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**PHASE II  
ENVIRONMENTAL SITE ASSESSMENT WORK PLAN**

**Determination of the Extent of Petroleum Product  
Contamination at 14 – 34 Whitesboro Street**

**City of Utica  
Oneida County, New York**

**Issued on: December 8, 1999**

**Prepared for:**

**Mr. Eugene Santacroce  
City of Utica  
Dept of Engineering  
1 Kennedy Plaza  
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**Prepared by:**

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**PHASE II ENVIRONMENTAL SITE ASSESSMENT WORK PLAN**  
**14 – 34 WHITESBORO ST. – UTICA, N.Y.**  
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## 1.0 PROJECT PERSONNEL

<u>PERSON</u>	<u>TITLE</u>	<u>AFFILIATION</u>
Mr. Eugene Santacroce	Senior Engineer	City of Utica Dept of Engineering
Mr. Eugene A. Carcone	President	Hygeia of New York, Inc.
Mr. Brian C. King	Project Manager	Hygeia of New York, Inc.
Mr. John A. Witz	Environmental Scientist	Hygeia of New York, Inc.
Mr. Don Johnson	Environmental Engineer 1	NYS DEC Region 6
Mr. Daniel J. Clemmons	Project Manager	Central Pump and Tank, Inc.

## 2.0 INTRODUCTION

In accordance with the request of Mr. Eugene Santacroce, Senior Engineer with the City of Utica (City) - Department of Engineering, Hygeia of New York, Inc. (Hygeia) has performed a limited Phase II Environmental Site Assessment for eight (8) parcels of land located on Whitesboro Street in Utica, Oneida County, New York (Oneida County Tax IDs 318.8-1-48,47,46,45,44,43,42 and 41). For the purposes of this study these parcels have been divided into two (2) separate areas. Area 1 consists of parcels 46 – 48 and Area 2 consists of parcels 41-45.

The site is bounded on the east by Division Street, on the South by Water Street, on the West by a vacant lot owned by National Bldg. & Restoration and on the North by Whitesboro Street. All of the aforementioned lots are owned by the City of Utica except parcel 41, which is owned by Boiler Maker Road Race, Inc. The site is currently unpaved vacant land overgrown with grass and weeds. The total site area covers approximately 1.5 acres of land. According to the United States Geological Survey (USGS) Topographic Map (Utica East, New York Quadrangle), the subject site lies at approximately 420 feet above Mean Sea Level.

The property was occupied by structures from at least the early 1900's until the structures were demolished in 1995 or 1994 after a fire. The area contained industrial operations dating back to the early 1800's likely associated with the Erie Canal, including the Utica Steam Engine and Boiler Works. Former building foundations and demolition debris remains on-site.

Historically Area 1 was occupied by the Horocks Ibbotson & Co. facility from at least 1925 until 1973. Horocks Ibbotson & Co. manufactured fishing rods. Area 1 has been listed as a petroleum spill site in the New York State Department of Environmental Conservation's (NYS DEC) Spills Information Database (spill # 97-09722)

Based on a Phase I Environmental Assessment report completed by Dames & Moore, Inc., (Dames & Moore) commercial buildings were located on the lots to the east of Area 1 (i.e. Area 2). More specifically, the Hotel Dana was located in Area 2 based on a 1925 Sanborn fire insurance map. In Sanborn Fire Insurance Maps for 1950 and 1973 the hotel in Area 2 has been renamed as the Gilbert Hotel and the Center Hotel, respectively.

Dames & Moore also performed a limited Phase II Environmental Investigation in Area 1 from June 24 through July 2, 1997. Soil samples were collected and headspace measurements of volatile organic compounds were performed. The report was unable to conclude that the results were indicative of widespread VOC contamination or isolated releases due to previous manufacturing activities.

Dames & Moore installed a temporary groundwater monitoring well to obtain additional information on the quality of groundwater. Groundwater contaminant concentrations were also described as being below NY State Water standards. The report concluded by recommending

additional exploratory activities in the vicinity of TP-4 to attempt to define the lateral extent of impacts. Dames & Moore also recommended that additional monitoring wells be installed upgradient and downgradient of test pit #4 to evaluate the potential groundwater impact.

## **2.1 Project Objectives**

The project objective was to characterize the extent of petroleum hydrocarbon contamination in the soil and groundwater for Area 1 and to attempt to identify potential sources of hazardous wastes, hazardous substances, and/or chemical or petroleum contamination present Area 2.

## **3.0 METHODOLOGY**

### **3.1 Test Pits, Soil Borings and Groundwater Monitoring Well Installation**

Test pits were excavated by the City of Utica using a rubber tire backhoe. Each test pit was approximately six to eight feet in depth by four feet wide by eight feet long. Test pit contents were visually observed and photographed.

Soil borings were completed using a Geoprobe 5400. Continuous soil samples were collected using direct push technology to advance a four foot long macro-core sampler with disposable 1<sup>1/8</sup> inch disposable liners. The location and number of borings in Area 1 was chosen based on the results of the previous investigation conducted by Dames and Moore. A rectangular grid was established for borings completed in Area 2.

Temporary groundwater monitoring wells were installed using the aforementioned Geoprobe. Each well consisted of 1 inch diameter, 10 slot PVC screen from 16 feet below grade to 6 feet below grade and 1 inch diameter schedule 40 PVC riser from 6 feet below grade to approximately 2 feet above grade. Each well was back-filled to grade with sand and approximately 6 inches of bentonite. Wells were developed by purging with a 3/4 inch polyethylene disposable bailer.

### **3.2 Soil Sample Collection**

#### **3.2.1 Field Screening**

Soil samples generated from borings were placed in gallon ziplock bags and allowed to off-gas. After a period of time the headspace was screened using a calibrated Rae Systems Inc. Mini Rae Photoionization Detector Meter with an 11.7eV ultraviolet lamp. Based on the field screening results representative samples were selected for further laboratory analysis.

#### **3.2.2 Collection for Laboratory Analysis**

Grab samples were collected from the source area and its perimeter. Soil samples were generally collected from the soil groundwater interface area. Samples were collected essentially in accordance with U.S. Environmental Protection Agency's, Test Methods for Evaluating Solid Waste, Physical / Chemical Methods, SW-846 Third Ed., Field Manual Volume II, Sept. 1986, Rev. 1995.

### **3.3 Groundwater Sample Collection**

Wells established upgradient and down gradient from known areas of contamination were essentially sampled in accordance with U.S. Environmental Protection Agency's, Test Methods for Evaluating Solid Waste, Physical / Chemical Methods, SW-846 Third Ed., Field Manual Volume II, Sept. 1986, Rev. Jan. 1995.

### **3.4 Laboratory Analysis**

All samples collected were analyzed for Volatile and Semi-volatile Organic Compounds by Upstate Laboratories, Inc. in accordance with the Environmental Protection Agency's, Test Methods for Evaluating Solid Waste, Physical / Chemical Methods, SW-846 Third Ed., Laboratory Manual Volume I B, Sept. 1986, Rev. 1995 and N.Y. State Department of Environmental Conservation's Spill Technology and Remediation Series (STARS) Memo #1 Petroleum-Contaminated Soil Guidance Policy, August 1992. The specific reference methods used were 8270 TCLP STARS, 8021 TCLP STARS, 8021 Full Total, 8021 STARS Total and 8270 STARS Total.

## **4.0 DISCUSSION**

All site work was completed in accordance with a Site Specific Health and Safety Plan developed by Hygeia of N. Y. Inc.

### **4.1.0 Subsurface Investigation**

#### ***4.1.1 Soil Boring Installation***

In Area 1, a total of thirteen (13) soil borings (H-1 to H-13) were completed. The initial boring was installed in close proximity to an area with high levels of contamination as established by the previous investigation completed by Dames and Moore. Since the initial investigation established a lack of contamination in Southerly direction from the source, additional borings (i.e. eight) were concentrated in a crossing pattern with 30 foot intervals of separation to the Northeast and Northwest of the source. Four (4) additional borings were installed at the southern extreme of the Dames and Moore investigation to verify the lack of contamination and establish a control for ground water monitoring in an area presumed to be up-gradient from the source. Please refer to Appendix B for the specific locations of all borings completed.

The borings in Area 1 revealed that generally soils in the upper two (2) feet contained dry red/brown/grey fill (i.e. cinders and bricks). From a depth of approximately two (2) feet to seven (7) feet the soil consisted of brown, dry to moist, fine sand and silt with a trace of clay. From approximately seven (7) to twelve (12) feet the soil was a brown, wet, fine to medium sand. The depth to groundwater ranged from approximately 5 feet to approximately 11 feet. No odors or discoloration indicative of a petroleum product spill were observed in the soil samples generated by the borings.

In Area 2, fifteen (15) Geo-probe borings (H-14 to H-28) were completed. Borings were arranged in a 4 x 4 grid with one grid axis progressing from North to South and the other from East to West. Point separation along the east west axis was approximately 50 feet. Point separation along the North-South axis was approximately 45 feet. One location in the northeast

corner of this area was eliminated due to close proximity to a Niagara Mohawk Gas line. Please refer to Appendix B for the specific locations of all borings completed.

Area 2 borings revealed that, generally, soils in the upper four (4) to six (6) feet contained dry red/brown/grey fill (i.e. cinders and bricks). From a depth of approximately six (6) feet to ten (10) feet the soil consisted of brown, dry to wet, fine to medium sand, some silt and a trace of clay. From approximately seven (7) to twelve (12) feet the soil was a brown, wet, fine to medium sand. The depth to groundwater ranged from approximately 7 feet to approximately 11 feet. No odors or discoloration indicative of a petroleum product spill were observed in the soil samples generated by the borings.

Please refer to Appendix C - Field Data for boring logs.

#### **4.1.2 Test Pits**

A total of three (3) test pits were excavated in Area 2. Test Pit # 1 was located in the Southeast corner of this area. The soil excavated from this pit consisted of primarily red brick and grayish colored soil or ash with some charred wood. No odors or visual evidence indicative of petroleum or chemical contamination was observed. A concrete slab, which caused refusal of the bucket and termination of the excavation, was noted at a depth of 6 feet.

Test Pit # 2, located in the Northeast corner of Area 2, contained rags, sand, red bricks, ashes, charred wood and other fill materials. No odors or visual evidence indicative of petroleum or chemical contamination was observed. The test pit was terminated at a depth of 8 feet.

Test Pit # 3, located in the center of the western boundary with Area 1, contained red brick, ash sand and silt. No odors or visual evidence indicative of petroleum or chemical contamination was observed. A concrete slab, which caused refusal of the bucket, was noted at a depth of 8 feet, terminating the excavation.

All test pits were immediately backfilled with excavated soil upon completion of the excavation. Please refer to Appendix C for test pit contents logs and photographic documentation.

#### **4.1.2 PID sample screening**

Soil obtained from the test borings and test pits was screened in the field for volatile organic compounds (VOC) using a MiniRae PID meter. Background VOC concentrations were measured at 1.9 parts of VOC per million parts of air (PPM) on October 26, 1999 (Area 1) and 1.8 PPM on October 27, 1999 (Area 2). For the most part, PID screenings did not indicate widespread site contamination as can be seen in the following table:

Location	ID	PID reading (PPM)	Location	ID	PID reading (PPM)
Area 1	H-1	4.0 - 12.3	Area 2	H-14	2.2 - 2.5
Area 1	H-2	2.8 - 3.1	Area 2	H-15	2.4 - 3.0
Area 1	H-3	3.2 - 5.5	Area 2	H-16	2.5 - 6.3
Area 1	H-4	2.3 - 2.6	Area 2	H-17	2.3 - 2.9
Area 1	H-5	2.3 - 2.6	Area 2	H-18	2.7 - 4.3
Area 1	H-6	1.9 - 2.4	Area 2	H-19	2.8 - 3.9
Area 1	H-7	3.3 - 4.0	Area 2	H-20	3.4 - 4.2
Area 1	H-8	1.9 - 2.2	Area 2	H-21	2.7 - 3.9
Area 1	H-9	2.5 - 3.0	Area 2	H-22	2.4 - 3.1
Area 1	H-10	2.6 - 4.6	Area 2	H-23	2.6 - 3.6
Area 1	H-11	2.5	Area 2	H-24	2.5 - 3.6
Area 1	H-12	2.5 - 2.6	Area 2	H-25	2.1 - 3.2
Area 1	H-13	1.9 - 2.4	Area 2	H-26	2.6 - 2.7
			Area 2	H-27	2.3
			Area 2	H-28	2.7 - 5.1
			Area 2	Test Pit #1	2.3 - 3.5
			Area 2	Test Pit #2	2.1
			Area 2	Test Pit #3	2.1 - 2.4

## 4.2.0 GROUNDWATER INVESTIGATION

### 4.2.1 Groundwater Sampling

A total of three (3) temporary groundwater monitoring wells were installed in Area 1. These wells were installed in borings H-4, H-5 and H-13. Each well was purged of approximately three well volumes and sampled using ¾ inch disposable polyethylene bailers. Recharge time during purging was insignificant. No odors or sheens were observed from groundwater sampled from H-13 or H-4. Groundwater collected from H-5 had a diesel fuel odor and a petroleum product sheen. All groundwater sampled was brown in color and highly turbid.

Groundwater in Area 2 was not sampled since evidence of contamination was not observed during the on-site investigation.

### 4.2.2 Site Hydrology

Based on the borings completed it is estimated that the groundwater surface ranges from 5 to 11 feet below ground surface. Water level measurements conducted show that the relative ground water elevations (note: manhole 1 (MH-1), assigned an elevation of 100 feet, was used as a benchmark) at H-13, H-4 and H-5 are 89.73 feet, 89.21 feet and 89.12 feet, respectively. Consequently, it is apparent that direction of shallow groundwater flow is to the north - northeast. Please refer to Appendix B for the Groundwater Contour and Flow Map.



#### **4.3.0 Analytical Results**

##### **4.3.1 Soil Sampling Results**

The analytical results for the soil sampling conducted indicate primarily fuel oil contamination in Area 1 and gasoline contamination of Area 2.

More specifically, analysis of the soil sample collected from boring H-1 per EPA reference method 8021 showed a high concentration of naphthalene and styrene (i.e. 14 mg/kg and 4.5 mg/kg, respectively). This is indicative of fuel oil (eg. diesel fuel, kerosene, crude oil). The high concentration of naphthalene and styrene precluded reporting of other compounds more accurately than less than 0.49 mg/kg. This is consistent with the previously conducted Dames and Moore study which showed high concentrations of diesel range organics to the south of this boring.

Analysis of the TCLP extract from soil samples collected from borings H-3 and H-10 via EPA reference method 8270 showed primarily ethylbenzene, toluene and total xylenes contamination. These results are indicative of a gasoline spill that has weathered over time. Analysis of the TCLP extract from soil sample collected from borings H-8 indicated that the soil in this area was essentially uncontaminated by the DEC's STARS target compound list.

Similarly, in Area 2 analysis of the TCLP extract obtained from soil samples collected in borings H15, H19 and H26 showed the presence of primarily ethylbenzene, toluene and total xylenes indicative of a gasoline spill or spills.

##### **4.3.2 Water Sampling Results**

Analysis of the water sample collected from the temporary monitoring well installed in boring H-5 showed high levels of n-butylbenzene and naphthalene (i.e. 230 micrograms per liter (ug/liter) and 1,700 ug/l, respectively). The presence of naphthalene in this sample indicates that it is highly probable that the soil contamination observed in the soil sample collected at H-1 as well as the contamination observed in samples previously collected by Dames and Moore has impacted the groundwater. It is apparent that the contamination is moving in a northerly direction since contamination was not observed in water sampled from the temporary well installed at boring H-4 which lies to the northwest of areas of known contamination. Additionally, it is apparent that the contamination is being generated on the site since contamination was not observed in groundwater sampled from the well installed at boring H-13 which is located at the southern extreme of contamination.

## **5.0 CONCLUSIONS / RECOMMENDATIONS**

A fairly well defined area of soil contaminated with a fuel oil has been identified in Area 1. Based on laboratory analysis of the soil samples collected, the soils in this area exceed guidelines established by the NYDEC's Spill Technology and Remediation Series (STARS) Memo #1 Petroleum-Contaminated Soil Guidance Policy which must be satisfied in order for soil to be considered acceptably remediated or not sufficiently contaminated (Please refer to Appendix for A for a summary of analytical results). Additionally, it is apparent that contamination present in

the soil has impacted the groundwater in Area 1. The extent of the groundwater contamination plume could not be determined due to limitation of the project scope but the potential exists that the plume has extended beyond the boundaries of the property. It is recommended that additional investigation be completed to determine the limits of the groundwater contamination plume.


Similarly, in Area 2 it is apparent based on the analytical results of the soil samples collected that the soil contains contaminants indicative of a gasoline spill. Due to the limited number of samples collected it is not clear that the analytical result indicate widespread contamination or isolated releases. Consequently, additional investigation of Area 2 to define the extent of contamination and whether or not such contamination has impacted the groundwater appears to be warranted. Assuming, that contaminated soils identified in this area are related in an area of widespread contamination, a potential extent of contamination based on the analysis of the samples collected was developed to assist in the planning of a remedial response in the absence of additional information. Please refer to Appendix B for a map of contaminated and potentially contaminated soils.

### **5.1 Estimated Volume of Contaminated Soil**

Based on laboratory analysis the soil samples collected it appears the area of contamination in Area 1 is at least 13,216 square feet. Since it is apparent that the contamination has impacted the ground water and because the contamination will primarily float on top of the groundwater the vertical extent of contamination ranges from 5 to 11 feet. Using the maximum vertical extent of contamination with the calculated horizontal area the estimated volume of contaminated soil in Area 1 is 5,384 cubic yards. In Area 2, the estimated volume of potentially contaminated soil was calculated to be 3,654 cubic yards. Please refer to Appendix B for Calculations of Estimated Volume of Contaminated Soil.

The information presented in this report is limited to the investigation conducted and described, and is not necessarily inclusive of all conditions present at the subject site. If you have any questions regarding this report, please contact this office at (315) 733-0191.

Respectfully Submitted By:  
**HYGEIA OF NEW YORK, INC.**

  
Brian C. King, C.I.H.  
Project Manager

Reviewed and Approved by:

Eugene A. Carcone, C.S.P.  
President

**APPENDIX A**

**Sample Summary**

## SUMMARY OF SOIL AND WATER SAMPLING\*

Whitesboro Street in Utica, Oneida County, New York (Oneida County Tax IDs 318.8-1-48, 47, 46, 45, 44, 43, 42 and 41)

DATE	SAMP ID	TYPE	ANALYSIS	LOCATION	CONTAMINANT	CONC (ppb)	DEC STARS ECV (ppb)
10/26/99	H1	Soil	8021		Styrene	4,500	N/A
					Naphthalene	14,000	200**
10/26/99	H3	Soil	8021 TCLP		Ethylbenzene	9	5
					Toluene	7	5
					m & p Xylene	31	5
					o-Xylene	33	5
					1, 2, 4 - Trimethylbenzene	21	5
					1, 3, 5 - Trimethylbenzene	3	5
					n-Butylbenzene	2	5
10/26/99	H8	Soil	8021 TCLP		Toluene	3	5
10/27/99	H10	Soil	8021 TCLP		Ethylbenzene	7	5
					Toluene	7	5
					m & p Xylene	15	5
					o-Xylene	15	5

\* Only parameters with measurable quantities are included in the table. Concentrations of other parameters were below detection limits. Please refer to the Laboratory Analysis Reports in Appendix D for complete analytical results.

\*\* TCLP Alternative Guidance Value

\*\*\* Concentration does not exceed DEC STARS Human Health Guidance Value of  $3.0 \times 10^5$  ug/kg but does exceed nuisance criteria. EVG - Extraction Guidance Value, N/A - Not Applicable

**SUMMARY OF SOIL AND WATER SAMPLING - CONTINUED\***

Whitesboro Street in Utica, Oneida County, New York (Oneida County Tax IDs 318.8-1-48,47,46,45,44,43,42 and 41

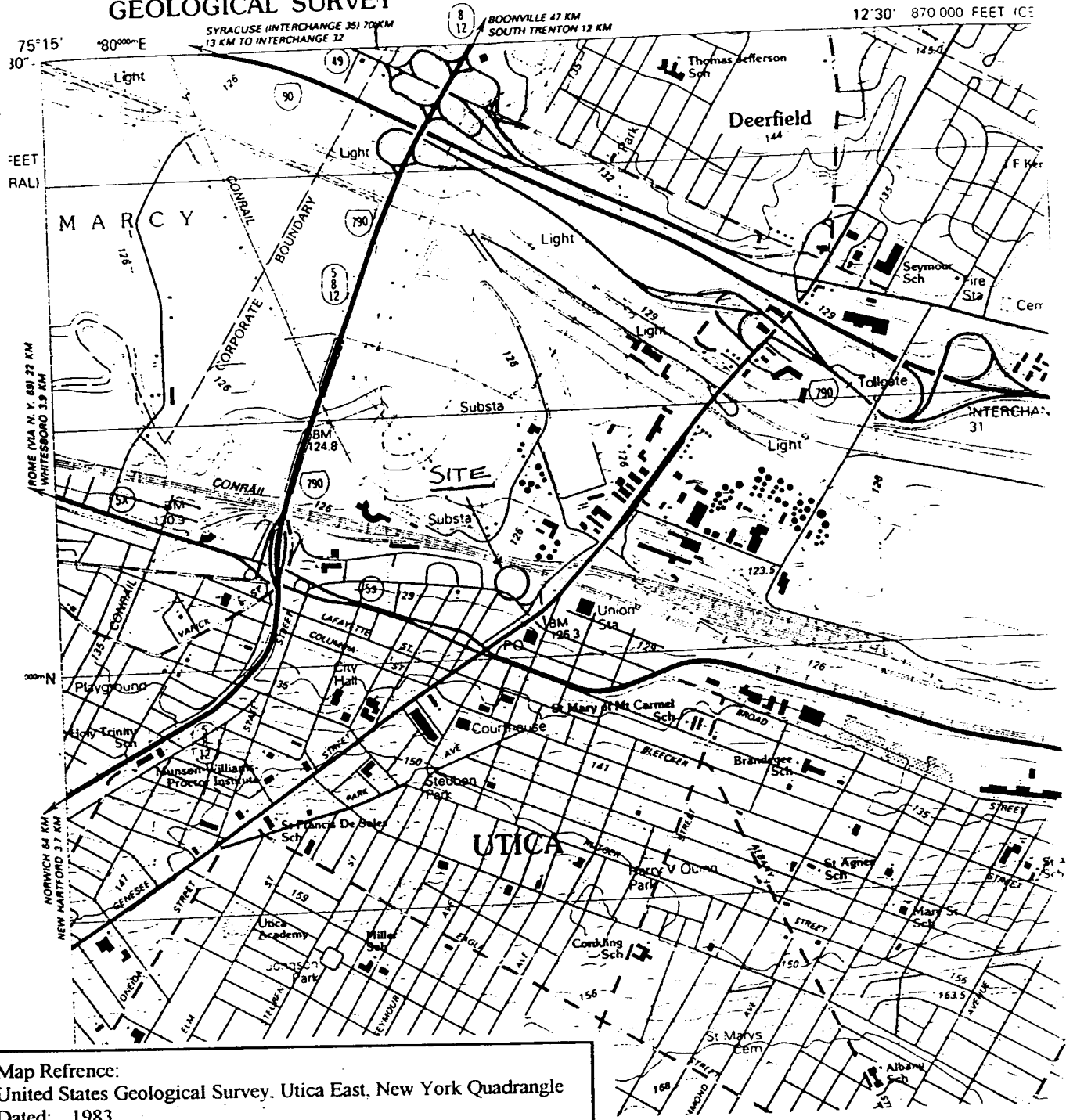
DATE	SAMP ID	TYPE	ANALYSIS	LOCATION	CONTAMINANT	CONC	DEC SEARS	DEC SEARS (PPM)
10/27/99	H15	Soil			Toluene	53		5
					m & p Xylene	7		5
10/27/99	H19	Soil			Ethylbenzene	15		5
					Toluene	56		5
					m & p Xylene	72		5
					o- Xylene	16		5
10/28/99	H24	Soil	N/A		N/A	N/A		N/A
10/28/99	H5	Water	8021		n-Butylbenzene	230		5
					Naphthalene	1,700		10
					Fluorene	7		50
			8270					
10/28/99	H13	Water	N/A		N/A	N/A		N/A
10/28/99	H4	Water	N/A		N/A	N/A		N/A
10/28/99	H26	Soil	8021TCLP		Ethylbenzene	5		5
					Toluene	25		5
					m & p Xylene	18		5
					o- Xylene	11		5

\* Only parameters with measurable quantities are included in the table. Concentrations of other parameters were below detection limits. Please refer to the Laboratory Analysis Reports in Appendix D for complete analytical results.  
 EVG - Extraction Guidance Value, N/A - Not Applicable

**APPENDIX B**

**Site Maps**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY



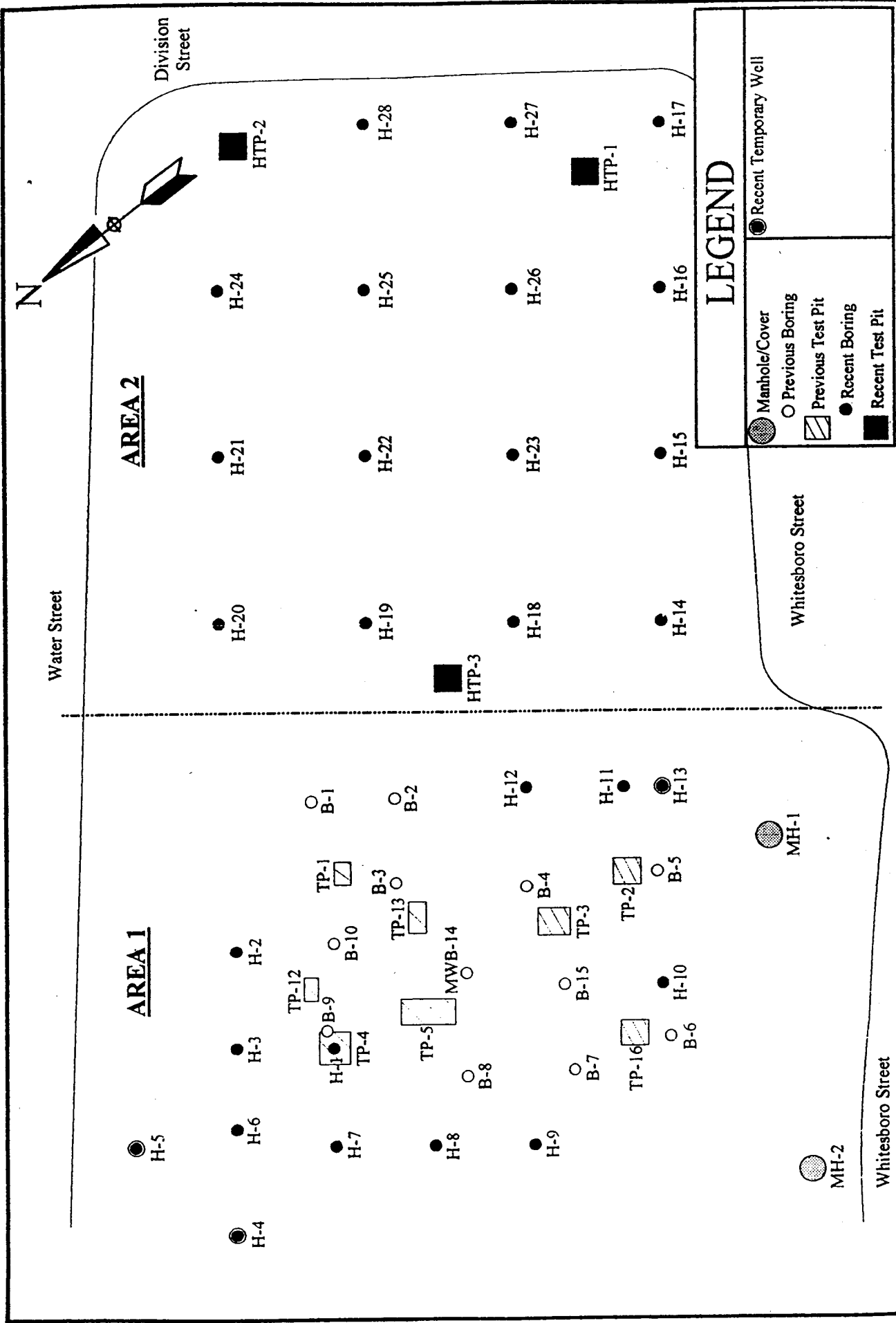
Map Reference:  
United States Geological Survey, Utica East, New York Quadrangle  
Dated: 1983

**Figure 1: Site Location Map**  
14 - 34 Whitesboro Street  
Phase II Environmental Site Assessment

**HYGEIA OF NEW YORK, INC.**  
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Utica, New York 13501  
Telephone 315-733-0191 • Fax 315-735-4922  
Toll Free 1-800-662-5445

City of Utica	Oneida County, N. Y.
Scale: 1" = 2000'	Proj. No.:

Drafter: B. King Date 10/25/99

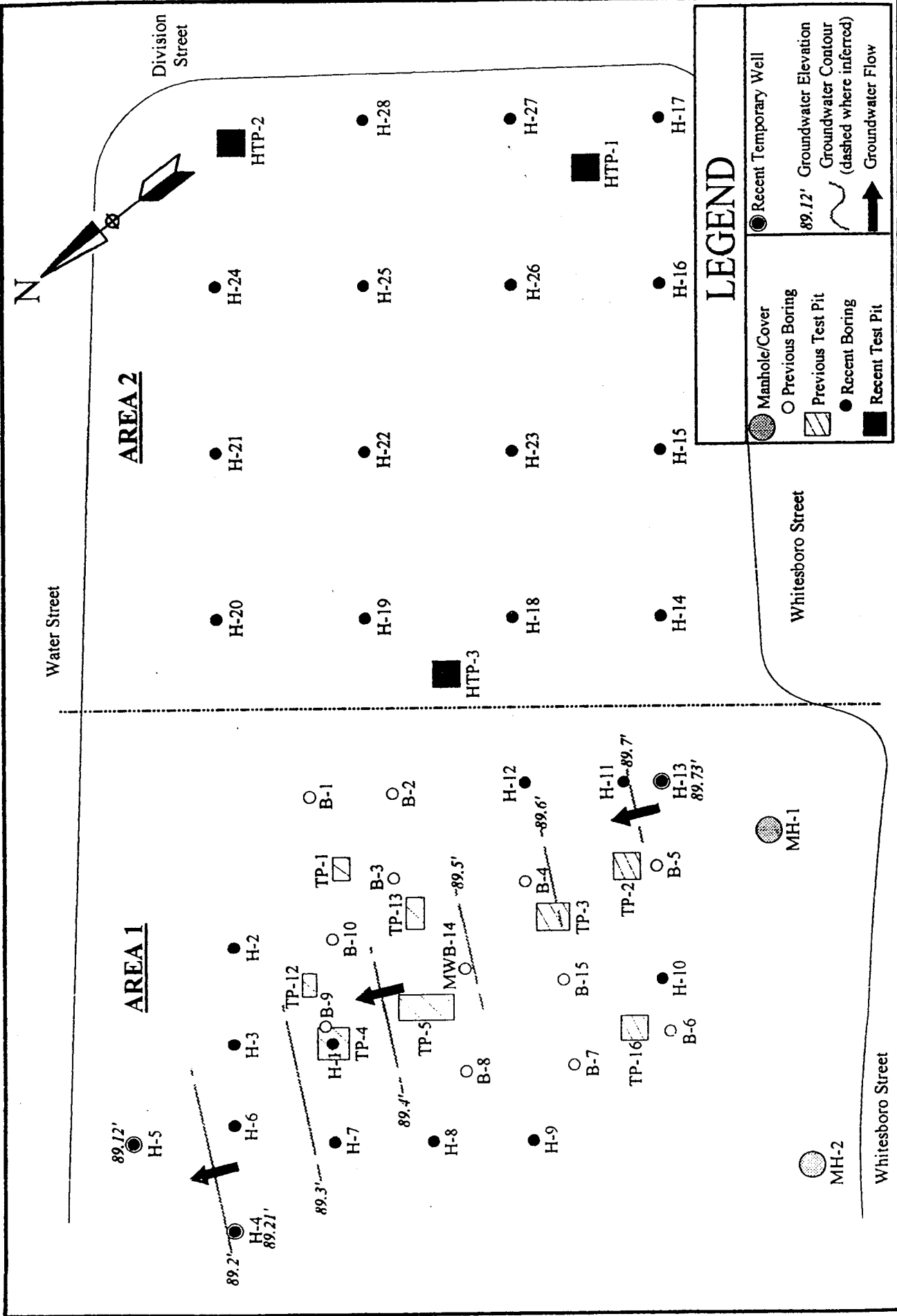


**LEGEND**

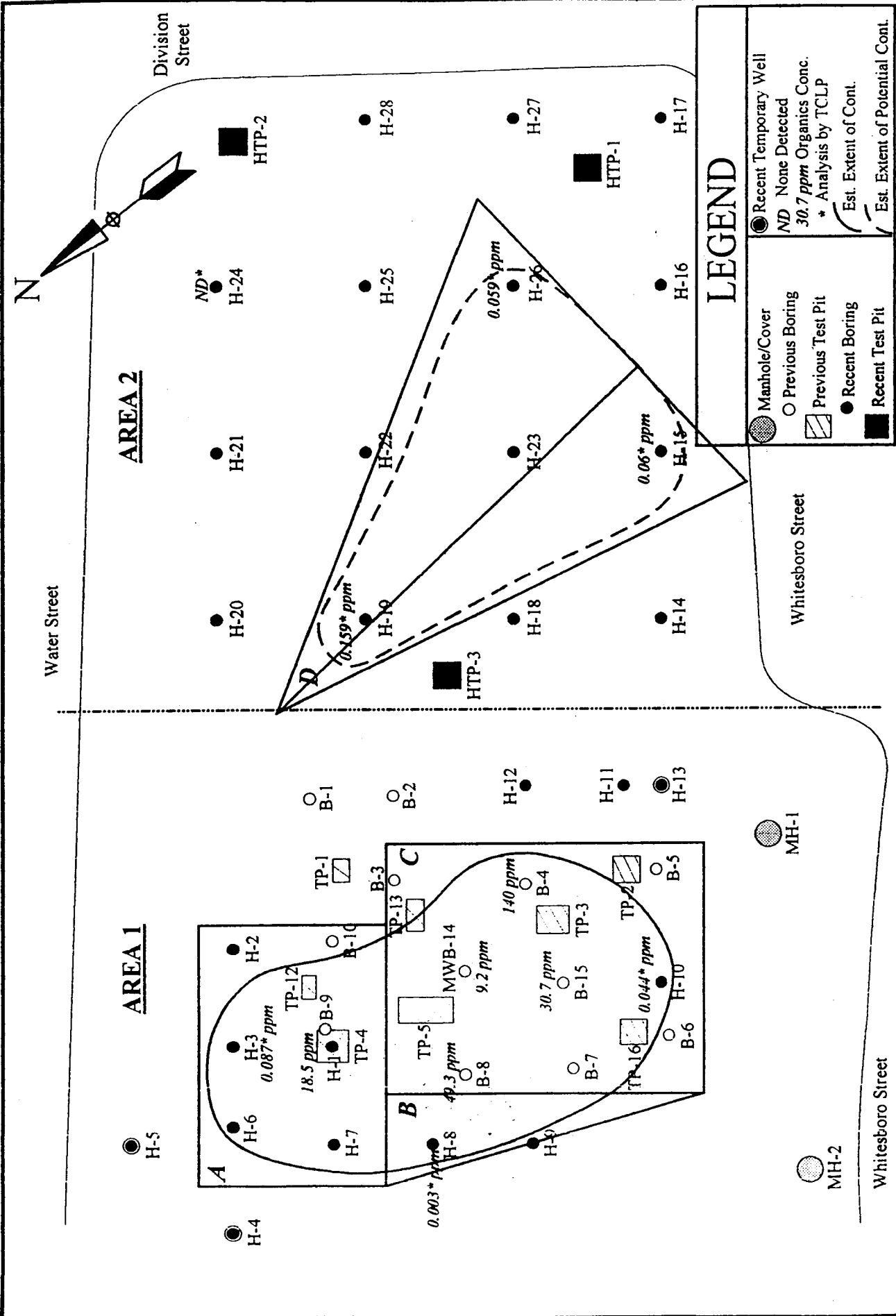
- Manhole/Cover
- Recent Temporary Well
- Previous Boring
- Recent Boring
- Previous Test Pit
- Recent Test Pit

<b>HYGELA OF N.Y., INC.</b>		<b>Date:</b> December 1999	<b>Project No.:</b> G5815
Site Map with Boring Locations		<b>Scale:</b> 1" = Approx. 40 ft.	<b>Figure No.:</b> 1
14-34 Whitesboro Street Utica, New York		<b>Drawn By:</b> TAW	<b>Location:</b> Utica, NY

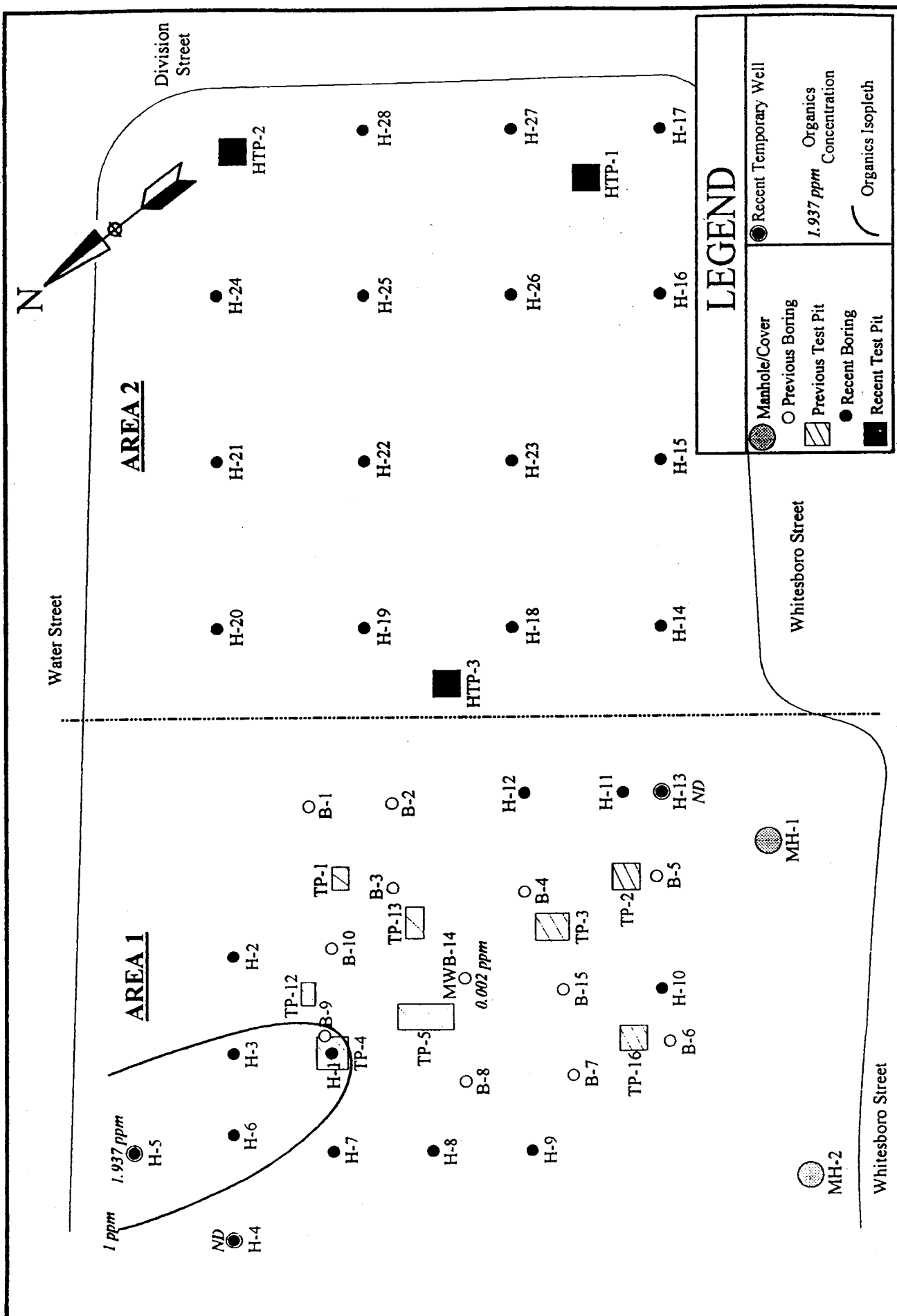




<b>HYGEIA OF N.Y., INC.</b>		<b>Date:</b> December 1999	<b>Project No.:</b> G5815
<b>Groundwater Contour and Flow Map</b>	<b>14-34 Whitesboro Street Utica, New York</b>	<b>Scale:</b> 1" = Approx. 40 ft.	<b>Figure No.:</b> 2
<small>Revised Data Collected 10/26/99</small>		<b>Drawn By:</b> JAW	<b>Location:</b> Utica, NY



<b>HYGEIA OF N.Y., INC.</b>		<b>Date:</b> December 1999	<b>Project No.:</b> G5815
<b>Estimated Areas of Contamination</b>		<b>Scale:</b> 1" = Approx. 40 ft.	<b>Figure No.:</b> 3
14-34 Whitesboro Street Utica, New York		<b>Drawn By:</b> JAW	<b>Location:</b> Utica NY



### LEGEND

Manhole/Cover Previous Boring Previous Test Pit Recent Boring Recent Test Pit	Recent Temporary Well  1.937 ppm Organics Concentration  Organics Isopleth
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<b>HYGEIA OF N.Y., INC.</b>		Date: December 1999	Project No.: G5815
Organics Distribution in Groundwater Map	14-34 Whitesboro Street Utica, New York	Scale: 1" = Approx. 40 ft.	Figure No.: 4
		Drawn By: JAW	Location: Utica, NY

# CALCULATIONS FOR ESTIMATED VOLUME OF CONTAMINATED SOIL

## AREA A:

Length: 80 feet  
Width: 56 feet  
Depth: 11 feet  
LxWxD: 49,280 cubic feet = 1,825 cubic yards

## AREA B:

Height: 96 feet  
Base: 28 feet  
Depth: 11 feet  
 $0.5(B \times H) \times D$ : 14,784 cubic feet = 548 cubic yards

## AREA C:

Length: 96 feet  
Width: 77 feet  
Depth: 11 feet  
LxWxD: 81,312 cubic feet = 3,012 cubic yards

## AREA D:

Height: 152 feet  
Base: 118 feet  
Depth: 11 feet  
 $0.5(B \times H) \times D$ : 98,648 cubic feet = 3,654 cubic yards

TOTAL: 9,038 cubic yards

**APPENDIX C**

**Field Data**

**Subsurface Log**

Hole No.: H-1

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:

Method of Investigation: Advance 4-foot long macro-core Sampler with direct-push rig. Collect continuous soil samples.

Location: Utica, NY

Project No.: G5815

Drilling Co.: Central Pump & Tank

Driller: Dan

Weather: clear, mild 55°F

Helper: Martin

Project Manager: John Witz

Geologist: John Witz

Drill Rig: Geoprobe 5400

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.0	Red/brown, dry, FILL. (cinders and brick) 2.0	4.0		
	0-2	4-8	NA	NA	4.0	Brown, dry, fine SAND and SILT. SAA, trace clay.	12.3		
10	0-3	8-12	NA	NA	4.0	SAA.	9.6		
						10.5			
15						Brown, wet, fine-medium SAND.			-groundwater first encountered at approx. 10.5 feet.
						Bottom of Boring = 12.0			
20									
25									
30									
35									
							Mini Rae Background 1.9 ppm		SAA = Same As Above

Sample Types:

S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. Macro-core \_\_\_\_\_

N= ASTM D1586

Back-fill Well Key

Cement  
 Sand

Bentonite  
 Native Fill

Subsurface Log

Hole No.: H-2

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: Geoprobe 5400

Weather: Clear, mild  
55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.5	Red/brown/gray, dry, Fill. (cinders and brick)	2.9		
	0-2	4-8	NA	NA	2.0				
10						SAA. 4.5 Brown, moist, SILT, some clay, little fine sand.	3.1		
	0-3	8-12	NA	NA	3.0				
15						SAA. 16.5 Brown, wet, fine to medium SAND.	2.8		-groundwater first encountered at approximately 18.5 feet.
						Bottom of Boring = 12.0			
20									
25									
30									
35									

Mini Rae Background 1.9ppm

SAA = Same As Above

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-3  
Sheet: 1 of 1

Date Started: 10-26-99  
Date Finished: 10-26-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather: clear, mild 55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.0	Red/brown, dry, FILL. (Cinders and brick) 2.0	3.2		
						Brown/black, dry, SILT, some clay, trace fine sand.			
10	0-2	4-8	NA	NA	4.0	SAA. 7.0	3.3		
15	0-3	8-12	NA	NA	2.5	Brown, moist, fine SAND and SILT, trace clay. SAA. 10.5	5.5		
20						Brown, wet, fine to medium SAND. Bottom of Boring = 12.0			
25									
30									
35							Mini Rice Background 1.9 ppm		

-groundwater first encountered at approximately 10.5 feet.

SAA = Same As Above

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core  
N= ASTM D1586

Back-fill Well Key  
 Cement       Bentonite  
 Sand          Native Fill



Subsurface Log

Hole No.: H-4

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Location: Utica, NY

Project No.: G5815

Drilling Co.: Central Pump & Tank

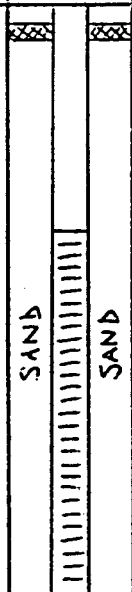
Driller: Dan  
Helper: Martin

Weather: clear, mild  
55°F

Project Manager: John Witz

Geologist: John Witz

Drill Rig: GenProbe 5400

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Red/brown/gray, dry, FILL. (Cinders and brick)	2.6		
	0-2	4-8	NA	NA	2.5				
10	0-3	8-12	NA	NA	3.5	Brown, wet, fine to medium SAND, little silt. SAA.	2.3	SAND	- groundwater first encountered at approximately 7.5 feet.
15						Bottom of Boring = 12.0			
20						Note: Installed 1-inch diameter, 10-slot, PVC Screen from 16 feet below grade to 6 feet below grade and 1-inch diameter, sch. 40 PVC riser from 6 feet below grade to approximately 2 feet above grade.			
25									
30									
35									

Mini-Pne Background  
1.9ppm

SAA = Same As Above.

Sample Types:

S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. Macro-core \_\_\_\_\_

Back-fill Well Key

Cement Sand  Bentonite  
SAND  Native Fill

N= ASTM D1586

**Subsurface Log**

Hole No.: H-5

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:

Method of Investigation: Advance 4-foot long macro-core Sampler with direct-push rig. Collect continuous soil samples.

Location: Utica, NY

Project No.: G5815

Drilling Co.: Central Pump & Tank

Driller: Dan  
Helper: Martin  
Drill Rig: Geoprobe 5400

Weather: clear, mild  
55°F

Project Manager: John Witz

Geologist: John Witz

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.5	Brown/gray/red, dry, FILL. (cinders and brick)	2.3		
	0-2	4-8	NA	NA	4.0				
10						7.0 Brown, wet, SILT, little fine sand.	2.6		-groundwater first encountered at approximately 7 feet.
						Refusal at 8.0 (could not penetrate with macro-core sampler)			
15						Note: Installed 1-inch diameter, 10-slot, PVC screen from 16 feet below grade to 6 feet below grade and 1-inch diameter, Sch. 40 PVC riser from 6 feet below grade to approximately 2 feet above grade.			
20									
25									
30									
35							Mini Rae Background 1.9 ppm		SAA = Same As Above.

**Sample Types:**

S=Split Spoon: \_\_\_\_\_

R=Rock Core: \_\_\_\_\_

T=Shelby Tube: \_\_\_\_\_

O= 4 ft. Macro-core \_\_\_\_\_

N= ASTM D1586

**Back-fill Well Key**

	Cement		Bentonite
	Sand		Native Fill

Subsurface Log

Hole No.: H-6

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather: clear, mild  
55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.5	Brown/red, dry, FILL. (cinders and brick)	1.9		
							9.0		
10	0-2	4-8	NA	NA	1.0	Brown, moist to wetter 5ft, fine to medium SAND	2.4		groundwater first encountered at approximately 5 feet.
15	0-3	8-12	NA	NA	0	-No Recovery: Sample was "washed" out of sampler by groundwater.	NA		
20						Bottom of Boring = 12.0			
25									
30									
35									

Mini Rec Background  
1.9 ppm

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. Macro-core

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-7

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:

Method of Investigation: Advance 4-foot long macro-core  
Sampler with direct-push rig. Collect continuous soil  
samples.

Location: Utica, NY

Project No.: G5815

Drilling Co.: Central Pump  
& Tank

Driller: Dan  
Helper: Martin  
Drill Rig: Geoprobe 5400

Weather:  
clear, mild  
55°F

Project Manager: John Witz

Geologist: John Witz

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.5	Gray/brown/red, dry, FILL. (clinders and brick)	3.3		
	0-2	4-8	NA	NA	2.0				
10						SAA. Brown, moist, fine SAND.	4.0		
						Refusal @ 3.0			
15									
20									
25									
30									
35							Mini Rine Background 1.9ppm		SAA = Same As Above.

Sample Types:

S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core

N= ASTM D1586

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-8

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:   
 Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core Sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
 Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
 Geologist: John Witz

Driller: Dan  
 Helper: Martin  
 Drill Rig: GeoProbe 5400

Weather: clear, mild 55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Red/brown, dry, FILL. (cinders and brick)	1.9		
	0-2	4-8	NA	NA	4.0				
10						WOOD. 6.0	1.9		
						7.0			
	0-3	8-12	NA	NA	4.0	Brown, med. st, fine SAND, trace silt. SAA, wet @ 11.0 ft.			
15						Bottom of Boring = 12.0			- groundwater first encountered at approximately 11 feet.
20									
25									
30									
35									

Mini-Rae Background 1.9 ppm

SAA = Same As Above

Sample Types:   
 S=Split Spoon: \_\_\_\_\_ T=Shelby Tube: \_\_\_\_\_   
 R=Rock Core: \_\_\_\_\_ O= 4 ft. macro-core   
 N= ASTM D1586

Back-fill Well Key   
  Cement  Bentonite   
  Sand  Native Fill

**Subsurface Log**

Hole No.: 11-9  
Sheet: 1 of 1

Date Started: 10-26-99  
Date Finished: 10-26-99

Client: \_\_\_\_\_ Method of Investigation: Advance 4-foot long macro-core  
Sampler with direct-push rig. Collect continuous soil  
Location: Utica, NY Samples.

Project No.: G5815 Drilling Co.: Central Pump & Tank Driller: Dan  
Project Manager: John Witz Geologist: John Witz Helper: Martin Drill Rig: Geoprobe 5400 Weather: clear, mild  
55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.5	Brown/red, dry, FILL (cinders and brick)	3.0		
	0-2	4-8	NA	NA	2.0				
10	0-3	8-12	NA	NA	3.0	SAA.	2.5		
15						Brown, wet, fine to medium SAND.	10.0		- groundwater first encountered at approximately 10 feet.
						Bottom of Boring = 12.0			
20									
25									
30									
35							Mini Pure Background 1.9 ppm		SAA = Same As Above

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core.

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

**Subsurface Log**

Hole No.: H-10

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client: \_\_\_\_\_ Method of Investigation: Advance 4-foot long macro-core  
 Location: Utica, NY Sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5E15 Drilling Co.: Central Pump & Tank Driller: Dan Weather: clear, mild  
 Project Manager: John Witz Geologist: John Witz Helper: Martin Drill Rig: GeoProbe 5400 55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.0	Brown/red/grey, dry, FILL. (cinders and brick)	4.6		
	0-2	4-8	NA	NA	2.0				
10	0-3	8-12	NA	NA	3.0	SAA.	2.6		
15						Brown, wet, fine to medium SAND Bottom of Boring = 12.0	11.0		--groundwater first encountered at approximately 11 feet
20									
25									
30									
35							Mini Rue Background 1.9 ppm		SAA = Same As Above.

Sample Types:  
 S=Split Spoon: \_\_\_\_\_ T=Shelby Tube: \_\_\_\_\_  
 R=Rock Core: \_\_\_\_\_ O= 4 ft. Macro-core \_\_\_\_\_  
 N= ASTM D1586

Back-fill Well Key  
 Cement  Bentonite  
 Sand  Native Fill

Client: \_\_\_\_\_ Method of Investigation: Advance 4-foot long macro-core  
 Sampler with direct-push rig. Collect continuous soil  
 Location: Utica, NY Samples.

Project No.: G5815 Drilling Co.: Central Pump & Tank Driller: Dan Weather: clear, mild  
 Project Manager: John Witz Geologist: John Witz Helper: Martin Drill Rig: Geoprobe 5400 55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.0	Brown/red, dry, FILL. (cinders and brick)	2.5		
5	0-2	4-7	NA	NA	2.5	SAA	2.5		
10						Refusal @ 7ft.			
15									
20									
25									
30									
35							Mn. Rue Background 1.9 ppm		SAA = Same As Above

Sample Types: S=Split Spoon: \_\_\_\_\_ T=Shelby Tube: \_\_\_\_\_  
 R=Rock Core: \_\_\_\_\_ O= 4 ft. macro-core  
 N= ASTM D1586

Back-fill Well Key  
 Cement  Bentonite  
 Sand  Native Fill



Subsurface Log

Hole No.: H-12

Date Started: 10-26-99

Sheet: 1 of 1

Date Finished: 10-26-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core  
Sampler with direct-push rig. Collect continuous soil  
samples.

Project No.: G5815  
Project Manager: John W. Fz

Drilling Co.: Central Pump  
& Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather:  
clear, mild  
55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	4.0	Brown, dry, fine to medium SAND, some silt, trace clay.	2.5		
	0-2	4-7	NA	NA	3.0				
10						Refusal @ 7ft.			
15									
20									
25									
30									
35							Mini Rac Background 1.9 ppm		SAA = Same As Above

Sample Types:  
 S=Split Spoon: \_\_\_\_\_  
 R=Rock Core: \_\_\_\_\_  
 N= ASTM D1586  
 T=Shelby Tube: \_\_\_\_\_  
 O= 4ft. macro-core

Back-fill Well Key  
 Cement       Bentonite  
 Sand          Native Fill

Subsurface Log

Hole No.: H-13  
Sheet: 1 of 1

Date Started: 10-26-99  
Date Finished: 10-26-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: Geoprobe 5400

Weather: clear, mild  
55°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Brown/gray, dry, SILT and fine SAND, little clay.	2.4		
	0-2	4-8	NA	NA	3.0				
10	0-3	8-12	NA	NA	3.0	SAA, wet @ 10.5 ft.	1.9		-groundwater first encountered at approximately 10.5 feet.
15						Bottom of Boring = 12.0			
20									
25									
30									
35							MiniPac Background 1.9 ppm		SAA = Same as Above.

Sample Types:  
 S=Split Spoon: \_\_\_\_\_  
 R=Rock Core: \_\_\_\_\_  
 N= ASTM D1586  
 T=Shelby Tube: \_\_\_\_\_  
 O= 4 ft. macro-core

Back-fill Well Key  
 Cement  
 SAND  
 Bentonite  
 Native Fill

Subsurface Log

Hole No.: H-14

Date Started: 10-27-99

Sheet: 1 of 1

Date Finished: 10-27-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core  
Sampler with direct-push rig. Collect continuous soil  
samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump  
& Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather:  
cool  
40°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Brown/red, dry, FILL.	2.5		
	0-2	4-8	NA	NA	3.0	SAA.	2.3		
10	0-3	8-12	NA	NA	4.0	Brown, dry, fine to medium SAND, little silt. SAA, wet @ 10 ft.	2.2		-groundwater first encountered at approximately 10 feet.
						Bottom of Boring = 12.0			
15									
20									
25									
30									
35							Mini Rae Background 1.3 ppm		SAA = Same As Above.

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. Macro-core

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-15  
Sheet: 1 of 1

Date Started: 10-27-99  
Date Finished: 10-27-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core Sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather: Cool  
40°

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	1.0	Red/brown, dry, FILL. (cinders and brick)	3.1		- groundwater first encountered at approximately 10 feet.
	0-2	4-8	NA	NA	3.0	SAA.			
							6.0	3.0	
10	0-3	8-12	NA	NA	3.0	Brown, moist, SILT and fine SAND, trace clay. SAA.			
							10.0	2.4	
15						Brown, wet, fine to medium SAND.			
						Bottom of Boring = 12.0			
20									
25									
30									
35									

MiniPac Background  
1.5 ppm

SAA = Same As Above

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-16  
Sheet: 1 of 1

Date Started: 10-27-99  
Date Finished: 10-27-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John W. Fz

Drilling Co.: Central Pump & Tank  
Geologist: John Wirtz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather: cool  
40°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.5	Red/brown, dry, FILL. (cinders and brick)	6.3		
10	0-2	4-8	NA	NA	2.5	SAA.  Brown, moist, SILT, some fine sand, trace clay.	3.5		
15	0-3	8-12	NA	NA	3.5	SAA.  Brown, wet, fine to medium S&M.	2.5		groundwater first encountered at approximately 10.5 feet
20						Bottom of Boring = 12.0			
25									
30									
35							Mini Rac Background 1.8 ppm		

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core \_\_\_\_\_

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

SAA = Same As Above.

Subsurface Log

Hole No.: H-17

Date Started: 10-27-99

Sheet: 1 of 1

Date Finished: 10-27-99

Client:

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Location: Utica, NY

Project No.: G5815

Drilling Co.: Central Pump & Tank

Driller: Dan  
Helper: Martin  
Drill Rig: GenProbe 5400

Weather:  
Cool  
40°F

Project Manager: John Witz

Geologist: John Witz

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Gray/brown, dry, FILL. (cinders and brick)	2.3		
	0-2	4-8	NA	NA	2.0				
10						SAA. <span style="float: right;">5.0</span> Brown, moist, fine to medium SAND.	2.9		
	0-3	8-12	NA	NA	3.0				
15						Bottom of Boring = 12.0			
20									
25									
30									
35							Mini Rae Background 1.8 ppm		SAA = Same As Above.

Sample Types:

S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. Macro-core \_\_\_\_\_

N= ASTM D1586

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-18  
Sheet: 1 of 1

Date Started: 10-27-99  
Date Finished: 10-27-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5E15  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather: Clear  
40°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Red/brown, dry, FILL. (cinders and brick)	2.8		
10	0-2	4-8	NA	NA	2.0	SAA. <span style="float: right;">5.0</span> Brown, moist, fine to medium SAND.	2.7		
15	0-3	8-12	NA	NA	3.0	SAA, wet @ 10.5 ft.  Bottom of Boring = 12.0	4.3		- Groundwater first encountered at approximately 10.5 feet.
20									
25									
30									
35							Mini Rac Background 1.8 ppm		JAA = Same as Above

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-19

Date Started: 10-27-99

Sheet: 1 of 1

Date Finished: 10-27-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core Sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather: cool  
40°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Red/brown/gray, dry, FILL. (cinders and brick)	3.9		
	0-2	4-8	NA	NA	2.0	SAA. 5.0	3.2		
10						Brown, moist, SILT, some clay, little fine sand.			
	0-3	8-12	NA	NA	4.0	SAA. 10.0	2.8		
15						Brown, wet, fine to medium SAND 11.0			-groundwater first encountered at approximately 10 feet.
						Brown, wet, SILT and fine SAND, little clay. Bottom of Boring = 12.0			
20									
25									
30									
35							Mini-Rac Background 1.3 ppm		SAA = Same As Above

Sample Types:  
 S=Split Spoon: \_\_\_\_\_  
 R=Rock Core: \_\_\_\_\_  
 N= ASTM D1586  
 T=Shelby Tube: \_\_\_\_\_  
 O= 4 ft. macro-core

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill



Subsurface Log

Hole No.: H-20

Date Started: 10-27-99

Sheet: 1 of 1

Date Finished: 10-27-99

Client:

Method of Investigation: Advance 4-foot long macro-core Sampler with direct-push rig. Collect continuous soil samples.

Location: Ulster, NY

Project No.: G5815

Drilling Co.: Central Pump & Tank

Driller: Dan

Weather:

Helper: Martin

60:1

Project Manager: John Witz

Geologist: John Witz

Drill Rig: Geoprobe 5400

40°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	2.0	Brown/red, dry, FILL. (cinders and brick)	4.2		
10	0-2	4-8	NA	NA	4.0	Brown/gray, moist to wet @ 7ft. fine to medium SAND, some silt.	3.4		
15						Bottom of Boring = 8.0			
20									
25									
30									
35									

-groundwater first encountered at approximately 7 feet.

Mini Rae Background 1.8 ppm

Sample Types:

S=Split Spoon: \_\_\_\_\_

T=Shelby Tube: \_\_\_\_\_

R=Rock Core: \_\_\_\_\_

O= 4 ft. macro-core \_\_\_\_\_

N= ASTM D1586

Back-fill Well Key

Cement

Bentonite

Sand

Native Fill

Subsurface Log

Hole No.: H-21

Date Started: 10-27-99

Sheet: 1 of 1

Date Finished: 10-27-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: Geoprobe 5400

Weather: ca 40°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.0	Brown/red, dry, FILL. (cinders and brick)	3.9		
	0-2	4-8	NA	NA	4.0				
10	0-3	8-12	NA	NA	4.0	Brown, moist, fine to medium SAND. SAA, wet @ 10.5 ft.	2.7		Groundwater first encountered at approximately 10.5 feet.
							2.7		
15						Bottom of Boring = 12.0			
20									
25									
30									
35							MiniRac Background 1.8 ppm		SAA = Same As Above.

Sample Types:  
 S=Split Spoon: \_\_\_\_\_  
 R=Rock Core: \_\_\_\_\_  
 N= ASTM D1586  
 T=Shelby Tube: \_\_\_\_\_  
 O= 4 ft. Macro-core \_\_\_\_\_

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-22

Date Started: 10-27-99

Sheet: 1 of 1

Date Finished: 10-27-99

Client:  
Location: Utica, NY

Method of Investigation: Advance 4-foot long macro-core sampler with direct-push rig. Collect continuous soil samples.

Project No.: G5815  
Project Manager: John Witz

Drilling Co.: Central Pump & Tank  
Geologist: John Witz

Driller: Dan  
Helper: Martin  
Drill Rig: GeoProbe 5400

Weather:  
cal  
40°F

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	3.0	Brown/red, dry, FILL. (cinders and brick)	3.1		
10	0-2	4-8	NA	NA	4.0	Brown, moist, SILT, some fine sand, trace clay.	2.9		
15	0-3	8-12	NA	NA	4.0	SAA, wet @ 11 ft.	2.4		
20						Bottom of Boring = 12.0			
25									
30									
35									

- groundwater first encountered at approximately 11 feet.

MiniPave Background  
1.8 ppm

SAA = Same As Above.

Sample Types:  
S=Split Spoon: \_\_\_\_\_  
R=Rock Core: \_\_\_\_\_  
N= ASTM D1586

T=Shelby Tube: \_\_\_\_\_  
O= 4 ft. macro-core

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

Subsurface Log

Hole No.: H-25

Date Started: 10-27-99

Sheet: 1 of 1

Date Finished: 10-27-99

Client:

Method of Investigation: Advance 4-foot long macro-core Sampler with direct-push rig. Collect continuous soil samples.

Location: Utica, NY

Project No.: G5815

Drilling Co.: Central Pump & Tank

Driller: Dan

Weather: Cool

Helper: Martin

40°F

Project Manager: John Witz

Geologist: John Witz

Drill Rig: Geoprobe 5400

Depth (ft.)	Sample Information					Sample Description	Field Screening Readings	Well Details	Groundwater and Other Observations
	No.	Depth (ft.)	Blows per 6"	N	Recovery (ft.)				
5	0-1	0-4	NA	NA	4.0	Brown/red/gray, dry, FILL. (Cinders and brick)	2.9		
10	0-2	4-8	NA	NA	4.0	SAA.  Brown, moist, fine SAND, some silt. SAA, wet at 10.5 feet.	2.1		
15	0-3	8-12	NA	NA	4.0	Bottom of Boring = 12.0			- groundwater first encountered at approximately 10.5 feet.
20									
25									
30									
35							MiniPac Background 1.8 ppm		SAA = Same As Above

Sample Types:

S=Split Spoon: \_\_\_\_\_

R=Rock Core: \_\_\_\_\_

T=Shelby Tube: \_\_\_\_\_

O= 4 ft. macro-core \_\_\_\_\_

N= ASTM D1586

Back-fill Well Key

<input type="checkbox"/>	Cement	<input type="checkbox"/>	Bentonite
<input type="checkbox"/>	Sand	<input type="checkbox"/>	Native Fill

TEST PIT LOG

PIT ID: TP-2

PIT DIMENSIONS: 4 x 8 x 8 (W x L x D)

D E P T H  I N  F E E T	2	Gross, Woods, Brush TOP SOIL
	4	FILL - Red Bricks, Sand
	6	Fill - Rugs, Red Brick, Sand,
	8	Fill - Red Brick, Sand, Some Clay
	10	SAND - medium to fine - terminated

14-34 Whitesboro Street Utica, New York	
Date: <u>10/27/99</u>	Job No.: _____
HYGEIA OF N.Y., INC. 430 CATHERINE STREET UTICA, NY 13501	

TEST PIT LOG

PIT ID: TP-1

PIT DIMENSIONS: 4' X 8' X 6' (W X L X D)

Grass

D E P T H  I N  F E E T	2	Top Soil
	4	Fill - Red Brick Greyish Soil/Ash
	6	Same as above
	8	Black material appearing to be charred wood.
	10	Concrete Slab - Pit Terminated

14-34 Whitesboro Street Utica, New York	
Date: <u>10/27/99</u>	Job No.: _____
HYGEIA OF N.Y., INC. 430 CATHERINE STREET UTICA, NY 13501	

**APPENDIX D**

**Analytical Reports**

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *QJS*  
QC: *PD*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-1 AM 10/26/99 G

ULI I.D.: 30299077

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	86%	10/29/99		WC7966
EPA Method 8021				
Dichlorodifluoromethane	<490ug/kg dw	11/14/99	01	VA4669
Chloromethane	<490ug/kg dw	11/14/99	01	VA4669
Vinyl Chloride	<490ug/kg dw	11/14/99	01	VA4669
Bromomethane	<490ug/kg dw	11/14/99	01	VA4669
Chloroethane	<490ug/kg dw	11/14/99	01	VA4669
Trichlorofluoromethane	<490ug/kg dw	11/14/99	01	VA4669
1,1-Dichloroethene	<490ug/kg dw	11/14/99	01	VA4669
Methylene Chloride	<490ug/kg dw	11/14/99	01	VA4669
trans-1,2-Dichloroethene	<490ug/kg dw	11/14/99	01	VA4669
1,1-Dichloroethane	<490ug/kg dw	11/14/99	01	VA4669
2,2-Dichloropropane	<490ug/kg dw	11/14/99	01	VA4669
cis-1,2-Dichloroethene	<490ug/kg dw	11/14/99	01	VA4669
Chloroform	<490ug/kg dw	11/14/99	01	VA4669
Bromochloromethane	<490ug/kg dw	11/14/99	01	VA4669
1,1,1-Trichloroethane	<490ug/kg dw	11/14/99	01	VA4669
1,1-Dichloropropene	<490ug/kg dw	11/14/99	01	VA4669
Carbon Tetrachloride	<490ug/kg dw	11/14/99	01	VA4669
1,2-Dichloroethane	<490ug/kg dw	11/14/99	01	VA4669
Trichloroethene	<490ug/kg dw	11/14/99	01	VA4669
1,2-Dichloropropane	<490ug/kg dw	11/14/99	01	VA4669
Bromodichloromethane	<490ug/kg dw	11/14/99	01	VA4669
Dibromomethane	<490ug/kg dw	11/14/99	01	VA4669
cis-1,3-Dichloropropene	<490ug/kg dw	11/14/99	01	VA4669
trans-1,3-Dichloropropene	<490ug/kg dw	11/14/99	01	VA4669
1,1,2-Trichloroethane	<490ug/kg dw	11/14/99	01	VA4669
Tetrachloroethene	<490ug/kg dw	11/14/99	01	VA4669
1,3-Dichloropropane	<490ug/kg dw	11/14/99	01	VA4669
Dibromochloromethane	<490ug/kg dw	11/14/99	01	VA4669
1,2-Dibromoethane	<490ug/kg dw	11/14/99	01	VA4669
1,1,1,2-Tetrachloroethane	<490ug/kg dw	11/14/99	01	VA4669
Bromoform	<490ug/kg dw	11/14/99	01	VA4669
1,1,2,2-Tetrachloroethane	<490ug/kg dw	11/14/99	01	VA4669
1,2,3-Trichloropropane	<490ug/kg dw	11/14/99	01	VA4669
1,2-Dibromo-3-chloropropane	<490ug/kg dw	11/14/99	01	VA4669
Benzene	<490ug/kg dw	11/14/99	01	VA4669
Toluene	<490ug/kg dw	11/14/99	01	VA4669
Chlorobenzene	<490ug/kg dw	11/14/99	01	VA4669

dw = Dry weight



DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *QJS*  
QC: *PD*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-1 AM 10/26/99 G

ULI I.D.: 30299077

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Ethylbenzene	<490ug/kg dw	11/14/99	01	VA4669
m-Xylene and p-Xylene	<490ug/kg dw	11/14/99	01	VA4669
o-Xylene	<490ug/kg dw	11/14/99	01	VA4669
Styrene	4500ug/kg dw	11/14/99		VA4669
Isopropylbenzene	<490ug/kg dw	11/14/99	01	VA4669
n-Propylbenzene	<490ug/kg dw	11/14/99	01	VA4669
Bromobenzene	<490ug/kg dw	11/14/99	01	VA4669
1,3,5-Trimethylbenzene	<490ug/kg dw	11/14/99	01	VA4669
2-Chlorotoluene	<490ug/kg dw	11/14/99	01	VA4669
4-Chlorotoluene	<490ug/kg dw	11/14/99	01	VA4669
tert-Butylbenzene	<490ug/kg dw	11/14/99	01	VA4669
1,2,4-Trimethylbenzene	<490ug/kg dw	11/14/99	01	VA4669
sec-Butylbenzene	<490ug/kg dw	11/14/99	01	VA4669
4-Isopropyltoluene	<490ug/kg dw	11/14/99	01	VA4669
1,3-Dichlorobenzene	<490ug/kg dw	11/14/99	01	VA4669
1,4-Dichlorobenzene	<490ug/kg dw	11/14/99	01	VA4669
n-Butylbenzene	<490ug/kg dw	11/14/99	01	VA4669
1,2-Dichlorobenzene	<490ug/kg dw	11/14/99	01	VA4669
1,2,4-Trichlorobenzene	<490ug/kg dw	11/14/99	01	VA4669
Hexachlorobutadiene	<490ug/kg dw	11/14/99	01	VA4669
Naphthalene	14,000ug/kg dw	11/14/99		VA4669
1,2,3-Trichlorobenzene	<490ug/kg dw	11/14/99	01	VA4669

dw = Dry weight

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *ajs*  
QC: *ED*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-8 AM 10/26/99 G

ULI I.D.: 30299079

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Petroleum, EPA Method 8021				
TCLP Benzene	<0.5ug/l	11/10/99		VA4665
TCLP Ethylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP Toluene	3ug/l	11/10/99		VA4665
TCLP m-Xylene and p-Xylene	<0.5ug/l	11/10/99		VA4665
TCLP o-Xylene	<0.5ug/l	11/10/99		VA4665
TCLP Isopropylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP n-Propylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP p-Isopropyltoluene	<0.5ug/l	11/10/99		VA4665
TCLP 1,2,4-Trimethylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP 1,3,5-Trimethylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP n-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP sec-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP t-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP Naphthalene	<0.5ug/l	11/10/99		VA4665
TCLP MTBE	<10ug/l	11/10/99		VA4665
TCLP Petroleum, EPA Method 8270				
TCLP Anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluorene	<50ug/l	11/16/99		SA2209
TCLP Phenanthrene	<50ug/l	11/16/99		SA2209
TCLP Pyrene	<50ug/l	11/16/99		SA2209
TCLP Acenaphthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (b) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (k) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Chrysene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) pyrene	<50ug/l	11/16/99		SA2209
TCLP Benzo (g, h, i) perylene	<50ug/l	11/16/99		SA2209
TCLP Indeno (1, 2, 3-cd) pyrene	<50ug/l	11/16/99		SA2209
TCLP Dibenzo (a, h) anthracene	<50ug/l	11/16/99		SA2209

dw = Dry weight

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *CJS*  
QC: *PD*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-3 AM 10/26/99 G

ULI I.D.: 30299078

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Petroleum, EPA Method 8021				
TCLP Benzene	<0.5ug/l	11/10/99		VA4665
TCLP Ethylbenzene	9ug/l	11/10/99		VA4665
TCLP Toluene	7ug/l	11/10/99		VA4665
TCLP m-Xylene and p-Xylene	31ug/l	11/10/99		VA4665
TCLP o-Xylene	33ug/l	11/10/99		VA4665
TCLP Isopropylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP n-Propylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP p-Isopropyltoluene	<0.5ug/l	11/10/99		VA4665
TCLP 1,2,4-Trimethylbenzene	2ug/l	11/10/99		VA4665
TCLP 1,3,5-Trimethylbenzene	3ug/l	11/10/99		VA4665
TCLP n-Butylbenzene	2ug/l	11/10/99		VA4665
TCLP sec-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP t-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP Naphthalene	<0.5ug/l	11/10/99		VA4665
TCLP MTBE	<10ug/l	11/10/99		VA4665
TCLP Petroleum, EPA Method 8270				
TCLP Anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluorene	<50ug/l	11/16/99		SA2209
TCLP Phenanthrene	<50ug/l	11/16/99		SA2209
TCLP Pyrene	<50ug/l	11/16/99		SA2209
TCLP Acenaphthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (b) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (k) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Chrysene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) pyrene	<50ug/l	11/16/99		SA2209
TCLP Benzo (g, h, i) perylene	<50ug/l	11/16/99		SA2209
TCLP Indeno (1, 2, 3-cd) pyrene	<50ug/l	11/16/99		SA2209
TCLP Dibenzo (a, h) anthracene	<50ug/l	11/16/99		SA2209

dw = Dry weight

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *ajs*  
QC: *PO*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-10 PM 10/27/99 G

ULI I.D.: 30299080

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Petroleum, EPA Method 8021				
TCLP Benzene	<0.5ug/l	11/10/99		VA4665
TCLP Ethylbenzene	7ug/l	11/10/99		VA4665
TCLP Toluene	7ug/l	11/10/99		VA4665
TCLP m-Xylene and p-Xylene	15ug/l	11/10/99		VA4665
TCLP o-Xylene	15ug/l	11/10/99		VA4665
TCLP Isopropylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP n-Propylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP p-Isopropyltoluene	<0.5ug/l	11/10/99		VA4665
TCLP 1,2,4-Trimethylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP 1,3,5-Trimethylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP n-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP sec-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP t-Butylbenzene	<0.5ug/l	11/10/99		VA4665
TCLP Naphthalene	<0.5ug/l	11/10/99		VA4665
TCLP MTBE	<10ug/l	11/10/99		VA4665
TCLP Petroleum, EPA Method 8270				
TCLP Anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluorene	<50ug/l	11/16/99		SA2209
TCLP Phenanthrene	<50ug/l	11/16/99		SA2209
TCLP Pyrene	<50ug/l	11/16/99		SA2209
TCLP Acenaphthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (b) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (k) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Chrysene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) pyrene	<50ug/l	11/16/99		SA2209
TCLP Benzo (g, h, i) perylene	<50ug/l	11/16/99		SA2209
TCLP Indeno (1, 2, 3-cd) pyrene	<50ug/l	11/16/99		SA2209
TCLP Dibenzo (a, h) anthracene	<50ug/l	11/16/99		SA2209

dw = Dry weight

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *Q/S*  
QC: *PO*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-15 PM 10/27/99 G

ULI I.D.: 30299081

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Petroleum, EPA Method 8021				
TCLP Benzene	<3ug/l	11/11/99	05	VA4666
TCLP Ethylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP Toluene	53ug/l	11/11/99		VA4666
TCLP m-Xylene and p-Xylene	7ug/l	11/11/99		VA4666
TCLP o-Xylene	<3ug/l	11/11/99	05	VA4666
TCLP Isopropylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP n-Propylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP p-Isopropyltoluene	<3ug/l	11/11/99	05	VA4666
TCLP 1,2,4-Trimethylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP 1,3,5-Trimethylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP n-Butylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP sec-Butylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP t-Butylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP Naphthalene	<3ug/l	11/11/99	05	VA4666
TCLP MTBE	<50ug/l	11/11/99	05	VA4666
TCLP Petroleum, EPA Method 8270				
TCLP Anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluorene	<50ug/l	11/16/99		SA2209
TCLP Phenanthrene	<50ug/l	11/16/99		SA2209
TCLP Pyrene	<50ug/l	11/16/99		SA2209
TCLP Acenaphthene	<50ug/l	11/16/99		SA2209
TCLP Benzo(a)anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo(b)fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo(k)fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Chrysene	<50ug/l	11/16/99		SA2209
TCLP Benzo(a)pyrene	<50ug/l	11/16/99		SA2209
TCLP Benzo(g,h,i)perylene	<50ug/l	11/16/99		SA2209
TCLP Indeno(1,2,3-cd)pyrene	<50ug/l	11/16/99		SA2209
TCLP Dibenzo(a,h)anthracene	<50ug/l	11/16/99		SA2209

dw = Dry weight

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *CJS*  
QC: *PD*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-19 PM 10/27/99 G

ULI I.D.: 30299082

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Petroleum, EPA Method 8021				
TCLP Benzene	<3ug/l	11/11/99	05	VA4666
TCLP Ethylbenzene	15ug/l	11/11/99		VA4666
TCLP Toluene	56ug/l	11/11/99		VA4666
TCLP m-Xylene and p-Xylene	72ug/l	11/11/99		VA4666
TCLP o-Xylene	16ug/l	11/11/99		VA4666
TCLP Isopropylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP n-Propylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP p-Isopropyltoluene	<3ug/l	11/11/99	05	VA4666
TCLP 1,2,4-Trimethylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP 1,3,5-Trimethylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP n-Butylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP sec-Butylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP t-Butylbenzene	<3ug/l	11/11/99	05	VA4666
TCLP Naphthalene	<3ug/l	11/11/99	05	VA4666
TCLP MTBE	<50ug/l	11/11/99	05	VA4666
TCLP Petroleum, EPA Method 8270				
TCLP Anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluorene	<50ug/l	11/16/99		SA2209
TCLP Phenanthrene	<50ug/l	11/16/99		SA2209
TCLP Pyrene	<50ug/l	11/16/99		SA2209
TCLP Acenaphthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) anthracene	<50ug/l	11/16/99		SA2209
TCLP Fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (b) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Benzo (k) fluoranthene	<50ug/l	11/16/99		SA2209
TCLP Chrysene	<50ug/l	11/16/99		SA2209
TCLP Benzo (a) pyrene	<50ug/l	11/16/99		SA2209
TCLP Benzo (g, h, i) perylene	<50ug/l	11/16/99		SA2209
TCLP Indeno (1, 2, 3-cd) pyrene	<50ug/l	11/16/99		SA2209
TCLP Dibenzo (a, h) anthracene	<50ug/l	11/16/99		SA2209

dw = Dry weight

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *CJS*  
QC: *PD*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-24 PM 10/27/99 G

ULI I.D.: 30299083

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Petroleum, EPA Method 8021				
TCLP Benzene	<0.5ug/l	11/11/99		VA4665
TCLP Ethylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP Toluene	<0.5ug/l	11/11/99		VA4665
TCLP m-Xylene and p-Xylene	<0.5ug/l	11/11/99		VA4665
TCLP o-Xylene	<0.5ug/l	11/11/99		VA4665
TCLP Isopropylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP n-Propylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP p-Isopropyltoluene	<0.5ug/l	11/11/99		VA4665
TCLP 1,2,4-Trimethylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP 1,3,5-Trimethylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP n-Butylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP sec-Butylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP t-Butylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP Naphthalene	<0.5ug/l	11/11/99		VA4665
TCLP MTBE	<10ug/l	11/11/99		VA4665
TCLP Petroleum, EPA Method 8270				
TCLP Anthracene	<50ug/l	11/18/99		SA2209
TCLP Fluorene	<50ug/l	11/18/99		SA2209
TCLP Phenanthrene	<50ug/l	11/18/99		SA2209
TCLP Pyrene	<50ug/l	11/18/99		SA2209
TCLP Acenaphthene	<50ug/l	11/18/99		SA2209
TCLP Benzo (a) anthracene	<50ug/l	11/18/99		SA2209
TCLP Fluoranthene	<50ug/l	11/18/99		SA2209
TCLP Benzo (b) fluoranthene	<50ug/l	11/18/99		SA2209
TCLP Benzo (k) fluoranthene	<50ug/l	11/18/99		SA2209
TCLP Chrysene	<50ug/l	11/18/99		SA2209
TCLP Benzo (a) pyrene	<50ug/l	11/18/99		SA2209
TCLP Benzo (g, h, i) perylene	<50ug/l	11/18/99		SA2209
TCLP Indeno (1, 2, 3-cd) pyrene	<50ug/l	11/18/99		SA2209
TCLP Dibenzo (a, h) anthracene	<50ug/l	11/18/99		SA2209

dw = Dry weight

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *CJS*  
QC: *PD*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-5 PM 10/28/99 G

ULI I.D.: 30299084

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----				
Petroleum, EPA Method 8021				
-----				
Benzene	<25ug/l	11/13/99	05	VA4669
Ethylbenzene	<25ug/l	11/13/99	05	VA4669
Toluene	<25ug/l	11/13/99	05	VA4669
m-Xylene and p-Xylene	<25ug/l	11/13/99	05	VA4669
o-Xylene	<25ug/l	11/13/99	05	VA4669
Isopropylbenzene	<25ug/l	11/13/99	05	VA4669
n-Propylbenzene	<25ug/l	11/13/99	05	VA4669
p-Isopropyltoluene	<25ug/l	11/13/99	05	VA4669
1,2,4-Trimethylbenzene	<25ug/l	11/13/99	05	VA4669
1,3,5-Trimethylbenzene	<25ug/l	11/13/99	05	VA4669
n-Butylbenzene	230ug/l	11/13/99		VA4669
sec-Butylbenzene	<25ug/l	11/13/99	05	VA4669
t-Butylbenzene	<25ug/l	11/13/99	05	VA4669
Naphthalene	1700ug/l	11/13/99		VA4669
MTBE	<500ug/l	11/13/99	05	VA4669
Petroleum, EPA Method 8270				
-----				
Anthracene	<5ug/l	11/18/99		SA2204
Fluorene	7ug/l	11/18/99		SA2204
Phenanthrene	<5ug/l	11/18/99		SA2204
Pyrene	<5ug/l	11/18/99		SA2204
Acenaphthene	<5ug/l	11/18/99		SA2204
Benzo (a) anthracene	<5ug/l	11/18/99		SA2204
Fluoranthene	<5ug/l	11/18/99		SA2204
Benzo (b) fluoranthene	<5ug/l	11/18/99		SA2204
Benzo (k) fluoranthene	<5ug/l	11/18/99		SA2204
Chrysene	<5ug/l	11/18/99		SA2204
Benzo (a) pyrene	<5ug/l	11/18/99		SA2204
Benzo (g, h, i) perylene	<5ug/l	11/18/99		SA2204
Indeno (1, 2, 3-cd) pyrene	<5ug/l	11/18/99		SA2204
Dibenzo (a, h) anthracene	<5ug/l	11/18/99		SA2204



DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *O/S*  
QC: *PO*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-13 PM 10/28/99 G

ULI I.D.: 30299085

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----				
Petroleum, EPA Method 8021				
-----				
Benzene	<0.5ug/l	11/09/99		VA4664
Ethylbenzene	<0.5ug/l	11/09/99		VA4664
Toluene	<0.5ug/l	11/09/99		VA4664
m-Xylene and p-Xylene	<0.5ug/l	11/09/99		VA4664
o-Xylene	<0.5ug/l	11/09/99		VA4664
Isopropylbenzene	<0.5ug/l	11/09/99		VA4664
n-Propylbenzene	<0.5ug/l	11/09/99		VA4664
p-Isopropyltoluene	<0.5ug/l	11/09/99		VA4664
1,2,4-Trimethylbenzene	<0.5ug/l	11/09/99		VA4664
1,3,5-Trimethylbenzene	<0.5ug/l	11/09/99		VA4664
n-Butylbenzene	<0.5ug/l	11/09/99		VA4664
sec-Butylbenzene	<0.5ug/l	11/09/99		VA4664
t-Butylbenzene	<0.5ug/l	11/09/99		VA4664
Naphthalene	<0.5ug/l	11/09/99		VA4664
MTBE	<10ug/l	11/09/99		VA4664
Petroleum, EPA Method 8270				
-----				
Anthracene	<5ug/l	11/18/99		SA2204
Fluorene	<5ug/l	11/18/99		SA2204
Phenanthrene	<5ug/l	11/18/99		SA2204
Pyrene	<5ug/l	11/18/99		SA2204
Acenaphthene	<5ug/l	11/18/99		SA2204
Benzo(a)anthracene	<5ug/l	11/18/99		SA2204
Fluoranthene	<5ug/l	11/18/99		SA2204
Benzo(b)fluoranthene	<5ug/l	11/18/99		SA2204
Benzo(k)fluoranthene	<5ug/l	11/18/99		SA2204
Chrysene	<5ug/l	11/18/99		SA2204
Benzo(a)pyrene	<5ug/l	11/18/99		SA2204
Benzo(g,h,i)perylene	<5ug/l	11/18/99		SA2204
Indeno(1,2,3-cd)pyrene	<5ug/l	11/18/99		SA2204
Dibenzo(a,h)anthracene	<5ug/l	11/18/99		SA2204

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *C/S*  
QC: *PD*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-4 PM 10/28/99 G

ULI I.D.: 30299086

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
-----				
Petroleum, EPA Method 8021				
-----				
Benzene	<0.5ug/l	11/09/99		VA4664
Ethylbenzene	<0.5ug/l	11/09/99		VA4664
Toluene	<0.5ug/l	11/09/99		VA4664
m-Xylene and p-Xylene	<0.5ug/l	11/09/99		VA4664
o-Xylene	<0.5ug/l	11/09/99		VA4664
Isopropylbenzene	<0.5ug/l	11/09/99		VA4664
n-Propylbenzene	<0.5ug/l	11/09/99		VA4664
p-Isopropyltoluene	<0.5ug/l	11/09/99		VA4664
1,2,4-Trimethylbenzene	<0.5ug/l	11/09/99		VA4664
1,3,5-Trimethylbenzene	<0.5ug/l	11/09/99		VA4664
n-Butylbenzene	<0.5ug/l	11/09/99		VA4664
sec-Butylbenzene	<0.5ug/l	11/09/99		VA4664
t-Butylbenzene	<0.5ug/l	11/09/99		VA4664
Naphthalene	<0.5ug/l	11/09/99		VA4664
MTBE	<10ug/l	11/09/99		VA4664
Petroleum, EPA Method 8270				
-----				
Anthracene	<5ug/l	11/18/99		SA2204
Fluorene	<5ug/l	11/18/99		SA2204
Phenanthrene	<5ug/l	11/18/99		SA2204
Pyrene	<5ug/l	11/18/99		SA2204
Acenaphthene	<5ug/l	11/18/99		SA2204
Benzo (a) anthracene	<5ug/l	11/18/99		SA2204
Fluoranthene	<5ug/l	11/18/99		SA2204
Benzo (b) fluoranthene	<5ug/l	11/18/99		SA2204
Benzo (k) fluoranthene	<5ug/l	11/18/99		SA2204
Chrysene	<5ug/l	11/18/99		SA2204
Benzo (a) pyrene	<5ug/l	11/18/99		SA2204
Benzo (g, h, i) perylene	<5ug/l	11/18/99		SA2204
Indeno (1,2,3-cd) pyrene	<5ug/l	11/18/99		SA2204
Dibenzo (a, h) anthracene	<5ug/l	11/18/99		SA2204

DATE: 11/22/99

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 30299077  
Client I.D.: HSE CONSULTING SERVICES  
Sampled by: Client

APPROVAL: *QJS*  
QC: *RO*  
Lab I.D.: 10170

HORROCKS IBBOTSON  
H-26 PM 10/28/99 G

ULI I.D.: 30299087

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Petroleum, EPA Method 8021				
TCLP Benzene	<0.5ug/l	11/11/99		VA4665
TCLP Ethylbenzene	5ug/l	11/11/99		VA4665
TCLP Toluene	25ug/l	11/11/99		VA4665
TCLP m-Xylene and p-Xylene	18ug/l	11/11/99		VA4665
TCLP o-Xylene	11ug/l	11/11/99		VA4665
TCLP Isopropylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP n-Propylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP p-Isopropyltoluene	<0.5ug/l	11/11/99		VA4665
TCLP 1,2,4-Trimethylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP 1,3,5-Trimethylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP n-Butylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP sec-Butylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP t-Butylbenzene	<0.5ug/l	11/11/99		VA4665
TCLP Naphthalene	<0.5ug/l	11/11/99		VA4665
TCLP MTBE	<10ug/l	11/11/99		VA4665
TCLP Petroleum, EPA Method 8270				
TCLP Anthracene	<50ug/l	11/18/99		SA2209
TCLP Fluorene	<50ug/l	11/18/99		SA2209
TCLP Phenanthrene	<50ug/l	11/18/99		SA2209
TCLP Pyrene	<50ug/l	11/18/99		SA2209
TCLP Acenaphthene	<50ug/l	11/18/99		SA2209
TCLP Benzo (a) anthracene	<50ug/l	11/18/99		SA2209
TCLP Fluoranthene	<50ug/l	11/18/99		SA2209
TCLP Benzo (b) fluoranthene	<50ug/l	11/18/99		SA2209
TCLP Benzo (k) fluoranthene	<50ug/l	11/18/99		SA2209
TCLP Chrysene	<50ug/l	11/18/99		SA2209
TCLP Benzo (a) pyrene	<50ug/l	11/18/99		SA2209
TCLP Benzo (g, h, i) perylene	<50ug/l	11/18/99		SA2209
TCLP Indeno (1, 2, 3-cd) pyrene	<50ug/l	11/18/99		SA2209
TCLP Dibenzo (a, h) anthracene	<50ug/l	11/18/99		SA2209

dw = Dry weight

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS  
2 MATRIX INTERFERENCE  
3 PRESENT IN BLANK  
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE  
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS  
6 BLANK CORRECTED  
7 HEAD SPACE PRESENT IN SAMPLE  
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE  
QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.  
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID  
10 ADL(AVERAGE DETECTION LIMITS)  
11 PQL(PRACTICAL QUANTITATION LIMITS)  
12 SAMPLE ANALYZED OVER HOLDING TIME  
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM  
THE FILTERING PROCEDURE  
14 SAMPLED BY ULI  
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE  
WITHIN EXPERIMENTAL ERROR  
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS  
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING  
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL  
INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.  
19 CALCULATION BASED ON DRY WEIGHT  
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION  
LIMITS  
21 UG/KG AS REC.D / UG/KG DRY WT  
22 MG/KG AS REC.D / MG/KG DRY WT  
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS  
24 SAMPLE DILUTED/BLANK CORRECTED  
25 ND(NON-DETECTED)  
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED  
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE  
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL  
LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL  
29 ANALYZED BY METHOD OF STANDARD ADDITIONS  
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)  
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT  
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED  
33 NON-POTABLE WATER SOURCE  
34 VOLATILE ASP CODES

-----  
(B) POSSIBLE/PROBABLE BLANK CONTAMINATION (D) ALL COMPOUNDS IDENTIFIED  
AT A SECONDARY DILUTION FACTOR (J) ESTIMATED VALUE  
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON  
PETROLEUM DISTILLATES  
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY  
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY  
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)  
PER DAY OF CL2  
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY  
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)  
PER DAY LAS  
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS  
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED  
TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,  
CREATING A THEORETICAL TCLP VALUE  
43 METAL BY CONCENTRATION PROCEDURE  
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

**Chain Of Custody Record**

Client: HSE Consulting Services		Client Project # / Project Name		No. of Containers		Special Turnaround Time (Lab Notification required)	
Client Contact: Brian C. King		Site Location (city/state): Utica, NY		HARRIS Ibbotson			
Sample Location:		Date	Time	Matrix	Grab or Comp.	ULI Internal Use Only	Remarks
H1		10/26	AM	SOIL	Grab	3099077	
H3		10/26	"	"	"	78	
H8		10/26	"	"	"	79	
H10		10/27	PM	"	"	80	
H15		10/27	"	"	"	81	
H19		10/27	"	"	"	82	
H24		10/27	"	"	"	83	
H5		10/28	PM	WATER	"	84	
H13		10/28	"	"	"	85	
H4		10/28	"	"	"	86	
Method		L		sample bottle:	type	size	pic.
1)	8021 STARS TCLP						
2)	8270 STARS TCLP						
3)	8021 Full TOTAL						
4)	8021 STARS TOTAL						
5)	8270 STARS TOTAL						
6)	(% solids)						
7)							
8)							
9)							
10)							

ULI Internal Use Only  
 Delivery (check one):  
 ULI Sampled  
 Pickup  Dropoff  
 CC

Relinquished by: (Signature) Date Time  
 Brian C. King  
 Company: HSE Consulting Services  
 Received by: (Signature) Date Time

Relinquished by: (Signature) Date Time  
 Brian C. King  
 Received by: (Signature) Date Time

Relinquished by: (Signature) Date Time  
 Received by: (Signature) Date Time

Relinquished by: (Signature) Date Time  
 Received by: (Signature) Date Time

Rec'd for Lab by: (Signature) Time  
 Peter J. ... 11:10

Note: The numbered columns above cross-reference with the numbered columns in the upper right-hand corner.