u>

	<u>ug/l or mg/kg</u> (circle one)
10. Zinc	<u>10,200 c</u>
11. Boron	<u>200</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>17</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Arsenic	<u>240</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l or mg/kg</u> (circle one)
5. Mercury	<u>1.6 c</u> ~~ND~~ ~~31~~
6. Tin	<u>114</u>
7. Cadmium	<u>72</u>
8. Lead	<u>2560</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - Not Applicable

[Signature]

10-26-P

Slagter & Murphy

U.S. ENVIRONMENTAL PROTECTION AGENCY-CLP Sample Management Office
P.O. Box 818, Alexandria, VA 22313 - 703/557-2490

Sample Number

A1273

LOW LEVEL LIQUID

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ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Head CompuChem
Lab Sample ID No. 20330

Case Number 1318
QC Report No. 122-18, 124-18, 126-18

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	di benzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1273

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20330

QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	LT 50 KH
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	58.5U KH
(30V)	156-60-5	1,2-trans-dichloroethene	5200. ← 3 5200.
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	ET 5U KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	9.8 5U KH
(87V)	79-01-6	trichloroethene	73. 5U KH
(88V)	75-01-4	vinyl chloride	1200 50 Q KH

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1273

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20330

QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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ORGANICS ANALYSIS DATA SHEET - Page 4

LAB NAME: MEAD CORP/CHEN

LAB SAMPLE I.D. # 20330

EPA
SAMPLE #

C41318 7/12/73

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/g)	LEV
1	438	108-88-3	Benzene-1,4-dichloro	FSCC	70	16	
2				FSCC			
3				FSCC			
4				FSCC			
5				FSCC			
6				FSCC			
7				FSCC			
8				FSCC			
9				FSCC			
10				FSCC			
11				FSCC			
12				FSCC			
13				FSCC			
14				FSCC			
15				FSCC			
16				FSCC			
17				FSCC			
18				FSCC			
19				FSCC			
20				FSCC			

ORGANICS ANALYSIS DATA SHEET - Page 4

LAB NAME: MEAD COMPU/CHEM

LAB SAMPLE I.D. # 20330

EPA
SAMPLE #

C#1518-A1213

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	% PURITY	ESTIMATE CONC. (ug/g)	EV
1	296		<i>peak with 180% purity</i>	VOA		9.8	EV
2				VOA			
3				VOA			
4				VOA			
5				VOA			
6				VOA			
7				VOA			
8				VOA			
9				VOA			
10				VOA			

INORGANICS ANALYSIS DATA SHEET

LAB NAME ITE Environmental Consultants CASE NO. 1318

LAB SAMPLE ID. NO. 70-0057

QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Aluminum	11,900	10. Zinc	1280 e
2. Chromium	92	11. Boron	ND
3. Barium	1200	12. Vanadium	ND
4. Beryllium	[3.7]	13. Silver	[47]
5. Cobalt	[12]		
6. Copper	2,650		
7. Iron	28,900C		
8. Nickel	430		
9. Manganese	1,290		

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Arsenic	55	5. Mercury	ND/B
2. Antimony	ND	6. Tin	28
3. Selenium	ND	7. Cadmium	134
4. Thallium	ND	8. Lead	820

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	NA
2. Cyanide	NA
3. Sulfide	NA

COMMENTS: NA - Not Applicable

[Signature] 10-26-01

Sample Number

A1274

LOW LEVEL LIQUID

4CR

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Head CompuChem
Lab Sample ID No. 20331

Case Number 1318
QC Report No. 122-18, 124-18, 126-19

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#	ug/l
(21A)	88-06-2	2,4,6-trichlorophenol 20U
(22A)	59-50-7	p-chloro-m-cresol 40U
(24A)	95-57-8	2-chlorophenol 20U
(31A)	122-83-2	2,4-dichlorophenol 20U
(34A)	105-67-9	2,4-dimethylphenol 20U
(57A)	88-75-5	2-nitrophenol 40U
(58A)	100-02-7	4-nitrophenol 200U
(59A)	51-88-5	2,4-dinitrophenol 100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol 40U
(64A)	87-36-5	pentachlorophenol 40U
(65A)	108-95-2	phenol 20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#	ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether 40U
(43B)	11--91-1	bis-(2-chloroethoxy)methane 40U
(52B)	87-68-3	hexachlorobutadiene 20U
(53B)	77-47-4	hexachlorocyclopentadiene 20U
(54B)	78-59-1	isophorone 20U
(55B)	91-20-3	naphthalene 20U
(56B)	98-95-3	nitrobenzene 20U
(62B)	86-30-6	N-nitrosodiphenylamine 20U
(63B)	621-64-7	N-nitrosodi-n-propylamine 40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate 20U
(67B)	85-68-7	butyl benzyl phthalate 20U
(68B)	84-74-2	di-n-butyl phthalate LT 20U KH
(69B)	117-84-0	di-n-octyl phthalate 20U
(70B)	84-66-2	diethyl phthalate 20U
(71B)	131-11-3	dimethyl phthalate 20U
(72B)	56-55-3	benzo(a)anthracene 40U
(73B)	50-33-8	benzo(a)pyrene 40U
(74B)	205-99-2	benzo(b)fluoranthene 40U
(75B)	207-08-9	benzo(k)fluoranthene 40U
(76B)	318-01-9	chrysene 20U
(77B)	208-96-8	acenaphthylene 20U
(78B)	120-12-7	anthracene 20U
(79B)	181-24-2	benzo(ghi)perylene 40U
(80B)	86-73-7	fluorene 20U
(81B)	85-01-8	phenanthrene 20U
(82B)	53-70-3	dibenzo(a,h)anthracene 40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene 40U
(84B)	129-00-0	pyrene 20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1274

LOW LEVEL LIQUID

70K

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20331

QC Report No. 122-19, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U KH
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis,1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	4-3.5 5U KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	13 5U KH
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U KH
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	11.0 100U KH
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1274

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Lab Sample ID No. 20331

Case Number

1318

QC Report No.

122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

PESTICIDES

PP#	CAS#		ug/l
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	76-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINS

ug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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LAB NAME: MEAD COMBUI/CHEN

LAB SAMPLE I.D. # 20331

EPA
SAMPLE #

C0318 - 11214

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/L)
1	322	110-82-7	Cyclohexane	FSCC	83	2800
2	483	544-25-2	1,3,5-Cycloheptatriene	FSCC	94	46
3	1454	1453-06-1	2,5-Dimethyl Benzenebutanoic acid	FSCC	85	14
4	374	123-91-1	1,4-Dioxane	FSCC	92	22
5				FSCC		
6				FSCC		
7				FSCC		
8				FSCC		
9				FSCC		
10				FSCC		
11				FSCC		
12				FSCC		
13				FSCC		
14				FSCC		
15				FSCC		
16				FSCC		
17				FSCC		
18				FSCC		
19				FSCC		
20				FSCC		

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

1418882

40R

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318
LAB SAMPLE ID. NO. FD-0058 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Aluminum	<u>16,200</u>
2. Chromium	<u>31</u>
3. Barium	<u>1300</u>
4. Beryllium	<u>7.6</u>
5. Cobalt	<u>[17]</u>
6. Copper	<u>200</u>
7. Iron	<u>7,800 C</u>
8. Nickel	<u>130</u>
9. Manganese	<u>1,910</u>

	<u>ug/l or mg/kg</u> (circle one)
10. Zinc	<u>1470 C</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>88.67</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Arsenic	<u>58</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l or mg/kg</u> (circle one)
5. Mercury	<u>ND B</u>
6. Tin	<u>30</u>
7. Cadmium	<u>53</u>
8. Lead	<u>65</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l or mg/kg</u> (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - Not Applicable

[Signature]
10-26-82

Sample Number
A1275
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Head CompuChem
Sample ID No. 20332

Case Number 1318
QC Report No. 122-R, 124-R, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ or ☐
(Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(41B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(2B)	67-72-1	hexachloroethane	20U
(8B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(5B)	95-50-1	1,2-dichlorobenzene	20U
(6B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(5B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(7B)	122-66-7	(as azobenzene)	40U
(9B)	206-44-0	fluoranthene	20U
(8B)	7005-72-3	4-chlorophenyl phenylether	20U
(1B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1275

LOW LEVEL LIQUID

45E

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No.

20332

QC Report No.

122-18, 124-19, 124-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis,1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	LT 5U KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	5U
(88V)	75-01-4	vinyl chloride	5U

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1275

LOW LEVEL LIQUID

43E

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No.

20332

QC Report No.

122-18, 124-18, 126-A

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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MEAD COMPUCHEM ORGANICS ANALYSIS DATA SHEET

LAB SAMPLE I.D. # 020332

SAMPLE # J218-A1275

131

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS
ANALYTICAL FRACTION: F5CC

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	PURITY %	ESTIMATED CONC. (UG/G) OR (UG/L) (EU)
1	526	123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	92.7	13.
2	1680	-	SEARCH RESULTS < 80% PURITY	---	12.
2.000					

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318
AB SAMPLE ID. NO. 70-0059 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>23,600</u>
2. Chromium	<u>89</u>
3. Barium	<u>3800</u>
4. Beryllium	<u>10</u>
5. Cobalt	<u>[16]</u>
6. Copper	<u>350</u>
7. Iron	<u>51,800</u>
8. Nickel	<u>2,050</u>
9. Manganese	<u>3,910</u>

	<u>ug/l</u> or mg/kg (circle one)
10. Zinc	<u>3680</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>[6.5]</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>210</u>
2. Antimony	<u>ND</u>
3. Selenium	<u>ND</u>
4. Thallium	<u>ND</u>

	<u>ug/l</u> or mg/kg (circle one)
5. Mercury	<u>ND</u>
6. Tin	<u>85</u>
7. Cadmium	<u>22</u>
8. Lead	<u>400</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS: NA - Not Applicable

[Signature]

Sample No.
Dupl.
MA8876

63R
Dupl.

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318

LAB SAMPLE ID. NO. _____ QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Aluminum	<u>1,200</u>	10. Zinc	<u>830 C</u>
2. Chromium	<u>40</u>	11. Boron	<u>ND</u>
3. Barium	<u>570</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>ND</u>	13. Silver	<u>[9.5]</u>
5. Cobalt	<u>[6.6]</u>		
6. Copper	<u>530</u>		
7. Iron	<u>2,300 C</u>		
8. Nickel	<u>170</u>		
9. Manganese	<u>1,510</u> <u>4,530</u> <u>ND</u>		

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Arsenic	<u>48</u>	5. Mercury	<u>ND B</u>
2. Antimony	<u>ND</u>	6. Tin	<u>[197]</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>3.2</u>
4. Thallium	<u>ND</u>	8. Lead	<u>67</u>

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - Not Applicable

[Signature]

INORGANICS ANALYSIS DATA SHEET

LAB NAME J.E. Environmental Consultants CASE NO. 1318

AB SAMPLE ID. NO. QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
Aluminum	<u>ND</u>
2. Chromium	<u>ND</u>
Barium	<u>ND</u>
4. Beryllium	<u>ND</u>
Cobalt	<u>ND</u>
6. Copper	<u>ND</u>
Iron	<u>50</u>
8. Nickel	<u>ND</u>
Manganese	<u>ND</u>

	<u>ug/l</u> or mg/kg (circle one)
10. Zinc	<u>20</u>
11. Boron	<u>ND</u>
12. Vanadium	<u>ND</u>
13. Silver	<u>ND</u>

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
Arsenic	<u>ND</u>
2. Antimony	<u>ND</u>
Selenium	<u>ND</u>
Thallium	<u>ND</u>

	<u>ug/l</u> or mg/kg (circle one)
5. Mercury	<u>1.1</u>
6. Tin	<u>ND</u>
7. Cadmium	<u>ND</u>
8. Lead	<u>ND</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - NOT APPLICABLE

10-26-82

LAB NAME: MEAD, COMPLY/CI/CH

LAB SAMPLE I.D. # 20303

EPA
SAMPLE #

C11318-A1224

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/g)
1	347	79-01-6	1,4-dioxane	FSCC	95	140
2	410	123-91-1	1,4-dioxane	FSCC	97	29
3	448	123-010-02-8	1,4-dioxane, 2-(4-chlorophenyl)-	FSCC	84	7.2
4	614	123-91-2	2-chloro-4-hydroxy-4-methyl-1,4-dioxane	FSCC	95	51
5	3063		2-chloro-4-hydroxy-4-methyl-1,4-dioxane	FSCC		860
6	3105			FSCC		65
7	3374			FSCC		40
8	3672			FSCC		100
9	3734			FSCC		140
10				FSCC		
11				FSCC		
12				FSCC		
13				FSCC		
14				FSCC		
15				FSCC		
16				FSCC		
17				FSCC		
18				FSCC		
19				FSCC		
20				FSCC		

HEAD COMPOUCHEN ORGANICS ANALYSIS DATA SHEET

PAGE 4

LAB SAMPLE I.D. # 020303

SAMPLE # 1378-A1204

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS ANALYTICAL FRACTION: HB

ITEM	SC#11 NUMBER	CAS #	COMPOUND NAME	PURITY (%)	ESTIMATED CONC. (UG/G) OR (UG/L)
10	1748	-	SEARCH RESULTS < 80% PURITY	---	9.5
11	1760	-	SEARCH RESULTS < 80% PURITY	---	30.
12	1826	-	SEARCH RESULTS < 80% PURITY	---	15.
13	1904	-	SEARCH RESULTS < 80% PURITY	---	12.
14	1991	-	SEARCH RESULTS < 80% PURITY	---	24.
15	2002	-	SEARCH RESULTS < 80% PURITY	---	13.
16	2135	-	SEARCH RESULTS < 80% PURITY	---	51.
17	2229	-	SEARCH RESULTS < 80% PURITY	---	25.
18	2336	-	SEARCH RESULTS < 80% PURITY	---	91.
19	2465	-	SEARCH RESULTS < 80% PURITY	---	69.
20	2621	-	SEARCH RESULTS < 80% PURITY	---	90.

2.000

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

148872

38E

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318

LAB SAMPLE ID. NO. 70-0048 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>9800</u>	10. Zinc	<u>67.00</u>
2. Chromium	<u>81</u>	11. Boron	<u>ND</u>
3. Barium	<u>960</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>17</u>	13. Silver	<u>[1.0]</u>
5. Cobalt	<u>[47]</u>		
6. Copper	<u>4,000</u>		
7. Iron	<u>160,000</u>		
8. Nickel	<u>2,260</u>		
9. Manganese	<u>4150</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>93</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>ND</u>	6. Tin	<u>80</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>74</u>
4. Thallium	<u>ND</u>	8. Lead	<u>1040</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - NOT APPLICABLE

Sample Number
A1265
LOW LEVEL LIQUID
312

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem
Lab Sample ID No. 20304

Case Number 1318
QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	58 20U KH
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	LT 20U
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	LT 40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	LT 40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	22 20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	24 20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	54 20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A1265

LOW LEVEL LIQUID

33.1k

Laboratory Name Meed CompuChem

Case Number

1318

Lab Sample ID No. 20304

QC Report No. 122-18, 124-19, 126-19

Multiply Detection Limits by 1 ☐ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#	D-200:1	ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U (D)
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	5U
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	7405U (D)
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	7200 5U (P)
(88V)	75-01-4	vinyl chloride	3800 5U (P)

Detection limit
200 x three
list
-all

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	9000 100U (D)
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A1265

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number 1318

Lab Sample ID No. 20304

QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129P)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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LAB NAME: HEAD COMPU/CIERLAB SAMPLE I.D. # 20304EPA
SAMPLE #

C01318 - M15

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY	ESTIMATE CONC. (ug/l)
1	321	74-01-6	Ethane, Trichloro-	FSCC	89	1500
2	332	123-91-1	1,4-Dioxane	FSCC	93	73
3	1412	108-88-3	Benzene, Methyl	FSCC	90	8.4
4	585-	127-18-4	Ethene, Tetrahydro-	FSCC	96	110
5	593	123-92-2	2-Pentadecene, 4-Hydroxy-4-Methyl-	FSCC	95-	42.56
6	1046	1412-62-1	Hexane, Hept-	FSCC	81	58
7	1358		Super 8 Acetyl, 6802 Acetyl	FSCC		33
8	2248		"	FSCC		18
9	2548		"	FSCC		22
10	2663		"	FSCC		30
11	2932		"	FSCC		68
12	3020		"	FSCC		35-
13				FSCC		
14				FSCC		
15				FSCC		
16				FSCC		
17				FSCC		
18				FSCC		
19				FSCC		
20				FSCC		

US ENVIRONMENTAL PROTECTION AGENCY

HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8873

352

INORGANICS ANALYSIS DATA SHEET

AB NAME JTC Environmental Consultants CASE NO. 1318
LAB SAMPLE ID. NO. 70-0049 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Aluminum	13,300	10. Zinc	6350 C
2. Chromium	210	11. Boron	ND
3. Barium	2300	12. Vanadium	ND
4. Beryllium	[4.2]	13. Silver	[7.0]
5. Cobalt	[49]		
6. Copper	1,050		
7. Iron	147,000 C		
8. Nickel	2,590		
9. Manganese	5370		

TASK 2 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)		ug/l or mg/kg (circle one)
1. Arsenic	110	5. Mercury	ND B
2. Antimony	ND	6. Tin	81
3. Selenium	ND	7. Cadmium	34
4. Thallium	ND	8. Lead	1090

TASK 3 (Elements to be Identified and Measured)

	ug/l or mg/kg (circle one)
1. Ammonia	NA
2. Cyanide	NA
3. Sulfide	NA

COMMENTS: NA - Not Applicable

[Signature] 10-26-82

Sample Number
A12166
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Hezd CompuChem
Sample ID No. 20305

Case Number 1318
QC Report No. 122-19, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PI	CAS#		ug/l
(7A)	88-06-2	2,4,6-trichlorophenol	20U
(A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(A)	105-67-9	2,4-dimethylphenol	20U
(21A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(A)	51-88-5	2,4-dinitrophenol	100U
(A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

	65-85-0	benzoic acid	200U
	95-48-7	2-methylphenol	20U
	108-39-4	4-methylphenol	20U
	95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(7B)	120-82-1	1,2,4-trichlorobenzene	20U
(B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(B)	91-58-7	2-chloronaphthalene	20U
(20B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(B)	106-46-7	1,4-dichlorobenzene	20U
(B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(9B)	206-44-0	fluoranthene	20U
(B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	20U KH
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(chi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	di benzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

	62-53-3	aniline	20U
	100-51-6	benzyl alcohol	40U
	106-47-8	4-chloroaniline	100U
	132-64-9	di benzofuran	20U
	91-57-6	2-methylnaphthalene	40U
	88-74-4	2-nitroaniline	200U
	99-09-2	3-nitroaniline	200U
	100-01-6	4-nitroaniline	200U

ORGANICS ANALYSIS DATA SHEET - Page 2

Sample Number

A12066

LOW LEVEL LIQUID

Laboratory Name Mead CompuChem

Case Number

1318

Lab Sample ID No. 00305

QC Report No. 122-19, 124-19, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
✓ (4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
✓ (11V)	71-55-6	1,1,1-trichloroethane	5U
✓ (13V)	75-34-3	1,1-dichloroethane	LT 5U K ⁺
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
✓ (16V)	75-00-3	chloroethane	10 5U SS
(19V)	110-75-8	2-chloroethylvinyl ether	5U
✓ (23V)	67-66-3	chloroform	5U
✓ (29V)	75-35-4	1,1-dichloroethane	5U
✓ (30V)	156-60-5	1,2-trans-dichloroethane	100 5U K ⁺
(32V)	78-87-5	1,2-dichloropropene	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
✓ (44V)	75-09-2	methylene chloride	LT 5U K ⁺
(45V)	74-87-3	chloromethane	10 5U K ⁺
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
✓ (85V)	127-18-4	tetrachloroethene	5U
✓ (86V)	108-88-3	toluene	LT 5U K ⁺
✓ (87V)	79-01-6	trichloroethene	14 5U K ⁺
✓ (88V)	75-01-4	vinyl chloride	25 5U K ⁺

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample Number

A121da

LOW LEVEL LIQUID

27E

Laboratory Name Head CompuChem

Case Number

1318

Lab Sample ID No.

20305

QC Report No.

122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)PESTICIDES

<u>PP#</u>	<u>CAS#</u>		<u>ug/l</u>
(39P)	309-00-2	aldrin	0.1U
(90P)	60-57-1	dieldrin	0.1U
(91P)	57-74-9	chlordane	0.1U
(92P)	50-29-3	4,4'-DDT	0.1U
(93P)	72-55-9	4,4'-DDE	0.1U
(94P)	72-54-8	4,4'-DDD	0.1U
(95P)	115-29-7	endosulfan I	0.1U
(96P)	115-29-7	endosulfan II	0.1U
(97P)	1031-07-8	endosulfan sulfate	0.1U
(98P)	78-20-8	endrin	0.1U
(99P)	7421-43-4	endrin aldehyde	0.1U
(100P)	76-44-8	heptachlor	0.1U
(101P)	1024-57-3	heptachlor epoxide	0.1U
(102P)	319-84-6	BHC-Alpha	0.1U
(103P)	319-85-7	BHC-Beta	0.1U
(104P)	319-86-8	BHC-Delta	0.1U
(105P)	58-89-9	BHC-Gamma	0.1U
(106P)	53469-21-9	PCB-1242	0.1U
(107P)	11097-69-7	PCB-1254	0.1U
(108P)	11104-28-2	PCB-1221	0.1U
(109P)	11141-16-5	PCB-1232	0.1U
(110P)	12672-29-6	PCB-1248	0.1U
(111P)	11096-82-5	PCB-1260	0.1U
(112P)	12674-11-2	PCB-1016	0.1U
(113P)	8001-35-2	toxaphene	0.1U

DIOXINSug/l

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo- p-dioxin	0.002U
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ORGANICS ANALYSIS DATA SHEET - Page 4

LAB NAME: NEAD CORP/ICHEM

EPA

SAMPLE #

CA

LAB SAMPLE I.D. # 20305

ESTIMATED CONCENTRATION OF TENTATIVELY IDENTIFIED COMPOUNDS

ITEM	SCAN NUMBER	CAS #	COMPOUND NAME	FRACTION	PURITY
1	379	79-01-6	Trichloro ethene	FSCC	92
2	1088		Search Results <80% Purity	FSCC	
3	1124			FSCC	
4	1153			FSCC	
5	1183			FSCC	
6	1203			FSCC	
7	1238			FSCC	
8	1265			FSCC	
9	1288			FSCC	
10	1350	18344-37-1	2,6,10,14 -Tetramethyl Heptadecane	FSCC	93
11	1387		Search Results <80% Purity	FSC	
12	2014			FSCC	
13	2177			FSCC	
14	2291			FSCC	
15	2429			FSCC	
16	2573			FSCC	
17	2801			FSCC	
18	3348			FSCC	
19	3379			FSCC	
20	3472			FSCC	

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

Sample No.

MA8874

27E

INORGANICS ANALYSIS DATA SHEET

LAB NAME JTC Environmental Consultants CASE NO. 1318
LAB SAMPLE ID. NO. 70-0050 QC REPORT NO. 8

TASK 1 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Aluminum	<u>760</u>	10. Zinc	<u>3750C</u>
2. Chromium	<u>51</u>	11. Boron	<u>ND</u>
3. Barium	<u>1700</u>	12. Vanadium	<u>ND</u>
4. Beryllium	<u>[1.1]</u>	13. Silver	<u>13</u>
5. Cobalt	<u>55</u>		
6. Copper	<u>200</u>		
7. Iron	<u>36,500C</u>		
8. Nickel	<u>730</u>		
9. Manganese	<u>4,990</u>		

TASK 2 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)		<u>ug/l</u> or mg/kg (circle one)
1. Arsenic	<u>55</u>	5. Mercury	<u>ND</u>
2. Antimony	<u>ND</u>	6. Tin	<u>60</u>
3. Selenium	<u>ND</u>	7. Cadmium	<u>24</u>
4. Thallium	<u>ND</u>	8. Lead	<u>57</u>

TASK 3 (Elements to be Identified and Measured)

	<u>ug/l</u> or mg/kg (circle one)
1. Ammonia	<u>NA</u>
2. Cyanide	<u>NA</u>
3. Sulfide	<u>NA</u>

COMMENTS:

NA - NOT applicable

Dkwhite 10-26-8

Sample Number
A 1267
LOW LEVEL LIQUID

ORGANICS ANALYSIS DATA SHEET - Page 1

Laboratory Name Mead CompuChem
Lab Sample ID No. 203000

Case Number 1318
QC Report No. 122-18, 124-18, 126-15

Multiply Detection limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

ACID COMPOUNDS

PP#	CAS#		ug/l
(21A)	88-06-2	2,4,6-trichlorophenol	20U
(22A)	59-50-7	p-chloro-m-cresol	40U
(24A)	95-57-8	2-chlorophenol	20U
(31A)	122-83-2	2,4-dichlorophenol	20U
(34A)	105-67-9	2,4-dimethylphenol	20U
(57A)	88-75-5	2-nitrophenol	40U
(58A)	100-02-7	4-nitrophenol	200U
(59A)	51-88-5	2,4-dinitrophenol	100U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	40U
(64A)	87-36-5	pentachlorophenol	40U
(65A)	108-95-2	phenol	20U

(Non-Priority Pollutant Hazardous Substances)

65-85-0	benzoic acid	200U
95-48-7	2-methylphenol	20U
108-39-4	4-methylphenol	20U
95-95-4	2,4,5-trichlorophenol	200U

BASE-NEUTRAL COMPOUNDS

(1B)	83-32-9	acenaphthene	20U
(5B)	92-87-5	benzidine	80U
(8B)	120-82-1	1,2,4-trichlorobenzene	20U
(9B)	118-74-1	hexachlorobenzene	20U
(12B)	67-72-1	hexachloroethane	20U
(18B)	111-44-4	bis(2-chloroethyl)ether	20U
(20B)	91-58-7	2-chloronaphthalene	20U
(25B)	95-50-1	1,2-dichlorobenzene	20U
(26B)	541-73-1	1,3-dichlorobenzene	20U
(27B)	106-46-7	1,4-dichlorobenzene	20U
(28B)	91-94-1	3,3'-dichlorobenzidine	40U
(35B)	121-14-2	2,4-dinitrotoluene	40U
(36B)	606-20-2	2,6-dinitrotoluene	40U
		1,2-diphenylhydrazine	
(37B)	122-66-7	(as azobenzene)	40U
(39B)	206-44-0	fluoranthene	20U
(40B)	7005-72-3	4-chlorophenyl phenylether	20U
(41B)	101-55-3	4-bromophenyl phenyl ether	20U

BASE/NEUTRAL COMPOUNDS

PP#	CAS#		ug/l
(42B)	39638-32-9	bis-(2-chloroisopropyl)ether	40U
(43B)	11-91-1	bis-(2-chloroethoxy)methane	40U
(52B)	87-68-3	hexachlorobutadiene	20U
(53B)	77-47-4	hexachlorocyclopentadiene	20U
(54B)	78-59-1	isophorone	20U
(55B)	91-20-3	naphthalene	20U
(56B)	98-95-3	nitrobenzene	20U
(62B)	86-30-6	N-nitrosodiphenylamine	20U
(63B)	621-64-7	N-nitrosodi-n-propylamine	40U
(66B)	117-81-7	bis(2-ethylhexyl)phthalate	93 20U X.H
(67B)	85-68-7	butyl benzyl phthalate	20U
(68B)	84-74-2	di-n-butyl phthalate	20U
(69B)	117-84-0	di-n-octyl phthalate	20U
(70B)	84-66-2	diethyl phthalate	20U
(71B)	131-11-3	dimethyl phthalate	20U
(72B)	56-55-3	benzo(a)anthracene	40U
(73B)	50-33-8	benzo(a)pyrene	40U
(74B)	205-99-2	benzo(b)fluoranthene	40U
(75B)	207-08-9	benzo(k)fluoranthene	40U
(76B)	318-01-9	chrysene	20U
(77B)	208-96-8	acenaphthylene	20U
(78B)	120-12-7	anthracene	20U
(79B)	181-24-2	benzo(ghi)perylene	40U
(80B)	86-73-7	fluorene	20U
(81B)	85-01-8	phenanthrene	20U
(82B)	53-70-3	dibenzo(a,h)anthracene	40U
(83B)	183-39-5	indeno(1,2,3-cd)pyrene	40U
(84B)	129-00-0	pyrene	20U

(Non-Priority Pollutant Hazardous Substances)

62-53-3	aniline	20U
100-51-6	benzyl alcohol	40U
106-47-8	4-chloroaniline	100U
132-64-9	dibenzofuran	20U
91-57-6	2-methylnaphthalene	40U
88-74-4	2-nitroaniline	200U
99-09-2	3-nitroaniline	200U
100-01-6	4-nitroaniline	200U

Sample Number
A 1267
LOW LEVEL LIQUID

Laboratory Name Meed CompuChem
 Job Sample ID No. 20306

Case Number 1318
 QC Report No. 122-18, 124-18, 126-19

Multiply Detection Limits by 1 ☒ or 10 ☐ (Check Box for Appropriate Factor)

VOLATILES

PP#	CAS#		ug/l
(2V)	107-02-8	acrolein	100U
(3V)	107-13-1	acrylonitrile	100U
(4V)	71-43-2	benzene	5U
(6V)	56-23-5	carbon tetrachloride	5U
(7V)	108-90-7	chlorobenzene	5U
(10V)	107-06-2	1,2-dichloroethane	5U
(11V)	71-55-6	1,1,1-trichloroethane	5U
(13V)	75-34-3	1,1-dichloroethane	5U
(14V)	79-00-5	1,1,2-trichloroethane	5U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	5U
(16V)	75-00-3	chloroethane	5U
(19V)	110-75-8	2-chloroethylvinyl ether	5U
(23V)	67-66-3	chloroform	5U
(29V)	75-35-4	1,1-dichloroethene	5U
(30V)	156-60-5	1,2-trans-dichloroethene	5U KH
(32V)	78-87-5	1,2-dichloropropane	5U
(33V)	10061-02-6	trans-1,3-dichloropropene	5U
	10061-01-05	cis-1,3-dichloropropene	10U
(38V)	100-41-4	ethylbenzene	5U
(44V)	75-09-2	methylene chloride	LT 5U KH
(45V)	74-87-3	chloromethane	5U
(46V)	74-83-9	bromomethane	5U
(47V)	75-25-2	bromoform	5U
(48V)	75-27-4	bromodichloromethane	5U
(49V)	75-69-4	fluorotrichloromethane	5U
(50V)	75-71-8	dichlorodifluoromethane	NA
(51V)	124-48-1	chlorodibromomethane	5U
(85V)	127-18-4	tetrachloroethene	5U
(86V)	108-88-3	toluene	5U
(87V)	79-01-6	trichloroethene	LT 5U KH
(88V)	75-01-4	vinyl chloride	54 5U KH

(Non-Priority Pollutant Hazardous Substances)

67-64-1	acetone	100U
78-93-3	2-butanone	200U
75-15-0	carbonylsulfide	10U
519-78-6	2-hexanone	100U
108-10-1	4-methyl-2-pentanone	100U
100-42-5	styrene	5U
108-05-4	vinyl acetate	10U
95-47-6	o-xylene	5U

APPENDIX F

Photographs



FIGURE 42: Panorama of Northwest
Portion of Shpack Landfill



FIGURE 43 : Central Portion of
Shpack Landfill

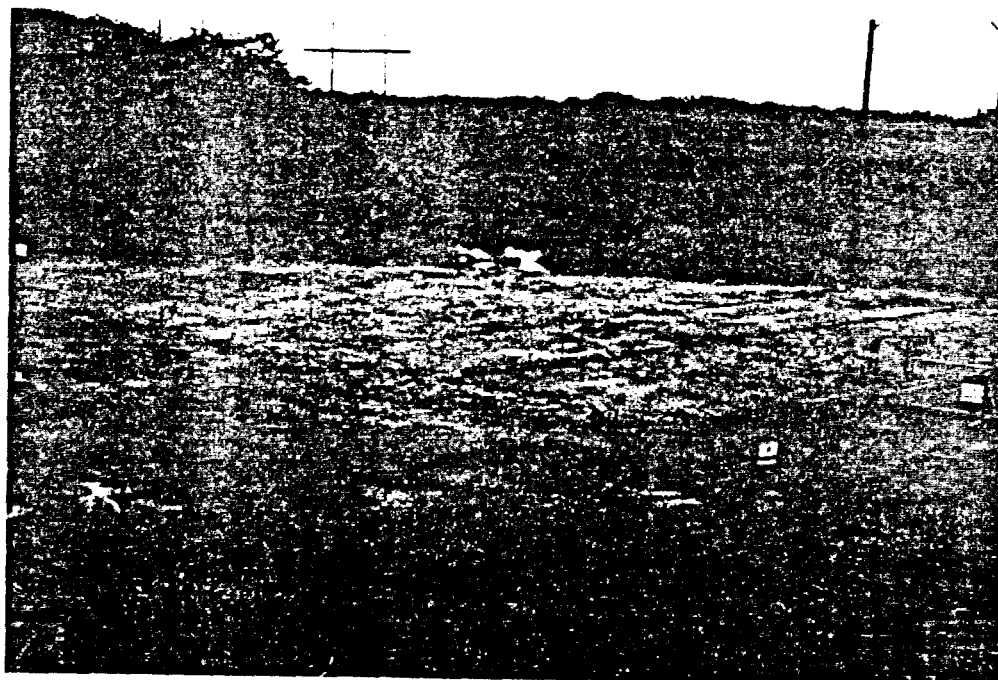


FIGURE 44 : Southeastern Corner of
Shpack Landfill Where Thompson
Chemical Co. Wastes Were Dumped

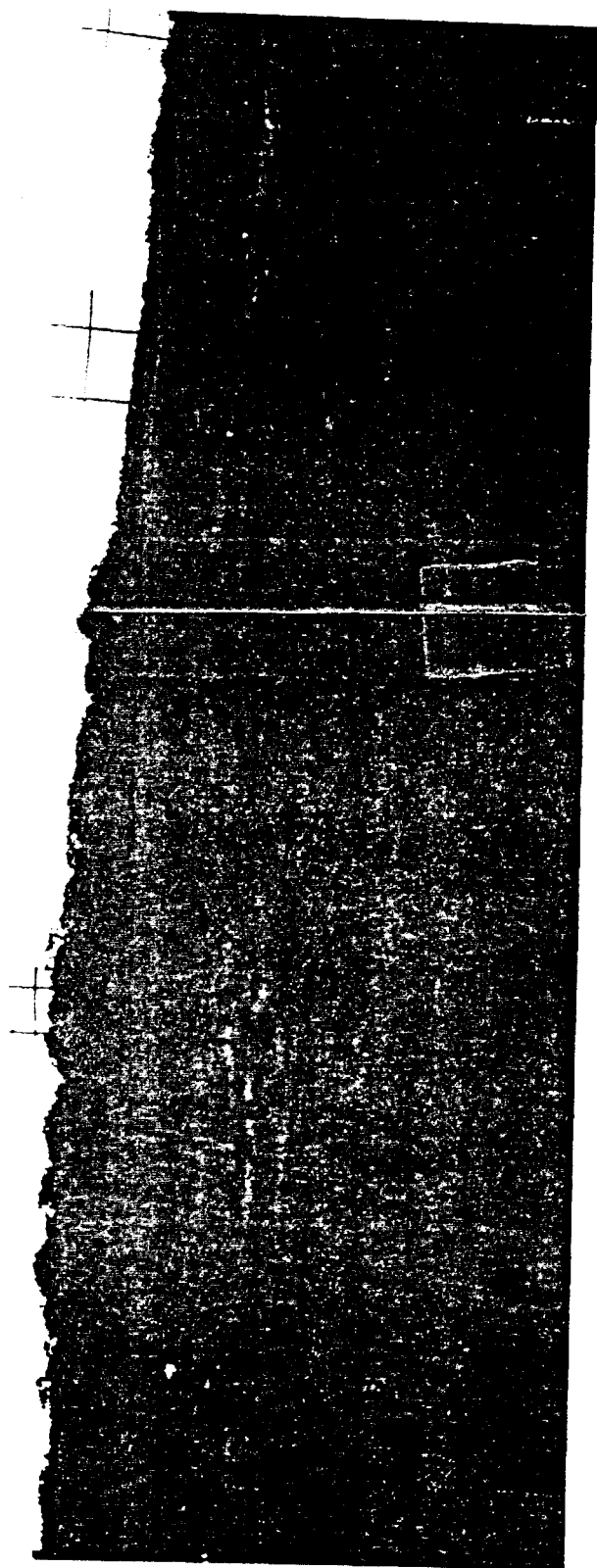


FIGURE 45 : Panorama of South-
western Portion of Shipack
Landfill

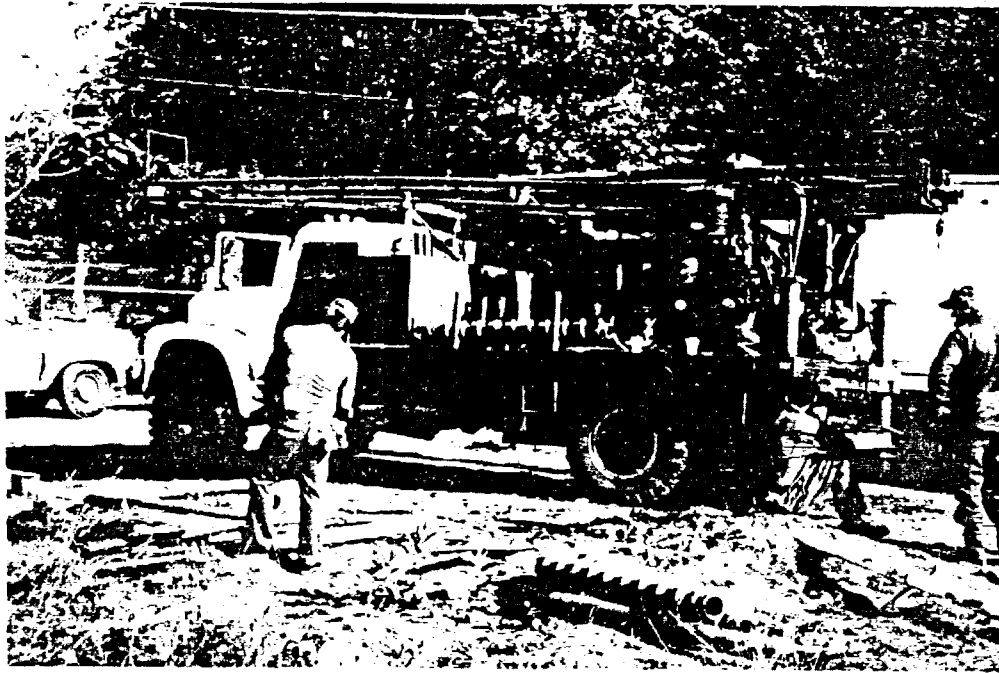


FIGURE 46 : Warren George Co.
Truck-Mounted Drilling Rig

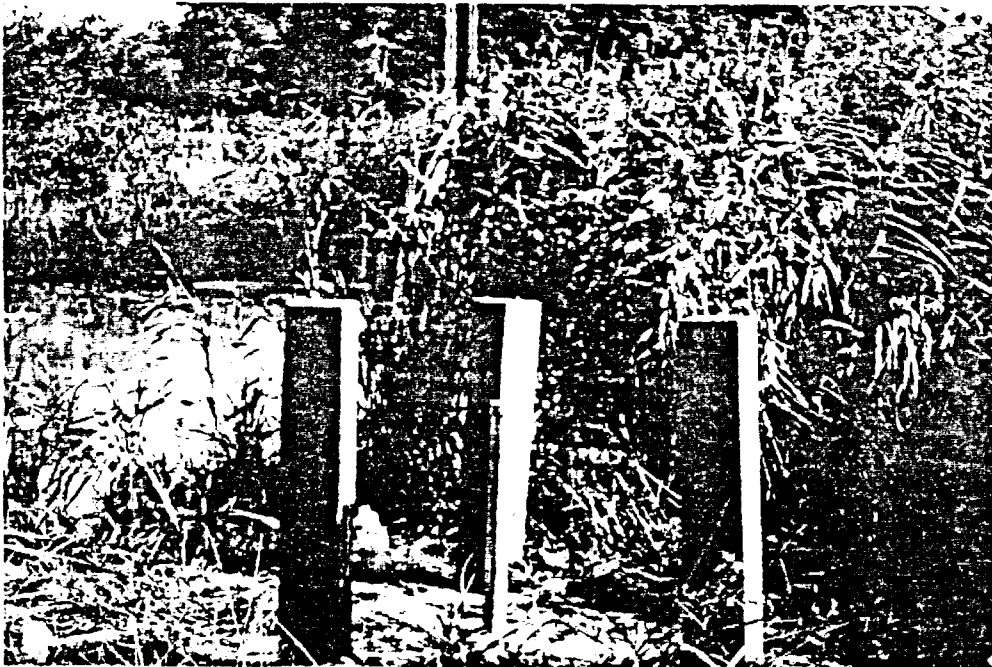


FIGURE 47: Typical Well
Monitoring Installation



FIGURE 48 : Attleboro Landfill
Leachate Pond



FIGURE 49 : Leachate Breakout on
Northeast Side of Attleboro
Landfill



FIGURE 50: Panorama of Drum
Disposal Area of Shpack
Landfill

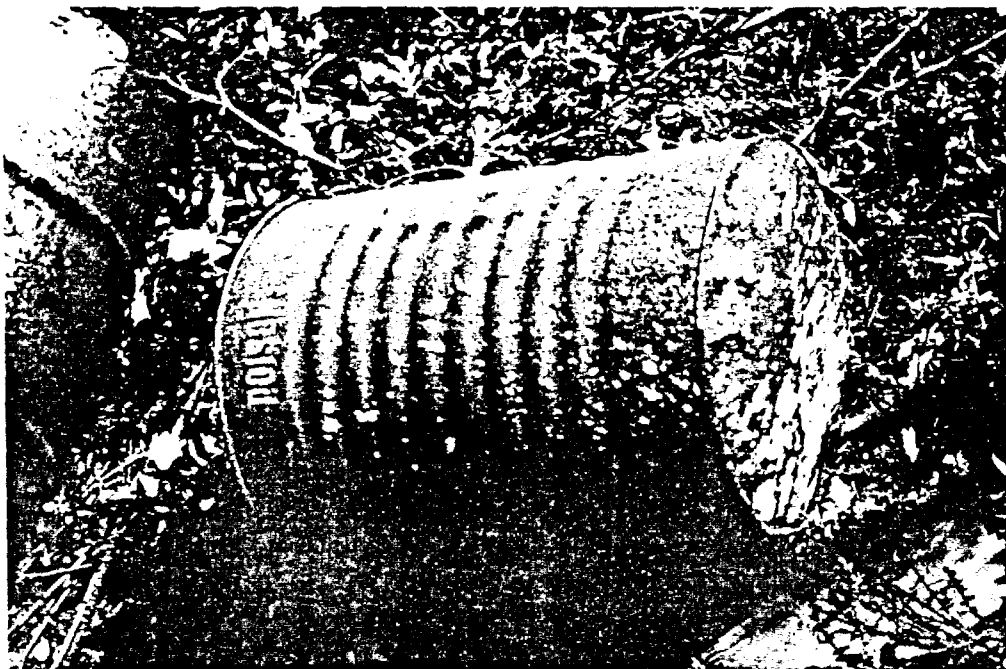


FIGURE 51: Sodium Cyanide Drum
on Shpack Landfill



FIGURE 52: Drum Disposal Area
Shpack Landfill

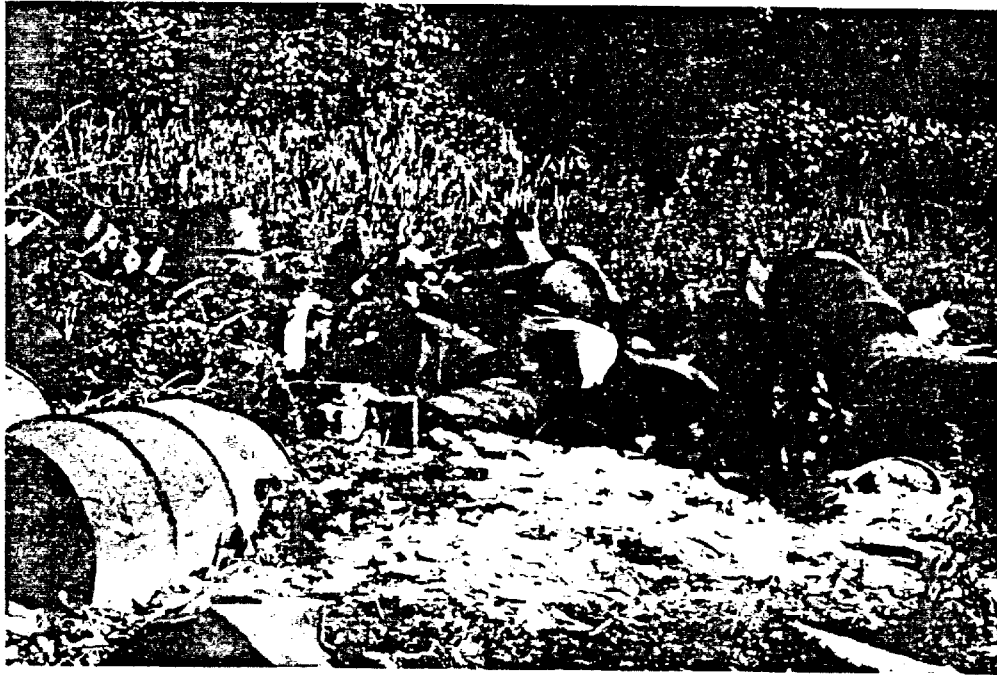


FIGURE 53: Drum Disposal Area
Shpack Landfill



FIGURE 54: Drum Disposal Area
Shpack Landfill

SUMMARY OF ENVIRONMENTAL CONCENTRATIONS - GROUNDWATER

Compounds	Range of Concentrations	Number of Sample Locations	Location* of Max Conc	Data Source	Comments
1,1,2-dichloroethene	ND - 61,800 ppb	23	borehole 49R	E & E, 1982 (2)	Shpack onsite borehole, data not validated
trichloroethylene	ND - 71,000 ppb	23	borehole 33R	E & E, 1982 (2)	Shpack onsite borehole, data not validated
chloroform	ND - 1,000 ppb	23	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
ethylbenzene	ND - 510 ppb	23	ALI-05	NUS, 1984	ALI perimeter monitoring well, data validated
toluene	ND - 500 ppb	23	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
acetone/NP	ND - 1500 ppb	23	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
2-butanone (NP)	ND - 3160 ppb	11	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
2-hexane (NP)	ND - 750 ppb	11	ALI-05	NUS, 1984	ALI perimeter monitoring well, data validated
4-methyl-2-pentanone (NP)	ND - 250 ppb	11	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
styrene (NP)	ND - 1,760 ppb	23	ALI-05	NUS, 1984	ALI perimeter monitoring well, data validated
benzene	ND - 2,330 ppb	23	ALI-05	GHR, 1984	ALI perimeter monitoring well, data not validated
total alpha counts	ND - 22 pCi/L		ALI-10	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u)
aluminum	ND - 500 ppb	12	ALI-5,10	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u), soluble species
iron	ND - 650,000 ppb	12	ALI-07	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u), soluble species
manganese	90-47,000 ppb	12	ALI-07	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u), soluble species
aluminum	760-37,900 ppb	13	** borehole 2ZE	E & E, 1982 (2)	Shpack onsite borehole, data not validated, unfiltered sample, total species
chromium	31-260 ppb	13	2ZE		
barium	320-3,800 ppb	13	43E		
cobalt	200-200 ppb	13	11E		
copper	2300-32,000 ppb	13	2NE		
nickel	130-19,700 ppb	13	49R		
manganese	960-20,700 ppb	13	2ZE		
zinc	800-23,600 ppb	13	2NE		
arsenic	27-280 ppb	13	2ZE		
cadmium	3-197 ppb	13	2NE		
lead	69-7,400 ppb	13	11E		

* see Figure 3 for locations

** see Figure 4 for location

ppb parts per billion
 pCi/L picocurie/Liter
 ND not detected
 NP non priority pollutant compound

Scale 1" = 100'

SUMMARY OF ENVIRONMENTAL CONCENTRATIONS - GROUNDWATER

Compounds	Range of Concentrations	Number of Sample Locations	Location* of Max Conc	Data Source	Comments
t-1,2-dichloroethene	ND - 65,000 ppb	25	borehole 49R	E & E, 1982 (2)	Shipack onsite borehole, data not validated
trichloroethylene	ND - 72,000 ppb	25	borehole 35R	E & E, 1982 (2)	Shipack onsite borehole, data not validated
chloroethane	ND - 2,000 ppb	25	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
ethylbenzene	ND - 510 ppb	25	ALI-05	NUS, 1984	ALI perimeter monitoring well, data validated
toluene	ND - 590 ppb	25	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
acetone(NP)	ND - 190 ppb	11	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
2-butanone (NP)	ND - 310 ppb	11	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
2-hexane (NP)	ND - 790 ppb	25	ALI-05	NUS, 1984	ALI perimeter monitoring well, data validated
4-methyl-2-pentanone (NP)	ND - 240 ppb	25	ALI-07	NUS, 1984	ALI perimeter monitoring well, data validated
xylylene (NP)	ND - 1,780 ppb	25	ALI-05	GHR, 1984	ALI perimeter monitoring well, data not validated
benzene	ND - 2,330 ppb	25	ALI-05	GHR, 1984	ALI perimeter monitoring well, data not validated
total alpha counts	ND - 22 pCi/L	12	ALI-10	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u)
aluminum	ND - 500 ppb	12	ALI-9,10	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u), soluble species
iron	ND - 690,000 ppb	12	ALI-07	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u), soluble species
manganese	90-47,000 ppb	12	ALI-07	NUS, 1984	ALI perimeter monitoring well, sample prefiltered (0.45u), soluble species
aluminum	760-37,900 ppb	13	** borehole 22E	E & E, 1982 (2)	Shipack onsite borehole, data not validated, unfiltered sample, total species
chromium	31-260 ppb	13	22E		
barium	520-3,800 ppb	13	43E		
cobalt	6-204 ppb	13	11E		
copper	200-5630 ppb	13	24E		
iron	2300-326,000 ppb	13	24E		
nickel	130-19,700 ppb	13	49R		
manganese	960-20,700	13	22E		
zinc	800-25,600 ppb	13	24E		
arsenic	27-240 ppb	13	22E		
cadmium	3-197 ppb	13	11E		
lead	49-7,400 ppb	13	22E		

* see Figure 3 for locations

** see Figure 4 for location

ppb parts per billion
pCi/L pico curie/liter
ND not detected
NP non priority pollutant compound

1.08 = 11 91035