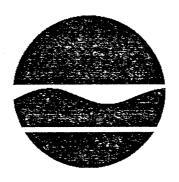
OFF SITE REMEDIAL INVESTIGATION VOLUME I

PFOHL BROTHERS LANDFILL SITE Erie County, Cheektowaga, New York Site No. 09-15-043

Issue Date: October 1993



Reported By:

New York State Department of Environmental Conservation Division of Hazardous Waste Remediation Bureau of Western Remedial Action

OFF SITE REMEDIAL INVESTIGATION

VOLUME I

PFOHL BROTHERS LANDFILL SITE Erie County, Cheektowaga, New York Site No. 09-15-043

Issue Date: October 1993



Reported By:

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
Bureau of Western Remedial Action

Table of Contents

Volur	ne I	Page(s	3)
1.0	SITE	BACKGROUND AND HISTORY	3
2.0	ОВЛ	ECTIVES OF THE OFF-SITE REMEDIAL INVESTIGATION	4
3.0	STU	DY AREA INVESTIGATIONS	4
	3.1 3.2 3.3 3.4	Area A Subsurface Soil Investigation 4- Area C Landfill Border Delineation 5- Off-Site Groundwater Investigation 7- Aquifer Investigation 8-	·7 ·8
4.0	FINE	DINGS OF THE INVESTIGATIONS	9
	4.1 4.2 4.3 4.4	Area A Subsurface Soil 9-1 Area C Landfill Border Delineation 1 Off-Site Groundwater 10-1 Aquifer Investigation 15-1	0 5
5.0	CON	CLUSIONS AND RECOMMENDATIONS 1	7
	5.1 5.2 5.3 5.4	Off-Site Groundwater	7 7 8 8
FIGU	JRES		9
	1. 2. 3. 4. 5.	Area Map Area A Borings and Monitoring Well Area A Well and Boring locations for Off-Site RI Area C Delineation Borings Monitoring Well Placement	•

20 **GRAPHS** MW-5 S and D: 6/9/93 - 6/30/93 1**A** 7/1/93 - 7/23/93 MW-5 S and D: 1B MW-5 S and D: 7/23/93 - 8/5/93 1C 6/9/93 - 6/30/93 2:A MW-19 S and D: 7/1/93 - 7/23/93 2B MW-19 S and D: MW-5S, MW-7S and MW-19S: 6/9/93 - 6/30/93 3A 3B MW-5S, MW-7S and MW-19S: 7/1/93 - 7/23/93 6/9/93 - 6/30/93 4A MW-5D and MW-19D: 7/1/93 - 7/23/93 4B MW-5D and MW-19D: 6/9/93 - 7/23/93 4C MW-7D: 5A MW-23 S, D and DD: 7/23/91 - 8/21/93 7/23/93 - 8/21/93 MW-3D, MW-5D and MW-19D: 6A 7A MW-5S and MW-23S: 7/23/93 - 8/21/93 **APPENDIX** Area A boring logs A. Area A subsurface soils, Analytical Results B. C. Area C border delineation report by Camp Dresser & McKee D. Tables of Groundwater testing results APPENDIX - Volume II Analytical Results of Water Analysis E. F. Analytical Field data, boring logs, monitoring well logs

Volume I

1.0 SITE BACKGROUND AND HISTORY

The Pfohl Brothers Landfill is a 120 acre inactive hazardous waste site located about one mile northeast of the Buffalo International Airport in Cheektowaga, Erie County, New York. The landfill operated from 1932 to 1971 for disposal of municipal and industrial wastes.

The results of a remedial investigation completed by the New York State Department of Environmental Conservation (NYSDEC) in 1991 found that contamination at the site was widespread and variable in character and concentration. Analysis of the drummed wastes indicate disposal of a wide variety of organic compounds. Waste samples showed elevated levels of volatile organic compounds and chlorinated hydrocarbons, and lower levels of semi-volatile organics and dioxin. Many of these same compounds were also found in the landfill soil, leachate seeps and groundwater at the site and, to a lesser degree, in the bedrock aquifer. Other contaminants found at the site include metals, tar, and radioactive material, however, no dioxin or radioactive contamination were detected leaving the site.

The NYSDEC evaluated a number of different technologies for remediating the Pfohl Brothers Landfill. After a thorough review, containment of the wastes and treatment of the contaminated groundwater were found to be the only feasible technologies, given the large size of the landfill and the wide variety of wastes it contains. The remedy selected by the February 1992 Record of Decision (ROD) will contain the contaminants and eliminate their pathways of exposure to the public and the environment.

The Record of Decision (ROD), the administrative document that presents the information and rationale used to selected the remedy for the Pfohl Brothers Landfill, was signed by deputy Commissioner Edward O. Sullivan on February 11, 1992. The selected remedy will control the off-site migration of contaminants and eliminate the potential routes of exposure to the public and the environment. The remedy includes:

- Removal and proper disposal of drums and phenolic tars from waste "hot spots". This interim work will be performed prior to implementation of the full remedy;
- Installation of a slurry wall containment system to contain the wastes and eliminate migration of contaminants. The physical containment system will surround the waste in the landfill areas south of Aero Lake and north of Pfohl Road;
- A landfill cap to eliminate the infiltration of water, minimize erosion of contaminated soils, and prevent direct contact with the waste by people and wildlife. The cap will cover the entire waste area contained within the slurry wall and extend beyond it;
- Collection and treatment of landfill leachate. Water from within the cap and containment system will be pumped and treated before it is discharged to either the municipal wastewater treatment system or to surface water.

2.0 OBJECTIVES OF THE INVESTIGATION

This report presents the results of additional investigatory activities that have taken place in 1993 to identify any off-site impacts resulting from the waste disposal identified by the 1992 Remedial Investigation/Feasibility Study (RI/FS). Those areas to be addressed were:

- 1. Determine if Area A of the site (Figure 1) is a hazardous waste disposal area serving as a source of groundwater contamination and if those contaminants are migrating to Aero Lake.
- 2. Further define the southern boundary of the landfill (Area C).
- 3. Determine if significant contamination is migrating beyond the perimeter of the site via groundwater.
- 4. Provide the means to continuously monitor the upper aquifer and bedrock aquifer for an extended period of time to evaluate the hydraulic connection between the aquifers as well as any connection to surface waters.

These activities were recommended to (1) delineate the extent of any off-site contamination and (2) to better define the aquifer's hydraulic properties.

3.0 STUDY AREA INVESTIGATIONS

3.1 Area A Subsurface Soil

Area A is that portion of the designated class 2 site located adjacent to the eastbound lanes of the NYS Thruway and north of the access ramp of interchange number 49. It is north of Area B of the site and Aero Creek, and is east of Aero Lake (See figure 1). This area is primarily fill and is currently the location of the Thruway interchange ramps, as well as several trucking terminals and parking lots.

It was determined, during the Remedial Investigation of the landfill, that this area consisted of imported fill, primarily construction & demolition debris. No evidence of municipal landfill material or industrial wastes were found. The locations of the previous boring and monitoring wells in area A are shown in Figure 2. The drilling logs describing the subsurface soils in these locations are contained in Appendix A of this report.

The purpose of this investigation was to conclude whether any waste disposal had occurred in Area A and determine if this Area was a source of any contaminant migration towards Aero Lake. The RI included an additional two soil borings, to verify the subsurface soil composition, and installed two monitoring wells between Area A and Aero Lake, to determine if Area A was a source of contaminant migration to the Lake. An additional upgradient well was also installed. The drilling logs describing these subsurface soils are also available in Appendix A of this report.

Soil borings B-01, B-02, and MW-12S were completed on Area A in July 1989 as part of the landfill RI. Borings B-18 and B-19 were installed on Area A during 1992 as part of this off-site RI. The purpose of these additional borings was to insure that sufficient sampling was conducted over the geographic area of this portion of the site to draw conclusions regarding the nature of the fill material. These two borings were placed in the northeast and northwest sections of Area A. Additionally, MW-18D was installed upgradient of Area A to provide a comparative background location unaffected by the landfill and MW-22 S&D were installed downgradient of Area A to determine if contaminants are migrating towards Aero Lake from Area A.

A total of five borings were installed on Area A with boring MW-18D installed at a background location as shown in Figure 3. The following table identifies the location of the soil samples collected from each boring location and submitted for laboratory analysis:

TABLE A	TABLE A ANALYTICAL SAMPLE LOCATIONS					
Boring/Depth (ft.)	B-01	B-02	MW-12S Boring	B-18	B-19	MW-18D Boring
0'-2'		·		`		sample
2'-4'			·			sample
4'-6'		sample				
6'-8'	sample	sample		sample	sample	
8'-10'						
10'-12'	sample	·	sample	sample	sample	
Bedrock	13.5'	13.2'	15.3'	12'	12'	4'

3.2 Area C Borings for Landfill Border Delineation

Area C is that portion of the landfill which is south of Aero Drive and north of Pfohl Road. It is bordered on the east by Transit Road and to the west by the Pfohl Trucking property (Figure 1). Pfohl Road and the residential properties and other parcels on its northern side form the southern limit of the landfill. Historic aerial photographs indicate that landfilling was ongoing while some of the adjacent structures were in existence. It was the objective of this investigation to determine how close the landfill materials are to the existing structures north of Pfohl Road and south of the landfill perimeter fence. The perimeter fence was installed by the NYSDEC as an interim remedial measure in 1990 to secure the landfill from unauthorized entry.

Approximately 34 soil borings were installed in the area to the south of the Area C fence line to visually ascertain the approximate extent of landfill material. The results of this work are presented on Figure 4 and are described in detail in the report from the NYSDEC consultant,

Camp Dresser & McKee (CDM), which identifies the work performed and the results of this part of the investigation. The CDM report is included as Appendix C of this report.

In order to define the location of the southern boundary of the landfill in the vicinity of the homes north of Pfohl Road, soil borings were drilled on these properties immediately north of Pfohl Road along the existing east/west fence line and the berm area. The easternmost soil borings were installed on the vacant property at the end of Pfohl Road and the westernmost soil boring was installed on the Pfohl Trucking property.

A baseline of soil borings was placed along the east/west fence line (designated with the letters A through M). Wherever possible, the lateral distance between the baseline borings was 100 feet on private property and 200 feet on vacant property. If the baseline soil boring did not contain evidence of landfill material, then another boring was drilled at a location 50 feet to the north. If the baseline soil boring did contain landfill material then a soil boring was drilled at a location 50 feet to the south. An additional boring was placed between the borings with and without landfill material in order to determine the extent of the landfill within +/- 25 feet. In some cases, physical obstructions prevented a full complement of additional borings to be installed at each baseline boring location (e.g., borings D, G, L and M). The supplemental borings are designated with the corresponding letter of the baseline boring, followed by a number (i.e., boring A1, A2, etc.).

The depth of the soil boring was determined by the presence or lack of landfill material. When evidence of landfill material was encountered and confirmed, the borehole was terminated at that depth. Otherwise the borehole was advanced to the maximum depth of 10 feet.

The soil borings were drilled in the following prescribed manner:

- 1. Prior to soil borings activities, the baseline soil boring locations were staked by the CDM geologist under the direction of NYSDEC personnel.
- 2. Fencing was erected around the drill rig and the immediate vicinity of each soil boring location outside the landfill fence in order to prevent the public from accessing the work area.
- 3. The top six inches of soil was removed from each borehole using a shovel and set aside.
- 4. Six-inch outside diameter solid stem augers were advanced at each borehole to a maximum depth of 10 feet using an all-terrain vehicle (ATV) drill rig.
- 5. Air space directly above the drill cuttings was monitored for volatile organic carbon (VOC) compounds using a calibrated HNu PI-101 Photo Ionization Detector.
- 6. Soil samples were collected by the CDM geologist at each two foot depth interval from the drill cuttings brought to the surface during drilling. Each soil sample

was collected using a disposable plastic scoop and placed into an 8 ounce glass container.

- 7. The CDM geologist recorded the description of each sample and photographed the samples for documentation.
- 8. At the completion of each boring, the hole was backfilled with the same material removed during drilling.

3.3 Off-Site Groundwater Monitoring Wells

A total of 24 monitoring wells were installed during the initial RI. This Off-site RI added an additional 12 monitoring wells consisting of 5 overburden/bedrock well clusters and 2 bedrock wells. These additional 12 wells were installed from 300 feet to 2800 feet away from the perimeter of the site. The objective of this effort was to determine if contamination had migrated beyond the immediate site perimeter, which had not been identified by the 14 wells installed at the site boundaries during the original RI. Figure 5 shows the approximate location of the new and existing monitoring wells. The following table illustrates the planned reason for each monitoring well location:

TABLE B Phase II Monitoring Well Location and Purpose				
WELL #	LOCATION	PURPOSE		
18D	N.E. of the site	Background/upgradient		
19S & D	S.E. of site, South of Ellicott Creek	Downgradient of well 7S & D, hydraulic effects of Ellicott Creek		
20S & D	South of site and Ellicott Creek	Downgradient of well 5S & D, hydraulic effects of Ellicott Creek		
21S & D	Midway between well 4S&D and Ellicott Creek	Downgradient of well 4S & D, hydraulic effects of Ellicott Creek		
22S & D	N.E. of Aero Lake and South of Thruway exit ramp	Downgradient of Area A, hydraulic effects of Aero Lake		
23S & D & DD	West of wells 4D & 11S and east of Scott Place	Downgradient of site and deepest well to examine possible sinking plume of contaminants		

In addition to providing additional data to better understand the aquifer and identify any contamination resulting from migration from the landfill, these wells will also serve as long term monitoring wells for the containment measures to be taken at the landfill. This monitoring will take place over the life of the containment system.

At the conclusion of the new monitoring well installation, the following new and existing wells were sampled:

TABLE C - Monitoring Wells Sampled for the Off-Site RI				
GROUP	MONITORING WELL			
ON-SITE WELLS	2S, 2D			
BEDROCK PERIMETER WELLS	1D, 3D, 4D, 7D			
BEDROCK BACKGROUND WELLS	6D & 18D			
BEDROCK OFF-SITE WELLS	19D, 20D, 21D, 22D, 23D, 23DD, (6D& 18D BACKGROUND WELLS)			
OVERBURDEN BACKGROUND WELL	6S			
OVERBURDEN OFF-SITE WELLS	19S, 20S, 21S, 22S, 23S			
OVERBURDEN PERIMETER WELLS	1S, 3S, 4S, 5S, 7S, 8S, 10S			

3.4 Aquifer Investigation

Data gaps existed at the conclusion of the first phase RI regarding physical characteristics of the two aquifer system beneath the site, specifically the vertical hydraulic gradient and degree of interconnection between the two aquifers at a given location. Additional questions pertaining to artificial influences to groundwater flow patterns and the relationship of Ellicott Creek to the groundwater system remained to be answered. Continuous monitoring of groundwater elevations over an extended period of time at monitoring well locations containing deep and shallow well clusters was necessary to address these questions.

Electronic data loggers were installed on selected monitoring wells to collect groundwater elevation data over extended periods of time. Six individual units were used so that three two-well clusters could be monitored simultaneously. The data loggers were programmed to record the water elevation within the well every 15 minutes for approximately four weeks at a time. The data was then stored on a computer for later use and the data logger moved to a new location. The data was then plotted on graphs (attached) for interpretation.

Monitoring to date has been performed as shown below:

Location	<u>Duration</u>
MW-5S-5D	June 9, 1993 - August 5, 1993
MW-7S-7D	June 9, 1993 - July 23, 1993
MW-19S-19D	June 9, 1993 - July 23, 1993
MW-3D	July 23, 1993 - August 21, 1993
MW-23S, 23D and 23DD	July 23, 1993 - August 21, 1993

Monitoring well cluster MW-19 is located just south of Ellicott Creek, close enough that the shallow well can be considered a stream monitor with a delayed response to stream fluctuation.

Recording of groundwater elevation data from the entire network of monitoring wells, for the purpose of plotting horizontal groundwater flow patterns, was not an objective of this specific study, although it has been in the past and will continue to be monitored in the future.

4.0 RESULTS OF INVESTIGATIONS

4.1 Area A Subsurface Soil

The boring logs, included as Appendix A of this report, do not show any specific indications of contamination or evidence of elevated organic volatiles, as measured by the field instruments. No chemical waste materials were visually identified in the borings. The remarks by the field geologist inspecting the recovered soils from the borings make reference to either specific soil types, or fill and debris, as the predominate material encountered by these borings.

Appendix B of this report contains the analytical results of both the off-site RI samples and the 1991 RI results for the sampling in Area A. The findings of the off-site subsurface soil investigation in Area A can be summarized as follows:

- 1. No significant levels of volatile organics were detected. The only detected compound was methylene chloride in boring B-19 at 5-30 parts per billion, which is attributable to laboratory contamination.
- 2. Low levels of semi-volatile compounds were detected. Polynuclear aromatic hydrocarbons (PAHs) were encountered at levels which are consistent with the various types of fill materials (i.e., asphalt).
- 3. PCB Aroclor-1254 was detected in the background off-site sample at less than 2 parts per million but not in any of the Area A samples.
- 4. No significant levels of inorganics analyzed for were detected. All results were similar to the background location (MW-18D).

5. A boring at MW-22D location was installed to determine if contamination was migrating from Area A to Aero Lake. The boring (Appendix F) did not show any visual evidence of waste and no organic vapors were detected by the field instrumentation. Therefore, the soils show no apparent migration of waste from Area A.

4.2 Area C Landfill Border Delineation

Twenty of the 34 soil borings installed during this investigation contained landfill material. Landfill material generally consisted of broken glass (clear, brown and green colored), bricks and brick fragments, metal scraps, wire, plastic sheeting and plastic pieces. At several areas black slag material, cinders, wood, sewer tile, and household trash were encountered. In general, landfill material was encountered at depths ranging from zero to six feet, below the ground surface. HNu readings of drill cuttings from each of the boreholes remained within background levels indicating little contamination from any volatile components.

Thirteen of the boreholes drilled south of the fence line along Area C revealed landfilled material. This determination, although only a visual indicator, demonstrated that the landfill border was chosen to the homes north of Pfohl Road than previously expected. Figure 4 shows the current estimate of the southern border of the landfill based on these visual observations.

4.3 Groundwater Sampling

The monitoring wells, identified in Table C above, were sampled in February of 1993 for volatile organic compounds, semi-volatile organic compounds, PCB's and inorganic (metals) compounds. The numerical analytical results of the groundwater chemical analysis are included as Appendix E of his report.

The overall results of this sampling can be characterized as follows; (1) no significant organic contamination is evident in either the overburden aquifer or the bedrock aquifer surrounding the site. (2) The inorganic contamination in the surrounding wells is not significantly elevated above background.

The background wells (6S, 6D, 18D) were selected to provide a baseline measurement of the levels of the various analytical compounds present in the regional groundwater from the vicinity of site, but in areas unaffected by the landfill. These background levels provide a basis on which to attribute the landfill as a possible source of any contamination identified in downgradient wells. The sampling points are upgradient of the site but are in the general groundwater flow towards the landfill.

Monitoring wells 22 S&D were installed downgradient of Area A, between Area A and Aero Lake. These wells, in conjunction with background well 18D, were intended to monitor groundwater to determine if any contamination was originating from Area A and migrating towards Aero Lake. The results of the chemical analysis indicated no detectable organic components in either 22S or 22D. The inorganics were very low in the bedrock well (22D) and non detect in the shallow overburden well (22S). These results do not indicate the presence of any contamination migrating from Area A to Aero Lake and, in light of the previously discussion

of the subsurface soils in Area A, support the conclusion that Area A was not a disposal site for hazardous waste.

The following table (Table D) is intended as a quick reference guide to the tables of chemical analytical results presented in Appendix D. These groupings are intended to present the data from wells in the same aquifer to determine if contaminants from the site are migrating to the perimeter of the site and then off-site beyond the perimeter. The on-site wells are from an area of known contamination at the site. One well is screened in the overburden (2S) and one is a bedrock well (2D). Both of the wells were sampled during the original RI and were contaminated with solvents.

TABLE D - CHEMICAL ANALYSIS Tables Appendix D					
WELL LOCATION	Volatiles	Pesticides	PCBs	Inorganics	Conventional
ON-SITE	Table 1	Table 6	Table 11	Table 16	Table 21
BEDROCK PERIMETER	Table 2	Table 7	Table 12	Table 17	Table 22
BEDROCK OFF-SITE	Table 3	Table 8	Table 13	Table 18	Table 23
OVERBURDEN OFF-SITE	Table 4	Table 9	Table 14	Table 19	Table 24
OVERBURDEN PERIMETER	Table 5	Table 10	Table 15	Table 20	Table 25

Using the same well location format as above, the following tables (Tables E, F and G) illustrate the findings of the groundwater investigation portion of the Off-Site RI.

TABLE E - CHEMICAL ANALYSIS				
WELL LOCATION	Volatiles			
ON-SITE	12ppb methylene chloride, 270ppb dichloroethane, 9ppb trichloroethane, 6ppb trichloroethene			
BEDROCK PERIMETER	All non detect (<5ppb)			
BEDROCK BACKGROUND	All non detect (<5ppb)			
BEDROCK OFF- SITE	All non detect (<5ppb)			
OVERBURDEN BACKGROUND	All non detect (<5ppb)			
OVERBURDEN OFF-SITE	5ppb benzene, 1ppb toluene			
OVERBURDEN PERIMETER	All non detect (<5ppb)			

As stated previously, the above results show little or no volatile component contamination in the groundwater off-site from the landfill. The benzene and toluene identified are in the off-site shallow wells which are adjacent to the Thruway ramp and near the Conrail tracks. It is likely that these results represent gasoline or other fuel components which have washed into these areas from the roadway run-off.

The on-site wells showed contaminants, as expected, however, the level of contamination was much lower than anticipated, based on the original RI data. The 1991 RI reported results for monitoring well 2S identified the components dichloroethane and trichlorothane at levels of 4,900 ppb and 15,000 ppb respectively. The variation from these results to the current round of sampling is of a large magnitude. A longer trend of results would be more useful in determining the extent of contamination at the site and this will be the goal of the long term monitoring of the site.

TABLE F - CHEMICAL ANALYSIS				
WELL LOCATION	Semi-volatiles	Pesticides	PCBs	
ON-SITE	All non detect (<5ppb)	All non detect (<.05ppb)	All non detect (< 0.5ppb)	
BEDROCK PERIMETER	All non detect (<5ppb)	All non detect (<.05ppb)	All non detect (<0.5ppb)	
BEDROCK BACKGROUND	All non detect (< 5ppb)	All non detect (<.05 ppm)	All non detect (<0.5 ppb)	
BEDROCK OFF- SITE	All non detect (<5ppb)	All non detect (<.05ppb)	All non detect (< 0.5ppb)	
OVERBURDEN BACKGROUND	All non detect (<5ppb)	All non detect (<.05 ppm)	All non detect (< 0.5ppb)	
OVERBURDEN OFF-SITE	All non detect (<5ppb)	All non detect (<.05ppb)	All non detect (<0.5ppb)	
OVERBURDEN PERIMETER	All non detect (<5ppb)	All non detect (<.05ppb)	All non detect (<0.5ppb)	

No semi-volatiles, pesticides, or PCB components were detected in this round of groundwater sampling. This is consistent with the previous sampling results from the on-site, and bedrock/overburden wells presented in the landfill RI/FS where only a few instances were recorded where semi-volatiles and PCBs were detected in the groundwater at the perimeter.

TABLE G - CHEMICAL ANALYSIS				
WELL LOCATION	Inorganics			
ON-SITE	lead 9-17ppb			
BEDROCK PERIMETER	lead 7-25ppb, chromium 30-50ppb			
BEDROCK BACKGROUND	lead 25 ppb, chromium 30 ppb			
BEDROCK OFF- SITE	lead 9-25ppb, chromium 6-30ppb			
OVERBURDEN BACKGROUND	lead 34, chromium 2200 ppb			
OVERBURDEN OFF-SITE	lead 12-27ppb, chromium < 10 ppb			
OVERBURDEN PERIMETER	lead 7-15ppb, chromium 42ppb (mw7s)			

Although lead was identified in many of the surrounding wells it was not detected at levels significantly above the groundwater standards of 25ppb. The 25ppb standard is based on the groundwater being a source of drinking water, which is not the case in the vicinity of these wells.

The on-site wells showed lead concentrations of 9-17 ppb while the 1991 RI showed on-site lead concentrations ranging from 40-400 ppb. Since the off-site wells both shallow and deep had no levels greater than 27 ppb, it appears that the on-site contamination is not significantly impacting the off-site areas surrounding the landfill. These slightly elevated lead levels encountered are most likely associated with the proximity of the heavily traveled area roadways and not attributed to the site.

The chromium levels were again not significant when compared to the drinking water standard of 50ppb. Only one detect for chromium exceeded the standard and that instance was in monitoring well 6S, the background monitoring well. This monitoring well is upgradient of the site and is not indicative of contamination leaving the site. The value of 2,200 ppb is also not typical of a normal background sample and for our purposes can be discounted as a comparison to site values.

The 1991 RI showed chromium levels of 130 - 730 ppb at monitoring wells 3D and 4D. This chromium did not show up at MW-23 D&DD which are in the same general direction but

further from the site than 3D and 4D (see Figure 3). Therefore, the higher levels at these perimeter wells are associated with their close proximity to the landfill.

Therefore, the inorganic compound analytical results in this round of sampling do not indicate an off-site migration of contaminants from the landfill to the surrounding groundwater aquifers beyond the immediate perimeter of the site.

4.4 Aquifer Investigation

The data for all continuous monitoring to date has been compiled and graphed in various combination for comparative purposes. Those graphs are included at the end of this report as Graph 1A through Graph 7A. Discussions of these results and graph interpretation are grouped into two general time periods:

- 1) June 9, 1993 to July 23, 1993 for monitoring wells MW-5S and D, MW-7S and D, and MW-19S and D, and;
- 2) July 23, 1993 to August 23, 1993 for monitoring wells MW-5S and D, MW-3D, and MW-23S, D, and DD.

Monitoring data for monitoring well cluster MW-5 is graphed on Graphs 1A, 1B, and 1C. The data indicates there is a downward vertical gradient at this location from June 9, 1993 to July 23, 1993 at which time the gradient reverses to an upward gradient for the remainder of the monitoring period (August 5, 1993). During downward gradient conditions water would flow from the overburden to the bedrock if a pathway existed for flow to occur. The opposite is true during upward gradient conditions. An artificial influence to the bedrock aquifer has been identified at this location as well as all other bedrock locations monitored to date. This can be observed by the characteristic heartbeat pattern on the graphs. The time interval between cycles in this pattern is exactly 24 hours or a multiple of 24, i.e., 48 hours. This regular time interval and the repetitious pattern are the indicators that it is being caused by artificial stress on the aguifer. It was determined early in the first phase RI that no significant users (i.e., pumpers) of groundwater existed in the area with the exception of the stone quarry to the east, which required dewatering activities for daily operations. The pattern shown in the bedrock aquifer is most likely the result of such a daily dewatering, presumably at the quarry as suspected. A groundwater divide within the bedrock aquifer was described in the first phase RI report as being between the site and the stone quarry. East of this divide, groundwater within the bedrock flows toward the quarry; west of the divide flow is toward the site. Due to this divide and the relatively small diurnal variation, it has been determined that the quarry dewatering is not causing flow from the site eastward to the quarry, but rather periodically slightly depressurizing the confined bedrock aquifer as recorded in the bedrock wells.

Comparison of the overburden and bedrock data (Graphs 1A, 1B, and 1C) indicate the two aquifers are in direct communication based on simultaneous response in both wells to the diurnal variations, and the similarity in general trends. The change from downward to upward vertical gradient is most likely a seasonal feature and suggests that even though the two units are

connected, actual flow, and therefore contaminant migration between them is minimal, if at all. Contaminants have not been detected in either aquifer at the MW-5 location to date.

Monitoring well cluster MW-7 was monitored from June 9 to July 23, 1993. The most noticeable feature in the data at this location is that the bedrock well MW-7D behaved differently than the other bedrock wells (MW-5D and MW-19D) being monitored for this time interval. The diurnal variations were present through out the record, however, the general trend was a steady gradual increase in head rather than the up and down fluctuations exhibited in MW-5D and MW-19D (Compare Graphs 4A and 4B to 4C). The only other data exhibiting a similar pattern was collected at MW-23DD, the only deep bedrock well at the site. (Bedrock wells at the site are in the first 20 feet of rock, MW-23 DD is in the 20 to 40 foot zone.) The data for MW-7D is therefore, interpreted to be representative of the deeper bedrock aquifer. This would be possible if the upper bedrock fractures were not exposed during the drilling of MW-7D, with a deeper fracture that is connected to the 20-40 zone being exposed toward the bottom of the well.

As shown in Graphs 3A and 3B, the general trend of MW-7S was almost identical to MW-5S, which was expected due to the short distance between the two wells. The diurnal variation found at MW-5S and 5D, however, is not evident in MW-7S, indicating the overburden and bedrock aquifers are isolated from each other. A downward gradient exists at the MW-7 location.

Monitoring well cluster MW-19 was also monitored from June 9 to July 23, 1993 primarily to determine the relationship of Ellicott Creek to groundwater in both the overburden and bedrock. As mentioned earlier, MW-19S can be considered representative of Ellicott Creek due to its close proximity. Graphs 2A and 2B indicate a significant upward gradient from the bedrock to the overburden/Ellicott Creek. Again, even though a vertical gradient exists, actual flow is not expected due to the nature of the overburden soils. Also note the diurnal variation present in the bedrock well.

Graphs 3A and 3B compare the overburden wells monitored for this time period. The approximately six foot drop in head between MW-19S and the other two wells, MW-5S and MW-7S indicate horizontal flow of groundwater in the overburden toward Ellicott Creek.

Graphs 4A and 4B compare the two bedrock wells MW-5D and MW-19D. The strong similarity in both general trends and diurnal variations provide further evidence of the stone quarry having a regional influence.

The second period of monitoring was from July 23 to August 21, 1993 at monitoring well cluster MW-23, MW-3 and MW-5 (no data after August 5, 1993 at MW-5). MW-23 location is a three well cluster, so only the bedrock well was monitored at the MW-3 cluster due to the availability of only six recorders. The other two recorders were left at the MW-5 location as a continuation of the previous monitoring, to be used as a base line comparison.

Data collected at the MW-23 cluster is shown on Graph 5A. There is an upward gradient present from the deep to shallow bedrock and from the shallow bedrock to the overburden aquifer. The deep bedrock well exhibits the diurnal variations with a general trend unlike the

shallow bedrock at MW-23D, MW-5D, and MW-3D, but rather similar to the MW-7D pattern as discussed previously. The shallow bedrock and overburden aquifer appear to be in direct communication as evidenced in Graph 5A, MW-23D and MW-23S. Note that the diurnal variation is very slight in the shallow bedrock and does not exist in the overburden. The general trend for the shallow bedrock closely resembles the other shallow bedrock records MW-3D and MW-5D (see Graph 6A). The general trends for the two overburden wells, MW-5S and MW-23S are completely independent. Since MW-23S resembles the bedrock trends and there is an upward gradient it appears that the overburden aquifer is largely controlled by the bedrock aquifer for the time period monitored.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Area A

No evidence of hazardous waste disposal or evidence of municipal or industrial waste deposition was encounter in the fill material in Area A of the site. The fill present was predominately materials which would be defined as clean fill under the present Part 360 regulations, consisting primarily of miscellaneous soils mixed with concrete and asphalt which appears to be mostly the result of road demolition. The semi-volatile organic compounds (SVOC's), which were the predominate chemicals identified in any of the borings, are typically associated with the petroleum hydrocarbons used in asphalt.

No migration of chemical compounds was detected immediately downgradient of Area A. Hence there appears to be no migration of material towards Aero Lake and Area A is not a source of any contaminations.

It is therefore recommended that no additional study or remedial work be considered for Area A of the site. Further, it is recommended that the site description in the NYS Registry of Inactive Hazardous Waste Disposal Sites be revised to remove Area A from consideration as part of the Pfohl Brothers Landfill site. Owners of the property comprising Area A and adjacent property owners will be notified of this change in the description of the site, as will the Erie County Clerk's Office, if this recommendation is accepted.

5.2 Area C Boundary Delineation

Based upon the evidence of landfill material present in the borings placed as part of the investigation, it is apparent that the landfill border extends to the south of the existing perimeter fence along the southern boundary of Area C. At some locations the landfill appears to extend as far to the south as Pfohl Road. In these areas south of the existing fence, the landfill material is beneath the immediate surface soils but in the subsurface it extends closer to the structures north of Pfohl Road than previously estimated.

It is recommended that the limits of the area to be addressed by the remedy selected for this site should recognize Pfohl Road as the southern boundary for purposes of designing and implementing the Remedial Action.

5.3 Off-Site Groundwater Investigation

The off-site monitoring wells do not show any evidence of significant off-site migration of contaminants beyond the perimeter of the landfill in either the overburden or bedrock aquifers.

Based upon the findings that no off-site contaminate plume exists, no further study of alternatives to address groundwater contamination in the vicinity of the landfill is warranted. Therefore a Feasibility Study will not be needed and a finding of No Further Action beyond the remedy outlined by the 1992 ROD is in order.

A schedule for routine monitoring of the off-site wells each year should be considered as part of the long term monitoring for this site.

5.4 Aquifer Investigation

Based on the monitoring performed to date, the following conclusions can be made:

- There is an artificial influence on the bedrock aquifer causing a diurnal pattern. This influence is interpreted to be the result of daily dewatering activities at the stone quarry to the east.
- The overburden and bedrock aquifers are generally in communication with each other, however as supported by the presence of a significant vertical gradient actual flow between the aquifers is thought to be minimal if any. In cases where an upward vertical gradient is present, the overburden aquifer is generally responds to fluctuations in the bedrock aquifer.
- There is a strong upward gradient from the bedrock to Ellicott Creek and a moderate horizontal gradient within the overburden towards Ellicott Creek. This indicates that Ellicott Creek collects groundwater from the overburden aquifer and there would not be any leakage to the bedrock aquifer if a pathway existed for such leakage.

Recommendations for further work include continued monitoring at other select monitoring well cluster locations. If it becomes necessary to determine, or predict under pumping conditions, the actual flow between the aquifers, a pump test should be designed and performed. This information is not needed at this time, however, it may be during the design of the remedial action.

FIGURES

FIGURE 1 Andrew of the second se [] AREA B AREA C ACRO LUKE Area Boundary

Piohl Brothers Landfill Site

Piotil Brothers Landill, Choektowaga, New York

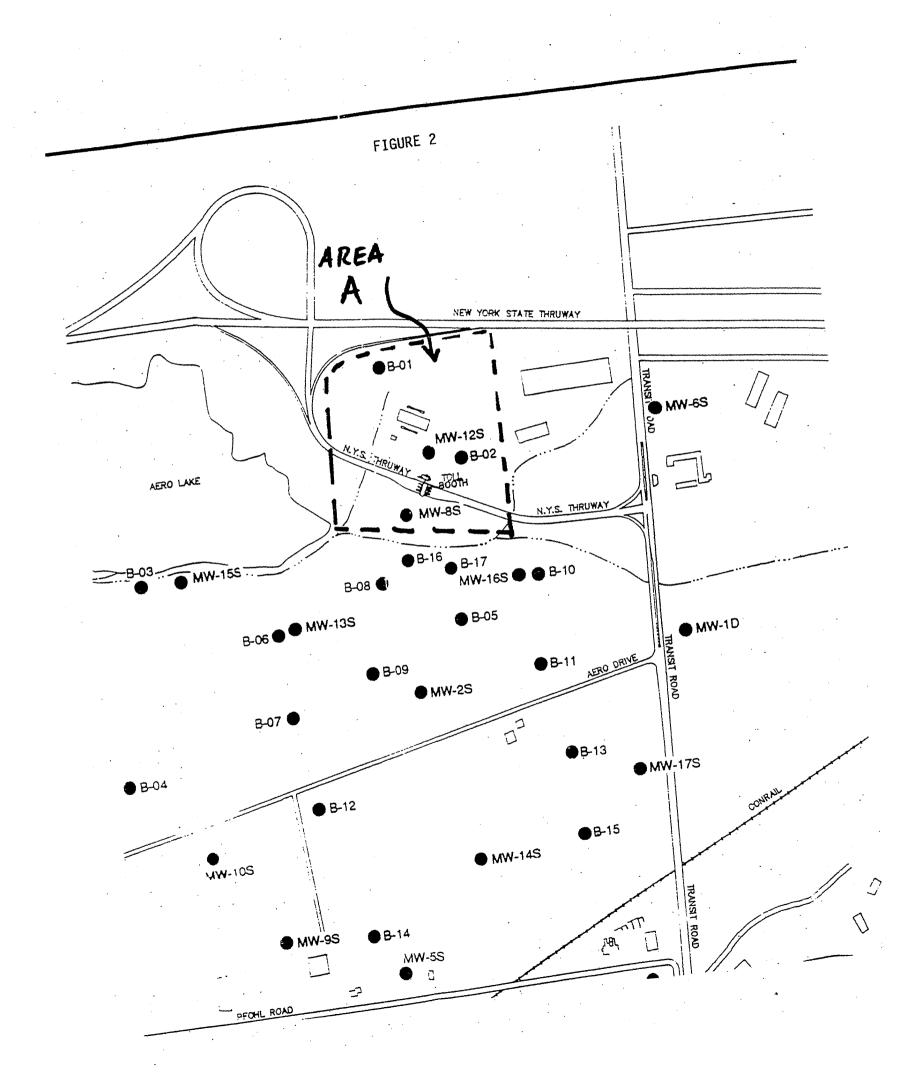
antronmental engineers, actantists, plantars, it management consultants CDM

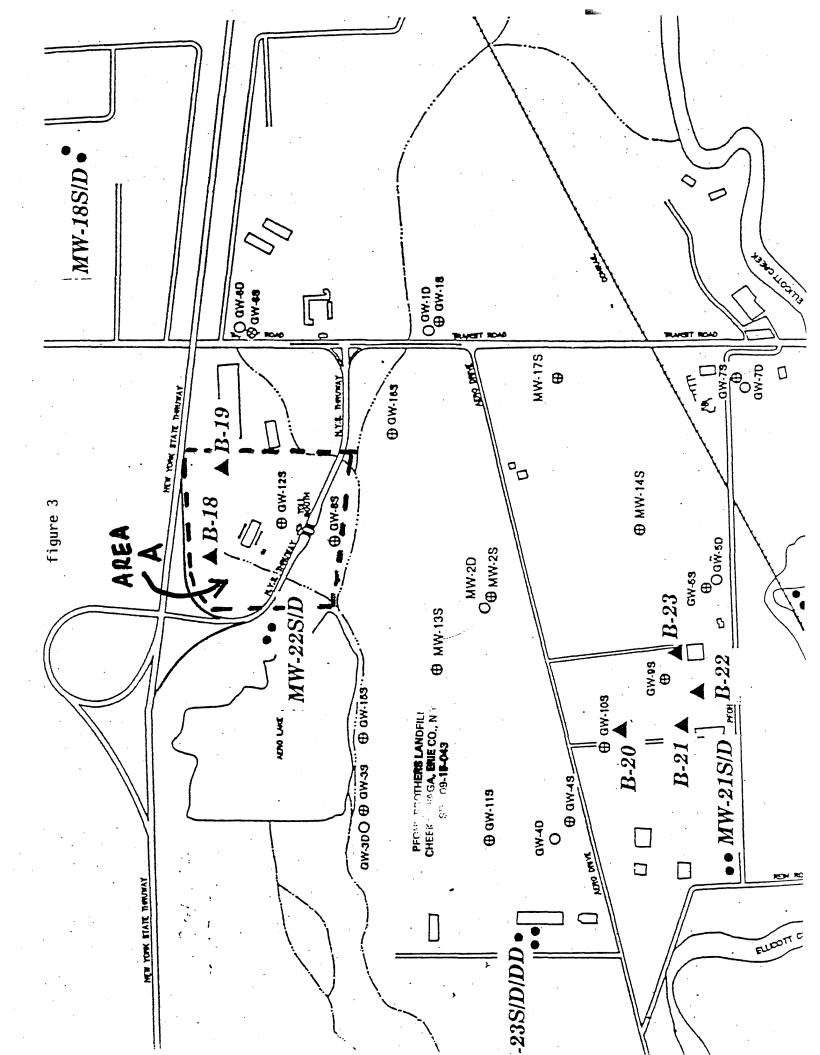
Scale: 1" = 650"

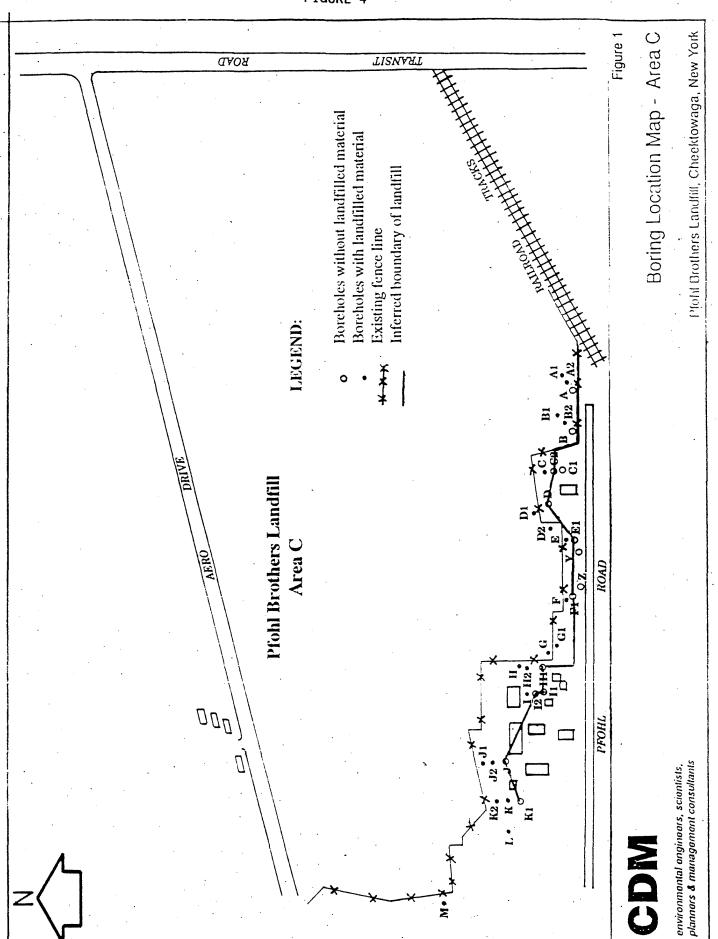
LEGEND.

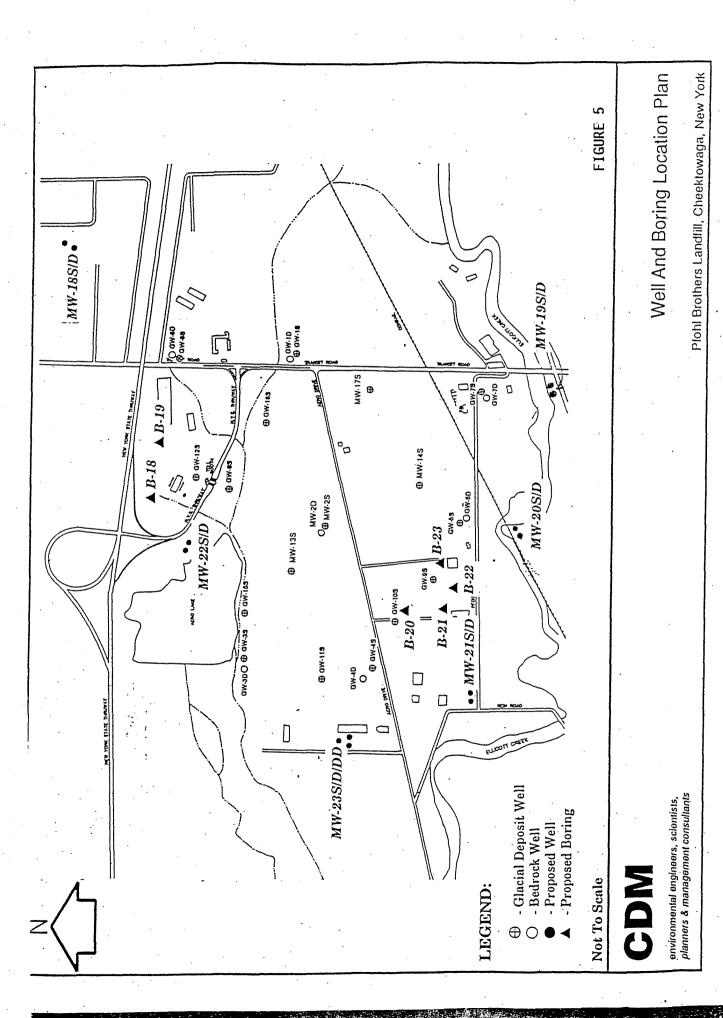
i Wall Straat Court-toth this liam York, Baw York, 1996.6.

PFOHL BROTHERS LANDFILL CHEEKTOWAGA, ERIE CO., N.Y. SITE 09-15-043

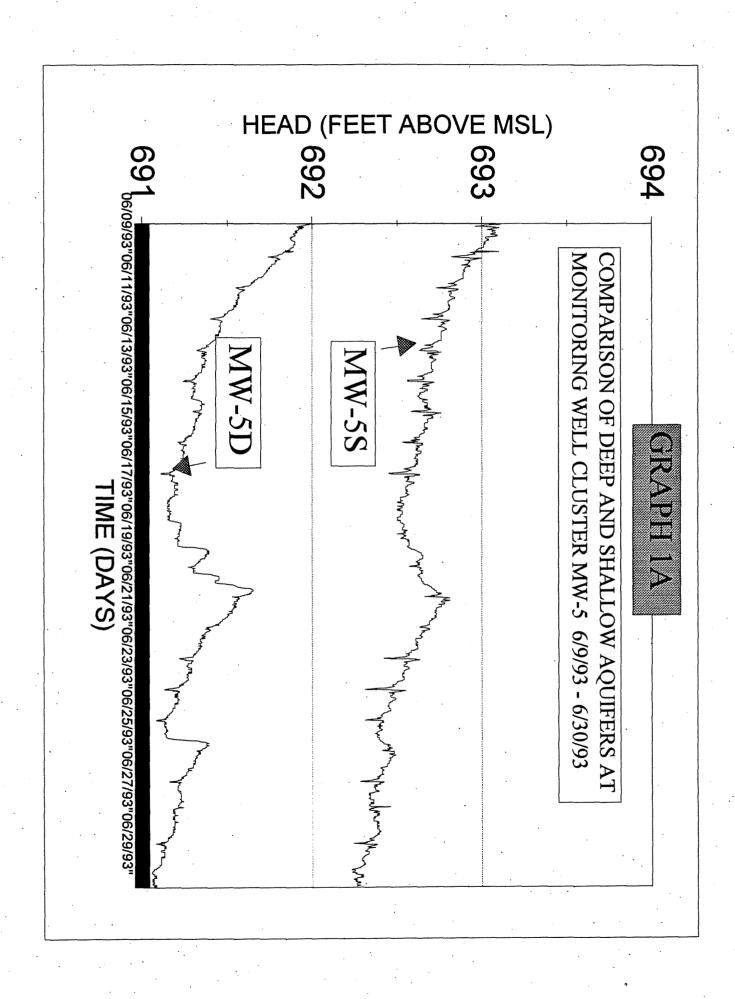


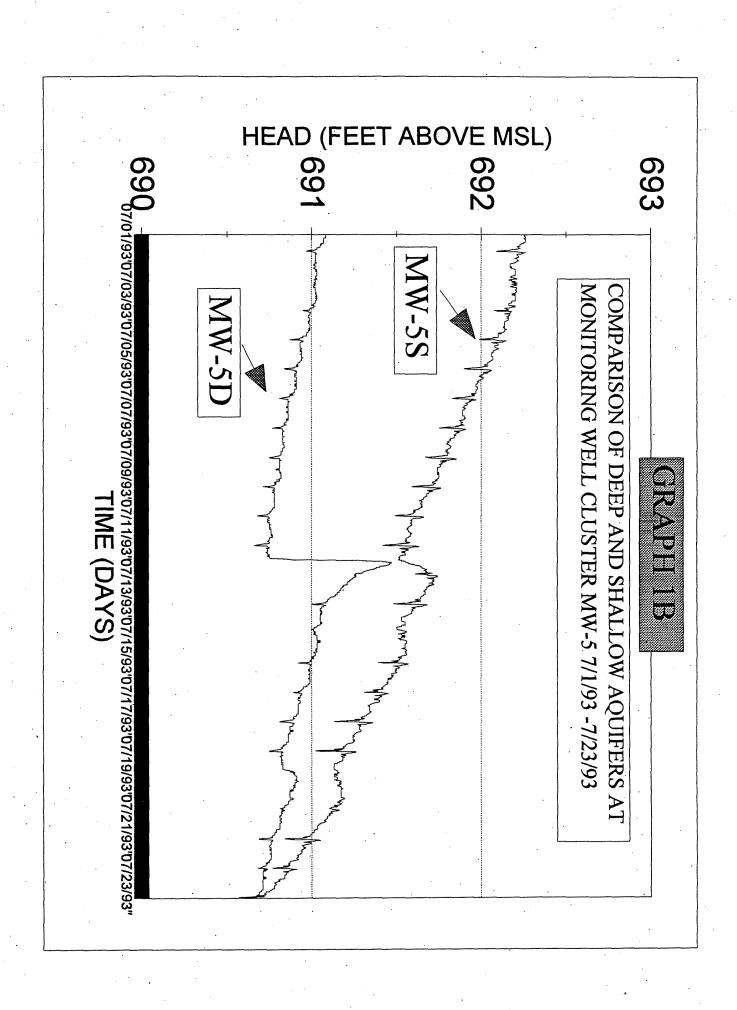


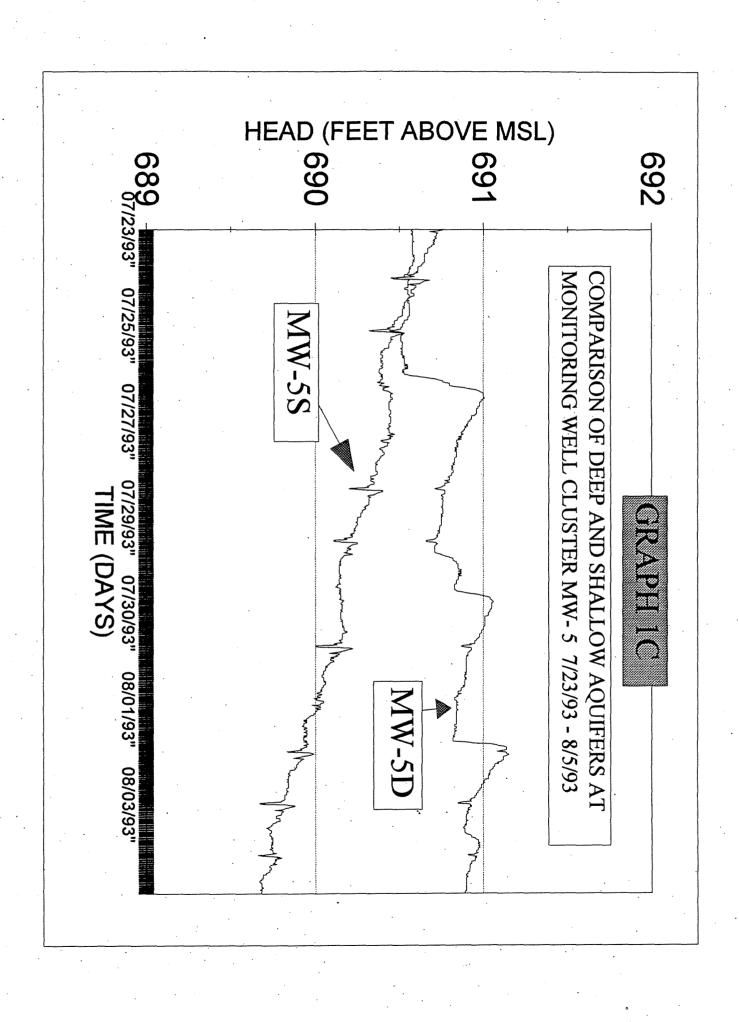


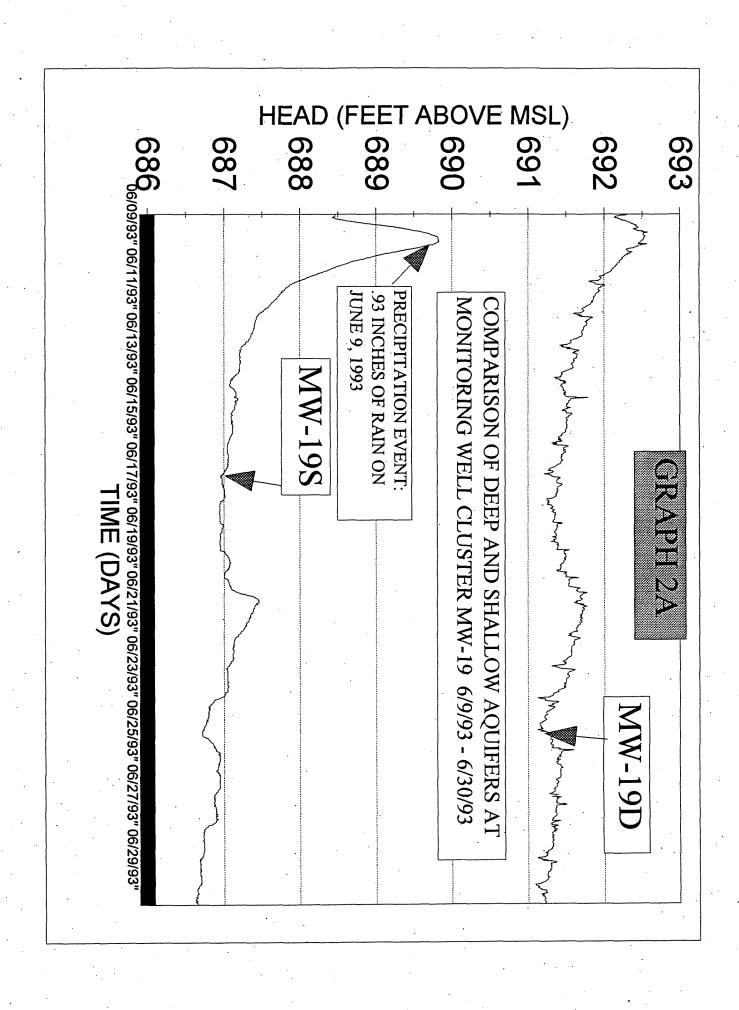


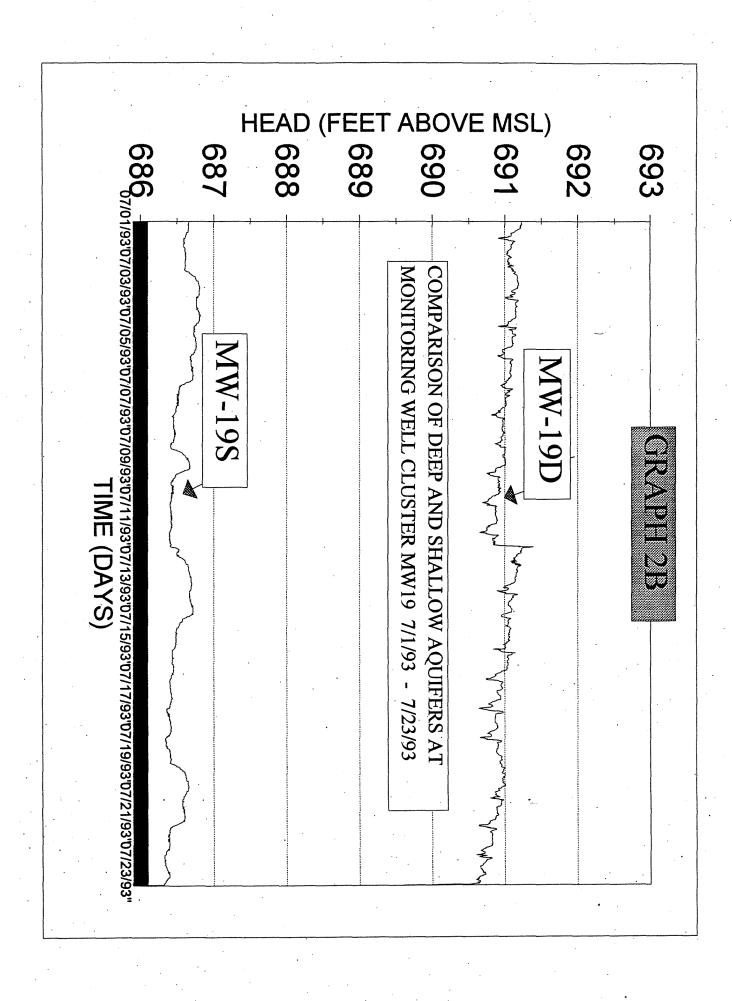
GRAPHS

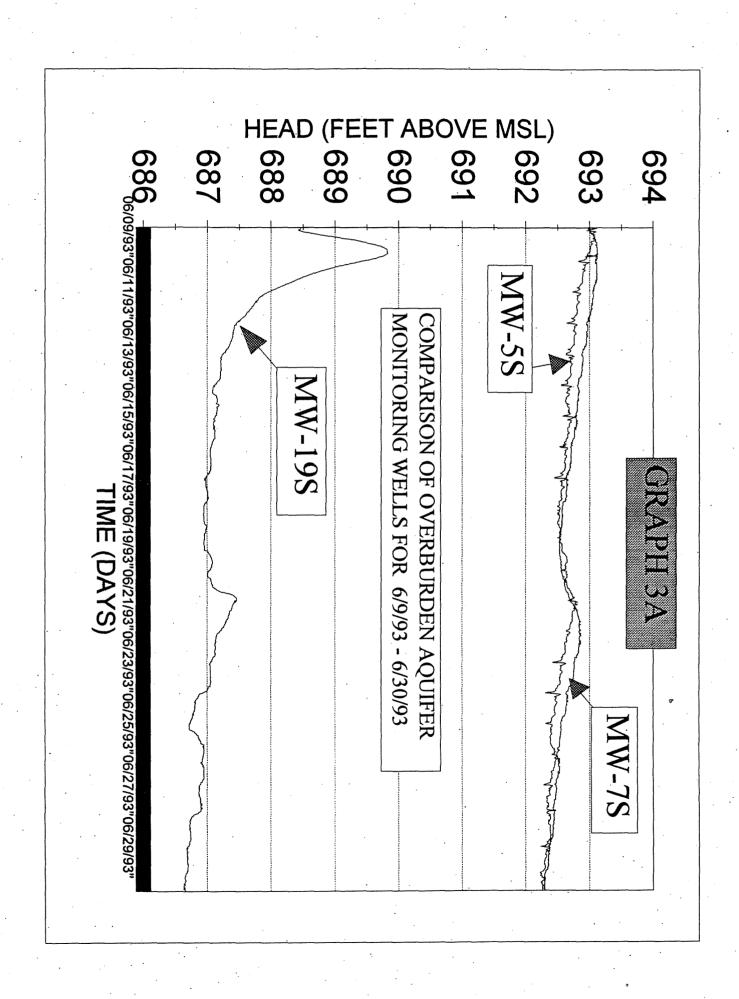


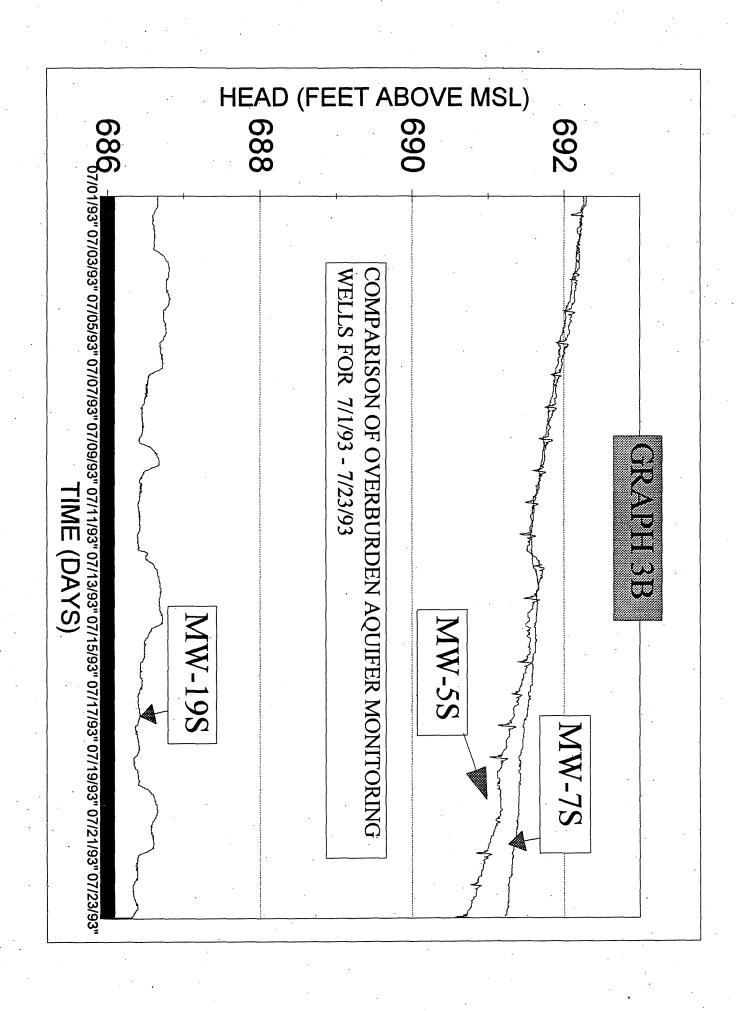


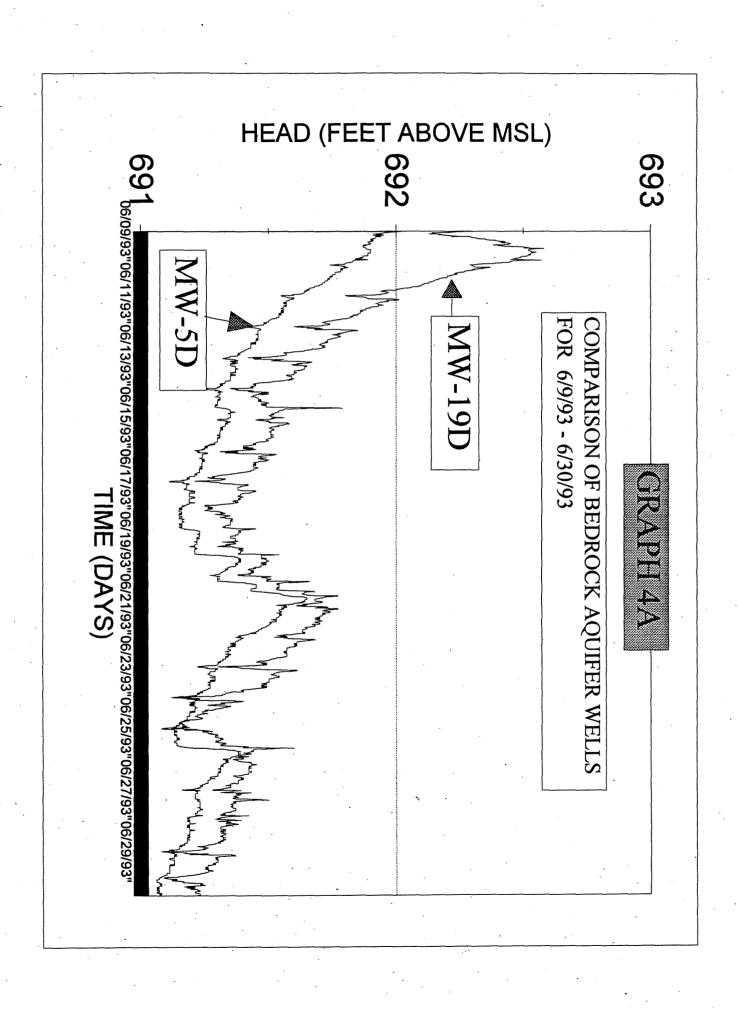


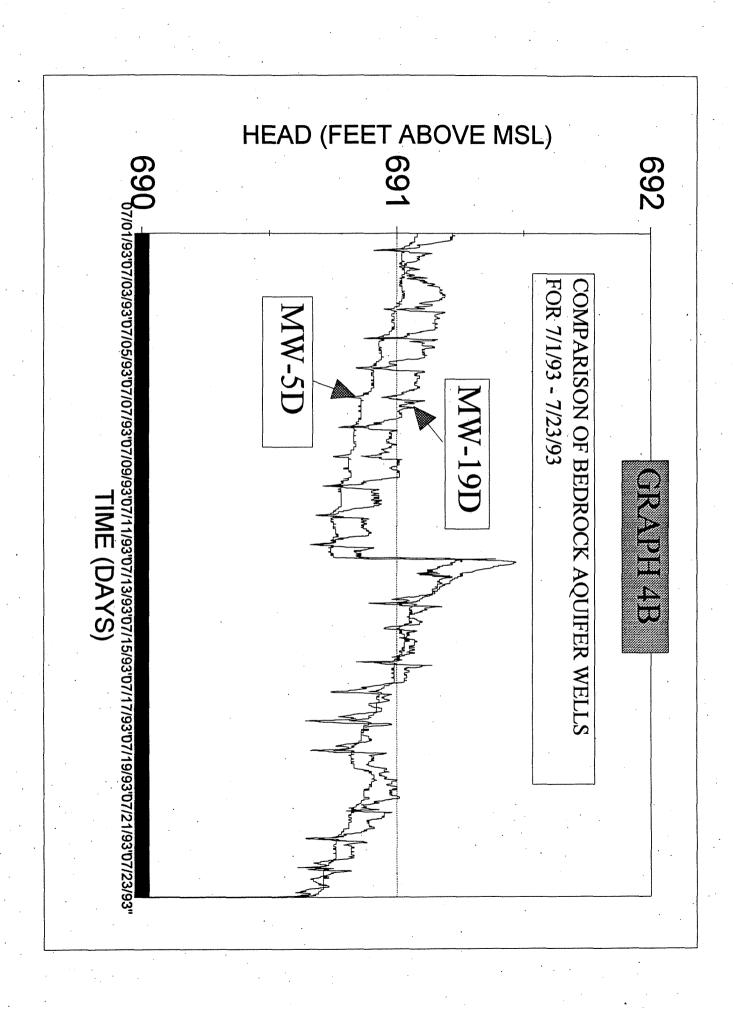


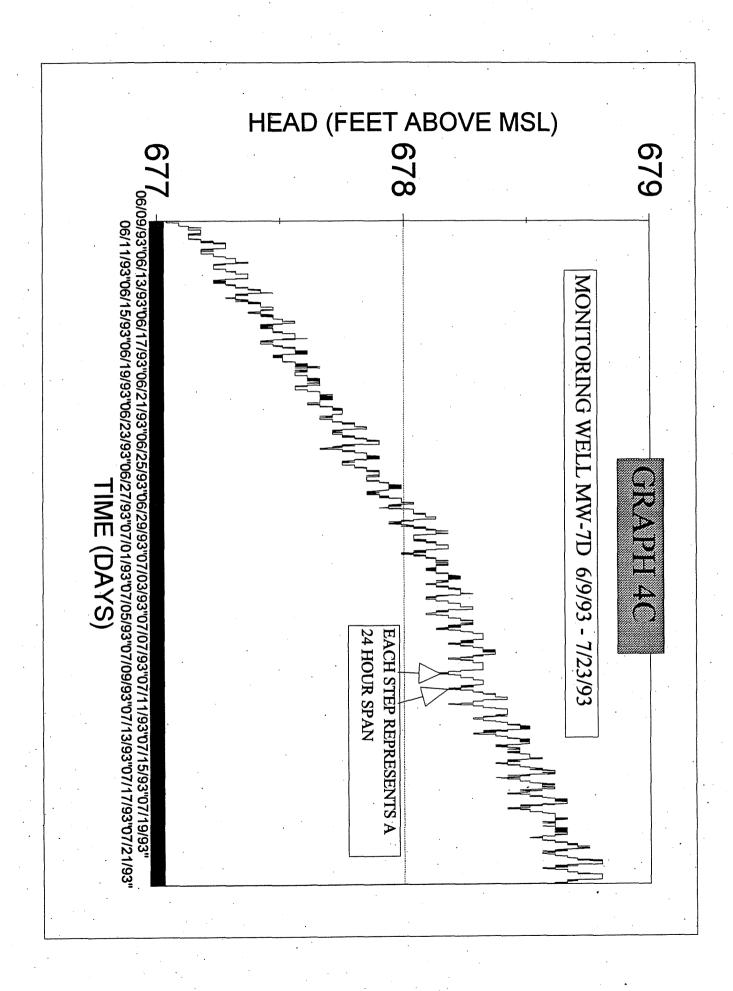


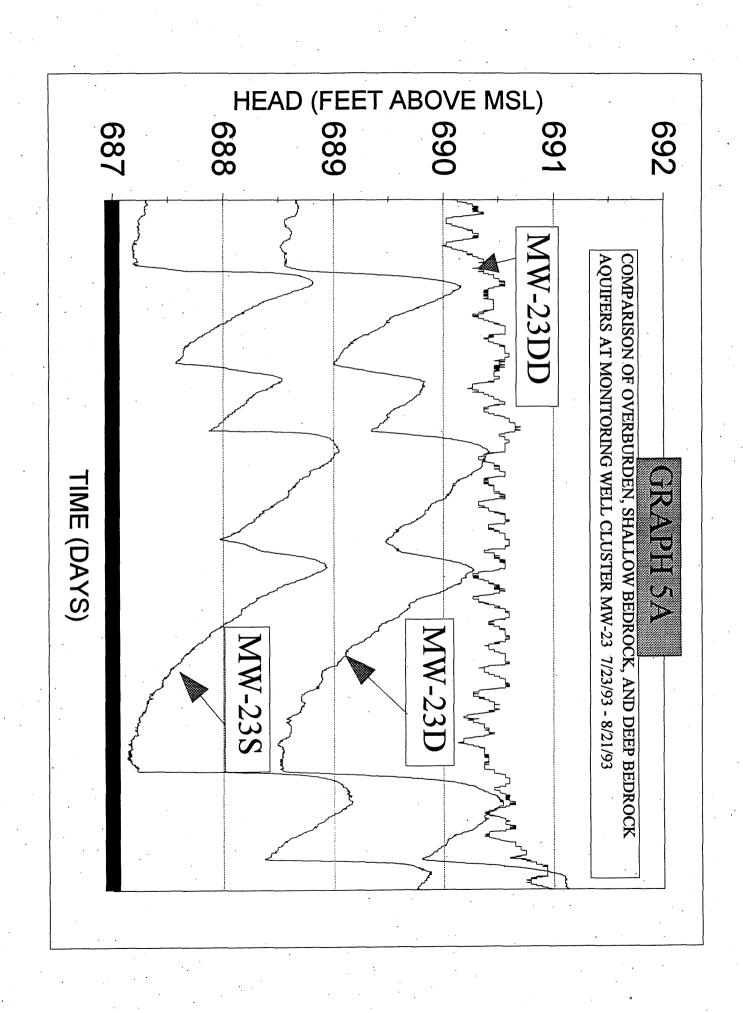


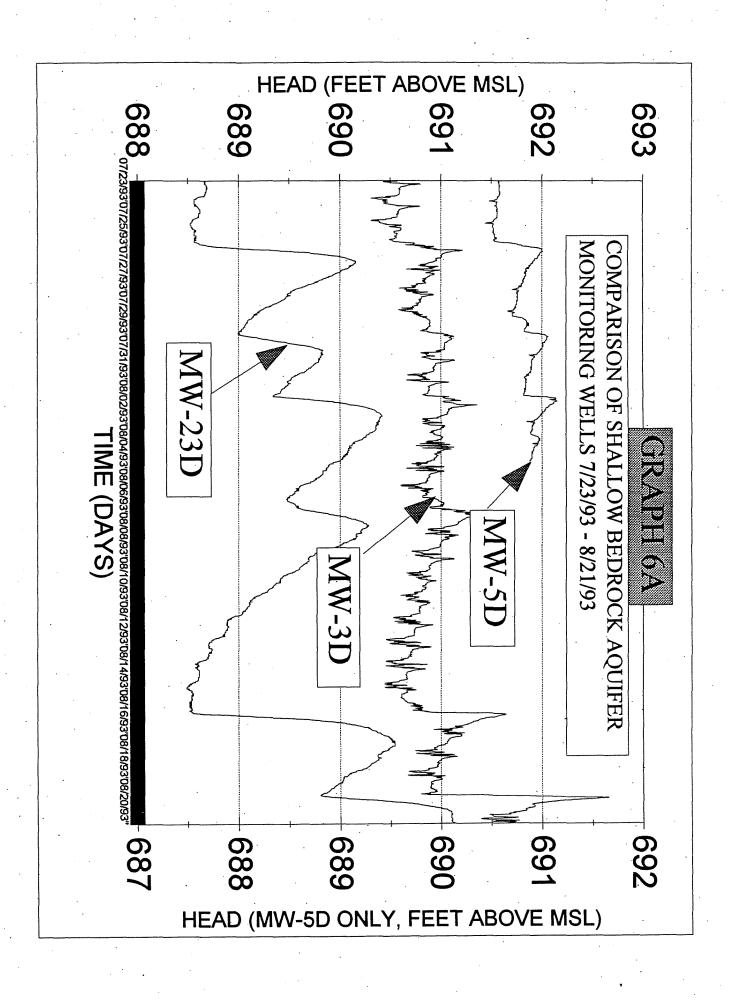


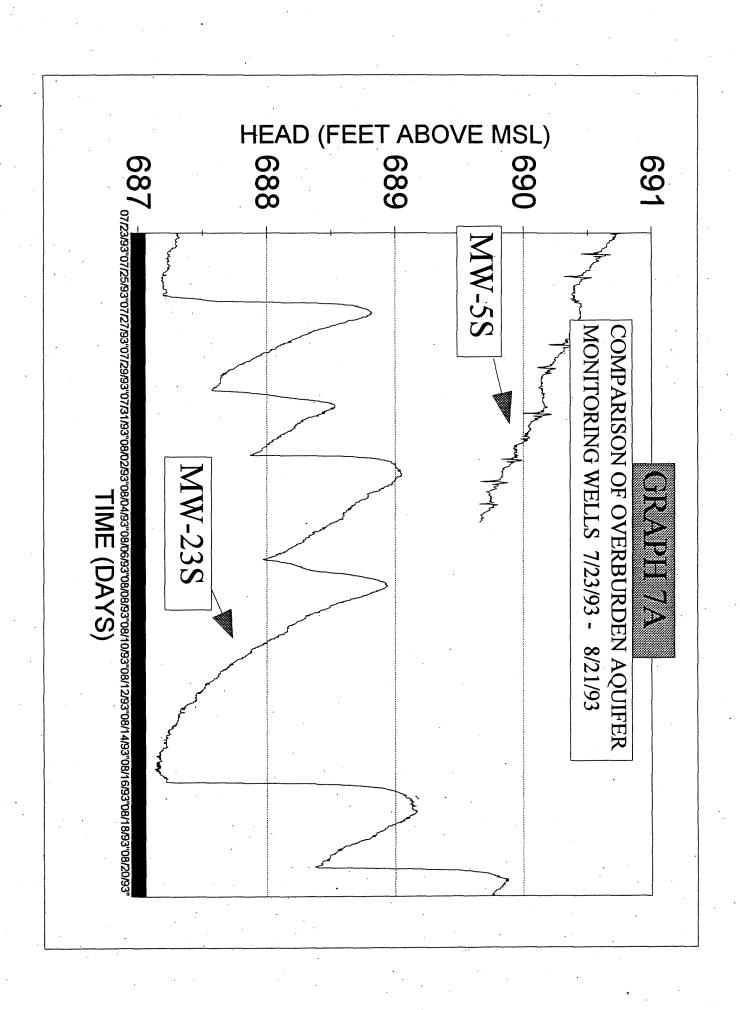












APPENDIX A

environmental engineers, scientets, planners & management consultants BORING NUMBER: BI

Page 1 of 2

Log of Boring

Project Toh! Bros Location N/S Anea Job. Nog97-12-RC-WELL
Date Drilled 7/21/89 Drilling Co. Rochester Drilling Company
Total Depth 13'6" Method Used Co'4" Auger

Inspector C. Wenczel Organic Vapor Instruments Used HNU Water Table Depth & 8'0'

Depth (feet	Sai	mp.	Blows per 6" lbs.	Sample Interva	Adv./ Recov.	Org. Vap - PPM	Sample Description	Strata Ch <u>ange</u>	Remarks (Time of Day)
							·		
	1		9	0,000 2,000	24°/	BKd	12" agenic soil horizon;		6 8 60
4	4 1		10	\\	11	13	,		
(-	1		15	n,	15	. 10			
Z -	1		24) <u>1</u>	ęŧ	11			·
	2		18	2'0" to 4'0"	ZA'/	BKd	12" Organic soil, gravel	·	
0	2		19	l i	1(11			
3-	12		13)(11	(1	3-1		
4-	2		10	W.	11	11	→		
	3		32	4'0" 6'0"	244	IX	A" Fill, concrete		
- - م	3		19	N	21	(1	5—		
7 -	3		28	n	11	(X)			
	3		73	11		11			kative scil
(g - 1	4		18	8'0" Z	A"/ 6"	н	FIND, medium; little fine; little very fine; trace silt; black		
7	4		47	11	1.	11	and orange		

environmental engineers, scientists, planners & management consultants

BORING NUMBER:

Page 2 of 2

Project Pfohl Bros Location M/S Area A Job. No 897-12-RC-WELL

Date Drilled 7/21/89 Drilling Co. Rochester Drilling Company

Total Depth 13'6" Method Used (0/4" Avaer

Inspector C. Wenczal Organic Vapor Instruments Used HMu Hater Table Depth 25'0"

Depth (feet	Samp	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap - PPM	Sample Description	Strata Ch <u>ange</u>	Remarks (Time of Day)
			·				·	
	4	59	800	24"/6"	BKd			
8-	4	89	11	i l	1.c	<u>^</u>		
	5	7	87004	Z4"/ Z4"	JA.	24" SILT, brown to Pink		
	5	9	1(g t	11			
9 -	15	12	ζŧ	11	11	4		
	5	13	1,	14	11		•	
10-	9	10	15,0,1 10,0,1	24 ⁴ /24 ⁴	11	24" Till, clay and silt i		
ı (—	6	13	` \					
	ĺ	12	ų	17	16	"		
172	6	10	11	K	11	2		
12 —	7	18	ا حد	18"	. и	24" Till, clay and 12-13 Silt, 1" gravel.		
	7	23	N	11 .	11	T-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		
13-1	7	27	(,	11	i,	13-		
7	7		11			Rock at 13'0"		5915

NY-1

BORING NUMBER: BZ

Page 1 of 2

Project 45h1 Bros. Location 5/5 Area A Job. No 897-12-RC-WELL

Date Drilled 7/20/89 Drilling Co. Rochester Drilling Company

Total Depth 13' Z" Method Used 6/4" Avger

Inspector C. Wenczel Organic Vapor Instruments Used HNu Water Table Depth \$8'C'

Depth (feet	Samp No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Yap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
				<u>, </u>				
	1	4	N + 0	27"/	BKd	16" Fill, 3"organicsoil rocks, brick, clay, sand. dry		1615
	1	15	W	, X	I(sano ary		
	1	35	. N	1(, N			
	1	40	11	Ŋ	A E	<u></u>		
2 -	2	ی	Zici Aioi	24°/		12" Fill, rocks, brick, clay, send		
	2	29	11	(1	()	3		·
3-	2	11	. 1\	11	(1)			
	2	€.	lχ	· jt		<u>^</u>		
4-	3	ي	ορ <u>ο</u> Τορο	244/	11.	12" Fill, rocks, brick, clay, sond, dry		
	3	Z	11	11	13	5		
5-	3	١	ti	11	1.1			·
	3	5	H	((. 11	_^		
(y	4	4	(A)	24"/ /191	11	and Clay & 161/41		
	4	Q	1,	lı .	il	7		

environmental engineers, scientists, planners & management consultants

BORING NUMBER: BZ

Page 2 of 2

Log of Boring		·
Project Hoh Bross.	Location 5/s Area A	JOB. 16947-12-RC-WBUL
Date Drilled 7/20/89	orilling co. Rochester	Dalling Company
Total Depth 1312"	Method Used 61/4" Aug	ger d
Inspector C. Wenczo Organi	c Vapor Instruments Used HMu	Water Table Depth <u>≅8'0"</u>

Depth (feet	Samp		Sample Interval	Adv./ Recov.	Org. Yap - PPM	Sample Description	Strata Change	Remarks (Time of Day)
	·							
	4	8	8000	24"/	14		-	
	4	10	11	74	ι(4		
·6 -	5.	8	0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	24"/ /24"	ų.	24" Interlaigned Clay = and SILTS, 1/8" to /4" = laigns		
·	5	0	11	ιι	(1	laigres		
q -	5	12	l (H	(\			
•	5	90	11			· · · · · · · · · · · · · · · · · · ·		
10 -	يُ ا	iD	12,0	24"/ /21"	١(٠	24" TILL, pink some 1" rocks, very tight?		
	(4	22	}(15	Įt.	,, _		
11 —	لا	39	11	11	11			
12-	Ú	.13	VC .	,	11	1 12-		
12	7	10	12'0" te 14'0"	12"/	11 ,	12" TILL pink some		
	7	18	11	a(*	1(-		
13	7	R	u		k	Rock at 13-7		
1	7		11					**

CDM environmental engineers, accentess, planners & management consultants

BORING NUMBER: 125

Page 1 of 3

Project Fohl Bros, Location Area A Job. Nogy-12-RC-WELL

Date Drilled 7/6/89 Drilling Co. Rochester Drilling Company

Total Depth 15'3" Method Used 6'4" Augus

Water Table Depth 全名'の' Organic Vapor Instruments Used HNU Inspector (Wenczel Blows per 6 Remarks Sample Org. Vap. Strata Adv./ Depth Samo Sample Description Interval (Time of Day) Recov. Change (feet) No. lbs. 0,00 24"/ 18" Gravel; topical crother ron for drikeway. Bkd 23 <u>/1</u>8" Z'0" 11 1(11 31 11 11 u 30 2 Z' C" 24"/ 20" Grave I ; typical croshed run for drilleway 1" graves, some modium sand; some silt. 18 te 11 /20" 410" 21 . 11 38 н k u 2 11 11 2 ゴ ĸ 10" Grand : typical crossor run for driveway. 4'0" Z4" 3 11 to 1 18" 610" 8" SAND, very fine, some Silt; little medium Emd, trace 14" rounded grand H 11 11 11 11 .4 4 11 11 6109 24"/ 5" Store ma sound stock 1000 in the drive shoe. 83°F OE 4 to **/**5" 11 8.0. 4 43 11 73 11

NY-1

BORING NUMBER: 125
Page 2 of 3

Log of Boring

Project Pfanl Bros.	Location Area A	Job. NO 847-12-PC-WELL
Date Drilled 7/6/89	Drilling Co. Rochester	FDrilling Company
Total Depth 1513"	Method Used (01/41) A	over !

Water Table Depth 스팅이 Inspector C. Wencel Organic Vapor Instruments Used HNu

Depth (feet)	Samp No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Yap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
			·					
•	4	4	10 p 0	2A"/ 5"	BKd			
	4	6	IV.	1 ()(4		
8 –	5	١	8.0°	24"/	16	3" SAND, Fine; some silf trace 's "cyrawel; brown to black.		
4 _	5	'Ì	10.7	IJ	· ų	3" Organic swampdepositions some silt; black		
7	5	4) (1 (Įt.	5" SILT, trace very fine q school; grey to black ; 5" CLAY, pink to brown; ; 1. He very fine sand;		
-	5	10	11	11	, 1	Title very time sure;		
10	(e	B	10'0" 12'0"	24"/ 24"	11	6" SAND, very fine; some ; silt; black, organic.		
	6	٩	10	X.	II.	18" SILT, red to orange of some strenks of grey damp		
	Ce	10	ч	11	н			
,	4	14	16	lı	11		·	
12 -	7	6	12:0"	24 / 24	((6" SAND, very fine; some = 18'SILT, orange to pink to		
12 4	7	12	h	n	ŧζ	red; some grey lamin ations. Trace	·	
13-+	7	19	11	Į1	h			
1	7	25	11	I.	11	14 =		

NY-1

the section of the section

envronmental engineers, acientists, planners & management consultants

BORING NUMBER: 125

Page 33 of 3

Project 75h | Bross. Location Anec A Job. No 897-12-RC-WELL

Date Drilled 71689 Drilling Co. Rockester Drilling Company

Total Depth 15'3" Method Used (0'/4" Auger

Inspector (1. Wincza) Organic Vapor Instruments Used HMu Water Table Depth 29'0"

Depth (feet)	Samp.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org: Yap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
							,	
***	96	(c	14,0,	24"/ /24"	BKJ	6" SAND, very fine; some silt. wet		
15-	8	10	N	\t	. 11	18"SILT, orange to pink to red, some green kiming trace 1/4" rounded grain (TILL) ROCK 15'3"	trons	
17 - 1	8	14	11	4.		(TILL) ROCK 15'3"		
1	8	R	11	13	l.	· •		
9 1						\		
1								
1								
4								
1								
1		· ·		<u> </u>				
-	+							
1		· ·						
1			·		\dashv		7	
1								

NY-1

environmental engineers, scientists, planners & management consultants BORING NUMBER: B - 18Page 1 of 1

Log of Boring		
Log of Boring PROJECT LANDFILL	Location BUFFALO, N	Job. No 897-14-RT-50L
Date Drilled CCT 15, 1992	Drilling Co. RURLIA	IGTON ENVIRONMENTAL
Total Depth 12 F.	Method Used 4/41 -	HOLLOW STEM AUGERS
Inspector M. EHNOT Organi	c Vapor Instruments Used $\mathcal{H}\mathcal{N}$	U Water Table Depth

Depth	n Sa	mp.	Blows per 6"	Sample	Adv./	Org. Vap	Sample Decements	Strata	Remarks
(feet		0.	per 6" lbs.			- PPM	Sample Description	Change	(Time of Day)
0									
	0-		3/5	0-2	1.17	0	BROWN CLAYEY SILT FILL, - TRACE COCK FRAGMENTS, TRACE F-C GRAVEL, TRACE -		
2-			10/4				BRICK FRAGMENTS. DEY.		
J	12-	4	3c/i3	2-4	1.1 /2.0	Ċ	BEOWN CLAYEY SILT FILL, TRACE TO LITTLE BRICKFRAGS, TRACE F-C GRAVEL BRY.		
4-		_	9/6				70 21.0.07/.5//.7		
	4-	4	5/4	4-6	1.2/2.0	0	BLUWN CLAYEY SILT, TRACE F-C GRAVEL.		
6-	1		3/2				BOALL C M SAIL SAUS		BLACK COLOR
	16-1	5	1/3	6-8	12/20	C	CRAY F-M SAND, SOME - OLAY, LITTLE DECAUTEMENTER.	•	(1) 7-7.5' BROWN COLOR 1277-8.0'2
£ <u> </u>	1	\perp	6/5		1 = 1		(G-CC) NO PEONEN		LAB SAMPLE
	8-11		2/2	8-10	1.5/	0	(E-85) NO RECOVERY (B5-95) BEVILLA F-M SAND, SOME CLAY, TRACE ORGANIC		Riack colar Gliffe -9.2'
10 -			4/5				MATTIEC TRACE TRLICE PLAGMENT.] SLT MUIST. 195-10) REDDISH BLOWN SILTY CLLY.	,	NATIFIAL SOIL
· ·	10-1		3/5	10-12	12.0		BEOWNE REDOISH BROWN LAYEY SILT, SUFT, TRACE RICK FLAGS, GRAVEL-SIZED. MUIST		"SATURATED BOLLE"
12 —			100(3")				AT 10 0-11.7 AT ORY AT 11.7 TO 12 0 PT		LAB SAYFLE IC'-12'
								, , , , , , , , , , , , , , , , , , ,	
								x x x	•

environmental engineers, scientists, planners & management consultants

BORING NUMBER: B-19

Page 1 of /

Log of Boring PROHL BRAS.	
Project LANSALL	Location BUFFALC, NY Job. No 897-14-RI-SOL
Date Drilled OCT 6, 1992	Drilling CO. BURLINGTON ENVIRONHENTAL
Total Depth 12 FT-	Method Used 4/4" HOLLOW STEM AUGERS
Inspector M. EHNIT Organi	c Vapor Instruments Used HNU Water Table Depth $6.8-7.0$

Dept (fee		Samp No.	Blows per 6" lbs.	Sample Interval	Adv./ Recov.	Org. Vap.	Sample Description	Strata Change	Remarks (Time of Day)
0					·				·
	1	0-2	0/2	0-2	1.0/	0	DARK BROWN CLAYEY SICT, TRACE BOULDERS, TRACE ORGANIC MATTER. DRY.		,
3.	- - - - -		7/8				-	•	
	1	2-4	8/13	2-4	0.8/	C.i	DARK BLOWN CLAYEY-SILT, SOME RUCK FRAGS, COBBLETO BOULDER SPIED, TRACE GRAVEL,		
<u>+</u>	1 1 1		10/7		-	and the second s	TRACE OFBANIC PUHILLE. DRY.		0
l [1/1	+6	1/3	4-6	1.1%	0	DARK BROWN F-M SAND! F-M GRAVEL, TRACE SILTY CLAY. VERY MOIST.		TRACE BLACK CULORATION
6-	1 1 1		5/8				•		
	16	;-E	2/3	6-6:	1.2/	1.	(6-6.8) NO RECOVERY (6.6-7.0) AS ABOVE SATURATED - (7.0-8 U) LIGHT BLUWN CLAYEY -		LAB SAMPLE COLLECTED FROM 6.8-7.0 \$ 44-6!
e -	4		5/7	·			SILT, STIFF OFY.		7-6
	30	-1C	3/5	8-10	2.0%	0	LIGHT BEUWN CLAYEY SILT, -		
10-	4		7/10				1 15 1 7 Chinh (1/4VEV SV/T		LAC SALAGIE
• .	10	12	5/7	10-12	2.0	0	LIGHT BLUWN CLAYEY SILT, STIFF, LITTLE F-C GRAVELD, (11-12). DRY		LAG SAMPLE
.12-	4		52(4)		34 /		BEDROCK (LS) @ 12 FT		
	12	-14	57(1")	2-14	(*/i**)	C	4	Y ビ メ メ <i>メ</i>	
14	4							X	

APPENDIX B

TABLE E-1
VOLATILES
SOIL BORING ANALYTICAL RESULTS
Page 01 of 07

B4-SS-100

)	!	CONCENTRATIONS	IIONS in ug/kg			
SAMPLE NUMBER -	B1-SS-05	B1-SS-06	B2-5S-03	B2-SS-05	ġ	80-88-04	010-23-78	n/_55 40 ·
VOLATILES						-	01 00 000	04-33-10
Chloromethane			11 0 =			•		
Vinvi Chiorida	12.0 U	12.0 U	11.00	12.0 U	130.0 U	200.0 0.	5000.0	12.0
Chloroethane			11.0			0	0.000g	12.00
Methylene Chloride		,	7.0			200.0 UJ	ö	12.0 UJ
Acetone	75	20:	20 ;	20 2		ċ		34.0 U
Carbon Disulfide			6.0	<u>,</u>	64-0 0	100.00	7500.0	770.0 DJ
1-Dichtoroethene		6.0 U	6.0 U	0			2500.0	> · ·
11.2-Dichloroethene (total)	-		Ġ	ò		100.0 UJ	2500.0 U	٠. د د د د د د د د د د د د د د د د د د د
Chloroform	A 0	× o . c		ó			2500.0 U	6.0 U
1,2-Dichloroethane	0	6.0 U	o	A 0.0		100.0 LJ	2500.0 U	6.0 U
1 1 1 7 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	12.0 U			0	130.0 U	D	\$000.0 C	0.00
Carbon Tetrachlorida						100.0 LJ	2500.0 U	, 6-0 =
Vinyl Acetate	- 6		Ġ	Ö		0	2500.0 U	6.0 U
Bromodichtoromethane	6.00	6.0 U	>	A.0.0		fn 0.002	5000.0 U	12.0 U
1, 2-Dichtoropropane	Ö			0	64.0	100.0	2500.0	
Trichioroether		6.0 0	0	ò		0	2500.0 11	A
Dibromochloromethane	6.0	<u>-</u> د	Ġ	Ö		Ö	2500.0 U	6.0 U
1,1,2-Trichlargethane	0		A 0, 0	<u>.</u>		ò	2500.0 U	6.0 U
Benzene		0	0	6.00	54.0		2500.0 U	6.0 U
trans-1,3-Dichtoropropene	Ö	6.0 U		0	0	100.0 11	2500.0	
4-Methyl-2-Dentanona		6.0 U	6.0 U		64.0 U		2500.0 u	> °.
2-Hexanone		ċ		ò		0		5
Tetrachloroethene	5.00	×.0	٠. د	ò		200.0 UJ	5000.0 U	12.0 UJ
1,1,2,2-Tetrachloroethane	6.0 U	0	· · ·	> · · ·	04.0	100.0 0	2500.0 U	6.0 LJ
Toluene	0.0 U	0		5		10000	2500.0	6.0 UJ
Chlorobenzene	Ö	6.0 U		0		150 0	3500.0	11.0
Ethylpenzene	Ö	6.0 U			1300.0	500.0	2/00.0	0.0
VV prosettotal	6.0 U		6.0 U	6.0 U		100.0 11.	2500.0 10	
A) telegational)	0.0	6.00			J 100.0 J		11000 0 n	• • • • • • • • • • • • • • • • • • • •

ug/kg (micrograms per kilogram) = ppb (parts per billion).
Units for inorganic results are mg/kg (milligrams per kilogram).
I is a data qualifier indicating estimated values (appendix A).

R = Analyte was rejected due to QA/QC.

For organics, analyte was detected in the method blank.

For inorganics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (IDL).

Findicates element was analyzed for but not detected. The number shown is the detection limit.

Findicates analyte quantified at a secondary dilution factor.

Figure 2. The number shown is the detection limit.

TABLE E-1 (contd)
VOLATILES
SOIL BORING ANALYTICAL RESULTS
Page 06 of 07

				CONCENTRATIONS	TIONS in ug/kg				
SAMPLE NUMBER -	Mu-108-07	HU-11S-07	MU-125-07	MW-13S-02	Mu-13S-06	MÜ-145-08	HU-145-12	MJ-158-05	WU-165-01
VOLATILES									100 0
Chloromethane		>		•	•			•	
Bromomethane	1.00	12.0 0	1	12.00	12.0 0	11.0 u	13.0 U		1500.0
Vinyl Chloride					_		13.0 0		1500.0
Chloroethane		0	1.0		ب ر		1.0 C	12.0 U	1500.0
Methylene Chloride		7		18.0	٠,	7.00	3.0	12.0 U	1500.0
Acetone	11.0 u	55.0	35.0		٠,	3.0	130.0		1000.0
1 1-Dichiosoathan	ö			0	0	6.0	A-0 -0	, o	7/0.0
1-Dichloroethane	·	0.0	6.0 U		6.0 U	6.0 U	6.0 U		740.0
,2-Dichloroethene (total)	٥.0 د د د	^ 0.0		·		6.0 U	6.0 U	-	740.0
		0	6.0	> · ·	5 C	0.0	6.0 C	6.0 U	740.0
2-Dichloroethane	٠	0	0	6.0 U	_ 0	A 0 0	٠. د د		740.0
1.1-Trichloroethane	ċ		11.0 u	12.0 U	0	75	79	12.0 0	1500.0
arbon Tetrachloride	> · ·	· · ·	ċ	· · ·	9	6.0	3.0 J	0	740.0
Vinyl Acetate	0	0	10.0	120.0	-			5	740.0
Bromodichloromethane	6.0 U		6.0 U	0	90	>	9 6	9.0	1500.0
	6.0 U	0		6.0 U	9	> · ·	5 0	_	7,0.0
richloroethene	ċ	6.0 0	·		0	6.00	6.0	> c	740.0
ibromochloromethane	A.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O			Ġ	0	_	0	31.0	740.0
,1,2-Trichloroethane	6.0 U	0	· ·	> · ·	3 C	· · ·	ö	6.0 U	740.0
Benzene	0	0	6.0 0	-	30		Ġ	· · · · ·	740.0
trans-1,3-Dichloropropene	ö	0	6.0 U		0	6.00		, o	740.0
4-Methyl-2-Pentanon			6.0 0	ò	0	_	0	6.0 U	740.0
Hexanone	=======================================	12.0		ċ	0			12.0 U	1500.0
etrachloroethene		6.0 U	200	7.0	9 C		13.0 0	12.0 U	1500.0
1, 1, 2, 2- Tetrachloroethane		6.0 U	6.0 U		0		> o		7/0.0
o Luene			6.0 U		0			> 0 = 0	740.0
Fthylbenzene		ò	6.0 U		0	_	6.0 U	6.0 U	780.0
Styrene	^	ء د	0.0		0		6.0 U	6.0 U	740.0
Xylenes(total)	6.0 U	6.0 U	6.00	6.0	> · ·	> o o o o o	· 6.0	 	740.1

rootNotes:

ug/kg (micrograms per kilogram) = ppb (parts per billion).

Units for inorganic results are mg/kg (milligrams per kilogram).

J is a data qualifier indicating estimated values (appendix A).

R = Analyte was rejected due to 0A/0C.

R = For organics, analyte was detected in the method blank.

B = For inorganics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (IDL).

U = Indicates element was analyzed for but not detected. The number shown is the detection limit.

				CONCENTRAT	CONCENTRATIONS in ug/kg			٠	
SAMPLE NUMBER -	B1-SS-05	B1-SS-06	82-55-03	82-SS-05RE	B3-SS-06	83-SS-60L	B4-SS-03	B4-SS-10	85-SS-08
SEHI-VOLATILES 1	·		,						
Phenol	300 D II	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	*		i.				
bis(2-chloroethyl)Ether	390.0	400.00	380.00		0	170000.0 U	150000.0	1800.0	390.0 U
2-Chlorophenol	390.00	400.00	780.0 C		0	170000.0 U	14000.0 U	390.0 U	390.0 U
1,3-Dichlorobenzene	390.0 U	400 0 11	380.0	300.0	•	170000.0 U	14000.0 U		390.0 U
1,4.Dichlorobenzene	390.0 0	400 0 11	, ,		0	170000.0 U	14000.0 U		390.0·U
Benzyl Alcohol	390.0 U	400.00	300.0 00.0	390.0 03	Ö	_	14000 0 U	390.0 U	
1,2-Dichlorobenzene	390.01	400.00	100.0		0	170000.0 UJ	14000.0 U	390.0 U	390.0 U
2-Methylphenol	390.0 0	400.0	100.0		0	. –	14000.0 U	ò	0
bis(2-Chloroisopropyl)Ether	390.0 U	400.00	380.00	·	0	170000.0 U	f 0.001		0
4-Methylphenol	390.0 U	400.0 11	380.0	5 0	ċ	170000.0 U	14000.0 U	. 390.0 U	
N-Nitroso-Di-n-Propylamine	390.0 U	400.0 1		100.00	0	7,0000.0	_	390.0 U	Ġ
Hexachloroethane	390.0 U	400.0 U	380.0 0	300.00	0	0.00007	_		390.0 U
Witrobenzene	390.0 U	400.0 U			9 0	70000.0	14000.0	390.0 U	390.0 U
Isophorone	390.0 U	400.0 U		-	85000.00	170000.0	0.000%	390.0 U	390.0 U
2-Nitrophenol	390.0 U	400.0 u	380.0 U	5	3	170000.0	ء د	390.0	.390.0 U
1c, 4-0 imetry (prenot	390.0 U	400.0 U	380.0 U	9	9	170000 0 11	1,000	170.0	390.00
Benzoic Acid	1900.0 U	1900,0 U	1800.0 u	9	9	850000 O LI	14000.0 C	1000.0	390.0 0
priste chitoroethoxy)Hethane	390.0 U	400.0 U		_	9	170000.0	17000.0	700.0	1900.0
1 2 6-Trichlorobantan	390.0 U	400.0 U		0	85000.0 U	170000.0 U	14000.0	1000.0 0	390.0 0
Warhthal are	700.0	*00.0 C	_	LD 0.06E	0	170000.0 U	14000.0 11	100.0	100.00
4-Chloroaniline	300.0	400.0	380.0	6	0	170000.0 U	14000.0 U	390.0 U	300.0
Hexachlorobutadiene	300.0	400.0 0	9 =	6	0	170000.0 U	14000.0 U	390.0 U	390.0 U
4-Chloro-3-Methylphenol	390.0 0	400.00	300.0	ċ	9	170000.0 U	14000.0 U	390.0 u	390.0 u
2-Hethylnaphthalene	390.0 1	400 0 11		ċ	ċ	1/0000.0 U	14000.0 U	390.0 U	390.0 u
Hexachlorocyclopentadiene	390.0 U	400 0 11	180 O	5	•	1/0000.0 U	_	390.0 U	390.0 U
2,4,6-Trichlorophenol	390.0 U	400.0 0		ء د	9 0	170000.0 U	14000.0 U	390.0 U	390.0 U
2,4,5-Irichlorophenol	1900.0 U	1900.0	_	1000 0 11	2 <	75000.0	14000,0 U	390,0 U	390.0 U
2.Chlaronaphthalene	390.0 U	400.0 U	380.0 u	- 6	3 C	170000.0		1900.0 U	ö
2-Witrognilline	1900.0 U	1900.0 U		1000 0 111	- c	# 0000 O U	14000.0	390.0 0	390.0 U
Dimethyl Phthalate	390.0 U	400.0 U	380 0 11	3	9 0	470000.U	69000.0	1900.0 U	1900.0 U
Acenaphthylene	390.0 U	400.0 U	75.0 2	390.0 11	85000.0	170000.0	. 14000.0 U	390.0 U	390.0 U
2,6-Dinitrotoluene	390.0 U	. 400.0 U	380.0 U		0	170000.0 1	14000.0	300.0	390.00
FOOTUGER									

FOOTNOTES :

ug/kg (micrigrams per kilogram) * ppb (parts per billion).
Units for inorganic results are mg/kg (milligrams per kilogram).
J is a data qualifier indicating estimated values (appendix A).
J is a data qualifier indicating estimated values (appendix A).
R * Analyte was rejected due to QA/QC,
B * For organics, analyte was detected in the method blank.
B ** For inorganics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (URDL).
U * Indicates element was analyzed for but not detected. The number shown is the detection limit.
E ** Estimated value due to excedence of linear calibration range.

TABLE E-? (contd)
SEMI-VOLATILES 1
SOIL BORING ANALYTICAL RESULTS
Page 05 of 07

10, 10, 10									4/17/4	
				CONCENTRATIONS	10MS in ug/kg					
SAMPLE NUMBER -	MW-6S-02	Mu-6S-03	MW-65-038D	MU-75-15	Ac oc				1	-
SEMI-VOLATILES 1						FIM 73 00	10-501-MH	MV-11S-07	(MJ-125-07)	
Pheno		٠								_
bis(2-Chloroethyl)Ether	380.0 U	390.0 U	400.0 U	420.0 U	0		10 00 11	, o		-
2-Chlorophenol		700.0	\$00.0 0	420.0 U		370.0 U	400.0	100.0	780.0	
1.4-Dichlorobenzene		390.0 U	\$00.0 C	420.0		370.0 U	400.0 U	400.0 U	380.0	
Benzyl Alcohol		390.0 U	400.0 U	420.0 U	٠ .		. 400.0 U	400.0 U	380.0 U	
1,2-Dichlorobenzene	÷	ò	400.0 U	420.0 U		370.0	400.0 U	400.0 U	380.0 U	
2-Hethylphenol	380.0 0	300.0	400.0 U	420.0 U			1 00.0	\$00.0 0	380.0 U	-
L-Mathy change		390.0 U	400.0	420.0 U			400.0 U	400.0 U	780.0	
N-Nitroso-Di-n-Pronylamina	ò	ò	400.0 U	420.0 U			400.0 u		380.0 U	
Hexachloroethane	380.0	300.0	Ö	420.0 U		370.0 U	400.0	\$00.0 0.0	380.0	
N1 (Fobenzene		390.0 U	400.0	420.00			400.0 U	0	380.0	_
2-Nitrophenol	380.0 U	390.0 U	0	420.0 U			400.0 U	400.0 U	380.0 U	
2,4-Dimethylphenol	380.00	390.0	0 0 0 U	420.0 U		370.0 U	400.0 C	4 00.0 c	380.0 U	
bis(2-Chloroethoxy)Methans		1900.0	0	2000.0 0			400.0 u		380.0 U	
2,4-Dichlorophenol	380.0	100.0	400.0 U	420.0 U		370.0 U	400.00	1900.0	0	
1,2,4-Trichlorobenzene	380.0 U	390.0 U	400.0	420.0 U		_	400.0 U	400.0 U	380.00	
4-Chloroaniline	380.0 U	390.0 U	400.0 U	420.0 U		370.0	400.0 U	0	380.0 U	-
4-Chioro-3-Nethylphonol		0		420.0 U		370.0 U	400.0 U	400.0 U	380.0 U	
2-Methylnophtholene	780.0	ö		420.0 U		370.0 G	1 00.0	400.0 U	380.0 U	
Hexachlorocyclopentadlene	380.00	200.0	400.0 U	0		370.0 U	400.0	*00.0	380.0	
2,4,6-Irichlorophenol		-	ء د	ö		370.0 U	400.0 U	00.00	380.0	
2,4,5-Trichlorophenol		1900.0 u	<u>.</u>			-	400.0 U	400.0 U	180.0	
2-Witroshi isa	380.0 U	390.0 U	400.0 U			1800.0 U	1900.0 U	1900.0 U	1800.0 U	_
Dimethyl Phthalate	1800.0 U	1900.0 U		2000.0 U		1900.0	\$00.0 C	400.0 U	380.0 U	
Acenaphthylene	190.0	390.0 U				770.0 U	100.0	1900.0	1800.0 U	
2,6-Dinitrotoluene	380.0 U	390.00	0.00 U		400.0 U	370.0 U	100.0	400.0 C	380.0 U	_
							100.00	0.000	380.0 0	
ug/kg (micrograms per kilogram) = rmh (reste per billion)	mh (nerte per	F11122							•	
uy/ky (micrograms per kilogram) =	The Court of	F								

ug/kg (micrógrams per kilogram) = ppb (parts per billion).
Units for inorganic results are mg/kg (milligrams per kilogram).
J is a data qualifier indicating estimated values (appendix A).
R = Analyte was rejected due to 0A/OC.
B = For organics, analyte was detected in the method blank.
B = For inorganics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit or indicates element was analyted for but not detected. The number shown is the detection limit.
E = Estimated value due to excedence of linear calibration range.

. 41

TABLE E-2
SEMI-VOLATILES 2
SOIL BORING ANALYTICAL RESULTS
Page 01 of 07

1900.0 0 100.000 1 100.000 1 100.000 0 100.000	Cether 390.0	SEHI-VOLATILES 2 S-Nitroaniline Acenaphthene 2,4-Dinitrophenol 4-Nitrophenol	1900.0 U 1900.0 U 1900.0 U 1900.0 U	1900.0 U 1900.0 U 1900.0 U 1900.0 U	- V - X	0000	420000.0 U 420000.0 U 420000.0 U	83-SS-60L 850000.0 U 170000.0 U 850000.0 U	84-55-03 69000.0 U 14000.0 U	84-55-10 1900.0 390.0
1900.0 U 1900.0 U 1800.0 U 1900.0 U 170000.0 U 1700000.0 U 170000.0 U 170000.	390.0 U 400.0 U 390.0 J 390.0 U 270.0 U 390.0 U 1 85000.0 U 170000.0 U 1	iltroaniline introphenol enzofuran enzofuran enzofuran enzofuran enzofuran enzofuran enzofuran iltrosoliene iltrosolilne iltrosoliphenyl-phenylether introaniline iltrosodiphenyl-menylether incomphenyl-phenylether incomphenyl-phenylether incomphenyl-phenylether incomphenyl-phenylether incomphenyl-phenylether incomphenyl-phenylether incomphenol inanthrene in-Butylphthalate oranthene ene ene ene zo(a)Anthracene ysene (2-Ethylhexyl)Phthalate co(b)Fluoranthene zo(b)Fluoranthene zo(b)Fluoranthene	1900 1900 1900 1900 1900 1900 1900 1900		·			850000.0 U 170000.0 U	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
300.0 U 300.0 U 300.0 U 170000 U 170000	1900.0 1900.0 1800.0 1900.0 12000.0 18000.0 1900.0	Chlorophenyl-phenylether Worene Witrophiline	390.0 U	400.0 00.0 0			85000.0 U 85000.0 U	170000.0 U	11.000 11.000 11.000	
390.0 U 400.0 U 380.0 U 390.0 U 85000.0 U 170000.0 U 1	Net 390.0 1	Nitrosniline 6-Dinitro-2-Methylphenol Nitrosodiphenylamina (1)	1900.0 U	1900.0 U	900			850000.0 U	6900	
390.0 U 400.0 U 360.0 U 390.0 U 85000.0 U 170000.0 U 1900.0 U 1900	1900.0 U 1900.0 U 1800.0 U 1900.0 U 170000.0 U 170000.0 U 1900.0 U 1900.0 U 170000.0 U 1900.0	Bromophenyl-phenylether Rachlorobenzene	390.00	400.0 U	90		85000.0 U	170000.0 U	1,000	
1000.0 U 1000.0 U 1000.0 U 1000.0 U 10000.0 U 100000.0 U 10000.0 U 100000.0 U 100000.0 U 100000.0 U 100000.0 U 100	390.0 1	entachlorophenol	1900.0	1900.0 U	380.0 U		420000.0 U	850000.0 U	14000	-60
390.0 U 400.0 U 360.0 U 390.0 U 390.0 U 170000.0 U 1700000.0 U 170000.0 U 1700000.0 U 170000.0 U 170000.0 U 170000.0 U 170000.0 U 170000.0 U 17	10000.0 1000	thracene	390.00	400.0 U	350.0 J		32000.0 J	170000.0 U	00.00	
1900.0 1	10000.0 1000	uoranthene uoranthene	390.0 U	400.0 U			85000.0 U	170000.0 U	14000	00
1900.0 1	Total Tota	rene itylbenzylphthalate	390.0 U	400.0			0.00004 0.00004	170000.0 U	17000 5200	-
1900.0 1	Late 390.0 U 400.0 U 940.0 390.0 UJ 24000.0 U 170000.0 U 1 390.0 UJ 24000.0 U 170000.0 U 1 390.0 UJ 24000.0 U 170000.0 U 1 390.0 UJ 25000.0 UJ 170000.0 U 1 390.0 UJ	3'-Dichlorobenzidine	790.0 0	800.0 U			85000.0 U	170000.0 U	14000	
1900.0 1	Section Sect	rysene	390.0 U	400.0 U	940.0		24000.0 1	170000.0 U	2900	
390.0 U 400.0 U 380.0 U 390.0 U 3900.0 U 170000.0 U 1900.0 U 1900.0 U 170000.0 U 1900.0 U 190	390.0 U 400.0 U 400.0 U 380.0 U 390.0 U 370000.0 U 170000.0 U 1 390.0 U 400.0 U 400.0 U 390.0 U 390.0 U 170000.0 U 1 390.0 U 400.0 U 390.0 U 390.0 U 170000.0 U 170000.0 U 1 390.0 U 1 390.	s(2-Ethylhexyl)Phthalate	390.0 U	400.00			34000.0 J	170000.0 U	14000	
## (1) 390.0 U 400.0 U 380.0 U 390.0 U 42000.0 U 170000.0 U 1700000.0 U 170000.0 U 1700000.0 U 170000.0 U 170000.0 U 170000.0 U 170000.0 U 170000.0 U 1700	390.0 U 400.0 U 400.0 U 390.0 U 390.0 U 170000.0 U 1700	nzo(b)f(voranthene	390.0	400.0 U			85000.0 U	170000.0 U	1400	-
## 1	390.0 U 400.0 U 390.0 390.0 U 27000.0 U 170000.0 U 1 390.0 U 400.0 U 270.0 J 390.0 U 470000.0 U 1 390.0 U 470000.0 U 1	nzo(k)fluoranthene	390.0 U	400.0 U	400.0		32000.0 J	170000.0 U	4100	
## (1) 390.0 U 400.0 U 380.0 U 390.0 U 42000.0 U 170000.0 U 170000	390.0 U 200.0 U 270.0 J 390.0 U 85000.0 U 470000.0 U	ciano(1 2 %-reiovena	390.0 U	400.0 U	390.0		21000.0	70000.0	14000	0.0
1900.0 1		Diberz(e, h)Anthrecene	390.0 U	400.0 U			85000.0 U	170000.0 U	14000	0.0

ug/kg (micrograms per kilogram) = ppb (parts per billion).
Units for inorganic results are mg/kg (milligrams per kilogram).
I is a data qualifier indicating estimated values (appendix A).
R = Analyte was rejected due to aA/ac.
B = for organics, analyte was detected in the method blank.
B = for inorganics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (IDL).
D = Indicates element was analyzed for but not detected. The number shown is the detection limit.
E = Estimated value due to excedence of linear calibration range.

06/26/90

TABLE E-2 (contd)
SEMI-VOLATILES 2
SOIL BORING ANALYTICAL RESULTS
Page 05 of 07

				LVALNAJNOJ	10416 1 - /l.	***************************************			
SAMPLE NUMBER -	MU-88-02	W1-46-07		מטחכבתותחו	CONCENTRALIONS IN US/KG				}
SEMI-VOLATILES 2		3 03	U8:03:0380	S1-5/-NH	MJ-8S-05	MU-95-06	MU-10S-07	MU-115-07	MJ-125-07
3-Nitrospills	•								
Acenaphthene	1800.0 U	1900.0 U	1900.0 U	2000,0 U		1800.0 U	1000 0 11	4000 0	
2,4-Dinitrophenol	0	1900.0	1000.0 0 0	420.0 U	400.0 U	370.0 U	400.0 0	400.0	1800.0 U
Dibenzofican	Ö	1900.0 U	1900.0 11	2000.0		1800.0 U	1900.0 U	1900.0.0	1800.0
2.4-Dinitrotolian	Ö	390.0 U	0.00 U	420.0	- -	1800.0 U	1900.0 U	1900.0 U	1800.0 0
Diethylphthalate	0		400.0 U	420.0 U	ة د	370.0	400.0 U	400.0 U	380.0 U
4-Chlorophenyl-phenylether	380.0 C	390.0	400.0 U	420.0 U	0	370.0	\$00.0 0.0 0.0	,00.0 U	
Fluorene	380.0 U	390.0 U	\$00.0 0.00	\$20.0 U	ö	370.0 U	400.0 U	400.00	780.0 0 0
4,6-Dinitro-2-Methylphenol	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0	1800 0	400.0 U	400.0 U	380.0 U
N-Witrosodiphenylamine (1)	380.0 U	390.0	1900.0	2000.0 U	1900.0 U	1800.0	1900.0	1900.0	1800.0
Hexachtorobenzene	380.0 U	390.0 U	00 0 U	420.0 U	0	370.0	0.00	400.0 U	380.0 U
Phenanthrene	1800.0 U	1900.0 U	1900.0	2000.0 U		370.0 U	400.00	400.00	380.00
Anthracene	380.0 4	700.0 J	400.0 U	420.0 U	250.0 J	370.0 U	100.00	1900.0 U	1800.0 U
Fliggranthers	380.0 U	390.0 U	400.0 U	420.00	320.0 J	370.0 U	400.0 U	0,00 U	380.0 0
Pyrene	170.0 J	270.0 J	400.0 U	190.0 5	340.0	370.0 U	400.0 C	400.0 U	380.0 U
Butylbenzylphthalate	380.0 U	390-0 U	400.0 U	420.0 U	260.0 J	370.0 U	400.0 U	400.0 G	160.0
Benza(a)Anthracana		790.0 U	800.0 U	840.0	800.0 0.0	370.0 U	400.0 U	400.0 U	380.0 C
Chrysene	85.0 J	120.0 J	400.0 U	420.0 U	9.0 J	370.0 u	000.0	69.0	760.0 U
bis(2-Ethylhexyl)Phthalate	380.0 U	470.0	400.00	150.0 U	150.0 J	370.0 U	400.0 U	400.0 U	380.00
Benzo(b)Flumranthene	380.00	390.0 U	400.0 u	420.0 U	400.0	370.0 0.0	2600.0	400.0 U	380.0 U
Benzo(k)fluoranthene	70.0	190.0	400.0 U	420.0 U	170.0 J	370.0 U	400.0 C	\$00.0 0	380.0 U
Benzo(a)Pyrene	380.0 U	98.0	400.0	420.0 U	400.0 U	370.0 U	400.0 U	400.0	380.0
Indeno(1, 2, 3-cd)Pyrene	380.0 U	390.0 U	400.0	420.00	. 0.3 . 0.3	370.0 U	400.0 U	400.0 U	380 0 0
Benzo(g,h,i)Perylene	380.0 U	390.0 U	400.0	420.0 U	31,0 1	370.0 0	400.0 U	100.0 u	380.0 U
	200.0	370.00	400.00	420.0 U	68.0 J	370.0 U	400.0 U	0 0 00	380.0
FOOTNOTES :		-							

ug/kg (micrograms per kilogram) = ppb (parts per billion).
Units for inorganic results are mg/kg (milligrams per kilogram).
J is a data qualifier indicating estimated values (appendix A).
R = Analyte was rejected due to qA/QC.
B = for organics, analyte was detected in the method blank.
B = for inorganics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (IDL).
U = Indicates element was analyzed for but not detected. The number shown is the detection limit.

calibration range.

TABLE E-3
PESTICIDES/PCBs
SOIL BORING ANALYTICAL RESULTS
Page 01 of 07

				CONCENTRAT	CONCENTRATIONS in ug/kg	•			
SAMPLE NUMBER -	81-88-05	81-SS-06	B2-SS-03	82-SS-05	83-SS-06	84-88-03	84-88-030	·B4-SS-10	85-SS-08
PESTICIDES/PCBs									
olpha-BHC	9.5 U	9.6 U		6.5 IIJ	,	5	3200_ 0 11	47 O U	4 0
beta-BHC	9.5	9.6 11		0.5 U.	-	35 7 3	1	47.0 U	0
del (a-BHC	9.50	9.60	52.0 UJ	9.5 UJ	210.0 U	23 ;	3200.0 U	47.0 U	2.0
gamma-BHC (Lindane)	9.5 U	9.6 U		G,	0	70	0	47.0 U	9.4
Heptachlor	9.5 u			9.5 UJ	_	70	0	47.0 U	4.6
Aldrin	9.5 U		92.0 UJ	9.5 UJ	_	7 9	3200.0 U	47.0 U	9.4
Heptachlor epoxide	Ů.	ò	92.0 UJ	9.5 UJ	_	Ö	0	47.0 U	9.4
			92.0 UJ	9.5 UJ	0	320.0 U	0	47.0 U	9.4
Dieldrin	19.0 U	19.0 U	180.0 UJ		0		0	0.16	19.0
4,41-DDE	19.0 U	19.0 U	180.0 UJ		560.0	7 5	6400.0 U	94.0 U	19.0
Endrin	19.0 0	19.0 U	180.0 UJ		0	640.0 U	ò	94.0 U	19.0
Endosultan II	19.00		180.0 01		. =	Ö	6400.0	94.0	19.0
4,4000	17.0	10.0	180.00	17.0	10.0	0,0,0	6400.0	?	
4.41-DDT	19.0 U	19.0 U	180.0 01		0	0	0.00.0 U	0 76	19.0
Methoxychlor		96.0 U	920.0 UJ		O		32000.0 U	470.0 U	94.0
Endrin ketone	Ö	19.0 U	LN 0.081	19.0 UJ	0	Ö	6400.0 U	94.0 U	19.0
alpha-Chlordane.	ö	96.0 U			2100.0 U		•	470.0 U	94.0
gemma-Chlordane	95.0 U	96.0 U		95.0 UJ	0		32000.0 U	470.0 U	94.0
Toxaphene		190.0 U	6		0	0	64000.0 U	940.0 U	190.0
Aroctor-1016	95.0 U	96.0 U	ò	95.0 UJ	0	3200.0 U	32000.0 U	470.0 U	94.0
Aroctor-1221	95.0 U	96.0 U	920.0 UJ	rn 0.56	0	3200.0 U	32000.0 U	470.0 U	94.0
Aroctor-1232	95.0 U	96.0 U	ä	95.0 UJ	0	3200.0 U	32000.0 U	470.0 U	94.0
Aroctor-1242	95.0 U	96.0 U	920.0 UJ	25.0 UJ	0	3200.0 u	32000.0 U	470.0 U	94.0
Aroctor-1248	95.0 U	96.0 U	÷	95.0 UJ	0	3200.0 U	32000.0 U	470.0 U	94.0
Araclar-1254	190.0 u	190.0 U	1800.0 UJ	190.0 UJ	4100.0 U	6400.0 U	64000.0 U	940.0 U	190.0
Aroclor-1260	190.0 U	190.0 U	1800.0 UJ	100.0 113		- C C C - C	- 0002		200

FOOTNOTES :

ug/kg (micrograms per kilogram) = ppb (parts per billion).
Units for inorganic results are mg/kg (milligrams per kilogram).
J is a data qualifier indicating estimated values (appendix A).
R = Analyte was rejected due to QA/QC.
B = For organics, analyte was detected in the method blank.
B = For organics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (IDL).
U = Indicates element was analyzed for but not detected. The number shown is the letection limit.
D = Denotes analyte quantified at a secondary dilution factor.
E = Estimated value due to excedence of linear calibration range.

06/34/00	7.34								
20/10/10				CONCENTRATIONS	ONS in ug/kg				
SAMPLE NUMBER -	Mu-125-07	MW-13S-02	MW-13S-06	MJ-14S-08	HU-14S-12	MU-15S-05	MJ-16S-01	MJ-16S-03	MV-16S-3DUP
PESTICIDES/PCBs									
alpha-BHC					_	>	^	>	
beta-BHC	9.2 u	9.6 0	9.6 U	9:1		0	S,	10.0 0	
				_	_	0	Ų,	0	
gamma-BHC (Lindane)	'n				_	•	G	0	
Reptachtor					_	ö	ı ÇS	0	
Heptachlor epoxide		0.0		o <u>v</u>	-	• i	n (ċ	
_					_	0	UR 1	5	_
Dieldrin			19.0 U		_	0	0	0	Τ.
* * ODE						Ö	0		_
Endosulfan II	18.00	19.0		10.0 C		20.0	-	.	20.0
		_	0		٠.	0	0	** :	
Endosulfan sulfate	18.0	19.0 U	19.0 U	18.0 U	20.0 U		19.0 U		20.0 U
Methoxychior	000		ە د		-	, 70	0	ö	ö
Endrin ketone	18.0 U		000	-	-	0 X	> c	> 0	-
alpha-Chlordane	92.0 U	0	0	0	0	0	0		9
germa-Chlordane	92.0 U	0	0	91.0 U	0	Ö	0	0	0
Toxaphene	180.0		_	ö	Ö	200.0 U	Ö	200.0 u	200.0 U
Aroclor-1221	97.0		06.0	٠. د	100.0	٠. د	-	_	
Aroctor-1232	92.0 U	96.0 U	96.0 U		0	0	93. C		500
Aroctor-1242	92.0 U		96.0 U		Ö	O	0	0	200 C
Aroctor-1248	92.0 U	_	96.0 U	ò	ö	Ö	0	0	100.0 U
Aroctor-1254	180.0 U	_	190.0 U	180.0 U	Ö	Ö	190.0 U	200.0 U	200.0 U
AFOCTOF- 1200	180.0 0	190.0 0	190.0 U	180.0 U	200.0	.0	190.0 U		200.0 U
		-							

FOOTNOTES:

ug/kg (micrograms per kilogram) = ppb (parts per billion).

Units for inorganic results are mg/kg (milligrams per kilogram).

J is a data qualifier indicating estimated values (appendix A).

R = Analyte was rejected due to QA/QC.

For organics, analyte was detected in the method blank.
For organics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (IDL).
Indicates element was analyzed for but not detected. The number shown is the detection limit.
Denotes analyte quantified at a secondary dilution factor.
Estimated value due to excedence of linear calibration range.

TABLE E-4
INORGANICS
SOIL BORING ANALYTICAL RESULTS
Page 01 of 06

		/	<i> </i> -	CONCENTRATIONS in mg	ONS in mg/kg	!			
SAMPLE NUMBER -	81-88-05	81-88-06	B2-SS-03	82-SS-05	83- SS-06	84-88-03	B4-SS-10	B5-SS-08	86-SS-07
INORGANICS		***************************************							
ALUMINUM	11400 00	0570 00	00 000	00 00	00 00	1700 00	11300 00	3300 00	יחבחח חח
ANTIHONY	20.30 J	12.90 UJ	12.20 UJ	13.40 BJ	13.80 01	15.70 UJ	11.70 03	11.90 UJ	13.20 U
ARSENIC	3.10	2.90	3.80	2.20 B	3.90	26.20 J	4.70 J		
BARIUM	93.00	75.00	35.40 B	37.00 B		304.00	B5.70	6	126.00
BERYLLIUM	0.02 U	0.02 U	0.02 U	0.02 U		0.31 U	0.50 B	0.23 U	0.43 B
CADRIUM	0.85 U	0.87 U	0.83 U	0.86 U	1.10 U	4.30	0.92 U	.92	1.30
CALCIUM	62900.00	69100.00	55200.00	121000.00		8040.00	61700.00	8	6460.00
CORAL T	30.00	70 g	7.00 00.00	3.50 8	24.00	37.80 1	7.40	 	33.20
COPPER	16,50	15.80 J	13.90	17.80 J	43.40	573.00	17,10	30 a	72.30
ROX	18700.00	16000.00	11600.00	7920.00	21400.00	104000.00	18200.00	5400.00	55800.00
	17/00 00	20100.20	47.10	12.30	70.50	375.00 J	13.40 J	7.60 J	107.00
NAME OF THE PROPERTY OF THE PR	267 00	20100.00	770.00	00000	3// 00	770,00	23400.00	24100.00	270.00
MEDCEN	007.00	1,40.00	0 11 1	003.00	244.UU J	728.00	453.00 1	294.00 J	7/0.00
NICKEL	15.60	12.50	10.70	,	3,7	77.00	10.00 10.00	7. 20. 20. 20.	× × × × × × × × × × × × × × × × × × ×
POTASSIUM	2190.00	2030.00	769.00 B	1200.00	1600.00	189.00 B	2820.00	659.00 в	1280.00
SELENIUM	0.54 U	0.56 U	0.53 U	0.55 U	0.54 UJ	0.62 81	0.46 UJ	0.47 UJ	0.78
SILVER	0.66.0	0.68	0.64	0.67 U	0.01	4.70	0.69 U	0.70 U	1.70
TEAT TIME	8 00.202	4 00.202	101.00	24.00	301.00	7.00	246.00 8	3.5	215.00
VARADICA	30.00	20.00	100	30.02	30.01	3.5	30.09	700	• • • • • • • • • • • • • • • • • • • •
ZINC	70.30	70.00	70.10 10 c	70.70	158.JO	35	67.40	70.00	% o
CYANIDE	0.59 U	0.61 U	. 0.57 U	0.60 บ	70.00	78 C	79 C.	70	0.65
CYANIDE	0.59 U	70.40 0.61 U	50.10 0.57 U	70.70 0.60 U	158,00 R	1000.00	63.20 R		70.20

rootnotes:

ug/kg (micrograms per kilogram) " ppb (parts per billion).

Units for inorganic results are mg/kg (milligrams per kilogram).

J is a data qualifier indicating estimated values (appendix A).

R = Analyte was rejected due to 0A/gC.

B = For organics, analyte was detected in the method blank.

B = For inorganics, analyte value is between the contract required detection limit (CRDL) and the instrument detection limit (IDL).

I = Indicates element was analyzed for but not detected. The number shown is the detection limit.

D = Denotes analyte quantified at a secondary dilution factor.

T = retimated value due to excedence of linear calibration range.

TABLE E-4 (contd)
INORGANICS
SOIL BORING ANALYTICAL RESULT

		3445 CUONA	ひしへツ	110s	SOIL BORING ANALYTICAL RESULT	AL RESULTS			1254	
06/26/90	7								\$	
CAUCHT AND	L				CONCENTRATIONS in mg,	ONS in mg/kg			1	
SARTER NUMBER -	_	MW-6S-03	MW-65-03D	HW-78-15	MM-88-05	MN-98-06	MJ-10S-07	MU-115-07	- 12c-07	W 021 121
INORGANICS								**** ****	10.63.01	20-SCI - MM
ALUMINUM ANTIMONY ARSENIC		4480,00 12.50 UJ 2.30 B	4920.00 13.00 UJ	4200.00 12.50 UJ	10800.00 12.30 UJ	4500.00 11.90 UJ	10300.00 12.20 UJ	11800.00 12.50 UJ	8900.00	16500.00
BERYLLIUM CADMIUM CALCIUM	`.	30.60 B 0.02 U 0.85 U 49800.00	33.60 B 0.02 U 0.08 U	29.30 B 0.24 B 0.85 U	67,60 0.44 B	33.40 B 0.02 U 0.81 U	0.37 0.37 8 0.83 8	94.70 0.39 B	0.39 0.39 8	104.00
CHROMIUM COPPER IRON		7.60 J	7.80 J 3.50 B	55400,00 7.30 J 3.90 B 7.80 J	43200.00 15.80 J 7.40 B	000		73600.00 16.30 J 7.90 B	65800.00 13.20 J 5.00 B	72900.00 72900.00 21.40 7.40 B
HAGNESTUM MANGANESE MERCURY	***************************************	20000.00 414.00	25100.00 406.00	18.50 21800.00 321.00	1/800.00 16.90 J 15500.00	8660.00 12.00 J 20900.00 329.00	16300.00 14.10 J 21400.00	17700.00 15.10 J 23400.00	13800.00	24500.00 19.00 24500.00
NICKEL POTASSIUM SELENIUM		0.54.0 8 00.500 9.00 8	981.00 B	0.37 6.10 B 1270.00	0.31 J 17.40 2060.00 J	0.11 UJ 8.90 B 1120.00	864	8228	0.71 13.00 2080.00	449.00 0.16 21.20
THALLIUM VANABII NE		114.00 B	0.68 U 135.00 B 0.63 U	0.66 U 0.66 U	196.00 B	158.00 B	228.00 B	239.00 B	0.47 UJ 0.62 U 263.00 B	296.00 U
ZINC		67.20 0.59 U	73.60 73.60 0.61 U	11.60 BJ 78.10 1.20 U	21.00 68.00 1.20 U	10.80 B 70.80 1.10 U	20.60 78.90	70.60 1	97.20 97.20	76.90 0.25 U
FOOTNOTES :	,							1		1.20 0

AREA A

Boring B-18 6'- 8' interval

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID:8-18 6-8

SITE CODE: 915043 PERCENT SOLIDS:

SAMPLE NUMBER:992-293-01 MATRIX:SOIL

SUBMISSION DATE: 10/19/92 ARCHIVE NO.: U29301

ANALYSIS DATE: 10/19/92 DATA FILE NO.: 9204C82A.D

СОМРОИНО	CONC (P	PB)		ЙОИ	TARGET	COMPOUN	DS:
Chloromethane	ы	C)		,			· .
Bromomethane	· 1	Ð	1			*	
Vinyl chloride	М	D	1	•		•	
Chloroethane	. N	D	į				
Methylene chloride	М	D	ŧ				
Acetone	И	D)	1				
Carbon disulfide	N		į				
1,1-Dichloroethene	M	0	i				•
1,1-Dichloroethane	N		1				
trans-1,2-Dichloroethens	N	D	1				
Chloroform	N	D .	ı				
1,2-Dichloroethane	. N	D	i				
2-Butanone	N		:	•			
1,1,1-Trichloroethane	N	D	į.				
Carbontetrachlorida	М		ŧ				
Vinyl acetate.	N		ŀ			•	
9romodichloromethane	М	D.	!				
-1,1,2,2-Tetrachloroethane			1	•			
1,2-Dichloropropane	N	D ·	1				
trans-1,3-Dichloropropene			{				
Trichloroethene	H		:		•		
D:bromochloromethane	N		ţ				
1,1.2-Trichloroethane	N		i		•		
Senzene	N		1				
org-1,3-Dichloropropene	N		1			•	•
2-Chloroethylvinylether	И		ļ		•		
Bromoform	N		Į			•	
2-Hexanone	, N		1			•	
4-Methyl-2-pentanone	. Н		i	,	•		
Tetrachloroethene	И	_	ļ			•	•
Toluene	N.						
Chlorobenzene	M		1	MU	= [=55	THAN '5	PP8
Ethylbenzene	. ' N		!				mmmm mener
Styrene .	N		1				ESS THAN
Total Xylenes	N		. !	5. F	LR UKF	ESTIMAT	LO
Total Chlorotoluene	N		1				
Total Dichlorobenzene	N	D	1	•		•	
			1			*	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY SEMI-VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: B-18 6'-8' % SOLID: 78

SAMPLE NUMBER: 992-293-01 MATRIX: SOIL

SUBMISSION DATE: 10/19/92 ARCHIVE NO.: S29301

ANALYSIS DATE: 10/27/92 DATA FILE NO.: 9203E62A

COMPOUND	CONC (ug/kg)	TIC AND COMMENT SECTION .
Pheno I	ND	
2-Chlorophenol	ND 1	Detection limit - CRDL
Aniline	. ND I	(Pesticide detection limit - 210)
Bis(2-Chloroethy1)Ether	ND 1	
1 3-Dichlorobenzene	· ND I	
1 4-Dichlorobenzene	ND 1	* Beta and Gamma BHC coelute -
1 2-Dichlorobenzene	ND 1	reported as the sum of the isomers
Benzyl Alcohol	ND I	
2-Methylphenol	NO I	
bis(2-chloroisopropyl)E	ther ND I	
Hexachloroethane	, ND I	TIC -
4-Methylphenol	ND I	Molecular sulfur - 1200
M-Nitroso-di-propylamin	e ND I	
Nitrobenzene	ND 1	
Isophorone	ND 1	
2-Nitrophenol	ND I	
2 4-Dimethylphenol	ND I	
bis(2-chloroethoxy)Metha	ane ND i	
2 4-Dichlorophenol	ND I	
1 2 4-Trichlorobenzene	ND i	
Naphthalene	MD i	
Benzoic acid	ND !	
4-Chiloroaniline	I OM	
Hexachlorobutadiene	MD I	
4-Chloro-3-Methylphenol	ND I	•
2-Methylnaphthalene	ND I	•
Hexachlorocyclopentadie	ne. ND I	
2,4,6-Trichlorophenol	, NEU 1	
2,4,5-trichlorophenol	ND 1	
2-Chloronaphthalene	, ND I	
2-Nitroaniline	ND I	
Acenaphthylene	ND I	
Dimethyl Phthalate	· · ND I	
2,6-Dinitrotaluene	. ND i	
Acenaphthene	ND I	
3-Nitroaniline	ND I	
2,4-Dinitrophenol	ND I	
Dibenzofuran	ND I	
4-Nitrophenol	. ND I	

CON'T SAMPLE NUMBER: 992-293-01

Benzo(g,h,ı)Parylana

DATA FILE: 9203E62A

COMPOUND	ОМОЭ	C(ug/kg)ļ					page 2	2
2,4-Dinitrotaluene		1 DN						
Fluorene		ND I						
4-Chlorophenyl-phen	Vlether	ND I						
Diethylphthalate		ND 1		•	٠			
2 Methyl 4,6-Dinitr	ophenol	ND I					•	•
N-Nitrosodiphenylam		ND I						
4-Nitroaniline	•	ND 1						
4-Bromophenyl-pheny	lether	ND I				*		
Alpha-BHC		ND I			•	•		•
Hexachlorobenzene		ND 1						
Pentachlorophenol		ND 1						•
Beta-BHC/Gamma-BHC	*	ND I						• •
Phenanthrene		280			•			
Anthracene		ND I						
Delta-SHC		ND I					•	*
Heptachlor		ND I						
Di-N-Butylphthalate		130 I	•					
Aldrin		T MD 1						
Heptachlor Epoxide		ND I					•	
Fluoranthene		390 i						
Pyrene		310 T						
Endosulfan I		ND i						
4,4'-DDE		ND I			•			
Dieldrin		ND I						
Endrin		ND I						
Endrin Aldehode		ND I		•				•
Endosulfan Il		ND 1			•			
4,4'-0DD		140 1						•
Butylbenzylphthalat	8	ND I						
Endosulfan Sulfate	•	ND I						
4,4'-DDT		ND 1						
Chrysene		, HD I						
- Benzo (a) Anthracen	e	ND I				•		,
bis(2-Ethylhexyl)Ph		ND 1						
Di-N-Octul Phthalat		ND I						
(Benzo(b/k)Fluoranth		190 i					•	
BenzotalPyrane	المتوبعريها و	ND I						
Indenc(1,2,3-cd)Pyr	ene .	F;[)						
- Dibanz(a,h)Anthrace		THE I						
and the second of the second o		8.34%						:

14E+ 1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY PCB ANALYSIS.

SITE NAME: PFOHL BROTHERS LANDFILL

SITE CODE: 915043

**** AROCLOR - 1260

GAS CHROMATOGRAPH RESULTS:

MASS SPECTROMETER RESULTS:

SAMPLE NUMBER: 992-293-01 FIELD ID: 8-18 6' - 8'

DATE RECEIVED: 10/19/92 ANALYSIS DATE: 10/23/92

MATRIX: BOIL % SOLID: NO ARCHIVE NUMBER: P29301

AROCLOR - 1016 GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: ND **** ARODLOR - 1221 GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: NO AROCLOF - 1232 DETECTION LIMIT 128 UG/KG GAS CHROMATOGRAPH RESULTS: NO MASS SPECTROMETER RESULTS: ND AROCLOR - 1242. DETECTION LIMIT 120 UG/KG GAS CHROMATOGRAPH RESULTS: ND MASS SPECTROMETER RESULTS: ND **** AROCLOR - 1248 **** GAS CHROMATOGRAPH RESULTS: ND DETESTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: ND **** AROCLOR - 1254 **** DETECTION LIMIT 120 UG/KG GAS CHROMATOGRAPH RESULTS: ND ... ND MASS SPECTROMETER RESULTS:

ND

ND DETECTION LIMIT 120 UG/KG

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF HAZARDOUS WASTE REMEDIATION BUREAU OF HAZARDOUS SITE CONTROL

METALS REPORT

SITE NAME: PFOHL BROTHERS LANDFILL .

FIELD ID: 8-18 6 - 8'

SAMPLE NUMBER: 992-293-01 DATE COLLECTED: 10/18/92

DATE REPORTED: 11/4/92

SITE CODE: 915043

MATRIX: SOIL

PERCENT SOLIOS: 78 % ARCHIVE NO.: M29301

	======		===	===	===			=======================================
METAL	1	CONC		į	1	METAL	! .	CONC
		mg∕Kg		¦ .!-	i - 1			mg/Kg '
ALUMINIUM		NR		1	1	MAGNESIUM	i	NR .
ANTIMONY	1	MR		i	†	MANGANESE	1	MR .
ARSENIC	1	5		:	1	MERCURY	1	0.1
BARIUM	1	NR.		i	1	NICKEL	1	NR
BERYLL IUM	1	NR		1	i	POTASSIUM	1	NR
CADMIUM	1	2.3	J	į	1	SELENIUM	ŧ	NR
CALCIUM	1	NR		1	1	SILVER	i	NR
CHROMIUM	i	7	J	1	Į	500 I UM	1	NR
COBALT		NR		ì	ł	THALLIUM	1	NR
COPPER	1	13		1	İ	TIN	i	NR
IRON	i	NR		i	1	VANAD I UM	1	NR
LEAD	· 1	38	J	İ	I	ZINC	1	NR
	======	======	===	==	==			

COMMENTS:

NR = NOT REQUESTED

J = ESTIMATED

U = LESS THAN DETECTION LIMIT (ND)

AREA A

Boring B-18 10'- 12" interval

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD [D:8-18-10-12]

SITE CODE:

915043

PERCENT SOLIDS: 89.0

SAMPLE NUMBER:992-293-02

MATRIX:SDIL

SUBMISSION DATE: 10/19/92

ARCHIVE ND.: U29302

ANALYSIS DATE: 10/19/92

DATA FILE NO.:9204084A.D

COMPOUND	CONC (PPB)	I NON TARGET COMPOUNDS:
Chloromethane :		ND		
Bromomethane		ND		
Vinyl chloride		ND		i de la companya de la companya de la companya de la companya de la companya de la companya de la companya de
Chloroethane		ND		
Methylene chloride		ND		1
Acetone		ND		1
Carbon disulfide		ND		1
1,1-Dichloroethene		ND		İ
1,1-Dichloroethane	•	ND		!
trans-1,2-Dichloroethene		ND		İ
Chloroform		ND		1
1,2-Dichloroethane		ND		
2-Butanone		ND		:
1,1,1-Trichloroethane		ND		
Carbontetrachloride		ND		
Vinyl acetate		ND		
Bromodichloromethane		ND		
1,1,2,2-Tetrachloroethane		ND		
1,2-Dichloropropane		ND		
trans-1,3-Dichloropropene	•	ND		
Trichloroethene		ND		•
Dibromochloromethane		ND		
1,1,2-Trichloroethane		ND		
- Benzene		ND		•
cis-1,3-Dichloropropene		NE		
2-Chloroethylvinylether		ND	`	1.
Bremoform		ND.		1
2-Hexanone		ND		1.
4-Methyl-2-pentanone		ND		
Tetrachioroethene		ND		
Toluene		r4D	. •	
Chlorobenzene	•	ND.		ND = LESS THAN 5 PPB
Ethylbenzene		ND.		
Styrene		ND .		I . ALL CONCENTRATIONS LESS THAN
Total Xylenes		ND		1 5 PPB ARE ESTIMATES
Total Chlorotoluene		ND		1
Total Dichlorobenzene		ND 1		
•	•		•	•

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY SEMI-VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: 8-18 10'-12' % SOLID: 89

SAMPLE NUMBER: 992-293-02 MATRIX: SOIL

. SUBMISSION DATE: 10/19/92 - ARCHIVE NO.: S29302

ANALYSIS DATE: 10/27/92 DATA FILE NO.: 9203E60A

•		
COMPOUND	CONC (ug/kg)	TIC AND COMMENT SECTION
Pheno!	ND I	
2-Chlorophenol	ND I	Detection limit - CRDL
Aniline	ND I	(Pesticide detection limit - 198)
Bis(2-Chloroethyl)Ether		
1 3-Dichlorobenzene	ND I	
1 4-0ichlorobenzene	110	* Bets and Gamma BHC coelute - · ·
1 2-Dichlorobenzene	ND i	reported as the sum of the isomers
Benzyl Alcohol	ND I	
2-Dethylphenol	ND i	
bis(2-chloroisopropyl)E		
Hexachloroethane	ND I	TIE -
4-Mathylphenol	ND I	lo TICs found at greater than
N-Mitroso-di-propylamin		10% of the nearest internal std.
Mitrobenzene	NO I	Town or the hot car intalinat with
isophorone	140 I	
2~Nitrophenol	ND :	
2 4-Dimethylphenol	ND I	
bis(2-chloroethoxy)Meth		·
2 4-Dichlorophenol	ND I	
1. 2. 4-Trichlorobenzene	ND !	
Naphthalene	ND I	
	ND I	
Benzolo adid 4-Chioroaniline	HD I	
Hexachlorobutadiene	ND I	
4-Chloro-3-Methylphenol	NO I	
2-Meithylnaphthalana	ND 1	
. Z-ne nyinapi waitne . Hexaphlonooyolopentadie		
2,4,5-Trichlorophenol	NE: I	
2,4,5-trichlorophenol	NO I	
- 2,4,5-chichichophenoi - 2-Chicrohaphthalene	ND I	
2-Nitroaniline	ND. I	
Acenaphthylene		
	MD /	
Dimethyl Phthalate	ND /	
2,6-Cimiffotcluene	ND 1	
- Ademaphthana - 3-Nitroamilina	140 /	
	. ND 1	
2,4-Dinitrophenol Dibenzofuran	ND 1	
	ND I	
4-Nitrophenol	RU I	

CON'T SAMPLE NUMBER:

992-293-02

DATA FILE: 9203E60A

COMPOUND	CONC	(ug/kg)				
2,4-Dinitrotoluane		ND I				
Fĺworene	. •	ND I				
4-Chlorophanyl-phen	ylether .	ND I				
Diethylphthalate	•	HD I				
2 Methyl 4,6-Dinitr	ophenol	ND I				
N-Nitrosodiphenylam		ND. I				•
4-Nitroaniline		ND I				
4-Bromophenyl-phany	lather	ND I				
Alpha-BHC		ND 1				
Hexachlorobenzene		NO I				
Pentachlorophenol		HD I	•			
Beta-BHC/Gamma-BHC	*	ND I				
Phenanthrene		ND 1				
Anthracene		ND I				
Delta-8HC		ND I				
Heptachlor		ND I				
Di-N-Butylphthalate		NO I				
Aldrin		· ND I				
Heptachlor Epoxide		ND I				
Fluoranthene		i4D i	•			
Pyrene		ND I				
Endosulfan I		ND I				
4,4'-DDE		ND I				
Dieldrin		MO I				
Endrin		ND I				
Endrin Aldehyde		ND I				
Endosulfan (ND I				
4,4'-000		ND I				
Butylbenzylphthalat	е	ND I				
Endosulfan Sulfate		ND I			•	
4,4'-0DT		ND I				
Chrysene		ND i			•	•
Benzo (a) Anthracen		ND I				•
bis(2-Ethylhexyl)Ph		. ND 1				
Di-N-Octyl Phthalat		ND 1				•
Benzo(b/k)Fluoranth		ND I				
Bénzo(a)Pyrene		· ND I	•			
Indeno(1,2,3-cd)Pyr	ene	ND I		•	•	
Dibenz(a,h)Anthrace		HD I				
·Benza(g,h,i)Perylen		ND I				

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PFOHL BROTHERS LANDFILL

SITE CODE: 915043

SAMPLE NUMBER: 992-293-02 FIELD ID: 8-18 10'-12'

DATE RECEIVED: 10/19/92 ANALYSIS DATE: 10/23/92

ARCHIVE NUMBER: P29302 MATRIX: SOIL % SOLID: NC

**** AROCLOR - 1016 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

**** AROCLOR - 1221 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

MASS SPECTROMETER RESULTS: ND

**** AROCLOR - 1232 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

**** 1 AROCLOR - 1242 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

**** AROCLOR - 1248 ****

GAS CHROMATOGRAPH RESULTS: NO DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

. **** AROCLOR = 1254 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

**** AROCLOR - 1260 ' ****

GAS CHROMATOGRAPH REBULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVÍSION OF HAZARDOUS WASTE REMEDIATION BUREAU OF HAZARDOUS SITE CONTROL

METALS REPORT

SITE NAME: PFOHL BROTHERS LANDFILL

SAMPLE NUMBER: 992-293-02 DATE COLLECTED: 10/18/92

DATE ANALYZED: 11/4/92
DATE REPORTED: 11/6/92

SITE CODE: 915043

MATRIX: SOIL

PERCENT SOLIDS: 89 % ARCHIVE NO.: M29302

=======================================	=======		=====		=====	=======================================
METAL	ı coi	4C 1	1	METAL	1	CONC
	I ma	ZKq I	!		1	mq/Kg
	_				- 1	
ALUMINIUM	i N	₹	1	MAGNESIUM	·	MR
ANTIMONY	I NE	₹	1	MANGANESE	1	NR
ARSENIC		5 l	1	MERCURY	1	0.1 U
BARIUM	I N	₹ 1	1	NICKEL	1	NR
BERYLLIUM	1 4	₹	1	POTASSIUM	1	NR
CADMIUM	1 6	5 U I	1	SELENIUM	1	NR
CALCIUM	I N	₹ 1	1	SILUER	1	NR
CHROMIUM	1	5 J I	1	MU1 DOS	1	NR
COBALT	I N	ર ા	l	THALL I UM	1	NR ·
COPPER	1 13	3 1	1	MIT	•	NR
IRON	1 1	₹ 1	;	UANAD I UM	1	NR
LEAD	3:	2 J I	1	ZINC		NR .
			=====			==========

COMMENTS:

NR = NOT REQUESTED

J = ESTIMATED

U = LESS THAN DETECTION LIMIT (ND)

AREA A

MW-18D 2'- 4' interval

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

"FIELD ID: MW-18D 2-4"

SITE CODE: 915043

PERCENT SOLIDS: 78.0

SAMPLE NUMBER:992-293-03. MATRIX:SOIL

SUBMISSION DATE: 10/19/92 ARCHIVE NO.: U29303

ANALYSIS DATE: 10/19/92

DATA FILE NO.:9204C85A.D

COMPOUND	CUNC (PPB) !	NON TARGET COMPOUNDS:
Chloromethane		ND i	
Bromomethane		1 : OH	
Vinyl chloride		MD 1	
. Chloroethana		HD I	
Methylene chloride		ND I	
Acetone		ND I	
Carbon disulfide		ND I	
1,1-Dichloroethene		ND I	
1,1-Dichloroethans		ND I	
trans-1,2-Dichloroethene		ND I	
Chloroform		ND I	•
1,2-Dichloroethane		ND I	
2-Sutanone		ND I	•
		ND I	
1,1,1-Trichloroethane Carbontetrachloride		ND I	
- "		ND I	
Vinyl acetate		ND I	
Bromodichloromethane			
1,1,2,2-Tetrachloroethane	•	ND !	
1,2-Dishloropropane		MD I	
trans-1,3-Dichloropropene		ND !	
Trichloroethene		ND 1	
Dibromochloromethane		ND I	
1,1,2-Trichloroethane		11D 1	
Benzene		ND I	
cis-1,3-Dichloropropens		MD I	
2-Chloroethylyinylether		ND I	
Bromoform		ND I	
2-Hexanone		-ND I	
14-Methyl-2-pentanone		ND I	
Tetrachloroethene		ND I	
Toluene		ND - I	
Chlorobenzene		ND 1	ND = LESS THAM 5 PPS ' '
Ethylbenzene		ND I	
Styrene		ND . !	ALL CONCENTRATIONS LESS THAN
Total Xylenes .	•	140	5 PPB ARE ESTIMATES
Total Chlorotoluene		ND 1	
Total Dichlorobenzene		ND 1	
		i	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY SEMI-VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: MW-18D 2'-4' % SOLID: 78.

SAMPLE NUMBER: 992-293-03 MATRIX: SOIL

SUBMISSION DATE: 10/19/92 ARCHIVE NO.: S29303

ANALYSIS DATE: 10/27/92 DATA FILE NO.: 9203E61A

COMPOUND	CONC	(ug/kg)	TIC AND COMMENT SECTION
·Phenol		ND	
2-Chlorophenol		ND	Detection limit - CRDL
Aniline		ND	
Bis(2-Chloroethyl)Ether		ND	
1 3-Dichlorobenzene		· ND	
1 4-Dichlorobenzene		ND	1 * Beta and Gamma BHC coelute -
1.2-Dichlorobenzene		NEI	reported as the sum of the isomers
Benzyl Alcohol		ND	
2-Methylphenol		ND	•
bis(2-chloroisopropyl)E	ther	MD	
Hexachlorosthans		ND	I TIC -
4-Methylphenol		ND :	No TICs found at greater than
N-Nitroso-di-propylamine	=	· ND	10% of the nearest internal std.
Nitrobenzene		ND.	
Isophorone		ND	
2-Mitrophenol		HD	
2 4-Dimethylphenol		HE	
bis(2-chloroethoxy)Metha	ane	NE	1
2 4-Dichlorophenol		ND	
1 2 4-Trichlorobenzene		ND	
.Naphthalene		. ND	
Benzoic acid		. ND	
4-Chloroaniline		MD	
Hexachlorobutadiene		. ND	
4-Chlobo-3-MetHylphenol		ME	
2-Methylnaphthalene		ND	
Hexachlorocyclopentadier	ne i	ND	
2,4,6-Trichlorophenol		HO	
2,4,5-trichlorophenol		ND 1	
2-Chloronaphthalene		ND 1	
2-Nitroaniline	•	, ND	
Acenaphthylene		ND I	
Dimethyl Phthalate		ND	
[2,6-Dinitrotoluene]		- ND	
Acenaph thene		ND	
3-Nitroaniline	•	ND I	
2,4-Dinitrophenol		ND .	
Dibenzofuran		ND 1	
4-Nitrophenol	•	ND :	

CON'T SAMPLE NUMBER:

992-293-03

DATA FILE: 9203E61A

page 2

COMPOUND	CONC(ug/kg)	1			; <u>-</u>	
2,4-Dinitrotoluene	ND					
Fluorene	ИD					
4-Chlorophenyl-phenyleth						
Diethylphthalate	ND	i	•			
2 Methyl 4,6-Dinitropheno						
N-Nitrosodiphenylamine	ND	1				
4-Nitroaniline	· · · -	1.		•		•
4-Bromophenyl-phenylethe		1				
Alpha-BHC	,	1				
Hexachlorobenzene	HD HD					
Pentachlorophenol	014 014	;				
Beta-BHC/Gamma-BHC * Phenanthrene	ND ND	1				
	ND ND	1				
Anthracene Delta-BHC	ND	1				
Heptachlor	ND	: 1				
Di-N-Butylphthalate	ND					ř
Aldrin	140	1				
Heptachlor Epoxide	MD					
Fluoranthene	280	1				
Pyrene	220	İ				
Endosulfan I	ND	1				
4,4'-DDE	ND	1				
Dieldrin	ND	l				•
Endrin	ИD	1				
Endrin Aldehyde	ND	;				
Endosulfan II	ND	i				
4,4'-DDD	ND	1				
Butylbenzylphthalate	ΝD	1				
Endosulfan Sulfate	HD					
4,4'-DDT	ND	i				
Chrysene	ND				•	
Benzo (a) Anthracene	ND					
bis(2-Ethylhexyl)Phthalat		!	4			
Di-N-Octyl Phthalate	ND.	1 .				
Benzo(b/k)Fluoranthene	ND". ND	i				
Benzo(a)Pyrene Indeno(1,2,3-cd)Pyrene	OM OM	;				•
Dibenz(a,h)Anthracene	ND ND	1				,
Benzo(g,h,i)Perylene	ND					
Denzorg, ny in brytana	١٩٢	*,				

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PFOHL BROTHERS LANDFILL

SITE CODE: 915043

SAMPLE NUMBER: 992-293-03 FIELD ID: NW-18D 2'-4'

DATE RECEIVED: 10/19/92 ANALYSIS DATE: 10/23/92

ARCHIVE NUMBER: P29303 MATRIX: SOIL % SOLID: NO

**** AROCLOR - 1016 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

**** AROCLOR = 1221 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

**** AROCLOR - 1232 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: NO

**** AROCLOR - 1242 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: NO

**** AROCLOR - 1248 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

**** AROCLOR - 1254 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: 250UG/KG

**** AROCLOR - 1260 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120-UG/KG -

MASS SPECTROMETER RESULTS: NO

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF HAZARDOUS WASTE REMEDIATION BUREAU OF HAZARDOUS SITE CONTROL

METALS REPORT

SITE NAME: PFOHL BROTHERS LANDFILL

FIELD ID: 8-18D 2 - 4'

SAMPLE NUMBER: 992-293-03 DATE COLLECTED: 10/18/92

DATE ANALYZED: 11/4/92 DATE REPORTED: 11/6/92 SITE CODE: 915043

MATRIX: SOIL

PERCENT SOLIDS: 78 % ARCHIVE NO.: M29303

METAL I CONC II METAL I CONC I mg/Kg II I mg/Kg	
ALUMINIUM NR MAGHESIUM NR ANTIMONY NR MANGANESE HR ARSENIC 6 MERCURY 0.1 BARIUM NR NICKEL NR BERYLLIUM NR POTASSIUM NR CADMIUM 6 U SELENIUM NR CALCIUM NR SILVER NR CHROMIUM 9 J SODIUM NR COBALT NR THALLIUM NR COPPER 19 TIN NR IRON NR VANADIUM NR	

COMMENTS:

NR = NOT REQUESTED

J = ESTIMATED

U = LESS THAN DETECTION LIMIT (ND)

AREA A

Boring 19SS 10'- 12' interval

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID:8-1958 10-12'

SITE CODE:

915043

PERCENT SOLIDS:

88.0

SAMPLE NUMBER: 992-281-02

MATRIX:SOIL

SUBMISSION DATE: 10/7/92

ARCHIVE NO.: U28102

ANALYSIS DATE: 10/7/92

DATA FILE NO.:9204072A.D

COMPOUND	CONC (PPB)	NON TARGET COMPOUNDS:
Chloromethane	ND	
Bromomethane	ND -	
Vinyl chloride	ND	
Chloroethane	ND	1
Methylene chloride	5 B	
Acetone	ND	
Carbon disulfide	МD	1
1,1-Dichloroethene	. ND	
1,1-Dichloroethane	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
1,2-Dichloroethans	ND	
2-Butanone	ND	
1,1,1-Trichloroethane	ИD	
Carbontetrachloride	ND	
Vinyl acetate	ND	
Bromodichloromethana	. ND	
1,1,2,2-Tetrachloroethane	ND ·	
.1,2-Dichloropropane	ND	
trans-1,3-Dichloropropens	ND	
Trichloroethene .	ND	
Dibromochloromethane	, ND	
1,1,2-Trichloroethane	NE)	
Benzene	ND.	
cis-1,3-Dichloropropene	ND	
[2-Chloroethylvinylether	ND .	
Eromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	, ND	1
Tetrachloroethene	MD .	í
Toluene	HD	
Chlorobenzene	ND	ND = LESS THAN 5 PPB
Ethylbenzene	ND	I SELECTION OF THE TURN
Styrene	, ND	ALL CONCENTRATIONS LESS THAN
Total Xylenes	ND	5 PPB ARE ESTIMATES
Total Chlorotoluene	ND	
Total Dichlarebenzens	· ND	
		*

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY SEMI-VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: 8-1988 10'-12 % SOLID: 88

SAMPLE NUMBER: 992-281-02 MATRIX: SOIL

SUBMISSION DATE: 10/07/92 ARCHIVE NO.: S28102

ANALYSIS.DATE: 10/09/92 DATA FILE NO.: 9203E52A

COMPOUND CONC (.ug/kg)∣	TIC AND COMMENT SECTION
Phenol	1I 1 QM	
2-Chlorophenol	40 1	
Aniline	ND I	(Pesticide detection limit - 190)
Bis(2-Chloroethyl)Ether	ND 1	
1 3-Dichlorobenzene	NO (
1 4-Dichlorobenzene	NO !	* Beta and Gamma BHC coelute -
1 2-Dichlorobenzene	1 OM	reported as the sum of the isomers
Benzyl Alcohol	ND I	
2-Methylphenol	ND 1	
bis(2-chloroisopropyl)Ether	ND :	
Hexachioroethane	ND 1	TIC -
4-Methylphenol	NO 1	No TICs found at greater than
N-Nitroso-di-propylamine	MD I	10% of the nearest internal std.
Nitrabenzere	MD +	•
Isophorone	MD 1	
2-Nitrophenol	HD I	
2 4-Dimethylphanol	ND I	
bis(2-chloroethoxy)Methane	ND 1	
2 4-Dichlorophenol	ND I	
1 2 4-Trichlorobenzene	ND E	
Naphthalene	ND I	
Benzolo acid	ND. I	
4-Chloroaniline	14D 1	
Hexachlorobutadiene	NO 1	
4-Chloro-3-Methylphenol	r‡Ε	
2-Nethy!naphthalene	MD I	·
Hexachlorocyclopentadiene	1 54	
2,4,6-Trichlorophenol	ND	
2,4,5-trichlorophenol	HD I	
2-Chloronaphthalene	MD 1	
2-Nitroaniline	ND: I	
Acenaphthylene	ME I	
Dimethyl Phthalaté	HD I	
2,5-Dinitrotoluene	HE · :	
Acenaphthene	ND 1	
3-Nitroaniline	MD I	
2,4-Dinitrophenol	ND	
Dibenzofuran .	ND (I	
4-Nitropheno:	ND 1	

COMPOUND	CONC(ug/kg)	baga 5
2,4-Dinitrotoluene	ND I	
Fluorene	· ND I	
4-Chlorophenyl-phenyleth	er ND I	
Diethylphthalate	- ND I	
2 Methyl 4,6-Dinitrophen	ol ND I	
N-Nitrosodiphenylamine	ND I	
4-Nitroaniline	ND L	
4-Bromophenyl-phenylethe	r NO I	
Alpha-BHC	ND I	
Hexachlorobenzene	ND I	
Pentachlorophenol	ND 1	•,
Beta-BHC/Gamma-BHC *	ND11	
Phenanthrene	ND I	
Anthracene	ND I	
. Delta-BHC	. ND 1	
Heptachlor	ND I	
Di-Ņ-Butylphthalate	130	
Aldrin	ND I	
Heptachlor Epoxide	ND I	
Fluoranthene	ND I	
Pyrene	ND 1	
Endosulfan I	ND 1	
4,4'-DDE	ND 1	
Dieldrin	ND 1	
Endrin	ND I	
Endrin Aldehyde	ND I	
Endosulfan II	ND I	
4,4'-DDD	, MD 1	
Butylbenzylphthalate	ND I	
Endosulfan Sulfate	ND	
4,4'-DDT	MD I	
Chrysene	ND I	
Benzo (a) Anthracene	ND 1	
bis(2-Ethylhexyl)Phthalat		
Di-N-Dotyl Phthalate	MD I	
Benzo(byk)Fluoranthene	ND 1	
Benzo(a)Fyrene	ND 1	
Indeno(1,2,3-cd)Pyrene	NE I	·
Dibenz(a,h)Anthracene	ND I	
8enzo(g,h,i)Perylene	ND Ì	
	•	•

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL COMSERVATION MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PFOHL BROTHERS LANDFILL

SITE CODE: 915043

GAS CHROMATOGRAPH RESULTS: ND

MASS SPECTROMETER RESULTS:

SAMPLE NUMBER: 992-281-02 FIELD ID: 8-1955 10' - 12'

DATE RECEIVED: 10/7/92 ANALYSIS DATE: 10/15/92

ARCHIVE NUMBER: P28102 MATRIX: SOIL . % SOLID: NC

**** AROCLOR - 1016 **** GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: MD **** AROCLOR = 1221 **** GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG MASS SPECTFOMETER RESULTS: ND AROCLOR - 1232 **** GAS CHROMATOGRAPH RESULTS: NO DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: NO **** AROCLOR - 1242 GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: ND . **** AROCLOR - 1248 GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: , A ND **** AROCLOR - 1254 GAS CHROMATOGRAPH RESULTS: NO DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: NO AROCLOR - 1280

NO

- DETECTION LIMIT 120 UGZKG

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF HAZARDOUS WASTE REMEDIATION BUREAU OF HAZARDOUS BITE CONTROL

. METALS REPORT

SITE NAME: PFOHL BROTHERS LANDFILL

FIELD ID: 8-1955 10 - 12 '

SAMPLE NUMBER: 992-281-02 DATE COLLECTED: 10/6/92 DATE ANALYZED: 11/4/92

DATE ANALYZED: 11/4/92
DATE REPORTED: 11/6/92

SITE CODE: 915043

MATRIX: SOIL

PERCENT SÓLIDS: 88 % ARCHIVE NO.: M28102

	====	=====	:	==:	===:		======		===
METAL	1	CONC mg/K		·	1	METAL		ÇONC mg/Kg	
ALUMINIUM ANTIMONY ARSENIC BARIUM BERYLLIUM CADMIUM CALCIUM CHROMIUM COBALT COPPER IRON LEAO		NR 7 NR 6 NR 3 NR 5 NR 3 NR 3 NR 5 NR 3 NR 5 NR 3 NR 5 NR 3 NR 5 NR 3 NR 3	U J			MAGNESIUM MANGANESE MERCURY NICKEL POTASSIUM SELENIUM SILVER SODIUM THALLIUM TIN VANADIUM ZINC		99 0.1 U 78 0.1 U 78 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
	_ = = = =	=====:	===:	====	= = =		:======		==

COMMENTS:

NR = MOT REQUESTED

J = ESTIMATED

U = LESS THAN DETECTION LIMIT (ND)

AREA A

Boring B19SS 6'- 8' interval

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID:8-1988 6-8'

SITE CODE: 915043 PERCENT SOLIOS: 80.0

SAMPLE NUMBER: 992-281-01 MATRIX: SOIL

SUBMISSION DATE: 10/7/92 ARCHIVE NO.: U28101

AMALYSIS DATE: 10/8/92 DATA FILE NO.: 9204C77A.D

COMPOUND	CONC (PPB)	NON TARGET COMPOUNDS:
Chloromethane	HD.	IUNKNOWN HYDROCARBONS
Bromomethane	NŪ	
Vinyl chloride	ND	
Chloroethane	NC	
Methylane chloride	30	
Acetone	ND	i
Carbon disulfide	ND	
1.1-Dichloroethene	ND	
1,1-Dichloroethane	ND	
trans-1,2-Dichloroethene	HD	
Chlaraform	ND	1
1,2-Dichloroethane	NO	1
2-Butanona	ND	
1,1,1-Trichloroethane	NO	
_Carbontetrachloride	MO	
Uinyl acetate	ND	
Bromodichloromethane	ND	I .
1,1,2,2-Tetrachloroethane	ND	Γ^{\prime}
1,2-Dichloropropane	· ND	
trans-1,3-Dichloropropens	, MD	1
Trichloroethene	ND	i .
Dibromochloromethane	ND 1	,
·1,1,2-Trichloroethane	ND	i
Benzene	ИD	
cis-1,3-Dichlaropropens	ND .	
2-Chloroethýlvinylether	ND	
Bromoform	ND	1
2-Hexanone	ND	
4-Methyl-2-pentanone	нD	
Tetrachlorcethene	МD	I and the second
Toluene	NO	
Chlorobenzene	ND	ND = LESS THAN 5 PPB
Ethylbenzene	ND:	
Styrene	ND .	ALL CONCENTRATIONS LESS THAN
Total Xylenes	ND	F PPB ARE ESTIMATES
Total Chlorotoluene	ND	
Total Dichlorobenzene	ND	
•		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY SEMI-VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: 8-1988 6'-8' % SOLID: 79

SAMPLE NUMBER: 992-281-01 MATRIX: SOIL

SUBMISSION DATE: 10/07/92 - ARCHIVE NO.: 328101

ANALYSIS DATE: 10/09/92 DATA FILE NO.: 9203E54A

COMPOUND C	DMC (ug/kg)	TIC AND CONMENT SECTION
Pheno I	ND I	
2-Chlorophenol	. ND I	Detection limit - CRDL X 2
Aniline	ND 1	(Pesticide detection limit - 438)
Bis(2-Chloroethyl)Ether	ND 1	· ·
1 3-Dichlorobenzene	ND 1	
1 4-Dichlarobenzene	ND 1	* Beta and Gamma BHC coelute -
1 2-Dichlorobenzene	ND I	reported as the sum of the isomers
Benzyl Alcohol	ND 1	
2-Methylphenol	ND 1	DILUTION FACTOR - 2
bis(2-chloroisopropy1)Eth	er ND 1	
Hexachloroethane	ND I	TIC -
4-Methylphenol	ND I	Benzolblnaphthol2,3-dlfuran - 84
N-Nitroso-di-propylamine	ND 1	• ,
Nitrobenzene	ND I	11H-Banzo(a)fluorene - 2200
Isophorone	. ND i	
2-Nitrophenol	ND I	Benzolg,h,:lflouranthana - 840
2 4-Dimethylphenol	ND 1	
bis(2-chloroethoxy)Methan	e ND I	Molecular Sulfur - 5000
2 4-Dichlorophenol	ND I	
1 2 4-Trichlorobenzene.	NO I	
Naphthalene	ND I	
Benzoic acid	ND 1	
4-Chloroaniline	ND I	
Hexachlorobutadiene	I DH	•
4-Chloro-3-Methylphenol	ND 1	
2-Methylnaphthalene	110	
Hexachlorocyclopentadiene	ND: 1	
2,4,6-Trichlorophenol	ND 1	
2,4,5-trichlorophenol	ND I	
2-Chloronaphthalene	. ND I	
2-Nitroaniline	ND I	
Acenaphthylene	2100	
Dimethyl Phthalate	ND 1	
2,6-Dinitrotoluene	ND I	
Acenaphthene	. 420 1.	
3-Nitroaniline	ND I	
2,4-Dinitrophenol	ND I	
Dibenzofuran	810 l	
4-Nitrophenol	ND I	

DATA FILE: 9203E54A

paga Z

COMPOUND	CONC(ug/kg)
2,4-Dinitrotoluene	ND
Fluorene	2200
4-Chlorophenyl-phenylethe	er ND I
Diethylphthalate	ND 1
2 Methyl 4,6-Dinitropheno	
- M-Nitrosodiphanylamine	NO I
4-Nitroan:line	MD I
4-Bromophenyl-phenylether	
Alpha-BHC	ND I
Hexach lorobenzene	MD I
Pentachloropheno!	ND I
Beta-BHC/Gamma-BHC *	ND I
Phananthrene	15000 !
. Anthracene	4900
Delta-BHC	ND I
Heptachlor	NO I
Di-N-Butylohthalate	ND I
Aldrin	ND i
Heptachlor Epoxide	ND 1
Fluoranthene	21000
Pyrene	16000
Endosulfan I	ND I
4,4'-DDE	ND 1
Dieldrin	ND I
Endrin	ND I
Endrin Aldehyde	ND I
Endosulfan II	ND I
4,4'-DDD	NO 1
Butylbenzylphthalate	ND I
Endosulfan Sulfate	NO I
4,4'-DDT	ND 7100
Chrysene	7100 l 7300 l
Benzo (a) Anthracene	
bis(2-Ethylhexyl)Phthalat	ND I
Di-N-Octyl Phthalate Benzo(k/b)Fluoranthene	<11001N
Benzo(k/b)r Idoranthene Benzo(b/k)Fluoranthene	10000 +
Benzo(a)Pyrene	5600 1
Indena(1,2,3-ad)Pyrene	4000 X
Dibenz(a,h)Anthracene	2000 4
Benzo(g,h,i)Perylene	2800 ¥
- 25.125 gy.19 121 61 y 15115	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY, PCB ANALYSIS

SITE NAME: PEGHL BROTHERS LANDFILL

SITE CODE: 915043 ...

SAMPLE NUMBER: 992-281-01 FIELD ID: 8-1955 6' - 8'

DATE RECEIVED: 10/7/92 ANALYSIS DATE: 10/23/92

% SOLID: NO MATRIX: SOIL ARCHIVE NUMBER: P28101

AROCLOR - 1016 DETECTION LIMIT 128 ÚG/KG MD GAS CHROMATOGRAPH RESULTS: MASS SPECTROMETER RESULTS: NO **** AROCLOR - 1221 . **** ND DETECTION LIMIT 120 UG/KG GAS CHROMATOGRAPH RESULTS: MASS SPECTROMETER RESULTS: ND **** AROCLOR - 1232 .DETECTION LIMIT 120 UG/KG GAS CHROMATOGRAPH RESULTS: ND MASS SPECTROMETER RESULTS: ND **** ARDOLOR - 1242 ***** GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG MASS SPECTROMETER RESULTS: ***** AROCLOR - 1248 DETECTION LIMIT 120 UG/KG GAS CHROMATOGRAPH RESULTS: 140 MASS SPECTROMETER RESULTS: ND ARDOLOR'- 1254 ND DETECTION LIMIT 120 UG/KG GAS CHROMATOGRAPH RESULTS: MASS SPECTROMETER RESULTS: ND

DETECTION LIMIT 120 UG/KG GAS CHROMATOGRAPH RESULTS: . ND ND

AROCLOR - 1260

MASS SPECTROMETER RESULTS:

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF HAZARDOUS WASTE REMEDIATION BUREAU OF HAZARDOUS SITE CONTROL

METALS REPORT

SITE NAME: PFOHL BROTHERS LANDFILL

FIELD ID: 8-1955 6 - 8'

SAMPLE NUMBER: 992-281-01

DATE COLLECTED: 10/6/92 DATE ANALYZED: 11/4/92

DATE REPORTED: 11/6/92

SITE CODE: 915043

MATRIX: SOIL

PERCENT SOLIDS: 79 % ARCHIVE NO.: M28101

=====	==========	=====		===	===			=======================================	====
	METAL	ł	CONC	1	İ	METAL	1.	CONC	
		1	mg∠Kg	i	ļ	•	l·	mg∕Kg	
					- i -				
	ALUMINIUM	i	NR	1	Ī	MAGNESIUM ·	1	NR	
	ANT I MONY	1	NR	į	1	MANGANESE	Í	NR T	
•	ARSENIC	2	6	1	į	MERCURY	1	0.1 U	
	BAR I Ui1	i	NR	ì	Í	NICKEL	1	, NR	
•	BERYLLIUM	I	NR	1	1	POTASSIUM	1	NR	
	CADMIUM	1	6 U	1	!	SELENIUM	1	MR	
	CALCIUM	1	NR	i	ţ	SILVER	I	NR	
	CHROMIUM	i	7 J	į	i	SODIUM	İ	NR	
	COBALT	i	MP	1	1	THALLIUM	1	NR ·	
	COPPER	İ	21 -	ĺ	i	TIN	!	NR	
	IRON	İ	ИR	;	;	VANADIUM	l	NR	
	LEAD	İ	64	i	1	ZIND	1	ŅR · · ·	

COMMENTS:

NR = NOT REQUESTED

J = ESTIMATED

-U = LESS THAN DETECTION LIMIT (NO)

AREA A

Boring MW-18D 0 - 2' interval

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: MW-18D 0-2'

SITE CODE: 915043

PERCENT SOLIDS:

80.0

SAMPLE NUMBER: 992-293-04

MATRIX:SOIL

SUBMISSION DATE:10/19/92

ARCHIVE NO.: U29304

ANALYSIS DATE: 10/19/92

DATA FILE NO.: 9204086A.D

COMPOUND	. CONC (PP8)	NON TARGET COMPOUNDS:
Chloromethane	ND	TUNKNOMN HYDROCARBON 1503 FPB
Bromomethane	ND	1
Uinyl chloride	ND	İ
Chloroethane	NO	1
Methylene chloride	ND	
Acetone	NO	1
Carbon disulfide	MO	İ
1,1-Dichloroethene	N□	1
1,1-Dichloraethane	NO	l
trans-1,2-Dichloroethene	MD	
Chloroform	ND	
1,2-Dichloroethane	. MD	1
2-Butanone	ND	
1,1,1-Trichloroethane	ND	
Carbontetrachloride	ND .	T .
Vinyl acetate	NO	İ
Bromodichloromethane .	ND	
1,1,2,2-Tetrachloroethane	NO	
1,2-Dichloropropane	ND .	
trans-1,3-Dichloropropene	t i D	l ·
Trichloroethene	ND	· ·
Dibromochloromethane	NO	
1,1,2-Trichloroethane	ND -	
Benzene	NĐ	· ·
∵cis-1,3-Dichloropropene	, HD	
2-Chloroethylvinylether	ND ND	
Bromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	. ND	
Tetrachloroethene	ND	
Toluene	ND .	
Chlorobenzene .	ND .	ND = LESS THAN 5 PP8
Ethylbenzene	· ND	I SECOND AND A SECOND ASSESSMENT OF THE PROPERTY OF THE PROPER
Styrene	ND .	ALL CONCENTRATIONS LESS THAN
Total Xylenes	ND	1 5 PPB ARE ESTIMATES
Total Chiorotoluene	. ND	
Total Dichlorobenzene	ND	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY SEMI-VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: MW-18D 0'-2' % SOLID: 82

SAMPLE NUMBER: 992-293-04 MATRIX: SOIL

SUBMISSION DATE: 10/19/92 ARCHIVE NO.: 529304

ANALYSIS DATE: 10/27/92 OATA FILE NO.: 9203E63A

COMPOUND	CONC (ug/kg)	TIC AND COMMENT SECTION .
Pheno!	HD I	
·2-Chlorophenol	ND I	Detection limit - CROL
Aniline	. ND 1	(Pesticide detection limit - 200)
Bis(2-Chloroethyl)Ether	ND I	
1 3-Dichlorobenzene	· ND I	•
1 4-Dichlorobenzene	ND :	* Beta and Gamma BHS coelute
1 2-Dichlorobenzene	ND I	reported as the sum of the isomers
Benzyl Alcohol	ND I	
2-Methylphenol	NO I	
bis(2-chloroisopropyl)E		
Hexachloroethane	. ND I	TIC -
4-Methylphenol	ND I	Berzolj]flyoranthere - 450
N-Nitroso-di-propylamın		Benzolelanthracene - 490 .
Nitrobenzene	ND I	Donzo to fontin acons 470
Isophorone	I GN	
2-Nitrophensl	ND I	
2 4-Dimethylphenol	ND I	
<pre>bis(2-chloroethoxy)Meth</pre>		
2 4-Dichlorophenol	ND I	
1 2 4-Trichlorobenzene	ND 1	
Naphthalene .	ND I	
Benzoic acid	ND 1	
4-Chloroaniline	ND I	
Hexachlorobutadiene	MD I	
4-Chloro-3-Methylphenol	HQ I	
2-Methylnaphthalens	NO I	
Hexachlorocyclopentadie	*	
2,4,6-Trichlorophenal	, 'ND I	· ·
2,4,5-trichlorophenol	ND 1	Y
2-Chloronaphthalene	ND I	
2-Nitroaniline	ND I	
Acenaphthylene	ND I	
Dimethyl Phthalate	· · ND I	
2,6-Dinitrotoluene	. NO	
Acenaphthene	ND I	
3-Nitroaniline	· . ND I	
2,4-Dinitrophenol	ND I	
Dibenzofuran	· ND I	
4-Nitrophenol	. ND i	

DATA FILE: 9203E63A

COMPOUND	CONClugzkgi	1		
2,4-Dinitratalusme	ND			
Fluorene	. ND	1		
4-Chlorophenyl-phenylether	· ND	1		•
Diethylphthalate	ND	1	•	
2 Methyl 4,6-Dinitrophenol	ND	1		•
N-Nitrosodiphenylamine	, ND	1		
4-Nitroaniline	ND	!		
4-Bromophenyl-phenylether	ND	•		
Alpha-BHC	ND	1		•
Hexachlorobenzene	ND	‡		
Pentachlorophenol	HD	1		•
Beta-BHC/Gamma-BHC *	ND	1		•
Phenanthrene	Ź0 0	1.	•	
Anthracene	180	1		
Delta-BHC	ND			•
Heptachlor	ND			•
Di-M-Butylphthalate	iND			
Aldrin	7 (A)	1		
Heptachlor Epoxide	ND ND	1		
Fluoranthene		! ·		
Pyrene	1100	l		
Endosulfan I	MD	i	_	
4,4'-DDE	MD	!		
Dieldrin	ND			
Endrin	ND	Į Į		
Endrin Aldehyce	ND 5	•		*
Endosulfan II	ND	•		
4,4'-DDD	110	:		
Butylbenzylphthalate	, ND	i		• •
Endosulfan Sulfate	- AD	!		•
4,4'-DDT	ND 620	i ·		
Chrysene	460			
Benzo (a) Anthracene		!	•	•
bis(2-Ethylhexyl)Phthalate	ND ND			
Di-N-Octyl Phthalate Benzo(b/k)Fluoranthene	ND	; 1		
Benzo(a)Pyrene	430	,		
	450	: 1	,	
Indena(1,2,3-cd)Pyrene	ND 490		•	
Dibenz(a,h)Anthracene	500	1		:
Benza(g,h,i)Perylene	700	1		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PFOHL BROTHERS LANDFILL

SITE CODE: 915043

SAMPLE NUMBER: 992-293-04 FIELD ID: MW-18D 0-2'

DATE RECEIVED: 10/19/92 ANALYSIS DATE: 10/26/92

ARCHIVE NUMBER: P29304 MATRIX: SOIL % SOLID: NC

**** AROCLOR - 1016 ****

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: MD

**** AROCLOR = 1221 ****

GAS CHROMATOGRAPH REBULTS: NO DETECTION LIMIT 170 UG/KS

MASS SPECTROMETER RESULTS: ND

**** AROCLOR - 1232 ****

GAS CHROMATOGRAPH RESULTS: 00 CETECTION LIMIT 120 UG/KG

MASS SPECIALMETER PESULTS: NO

+*** 480CLOR - 1242 ****

GAS CHROMATOGRAPH RESULTS: HO DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: 10

**** AROCLOR - 1248 ****

GAS CHADRATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

**** AROCLOR - 1254 ****

GAS CHROMATOGRAPH RESULTS: PRESENT DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: 1980UG/KG

**** AROCLOR - 1260 +***

GAS CHROMATOGRAPH RESULTS: ND DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS: ND

N.Y.S. DEPARTMENT OF ENUIRONMENTAL CONSERVATION DIVISION OF HAZARDOUS WASTE REMEDIATION BUREAU OF HAZARDOUS SITE CONTROL

METALS REPORT

SITE NAME: PFOHL BROTHERS LANDFILL

FIELD ID: 8-18D 0 - 2'

SAMPLE NUMBER: 992-293-04 DATE COLLECTED: 10/18/92

DATE ANALYZED: 11/4/92 DATE REPORTED: 11/6/92

SITE CODE: 915043 MATRIX: SOIL

PERCENT SOLIDS: 80 % ARCHIVE NO.: M29304

	====		= = =	===	===			
. METAL	i	CONC		1	i	METAL	1.	CONC
	1	mg/Kg		1	ì		i	mg/kg
				. i .	. i			
ALUMINIUM		· NR		1	•	MAGNESIUM	1	MR
ANTIMONY	1	NR		1	1	MANGANESE	1	NP .
ARSENIC	1	9		1	:	MERCURY	l	0.1
BARIUM	1	NR		1	1	NICKEL	1	NR
BERYLL IUM	ı	NR		1	1	POTASSium	1	NR
CADMIUM	I	6	1.1	1	;	SELEHTUM	!	NR
CALCIUM	į	(# R		į	;	STLUER	i	MR
CHECKTON	:	11	J	1	ŧ	SODIUM	1	NR
COBALT	ł	MP		1	ì	THALLIUM	1	NR .
COPPER	;	28		[İ	TIN	!	NR
1 ROM	ŧ	N₽		;	į	UANAD LUM	;	NE
LEAD	:	48	J.	į	1	ZIMC	į	NR
		======	===	===	===		=======	

COMMENTS:

NR - MOT REQUESTED

J = ESTIMATED

U = LESS THAN DETECTION LIMIT (NO)

APPENDIX C



environmental engineers, scientists, planners, & management consultants

CAMP DRESSER & McKEE

One Wall Street Court New York, New York 10005 212 943-1000

September 14, 1993

Mr. A. Joseph White, P.E.
Sanitary Engineer
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233

Project:

Pfohl Brothers Landfill RI/FS

Subject:

Technical Memorandum on Area C Perimeter Borings

Dear Mr. White:

Enclosed please find two copies of the Technical Memorandum on the soil boring investigation performed along the southern perimeter of Area C.

Should you have any questions or require additional information, please do not hesitate to call.

Very truly yours,

LEUKRMAN

CAMP DRESSER & McKEE

Lee Guterman

Project Manager

Enclosure

(PB#15LG.914)PM

TECHNICAL MEMORANDUM

PFOHL BROTHERS LANDFILL SOIL BORING PROGRAM TO DELINEATE THE SOUTHERN PERIMETER OF AREA C

Objective

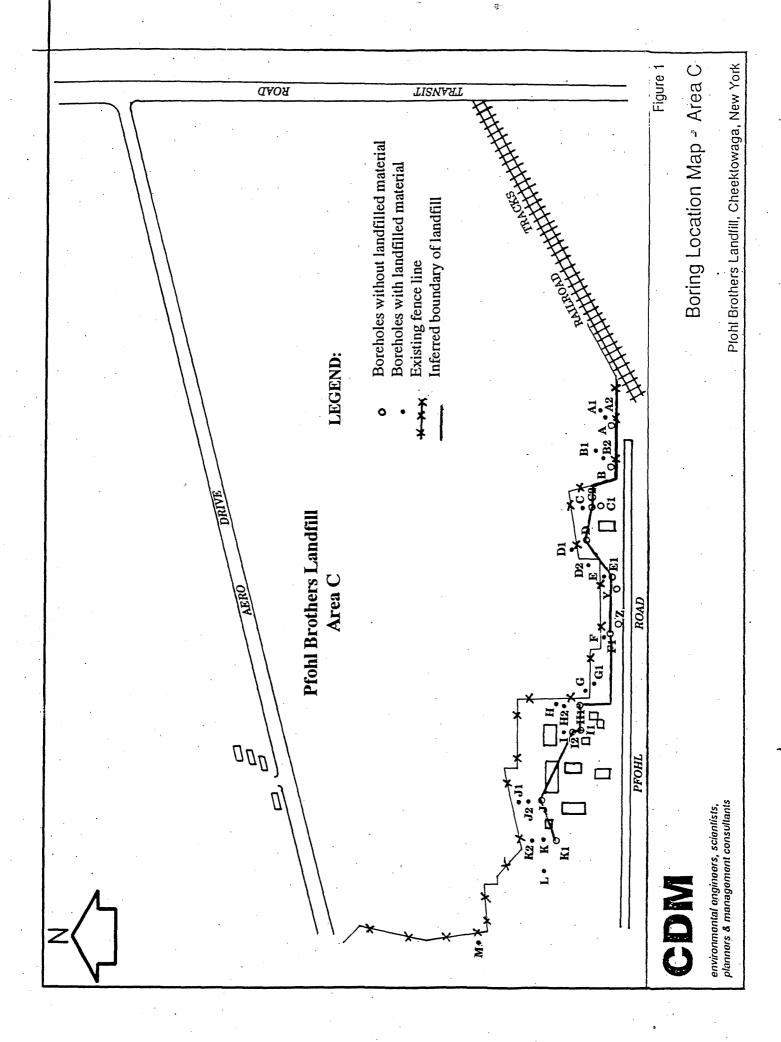
In order to define the southernmost boundary of the Pfohl Brothers Landfill, Burlington Environmental, Inc., under contract with Camp Dresser & Mckee, installed a total of 34 soil borings behind the homes on Pfohl Road and in the vacant lots between the homes on December 10-16, 1992 (Figure 1).

Task Overview

Each of the 34 soil borings (including two background soil borings) were drilled to a maximum depth of 10 foot. The two background soil borings were installed on vacant property adjacent to Pfohl Road (Figure 1) to determine background subsurface soil conditions. All field work was performed in accordance with the Pfohl Brothers Landfill Phase II Remedial Investigation, Site Operations Plan, Addendum No. 2, dated September 4, 1992.

Soil borings were drilled on properties immediately north of Pfohl Road along the existing east/west fence line and the berm area (where applicable). The eastern most soil borings were installed on the vacant property at the end of Pfohl Road and the western most soil boring was installed on Pfohl Trucking property.

A baseline of soil borings was placed along the east/west fence line (designated with the letters A through M). Wherever possible, the lateral distance between the baseline borings was 100 foot on private property and 200 foot on vacant property. If the baseline soil boring did not contain evidence of landfill material then a soil boring was drilled at a location 50 foot to the north. If the baseline soil boring



did contain landfill material then a soil boring was drilled at a location 50 foot to the south. An additional boring was placed between the borings with and without landfill material in order to determine the extent of the landfill within +/- 25 foot. In some cases, physical obstructions prevented a full complement of additional borings to be installed at each baseline boring location (e.g., borings D, G, L and M). The supplemental borings are designated with the corresponding letter of the baseline boring, followed by a number (i.e., boring A1, A2, etc.).

The depth of the soil boring was determined by the presence or lack of landfill material. When evidence of landfill material was encountered and confirmed, then the borehole was terminated at that depth. Otherwise the borehole was advanced to the maximum depth of 10 feet.

The soil borings were drilled in the following prescribed manner:

- 1) Prior to soil boring activities, the baseline soil boring locations were staked by the CDM geologist under the direction of NYSDEC personnel.
- 2) Fencing was erected around the drill rig and the immediate vicinity of each soil boring location outside the landfill fence in order to prevent the public from accessing the work area.
- 3) The top six inches of soil was removed from each borehole using a shovel and set aside.
- 4) Six-inch outside diameter solid stem augers were advanced at each borehole to a maximum depth of 10 feet using an all-terrain vehicle (ATV) drill rig.

- 5) Air space directly above the drill cuttings was monitored for volatile organic carbon (VOC) compounds using a calibrated HNu PI-101 Photo Ionization Detector.
- 6) Soil samples were collected by the CDM geologist at each 2-foot depth interval from the drill cuttings brought to the surface during drilling. Each soil sample was collected using a disposable plastic scoop and placed into an 8 ounce glass container.
- 7) The CDM geologist recorded the description of each sample and photographed the samples for documentation.
- 8) At the completion of each boring, the hole was backfilled with the same material removed during drilling.

Results of Investigation

Background soils consisted of brown to reddish brown clay, (becoming stiff with depth), trace silt, trace fine sand in some areas with trace organic matter at the 0-2 foot depth interval. Moist soil was encountered at depths from zero to eight feet.

Twenty of the 34 soil borings contained landfill material (detailed boring logs are provided in Attachment 1). Landfill material generally consisted of broken glass (clear, brown and green colored), bricks and brick fragments, metal scraps, wire, plastic sheeting and plastic pieces. At several areas black slag material, cinders, wood, sewer tile, and household trash were encountered. In general, landfill material was encountered at depths ranging from zero to six feet, with landfill material most frequently encountered between zero to two-feet below the ground surface. HNu readings of drill cuttings from each of the boreholes remained within background levels.

Thirteen of the boreholes drilled south of the fenceline along Area C revealed landfilled material. Several of the locations are within the

properties of current home owners. Each of the boreholes revealing landfilled material located to the south of the fenceline is summarized below:

- o Boring C: 41' south of the fenceline on homeowner's property
- o Boring E: 4.5' south of the fenceline on vacant property
- o Boring F: 7.5' south of fenceline on vacant property
- o Boring G1: 8.5' south of fenceline on vacant property (the presence of a swamp directly south of this location precluded the installation of additional borings further south).
- o Boring H: 20' west of N-S fenceline on homeowner's property
- o Boring H2: 25' south of boring H on homeowner's property
- o Boring I: 98' west of boring H on homeowner's property
- o Boring J1: 36' south of fence on homeowner's property
- o Boring J2: 61' south of fence on homeowner's property
- o Boring K: 61.5' south of fenceline on homeowner's property
- o Boring K2: 36.5' south of fenceline on homeowner's property
- o Boring L: 90' west and 71.5' south of fenceline on homeowner's property (the presence of a horse corral precluded the installation of additional borings).
- o Boring M: 8.5' west of fenceline on commercial property (the presence of an asphalt parking area precluded the installation of additional borings).

Attachment 1
Soil Boring Logs

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG PROJECT: Pfohl Brothers Landfill **CONTRACTOR:** Burlington Environmental, Inc. Very cold, snow **INSPECTOR:** MIKE EHNOT WEATHER: December 11, 1992 TIME START/END: 9:16-9:45 DATE: **LOCATION:** 73 feet East of gate; SOIL BORING NO.: Α 6.5 feet North of fenceline. LEVEL OF PROTECTION: MODIFIED 'D' MONITORING INSTRUMENT: HNu GENERAL OBSERVATIONS: Inside East gate of landfill Area C. LANDFILL MATERIAL ENCOUNTERED: NO (RETAIN SAMPLES) Sample No. Description HNu (ppm) 0-2' Brown Clay, soft, Trace organic matter. Slightly moist. 0 2'-4' Brown Clay, Trace(very small amount) brick fragments. Dry. 0 4'-6' Brown Clay as above. 6'-8' Reddish Brown Clay, stiff. Dry.

Reddish Brown Clay, stiff. Slightly moist.

8'-10'

LANDFILL SOIL BORING LOG CAMP DRESSER & McKEE Pfohl Brothers Landfill **CONTRACTOR:** Burlington Environmental, Inc. PROJECT: Very cold, snow **INSPECTOR:** MIKE EHNOT WEATHER: DATE: December 11, 1992 TIME START/END: 9:45-10:08 50 feet NNE of SB A. LOCATION: SOIL BORING NO.: A1 LEVEL OF PROTECTION: MODIFIED 'D' HNu MONITORING INSTRUMENT: GENERAL OBSERVATIONS: Location was moved in a NNE direction in order to delineate area inside gate. LANDFILL MATERIAL ENCOUNTERED: YES (RETAIN SAMPLES) HNu (ppm) Sample No. Description 0-2' Brown Clay, Trace M-C Sand, Trace organic matter. Moist. 0 Brown Clay, Trace M-C Sand. Dry. 0 2'-4' Brown Clay, Trace M-C Sand. Landfill Material: glass, plastic, metal, 4'-6' wood chips. Dry.

					•
CAMP DRESSE	R & McKEE	·	LANDFILL SOIL BO	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	nental, Inc.
WEATHER:	Very cold, snow		INSPECTOR:	MIKE EHNOT	٠.
DATE:	December 11, 1992		TIME START/END:	10:08-10:26	•
SOIL BORING	<u>NO.:</u> A2		LOCATION:	25 feet NNE of SB A	
LEVEL OF PRO	OTECTION:	MODIFIED "D"	•		
MONITORING	INSTRUMENT:	HNu			
GENERAL OB	SERVATIONS:	Location was moved in	a NNE direction in orde	r to delineate area insi	de gate.
		•			
LANDFILL MA	TERIAL ENCOUNTER	ED:	YES		
		(RETAIN SA	MPLES)	<i>i</i> .	
Sample No.		Descript	ion		HNu (ppm)
0-2'	•	soft, Trace organic matter een glass, plastic. Dry.	. Landfill Material: Man	y brick-	0
			·		·
•					
		·			
•					
*	· .	•			1

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG Pfohl Brothers Landfill CONTRACTOR: PROJECT: Burlington Environmental, Inc. WEATHER: Very cold, snow **INSPECTOR:** MIKE EHNOT TIME START/END: 10:26-10:45 DATE: December 11, 1992 SOIL BORING NO.: В LOCATION: 37 feet West of gate; 8.5 feet North of fenceline. LEVEL OF PROTECTION: MODIFIED 'D' HNu MONITORING INSTRUMENT: **GENERAL OBSERVATIONS:** Inside East gate of landfill Area C. LANDFILL MATERIAL ENCOUNTERED: NO (RETAIN SAMPLES) Sample No. Description HNu (ppm) 0-2' Brown & Reddish Brown Clay. Slightly moist. 0 2'-4' Reddish Brown Clay. Dry. Light yellow-brown Clay, Trace F-M Sand. Dry. 0 4'-6' 0 6'-8' Reddish Brown Clay, stiff. Dry. Reddish Brown Clay, stiff. Slightly moist. 8'-10'

CAMP DRESSEI	R & McKEE		LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environme	ntal, Inc.
WEATHER:	Very cold, snow		INSPECTOR:	MIKE EHNOT	•
DATE:	December 11, 1992		TIME START/END:	10:45-10:58	
SOIL BORING 1	<u>Ю.:</u> В1		LOCATION:	43 feet NNE of SB B;	
LEVEL OF PRO	TECTION:	MODIFIED 'D'		19 feet North of gate.	
MONITORING	INSTRUMENT:	HNu			
GENERAL OBS	ERVATIONS:	Location was moved in	a NNE direction in orde	r to delineate area inside	gate.
			•		
LANDFILL MA'	TERIAL ENCOUNTERI	<u>ED:</u>	YES		•
		•			
		(RETAIN SA	MPLES)		
Sample No.		Descripti	on		HNu (ppm)
0-2'	Brown Clay, T	Trace organic matter. Slig	htly moist.		0
2'-4'	Brown Clay, s	oft. Landfill Material: pla	•		0
	brick fragmen	ts. Dry.			• .
	·				
					•
					· .
	·				
					:
			٠.		

CAMP DRESSE	R & McKEE	LANDFILL SOIL BO	RING LOG	
ROJECT:	Pfohl Brothers Landfill	CONTRACTOR:	Burlington Environm	mental, Inc.
VEATHER:	Very cold, snow	INSPECTOR:	MIKE EHNOT	•
DATE:	December 11, 1992	TIME START/END:	10:58-11:16	•
OIL BORING	NO.: B2	LOCATION:	25 feet SSW of SB B	31.
EVEL OF PRO	<u>DTECTION:</u> MODIF	TED 'D'		
•	INSTRUMENT: HNu			
IOMITOIGNO	HOIKOMENI.			
ENERAL OBS	SERVATIONS: Location	was moved in a SSW direction in order	er to delineate area insi	de gate.
				٠.
ANDFILL MA	TERIAL ENCOUNTERED:	YES		
		(RETAIN SAMPLES)		•
ample No.		Description		HNu (ppm)
0-2'	Brown Clay. Landfill Ma	aterial: brick fragments. Dry.		. 0
2'-4'	Brown Clay soft I andfi	ill Material: plastic, metal, bricks,		0
	yellow slag rocks. Dry.			·
			•	
			•	
			. •	
				}
•				1
•				

CAMP DRESSER	R & McKEE ·		LANDFILL SOIL BOX	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, snow		INSPECTOR:	MIKE EHNOT	
DATE:	December 11, 1992		TIME START/END:	12:20-12:39	
SOIL BORING N	<u>ю.:</u> с		LOCATION:	41 feet South of fence	eline.
LEVEL OF PRO	TECTION:	MODIFIED 'D'	•		
MONITORING I	INSTRUMENT:	HNu			
GENERAL OBS	ERVATIONS:	Location on property o	f McPeek residence.		
<u>LANDFILL MA'</u>	FERIAL ENCOUNTERE	ED:	YES	,	
		(RETAIN SAI	MPLES)		
Sample No.		Descripti	on		HNu (ppm)
0-2'	Brown Clay, T	race Sand. Landfill Mate	rial: glass, brick fragmen	ts. Dry.	0
2'-4'	Brown Clay, T metal. Dry.	race F-M Sand. Landfill	Material: glass, brick frag	gments,	0
			· · · · · · · · · · · · · · · · · · ·		

CAMP DRESSER	& McKEE	LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill	CONTRACTOR:	Burlington Environme	ntal, Inc.
WEATHER:	Very cold, snow	INSPECTOR:	MIKE EHNOT	
DATE:	December 11, 1992	TIME START/END:	12:39-13:10	
SOIL BORING N	O.: C1	LOCATION:	50 feet South of SB C.	•
LEVEL OF PROT	TECTION: MODIFIED "D"			
MONITORING II	NSTRUMENT: HNu			•
GENERAL OBSE	ERVATIONS: Location on property	of McPeek residence.		
LANDFILL MAT	ERIAL ENCOUNTERED:	NO .		
. ,	·			
	(RETAIN SA	AMPLES)		*
Sample No.	Descript	tion	T	HNu (ppm)
0-2'	Reddish Brown Clay, stiff, Trace F-M	Sand. Slightly moist.	•	0
2'-4'	Black Clay, soft, Trace F-M Sand, Tra	ce Boulders, Slightly mois	t. .	0
4'-6'	Light yellow-brown Clay, Trace F-M S	Sand. Dry.		0
. 6'-8'	Yellow Brown Clay. Moist.			, 0 .
8'-10'	Yellow Brown Clay. Moist.			0
				•

CAMP DRESSER & McKEE		LANDFILL SOIL BORING LOG		
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environmental, Inc.
WEATHER:	Very cold, snow		INSPECTOR:	MIKE EHNOT
DATE:	December 11, 1992		TIME START/END:	13:10-13:35
SOIL BORING	NO.: C2		LOCATION:	24 feet South of SB C.
LEVEL OF PR	OTECTION:	MODIFIED 'D'		
MONITORING	INSTRUMENT:	HNu	· · · · · · · · · · · · · · · · · · ·	
GENERAL OB	SERVATIONS:	Location on property	of McPeek residence.	

LANDFILL MATERIAL ENCOUNTERED:

NO

	(RETAIN SAMPLES)				
Sample No.	Description H				
0-2'	Reddish Brown Clay, Trace organic matter. Slightly moist.	0			
2'-4'	Black Clay, soft, Trace F-C Gravel. Dry.	0			
4'-6'	Light yellow-brown Clay, Trace F-C Gravel. Slightly moist.	0			
6'-8'	Reddish Brown Clay. Moist.	0			
8'-10'	Reddish Brown Clay. Moist.	0			

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG Pfohl Brothers Landfill **CONTRACTOR:** Burlington Environmental, Inc. PROJECT: INSPECTOR: MIKE EHNOT WEATHER: Very cold, snow December 11, 1992 TIME START/END: 13:35-14:00 DATE: 40 feet South of fenceline; SOIL BORING NO.: D LOCATION: 59 feet West of SB C; MODIFIED 'D' 84 feet East of N-S fenceline. LEVEL OF PROTECTION: MONITORING INSTRUMENT: HNu Location on property of McPeek residence. **GENERAL OBSERVATIONS:** LANDFILL MATERIAL ENCOUNTERED: NO (RETAIN SAMPLES) HNu (ppm) Description Sample No.

0-2'	Brown Clay. Slightly moist.	0
2'-4'	Brown Clay, soft. Slightly moist.	0 .
4'-6'	Reddish Brown Clay. Moist.	0
6'-8'	Reddish Brown Clay. Moist.	0
8'-10'	Reddish Brown Clay. Moist.	0

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc. PROJECT: Very cold, breezy INSPECTOR: MIKE EHNOT WEATHER: DATE: December 16, 1992 TIME START/END: 9:20-9:30 SOIL BORING NO.: LOCATION: 8 feet North of fenceline; D1 28 feet East of corner fencepost. LEVEL OF PROTECTION: MODIFIED 'D' HNu MONITORING INSTRUMENT: **GENERAL OBSERVATIONS:** Location is North of backyard of McPeek residence. LANDFILL MATERIAL ENCOUNTERED: YES (RETAIN SAMPLES) HNu (ppm) Sample No. Description 0-2' Brown Clay, Little F-C Sand, Trace Gravel. Landfill Material: glass, brick fragments. Slightly moist.

CAMP DRESSE	R & McKEE		LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	nental, Inc.
WEATHER:	Very cold, breezy		INSPECTOR:	MIKE EHNOT	
DATE:	December 16, 1992		TIME START/END:	9:30-9:53	
SOIL BORING	NO.: D2		LOCATION:	5.5 feet West of N-S	fenceline:
LEVEL OF PRO		MODIFIED "D"		26.5 feet North of so	
MONITORING	INSTRUMENT:	HNu			
GENERAL OBS	SERVATIONS:	Due to trees and mound between SB D and SB	nds, borehole locations co D1.	uld not be placed	
LANDFILL MA	TERIAL ENCOUNTERI	ED:	YES		
		(RETAIN SA	AMPLES)		
Sample No.	-	Descript	ion		HNu (ppm)
0-2'		brown Clay, Some F-C rial: Lots of glass.	Sand. Slighlty moist to mo	ist.	0
·	·				
,					
•					
				•	

CAMP DRESSE	R & McKEE		LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, snow		INSPECTOR:	MIKE EHNOT	
DATE:	December 10, 1992		TIME START/END:	16:36-16:50	·
SOIL BORING	<u>NO.:</u> E	•	LOCATION:	86 feet West of corne 196 feet East of SB F	-
LEVEL OF PRO	OTECTION:	MODIFIED "D"		4.5 feet South of fend	
MONITORING	INSTRUMENT:	HNu			
GENERAL OBS	SERVATIONS:	Location on vacant lot	property.		
		·			
LANDFILL MA	TERIAL ENCOUNTER	∃D:	YES		
		(RETAIN SA	MPLES)	·	
Sample No.	1	Description	on	· · · · · · · · · · · · · · · · · · ·	HNu (ppm)
0-2'	Brown Clay A fragments. Slig	nd F-C Sand. Landfill Maghtly moist.	aterial: glass, plastic, brich	s -	0
			•		
*					
				•	, .
• •		•			
				•	

WEATHER: Very	RUMENT: 'ATIONS:	could not be placed		36 feet due South o	of SB E.
DATE: Decar SOIL BORING NO.: LEVEL OF PROTECT MONITORING INST. GENERAL OBSERV	E1 TION: RUMENT: VATIONS:	HNu A swampy area lies could not be placed	TIME START/ENI LOCATION: between SB E and SB E: between them.	D: 8:36-9:16 36 feet due South 6	
SOIL BORING NO.: LEVEL OF PROTEC MONITORING INST. GENERAL OBSERV	E1 TION: RUMENT: VATIONS:	HNu A swampy area lies could not be placed	LOCATION: between SB E and SB E: between them.	36 feet due South o	
LEVEL OF PROTEC MONITORING INST GENERAL OBSERV	TION: RUMENT: VATIONS:	HNu A swampy area lies could not be placed	between SB E and SB Esbetween them.		
MONITORING INST	RUMENT: 'ATIONS:	HNu A swampy area lies could not be placed	between them.	1; therefore, a borehole	
GENERAL OBSERV	'ATIONS:	A swampy area lies to	between them.	1; therefore, a borehole	
		could not be placed	between them.	1; therefore, a borehole	
LANDFILL MATERI	IAL ENCOUNTERI	ED:	NO		•
			NO		•
		(RETAIN	SAMPLES)		
Sample No.		Descri	iption		HNu (ppm)
0-2'	Brown Clay, s	oft, Trace organic mat	ter. Slightly moist.		0
2'-4'	Brown Clay, s	oft. Dry.			0
4'-6'	Brown and lig	ht brown Clay. Dry.			0
6'-8'	Reddish Brow	vn Clay, stiff. Dry.			0
8'-10'	Reddish Brow	vn Clay, stiff. Dry.			0

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG Pfohl Brothers Landfill PROJECT: **CONTRACTOR:** Burlington Environmental, Inc. MIKE EHNOT WEATHER: Very cold, snow **INSPECTOR:** December 10, 1992 TIME START/END: 15:45-16:12 DATE: SOIL BORING NO.: LOCATION: 7.5 feet South of fenceline; 15 feet East of corner fencepost. MODIFIED 'D' LEVEL OF PROTECTION: HNu MONITORING INSTRUMENT: GENERAL OBSERVATIONS: Location on vacant lot property. LANDFILL MATERIAL ENCOUNTERED: YES (RETAIN SAMPLES) Sample No. Description HNu (ppm) 0-2' Brown Clay And F-C Sand, Trace organic matter. Moist. 0

0-2	brown Clay And 1 -C Sand, 11acc Signific matter. Moss.	
2'-4'	Brown Clay And F-C Sand. Moist. Landfill Material: plastic, metal, glass.	0 .
·		

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG

PROJECT: Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, snow INSPECTOR: MIKE EHNOT

<u>DATE:</u> December 11, 1992 <u>TIME START/END:</u> 8:05-8:36

SOIL BORING NO.: F1 LOCATION: 44 feet South of fenceline;

35 feet East of corner fencepost.

LEVEL OF PROTECTION: MODIFIED "D"

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: A swampy area lies between SB F and SB F1, therefore a borehole

could not be placed between them. Borehole location is on top of the

berm at the southernmost edge.

LANDFILL MATERIAL ENCOUNTERED: NO

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clay, soft, Trace organic matter. Slightly moist.	0
2'-4'	Brown Clay, soft. Dry.	0
4'-6'	Brown Clay, soft. Dry.	. 0
6-8'	Reddish Brown Clay, slightly stiff. Dry.	0
8'-10'	Reddish Brown Clay, slightly stiff. Slightly moist.	0
·		

CAMP DRESSEI	R & McKEE		LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Cold, breezy	•	INSPECTOR:	MIKE EHNOT	
DATE:	December 16, 1992		TIME START/END:	9:53-10:10	
SOIL BORING 1	<u> 10.:</u> G	•	LOCATION:	6.5 feet North of fence 13.5 feet East of corn	
LEVEL OF PRO	TECTION:	MODIFIED 'D'		13.3 Tool Past of Cold	or romo-poor
MONITORING	INSTRUMENT:	HNu	·	·	
GENERAL OBS	ERVATIONS:	Location on vacant lo	t property.		
			,		
LANDFILL MA	TERIAL ENCOUNTERE	ED:	YES		
·				. •	
		(RETAIN SA	AMPLES)	•	
Sample No.		Descrip	tion		HNu (ppm)
0-2'	Brown & light sewer tile, woo		Sand. Landfill Material: lo	ots of glass,	0
	,				
	,				
		•			
				•	
•					
			•		
			.		
		•			

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG Pfohl Brothers Landfill PROJECT: CONTRACTOR: Burlington Environmental, Inc. WEATHER: Cold, breezy **INSPECTOR:** MIKE EHNOT December 16, 1992 DATE: TIME START/END: 12:18-12:30 SOIL BORING NO.: LOCATION: 8.5 feet South of fenceline; G1 66.5 feet East of corner fencepost. MODIFIED "D" LEVEL OF PROTECTION: HNu MONITORING INSTRUMENT: GENERAL OBSERVATIONS: Location on vacant lot property. A borehole could not be placed further south due to the area being swampy and low. LANDFILL MATERIAL ENCOUNTERED: YES (RETAIN SAMPLES) Sample No. Description HNu (ppm) 0-2' Black Clay, Little F Sand. Landfill Material: glass bricks, shoe soles, 0 slag. Very moist.

CAMP DRESSER	R & McKEE		LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, sunny		INSPECTOR:	MIKE EHNOT	·
DATE:	December 15, 1992		TIME START/END:	11:00-11:28	
SOIL BORING N	<u>Ю.:</u> Н		LOCATION:	ESE of unpaved driv 20 feet West of N-S f	
LEVEL OF PRO	TECTION:	MODIFIED 'D'		20 feet west of N-5 f	encenne.
MONITORING	INSTRUMENT:	HNu			
GENERAL OBS	ERVATIONS:	Location on propert	ry of Zelasko residence.		
LANDFILL MA	TERIAL ENCOUNTERI	<u>sD:</u>	YES		
		(RETAIN	SAMPLES)		
Sample No.		Descri	iption		HNu (ppm)
0-2'	Brown Clay. I cinders. Slight		, wires, plastic, black slag,		0
	·	·			
			·	•	
				•	

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG PROJECT: Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc. Very cold, sunny INSPECTOR: MIKE EHNOT WEATHER: December 15, 1992 TIME START/END: 11:28-11:52 DATE: 50 feet due South of SB H. SOIL BORING NO.: H1 LOCATION: MODIFIED "D" LEVEL OF PROTECTION: MONITORING INSTRUMENT: HNu GENERAL OBSERVATIONS: Location on property of Zelasko residence. NO LANDFILL MATERIAL ENCOUNTERED: (RETAIN SAMPLES) Sample No. Description HNu (ppm) 0-2' Black Clay topsoil, Trace Gravel. Slightly moist 0 2'-4' Gray Clay, soft, Trace F Sand. Very moist. 4'-6' Gray-brown Clay, Little F Sand. Wet to saturated. 6'-8' Gray-brown Clay, Trace to Little Sand. Saturated. Brown Clay, Trace Sand. Saturated. 8'-10'

CAMP DRESSE	MP DRESSER & McKEE LANDFILL SOIL BORING LOG			
PROJECT:	Pfohl Brothers Landfill	CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, sunny	INSPECTOR:	MIKE EHNOT	
DATE:	December 15, 1992	TIME START/END:	11:52-12:11	٠
SOIL BORING 1	NO.: H2	LOCATION:	25 feet North of SB I	H 1.
LEVEL OF PRO	OTECTION: MODIFIED 'D'			
MONITORING	INSTRUMENT: HNu		·	
GENERAL OBS	ERVATIONS: Location on property of	of Zelasko residence.		
•				•
LANDFILL MA	TERIAL ENCOUNTERED:	YES		
	(RETAIN SA	MPLES)		
Sample No.	Descripti	on		HNu (ppm)
0-2'	Orange-brown & brown Clay, Little F- plastic (very small amount of landfill m		i: glass,	0
	•			
•		•		
•			• .	
		•		
•			• .	
• •				
			•	

LANDFILL SOIL BORING LOG CAMP DRESSER & McKEE Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc. PROJECT: WEATHER: Very cold, sunny INSPECTOR: MIKE EHNOT TIME START/END: 12:11-12:33 December 15, 1992 DATE: SOIL BORING NO.: I. LOCATION: 98 feet due West of SB H. MODIFIED 'D' LEVEL OF PROTECTION: HNu MONITORING INSTRUMENT: **GENERAL OBSERVATIONS:** Location on property of Zelasko residence. LANDFILL MATERIAL ENCOUNTERED: YES (RETAIN SAMPLES) Description HNu (ppm) Sample No. 0 0-2' Brown Clay, Trace F-M Sand. Landfill Material: glass, plastic, wirebrush, paintbrush. Dry.

CAMP DRESSE	CR & McKEE		LANDFILL SOIL BO	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	nental, Inc.
WEATHER:	Very cold, sunny	•	INSPECTOR:	MIKE EHNOT	
DATE:	December 15, 1992		TIME START/END:	12:33-12:48	
SOIL BORING	NO.: I1	•	LOCATION:	50 feet due South of	SB L
LEVEL OF PR	OTECTION:	MODIFIED "D"			
MONITORING	INSTRUMENT:	HNu			
GENERAL OB	SERVATIONS:		y of Zelasko residence. encountered at a depth of 5	to 6 feet.	
LANDFILL MA	ATERIAL ENCOUNTER	<u>ED:</u>	NO		• .
		(RETAIN S	SAMPLES)		
0 1-37-		Dananti			HNu (ppm)
Sample No.		Descri	ption		Тичи (ррш)
0-2'	Reddish Brov	vn Clay, Trace F Sand.	Moist.	-	0
2'-4'	Reddish Brov	vn Clay, Trace F Sand.	Wet.	·	0
4'-6'	Reddish Brow Obstruction a	vn Clay, Trace F Sand. t 5 to 6 feet.	Wet.		0
		•			
				•	
		·			
			•		

CAMP DRESSEI	R & McKEE		LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill	•	CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, sunny		INSPECTOR:	MIKE EHNOT	
DATE:	December 15, 1992		TIME START/END:	12:48-13:26	
SOIL BORING	<u>NO.:</u> I2		LOCATION:	25 feet North of SB I	1.
LEVEL OF PRO		MODIFIED 'D'			
MONITORING		HNu			
· ·		1111			•
GENERAL OBS	ERVATIONS:	Location on property of An obstruction was en	of Zelasko residence. countered at a depth of 5	to 6 feet.	
LANDFILL MA	TERIAL ENCOUNTERI	ED:	NO		
		(RETAIN SA	MPLES)		•
Sample No.	-	Descript	ion		HNu (ppm)
0-2'	Brown Clayey	Sand. Very moist.			. 0
2'-4'	Brown Clayey	Sand. Wet.			0 .
4'-6'	Brown Clayey Obstruction at				0
		•	•		
	·				
				•	

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG PROJECT: Pfohl Brothers Landfill **CONTRACTOR:** Burlington Environmental, Inc. MIKE EHNOT WEATHER: Very cold, sunny **INSPECTOR:** December 15, 1992 TIME START/END: 13:26-13:57 DATE: SOIL BORING NO.: J LOCATION: 86 feet South of fenceline; 32.5 feet NW of building. MODIFIED 'D' LEVEL OF PROTECTION: HNu MONITORING INSTRUMENT: Location on property of Zelasko residence. A borehole could not be placed closer to SB I due to buildings in the area. LANDFILL MATERIAL ENCOUNTERED: NO

(RETAIN SAMPLES) Sample No. Description HNu (ppm) 0-2' Dark brown Clay. Slightly moist. 0 2'-4' Dark brown Clay, Trace Gravel. Moist. 0 4'-6' Brown Sandy Clay, soft. Saturated. 0 6'-8' Reddish Brown Silty Clay, stiff. Dry. 0 8'-10' Reddish Brown Silty Clay, stiff. Dry. 0

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG Pfohl Brothers Landfill PROJECT: CONTRACTOR: Burlington Environmental, Inc. Very cold, sunny INSPECTOR: MIKE EHNOT WEATHER: December 15, 1992 DATE: TIME START/END: 13:57-14:29 SOIL BORING NO.: J1 LOCATION: 50 feet North of SB J. LEVEL OF PROTECTION: MODIFIED 'D' MONITORING INSTRUMENT: HNu GENERAL OBSERVATIONS: Location on property of Zelasko residence. LANDFILL MATERIAL ENCOUNTERED: YES (RETAIN SAMPLES) Sample No. Description HNu (ppm) 0-2' Dark Brown Clay, Trace organic matter. Slightly moist. 0 2'-4' Dark Brown Clay, soft. Household Material: bricks, concrete, wood. Moist. 4'-6' Brown Clay, soft. Landfill Material: glass. Wet.

CAMP DRESSE	R & McKEE		LANDFILL SOIL BOI	RING LOG	·
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, sunny		INSPECTOR:	MIKE EHNOT	
DATE:	December 15, 1992		TIME START/END:	14:29-14:53	
SOIL BORING	NO.: J2		LOCATION:	25 feet due South of	SB J1.
LEVEL OF PRO	OTECTION:	MODIFIED 'D'			
MONITORING	INSTRUMENT:	HNu			
GENERAL OBS	SERVATIONS:	Location on property of	of Zelasko residence.	•	
LANDFILL MA	TERIAL ENCOUNTERI	ED:	YES	•	
		(RETAIN SA	MPLES)		
Sample No.		Descripti	on		HNu (ppm)
0-2'	Brown Clay, s	oft. Landfill Material: gla	ass, bricks, wood. Slighlty	moist.	0
					·

PROJECT: Pfob	hl Brothers Landfill			
	in Dromers Landin.		CONTRACTOR:	Burlington Environmental, Inc.
WEATHER: Very	y cold, sunny		INSPECTOR:	MIKE EHNOT
DATE: Dec	ember 15, 1992		TIME START/END:	14:53-15:22
SOIL BORING NO.:	K		LOCATION:	17.5 feet West of barn;
LEVEL OF PROTEC	TION:	MODIFIED 'D'		61.5 feet South of fenceline.
MONITORING INST	RUMENT:	HNu		

LANDFILL MATERIAL ENCOUNTERED:

YES

	(RETAIN SAMPLES)	
Sample No.	Description	HNu (ppm)
0-2'	Dark Brown Clay, soft, Trace organic matter. Landfill Material: glass, brick fragments (very small amount of landfill material). Moist.	0
2'-4'	Orange-brown Clay. Landfill Material: small amount of black shiny slag. Dry.	0

LANDFILL SOIL BORING LOG CAMP DRESSER & McKEE Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc. PROJECT: WEATHER: Very cold, sunny **INSPECTOR:** MIKE EHNOT December 15, 1992 TIME START/END: 15:22-15:33 DATE: SOIL BORING NO.: K1 LOCATION: 25 feet due South of SB K. LEVEL OF PROTECTION: MODIFIED 'D' HNu MONITORING INSTRUMENT: GENERAL OBSERVATIONS: Location on property of R. Pfohl residence. LANDFILL MATERIAL ENCOUNTERED: NO (RETAIN SAMPLES) HNu (ppm) Sample No. Description 0-2' Dark Brown Clay, soft. Dry. 2'-4' Orange-brown Clay, Trace F-M Sand. Moist. 4'-6' Orange-brown Clay, Trace F-M Sand. Saturated. 0 6'-8' Reddish Brown Clay, Trace F Sand, Trace Silt. Dry. Reddish Brown Clay, Trace rock fragments, gravel-sized. Dry. 8'-10'

CAMP DRESSI	ER & McKEE	LANDFILL SOIL BOI	RING LOG	
			`	
PROJECT:	Pfohl Brothers Landfill	CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, sunny	INSPECTOR:	MIKE EHNOT	
DATE:	December 15, 1992	TIME START/END:	15:33-16:03	
SOIL BORING	NO.: K2	LOCATION:	25 feet due North of 36.5 feet South of fee	
LEVEL OF PR	OTECTION: MODIFIED 'D'	•	30.5 feet south of fer	reame.
MONITORING	INSTRUMENT: HNu			٠.
LANDFILL M	ATERIAL ENCOUNTERED:	YES		
				·
	(RETAIN S	AMPLES)		
Sample No.	Descri	otion		HNu (ppm)
0-2'	Brown Clay, Trace F Sand. Landfill I moist.	Material: black shiny slag. S	lightly	0
2'-4'	Brown Clay, Trace F Sand. Landfill I of glass, brick fragments. Slightly mo		ents, lots	0

•	R & McKEE		LANDFILL SOIL BOI	NG LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	nental, Inc.
WEATHER:	Very cold, sunny		INSPECTOR:	MIKE EHNOT	
DATE:	December 15, 1992		TIME START/END:	16:03-16:32	
SOIL BORING 1	<u>10.:</u> L		LOCATION:	90 feet due West and South of SB K.	1 10 feet further
LEVEL OF PRO	OTECTION:	MODIFIED 'D'			
MONITORING	INSTRUMENT:	HNu .			
GENERAL OBS	ERVATIONS:	Location on property	of R. Pfohl residence.		
·					٠.
LANDFILL MA	TERIAL ENCOUNTERI	ED:	YES		•
		•			
		(2)771.7716	1.2 (FI TO)		
		(RETAIN SA	AMPLES)		•
Sample No.	T	Descrip	otion		HNu (ppm)
0-2'	Dark Brown C	Clay, soft, Trace F Sand	. Moist.		0
2'-4'	Orange-brown black shiny sla	• •	e F Sand. Landfill Materia	il: lots of	0
•					
•				· ·	
		•			
		•			

CAMP DRESSEI	R & McKEE		LANDFILL SOIL BOI	RING LOG	
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environm	ental, Inc.
WEATHER:	Very cold, breezy		INSPECTOR:	MIKE EHNOT	
DATE:	December 16, 1992		TIME START/END:	11:44-12:00	
SOIL BORING 1	<u>NO.:</u> M		LOCATION:	8.5 feet West of fence	
LEVEL OF PRO	TECTION:	MODIFIED 'D'		95 feet North of corn	er rencepost.
MONITORING	INSTRUMENT:	HNu			
GENERAL OBS	ERVATIONS:	Location on property of	of Pfohl Trucking Co.		
r abindrit beat		CD.	770 0		•
LANDFILL MA	TERIAL ENCOUNTER	<u>sD:</u>	YES		
	-				
		(RETAIN SA	AMPLES)		
Sample No.	T	Descript	ion		HNu (ppm)
0-2'	Brown Clay, I black shiny sla		nd. Landfill Material: lots	of bricks,	0
				!	
					·
			•		,
•					
			x	•	
					,

CAMP DRESSER & McKEE LANDFILL SOIL BORING LOG

PROJECT: Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, snow INSPECTOR: MIKE EHNOT

<u>DATE:</u> December 10, 1992 <u>TIME START/END:</u> 15:26-15:45

SOIL BORING NO.: Y LOCATION: 72 feet due East of SB Z.

LEVEL OF PROTECTION: MODIFIED "D"

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on vacant lot property.

LANDFILL MATERIAL ENCOUNTERED:

NO

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clay, soft, Trace Sand, Trace organic matter. Slightly moist.	0
2'-4'	Light Brown & Brown Clay, soft, Trace F Sand. Moist to Very moist.	0
4'-6'	Reddish Brown Clay, stiff. Dry.	0
6'-8'	Reddish Brown Clay, stiff. Moist.	0
8'-10'	Reddish Brown Clay, stiff. Moist.	0
:		

CAMP DRESS	ER & McKEE		LANDFILL SOIL BORING LOG				
PROJECT:	Pfohl Brothers Landfill		CONTRACTOR:	Burlington Environmental, Inc.			
WEATHER:	Very cold, snow		INSPECTOR:	MIKE EHNOT			
DATE:	December 10, 1992	•	TIME START/END:	14:50-15:26			
SOIL BORING	NO.: Z		LOCATION:	64 feet South of fenceline;			
LEVEL OF PR	ROTECTION:	MODIFIED "D"		22 feet West of corner fencepost;30 feet North of Pfohl Road shoulder.			
MONITORING	GINSTRUMENT:	HNu					
GENERAL OBSERVATIONS: Location on vacant lot property.							
LANDFILL M	<u>ATERIAL ENCOUNTERI</u>	<u>ED:</u>	NO				

(RETAIN SAMPLES)

Sample No.	Description 1						
0-2'	Brown Clay, soft, Trace organic matter. Slightly moist.	0					
2'-4'	Brown Silty Clay, soft, Trace F Sand. Moist.	0					
4'-6'	Reddish Brown Clay, stiff. Dry.	0					
6'-8'	Reddish Brown Clay, stiff. Dry.	0					
8'-10'	Reddish Brown Clay, stiff. Dry.	0					

APPENDIX D

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. ON-SITE MONITORING WELLS VOLATILE CHEMICAL ANALYSIS RESULTS

COMPOUND	UNITS	MW 25	MW 2D
Ch{oromethane	PPB	ND	ND
Bromomethane	PPB	ND	ND
Vinyl chloride	PPB	ND	ND
Choroethane	PPB	ND	, ND
Methylene chloride	PP8	12	ND
Acetone	PPB	ND	ND
Carbon disulfide	PPB	ND	ND
1,1-Dichloroethene	PPB	DM	ND.
1,1-Dichloroethane	PPB	270	ND
trans-1,2-Dichloroethene	PPB	NO	ND
Chloroform	PPB	ND	ND
1,2-Dichloroethane	PPB	ND	ND
2-Butanone	PPB	ND	- ND
1,1,1-Trichloroethane	PPB	9	ND
Carbontetrachloride	PPB	ND	ND
Vinyl Acetate	PP8	ND	ND
Bromodichloromethane	PPB	NO	ND
1,1,2,2-Tetrachloroethane	PPB	ND	ND
1,2-Dichloropropane	PPB	ND	DM
trans-1,3-Dichloropropene	PPB	ND	ND
Trichloroethene	PPB	6	ND
Dibromochloromethane	PPB	ND	ND
1,1,2-Trichloroethane	PPB	ND	ND
Benzene	PPB	ND	ND
cis-1,3-Dichloropropene	PPB	ND	ND
2-Chloroethylvinylether	PPB .	ND	ND
Bromoform	PPB	ND	ND
2-Hexanone	PPB	ND	ND
4-Methyl-2-pentanone	PPB	ND	· ND
Tetrachloroethene	PPB	ND	ND
Toluene .	PPB	ND	ND
Chlorobenzene	PPB	ND	ND
Ethylbenzene	PPB	ND	ND
Styrene	PPB	ND	ND
Total Xylenes	PP8	ND	ND
Total Chlorotoluene	PPB	ND	ND
Total Dichlorobenzene	PPB	ND	ND

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. DEEP PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW. 70		ND BACKGROUND
						MW 6D	MW 180
Chloromethane	PP8	ND	ND	ND.	ND	ND	ND
Bromomethane	PPB	· ND	סא	ND	ND	ND	ОИ
Vinyl chloride	PPB	ND	ND	ND	ND	ND	ND
Choroethane	PPB	ND	ND .	ND	ND	ND	ND .
Methylene chloride	PPB	NO	- ND	NO	· ND	D	ND
Acetone	PPB	ND	ND 1	ND	ND	ND	ND
Carbon disulfide	PP8	ND	ND	ND	ND	ND	. מא
1,1-Dichloroethene	PPB	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	PPB	ND	ND.	ND	ND	ND	ND
trans-1,2-Dichloroethene	PPB	ND .	ND	ND	ND	ND	ND
Chloroform	PP B	. ND	ND	- ND	ND	ND -	ND
1,2-Dichloroethane	PPB	ND	ND	ND	ND	ND	ND
2-Butanone	PPB	ND	ND	ND	DN	ND	ND .
1,1,1-Trichloroethane	PPB	ND	ND	ND	ND	· ND	ND
Carbontetrachloride	PPB	ND	ND	ND	ND	ND	ND
Vinyl Acetate	PPB	ND	DM	ND	ND	ND	ND
Bromodichloromethane	PP8	ND	ND	ND	DK	ND	ИО
1,1,2,2-Tetrachloroethane	PPB	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	PPB	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	PPB	ND	ND	DM	ND	ND	ND
Trichloroethene	PPB	ND	ND	ND	ND	ND	ND .
Dibromochloromethane	PPB	ND	ND	ND	ND	DM	ND
1,1,2-Trichloroethane	PP8	ND	ND	ND	ND	ND	ND
Benzene	PPB	ND	ND	NO	ND	ND	ND
cis-1,3-Dichloropropene	PPB	ND	, ND	ND	ND	ND	ND
2-Chloroethylvinylether	PPB	ND	ND	ND	ND	ND	ND
Bromoform	PPB	ND	ND	ND .	ND	DN	ND
2-Hexanone	PPB	ND	DM	ND	ND	DK	ND
4-Methyl-2-pentanone	PPB	ND	ND	ND	ND	ND	ND .
Tetrachloroethene	PPB	ND	ND	- ND	ND	ND	ND
Toluene	PPB	ND	ND	ND	ND	ND	ND
Chlorobenzene	PPB	ND	ND	ND	ND	ND	ND
Ethylbenzene	PPB	ND	ND	ND	ND	ND	ND ·
Styrene	PP8	ND	ND	DM	ND	ND	· ND
Total Xylenes	PPB	ND	ND	ИD	ND	ND	, ND
Total Chlorotoluene	PPB	ND	ND	ND	ND	ND	ND
Total Dichlorobenzene	PPB	ND	NO .	DM	ND	ND	ND ·

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. OFFSITE DEEP MONITORING WELLS

Chloromethane	D BACKGROUND MW 180
Bromomethane PPB ND	
Bromomethane PPB ND	ND
Vinyl chloride PPB ND	ND
Choroethane PPB ND	ND
Methylene chloride PPB ND <td>ND</td>	ND
Acetone PPB ND <	NO
Carbon disulfide PPB ND	ND
1,1-Dichloroethene PPB ND <td>ND</td>	ND
trans-1,2-Dichloroethene PPB ND	ND
trans-1,2-Dichloroethene PPB ND	DM
Chloroform PPB ND	ND
2-Butanone PPS ND	ND
2-Butanone PPS ND	ND
Carbontetrachloride PPB ND ND ND ND ND ND ND ND ND ND ND ND ND	ND.
Vinyl Acetate PPB ND ND ND ND ND ND ND ND ND ND ND ND ND	ND
Bromodichloromethane PPB ND ND ND ND ND ND ND ND ND ND ND ND ND	ND
1,1,2,2-Tetrachloroethane PPB ND ND ND ND ND ND ND	ND
11.1-1-	ND
1 2-Dichlereprenance DDR ND ND ND ND ND ND	ND
ווא שא שא או או או או או או או או או או או או או	ND
trans-1,3-Dichloropropene PPB ND ND ND ND ND ND ND	ND
Trichloroethene PPB ND ND ND ND ND ND	ND
Dibromochloromethane PPB ND ND ND ND ND ND ND	ND
1,1,2-Trichloroethane PPB ND ND ND ND ND ND ND	ND
Benzene PPB ND ND ND ND ND ND	ND
cis-1,3-Dichloropropene PPB ND ND ND ND ND ND ND	ND
2-Chloroethylvinylether PPB ND ND ND ND ND ND ND ND	ND
Bromoform PPB ND ND ND ND ND ND	ND
2-Hexanone PPB ND ND ND ND ND ND ND	ИD
4-Methyl-2-pentanone PPB ND ND ND ND ND ND ND	ND
Tetrachloroethene PPB ND ND ND ND ND ND ND	ND
Toluene PPB ND ND ND ND ND ND	ND
Chlorobenzene PPB ND ND ND ND ND ND ND	ND
Ethylbenzene PPB ND ND ND ND ND ND ND ND	ND '
Styrene PPB ND ND ND ND ND ND ND	ND
Total Xylenes PPB ND ND ND ND ND ND ND	ND
Total Chlorotoluene PPB ND ND ND ND ND ND ND	ND
Total Dichlorobenzene PPB ND ND ND ND ND ND ND	ND

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. OFFSITE SHALLOW MONITORING WELLS

COMPOUND	UNITS	, MW 19S	NW 20S	MW 21S	MW 22S	MW 23s	BACKGROUND	
Chloromethane	PPB '	ND	ND	ND	ND	ND	ND	
Bromomethane	PP B	ND	ND	ND	ND	ND	ND	
Vinyl chloride	PPB .	ND	ND	ND	ND	ND	ND	
Choroethane	PPB	ND	ND	ND	ND	ND	ND	
. Methylene chloride	FFB	ND	ND	ND	ND	, ND	ND	
Acetone	PPB	ND	ND	ND	ND	ND	NO	
Carbon disulfide	PPB	ND	ND	ND	ND	ָ לא	ND	
1,1-Dichloroethene	PPB	ND	ND	NO	ND	ND	ND	
1,1-Dichloroethane	PPB	ND	ND	ND	ND	ND	ND	
trans-1,2-Dichloroethene	PPB	DN	ND	ND	ND	סא	ND	
Chloroform	PPB	ND	סא	ND	ND	ND	ND	
1,2-Dichloroethane	PPB	ND	סא	. פא	ND	ND	ND	
2-Butanone	PPB	ND	· ND	ND	ND	ND	ND	
1,1,1-TrichLoroethane	PPB	ND	ND	ND	ND	ND	ND	
Carbontetrachloride	PPB	ND	ND	ND	ND.	ND	ND	
Vinyl Acetate	PPB	ND	ND .	DM	ND	ND	ND	•
Bromodichloromethane	PPB	ND	ND	ND	ND	ND	ND	
1,1,2,2-Tetrachloroethane	PPB	ND	ND	ND	ND	ND	ND	
1,2-Dichloropropane	PPB	ND	ND	ND	ND	ND	ND	
trans-1,3-Dichloropropene	PPB	ND	ND	ND .	ND	ND	ND	
Trichloroethene	PPB	ND	ND	ND	ND	ND	ND	
Dibromochloromethane	PPB	ND	ND	ND	ND	ND	DM	
1,1,2-Trichloroethane	PPB	ND	ND	ND	ND	ND	ND	
Benzene	PPB	ND	5	ND	2	סא	ND	
cis-1,3-Dichlaropropene	PPB	ND	ND	ND	סא	ND	ND	
2-Chloroethylvinylether	. PPB	ND	ND	DM	ND	ND	ND	
Bromoform	PPB	ND	ND	ND	ND	ND	ND	
2-Hexanone	PPB	סא	ND	ND	ND	ND	- ND	
4-Methyl-2-pentanone	PP8	ND	- ND	ND	ND	ND	ND	
Tetrachloroethene	PPB	ND	ND.	ND	ND	ND	' ND	
Toluene	PPB	ND	1	ND ·	. 1	ND	ND	
Chlorobenzene	PPB	ND	ND	ND	ND	ND	ND ·	
Ethylbenzene	PP B	ND	ND	ND	ND	ND	ND	
Styrene	PPB	ND	ND	ND	ND	ND	ND	
Total Xylenes	PPB	. ND	ND	ND	ND	ND	ND	
Total Chlorotoluene	PPB	ND	ND	ND	ND	DM	ND	
Total Dichlorobenzene	PPB	ND	ND	ND	ND	ND	ND	

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. SHALLOW PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1S	MW 3s	MW 4s	MW 5s	MW 7s	MW 8S	MW 10s
Chloromethane	PPB	ND	ND	ND	ND	. , ND	СИ	ND
Bromomethane	PPB	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	PPB	ND	ND	ND	ND	ND	ND	ND
.Choroethane	PPB	ND	ND	· ND	- ND	ND	ND	ND
Methylene chloride	PPB	סא	ND	ОМ	ND	ND	ОК	GM
Acetone	PPB	ND	ND	ND	CN	ПN	ND T	סא
.Carbon disulfide	PPB	DM	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	PPB	ND	ND.	. ND	ND	ND	би	CN
1,1-Dichloroethane	PPB	ND	ND	ND	ND	. ND	ND	ND .
trans-1,2-Dichloroethene	PPB	ND	ND	ND	ND	ND	ND	סא
Chloroform -	PPB	ND	ND	ND.	מא	סא	ND	ND
1,2-Dichloroethane	P PB	ND	ND	מא	ND	םא	. ND	. ND
2-Butanone	PPB	NO	ND.	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	PPB	ND	ND	ND	ND	סא	ND	ND
Carbontetrachloride	PP8	· ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	PPB	ND	ND	ND	ND	DN	ND	ND
Bromodichloromethane	PP B	ND	ND	ND	ND	ND	ND	ND .
1,1,2,2-Tetrachloroethane	PPB	ND	ND	ND	ND	ND	DM	ЙD
1,2-Dichloropropane	PPB	ND	ND	ND	ND	ND	ND	· ND
trans-1,3-Dichloropropene	PPB	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	PPB	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	PPB	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	PPB	ND .	ND	ND	ND	ND	ND	ND
Benzene	PPB	ND	ND	ND	ND	ND	ND	סא
cis-1,3-Dichloropropene	PPB	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinylether	PPB	ND	ND	ND	ND	ND	ND	ND
Bromoform	PPB	ND	ND	ND	ND	· ND	ND	. ND
2-Hexanone	PPB	·ND	ND	ND	ND	ND	ND	. ND
4-Methyl-2-pentanone	PPB	ND	, ND	ND	ND	- אם	ND.	סא
Tetrachloroethene	PPB	ND	ND	ND	ND	ND	ND	ND
Toluene	PPB	ND	. ND	ND	ND.	ND	ND	ND
Chlorobenzene	PP8	ND '	ND	ND	ND	ND	ND	ND
Ethylbenzene	PPB	ND	ND	ND	ND	ND	ND	ND
Styrene	PPB	ND	. ND	ND	ND	ND	ND	ND
Total Xylenes	PPB	ND	ND	, ND	. ND	ND	ND	ND
Total Chlorotoluene	PPB	ND	ND	ND	ND	ND	ND	ND
Total Dichlorobenzene	PPB	ND	- ND	ND	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. ON-SITE MONITORING WELLS

COMPOUND	UNITS	MW	28	WÀ	2D
Alpha-BHC	UG/L		ND		ND
Beta-BHC/Gamma-BHC*	UG/L		ND		ND
Delta-BHC	ńg\r		ND		ИD
Heptachlor	. UG/L		ND		ИD
Aldrin	UG/L		ND		ND
Heptachlor Epoxide	UG/L		ND		ND
Endosulfan I	UG/L	:	ND		ND
4,4'-DDE	UG/L	1	ND		ND
Dieldrin	UG/L	1	ND		ND
Endrin	UG/L	I	ND		ND
Endrin Aldehyde	UG/L	1	ND		ND
Endosulfan II	UG/L	. 1	ND		ND
4,4"-DDD	UG/L	1	ND		ND
Endosulfan Sulfate	UG/L	. 1	ND		ND
4,4'-DDT	UG/L	1	ND	•	ND
Endrin Ketone	UG/L	,	ND		ND
Methoxychlor	UG/L	1	ND		ND
Chlordane	UG/L	1	ND		DM
Toxaphene	UG/L)	D		ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. DEEP PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW-7D	BACKGROUND MW 6D	BACKGROUND MW 18D
		•					
Alpha-BHC	UG/L	ND	, ND	ND	ND	ND	ND
Beta-BHC/Gamma-BHC*	UG/L	, ND	ND	DM	ND	ND	DM
Delta-BHC	UG/L	- ND	ND	ND	ND	ŃD	ND
Heptachlor	. UG/L	DM	ND	ND	NO	, ND	NO -
Aldrin	UG/L	ND	· ND	ND	ם א	ND	ND
Heptachlor Epoxide	UG/L	ND	ND	ND	DM	NO .	ND
Endosulfan I	UG/L	ND	DIK	ND	, ND	ND	ND
4,4'-DDE	UG/L	ND	ND	ND	ND	ND	ND
Dieldrin	UG/L	ND	ND	ND	ND	ND	ND
Endrin	UG/L	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	UG/L	ND	ND	ND	ND	ND	ND
Endosulfan II	UG/L	ND	סא	ND	ND	ND	ND
4,4"-DDD	UG/L	ND	סא	DN	ND	ND	ND .
Endosulfan Sulfate	UG/L	ND	ND	ND	ND	DN	ND .
4,4'-DDT	UG/L	ND	ND	ND	ND	, ND	ND
Endrin Ketone	UG/L	ND	ND	ND	ND	ND	ND
Methoxychlor	UG/L	ND	סא	ND	ND	ND	ND
Chlordane	UG/L	ND	ND	ND	ND	ND	ND
Toxaphene	UG/L	ND	ND	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. OFFSITE DEEP MONITORING WELLS

	COMPOUND	UNITS	MW 19D	MW 200	MV 210	MW 22D	MW 23D	MW 23DD	BACKGROUND MW 60	BACKGROUND MW 18D
	Alpha-BHC	UG/L	ND	NĎ		ND	ND	ND	ND	ND
	Beta-BHC/Gamma-BHC*	UG/L	ND	ND		ND	ND	ND	ND	ND
	Delta-BHC	UG/L	ND	ND		ND	ND	ND.	ND	ND
	Heptachlor	, UG/L	ND	ND		ND	ND	סא	ND	D
	Aldrin	UG/L	ND	ND		ND	ND .	ND -	ND	ND
•	Heptachlor Epoxide	UG/L	ND	ND		ND .	ND	ND	ND	ND
	Endosulfan I	UG/L	ND	ND		ND	ND	ND	ND	ND
	4,4'-DDE	UG/L	ND	GN		ND	מא	ND	ND .	ND
	Dieldrin	UG/L	ND	ND	•	ND	ND	ND	ND .	. ND
	Endrin	UG/L	ND	ND		ND	ND	ND	ND	ND
٠	Endrin Aldehyde	. UG/L	ND	ND		ND	ND	ND	ND	ND
	Endosulfan II	UG/L	ND ·	ND		ND	ND	, ND	ND	ND
	4,4"-000	UG/L	ND	DK		ND	· ND	ND	МĎ	ND -
	Endosulfan Sulfate	UG/L	ND	NO		ND	ND	ND	· ND	ND
	4,4'-DDT	UG/L	ND	ND		ND	ND	ND	ND	ND .
	Endrin Ketone	UG/L	ND	ND		ND	ND	ND	ND	ND
	Methoxychlor	UG/L	ND	ND		ND	ND	ND	ND	ND
	Chlordane	UG/L	ND	ND		ND	ND	ND	ND	ND
	Toxaphene	UG/L	ND	ND		ND	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. OFFSITE SHALLOW MONITORING WELLS

COMPOUND	UNITS	MW 19S	MW 20S	MW 21S	MW 22S	MW 23S	BACKGROUND MW 6S
Alpha-BHC	UG/L	ND	ND	ND	סא	ND	ND -
Beta-BHC/Gamma-BHC*	UG/L	ND	ND	ND	ND	ND	ND
Delta-BHC	UG/L .	ND	ND	ND	ND	ND	ND
Heptachlor	- UG/L	מא	DM	· ND	ND.	ND	ND
Aldrin	UG/L	ND	ND	ND	ND	ND	ND ·
Heptachlor Epoxide	UG/L	ND	ND	ND	DИ	ND	ND
Endosulfan I	UG/L	ND	ND	ND	ND	, ND .	DN
4,4'-DDE	UG/L	ND	ND	ND	ND	ND	ND
Dieldrin	UG/L	ND	ND	. ND	סא	. ND	ND
Endrin	UG/L	ND	ND	NO	סא	ָאס	,ND
Endrin Aldehyde	UG/L	ND	ND	ND	DM	ND	ND
Endosulfan II	UG/L	ND	ND	· ND	ND	ND	ND
4,4"-DDD	UG/L	ND	· ND	ND.	ND	ND	סא
Endosulfan Sulfate	UG/L	ND	ND	, ND	ND	ND	ND
4,4'-DDT	UG/L	ND	ND	ND	ND .	ND	ND
Endrin Ketone	UG/L	ND	ND .	DK	ND	ND	ND
Methoxychlor	UG/L	ND	ND	ND	ND	ND	ND
Chlordane	UG/L	ND	ND	ND	ND	ND	ND
Toxaphene	UG/L	ND	ND	ND	ND	NĐ	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. SHALLOW PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1s	MW 3S	MW 4S	MW 5s	HW 7s	NW 8S	MW 10S
Alpha-BHC	UG/L	ND	ND	ND	ND	ND	DM	ND
Beta-BHC/Gamma-BHC*	UG/L	ND	ND	ND	ND	ND	ND	ND
Delta-BKC	UG/L	ND	ND	DK	DK	DM	ND	ND
Heptachlor	UG/L	ND	סא	ND	ND	CK	_ ND	ND
Aldrin	, UG/L	ND	DIA	· ND	· ND	ND	ND	KD
Heptachlor Epoxide	UG/L	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	UG/L	ND	ND	ND	ND	ND	ND .	ND
.4,4'-DDE	UG/L	ND	ND	ND	ND	ND	ND	ND
Dieldrin	UG/L	ND	ND	' אס	ND	ND	ND	ND
Endrin	UG/L	ND	ND	ND	ND	, ND	ND	ND .
Endrin Aldehyde	UG/L	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	UG/L	МĎ	ND	ND.	ND	ND	ND	ND
4,4"-DDD	UG/L	ND	ND	DM	ND	ND	· ND	ND
Endosulfan Sulfate	UG/L	ND	ND.	ND	' ND	ND	ND	ND .
4,4'-DDT	UG/L	ND	ND	ND	ND	ND	ND	DM
Endrin Ketone	UG/L	ND	ND	ND	ND	ND	ND .	ND
Methoxychlor	UG/L	ND	ND	ND	ND	ND	ND	ND
Chlordane	UG/L	ND	DM	ND	ND	ND	ND	ND
Toxaphene	UG/L	ND	ND	ND	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043
CHEEKTOWAGA, ERIE CO.
ON-SITE MONITORING WELLS

V...

COMPOUND	UNITS	MW 2S	MW 2D
Aroclor-1016	UG/L	ND	ND
Aroctor-1221	UG/L	ND	ND
Aroclor-1232	UG/L	ND	ND
Aroclor-1242	. UG/L	ND	ND
Aroclor-1248	UG/L	ND	- NO
Aroclor-1254	UG/L	ND	ND
Aroclor-1260	HeVI	מא	NU

Page No. 5

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. DEEP PERIMETER MONITORING WELLS

							•	
COMPOUND	UNITS	MW 1D	MW 30	MW 4D	MU 70	BACKGROUND		
						MW 6D	MW 18D	
Aroclor-1016	UG/L	ND	· ND	ND	ND	ND	ND	
Aroctor-1221	UG/L	ND	ND	ND	ND	ND	ND	
Aroclor-1232	UG/L	` ND	ND	ND	ND	ND	ND	
Aroclor-1242	· UG/L	ND	ND	ND	ND	· ND	ND .	
Aroclor-1248	UG/L	ND	ND	ND	ND	DM	ND	
Aroclor-1254	UG/L	ND	ND	ND	ND	מא	ND	
Aroclor-1260	UG/L	ND	ND	ND	· ND	ND	'ND	

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-04 CHEEKTOWAGA, ERIE CO. OFFSITE DEEP MONITORING WELLS

COMPOUND	UNITS	MW 190	MW 200	MW 21D	MW 22D	MW 23D	MW 2300	BACKGROUNI	BACKGROUND
								MW COU	, MW TOU
		•							
Aroclor-1016	UG/L	ND ·	ND		ND	ND	ND	ND	ND
Aroclor-1221	UG/L	ND	ND		ND	ND	ND	ND	ND
Aroclor-1232	UG/L	ND	ND		ND	ND	ND	ND .	ND
Aroclor-1242	- UG/L	ND	ND		ND .	DN	ND	ND	ND
Aroclor-1248	. UG/L	סא	· ND		ND	ND	ND .	ND.	ND
Aroclor-1254	. UG/L	ND	ND		GM	ND	ND	ND	ND
Aroclor-1260	UG/L	סא	ND		ND `	ND	ND	ND	GN

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. OFFSITE SHALLOW MONITORING WELLS

COMPOUND		UNITS	MW 195	MW 20S	MW 21S	MW 22S	MW 23S	BACKGROUND MW 68
Aroclor-1016		UG/L	ИО	ND	ND	ND	ND	ND
Aroclor-1221		UG/L	ND	ND	ND	ND	DI	ND
Aroclor-1232		UG/L .	ND	ND	ND	ND	ND	ND
Aroclor-1242		UG/L	ND	ND	ND	ND.	ND	ND
Aroclor-1248		UG/L	ND	ND	ND	ND	ND	ND ·
Aroclor-1254		UG/L	ND	, ND	ND	ND	ND	ND
Aroclor-1260	•	UG/L	ND	DIA	ND	ND	. DM	ND

PFOHL BROTHERS LANDFILL 09-15-043
CHEEKTOWAGA, ERIE CO.
SHALLOW PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1S	MW 3s	MW 4S	MW 5s	MW 7s	MW 85	MW 10S
Aroclor-1016	UG/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	UG/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	UG/L	ND	ND	, ND	. ND	ND	ND	ND
Aroclor-1242	UG/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	· UG/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	UG/L	ND	ND	ND.	HD	ND	ND	ND
Aroclor-1260	UG/L	ND	ND	ND	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. ON-SITE MONITORING WELLS

COMPOUND	UNITS	· MW	2\$	MW	20
Arsenic	UG/L	. LT	10	LŦ	10
Cadmium	UG/L	LT	25	LT	25
Chromium	UG/L	LT	10	LT	10
Lead	UG/L		17		9
Mercury	UG/L	LT	0.2	LT	0.2

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043
CHEEKTOWAGA, ERIE CO.
DEEP PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW 7D	BACKGROUND MW 60	BACKGROUND MW 18D
Arsenic	UG/L	LT 10	LT 10	LT 10	LT 10	LT 10	LT 10
Cadmium	UG/L	LT 25	LT 25	LT 25	LT 25	LT 25	LT 25
Chromium	UG/L	LT 10	LT 10	50	LT 10	30	LT 10 .
Lead	. UG/L	LT 5	. 7	15	· LT 5	25	LT 5
Mercury	UG/L	LT 0.	2 LT 0.2	LT 0	.2 LT 0	.2 LT 0.2	LT 0.2

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-04: CHEEKTOWAGA, ERIE CO. OFFSITE DEEP MONITORING WELLS

COMPOUND	UNITS	MW	190	MW	200	MU	210	HW	220 -	HW	2 3 D	MW	2300	BAC	KGROUND	BAC	KGROUND
,														MW	6D ,	MW	180
*			,														
Arsenic	UG/L	LT	10	LT	10	LT	10	LT	10	LT	10	LT	10	LT	10	LT	10
Cadmium	UG/L	LT	25	LT	25	LT	25	LT	25	LT	25	LT	25	LT	25	LT	25
Chromium	UG/L	LT	10		16		12		10	LT	10	ĻT	10		30 ·	LT	10
Lead	- UG/L		21		9		18 -		12	LT	5		10		25	LT	5
Mercury	UG/L	LT	0.	2. LT	0.	2 LT	0.2	2 LT	0.2	2 LT	0.	2 LT	0.	2 LT	0.2	LT	0.2

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. OFFSITE SHALLOW MONITORING WELLS

COMPOUND		UNITS		MW	198	MW	20s	MW	215	MW	22\$	MW	23\$	BAC	KGROUND	
						•					*			MW	6S	
											•					
Arsenic		UG/L		LT	10	LT	10	LT	10	LT	10	LT	10	LT	10	
Cadmium		UG/L		LT	25	LT	25	LT	25	LT	25	LT	25	LT	25	
Chromium		UG/L	•	LT	10	LT	10	LT	10	LT	10	LT	10		2200	
Lead	•	UG/L			27		12		13	LT	5		1.7		34	
Mercury		UG/L		LT	0.	.2 LT	0	.2 LT	0.	2 LT	0.	2 LT	0.2	LT	0.2	

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. SHALLOW PERIMETER MONITORING WELLS

COMPOUND	UNITS	HW 1S	MW 3s	MW 4S MW	J 5s MW	7S MW	8S MW 10S
	•			ī			
Arsenic	UG/L	LT 10	LT 10	LT 10 LT	r 10 LT	10 LT	10
Cadmium	UG/L	LT 25	LT 25	LT 25 LT	7 25 LT	25 LT	25
Chromium	UG/L	LT 10	LT 10	LT 10 LT	10	42	304
Lead	UG/L	12	10	. 15 LT	5	7 LT	5
Mercury	. UG/L	LT 0.2	LT 0.2	LT 0.2 LT	0.2 LT	0.2 LT	0.2

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. ON-SITE MONITORING WELLS

COMPOUND			UNITS	MW 2	S	MW 21	D .
	• ,				•		
рн					7.76	7	7.2
Conductivity				•	1500		550
Temperature (C)		•	t	5 ·	ŧ	5.5
Disolved Oxygen	(mg/l)	•		8	3.0		5
Turbidity (ntu) ·			4	44	•	12

Page No. 1

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. DEEP PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW 70	BACKGROUND MW 60	BACKGROUND MW 18D
pH Conductivity		7.15 600	7.4 400	6.61 600	7.25 325	7.17 925	7.18 420
Temperature (C)		8	6.0	6.0	6.5	. 8	5.5
Disolved Oxygen (mg/l)	•	3	5.0	8	. 8	7.0	5
Turbidity (ntu)		. 4	6	100+	10	25	1.1

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043

CHEEKTOWAGA, ERIE CO.

OFFSITE DEEP MONITORING WELLS

COMPOUND	UNITS	MW 190	MW 200	MW 210	MW 22D	MW 23D	MW 2300	BACKGROUND	BACKGROUND
•				,				MW 6D	MW 180
								•	
	•	. 1_							
рH		6.87	7.32	7.15	7.26	7.3	7.37	7.17	7.18
Conductivity		360	1375	850	250	650	575	925	420
Temperature (C)	•	9	8	8	6.5.	6.0	5.0	8	5.5
Disolved Oxygen (mg/l)	•	2	4	6.0	5	5	1.8	7.0	5
Turbidity (ntu)	•	22	8	40	6	18 -	22	25	1.1

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043
CHEEKTOWAGA, ERIE CO.
OFFSITE SHALLOW MONITORING WELLS

COMPOUND	UNITS	MW 19S	MW 20S	MW 21S	MW 22S	MW 235	BACKGROUND MW 6S
			•		•		MW 05
рН	•	6.42	7.32	7.10	7.42	7.45	6.94
Conductivity		700	325	1450	850	675	9500
Temperature (C)		9	7	6.5	6	5.0	6.5
Disolved Oxygen (mg/l)		5	4.5	4	8	5.5	6.5
Turbidity (ntu)	•	37	100+	38	19	20	40

Page No. 05/21/93

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. SHALLOW PERIMETER MONITORING WELLS

COMPOUND	UNITS .	MW 1S	MW 3s	MW 4S	MW 5s	MW 7S	MW 8S	MW 10S
рН		7.06	7.35	7.81	7.39	7.35	7.01	7.04
Conductivity		85	325	300	300	360	1050	1850
Temperature (C)		5.0	6.0	7.1	7.5		. 5	6.2
Disolved Oxygen (mg/l)		6	8	8.0	. 8	9.2	8	5.5
Turbidity (ntu)		10	7		18	17	14	- 16

PFOHL BROTHERS LANDFILL 09-15-04: CHEEKTOWAGA, ERIE CO. ON-SITE MONITORING WELLS

COMPOUND	UNITS	MW 2S	MW 2D
	•		
Phenol	UG/L	ND	ND
2-Chlorophenol	UG/L	ND	ND
Bis (2-Chloroethyl) Ether	UG/L	ND	ND
1 3-Dichlorobenzene	UG/L	ND	. ND
1 4-Dichlorobenzene	UG/L	ND	ַמא
1 2-Dichlorobenzene	UG/L	ND	DM
Benzyl Alcohol	UG/L	ND	NO
2-Methylphenol	UG/L	ND	DM
bis(2-chloroisopropyl)Ether	UG/L	ND	ND
Hexachloroethane	UG/L	DH	ND
4-Methylphenol	UG/L	ND	ND
N-Nitroso-di-propylamine	UG/L	ND	DM
Nitrobenzene	UG/L	DN	ИD
Isaphorone	UG/L	ND	-ND
2-Nitrophenol	UG/L	ND	ND
2 4-Dimethylphenol	UG/L	ND	DM
bis(2-chloroethoxy)Methane	UG/L	ND	ND
2 4-Dichlorophenol	UG/L	ND	ND
1 2 4-Trichlorobenzene	UG/L	DM	ND
Naphthalene	UG/L	ND	ND
Benzoic acid	UG/L	ND	ND
4-Chloroaniline	UG/L	ND ·	ND
Hexachlorodutadiene	UG/L	DM	ND
4-Chloro-3-Methylphenol	UG/L	ND	ND
2-Methylnaphthalene	UG/L	ND	ND
Hexachlorocyclopentadiene	UG/L	ND	ND
2,4,6-Trichlorophenol	UG/L	ND	ND
2,4,5-trichlorophenol	UG/L	ND	ND
2-Chloronaphthalene	UG/L	ND	ND
2-Nitroaniline	UG/L	ND	ИD
Acenaphthylene	UG/L	ND	ND
Dimethyl Phthalate	UG/L	ND .	DM
2,4-Dinitrophenol	UG/L	ND	ND .
Dibenzofuran	UG/L	ND	ND
4-Nitrophenol	UG/L	ND	ND
2,4-Dinitrotoluene	UG/L	ND	ND
Fluorene	UG/L	ND	ND
4-Chlorophenyl-phenylether	UG/L	ND -	ND
Diethylphthalate	UG/L	ND	ND
2 Methyl 4,6-Dinitrophenol	UG/L	ND	ND
N-Nitrosodiphenylamine	UG/L	ND	DM
4-Nitroaniline	UG/L	ND .	ND
4-Bromophenyl-phenylether	UG/L	DN	ND
Hexachlorobenzene	UG/L	ND	ND
Pentachlorophenol	UG/L	ND	ND
Phenanthrene	UG/L	ND	ND
Anthracene	UG/L	ND	ND-
Di-N-Butylphthalate	UG/L	ND	ND
or a sucycontinatate	04/6	•••	

PFOHL BROTHERS LANDFILL 09-15-043
CHEEKTOWAGA, ERIE CO.
ON-SITE MONITORING WELLS

+ pp = 1 ...

COMPOUND	UNITS	MW 2S	MW 2D
Fluoranthene	UG/L	, ND	ND
Pyrene	UG/L	סא	DM
Butylbenzylphthalate	UG/L	ND	ND
Chrysene ,	UG/L	סא	. GH
Benzo (a) Anthracene	UG/L	, GM	- ND
bis(2-Ethylhexyl)Phthalate	UG/L	ND	ND
Di-N-Octyl Phthalate	UG/L	ND	DM
Benzo(a)Pyrene	UG/L	ND	ND
Indeno(1,2,3-cd)Pyrene	UG/L	ND	ND
Dibenz(a,h)Anthracene	UG/L	. ND	ND
Benzo(g,h,i)Perylene	UG/L	ND	. ND
3-Nitroaniline	UG/L	ND	ND
Benzo(b/k)Fluoranthene	UG/L	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. DEEP PERIMETER MONITORING WELLS

COMPOUND	UNITS	HW 1D	MW 3D	MW 4D	MW 7D	BACKGROUND	BACKGROUND MW 18D
		•		•		, 22	
Phenol	UG/L	מא	ND	ND	ND	ND	ND
2-Chlorophenol	UG/L	ND	ND	ND	ND	ND	ND
Bis (2-Chloroethyl) Ether	UG/L	ND	ND	ND	ND.	ND	ND ND
1 3-Dichlorobenzene	UG/L	ND	ND	, ND	ND .	ND	ND
1 4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND -	ND -
1 2-Dichlorobenzene	UG/L	ND	ND	ND	ND.	ND	ND
Benzyl Alcohol	UG/L	ND	ND	ND	ND	ND	ND
2-Methylphenol	UG/L	ND	ОМ	ND	ND	DM	ND
bis(2-chloroisopropyl)Ether	UG/L	ND.	ND	ND .	ND	ND	'Dא
Hexachloroethane	UG/L	ND	ND	ND	ND	ND	ND
4-Methylphenol	UG/L	ND	ND	ND	ND	ND	ND
N-Nitroso-di-propylamine	UG/L	ND .	мD	ND	ND	ND	ND ·
Nitrobenzene	UG/L	ND	ND	ND	ND	ND	ND
Isophorone	UG/L	ND	ND	מא	ND	ND .	ND
2-Nitrophenol	UG/L	ND	ND	DM	ND	ND	ND
2 4-Dimethylphenol	UG/L	ND	ND	DM	ND	ND	ND
bis(2-chloroethoxy)Methane	UG/L	ND	ND	ND	ND	ND	ND
2 4-Dichlorophenol	UG/L	ND	ND	ND	ND	ND	ND
1 2 4-Trichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND
Naphthalene	UG/L	ND	ND	, ND	ND	ND	ND
Benzoic acid	UG/L	ND	ND	ND	ND	ND	ND
4-Chloroaniline	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorodutadiene	UG/L	ND	ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	UG/L	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	UG/L	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	UG/L	- סא	ND	ND	ND	ND	ИD
2,4,6-Trichlorophenol	UG/L	ND	ND	ND	ND	ND.	ND
2,4,5-trichlorophenol	UG/L	ND	ND	ND	. ND	ND	ND
2-Chloronaphthalene	UG/L	ND	ND	ND-	ND	ND	ND
2-Nitroaniline	UG/L	ND	ND	ND	ND	ND	ND
Acenaphthylene	UG/L	ND	ND	ND	ND	ND	ND
Dimethyl Phthalate	UG/L	· ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	UG/L	ND	ND	ND -	ND	ND	ND
Dibenzofuran	UG/L	ND	ND	ND	ND	ND	ND
4-Nitrophenol	UG/L	ND	ND	ND	ND	. ND	ND
2,4-Dinitrotoluene	UG/L	. ND	ND	ND	סא	. ND	ND .
Fluorene	UG/L	ND	ND	ИĎ	, ND	ND	ND
4-Chlorophenyl-phenylether	UG/L	ND	· ND	ND	МD	ND	ND
Diethylphthalate	UG/L	ND	ND	ND	ND	ND	ND
2 Methyl 4,6-Dinitrophenol	UG/L	ND	ND	ND	ND	ND .	ND
N-Nitrosodiphenylamine	UG/L	ND	ND	ND	DM	ND	DN
4-Nitroaniline	UG/L	, ND.	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	UG/L	DM	. ND	DM	ND .	ND	ND
Hexachlorobenzene	UG/L	` אס	ND	· ND	ND	ND	ND
Pentachlorophenol	UG/L	ND	ND	ND.	ND	ND	ND .
Phenanthrene	UG/L	ND	ND	ND	· ND	DM	· ND
Anthracene	UG/L	ND	ND	ND	- ND	ND	ND
Di-N-Butylphthalate	UG/L	ND	ND	. ND	ND	ND .	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. DEEP PERIMETER MONITORING WELLS

COMPOUND	UNITS	, MW 10	MW 3D	MW 4D	MW 70	BACKGROUND MW 6D	BACKGROUND MW 18D
Fluoranthene	UG/L	ND	ND	МО	ND	ND	ND -
Pyrene	UG/L	ND	· ND	ND	ND	ND	סא
Butylbenzylphthalate	UG/L	ND	ND	ND	ND	ND ·	ND
Chrysene	UG/L	ND	ND	ND	ND .	ND	σίκ
Benzo (a) Anthracene	UG/L	ND	ND	ND	ND	סא	ND .
bis(2-Ethylhexyl)Phthalate	UG/L	ND	' ND	ND	ND	ND	סא
Dî-N-Octyl Phthalate	UG/L	ND	ND.	ND	ND	ND .	. אס
Benzo(a)Pyrene	UG/L	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	UG/L	ND	· ND	ND	ND	ND	ND
Dibenz(a,h)Anthracene	UG/L	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)Perylene	UG/L	ND	ND	ND	ND	ND	ND
3-Nitroaniline	UG/L	ND	ND	ŅD	ND	ND	ND
Benzo(b/k)Fluoranthene	UG/L	ND	, ND	ND	ND	ND	ND .

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. OFFSITE DEEP MONITORING WELLS

COMPOUND	UNITS	MW 19D	MW 200	MW 21D	MW 22D	MW 23D	MW 23DD	BACKGROUI	ND BACKGROUND MW 18D
		•		•					
Phenol	UG/L	ND	ND	ND	ND	ND	ND	Gil	ND
2-Chlorophenol	UG/L	ND	ND	, ND	. ND	ND	ND	ND	ND
Bis (2-Chloroethyl) Ether	UG/L	ND	ND	ND	סא	ND	סא	ND	В
1 3-Dichlorobenzene	UG/L	ND	ND	ND	ND	NO	NO.	ND	ND
1 4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
1 2-Dichlorobenzene	UG/L	ND	ND	- ND	ND	ND	סא	ND	ND
Benzyl Alcohol	UG/L	ND	ND	DM	СИ	- ND	ND	ND .	D
2-Methylphenol	UG/L	ND	ND	ND	· ND	ND	ND	ND	ND .
bis(2-chloroisopropyl)Ether	UG/L	ND	ND	ND -	ND	ND	ND	ND.	ND
Hexachloroethane	UG/L	ND	ND	ND	ND	ND	פא	ND	NO
4-Methylphenol	UG/L	ИD	ND	ND	- ND	ND	סא	ND	ND
N-Nitroso-di-propylamine	UG/L	ND	ND	GN	ND	ND	DИ	ND-	ND
Nitrobenzene	UG/L	. ND	ND	ND	. ND	ND	ND	ND	ND.
Isophorone	UG/L	ND	ND	ND	ND	ND	ND	ND.	ND
2-Nitrophenol	UG/L	ND	ND	ND	. ND	ND	ND	ND .	ND
2 4-Dimethylphenol	UG/L	DM	ND	ND	ND	ND	ND	ND	ND .
bis(2-chloroethoxy)Methane	UG/L	ND	ND	ND	ND	ND	ND	. מא	ND
2 4-Dichlorophenol	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
1 2 4-Trichlorobenzene	UG/L	סא	ND	ND	ND	ND	ND	NĎ	ND
Naphthalene	UG/L	סא	ND	ND	ND	ND	ND	מא	ND
Benzoic acid	UG/L	ND	. ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	UG/L	DN	ND	ND	ND	ND	ND	ND	· ND
Hexachlorodutadiene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	UG/L	ND	ND	ND	ND	ND	ND	ND	ND .
2-Methylnaphthalene	UG/L	ND	ND	ND	ND	. ND	ND	ND	ND
Hexachlorocyclopentadiene	UG/L	ND	ND	ND	ND	ND	ND	ND	סא
2,4,6-Trichlorophenol	UG/L	ND	ND	. ND	ND	. ND	ND	ND	ND
2,4,5-trichlorophenol	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	UG/L	ND	ND	· ND	ND	ND	ND	ND	ND
2-Nitroaniline	UG/L	ND	, ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	UG/L	ND	ND	· ND	ND	ND	ND	ND .	ND
Dimethyl Phthalate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	UG/L	ND	ND	ND	. ND	ND	ND	ND	ND
Dibenzofuran	UG/L	ND	ND	שא	ND	ND	ND	ND	ND
4-Nitrophenol	UG/L	· ND	ND	ND	ND	ND	ND	 ND	ND
2,4-Dinitrotoluene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	·UG/L	ND	ND	· ND	ND	סע	ND	ND	ND .
4-Chlorophenyl-phenylether	UG/L	ND	ND .	ND	ND	ND	ND.	ND	ND
Diethylphthalate	UG/L	מא	ND	ND	ND	ND	ND	ND	סא
2 Methyl 4,6-Dinitrophenol	UG/L	ND	ND	ND	ND	ND	ND	ND .	ND
N-Nitrosodiphenylamine	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	UG/L	ND	ND	ND	. ND	ND	ND .	ND	ND
4-Bromophenyl-phenylether	UG/L	. ND	, AD ND	ND	ND	ND	ND	, ND ND	מא
Hexachlorobenzene	UG/L	. ND	ND .	ND	ND	ND	ND '	ND .	ND
Pentachlorophenol	UG/L	· ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	UG/L	ND ND	ND ND	ND	ND	ND ND	ND .	ND	סא
Anthracene	UG/L	ND ND		ND ND		ND ND	ND	ND	
•			ND		ЙD				
Di-N-Butylphthalate	UG/L	ND	ND	ND -	ND .	ND ·	ND .	DM	

PFOHL BROTHERS LANDFILL 09-15-04 CHEEKTOWAGA, ERIE CO. OFFSITE DEEP MONITORING WELLS

COMPOUND	UNITS	MW 19D	MM 500	MW 21D	MW 22D	MW 230	MW 2300	BACKGROUN MW 6D	ID BACKGROUND MW 18D
•	,								. •
Fluoranthene	UG/L	би	DM	ND	ND	ND	ND	ND	מא
Pyrene	UG/L	ND	ND	ND	ND	DM	ND	DM	ND
Butylbenzylphthalate	UG/L	ВD	ND	. ND	DИ	ND	ND	ND	ND
Chrysene	′ UG/L	ND	ND	ND	. ND	ND	DM	ND	ND
Benzo (a) Anthracene	UG/Ľ	סא	ND	ND D	ND	DM	ND	ND	ND .
bis(2-Ethylhexyl)Phthalate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl Phthalate	UG/L	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	UG/L	. NO	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	UG/L	ND	ND	ND	ND	ND	ND	ND	ND .
Dibenz(a,h)Anthracene	UG/L	DN	ND	ND	. ND	DM	ND	. ND	ND -
Benzo(g,h,i)Perylene	UG/L	DM	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	UG/L	. ND	DN	ND	ND	ND	ND	ND	ND
Benzo(b/k)Fluoranthene	UG/L	ND	ND	ND	DM	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-04: CHEEKTOWAGA, ERIE CO. OFFSITE SHALLOW MONITORING WELLS

COMPOUND	UNITS	MW 198	MW 20S	MW 21S	HW 225	MW 23S	BACKGROUND MW 65
				•			
Phenol	UG/L	DN	DM	ND	ND	ND	ND
2-Chlorophenol	UG/L	ND	DM	ND	ND	. ND	ИО
Bis (2-Chloroethyl) Ether	UG/L	ND	ND .	ND	ND	ND	ND
1 3-Dichlorobenzene	UG/L	ND	ND	ND	, ND	ND	HD
1 4-Dichlorobenzene	UG/L	DM	ND .	ND	DM	ND	ND
1 2-Dichlorobenzene	UG/L	ND	ND	ND	DM	ND	HD
Benzyi Alcohol	UG/L	ND	ND	ND	, ND	ND	ND
2-Methylphenol	UG/L	ND	ND	ND	ND	ND	СИ
bis(2-chloroisopropyl)Ether	UG/L	ND .	ND	ND	, ND	ND	ИD
Hexachloroethane	UG/L	ND	ND	, ND	ND	ND _.	ND
4-Methylphenol	UG/L	ND	ND	ND	ND	ND	ND
N-Nitroso-di-propylamine	UG/L	ND	ND	ND	ND	GM	DM
Nitrobenzene	UG/L	ND	ND	ND	ND	, ND	DM
Isophorone	UG/L	ND	ND	ND	ND	סא	. סא
2-Nitrophenol	UG/L	ND	ND	ND	ND	, ND	DH
2 4-Dimethylphenol	UG/L	ND	ND	ND	ND	ND	ND
bis(2-chloroethoxy)Methane	UG/L	ND	ND	ND	ND	ND	סא
2 4-Dichlorophenol	UG/L	סא	GN	ND	ND	ND	ND
1 2 4-Trichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND
Naphthalene	UG/L	DK	ND	ND	ND	ND	ND
Benzoic acid	UG/L	ND	ND	ND	ND	ND	ND
4-Chloroaniline	UG/L	ND	DM	ND	ND	ND	ND
Hexachlorodutadiene	UG/L	ND	ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol	UG/L	DN	ND	ND	ND	ND	ND
2-Methylnaphthalene	UG/L	ND	. ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	UG/L	ND	ND	ND .	ND	ND	ND
2,4,6-Trichlorophenol	UG/L	ND	ND	ND	ND	ND	ND .
2,4,5-trichlorophenol	UG/L	ND	מא	ND	ND	ND	ND .
2-Chloronaphthalene	UG/L	ND	ND	ND	ND	ND	ND
2-Nitroaniline	UG/L	ND ND	ND	ND	ND	ND	ND
Acenaphthylene	UG/L	ND	ND	ND	ND	ND	ND .
Dimethyl Phthalate	UG/L	ND	ND	· ND	ND	ND	ND
2,4-Dinitrophenol	UG/L	ND	ND	ND	ND	ND	ND
Dibenzofuran	UG/L	ND	ND	ND	ND	ND	ND
4-Nitrophenol	UG/L	ND	ND	ND	ND	ND	· ND
2,4-Dinitrotoluene	UG/L	ND	ND	ND	ND	ND	ND
Fluorene	UG/L	ND	ND	ND	ND	ND	ND .
4-Chlorophenyl-phenylether	UG/L	ND	· ND	ND	ND	ND	ND
Diethylphthalate	UG/L	ND	ND	ND	ND	ND	ND .
2 Methyl 4,6-Dinitrophenol	UG/L	ND	ND -	ND	ND	ND	ND .
N-Nitrosodiphenylamine	UG/L	ND	ND	ND	ND	ND	ND
4-Nitroaniline	UG/L	ND	ND	ND	NĎ	ND	ND
4-Bromophenyl-phenylether	UG/L	ND	ND	ND ·	. ND	ND	ND
Hexachlorobenzene	UG/L	ND	ND	ND	ND	ND.	ND .
Pentachlorophenol	UG/L	ND.	מא	ND	ND	ND	ND
Phenanthrene	UG/L	ND	ND	ND	ND	ND	ND
Anthracene	UG/L	ND	ND	ND	ND	ND	ND
Di-N-Butylphthalate	UG/L	ND	, ND	ND	ND	. ND	ND
and the second representation of the second	/-	110	. ,,,,				

TABLE 29 (cont)

Page No. 2

PFOHL BROTHERS LANDFILL 09-15-04 CHEEKTOWAGA, ERIE CO. OFFSITE SHALLOW MONITORING WELLS

COMPOUND	UNITS	MW 19S	MW 20S	MW 21S	MW 22S	MW 23S	BACKGROUND MW 6S
Fluoranthene	UG/L	ND	ND	ND	ND	ND	ND
Pyrene	UG/L	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	UG/L	ND	ND	ND	ND .	סא	ND
Chrysene	UG/L	DM	ND	ND	ND	ND	ND
Benzo (a) Anthracene	UG/L	ND	DM	ND	ND	, CM	ND .
bis(2-Ethylhexyl)Phthalate	UG/L	ND	ND	ND	ND	ND	ND
Di-N-Octyl Phthalate	UG/L	ND	ND	מא	ND	ND	DM
Benzo(a)Pyrene	UG/L	ND	ND	DM	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	UG/L	ND .	ND	ND ·	NO	ND	ND ·
Dibenz(a,h)Anthracene	'UG/L	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)Perylene	UG/L	ND	פא	DM	ND	ND	DM
3-Nitroaniline	UG/L	ND .	ND	ND	GM	DM	, ND ·
Benzo(b/k)Fluoranthene	UG/L	ND	ND	DM	ND	, ND	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. SHALLOW PERIMETER MONITORING WELLS

						٠.	•	
COMPOUND	UNITS	MW 15	MW 3s	MW 45	MW 58	MW 7S	MW 8s	MW 10S
Phenol	UG/L	ND	CM	ND	ND	ND	ND	ND
2-Chlorophenol	UG/L	ND	ND	ND	DM	ND	סא	В
Bis (2-Chloroethyl) Ether	UG/L	ND	· ND	ND	DM	ND	ND	ND
1 3-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND
1 4-Dichlorobenzene	· UG/L	ND	ND	ND	ND	CM	ָסא	ND
1 2-Dichlorobenzene	UG/L	ND	ND	ND	ND	NO.	ND	ND
Benzyl Alcohol	UG/L	ND	· ND	ND	GM	ND	ND	ND
2-Methylphenol	UG/L	ND	ND	ND	ND	ND	ND	ND
bis(2-chloroisopropyl)Ether	UG/L	ND	HD	ND	ND	ND	ND	ND
Hexachloroethane	UG/L	ND	- ND	ND	סא	ND	ND	ND
4-Methylphenol	UG/L	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-propylamine	UG/L	ND	ND	ND	ND	ND	ND	ND.
Nitrobenzene	UG/L	סא	NO	NО	. ND	ND	ND .	ND
Isophorone	UG/L	ND	,ND	ND	ND	ND	ND	ND
2-Nitrophenol	UG/L	ND	ND	ND	ND	ND	ND	ND
2 4-Dimethylphenol	UG/L	ND	ND	ND	ND	ND	ND	ND
bis(2-chloroethoxy)Methane	UG/L	ND	ND	ND	ND	ND .	ND	DИ
2 4-Dichlorophenol	UG/L	סא	ND	ND	ND	DM	ND	ИD
1 2 4-Trichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND
Naphthalene	UG/L	ND	ND	ND	ND	ND .	ND	ND
Benzoic acid	UG/L	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	UG/L	ND	ND	ND	ND	ND	ND	ND
Hexachlorodutadiene	UG/L	ND	ND	. ND	ND	ND	ND	מא
4-Chloro-3-Methylphenol	UG/L	ND	ND	ND	DN	ND	ND	ND
2-Methylnaphthalene	UG/L	ND	ND	ND	ND	ND '	ND	ND
Hexachlorocyclopentadiene	UG/L	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	UG/L	ND	ND	ND	ND	ND	ND	ND
2,4,5-trichlorophenol	UG/L	ND	ND	ND	ND	ND	ND	"ND
2-Chloronaphthalene	UG/L	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	UG/L	ND.	. ND	DN	ИD	ND	ND	ND
Acenaphthylene	UG/L	ND	ND	ND	ND	ND	ND	ND
Dimethyl Phthalate	UG/L	- ND	ND	ND	. ND	ND	ND	ND
2,4-Dinitrophenol	UG/L	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	UG/L	ND	ND	ND	DM	ND	ND	ND
4-Nitrophenol	UG/L	ND	ND	ND.	ND	ND	ND	ND
2,4-Dinitrotoluene	UG/L	- ND	ND	ND	ND	ND	ND	ND
Fluorene	UG/L	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	UG/L	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	UG/L	ND	ND	ND	ND	· ND	ND	ND ·
2 Methyl 4,6-Dinitrophenol	UG/L	ND	ND	. ND	ND	מא	ND	ND
N-Nitrosodiphenylamine	UG/L	ND	ND :	ND	ND	· ND	ND	ND
4-Nitroaniline	UG/L	ND	ND	ND	ND.	ND ·	. ND	ND .
4-Bromophenyl-phenylether	UG/L	ND	ND	, ND	ND	ND	. ND	ND
Hexachlorobenzene	UG/L	, MD	ND -	ND	ND	ND	ND	ND
Pentachlorophenol	UG/L	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	UG/L	. ND	ND	ND	ND	ND	ND	ND
Anthracene	UG/L	DH	ND	ND	'ND	ND	ND	ND
. Di-N-Butylphthalate	UG/L	ND.	ND	ND	ND.	ND	ND	· ND
Fluoranthene	UG/L	ND	ND	ND	ND	ND .	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043 CHEEKTOWAGA, ERIE CO. SHALLOW PERIMETER MONITORING WELLS

COMPOUND	UNITS	MW 1S	MW 3s	MW 48	HW 5s	MW 7s	MW 8S	MW 10s
•								
Pyrene	UG/L	ND	ND	ND	ŃD	ND	ND	ND
Butylbenzylphthalate	UG/L	ND	ND	DIA	ND	ND	ND	DM
Chrysene	UG/L	ND	ND	DM	ND	ND	ND	ND
Benzo (a) Anthracene	UG/L	ND	ND	, ND	. ND	ND	ND	ND
bis(2-Ethylhexyl)Phthalate.	UG/L	סא	ND	ND	ND	ND	DM	DM
Di-N-Octyl Phthalate.	UG/L	ND	ND	ND	ND	ND	ND "	ND
Benzo(a)Pyrene	UG/L	ND	ND	DM	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	UG/L	NO	ָסא	- ND	ND	ND	ND	ND
Dibenz(a,h)Anthracene	UG/L	DM	ND	ND	ND	ND	ND	ND .
Benzo(g,h,i)Perylene	UG/L	DM	ND	ND	· ND	ND	ND	ND
· 3-Nitroaniline	UG/L	ND	ND	ND.	ND	DM	ND	ND
Benzo(b/k)Fluoranthene	UG/L	ND	ND	ОМ	ND	ND	ND	ND

COMPOUND	UNITS	B-18	8-18	MW-18D	MW-180	B-19SS	B-193S
		61-81	10'-12'	0'-2'	21-41	6'-8'	10'-12'
	•		,				
Chloromethane	PPB	ND	ND	ND	ND	DИ	ND
Bromomethane	PPB	ND	ND	ND	מא	ND	סא
Vinyl chloride	PPB	ND	ND	DM	ND	ND	ND
Choroethane	. PPB	ND	DM	ND	. ND	ND	GK
Methylene chloride	PPB	ND	ND	- ND	ND	30	5
Acetone	PPB	ND	ND	ND	ND	ND	ND
Carbon disulfide	PP8	ND	NO	ND	. מא	ND	КD
1,1-Dichloroethene	PPB	. ND	ND	DN	DИ	ND	ΝĐ
1,1-Dichloroethane	PPB	ND	ND	ND	ND	HD	DM
trans-1,2-Dichloroethene	PPB	ND	ND	ND	. אס	ND	סא
Chloroform	PPB	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	PPB	. ND	ND	ND	ND	ND	סא
2-Butanone	PPB	ND	ND	ND	סא	ND	ND
1,1,1-Trichloroethane	PPB	ND	ND	ND	ND	ND	ND
Carbontetrachloride	PPB	, ND	ND	ND	מא	ND	ND
Vinyl Acetate	PPB	ND	ND	ND	ND	ND	ND
Bromodichloromethane	PPB.	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	PPB	ND	ND	DM	ND	ND	ND
1,2-Dichloropropane	PP B	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	PPB	ND	ND	ND	ND	ND	ND
Trichloroethene	PPB	ND	ND	ND	ND	ND	ND
DibromochLoromethane	PP B	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	PPB	ND	ND	ND	ND	ND	ND
Benzene	PPB	ND	ND	ND	· ND	ND	ND
cis-1,3-Dichloropropene	PP8	ND	ND	ND	ND	ND	ND
2-Chloroethylvinylether	PPB	ND	ND	ND	ND	ND	DM
Bromoform	PPB	. ND	ND	ND	ND	, ND	ND
2-Hexanone	PPB	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	PP8	ND	ND	ND	ND	ND	ND
Tetrachloroethene	PPB	ND	ND	ND	ND	ND .	ND
Toluene	PPB	ND	ND	ND	ND	ND	ND
Chlorobenzene	PPB	ND	ND	ND	ND	ND	ND
Ethylbenzene	PPB	ND	ND	ND	ND	ND	ND
Styrene	PPB	ND	ND	ND	ND	ND	ND
Total Xylenes	PPB	ND	ND	ND	, ND	ND	ND
Total Chlorotoluene	PPB	ND	ND	ND	ND	ND	ND
Total Dichlorobenzene	PPB	ND	ND	ND	ND	ND	ND
	· · -						

COMPOUND	UNITS	B-18	B-18	MW-180	MW-180	B-19SS	B-19SS
•		6'-8'	10'-12'	0'-2'	21-41	6'-8'	10'-12'
		٠					
Phenol		ND	ND	ND	ND	ND	ND
2-Chlorophenol		, ND	. ND	פא	МĎ	GK	ND
Bis (2-Chloroethyl) Ether		ND	ND	NO	ND	ND	ND
1 3-Dichlorobenzene		ND	ND	, ND	ND	ND	ND
1 4-Dichlorobenzene		ND	, ND	ND	ND	ND	ND
1 2-Dichlorobenzene		ND	ND .	ND	סא	ND	ND
Benzyl Alcohol		ND	ND	ND	ND	ND	ND
2-Methylphenol		ND	ND	ND	, ND	ND	ND
bis(2-chloroisopropyl)Ether		DK	ND	ND	ND	ND	ИD
Hexachloroethane		ND	. ND	ND	ND	ND	ND
4-Methylphenol		ND	ND	_ ND	ND	סא	МĐ
N-Nitroso-di-propylamine		ND	ND	ND	ND	סא	ND
Nitrobenzene		ND	DM	ND	ND	ND	ND
Isophorone		ND	DK	ND	ND	, ND	ND
2-Nitrophenol		ND	ND	ND	ND	ND	ND
2 4-Dimethylphenol		ND	ND	ND	ND	. ND	ND
bis(2-chloroethoxy)Methane		ND	ND	ND	ND	ND	ND
2 4-Dichlorophenol		ND	ND	ND	ND	ND	ND
1 2 4-Trichlorobenzene		ND	ND	ND	ND	ND	ND
Naphthalene		ND	ND	ND	ND	ND	ND
Benzoic acid		ND	ND	ND	ND	ND	ND
4-Chloroaniline		ND	ND	ND	ND	ND	DM
Hexachlorodutadiene		ND	ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol		ND	ND	DIA	ND	ND	ND
2-Methylnaphthalene		ND	ND	ND	ND	110	ND
Hexachlorocyclopentadiene		ND	. אם	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND
2,4,5-trich[orophenol		ND	ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	סא	ND	ND	ND .
2-Nitroaniline		ND	ND	ND	ND	ND	ND
Acenaphthylene		ND	ND	ND	ND	2100	ND
Dimethyl Phthalate		ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	· ND	ND	ND	ND
Dibenzofuran		ND	ND	- ND	ND	810	ND
4-Nitrophénol		ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		ND	ND	ND	ND	ND	. ND
Fluorene		ND	סא	ND	ND	2200	ND
4-Chlorophenyl-phenylether		ND	ND	ND	ND	ND	ND
Diethylphthalate	-	ND	- ND	NO	ND	ND ·	ND
2 Methyl 4,6-Dinitrophenol		ND.	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine		ND	ND .	ND	ND	ND .	ND
4-Nitroaniline		. ND	ND	ND	· ND	ND	ND
4-Bromopheny.l-pheny.lether		ND .	ND	ND	NĎ	ND	ND
Hexachlorobenzene		ND	ND	ND .	, ND	ND	ND
Pentachlorophenol	•	ND	ND	ND	ND .	ND .	ND
Phenanthrene		280	ND	700	ND	15000	ND
Anthracene		ND	ND	180	ND	4900	ND
Di-N-Butylphthalate		130	ND	ND.	ND	ND	130
		*				•	

COMPOUND	UNITS	B-18	B-18	MW-18D	MW-180	B-19SS	B-19SS
		61-81	10'-12'	0'-2'	21-41	6'-8'	10'-12'
Fluoranthene		390	ND	1400	280	21000	ND
Pyrene		310	DN	1100	220	16000	ND
Butylbenzylphthalate		ND	ND	ND	ND	ND	ND
Chrysene		ND	ND	620	ND .	7100	ND
Benzo (a) Anthracene	,	ND	ND	460	ND	7300	ND
bis(2-Ethylhexyl)Phthalate		ND	ND	ND	ND	790 -	ND
Di-N-Octyl Phthalate		DM	ND	ND	ND	ND	ND
Benzo(a)Pyrene		ND	ND	430	ND	5600	ND
Indeno(1,2,3-cd)Pyrene		ND	ND	450	ND	4000	ND
Dibenz(a,h)Anthracene	•	HD	ND "	ND.	ND	2000	ND
Benzo(g,h,i)Perylene	•	ND	ND	500	ND	2800	ND
3-Nitroaniline		ND	ND	ND	DM	ND	ND
Benzo(b/k)Fluoranthene		190 -	ND	ND	ND	10000	. ND

COMPOUND	UNITS	B-18 6'-8'	B-18 10'-12'	MW-18D -	MW-18D 2'-4'	B-19\$\$ 6'-8'	B-19SS 10'-12'
Aroclor-1016	UG/KG	ND	ND	ND	ND	ND	ND
Aroclor-1221	UG/KG	ND	. ND	ND	ND	ND	ND
Aroclor-1232	UG/KG	ND	ND	ND	ND	ND	ND
Arcolor-1242	UG/KĠ	ND	. ND	ND	ND	ND	ND
Aroclor-1248	. UG/KG	ND	ND	ND	ИĎ	ND	ND
Aroclor-1254	UG/KG	ND	. ND	1980	250	ND	ND
Aroclor-1260	UG/KG	ND	· ND	. ND	ND	NO	ND

COMPOUND	UNITS	B-18 6'-8'	8-1 10'	8 -12'	нw- 0'-	180 21	MW- 2'-	180 47	B-1 6'-	988 81		988 -127
Arsenic	MG/KG	5		5		9		6		6		7
`Cadmium	MG/KG	2.3	LT	6	LT	6	LT	6	LT	6	LT	6
Chromium	MG/KG	7		5		11		9		7	•	3
Copper	MG/KG	13		13		28		19		21		15
Lead	MG/KG	38		32		48		52		64		33.
Mercury	MG/KG	0.1	£1	0.1		0.1		0.1	LT	0.1	LT	0.1