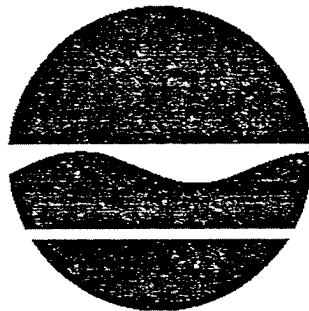


**OFF SITE REMEDIAL INVESTIGATION**

**VOLUME I**

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

**Issue Date:  
October 1993**



**Reported By:**

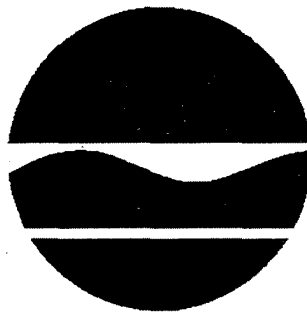
**New York State Department of Environmental Conservation  
Division of Hazardous Waste Remediation  
Bureau of Western Remedial Action**

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APPENDIX

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## 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 select 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 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:

<b>TABLE B Phase II Monitoring Well Location and Purpose</b>		
<b>WELL #</b>	<b>LOCATION</b>	<b>PURPOSE</b>
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:

<b>TABLE C - Monitoring Wells Sampled for the Off-Site RI</b>	
<b>GROUP</b>	<b>MONITORING WELL</b>
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:

<u>Location</u>	<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 closer 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.

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

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

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

<b>TABLE G - CHEMICAL ANALYSIS</b>	
<b>WELL LOCATION</b>	<b>Inorganics</b>
<b>ON-SITE</b>	lead 9-17ppb
<b>BEDROCK PERIMETER</b>	lead 7-25ppb, chromium 30-50ppb
<b>BEDROCK BACKGROUND</b>	lead 25 ppb, chromium 30 ppb
<b>BEDROCK OFF-SITE</b>	lead 9-25ppb, chromium 6-30ppb
<b>OVERBURDEN BACKGROUND</b>	lead 34, chromium 2200 ppb
<b>OVERBURDEN OFF-SITE</b>	lead 12-27ppb, chromium < 10 ppb
<b>OVERBURDEN PERIMETER</b>	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 aquifer. 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 encountered 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

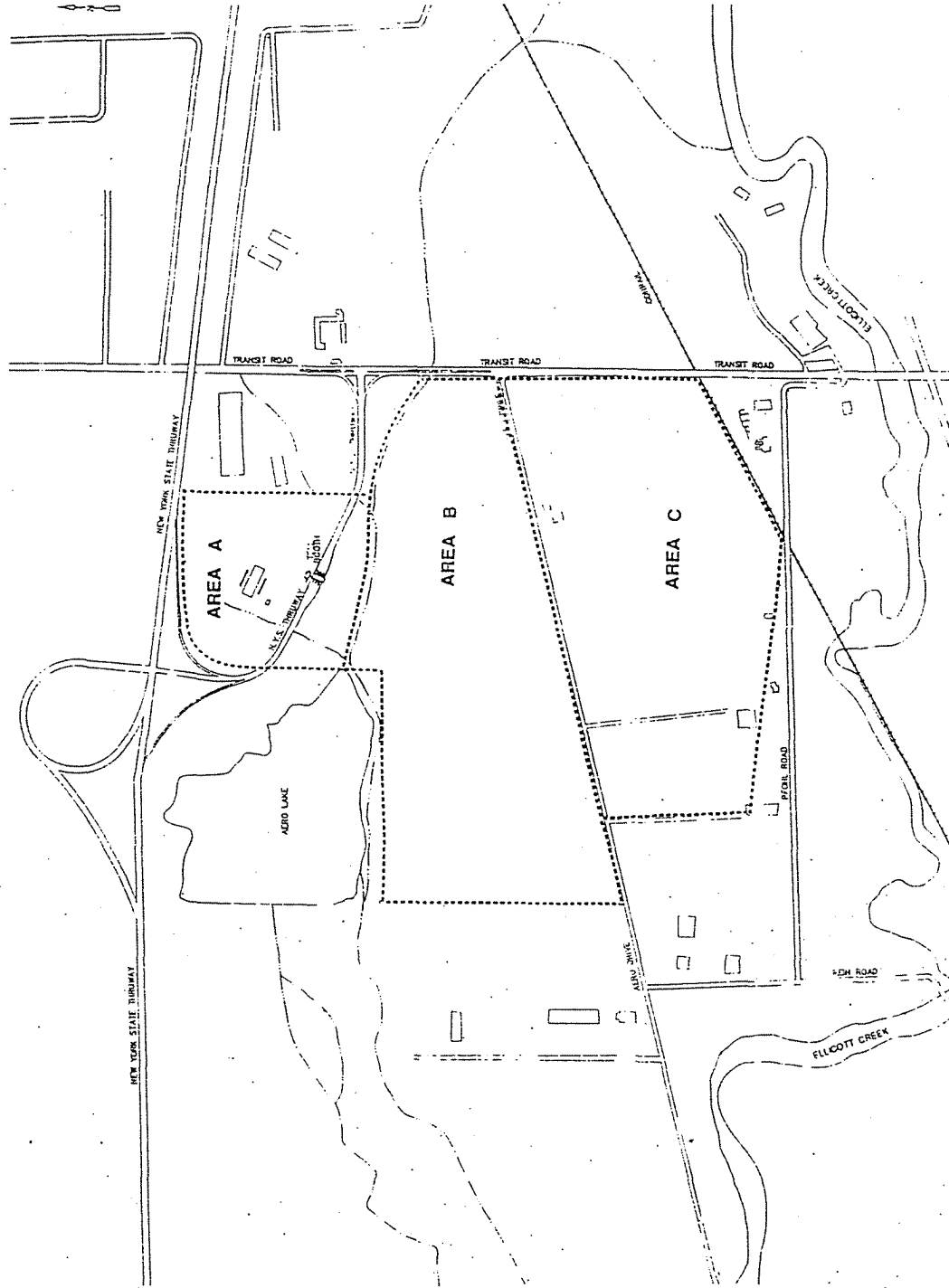


FIGURE 1

Pfohl Brothers Landfill Site  
 Pfohl Brothers Landfill, Cheektowaga, New York

**PFOHL BROTHERS LANDFILL**  
**CHEEKTOWAGA, ERIE CO., N.Y.**  
**SITE 09-18-04S**

1. Well Street Court, 15th Fl.  
 New York, New York 10022

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 environmental engineers,  
 planners, & management consultants

LEGEND:  
 - - - Area Boundary

Scale: 1" = 650'

FIGURE 2

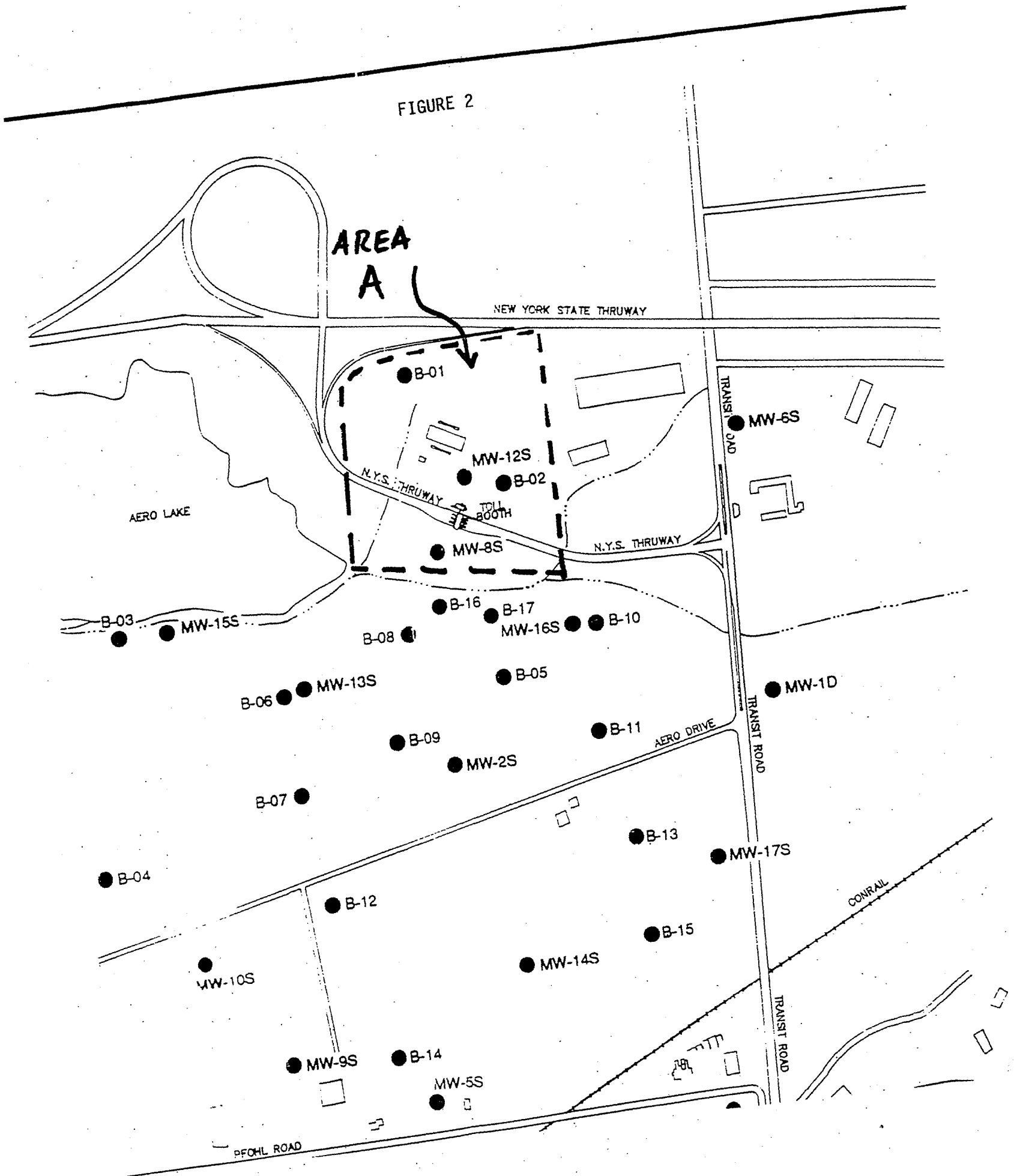


figure 3

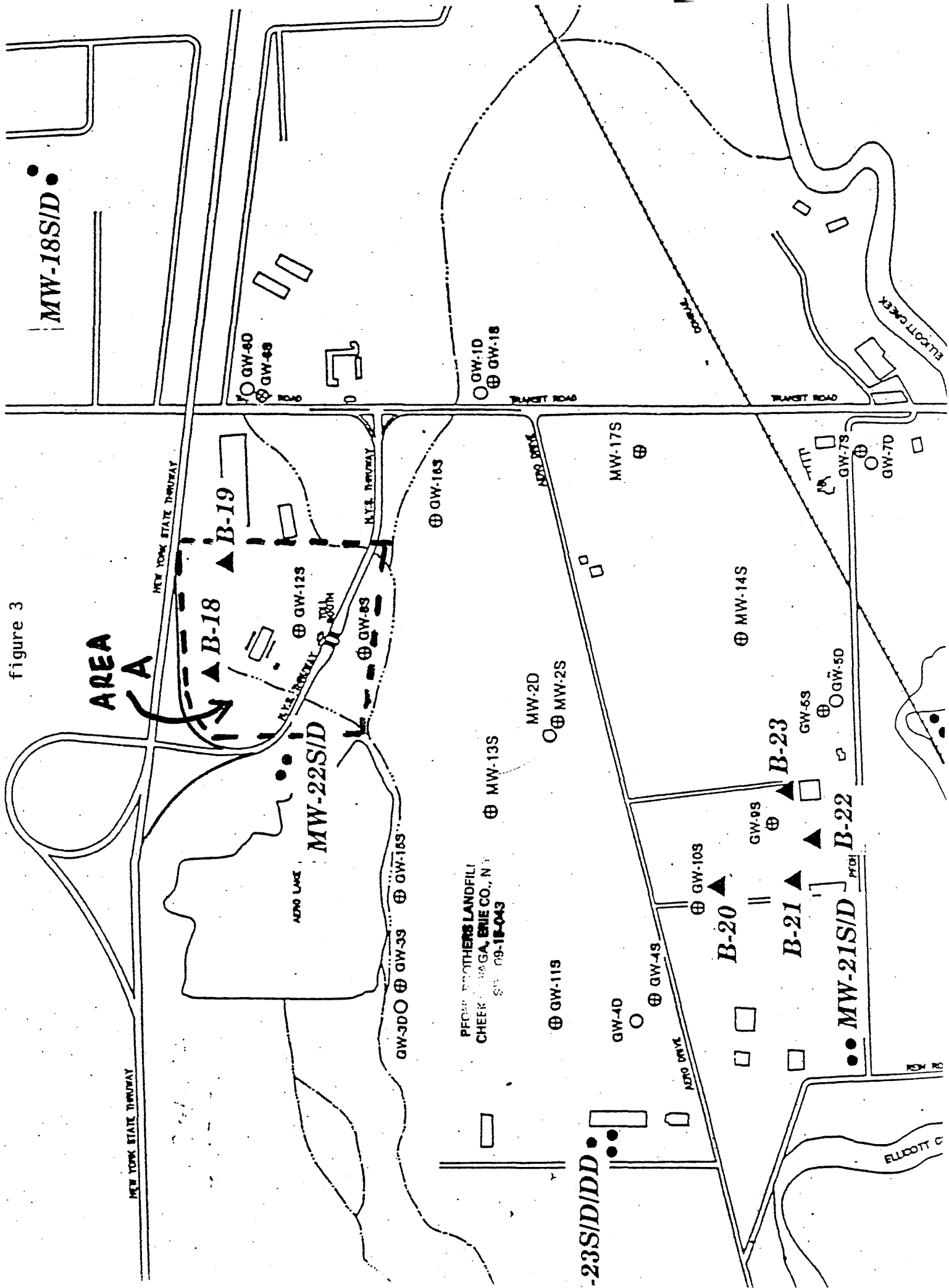




FIGURE 4

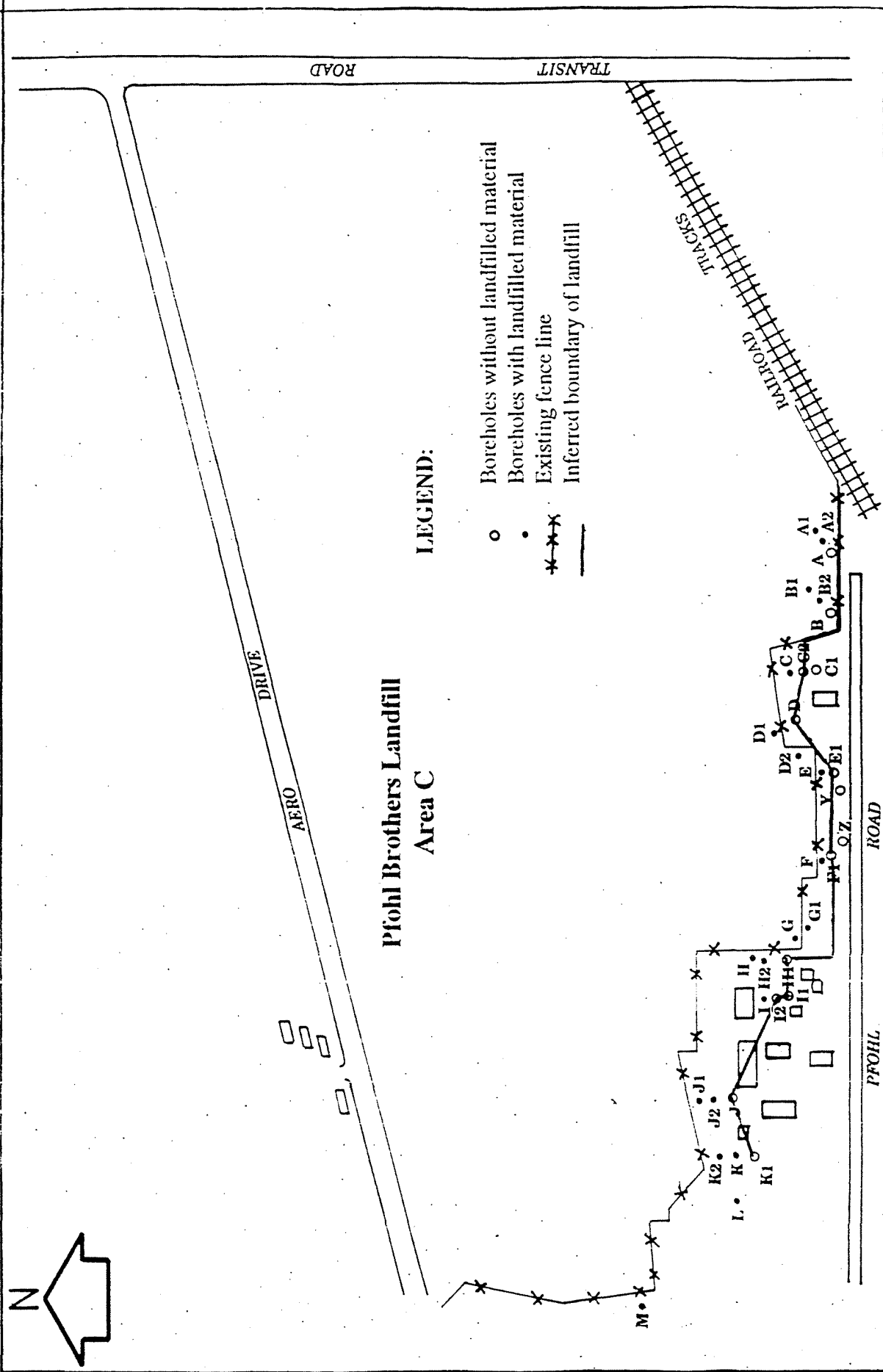


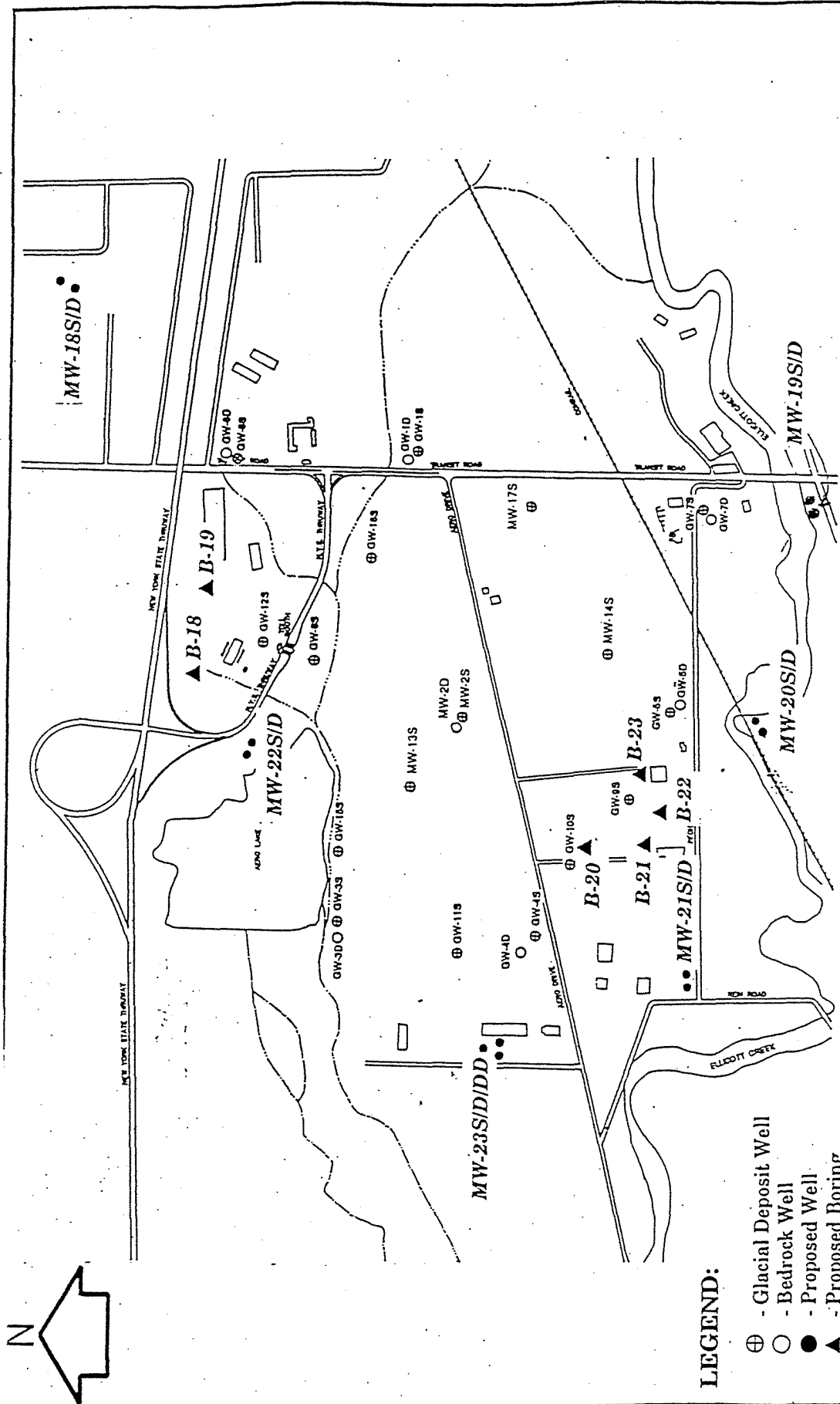
Figure 1

### Boring Location Map - Area C

Pfohl Brothers Landfill, Cheektowaga, New York



environmental engineers, scientists,  
planners & management consultants



**LEGEND:**

- ⊕ - Glacial Deposit Well
- - Bedrock Well
- - Proposed Well
- ▲ - Proposed Boring

Not To Scale

FIGURE 5

**CDM**

environmental engineers, scientists,  
planners & management consultants

Well And Boring Location Plan

Plohl Brothers Landfill, Cheektowaga, New York

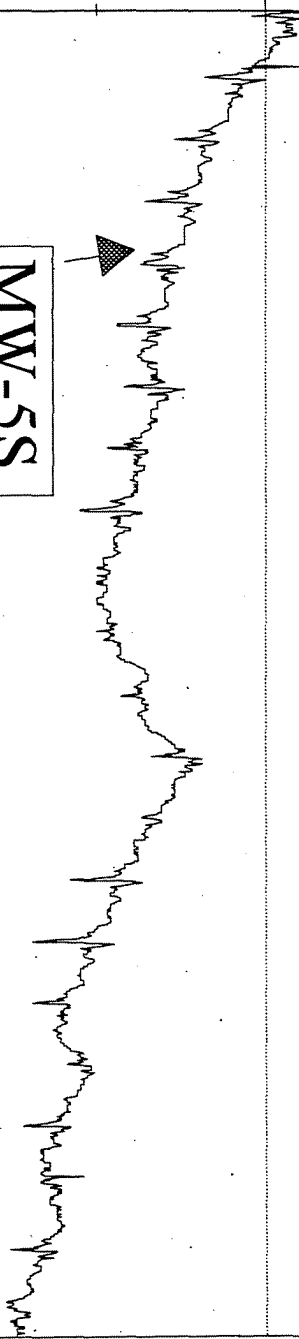
# GRAPHS

694

**GRAPH 1A**

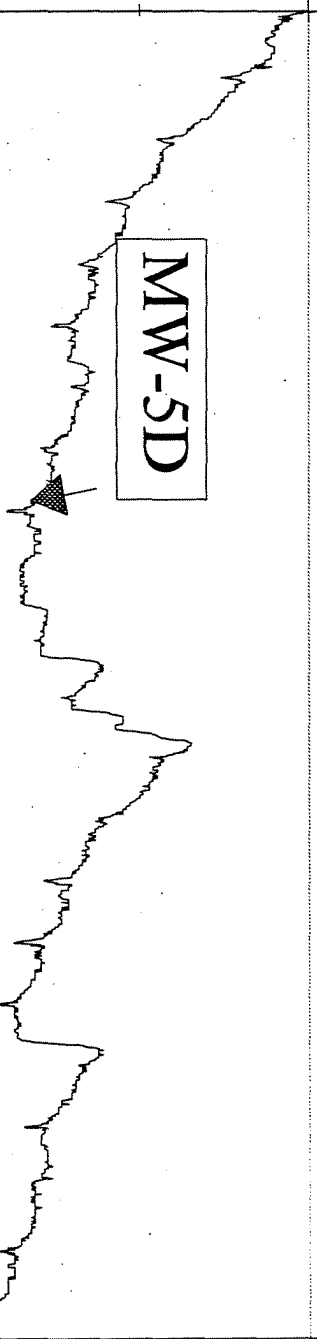
COMPARISON OF DEEP AND SHALLOW AQUIFERS AT  
MONITORING WELL CLUSTER MW-5 6/9/93 - 6/30/93

693



**MW-5S**

692



**MW-5D**

691

06/09/93"06/11/93"06/13/93"06/15/93"06/17/93"06/19/93"06/21/93"06/23/93"06/25/93"06/27/93"06/29/93"

**TIME (DAYS)**

693

**GRAPH 1B**

COMPARISON OF DEEP AND SHALLOW AQUIFERS AT  
MONITORING WELL CLUSTER MW-5 7/1/93 -7/23/93

692

MW-5S

691

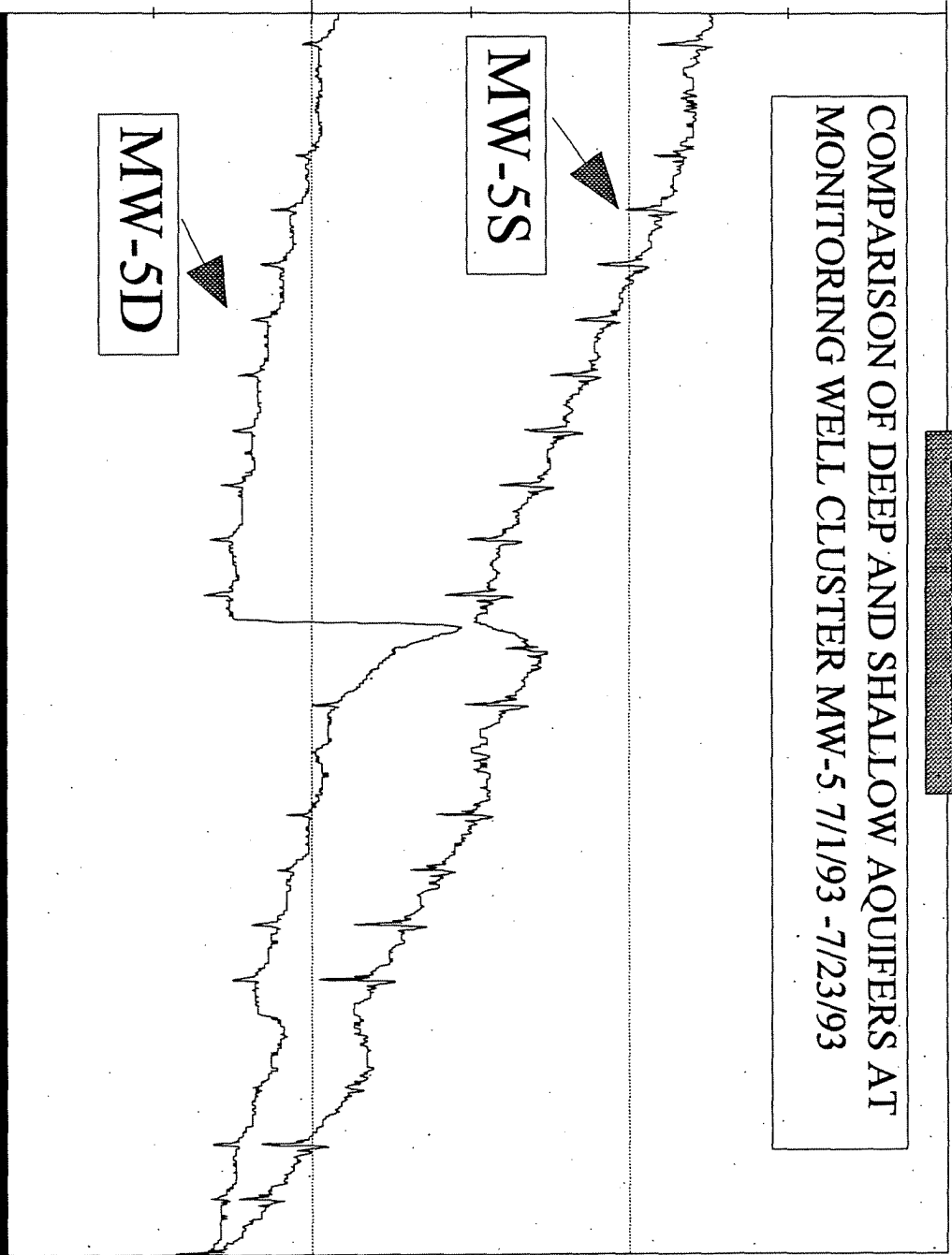
MW-5D

HEAD (FEET ABOVE MSL)

690

07/01/93 07/03/93 07/05/93 07/07/93 07/09/93 07/11/93 07/13/93 07/15/93 07/17/93 07/19/93 07/21/93 07/23/93

TIME (DAYS)



692

**GRAPHIC**

COMPARISON OF DEEP AND SHALLOW AQUIFERS AT  
MONITORING WELL CLUSTER MW-5 7/23/93 - 8/5/93

691

HEAD (FEET ABOVE MSL)

690

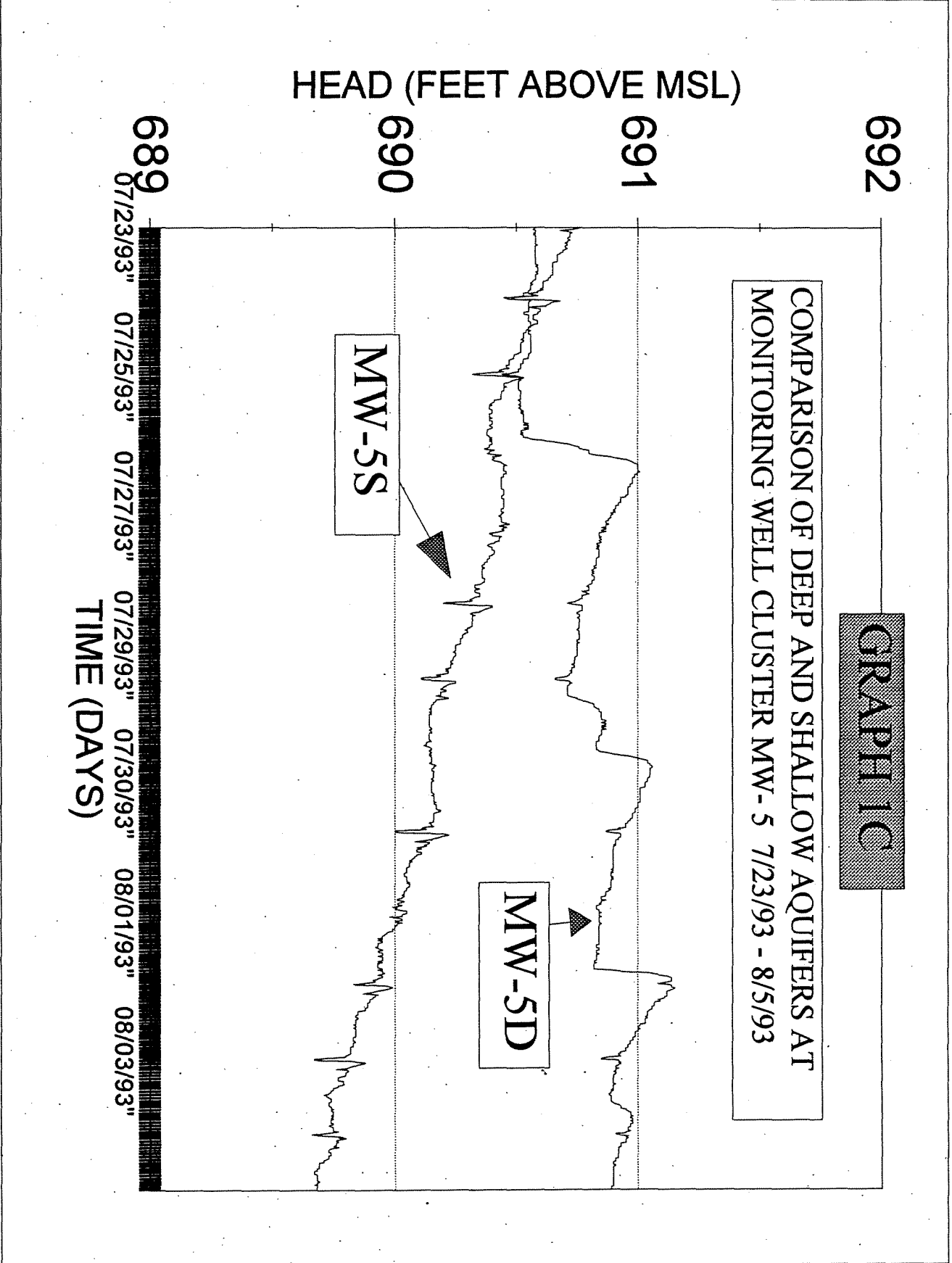
MW-5S

MW-5D

689

07/23/93" 07/25/93" 07/27/93" 07/29/93" 07/30/93" 08/01/93" 08/03/93"

TIME (DAYS)



# GRAPH 2A

MW-19D

HEAD (FEET ABOVE MSL)

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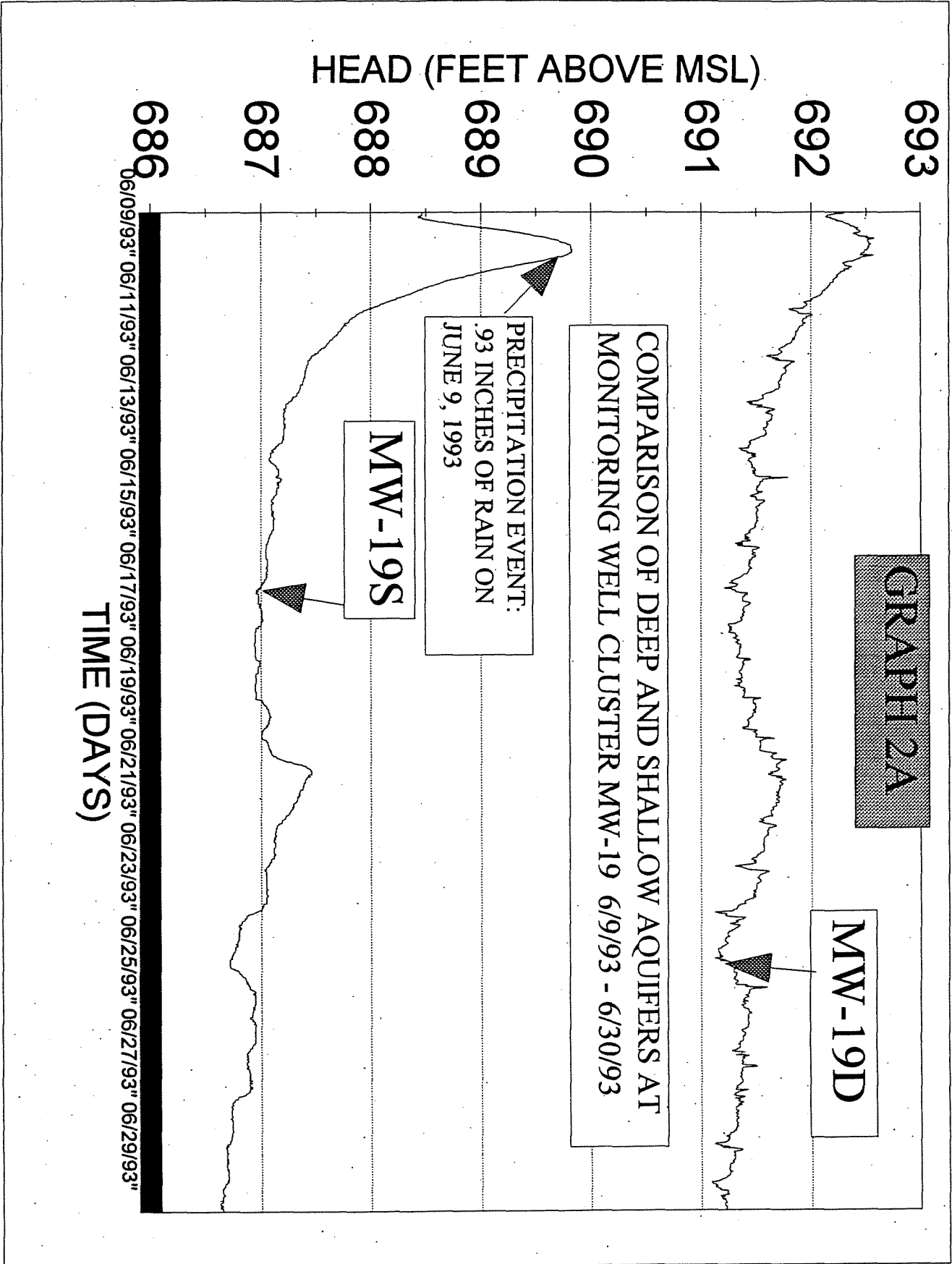
COMPARISON OF DEEP AND SHALLOW AQUIFERS AT MONITORING WELL CLUSTER MW-19 6/9/93 - 6/30/93

PRECIPITATION EVENT:  
.93 INCHES OF RAIN ON  
JUNE 9, 1993

MW-19S

06/09/93" 06/11/93" 06/13/93" 06/15/93" 06/17/93" 06/19/93" 06/21/93" 06/23/93" 06/25/93" 06/27/93" 06/29/93"

TIME (DAYS)



**GRAPH 2B**

HEAD (FEET ABOVE MSL)

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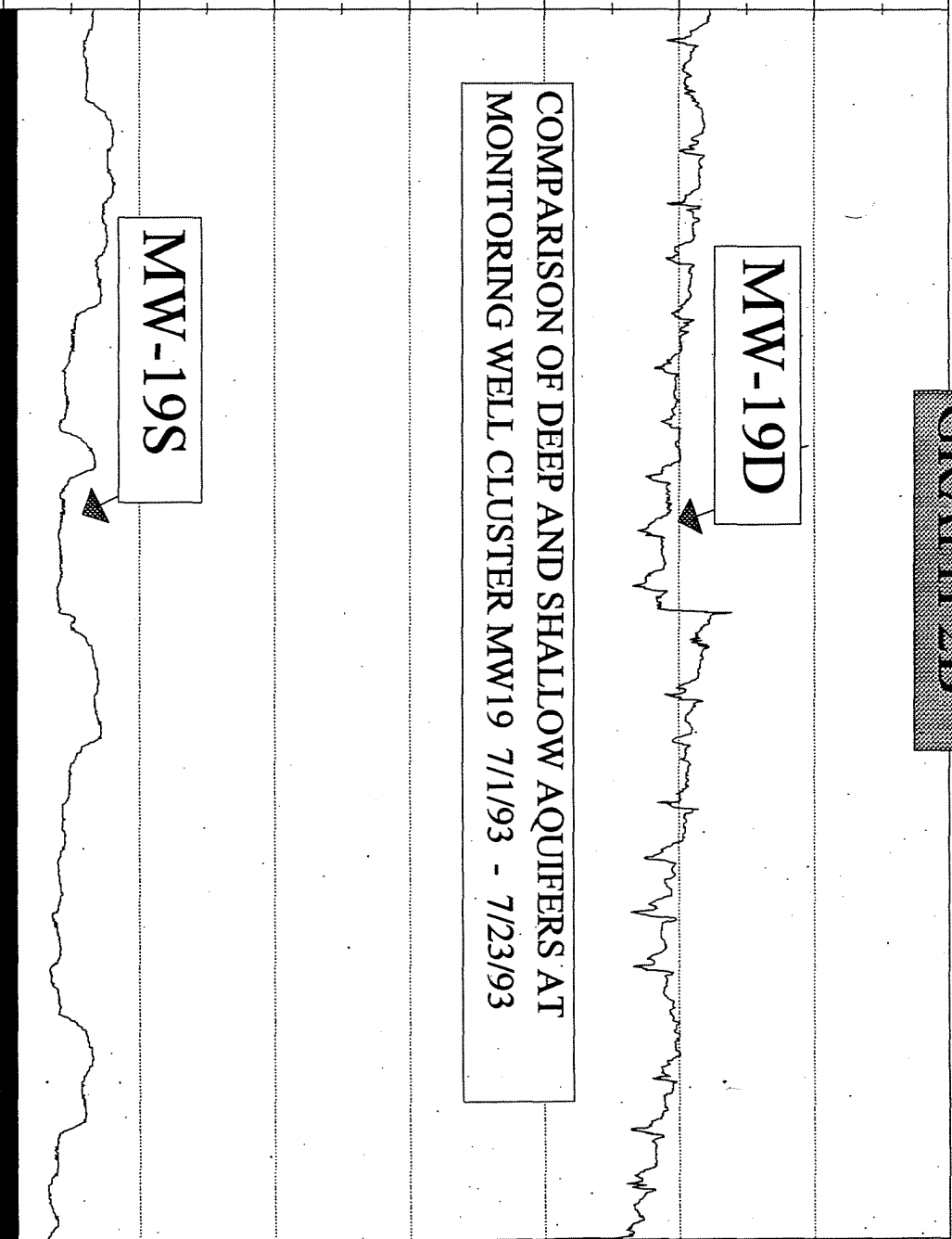
**MW-19D**

COMPARISON OF DEEP AND SHALLOW AQUIFERS AT  
MONITORING WELL CLUSTER MW19 7/1/93 - 7/23/93

**MW-19S**

07/01/93 07/03/93 07/05/93 07/07/93 07/09/93 07/11/93 07/13/93 07/15/93 07/17/93 07/19/93 07/21/93 07/23/93

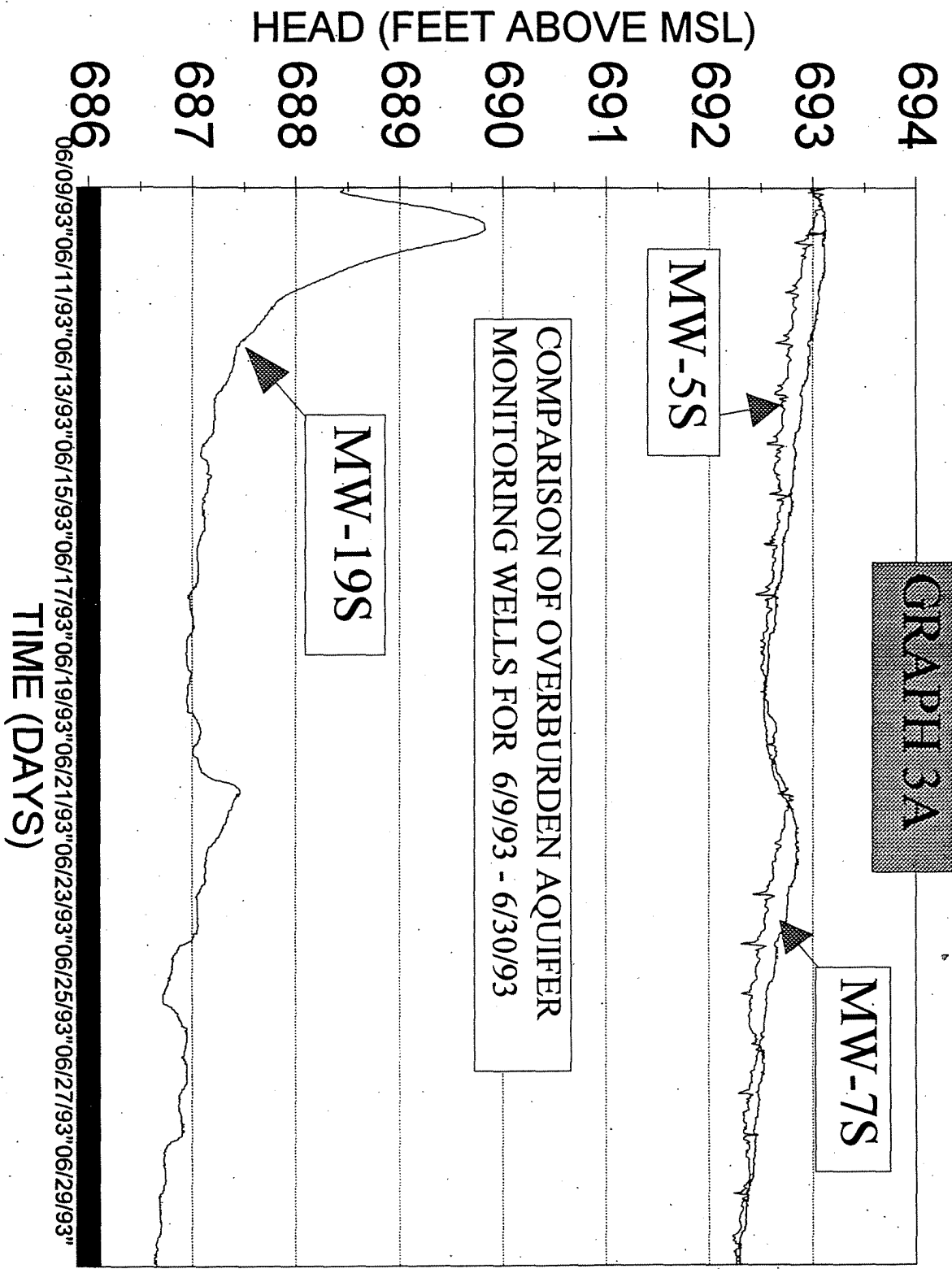
**TIME (DAYS)**





GRAPH 3A

COMPARISON OF OVERBURDEN AQUIFER  
MONITORING WELLS FOR 6/9/93 - 6/30/93



GRAPH 3B

HEAD (FEET ABOVE MSL)

692

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686

COMPARISON OF OVERBURDEN AQUIFER MONITORING  
WELLS FOR 7/1/93 - 7/23/93

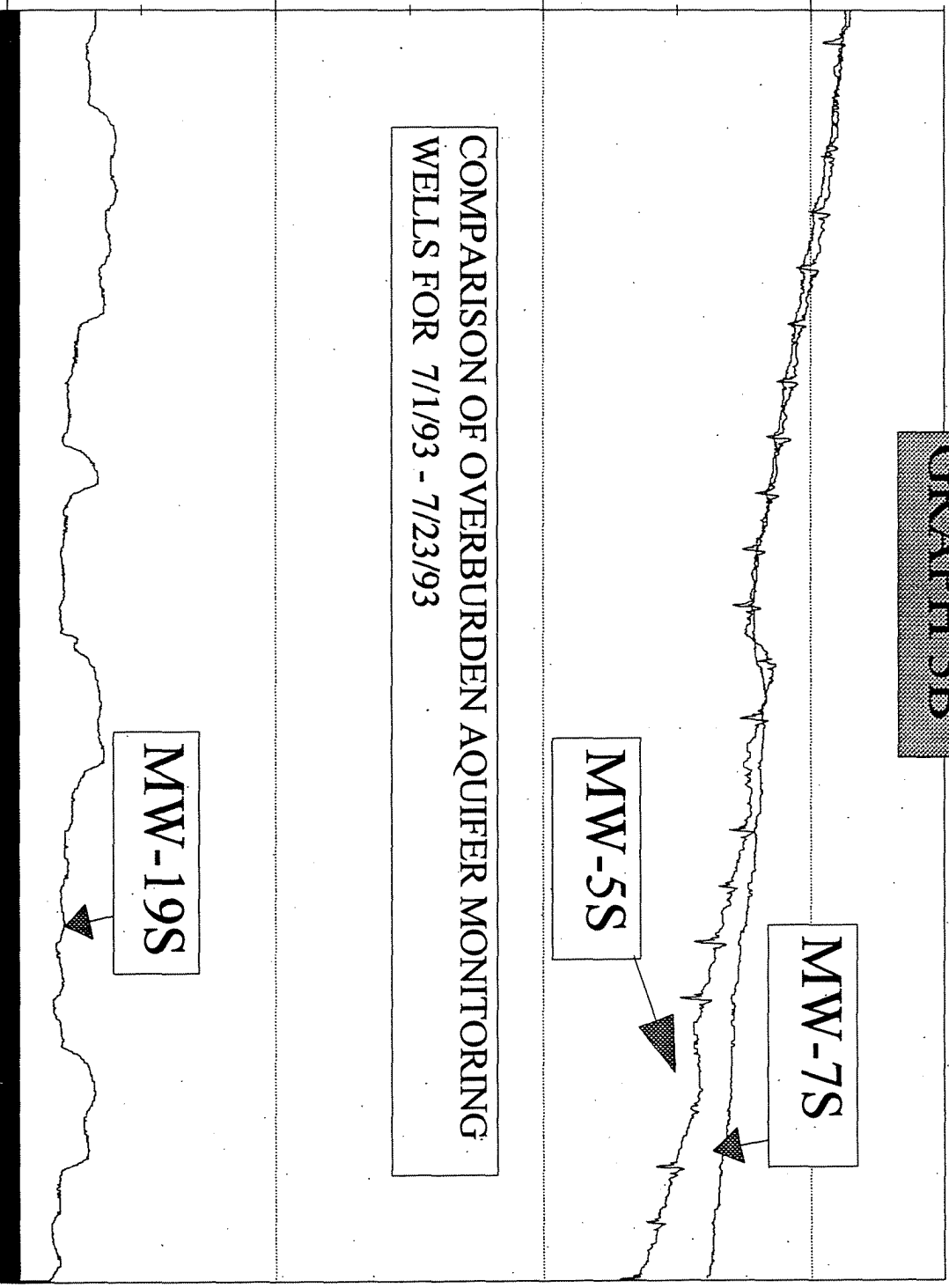
MW-7S

MW-5S

MW-19S

07/01/93" 07/03/93" 07/05/93" 07/07/93" 07/09/93" 07/11/93" 07/13/93" 07/15/93" 07/17/93" 07/19/93" 07/21/93" 07/23/93"

TIME (DAYS)



693

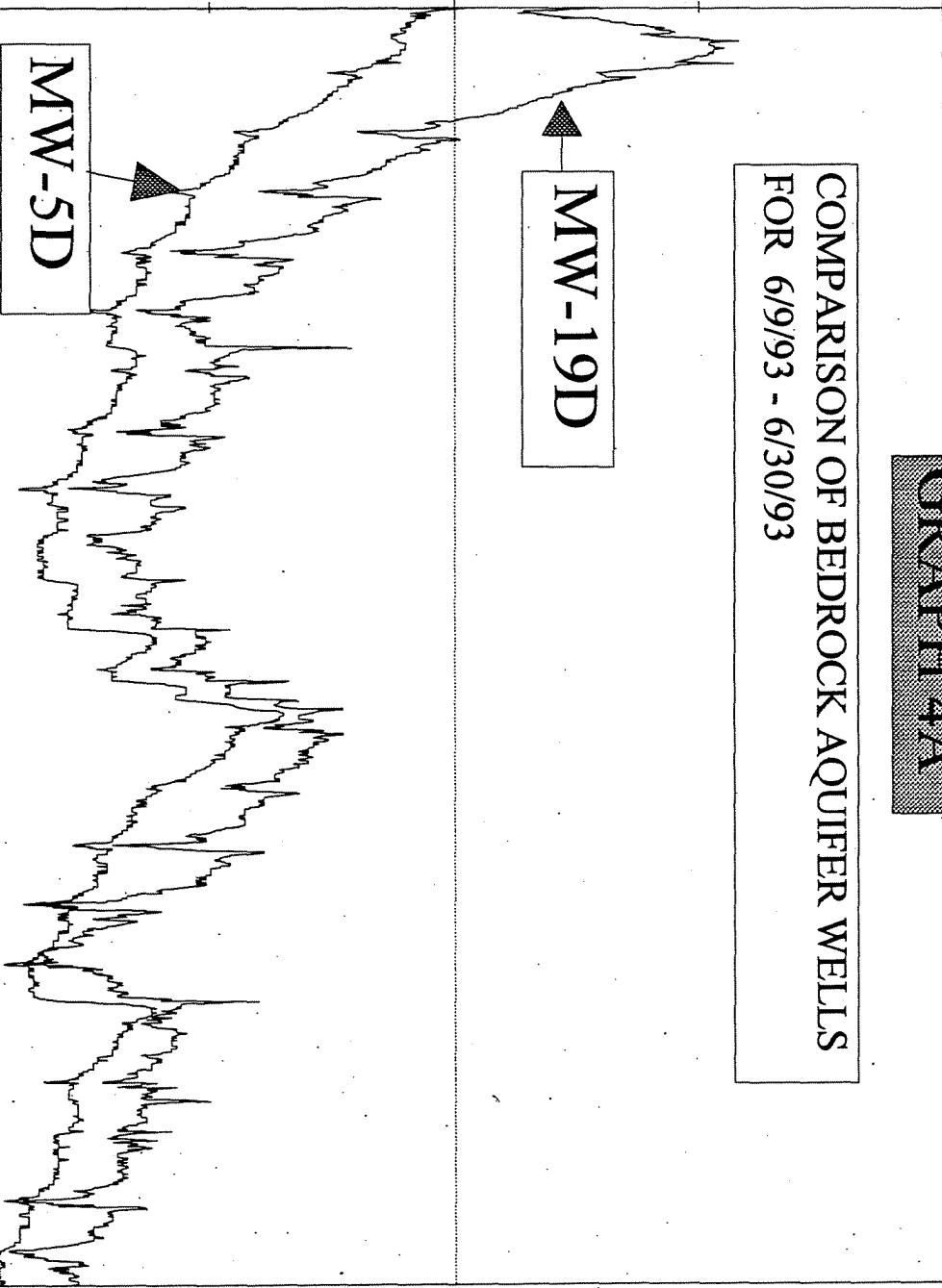
**GRAPH 4A**

COMPARISON OF BEDROCK AQUIFER WELLS  
FOR 6/9/93 - 6/30/93

692

MW-19D

HEAD (FEET ABOVE MSL)



691

06/09/93"06/11/93"06/13/93"06/15/93"06/17/93"06/19/93"06/21/93"06/23/93"06/25/93"06/27/93"06/29/93"

TIME (DAYS)

692

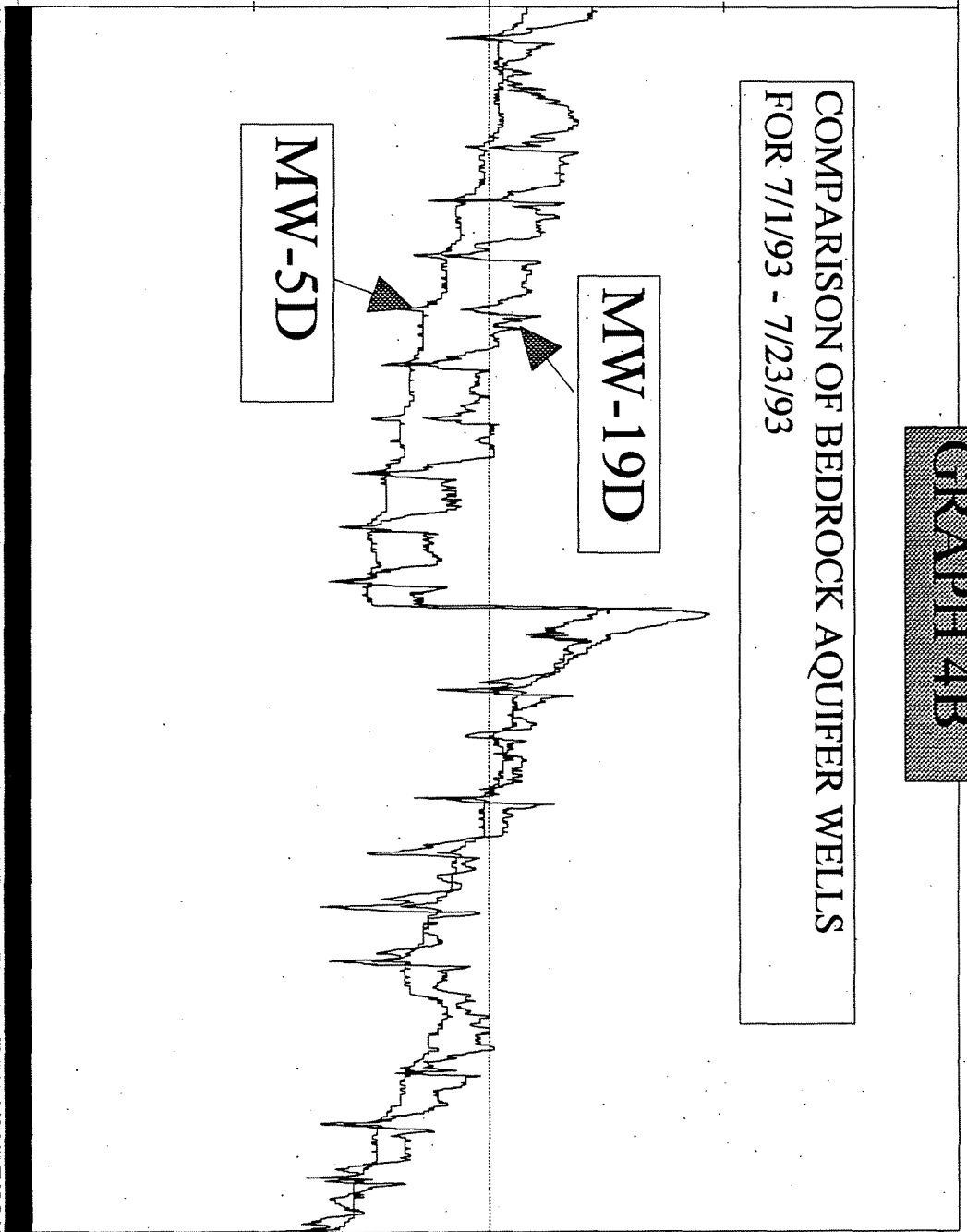
GRAPH 4B

COMPARISON OF BEDROCK AQUIFER WELLS  
FOR 7/1/93 - 7/23/93

HEAD (FEET ABOVE MSL)

691

690



MW-5D

MW-19D

07/01/93 07/03/93 07/05/93 07/07/93 07/09/93 07/11/93 07/13/93 07/15/93 07/17/93 07/19/93 07/21/93 07/23/93

TIME (DAYS)

679

**GRAPH 4C**

MONITORING WELL MW-7D 6/9/93 - 7/23/93

678

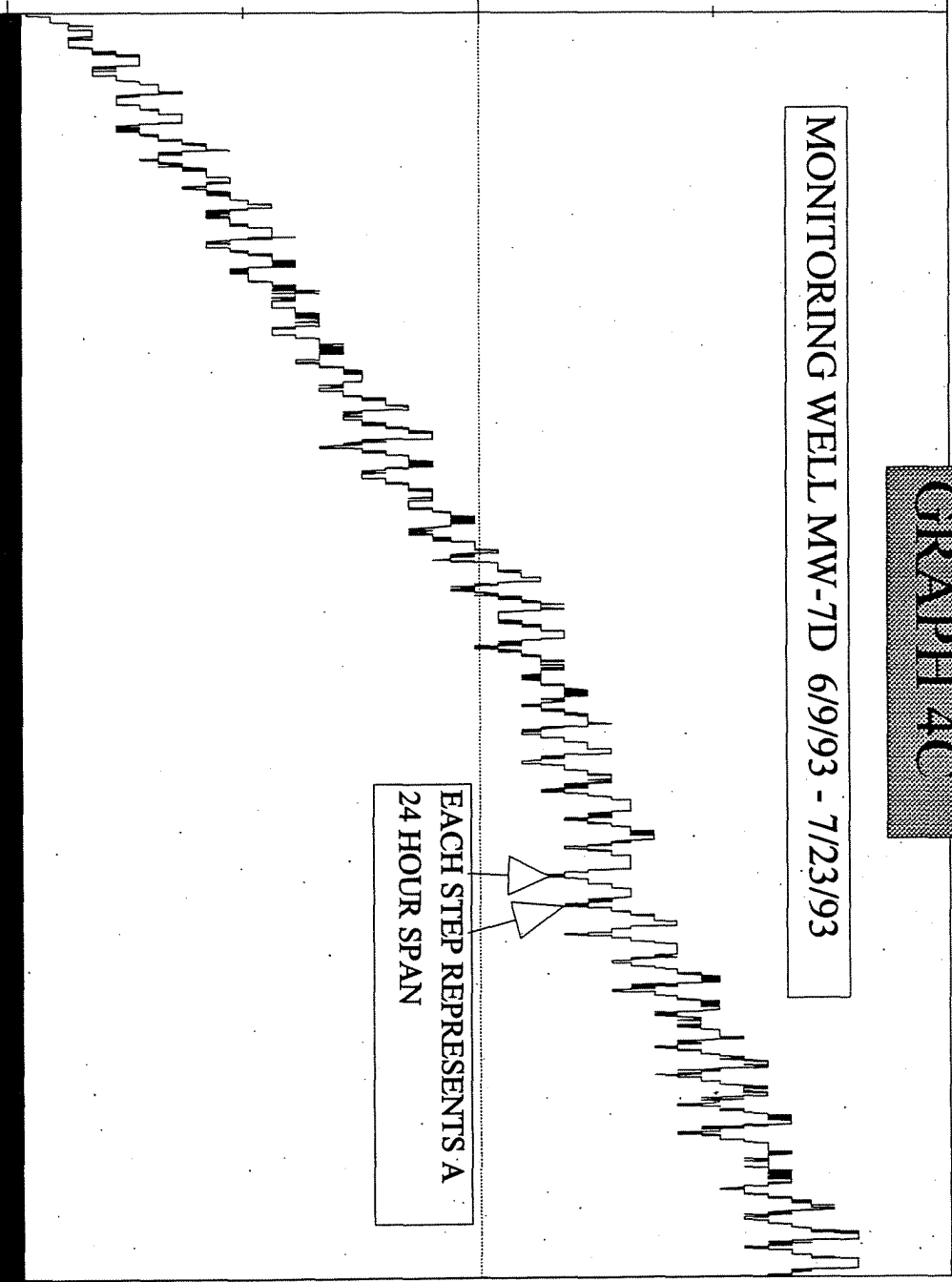
EACH STEP REPRESENTS A  
24 HOUR SPAN

HEAD (FEET ABOVE MSL)

677

06/09/93 06/13/93 06/17/93 06/21/93 06/25/93 06/29/93 07/03/93 07/07/93 07/11/93 07/15/93 07/19/93  
06/11/93 06/15/93 06/19/93 06/23/93 06/27/93 07/01/93 07/05/93 07/09/93 07/13/93 07/17/93 07/21/93

TIME (DAYS)



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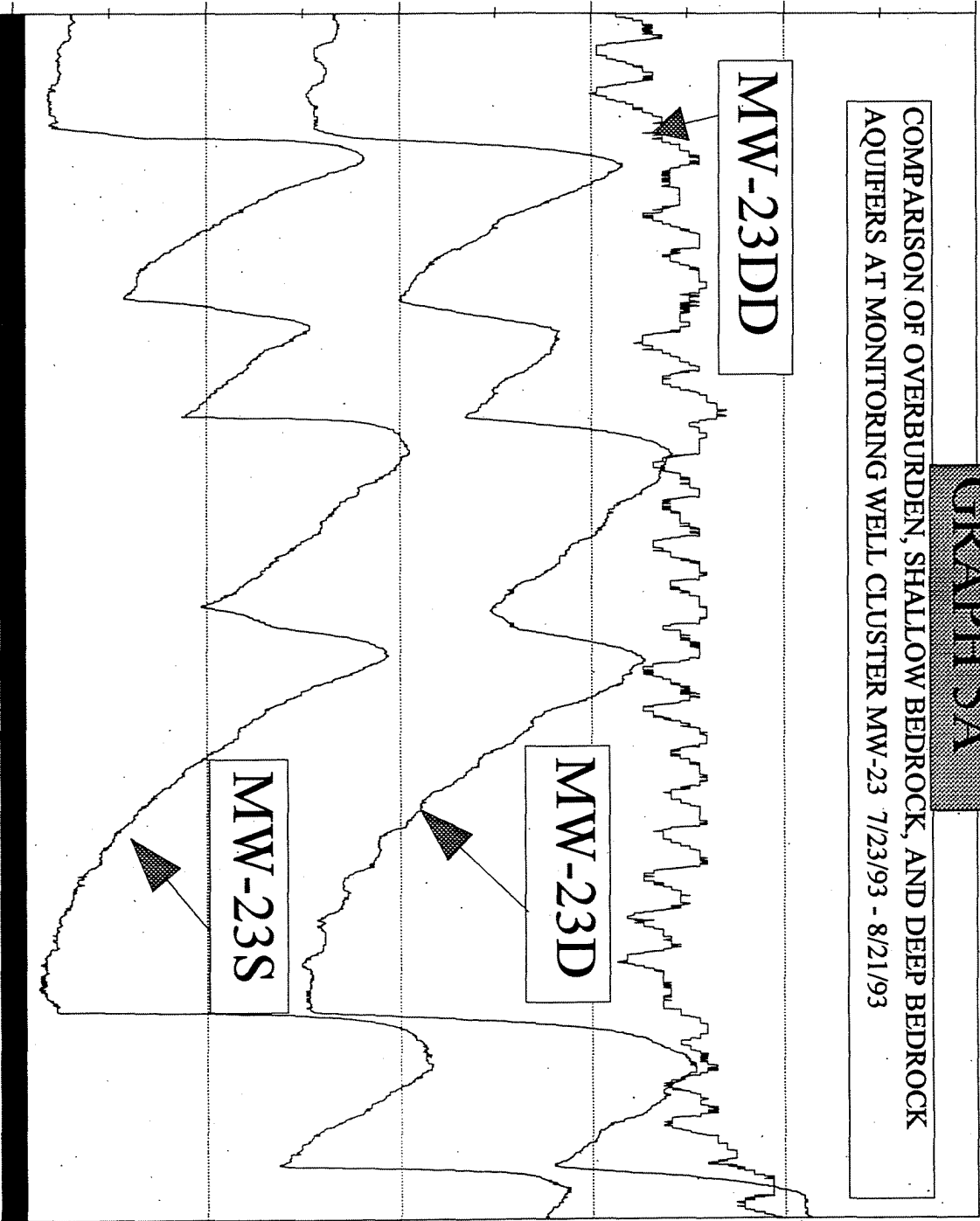
# GRAPH 5A

COMPARISON OF OVERBURDEN, SHALLOW BEDROCK, AND DEEP BEDROCK  
AQUIFERS AT MONITORING WELL CLUSTER MW-23 7/23/93 - 8/21/93

MW-23DD

MW-23D

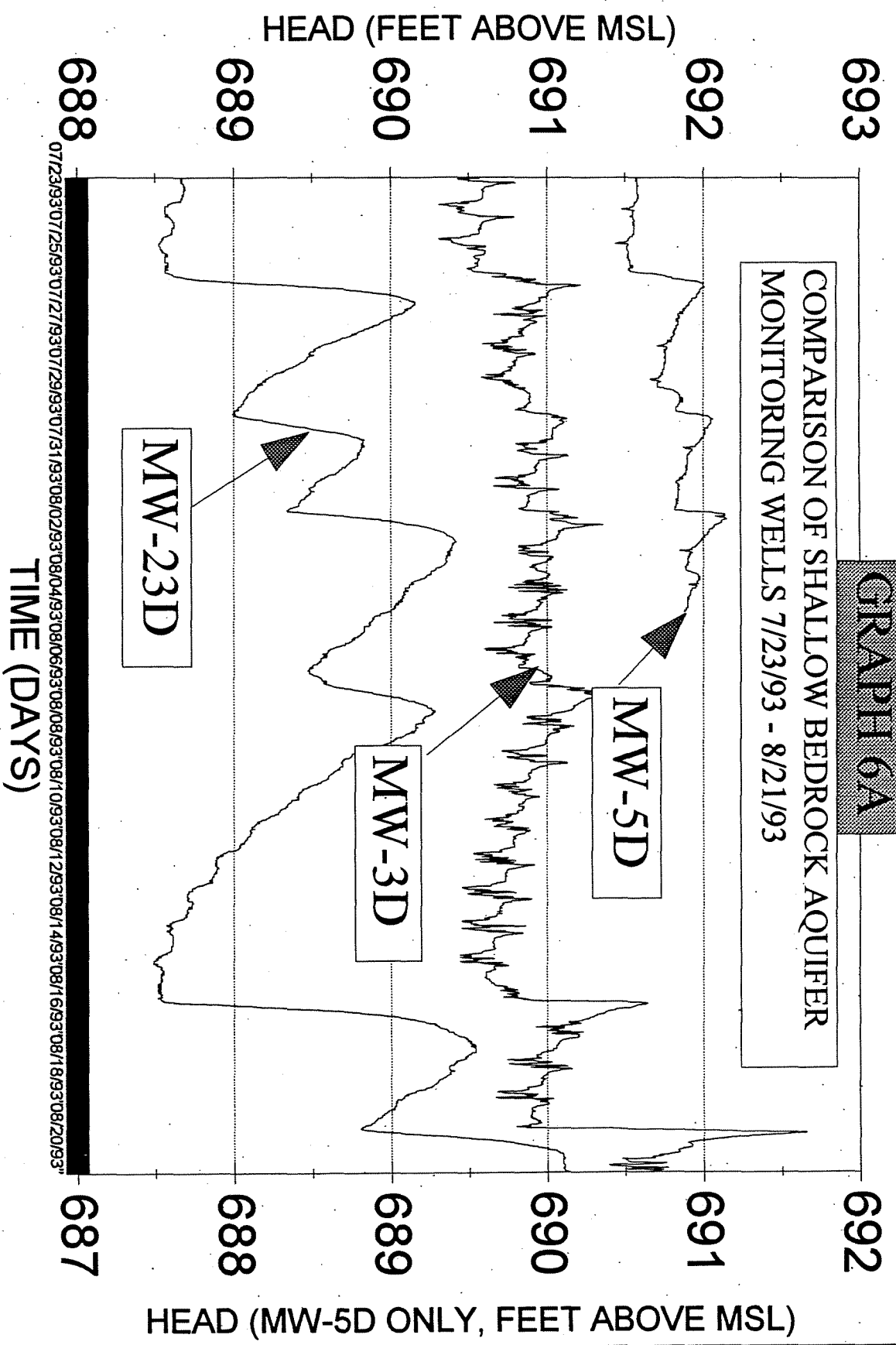
MW-23S



TIME (DAYS)

**GRAPH 6A**

COMPARISON OF SHALLOW BEDROCK AQUIFER  
MONITORING WELLS 7/23/93 - 8/21/93



07/23/93 07/25/93 07/27/93 07/29/93 07/31/93 08/02/93 08/04/93 08/06/93 08/08/93 08/10/93 08/12/93 08/14/93 08/16/93 08/18/93 08/20/93

TIME (DAYS)

691

**GRAPH 7A**

COMPARISON OF OVERBURDEN AQUIFER  
MONITORING WELLS 7/23/93 - 8/21/93

690

MW-5S



689

MW-23S



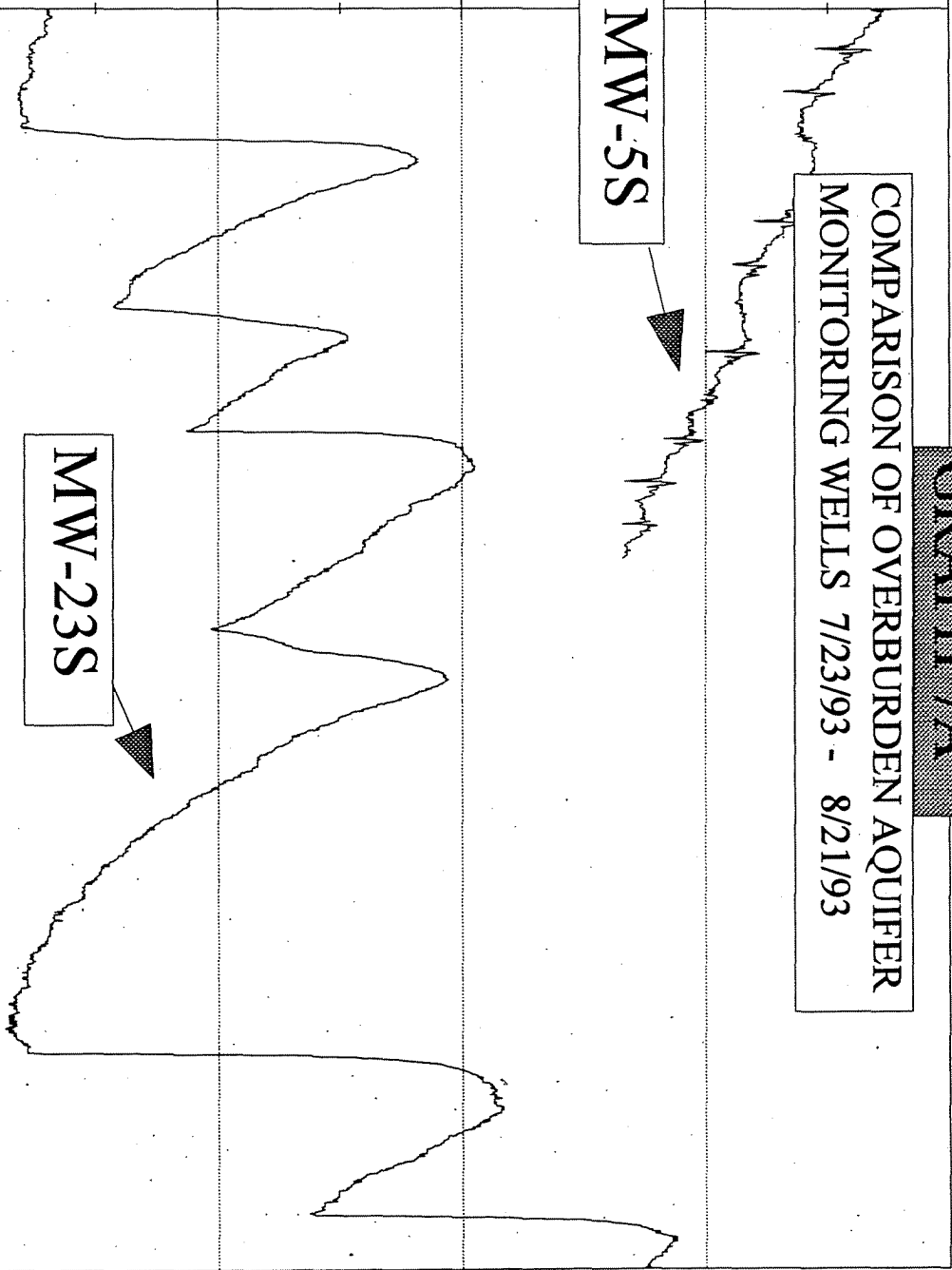
688

687

HEAD (FEET ABOVE MSL)

07/23/93 07/25/93 07/27/93 07/29/93 07/31/93 08/02/93 08/04/93 08/06/93 08/08/93 08/10/93 08/12/93 08/14/93 08/16/93 08/18/93 08/20/93

TIME (DAYS)





## APPENDIX A

# CDM

environmental engineers, scientists,  
planners & management consultants

BORING NUMBER: B1

Page 1 of 2

## Log of Boring

Project Fohl B.O.S. Location N/S Area Job. No. 897-12-RC-WEU  
 Date Drilled 7/21/89 Drilling Co. Rockester Drilling Company  
 Total Depth 13'6" Method Used 6 1/4" Auger  
 Inspector C. Wenczel Organic Vapor Instruments Used HNu Water Table Depth ± 8'0"

Depth (feet)	Samp No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
	1	9	0'0" to 2'0"	24"/12"	Bkd	12" Organic soil horizon; gravel and sand.		0800
	1	10	"	"	"			
	1	15	"	"	"			
	1	24	"	"	"			
2	2	18	2'0" to 4'0"	24"/12"	Bkd	12" Organic soil, gravel and sand.		
	2	19	"	"	"			
3	2	13	"	"	"			
	2	10	"	"	"			
4	3	32	4'0" to 6'0"	24"/4"	"	4" Fill, concrete		
	3	19	"	"	"			
5	3	28	"	"	"			
	3	73	"	"	"			
6	4	18	6'0" to 8'0"	24"/6"	"	SAND, medium; little fine; little very fine; trace silt; black and orange		Native soil
	4	47	"	"	"			

NY-1

Log of Boring

Project Phal Bros Location N/s Area A Job. No 89T-12-RC-WELL  
 Date Drilled 7/21/89 Drilling Co. Rochester Drilling Company  
 Total Depth 13' 6" Method Used 6 1/4" Auger  
 Inspector C. Wenczel Organic Vapor Instruments Used HMu Water Table Depth 8' 0"

Depth (feet)	Samp No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
	4	59	6' 0" to 8' 0"	24" / 6"	Bkd			
	4	89	"	"	"			
8	5	7	8' 0" to 10' 0"	24" / 24"	"	↑ 24" SILT, brown to pink	8	
	5	9	"	"	"			
9	5	12	"	"	"		9	
	5	13	"	"	"			
10	6	10	10' 0" to 12' 0"	24" / 24"	"	↑ 24" Till, clay and silt 1" gravel	10	
	6	13	"	"	"			
"	6	12	"	"	"		"	
	6	10	"	"	"			
12	7	18	12' 0" to 14' 0"	18" / 18"	"	↑ 24" Till, clay and silt, 1" gravel	12	
	7	23	"	"	"			
13	7	27	"	"	"		13	
	7		"	"	"	Rock at 13' 6"		0915
14							14	

NY-1

Log of Boring

Project Pfehl Bros. Location S/S Area A Job. No. 897-12-RC-WELL  
 Date Drilled 7/20/89 Drilling Co. Rochester Drilling Company  
 Total Depth 13' 2" Method Used 6 1/4" Auger  
 Inspector C. Wenczel Organic Vapor Instruments Used HNu Water Table Depth ± 8' 0"

Depth (feet)	Samp No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
1	1	4	0' 0" to 2' 0"	27" / 16"	BKD	16" Fill, 3" organic soil rocks, brick, clay, sand. dry		1615
1	1	15	"	"	"			
1	1	35	"	"	"			
1	1	40	"	"	"			
2	2	6	2' 0" to 4' 0"	24" / 12"	"	12" Fill, rocks, brick, clay, sand dry.		
2	2	29	"	"	"			
3	2	11	"	"	"			
3	2	8	"	"	"			
4	3	6	4' 0" to 6' 0"	27" / 12"	"	12" Fill, rocks, brick, clay, sand, dry		
4	3	2	"	"	"			
5	3	1	"	"	"			
5	3	5	"	"	"			
6	4	4	6' 0" to 8' 0"	24" / 19"	"	19" Interlayered SILTS and CLAY @ 1/8" to 1/4"		
6	4	6	"	"	"			

NY-1

# CDM

Environmental engineers, scientists,  
planners & management consultants

BORING NUMBER: B2

Page 2 of 2

## Log of Boring

Project Fish Bros. Location S/S Area A Job. No. 9917-12-RC-WBU  
 Date Drilled 7/20/89 Drilling Co. Rochester Drilling Company  
 Total Depth 13'2" Method Used 6 1/4" Auger  
 Inspector C. Wenzel Organic Vapor Instruments Used HMu Water Table Depth 8'0"

Depth (feet)	Samp No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
	4	8	6'0" to 8'0"	24" / 19"	"			
	4	10	"	"	"			
8	5	8	8'0" to 10'0"	24" / 24"	"	24" Interlayered clay and silts, 1/8" to 1/4" layers		
	5	10	"	"	"			
9	5	12	"	"	"			
	5	8	"	"	"			
10	6	10	10'0" to 12'0"	24" / 24"	"	24" Till, pink some 1" rocks, very tight		
	6	22	"	"	"			
11	6	38	"	"	"			
	6	13	"	"	"			
12	7	10	12'0" to 14'0"	12" / 12"	"	12" Till, pink some 1" rocks, very tight.		
	7	18	"	"	"			
13	7	R	"	"	"	Rock at 13'2"		
	7		"					

# CDM

environmental engineers, scientists,  
planners & management consultants

BORING NUMBER: 125

Page 1 of 3

Log of Boring

Project Pfahl Bros. Location Area A Job. No. 817-12-RC-WELL  
 Date Drilled 7/6/89 Drilling Co. Rochester Drilling Company  
 Total Depth 15' 3" Method Used 6 1/4" Auger  
 Inspector C. Wenzel Organic Vapor Instruments Used HMu Water Table Depth ± 8' 0"

Depth (feet)	Samp No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap - PPM	Sample Description	Strata Change	Remarks (Time of Day)
	1	23	0' 0" to 2' 0"	24" / 18"	Bkd	18" Gravel; typical crushed run for driveway.		
1	1	29	"	"	"			
	1	31	"	"	"			
	1	30	"	"	"			
2	2	18	2' 0" to 4' 0"	24" / 20"	"	20" Gravel; typical crushed run for driveway 1" gravel, some medium sand; some silt.		
	2	21	"	"	"			
3	2	38	"	"	"			
	2	51	"	"	"			
4	3	11	4' 0" to 6' 0"	24" / 18"	"	16" Gravel; typical crushed run for driveway.		
	3	7	"	"	"	8" SAND; very fine; some silt; little medium sand; trace 1/4" rounded gravel		- native soil.
5	3	4	"	"	"			
	3	4	"	"	"			
6	4	30	6' 0" to 8' 0"	24" / 5"	"	5" Stone no sand stuck in the drive shoe.		1000 83°F
	4	43	"	"	"			

NY-1

# CDM

environmental engineers, scientists,  
planners & management consultants

BORING NUMBER: 125

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## Log of Boring

Project Pfani Bros. Location Area A Job. No 847-12-RC-WELL  
 Date Drilled 7/6/89 Drilling Co. Rochester Drilling Company  
 Total Depth 15' 3" Method Used 6 1/4" Auger  
 Inspector C. Wenzel Organic Vapor Instruments Used HNu Water Table Depth ± 8' 0"

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
	4	4	6' 0" to 8' 0"	24" / 5"	Bkd			
	4	6	"	"	"			
8	5	1	8' 0" to 10' 0"	24" / 16"	"	3' SAND, fine; some silt; trace 1/8" gravel; brown to black.		
	5	1	"	"	"	3" organic swamp deposit some silt; black		
9	5	4	"	"	"	5" SILT, trace very fine sand; grey to black		
	5	10	"	"	"	5" CLAY, pink to brown; little very fine sand;		
10	6	8	10' 0" to 12' 0"	24" / 24"	"	6" SAND, very fine; some silt; black, organic.	10	
	6	9	"	"	"	18" SILT, red to orange some streaks of grey damp		
11	6	10	"	"	"			
	6	14	"	"	"			
12	7	6	12' 0" to 14' 0"	24" / 24"	"	6" SAND, very fine; some silt.	12	
	7	12	"	"	"	18" SILT, orange to pink to red; some grey laminations. Trace		
13	7	19	"	"	"		13	
	7	25	"	"	"			
14							14	

NY-1







Log of Boring

Project PPCHL BRCS. LANDFILL Location BUFFALO, NY Job. No. 897-14-RI-SOL  
 Date Drilled OCT. 6, 1992 Drilling Co. BURLINGTON ENVIRONMENTAL  
 Total Depth 12 FT. Method Used 4 1/4" HOLLOW STEM AUGERS  
 Inspector M. EHNOT Organic Vapor Instruments Used HNU Water Table Depth 6.8'-7.0'

Depth (feet)	Samp. No.	Blows per 6" lbs.	Sample Interval	Adv./Recov.	Org. Vap. - PPM	Sample Description	Strata Change	Remarks (Time of Day)
0								
0-2		0/2	0-2'	1.0'/2.0'	0	DARK BROWN CLAYEY SILT, TRACE BOULDERS, TRACE ORGANIC MATTER. DRY.		
		7/8						
2								
2-4		8/13	2-4'	0.8'/2.0'	0.1	DARK BROWN CLAYEY SILT, SOME ROCK FRAGS, COBBLE TO BOULDER SIZED, TRACE GRAVEL, TRACE ORGANIC MATTER. DRY.		
		10/7						
4								
4-6		1/3	4-6'	1.1'/2.0'	0	DARK BROWN F-M SAND/ F-M GRAVEL, TRACE SILTY CLAY. VERY MOIST.		TRACE BLACK COLORATION
		5/8						
6								
6-8		2/3	6-8'	1.2'/2.0'	0.2	(6-6.8) NO RECOVERY (6.8-7.0) AS ABOVE. SATURATED (7.0-8.0) LIGHT BROWN CLAYEY SILT, STIFF. DRY.		LAB SAMPLE COLLECTED FROM 6.8'-7.0' & 4'-6'
		5/7						
8								
8-10		3/5	8-10'	2.0'/2.0'	0	LIGHT BROWN CLAYEY SILT, STIFF. DRY.		
		7/10						
10								
10-12		5/7	10-12'	1.8'/2.0'	0	LIGHT BROWN CLAYEY SILT, STIFF, LITTLE FC GRAVEL @ (11'-12'). DRY		LAB SAMPLE 10'-12'
		5/50(4)						
12								
12-14		50(1")	12-14'	1"/1"	0	BEDROCK (LS) @ 12 FT.		
							X X	
							X X	
							X	
14							X X	

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## APPENDIX B

06/26/90

*Check A*

PFHLL BROTHERS LANDFILL ANALYTICAL DATA

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

VOLATILES	CONCENTRATIONS in ug/kg									
	B1-SS-05	B1-SS-06	B2-SS-03	B2-SS-05	B3-SS-06	B4-SS-03	B4-SS-03D	B4-SS-10	B4-SS-100	
Chloromethane	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
Bromomethane	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
Vinyl Chloride	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
Chloroethane	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
Methylene Chloride	R	R	R	R	80.0 U	390.0 UJ	5000.0 U	34.0 U	33.0 U	
Acetone	R	R	R	R	130.0 U	6800.0 UJ	7300.0 U	770.0 UJ	950.0 UJ	
Carbon Disulfide	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
1,1-Dichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
1,1-Dichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
1,2-Dichloroethane (total)	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Chloroform	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
1,2-Dichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
2-Butanone	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
1,1,1-Trichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Carbon Tetrachloride	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Vinyl Acetate	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
Bromodichloromethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
1,2-Dichloropropane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
cis-1,3-Dichloropropene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Trichloroethene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Dibromochloromethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
1,1,2-Trichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Benzene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
trans-1,3-Dichloropropene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Bromoform	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
4-Methyl-2-pentanone	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
2-Hexanone	12.0 U	12.0 U	11.0 U	12.0 U	130.0 U	200.0 UJ	5000.0 U	12.0 U	59.0 U	
Tetrachloroethene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
1,1,2,2-Tetrachloroethane	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Toluene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Chlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Ethylbenzene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Styrene	6.0 U	6.0 U	6.0 U	6.0 U	64.0 U	100.0 UJ	2500.0 U	6.0 U	29.0 U	
Xylenes(total)	6.0 U	6.0 U	6.0 U	6.0 U	3100.0 U	3300.0 UJ	11000.0 U	11.0 U	29.0 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.  
 B = For organics, analyte was detected in the method blank.  
 B = For inorganics, analyte value is between the contract required detection limit (CDL) and the instrument detection limit (IDL).  
 U = Indicates element was analyzed for but not detected. The number shown is the detection limit.  
 D = Denotes analyte quantified at a secondary dilution factor.  
 E = Estimated value due to exceedance of linear calibration range.

06/26/90

A/R 25-A  
A

PFHIL BROTHERS LANDFILL ANALYTICAL DATA  
TABLE E-1  
VOLATILES (cont'd)  
SOIL BORING ANALYTICAL RESULTS  
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VOLATILES	CONCENTRATIONS in ug/kg										
	MU-105-07	MU-115-07	MU-125-07	MU-135-02	MU-135-06	MU-145-08	MU-145-12	MU-155-05	MU-165-01		
Chloromethane	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
Bromomethane	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
Vinyl Chloride	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
Chloroethane	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
Methylene Chloride	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
Acetone	R 11.0 U	R 55.0 U	35.0 U	18.0 U	17.0 U	81.0 U	120.0 U	100.0 U	1500.0 U		
Carbon Disulfide	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
1,1-Dichloroethene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
1,2-Dichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Chloroform	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
1,2-Dichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
2-Butanone	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
1,1,1-Trichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Carbon Tetrachloride	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Vinyl Acetate	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
Bromodichloromethane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
1,2-Dichloropropane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
cis-1,3-Dichloropropene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Trichloroethene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Dibromochloroethane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
1,1,2-Trichloroethane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Benzene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
trans-1,3-Dichloropropene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Bromoform	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
4-Methyl-2-Pentanone	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
2-Hexanone	11.0 U	12.0 U	11.0 U	12.0 U	12.0 U	11.0 U	13.0 U	12.0 U	1500.0 U		
Tetrachloroethene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
1,1,2,2-Tetrachloroethane	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Toluene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Chlorobenzene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Ethylbenzene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Styrene	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		
Xylenes(total)	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	6.0 U	1500.0 U		

FOOTNOTES :  
 ug/kg (micrograms per kilogram) = ppb (parts per billion).  
 Units for Inorganic results are mg/kg (milligrams per kilogram).  
 J is a date 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.  
 D = Denotes analyte quantified at a secondary dilution factor.  
 E = Estimated value due to exceedance of linear calibration range.

PROFIL BROTHERS LANDFILL ANALYTICAL DATA

TABLE E-2  
SEMI-VOLATILES 1  
SOIL BORING ANALYTICAL RESULTS  
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SAMPLE NUMBER - SEMI-VOLATILES 1	CONCENTRATIONS In ug/kg									
	B1-SS-05	B1-SS-06	B2-SS-03	B2-SS-05RE	B3-SS-06	B3-SS-60L	B4-SS-03	B4-SS-10	B5-SS-08	
Phenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	150000.0 U	1800.0 U	390.0 U	390.0 U
bis(2-Chloroethyl)Ether	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2-Chlorophenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
1,3-Dichlorobenzene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
1,4-Dichlorobenzene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Benzyl Alcohol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2-Methylphenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
bis(2-Chloroisopropyl)Ether	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
4-Methylphenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
N-Nitroso-Di-n-Propylamine	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Hexachloroethane	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Nitrobenzene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Isophorone	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2-Nitrophenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2,4-Dimethylphenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Benzoic Acid	1900.0 U	1900.0 U	1800.0 U	1900.0 UJ	420000.0 U	850000.0 U	14000.0 U	1900.0 U	1900.0 U	1900.0 U
bis(2-Chloroethoxy)Methane	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
1,2,4-Trichlorobenzene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Naphthalene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
4-Chloroaniline	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Hexachlorobutadiene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
4-Chloro-3-Methylphenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2-Methylnaphthalene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Hexachlorocyclopentadiene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2,4,6-Trichlorophenol	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2,4,5-Trichlorophenol	1900.0 U	1900.0 U	1800.0 U	1900.0 UJ	420000.0 U	850000.0 U	14000.0 U	1900.0 U	1900.0 U	1900.0 U
2-Chloronaphthalene	1900.0 U	1900.0 U	1800.0 U	1900.0 UJ	420000.0 U	850000.0 U	14000.0 U	1900.0 U	1900.0 U	1900.0 U
2-Nitroaniline	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Dimethyl Phthalate	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
Acenaphthylene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 U
2,6-Dinitrotoluene	390.0 U	400.0 U	380.0 U	390.0 UJ	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	390.0 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.  
 B = For organics, analyte was detected in the method blank.  
 U = Indicates element was analyzed for but not detected. The number shown is the detection limit.  
 D = Denotes analyte quantified at a secondary dilution factor.  
 E = Estimated value due to exceedance of linear calibration range.

PFHLL BROTHERS LANDFILL ANALYTICAL DATA

TABLE E-2 (cont'd)  
SEMI-VOLATILES 1  
SOIL BORING ANALYTICAL RESULTS  
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*Background*

AREA A

SAMPLE NUMBER - SEMI-VOLATILES 1	CONCENTRATIONS in ug/Kg										
	MU-6S-02	MU-6S-03	MU-6S-03B0	MU-7S-15	MU-8S-05	MU-9S-06	MU-10S-07	MU-11S-07	MU-12S-07		
Phenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Bis(2-Chloroethyl)Ether	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
2-Chlorophenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
1,3-Dichlorobenzene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
1,4-Dichlorobenzene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Benzyl Alcohol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
1,2-Dichlorobenzene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
2-Methylphenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Bis(2-Chloroisopropyl)Ether	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
4-Methylphenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
M-Nitroso-Di-n-Propylamine	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Hexachloroethane	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Nitrobenzene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
1,3-Dichlorobenzene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
2,4-Dimethylphenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Benzole Acid	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Bis(2-Chloroethoxy)Methane	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U		
2,4-Dichlorophenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
1,2,4-Trichlorobenzene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Morphthalene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
4-Chloroaniline	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Hexachlorobutadiene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
4-Chloro-3-Methylphenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Hexachlorocyclopentadiene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
2,4,6-Trichlorophenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
2,4,5-Trichlorophenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
2-Chloronaphthalene	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U		
2-Nitroaniline	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Dimethyl Phthalate	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
Acenaphthylene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		
2,6-Dinitrotoluene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U		

FOOTNOTES :  
 ug/kg (micrograms per kilogram) = ppb (parts per billion).  
 Units for inorganic results are mg/kg (milligrams per kilogram).  
 U = 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 (CRL) and the instrument detection limit (IDL).  
 D = Denotes analyte quantified at a secondary dilution factor.  
 E = Estimated value due to exceedance of linear calibration range.

PCOIL BROTHERS LANDFILL ANALYTICAL DATA

TABLE E-2  
SEMI-VOLATILES 2  
SOIL BORING ANALYTICAL RESULTS  
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*Over A*

SAMPLE NUMBER	CONCENTRATIONS in ug/kg									
	B1-SS-05	B1-SS-06	B2-SS-03	B2-SS-05RE	B3-SS-06	B3-SS-60L	B4-SS-03	B4-SS-10	B5-SS-08	
SEMI-VOLATILES 2										
3-Nitroaniline	1900.0 U	1900.0 U	1800.0 U	1900.0 U	420000.0 U	850000.0 U	69000.0 U	1900.0 U	1900.0 U	
Acenaphthene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
2,4-Dinitrophenol	1900.0 U	1900.0 U	1800.0 U	1900.0 U	420000.0 U	850000.0 U	69000.0 U	1900.0 U	1900.0 U	
4-Nitrophenol	1900.0 U	1900.0 U	1800.0 U	1900.0 U	420000.0 U	850000.0 U	69000.0 U	1900.0 U	1900.0 U	
Dibenzofuran	390.0 U	400.0 U	380.0 U	390.0 U	1800000.0 E	1900000.0 U	2100.0 J	120.0 J	390.0 U	
2,4-Dinitrotoluene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Dichlorophthalate	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
4-Chlorophenyl-phenylether	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Fluorene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
4-Nitroaniline	1900.0 U	1900.0 U	1800.0 U	1900.0 U	420000.0 U	850000.0 U	69000.0 U	1900.0 U	1900.0 U	
4,6-Dinitro-2-Methylphenol	1900.0 U	1900.0 U	1800.0 U	1900.0 U	420000.0 U	850000.0 U	69000.0 U	1900.0 U	1900.0 U	
N-Nitrosodiphenylamine (1)	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
4-Bromophenyl-phenylether	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Hexachlorobenzene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Pentachlorophenol	1900.0 U	1900.0 U	1800.0 U	1900.0 U	420000.0 U	850000.0 U	69000.0 U	1900.0 U	1900.0 U	
Phenanthrene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Anthracene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Di-n-Butylphthalate	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Fluoranthene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Pyrene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Butylbenzylphthalate	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
3,3'-Dichlorobenzidine	790.0 U	800.0 U	760.0 U	790.0 U	49000.0 J	170000.0 U	14000.0 U	780.0 U	780.0 U	
Benzo(a)Anthracene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Chrysene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
bis(2-Ethylhexyl)phthalate	390.0 U	400.0 U	380.0 U	390.0 U	3000.0 B	170000.0 U	14000.0 U	390.0 U	390.0 U	
Di-n-Octyl phthalate	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Benzo(b)fluoranthene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Benzo(k)fluoranthene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Benzo(a)Pyrene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Indeno(1,2,3-cd)Pyrene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Dibenz(e,h)Anthracene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	
Benzo(g,h,i)Perylene	390.0 U	400.0 U	380.0 U	390.0 U	85000.0 U	170000.0 U	14000.0 U	390.0 U	390.0 U	

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



PFOWL BROTHERS LANDFILL ANALYTICAL DATA

TABLE E-2 (cont'd)  
SEMI-VOLATILES 2  
SOIL BORING ANALYTICAL RESULTS  
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*Stack Group*

*AREA A*

SAMPLE NUMBER - SEMI-VOLATILES 2	CONCENTRATIONS in ug/kg									
	MU-65-02	MU-65-03	MU-65-03BD	MU-75-15	MU-85-05	MU-95-06	MU-105-07	MU-115-07	MU-125-07	
3-Nitroaniline	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U	
Acenaphthene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
2,4-Dinitrophenol	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U	
4-Nitrophenol	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U	
Dibenzofuran	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
2,4-Dinitrotoluene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Diethylphthalate	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
4-Chlorophenyl-phenylether	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Fluorene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
4-Nitroaniline	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U	
4,6-Dinitro-2-Methylphenol	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U	
M-Nitrosodiphenylamine (1)	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
4-Bromophenyl-phenylether	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Hexachlorobenzene	1800.0 U	1900.0 U	1900.0 U	2000.0 U	1900.0 U	1800.0 U	1900.0 U	1900.0 U	1800.0 U	
Pentachlorophenol	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Phenanthrene	130.0 J	200.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Anthracene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Di-n-Butylphthalate	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Fluoranthene	220.0 J	270.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Pyrene	170.0 J	240.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Butylbenzylphthalate	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
3,3'-Dichlorobenzidine	760.0 U	790.0 U	800.0 U	840.0 U	800.0 U	740.0 U	800.0 U	800.0 U	760.0 U	
Benzof(a)anthracene	97.0 J	110.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Chrysene	85.0 J	110.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Bis(2-Ethylhexyl)phthalate	380.0 U	470.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Di-n-Octyl Phthalate	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Benzof(b)fluoranthene	91.0 J	190.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Benzof(k)fluoranthene	70.0 J	390.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Benzof(a)Pyrene	380.0 U	98.0 J	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Indeno(1,2,3-cd)Pyrene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Dibenzof(e,h)anthracene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 U	
Benzof(g,h,i)Perylene	380.0 U	390.0 U	400.0 U	420.0 U	400.0 U	370.0 U	400.0 U	400.0 U	380.0 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.  
B = For organics, analyte was detected in the method blank.  
U = Indicates element was analyzed for but not detected. The number shown is the detection limit.  
E = Estimated value due to exceedance of linear calibration range.

PEOHL BROTHERS LANDFILL ANALYTICAL DATA

TABLE E-3  
PESTICIDES/PCBS  
SOIL BORING ANALYTICAL RESULTS  
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AREA  
A

PESTICIDES/PCBS	CONCENTRATIONS in ug/kg									
	B1-SS-05	B1-SS-06	B2-SS-03	B2-SS-05	B3-SS-06	B4-SS-03	B4-SS-030	B4-SS-10	B5-SS-08	
alpha-BHC	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	R	3200.0 U	47.0 U	9.4 U	
beta-BHC	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	R	3200.0 U	47.0 U	9.4 U	
delta-BHC	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	R	3200.0 U	47.0 U	9.4 U	
gamma-BHC (Lindane)	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	R	3200.0 U	47.0 U	9.4 U	
Heptachlor	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	R	3200.0 U	47.0 U	9.4 U	
Aldrin	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	R	3200.0 U	47.0 U	9.4 U	
Heptachlor epoxide	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	320.0 U	3200.0 U	47.0 U	9.4 U	
Endosulfan I	9.5 U	9.6 U	92.0 UJ	9.5 UJ	210.0 U	320.0 U	3200.0 U	47.0 U	9.4 U	
Endosulfan II	19.0 U	19.0 U	180.0 UJ	19.0 UJ	410.0 U	R	6400.0 U	94.0 U	19.0 U	
4,4'-DDE	19.0 U	19.0 U	180.0 UJ	19.0 UJ	410.0 U	640.0 U	6400.0 U	94.0 U	19.0 U	
Endosulfan II	19.0 U	19.0 U	180.0 UJ	19.0 UJ	410.0 U	640.0 U	6400.0 U	94.0 U	19.0 U	
4,4'-DDD	19.0 U	19.0 U	180.0 UJ	19.0 UJ	410.0 U	640.0 U	6400.0 U	94.0 U	19.0 U	
Endosulfan sulfate	19.0 U	19.0 U	180.0 UJ	19.0 UJ	410.0 U	640.0 U	6400.0 U	94.0 U	19.0 U	
4,4'-DDT	19.0 U	19.0 U	180.0 UJ	19.0 UJ	410.0 U	640.0 U	6400.0 U	94.0 U	19.0 U	
Methoxychlor	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
Endrin ketone	19.0 U	19.0 U	180.0 UJ	19.0 UJ	410.0 U	640.0 U	6400.0 U	94.0 U	19.0 U	
alpha-Chlordane	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
gamma-Chlordane	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 U	
Toxaphene	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
Aroclor-1016	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
Aroclor-1221	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
Aroclor-1232	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
Aroclor-1242	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
Aroclor-1248	95.0 U	96.0 U	920.0 UJ	95.0 UJ	2100.0 U	3200.0 U	32000.0 U	470.0 U	94.0 U	
Aroclor-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 U	
Aroclor-1260	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 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.  
 B = For organics, analyte was detected in the method blank.  
 B = For inorganics, analyte value is between the contract required detection limit (CRL) and the instrument detection limit (IDL).  
 U = Indicates element was analyzed for but not detected. The number shown is the detection limit.  
 D = Denotes analyte quantified at a secondary dilution factor.  
 E = Estimated value due to exceedance of linear calibration range.

PFOWL BROTHERS LANDFILL ANALYTICAL DATA

TABLE E-3 (cont'd)  
PESTICIDES/PCBS  
SOIL BORING ANALYTICAL RESULTS  
Page 06 of 07

06/26/90

AREA  
A

PESTICIDES/PCBS	CONCENTRATIONS in ug/kg										
	MM-125-07	MM-135-02	MM-135-06	MM-145-08	MM-145-12	MM-155-05	MM-165-01	MM-165-03	MM-165-3DUP		
alpha-BHC	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
beta-BHC	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
delta-BHC	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
gamma-BHC (Lindane)	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
Heptachlor	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
Aldrin	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
Heptachlor epoxide	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
Endosulfan I	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
Endosulfan II	9.2 U	9.6 U	9.6 U	9.1 U	10.0 U	10.0 U	9.5 U	10.0 U	10.0 U	10.0 U	
4,4'-DDE	18.0 U	19.0 U	19.0 U	18.0 U	20.0 U	20.0 U	19.0 U	20.0 U	20.0 U	20.0 U	
4,4'-DDD	18.0 U	19.0 U	19.0 U	18.0 U	20.0 U	20.0 U	19.0 U	20.0 U	20.0 U	20.0 U	
Endosulfan sulfate	18.0 U	19.0 U	19.0 U	18.0 U	20.0 U	20.0 U	19.0 U	20.0 U	20.0 U	20.0 U	
4,4'-DDT	18.0 U	19.0 U	19.0 U	18.0 U	20.0 U	20.0 U	19.0 U	20.0 U	20.0 U	20.0 U	
Methoxychlor	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
Ethrin ketone	18.0 U	19.0 U	19.0 U	18.0 U	20.0 U	20.0 U	19.0 U	20.0 U	20.0 U	20.0 U	
alpha-Chlordane	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
gamma-Chlordane	180.0 U	190.0 U	190.0 U	180.0 U	200.0 U	200.0 U	190.0 U	200.0 U	200.0 U	200.0 U	
Toxaphene	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
Aroclor-1016	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
Aroclor-1221	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
Aroclor-1232	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
Aroclor-1242	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
Aroclor-1248	92.0 U	96.0 U	96.0 U	91.0 U	100.0 U	100.0 U	95.0 U	100.0 U	100.0 U	100.0 U	
Aroclor-1254	180.0 U	190.0 U	190.0 U	180.0 U	200.0 U	200.0 U	190.0 U	200.0 U	200.0 U	200.0 U	
Aroclor-1260	180.0 U	190.0 U	190.0 U	180.0 U	200.0 U	200.0 U	190.0 U	200.0 U	200.0 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.  
B = For organics, analyte was detected in the method blank.  
U = Indicates element was analyzed for but not detected. The number shown is the detection limit (IDL).  
D = Denotes analyte quantified at a secondary dilution factor.  
E = Estimated value due to exceedence of linear calibration range.

PFHIL BROTHERS LANDFILL ANALYTICAL DATA

TABLE E-4  
INORGANICS  
SOIL BORING ANALYTICAL RESULTS  
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AREA

SAMPLE NUMBER -	CONCENTRATIONS in mg/kg									
	B1-SS-05	B1-SS-06	B2-SS-03	B2-SS-05	B3-SS-06	B4-SS-03	B4-SS-10	B5-SS-08	B6-SS-07	
INORGANICS										
ALUMINUM	11600.00	9540.00	5940.00	4620.00	9930.00	1700.00	11200.00	2290.00	10500.00	
ANTIMONY	20.30 J	12.90 UJ	12.20 UJ	13.40 BJ	13.80 UJ	15.70 UJ	11.70 UJ	11.90 UJ	13.20 UJ	
ARSENIC	3.10	2.90	3.80	2.20 B	3.90 J	26.20 J	4.70 J	0.77 BJ	8.10	
BARIUM	93.00	75.00	35.40 B	37.00 B	168.00	304.00 J	85.70	15.70 B	126.00	
BERYLLIUM	0.02 U	0.02 U	0.02 U	0.02 U	0.60 B	0.31 U	0.50 B	0.23 U	0.43 B	
CADMIUM	0.85 U	0.87 U	0.83 U	0.86 U	1.10 U	4.30	0.92 U	0.94 U	1.30 B	
CALCIUM	62900.00	69100.00	55200.00	121000.00	36000.00	8040.00	61700.00	54700.00	6460.00	
CHROMIUM	16.00 J	15.10 J	9.30 J	6.50	24.00 J	82.80 J	15.40 J	4.70	33.20	
COBALT	8.00 B	6.70 B	4.30 B	3.10 B	10.90 B	27.10	7.60 B	2.60 B	12.40 B	
COPPER	16.50 J	15.80 J	13.90 J	17.80 J	43.40	573.00	17.10	8.30	72.30	
IRON	18700.00	16000.00	11600.00	7920.00	21400.00	104000.00	18200.00	5400.00	55800.00	
LEAD	12.80	23.20	49.10	12.30	70.50 J	375.00 J	13.40 J	12.60 J	107.00	
MANGANESE	17400.00	20100.00	13400.00	60000.00	12800.00	1070.00 B	23400.00	24100.00	3780.00	
MERCURY	667.00	445.00	339.00	565.00	244.00 J	728.00 J	453.00 J	294.00 J	770.00	
NICKEL	0.12 U	0.12 U	0.11 U	0.12 U	0.31	1.30	0.81	0.12 U	0.70	
POTASSIUM	15.60	14.60	10.40	4.50 B	35.30	173.00 B	18.60	5.60 B	43.90	
SELENIUM	2190.00	2030.00	769.00 B	1200.00	1600.00	189.00 B	2820.00	659.00 B	1280.00 B	
SILVER	0.54 U	0.56 U	0.53 U	0.55 U	0.54 UJ	0.62 BJ	0.46 UJ	0.47 UJ	0.78 B	
SODIUM	0.66 U	0.68 U	0.64 U	0.67 U	0.01 U	4.70 B	0.69 U	0.70 U	1.70 B	
THALLIUM	202.00 B	202.00 B	161.00 B	164.00 B	381.00 B	174.00 B	246.00 B	195.00 B	215.00 B	
VANADIUM	0.61 J	0.63 J	0.60 J	0.62 U	0.81 U	0.93 U	0.69 U	0.70 U	0.78 U	
ZINC	79.30	70.40	50.10	70.70	22.50	1.20 U	21.40	7.80 B	16.40	
CYANIDE	0.59 U	0.61 U	0.57 U	0.60 U	158.00	1000.00	63.20	70.20	669.00	

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.  
U = For inorganics, analyte value is between the required detection limit (CDL) and the instrument detection limit (IDL).  
D = Indicates element was analyzed for but not detected. The number shown is the detection limit.  
E = Denotes analyte quantified at a secondary dilution factor.  
E = Estimated value due to exceedence of linear calibration range.

PCOHL BROTHERS LANDFILL ANALYTICAL DATA

BAYVIEW

TABLE E-4  
INORGANICS (cont'd)  
SOIL BORING ANALYTICAL RESULTS  
Page 05 of 06

AREA

06/26/90

SAMPLE NUMBER -	CONCENTRATIONS in mg/kg											
	MM-65-03	MM-65-03D	MM-78-15	MM-85-05	MM-95-06	MM-105-07	MM-115-07	MM-125-07	MM-135-02			
ALUMINUM	4480.00 U	4920.00 UJ	4200.00 UJ	10800.00 UJ	4500.00 UJ	10300.00 UJ	11800.00 UJ	8900.00 UJ	16500.00 UJ			
ANTHRAKY	12.50 B	13.00 B	12.50 B	12.50 B	11.90 B	12.20 B	12.50 B	11.80 B	12.70 B			
ARSENIC	2.30 B	3.00 B	3.70 B	3.80 B	1.90 B	2.90 B	3.30 B	2.40 B	4.40 B			
BERYLLIUM	30.60 B	33.60 B	29.30 B	67.60 B	33.40 B	79.80 B	94.70 B	93.50 B	104.00 B			
CADMIUM	0.02 U	0.02 U	0.24 B	0.44 B	0.02 U	0.32 B	0.39 B	0.39 B	1.40 B			
CALCIUM	49800.00 J	57900.00 J	55400.00 J	43200.00 J	52100.00 J	66000.00 J	73600.00 J	65800.00 J	72900.00 J			
CHROMIUM	7.60 J	7.80 J	7.30 J	15.80 J	7.80 J	15.00 J	16.30 J	13.20 J	21.40 J			
COBALT	3.50 B	3.50 B	3.90 B	7.40 B	4.10 B	8.40 B	7.90 B	5.00 B	7.40 B			
COPPER	11.60 J	18.90 J	7.80 J	16.50 J	14.40 J	15.00 J	16.20 J	13.20 J	21.20 J			
LEAD	9880.00 J	10500.00 J	7770.00 J	17800.00 J	8660.00 J	16300.00 J	17700.00 J	13800.00 J	24500.00 J			
MAGNESIUM	10.00 J	11.80 J	18.50 J	16.90 J	12.00 J	14.10 J	15.10 J	10.00 J	19.00 J			
MANGANESE	20000.00 J	25100.00 J	21800.00 J	15500.00 J	20900.00 J	21400.00 J	23400.00 J	24400.00 J	24500.00 J			
MERCURY	414.00 U	406.00 U	321.00 U	449.00 U	329.00 U	508.00 U	520.00 U	582.00 U	449.00 U			
NICKEL	0.12 U	0.12 U	0.37 B	0.31 J	0.11 U	0.31 J	0.12 U	0.71 J	0.16 U			
POTASSIUM	5.90 B	8.00 B	6.10 B	17.40 J	8.90 B	15.30 J	16.70 J	13.00 J	21.20 J			
SELENIUM	905.00 B	981.00 B	1270.00 B	2060.00 J	1120.00 B	2630.00 J	3010.00 J	2080.00 J	3330.00 J			
SILVER	0.54 U	0.56 U	0.49 U	0.49 U	0.52 U	0.48 U	0.49 U	0.47 U	0.50 U			
SODIUM	0.66 U	0.68 U	0.66 U	0.65 U	0.63 U	0.64 U	0.66 U	0.62 U	0.75 U			
THALLIUM	114.00 B	135.00 B	169.00 B	196.00 B	158.00 B	228.00 B	239.00 B	263.00 B	296.00 B			
VANADIUM	0.61 U	0.83 U	0.66 U	0.65 U	0.58 U	0.64 U	0.66 U	0.62 U	0.25 U			
ZINC	13.00 J	13.80 J	11.60 BJ	21.00 U	10.80 B	20.60 U	21.90 U	19.10 J	31.00 U			
CYANIDE	67.20 U	73.60 U	78.10 U	68.00 U	70.80 U	78.90 U	70.60 U	97.20 U	76.90 U			
	0.59 U	0.61 U	1.20 U	1.20 U	1.10 U	0.57 U	0.59 U	1.10 U	1.20 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.  
B = For organics, analyte was detected in the method blank.  
U = Indicates element was analyzed for but not detected. The number shown is the detection limit.  
E = Denotes analyte quantified at a secondary dilution factor.  
E = Estimated value due to exceedance of linear calibration range.

**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: B-18-6-8

SITE CODE: 915043

PERCENT SOLIDS: 78.0

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

COMPOUND	CONC ( PPB )	NON TARGET COMPOUNDS:
Chloromethane	ND	
Bromomethane	ND	
Vinyl chloride	ND	
Chloroethane	ND	
Methylene chloride	ND	
Acetone	ND	
Carbon disulfide	ND	
1,1-Dichloroethene	ND	
1,1-Dichloroethane	ND	
trans-1,2-Dichloroethene	ND	
Chloroform	ND	
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	ND	
2-Chloroethylvinylether	ND	
Bromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	ND	
Tetrachloroethene	ND	
Toluene	ND	
Chlorobenzene	ND	
Ethylbenzene	ND	
Styrene	ND	
Total Xylenes	ND	
Total Chlorotoluene	ND	
Total Dichlorobenzene	ND	

ND = LESS THAN 5 PPB

ALL CONCENTRATIONS LESS THAN 5. PPB ARE ESTIMATES

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	COND (ug/kg)	TIC AND COMMENT SECTION
Phenol	ND	
2-Chlorophenol	ND	Detection limit - CROL
Aniline	ND	(Pesticide detection limit - 210)
Bis(2-Chloroethyl)Ether	ND	
1 3-Dichlorobenzene	ND	
1 4-Dichlorobenzene	ND	* Beta and Gamma BHC coelute -
1 2-Dichlorobenzene	ND	reported as the sum of the isomers
Benzyl Alcohol	ND	
2-Methylphenol	ND	
bis(2-chloroisopropyl)Ether	ND	
Hexachloroethane	ND	TIC -
4-Methylphenol	ND	Molecular sulfur - 1200
N-Nitroso-di-propylamine	ND	
Nitrobenzene	ND	
Isophorone	ND	
2-Nitrophenol	ND	
2 4-Dimethylphenol	ND	
bis(2-chloroethoxy)Methane	ND	
2 4-Dichlorophenol	ND	
1 2 4-Trichlorobenzene	ND	
Naphthalene	ND	
Benzoic acid	ND	
4-Chloroaniline	ND	
Hexachlorobutadiene	ND	
4-Chloro-3-Methylphenol	ND	
2-Methylnaphthalene	ND	
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	
2,4,5-trichlorophenol	ND	
2-Chloronaphthalene	ND	
2-Nitroaniline	ND	
Acenaphthylene	ND	
Dimethyl Phthalate	ND	
2,6-Dinitrotoluene	ND	
Acenaphthene	ND	
3-Nitroaniline	ND	
2,4-Dinitrophenol	ND	
Dibenzofuran	ND	
4-Nitrophenol	ND	



CONT SAMPLE NUMBER: 992-293-01

DATA FILE: 9203E62A

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COMPOUND	CONC(ug/kg)
2,4-Dinitrotoluene	ND
Fluorene	ND
4-Chlorophenyl-phenylether	ND
Diethylphthalate	ND
2 Methyl 4,6-Dinitrophenol	ND
N-Nitrosodiphenylamine	ND
4-Nitroaniline	ND
4-Bromophenyl-phenylether	ND
Alpha-BHC	ND
Hexachlorobenzene	ND
Pentachlorophenol	ND
Beta-BHC/Gamma-BHC *	ND
Phenanthrene	280
Anthracene	ND
Delta-BHC	ND
Heptachlor	ND
Di-N-Butylphthalate	130
Aldrin	ND
Heptachlor Epoxide	ND
Fluoranthene	390
Pyrene	310
Endosulfan I	ND
4,4'-DDE	ND
Dieldrin	ND
Endrin	ND
Endrin Aldehyde	ND
Endosulfan II	ND
4,4'-DDD	ND
Butylbenzylphthalate	ND
Endosulfan Sulfate	ND
4,4'-DDT	ND
Chrysene	ND
Benzo. (a) Anthracene	ND
bis(2-Ethylhexyl)Phthalate	ND
Di-N-Octyl Phthalate	ND
Benzo(b/k)Fluoranthene	190
Benzo(a)Pyrene	ND
Indeno(1,2,3-cd)Pyrene	ND
Dibenz(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PROHL BROTHERS LANDFILL

SITE CODE: 915043

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

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

ARCHIVE NUMBER: P29301      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:      ND

\*\*\*\*      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:      ND

\*\*\*\*      AROCLOR - 1254      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      ND      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      ND

\*\*\*\*      AROCLOR - 1260      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      ND      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      ND

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: B-18 6 - 8'

SAMPLE NUMBER: 992-293-01  
 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.: M29301

METAL	CONC mg/Kg		METAL	CONC mg/Kg
ALUMINIUM	NR		MAGNESIUM	NR
ANTIMONY	NR		MANGANESE	NR
ARSENIC	5		MERCURY	0.1
BARIUM	NR		NICKEL	NR
BERYLLIUM	NR		POTASSIUM	NR
CADMIUM	2.3 J		SELENIUM	NR
CALCIUM	NR		SILVER	NR
CHROMIUM	7 J		SODIUM	NR
COBALT	NR		THALLIUM	NR
COPPER	13		TIN	NR
IRON	NR		VANADIUM	NR
LEAD	38 J		ZINC	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 ID: ~~B-18-10-12~~

SITE CODE: 915043

PERCENT SOLIDS: 89.0

SAMPLE NUMBER: 992-293-02

MATRIX: SDIL

SUBMISSION DATE: 10/19/92

ARCHIVE NO.: U29302

ANALYSIS DATE: 10/19/92

DATA FILE NO.: 9204C84A.D

COMPOUND	CONC ( PPB )	NON TARGET COMPOUNDS:
Chloromethane	ND	
Bromomethane	ND	
Vinyl chloride	ND	
Chloroethane	ND	
Methylene chloride	ND	
Acetone	ND	
Carbon disulfide	ND	
1,1-Dichloroethene	ND	
1,1-Dichloroethane	ND	
trans-1,2-Dichloroethene	ND	
Chloroform	ND	
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	ND	
2-Chloroethylvinylether	ND	
Bromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	ND	
Tetrachloroethene	ND	
Toluene	ND	
Chlorobenzene	ND	ND = LESS THAN 5 PPB
Ethylbenzene	ND	
Styrene	ND	ALL CONCENTRATIONS LESS THAN
Total xylenes	ND	5 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: 8-18 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
Phenol	ND	
2-Chlorophenol	ND	Detection limit - CRDL
Aniline	ND	(Pesticide detection limit - 190)
Bis(2-Chloroethyl)Ether	ND	
1,3-Dichlorobenzene	ND	
1,4-Dichlorobenzene	ND	* Beta and Gamma BHC coelute -
1,2-Dichlorobenzene	ND	reported as the sum of the isomers
Benzyl Alcohol	ND	
2-Methylphenol	ND	
bis(2-chloroisopropyl)Ether	ND	
Hexachloroethane	ND	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-Nitrophenol	ND	
2,4-Dimethylphenol	ND	
bis(2-chloroethoxy)Methane	ND	
2,4-Dichlorophenol	ND	
1,2,4-Trichlorobenzene	ND	
Naphthalene	ND	
Benzoic acid	ND	
4-Chloroaniline	ND	
Hexachlorobutadiene	ND	
4-Chloro-3-Methylphenol	ND	
2-Methylnaphthalene	ND	
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	
2,4,5-trichlorophenol	ND	
2-Chloronaphthalene	ND	
2-Nitroaniline	ND	
Acenaphthylene	ND	
Dimethyl Phthalate	ND	
2,6-Dinitrotoluene	ND	
Acenaphthene	ND	
3-Nitroaniline	ND	
2,4-Dinitrophenol	ND	
Dibenzofuran	ND	
4-Nitrophenol	ND	

CONT. SAMPLE NUMBER: 992-293-02

DATA FILE: 9203E60A

page 2

COMPOUND	CONC (ug/kg)
2,4-Dinitrotoluene	ND
Fluorene	ND
4-Chlorophenyl-phenylether	ND
Diethylphthalate	ND
2 Methyl 4,6-Dinitrophenol	ND
N-Nitrosodiphenylamine	ND
4-Nitroaniline	ND
4-Bromophenyl-phenylether	ND
Alpha-BHC	ND
Hexachlorobenzene	ND
Pentachlorophenol	ND
Beta-BHC/Gamma-BHC *	ND
Phenanthrene	ND
Anthracene	ND
Delta-BHC	ND
Heptachlor	ND
Di-N-Butylphthalate	ND
Aldrin	ND
Heptachlor Epoxide	ND
Fluoranthene	ND
Pyrene	ND
Endosulfan I	ND
4,4'-DDE	ND
Dieldrin	ND
Endrin	ND
Endrin Aldehyde	ND
Endosulfan II	ND
4,4'-DDD	ND
Butylbenzylphthalate	ND
Endosulfan Sulfate	ND
4,4'-DDT	ND
Chrysene	ND
Benzo (a) Anthracene	ND
bis(2-Ethylhexyl)Phthalate	ND
Di-N-Octyl Phthalate	ND
Benzo(b/k)Fluoranthene	ND
Benzo(a)Pyrene	ND
Indeno(1,2,3-cd)Pyrene	ND
Dibenz(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND

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: B-18 10'-12'  
DATE RECEIVED: 10/19/92      ANALYSIS DATE: 10/23/92  
ARCHIVE NUMBER: P29302      MATRIX: SOIL      % SOLID: NC

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****	AROCLOL - 1016	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	
****	AROCLOL - 1221	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	
****	AROCLOL - 1232	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	
****	AROCLOL - 1242	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	
****	AROCLOL - 1248	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	
****	AROCLOL - 1254	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	
****	AROCLOL - 1260	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	



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: B-18 10 - 12'

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	CONC		METAL	CONC
	mg/Kg			mg/Kg
ALUMINIUM	NR		MAGNESIUM	NR
ANTIMONY	NR		MANGANESE	NR
ARSENIC	5		MERCURY	0.1 U
BARIUM	NR		NICKEL	NR
BERYLLIUM	NR		POTASSIUM	NR
CADMIUM	6	U	SELENIUM	NR
CALCIUM	NR		SILVER	NR
CHROMIUM	5	J	SODIUM	NR
COBALT	NR		THALLIUM	NR
COPPER	13		TIN	NR
IRON	NR		VANADIUM	NR
LEAD	32	J	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: PFDHL BROTHERS

FIELD ID: MW-180 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	CONC ( PPB )	NON TARGET COMPOUNDS:
Chloromethane	ND	
Bromomethane	ND	
Vinyl chloride	ND	
Chloroethane	ND	
Methylene chloride	ND	
Acetone	ND	
Carbon disulfide	ND	
1,1-Dichloroethene	ND	
1,1-Dichloroethane	ND	
trans-1,2-Dichloroethene	ND	
Chloroform	ND	
1,2-Dichloroethane	ND	
2-Butanone	ND	
1,1,1-Trichloroethane	ND	
Carbontetrachloride	ND	
Vinyl acetate	ND	
Bromodichloromethane	ND	
1,1,1,2-Tetrachloroethane	ND	
1,2-Dichloropropane	ND	
trans-1,3-Dichloropropene	ND	
Trichloroethene	ND	
Dibromochloromethane	ND	
1,1,2-Trichloroethane	ND	
Benzene	ND	
dis-1,3-Dichloropropene	ND	
2-Chloroethylvinylether	ND	
Bromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	ND	
Tetrachloroethene	ND	
Toluene	ND	
Chlorobenzene	ND	ND = LESS THAN 5 PPB
Ethylbenzene	ND	
Styrene	ND	ALL CONCENTRATIONS LESS THAN
Total Xylenes	ND	5 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: MW-180 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	(Pesticide detection limit - 210)
Bis(2-Chloroethyl)Ether	ND	
1,3-Dichlorobenzene	ND	
1,4-Dichlorobenzene	ND	* Beta and Gamma BHC coelute -
1,2-Dichlorobenzene	ND	reported as the sum of the isomers
Benzyl Alcohol	ND	
2-Methylphenol	ND	
bis(2-chloroisopropyl)Ether	ND	
Hexachloroethane	ND	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-Nitrophenol	ND	
2,4-Dimethylphenol	ND	
bis(2-chloroethoxy)Methane	ND	
2,4-Dichlorophenol	ND	
1,2,4-Trichlorobenzene	ND	
Naphthalene	ND	
Benzoic acid	ND	
4-Chloroaniline	ND	
Hexachlorobutadiene	ND	
4-Chloro-3-Methylphenol	ND	
2-Methylnaphthalene	ND	
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	
2,4,5-trichlorophenol	ND	
2-Chloronaphthalene	ND	
2-Nitroaniline	ND	
Acenaphthylene	ND	
Dimethyl Phthalate	ND	
2,6-Dinitrotoluene	ND	
Acenaphthene	ND	
3-Nitroaniline	ND	
2,4-Dinitrophenol	ND	
Dibenzofuran	ND	
4-Nitrophenol	ND	

CONT SAMPLE NUMBER: 992-293-03

DATA FILE: 9203E61A

page 2

COMPOUND	CONC (ug/kg)
2,4-Dinitrotoluene	ND
Fluorene	ND
4-Chlorophenyl-phenylether	ND
Diethylphthalate	ND
2 Methyl 4,6-Dinitrophenol	ND
N-Nitrosodiphenylamine	ND
4-Nitroaniline	ND
4-Bromophenyl-phenylether	ND
Alpha-BHC	ND
Hexachlorobenzene	ND
Pentachlorophenol	ND
Beta-BHC/Gamma-BHC *	ND
Phenanthrene	ND
Anthracene	ND
Delta-BHC	ND
Heptachlor	ND
Di-N-Butylphthalate	ND
Aldrin	ND
Heptachlor Epoxide	ND
Fluoranthene	280
Pyrene	220
Endosulfan I	ND
4,4'-DDE	ND
Dieldrin	ND
Endrin	ND
Endrin Aldehyde	ND
Endosulfan II	ND
4,4'-DDD	ND
Butylbenzylphthalate	ND
Endosulfan Sulfate	ND
4,4'-DDT	ND
Chrysene	ND
Benzo (a) Anthracene	ND
bis(2-Ethylhexyl)Phthalate	ND
Di-N-Octyl Phthalate	ND
Benzo(b/k)Fluoranthene	ND
Benzo(a)Pyrene	ND
Indeno(1,2,3-cd)Pyrene	ND
Dibenz(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND

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: MW-180 2'-4'

DATE RECEIVED: 10/19/92

ANALYSIS DATE: 10/23/92

ARCHIVE NUMBER: P29303

MATRIX: SOIL

% SOLID: NC

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****	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:	ND	
****	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:	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:	ND	

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: B-180 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	CONC mg/Kg		METAL	CONC mg/Kg
ALUMINIUM	NR		MAGNESIUM	NR
ANTIMONY	NR		MANGANESE	NR
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
LEAD	52	J	ZINC	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: B-1955 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.: 9204C72A.D

COMPOUND	CONC ( PPB )	NON TARGET COMPOUNDS:
Chloromethane	ND	
Bromomethane	ND	
Vinyl chloride	ND	
Chloroethane	ND	
Methylene chloride	5 B	
Acetone	ND	
Carbon disulfide	ND	
1,1-Dichloroethene	ND	
1,1-Dichloroethane	ND	
trans-1,2-Dichloroethene	ND	
Chloroform	ND	
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	ND	
2-Chloroethylvinylether	ND	
Bromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	ND	
Tetrachloroethene	ND	
Toluene	ND	
Chlorobenzene	ND	ND = LESS THAN 5 PPB
Ethylbenzene	ND	
Styrene	ND	ALL CONCENTRATIONS LESS THAN
Total Xylenes	ND	5 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: B-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	COND (ug/kg)	TIC AND COMMENT SECTION
Phenol	ND	
2-Chlorophenol	ND	Detection limit - CRDL
Aniline	ND	(Pesticide detection limit - 190)
Bis(2-Chloroethyl)Ether	ND	
1 3-Dichlorobenzene	ND	
1 4-Dichlorobenzene	ND	* Beta and Gamma BHC coelute -
1 2-Dichlorobenzene	ND	reported as the sum of the isomers
Benzyl Alcohol	ND	
2-Methylphenol	ND	
bis(2-chloroisopropyl)Ether	ND	
Hexachloroethane	ND	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-Nitrophenol	ND	
2 4-Dimethylphenol	ND	
bis(2-chloroethoxy)Methane	ND	
2 4-Dichlorophenol	ND	
1 2 4-Trichlorobenzene	ND	
Naphthalene	ND	
Benzoic acid	ND	
4-Chloroaniline	ND	
Hexachlorobutadiene	ND	
4-Chloro-3-Methylphenol	ND	
2-Methylnaphthalene	ND	
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	
2,4,5-trichlorophenol	ND	
2-Chloronaphthalene	ND	
2-Nitroaniline	ND	
Acenaphthylene	ND	
Dimethyl Phthalate	ND	
2,6-Dinitrotoluene	ND	
Acenaphthene	ND	
3-Nitroaniline	ND	
2,4-Dinitrophenol	ND	
Dibenzofuran	ND	
4-Nitrophenol	ND	

CONT SAMPLE NUMBER: 992-281-02

DATA FILE: 9203E52A

page 2

COMPOUND	CONC(ug/kg)
2,4-Dinitrotoluene	ND
Fluorene	ND
4-Chlorophenyl-phenylether	ND
Diethylphthalate	ND
2 Methyl 4,6-Dinitrophenol	ND
N-Nitrosodiphenylamine	ND
4-Nitroaniline	ND
4-Bromophenyl-phenylether	ND
Alpha-BHC	ND
Hexachlorobenzene	ND
Pentachlorophenol	ND
Beta-BHC/Gamma-BHC *	ND
Phenanthrene	ND
Anthracene	ND
Delta-BHC	ND
Heptachlor	ND
Di-N-Butylphthalate	130
Aldrin	ND
Heptachlor Epoxide	ND
Fluoranthene	ND
Pyrene	ND
Endosulfan I	ND
4,4'-DDE	ND
Dieldrin	ND
Endrin	ND
Endrin Aldehyde	ND
Endosulfan II	ND
4,4'-DDD	ND
Butylbenzylphthalate	ND
Endosulfan Sulfate	ND
4,4'-DDT	ND
Chrysene	ND
Benzo (a) Anthracene	ND
bis(2-Ethylhexyl)Phthalate	ND
Di-N-Octyl Phthalate	ND
Benzo(b/k)Fluoranthene	ND
Benzo(a)Pyrene	ND
Indeno(1,2,3-cd)Pyrene	ND
Dibenz(a,h)Anthracene	ND
Benzo(g,h,i)Perylene	ND

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PFOHL BROTHERS LANDFILL

SITE CODE: P15043

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

DATE RECEIVED: 10/7/92      ANALYSIS DATE: 10/19/92

ARCHIVE NUMBER: P28102      MATRIX: SOIL      % SOLID: NC

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\*\*\*\*      AROCLOR - 1016      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      NO      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      NO

\*\*\*\*      AROCLOR - 1221      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      NO      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      NO

\*\*\*\*      AROCLOR - 1232      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      NO      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      NO

\*\*\*\*      AROCLOR - 1242      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      NO      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      NO

\*\*\*\*      AROCLOR - 1248      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      NO      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      NO

\*\*\*\*      AROCLOR - 1254      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      NO      DETECTION LIMIT 120 UG/KG

MASS SPECTROMETER RESULTS:      NO

\*\*\*\*      AROCLOR - 1260      \*\*\*\*

GAS CHROMATOGRAPH RESULTS:      NO      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: S-1955 10 - 12

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

SITE CODE: 915043  
 MATRIX: SOIL  
 PERCENT SOLIDS: 88 %  
 ARCHIVE NO.: M28102

METAL	CONC mg/Kg		METAL	CONC mg/Kg
ALUMINIUM	NR		MAGNESIUM	NR
ANTIMONY	NR		MANGANESE	NR
ARSENIC	7		MERCURY	0.1 U
BARIUM	NR		NICKEL	NR
BERYLLIUM	NR		POTASSIUM	NR
CADMIUM	6 U		SELENIUM	NR
CALCIUM	NR		SILVER	NR
CHROMIUM	3 J		SODIUM	NR
COBALT	NR		THALLIUM	NR
COPPER	15		TIN	NR
IRON	NR		VANADIUM	NR
LEAD	33 J		ZINC	NR

COMMENTS:

NR = NOT 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: B-1955 6-8'

SITE CODE: 915043

PERCENT SOLIDS: 80.0

SAMPLE NUMBER: 992-281-01

MATRIX: SOIL

SUBMISSION DATE: 10/7/92

ARCHIVE NO.: U28101

ANALYSIS DATE: 10/8/92

DATA FILE NO.: 9204077A.D

COMPOUND	CONC ( PPB )	NON TARGET COMPOUNDS:
Chloromethane	ND	UNKNOWN HYDROCARBONS
Bromomethane	ND	
Vinyl chloride	ND	
Chloroethane	ND	
Methylene chloride	30	
Acetone	ND	
Carbon disulfide	ND	
1,1-Dichloroethene	ND	
1,1-Dichloroethane	ND	
trans-1,2-Dichloroethene	ND	
Chloroform	ND	
1,2-Dichloroethane	ND	
2-Butanone	ND	
1,1,1-Trichloroethane	ND	
Carbon tetrachloride	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	ND	
2-Chloroethylvinylether	ND	
Bromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	ND	
Tetrachloroethene	ND	
Toluene	ND	
Chlorobenzene	ND	
Ethylbenzene	ND	
Styrene	ND	
Total Xylenes	ND	
Total Chlorotoluene	ND	
Total Dichlorobenzene	ND	

ND = LESS THAN 5 PPB

ALL CONCENTRATIONS LESS THAN 5 PPB ARE ESTIMATES

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

MOBILE LABORATORY SEMI-VOLATILE ANALYSIS

SITE NAME: PFOHL BROTHERS

FIELD ID: B-1988 61-81

% 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	CCMC (ug/kg)	TIC AND COMMENT SECTION
Phenol	ND	
2-Chlorophenol	ND	Detection limit - CROD X 2
Aniline	ND	(Pesticide detection limit - 430)
Bis(2-Chloroethyl)Ether	ND	
1 3-Dichlorobenzene	ND	
1 4-Dichlorobenzene	ND	* Beta and Gamma BHC coelute -
1 2-Dichlorobenzene	ND	reported as the sum of the isomers
Benzyl Alcohol	ND	
2-Methylphenol	ND	DILUTION FACTOR - 2
bis(2-chloroisopropyl)Ether	ND	
Hexachloroethane	ND	TIC -
4-Methylphenol	ND	Benzo[b]naphthof[2,3-d]furan - 84
N-Nitroso-di-propylamine	ND	
Nitrobenzene	ND	11H-Benzo[a]fluorene - 2200
Isophorone	ND	
2-Nitrophenol	ND	Benzo[g,h,i]fluoranthene - 840
2 4-Dimethylphenol	ND	
bis(2-chloroethoxy)Methane	ND	Molecular Sulfur - 5000
2 4-Dichlorophenol	ND	
1 2 4-Trichlorobenzene	ND	
Naphthalene	ND	
Benzoic acid	ND	
4-Chloroaniline	ND	
Hexachlorobutadiene	ND	
4-Chloro-3-Methylphenol	ND	
2-Methylnaphthalene	110	
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	
2,4,5-trichlorophenol	ND	
2-Chloronaphthalene	ND	
2-Nitroaniline	ND	
Acenaphthylene	2100	
Dimethyl Phthalate	ND	
2,6-Dinitrotoluene	ND	
Acenaphthene	420	
3-Nitroaniline	ND	
2,4-Dinitrophenol	ND	
Dibenzofuran	810	
4-Nitrophenol	ND	



CONT SAMPLE NUMBER: 992-281-01

DATA FILE: 9203E54A

page 2

COMPOUND	CONC (ug/kg)
2,4-Dinitrotoluene	ND
Fluorene	2200
4-Chlorophenyl-phenylether	ND
Diethylphthalate	ND
2 Methyl 4,6-Dinitrophenol	ND
N-Nitrosodiphenylamine	ND
4-Nitroaniline	ND
4-Bromophenyl-phenylether	ND
Alpha-BHC	ND
Hexachlorobenzene	ND
Pentachlorophenol	ND
Beta-BHC/Gamma-BHC *	ND
Phenanthrene	15000
Anthracene	4900
Delta-BHC	ND
Heptachlor	ND
Di-N-Butylphthalate	ND
Aldrin	ND
Heptachlor Epoxide	ND
Fluoranthene	21000
Pyrene	16000
Endosulfan I	ND
4,4'-DDE	ND
Dieldrin	ND
Endrin	ND
Endrin Aldehyde	ND
Endosulfan II	ND
4,4'-DDD	ND
Butylbenzylphthalate	ND
Endosulfan Sulfate	ND
4,4'-DDT	ND
Chrysene	7100
Benzo (a) Anthracene	7300
bis(2-Ethylhexyl)Phthalate	790
Di-N-Octyl Phthalate	ND
Benzo(k/b)Fluoranthene	11000
Benzo(b/k)Fluoranthene	10000
Benzo(a)Pyrene	5600
Indeno(1,2,3-cd)Pyrene	4000
Dibenz(a,h)Anthracene	2000
Benzo(g,h,i)Perylene	2800

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PFOHL 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  
ARCHIVE NUMBER: P28101      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:	ND	
****	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:	ND	
****	AROCLOR - 1254	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	
****	AROCLOR - 1260	****
GAS CHROMATOGRAPH RESULTS:	ND	DETECTION LIMIT 120 UG/KG
MASS SPECTROMETER RESULTS:	ND	

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	CONC mg/Kg		METAL	CONC mg/Kg
ALUMINIUM	NR		MAGNESIUM	NR
ANTIMONY	NR		MANGANESE	NR
ARSENIC	6		MERCURY	0.2 U
BARIUM	NR		NICKEL	NR
BERYLLIUM	NR		POTASSIUM	NR
CADMIUM	6 U		SELENIUM	NR
CALCIUM	NR		SILVER	NR
CHROMIUM	7 J		SODIUM	NR
COBALT	NR		THALLIUM	NR
COPPER	21		TIN	NR
IRON	NR		VANADIUM	NR
LEAD	64		ZINC	NR

COMMENTS:

NR = NOT REQUESTED

J = ESTIMATED

U = LESS THAN DETECTION LIMIT (ND)

**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.: 9204C86A.D

COMPOUND	COND ( PPB )	NON TARGET COMPOUNDS:
Chloromethane	ND	UNKNOWN HYDROCARBON 1500 PPB
Bromomethane	ND	
Vinyl chloride	ND	
Chloroethane	ND	
Methylene chloride	ND	
Acetone	ND	
Carbon disulfide	ND	
1,1-Dichloroethane	ND	
1,1-Dichloroethane	ND	
trans-1,2-Dichloroethane	ND	
Chloroform	ND	
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	ND	
2-Chloroethylvinylether	ND	
Bromoform	ND	
2-Hexanone	ND	
4-Methyl-2-pentanone	ND	
Tetrachloroethene	ND	
Toluene	ND	
Chlorobenzene	ND	ND = LESS THAN 5 PPB
Ethylbenzene	ND	
Styrene	ND	ALL CONCENTRATIONS LESS THAN 5 PPB ARE ESTIMATES
Total Xylenes	ND	
Total Chlorotoluene	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.: S29304

ANALYSIS DATE: 10/27/92

DATA FILE NO.: 9203E63A

COMPOUND	COND (ug/kg)	TIC AND COMMENT SECTION
Phenol	ND	
2-Chlorophenol	ND	Detection limit - CROIL
Aniline	ND	(Pesticide detection limit - 200)
Bis(2-Chloroethyl)Ether	ND	
1,3-Dichlorobenzene	ND	
1,4-Dichlorobenzene	ND	* Beta and Gamma BHC coelute -
1,2-Dichlorobenzene	ND	reported as the sum of the isomers
Benzyl Alcohol	ND	
2-Methylphenol	ND	
bis(2-chloroisopropyl)Ether	ND	
Hexachloroethane	ND	TIC -
4-Methylphenol	ND	Benzo[j]fluoranthene - 450
N-Nitroso-di-propylamine	ND	Benzo[e]anthracene - 490
Nitrobenzene	ND	
Isophorone	ND	
2-Nitrophenol	ND	
2,4-Dimethylphenol	ND	
Bis(2-chloroethoxy)Methane	ND	
2,4-Dichlorophenol	ND	
1,2,4-Trichlorobenzene	ND	
Naphthalene	ND	
Benzoic acid	ND	
4-Chloroaniline	ND	
Hexachlorobutadiene	ND	
4-Chloro-3-Methylphenol	ND	
2-Methylnaphthalene	ND	
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	
2,4,5-trichlorophenol	ND	
2-Chloronaphthalene	ND	
2-Nitroaniline	ND	
Acenaphthylene	ND	
Dimethyl Phthalate	ND	
2,6-Dinitrotoluene	ND	
Acenaphthene	ND	
3-Nitroaniline	ND	
2,4-Dinitrophenol	ND	
Dibenzofuran	ND	
4-Nitrophenol	ND	

COMPOUND	CONC (ug/kg)
2,4-Dinitrotoluene	ND
Fluorene	ND
4-Chlorophenyl-phenylether	ND
Diethylphthalate	ND
2 Methyl 4,6-Dinitrophenol	ND
N-Nitrosodiphenylamine	ND
4-Nitroaniline	ND
4-Bromophenyl-phenylether	ND
Alpha-BHC	ND
Hexachlorobenzene	ND
Pentachlorophenol	ND
Beta-BHC/Gamma-BHC *	ND
Phenanthrene	700
Anthracene	180
Delta-BHC	ND
Heptachlor	ND
Di-N-Butylphthalate	ND
Aldrin	ND
Heptachlor Epoxide	ND
Fluoranthene	1400
Pyrene	1100
Endosulfan I	ND
4,4'-DDE	ND
Dieldrin	ND
Endrin	ND
Endrin Aldehyde	ND
Endosulfan II	ND
4,4'-DDD	ND
Butylbenzylphthalate	ND
Endosulfan Sulfate	ND
4,4'-DDT	ND
Chrysene	620
Benzo (a) Anthracene	460
bis(2-Ethylhexyl)Phthalate	ND
Di-N-Octyl Phthalate	ND
Benzo(b/k)Fluoranthene	ND
Benzo(a)Pyrene	430
Indeno(1,2,3-cd)Pyrene	450
Dibenz(a,h)Anthracene	ND
Benzo(g,b,i)Perylene	500

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
MOBILE LABORATORY PCB ANALYSIS

SITE NAME: PFÖHL BROTHERS LANDFILL

SITE CODE: 915043

SAMPLE NUMBER: 992-293-04      FIELD ID: MW-180 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:	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:	ND	
****	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:	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 ENVIRONMENTAL CONSERVATION  
 DIVISION OF HAZARDOUS WASTE REMEDIATION  
 BUREAU OF HAZARDOUS SITE CONTROL

METALS REPORT

SITE NAME: PFOHL BROTHERS LANDFILL  
 FIELD ID: B-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	CONC mg/Kg		METAL	CONC mg/kg
ALUMINIUM	NR		MAGNESIUM	NR
ANTIMONY	NR		MANGANESE	NR
ARSENIC	9		MERCURY	0.1
BARIUM	NR		NICKEL	NR
BERYLLIUM	NR		POTASSIUM	NR
CAESIUM	6	U	SELENIUM	NR
CALCIUM	NR		SILVER	NR
CARBONUM	11	J	SODIUM	NR
COBALT	NR		THALLIUM	NR
COPPER	28		TIN	NR
IRON	NR		VANADIUM	NR
LEAD	43	J	ZINC	NR

COMMENTS:

NR = NOT REQUESTED  
 J = ESTIMATED  
 U = LESS THAN DETECTION LIMIT (ND)

## APPENDIX C

**CDM**

*environmental engineers, scientists,  
planners, & management consultants*

CAMP DRESSER & McKEE

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

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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,

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



DRIVE  
AERO

### Pfohl Brothers Landfill Area C

#### LEGEND:

- Boreholes without landfilled material
- Boreholes with landfilled material
- ✖ Existing fence line
- Inferred boundary of landfill

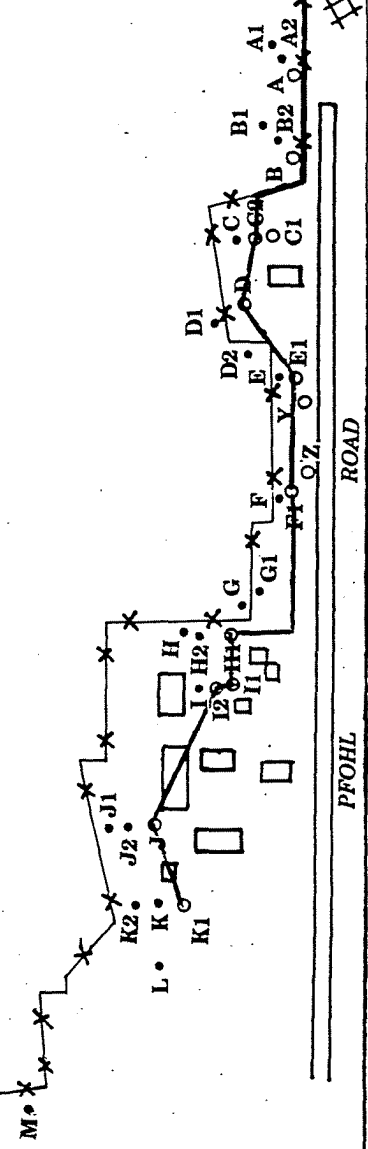


Figure 1

## Boring Location Map - Area C

Pfohl Brothers Landfill, Cheektowaga, New York



environmental engineers, scientists,  
planners & management consultants

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	
<u>PROJECT:</u>	Pfohl Brothers Landfill	<u>CONTRACTOR:</u>	Burlington Environmental, Inc.
<u>WEATHER:</u>	Very cold, snow	<u>INSPECTOR:</u>	MIKE EHNOT
<u>DATE:</u>	December 11, 1992	<u>TIME START/END:</u>	9:16-9:45
<u>SOIL BORING NO.:</u>	A	<u>LOCATION:</u>	73 feet East of gate; 6.5 feet North of fenceline.
<u>LEVEL OF PROTECTION:</u>	MODIFIED 'D'		
<u>MONITORING INSTRUMENT:</u>	HNu		
<u>GENERAL OBSERVATIONS:</u>	Inside East gate of landfill Area C.		
<u>LANDFILL MATERIAL ENCOUNTERED:</u>	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.	0	
6'-8'	Reddish Brown Clay, stiff. Dry.	0	
8'-10'	Reddish Brown Clay, stiff. Slightly moist.	0	



PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, snow

INSPECTOR: MIKE EHNOT

DATE: December 11, 1992

TIME START/END: 10:08-10:26

SOIL BORING NO.: A2

LOCATION: 25 feet NNE of SB A.

LEVEL OF PROTECTION: MODIFIED 'D'

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location was moved in a NNE direction in order to delineate area inside gate.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clay, soft, Trace organic matter. Landfill Material: Many brick fragments, green glass, plastic. Dry.	0



PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, snow

INSPECTOR: MIKE EHNOT

DATE: December 11, 1992

TIME START/END: 10:45-10:58

SOIL BORING NO.: B1

LOCATION: 43 feet NNE of SB B;  
19 feet North of gate.

LEVEL OF PROTECTION: MODIFIED "D"

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location was moved in a NNE direction in order to delineate area inside gate.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clay, Trace organic matter. Slightly moist.	0
2'-4'	Brown Clay, soft. Landfill Material: plastic bags, metal, glass, brick fragments. Dry.	0

PROJECT: Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc.  
WEATHER: Very cold, snow INSPECTOR: MIKE EHNOT  
DATE: December 11, 1992 TIME START/END: 10:58-11:16  
SOIL BORING NO.: B2 LOCATION: 25 feet SSW of SB B1  
LEVEL OF PROTECTION: MODIFIED "D"  
MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location was moved in a SSW direction in order to delineate area inside gate.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
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0-2'	Brown Clay. Landfill Material: brick fragments. Dry.	0
2'-4'	Brown Clay, soft. Landfill Material: plastic, metal, bricks, yellow slag rocks. Dry.	0







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 PROTECTION:      MODIFIED "D"  
MONITORING INSTRUMENT:      HNu

GENERAL OBSERVATIONS:      Location on property of McPeek residence.

LANDFILL MATERIAL ENCOUNTERED:      NO

(RETAIN SAMPLES)

Sample No.      Description      HNu (ppm)

Sample No.	Description	HNu (ppm)
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

PROJECT: Pfohl Brothers Landfill      CONTRACTOR: Burlington Environmental, Inc.  
WEATHER: Very cold, snow      INSPECTOR: MIKE EHNOT  
DATE: December 11, 1992      TIME START/END: 13:35-14:00  
SOIL BORING NO.: D      LOCATION: 40 feet South of fenceline;  
59 feet West of SB C;  
84 feet East of N-S fenceline.  
LEVEL OF PROTECTION: MODIFIED "D"  
MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on property of McPeck residence.

LANDFILL MATERIAL ENCOUNTERED: NO

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
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**

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, breezy

INSPECTOR: MIKE EHNOT

DATE: December 16, 1992

TIME START/END: 9:20-9:30

SOIL BORING NO.: D1

LOCATION: 8 feet North of fence line;  
28 feet East of corner fencepost.

LEVEL OF PROTECTION: MODIFIED 'D'

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location is North of backyard of McPeck residence.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clay, Little F-C Sand, Trace Gravel. Landfill Material: glass, brick fragments. Slightly moist.	0

**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, 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 fence line;  
26.5 feet North of southern fencepost.

LEVEL OF PROTECTION: MODIFIED "D"

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Due to trees and mounds, borehole locations could not be placed between SB D and SB D1.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
------------	-------------	-----------

0-2'

Brown & light brown Clay, Some F-C Sand. Slightly moist to moist.  
Landfill Material: Lots of glass.

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 10, 1992

TIME START/END: 16:36-16:50

SOIL BORING NO.: E

LOCATION: 86 feet West of corner fencepost;  
196 feet East of SB F;  
4.5 feet South of fenceline.

LEVEL OF PROTECTION: MODIFIED "D"

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on vacant lot property.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.

Description

HNu (ppm)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clay And F-C Sand. Landfill Material: glass, plastic, brick fragments. Slightly 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: 8:36-9:16

SOIL BORING NO.: E1

LOCATION: 36 feet due South of SB E.

LEVEL OF PROTECTION: MODIFIED 'D'

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: A swampy area lies between SB E and SB E1; therefore, a borehole could not be placed between them.

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 and light brown Clay. Dry.	0
6'-8'	Reddish Brown Clay, stiff. Dry.	0
8'-10'	Reddish Brown Clay, stiff. Dry.	0

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, snow

INSPECTOR: MIKE EHNOT

DATE: December 10, 1992

TIME START/END: 15:45-16:12

SOIL BORING NO.: F

LOCATION: 7.5 feet South of fence line;  
15 feet East of corner fencepost.

LEVEL OF PROTECTION: MODIFIED 'D'

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on vacant lot property.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
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0-2'	Brown Clay And F-C Sand, Trace organic matter. Moist.	0
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2'-4'	Brown Clay And F-C Sand. Moist. Landfill Material: plastic, metal, glass.	0
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**CAMP DRESSER & MCKEE**

**LANDFILL SOIL BORING LOG**

<u>PROJECT:</u>	Pfohl Brothers Landfill	<u>CONTRACTOR:</u>	Burlington Environmental, Inc.
<u>WEATHER:</u>	Very cold, snow	<u>INSPECTOR:</u>	MIKE EHNOT
<u>DATE:</u>	December 11, 1992	<u>TIME START/END:</u>	8:05-8:36
<u>SOIL BORING NO.:</u>	F1	<u>LOCATION:</u>	44 feet South of fence line; 35 feet East of corner fencepost.
<u>LEVEL OF PROTECTION:</u>	MODIFIED "D"		
<u>MONITORING INSTRUMENT:</u>	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 DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Cold, breezy

INSPECTOR: MIKE EHNOT

DATE: December 16, 1992

TIME START/END: 9:53-10:10

SOIL BORING NO.: G

LOCATION: 6.5 feet North of fenceline;  
13.5 feet East of corner fencepost.

LEVEL OF PROTECTION: MODIFIED 'D'

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on vacant lot property.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
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0-2'	Brown & light brown Clay, Some F-C Sand. Landfill Material: lots of glass, sewer tile, wood.	0
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**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

PROJECT: Pfohl Brothers Landfill      CONTRACTOR: Burlington Environmental, Inc.  
WEATHER: Cold, breezy      INSPECTOR: MIKE EHNOT  
DATE: December 16, 1992      TIME START/END: 12:18-12:30  
SOIL BORING NO.: G1      LOCATION: 8.5 feet South of fenceline;  
66.5 feet East of corner fencepost.  
LEVEL OF PROTECTION:      MODIFIED "D"  
MONITORING INSTRUMENT:      HNu

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)
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0-2'	Black Clay, Little F Sand. Landfill Material: glass bricks, shoe soles, slag. Very moist.	0
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**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

PROJECT: Pfohl Brothers Landfill      CONTRACTOR: Burlington Environmental, Inc.  
WEATHER: Very cold, sunny      INSPECTOR: MIKE EHNOT  
DATE: December 15, 1992      TIME START/END: 11:00-11:28  
SOIL BORING NO.: H      LOCATION: ESE of unpaved driveway;  
 20 feet West of N-S fenceline.  
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'	Brown Clay. Landfill Material: glass, wires, plastic, black slag, cinders. Slightly moist.	0

PROJECT: Pfohl Brothers Landfill CONTRACTOR: Burlington Environmental, Inc.  
WEATHER: Very cold, sunny INSPECTOR: MIKE EHNOT  
DATE: December 15, 1992 TIME START/END: 11:28-11:52  
SOIL BORING NO.: H1 LOCATION: 50 feet due South of SB H  
LEVEL OF PROTECTION: MODIFIED 'D'  
MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on property of Zelasko residence.

LANDFILL MATERIAL ENCOUNTERED: NO

(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.	0
4'-6'	Gray-brown Clay, Little F Sand. Wet to saturated.	0
6'-8'	Gray-brown Clay, Trace to Little Sand. Saturated.	0
8'-10'	Brown Clay, Trace Sand. Saturated.	0

CAMP DRESSER & McKEE

LANDFILL SOIL BORING LOG

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, sunny

INSPECTOR: MIKE EHNOT

DATE: December 15, 1992

TIME START/END: 11:52-12:11

SOIL BORING NO.: H2

LOCATION: 25 feet North of SB H1.

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'

Orange-brown & brown Clay, Little F-C Sand. Landfill Material: glass, plastic (very small amount of landfill material). Dry.

0



PROJECT: Pfohl Brothers Landfill      CONTRACTOR: Burlington Environmental, Inc.  
WEATHER: Very cold, sunny      INSPECTOR: MIKE EHNOT  
DATE: December 15, 1992      TIME START/END: 12:33-12:48  
SOIL BORING NO.: I 1      LOCATION: 50 feet due South of SB I  
LEVEL OF PROTECTION: MODIFIED "D"  
MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on property of Zelasko residence.  
 An obstruction was encountered at a depth of 5 to 6 feet.

LANDFILL MATERIAL ENCOUNTERED: NO

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Reddish Brown Clay, Trace F Sand. Moist.	0
2'-4'	Reddish Brown Clay, Trace F Sand. Wet.	0
4'-6'	Reddish Brown Clay, Trace F Sand. Wet. Obstruction at 5 to 6 feet.	0



**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, sunny

INSPECTOR: MIKE EHNOT

DATE: December 15, 1992

TIME START/END: 12:48-13:26

SOIL BORING NO.: I2

LOCATION: 25 feet North of SB I1.

LEVEL OF PROTECTION: MODIFIED 'D'

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on property of Zelasko residence.  
An obstruction was encountered at a depth of 5 to 6 feet.

LANDFILL MATERIAL ENCOUNTERED: NO

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clayey Sand. Very moist.	0
2'-4'	Brown Clayey Sand. Wet.	0
4'-6'	Brown Clayey Sand. Wet. Obstruction at 5 to 6 feet.	0

**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, Inc.

WEATHER: Very cold, sunny

INSPECTOR: MIKE EHNOT

DATE: December 15, 1992

TIME START/END: 13:26-13:57

SOIL BORING NO.: J

LOCATION: 86 feet South of fenceline;  
32.5 feet NW of building.

LEVEL OF PROTECTION: MODIFIED "D"

MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: 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	
<u>PROJECT:</u>	Pfohl Brothers Landfill	<u>CONTRACTOR:</u>	Burlington Environmental, Inc.
<u>WEATHER:</u>	Very cold, sunny	<u>INSPECTOR:</u>	MIKE EHNOT
<u>DATE:</u>	December 15, 1992	<u>TIME START/END:</u>	13:57-14:29
<u>SOIL BORING NO.:</u>	J1	<u>LOCATION:</u>	50 feet North of SB J.
<u>LEVEL OF PROTECTION:</u>	MODIFIED 'D'		
<u>MONITORING INSTRUMENT:</u>	HNu		
<u>GENERAL OBSERVATIONS:</u>	Location on property of Zelasko residence.		
<u>LANDFILL MATERIAL ENCOUNTERED:</u>	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.	0	
4'-6'	Brown Clay, soft. Landfill Material: glass. Wet.	0	

CAMP DRESSER & McKEE

LANDFILL SOIL BORING LOG

PROJECT: Pfohl Brothers Landfill

CONTRACTOR: Burlington Environmental, 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 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'	Brown Clay, soft. Landfill Material: glass, bricks, wood. Slightly moist.	0

**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

PROJECT: Pfohl Brothers Landfill . CONTRACTOR: Burlington Environmental, Inc.  
WEATHER: Very cold, sunny INSPECTOR: MIKE EHNOT  
DATE: December 15, 1992 TIME START/END: 14:53-15:22  
SOIL BORING NO.: K LOCATION: 17.5 feet West of barn;  
 61.5 feet South of fence line.  
LEVEL OF PROTECTION: MODIFIED 'D'  
MONITORING INSTRUMENT: HNu

GENERAL OBSERVATIONS: Location on property of R. Pfohl residence.

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

**CAMP DRESSER & McKEE** **LANDFILL SOIL BORING LOG**

<u>PROJECT:</u> Pfohl Brothers Landfill	<u>CONTRACTOR:</u> Burlington Environmental, Inc.
<u>WEATHER:</u> Very cold, sunny	<u>INSPECTOR:</u> MIKE EHNOT
<u>DATE:</u> December 15, 1992	<u>TIME START/END:</u> 15:22-15:33
<u>SOIL BORING NO.:</u> K1	<u>LOCATION:</u> 25 feet due South of SB K.
<u>LEVEL OF PROTECTION:</u> MODIFIED "D"	
<u>MONITORING INSTRUMENT:</u> HNu	

GENERAL OBSERVATIONS: Location on property of R. Pfohl residence.

LANDFILL MATERIAL ENCOUNTERED: NO

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Dark Brown Clay, soft. Dry.	0
2'-4'	Orange-brown Clay, Trace F-M Sand. Moist.	0
4'-6'	Orange-brown Clay, Trace F-M Sand. Saturated.	0
6'-8'	Reddish Brown Clay, Trace F Sand, Trace Silt. Dry.	0
8'-10'	Reddish Brown Clay, Trace rock fragments, gravel-sized. Dry.	0

**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

<u>PROJECT:</u>	Pfohl Brothers Landfill	<u>CONTRACTOR:</u>	Burlington Environmental, Inc.
<u>WEATHER:</u>	Very cold, sunny	<u>INSPECTOR:</u>	MIKE EHNOT
<u>DATE:</u>	December 15, 1992	<u>TIME START/END:</u>	15:33-16:03
<u>SOIL BORING NO.:</u>	K2	<u>LOCATION:</u>	25 feet due North of SB K; 36.5 feet South of fenceline.
<u>LEVEL OF PROTECTION:</u>	MODIFIED "D"		
<u>MONITORING INSTRUMENT:</u>	HNu		

GENERAL OBSERVATIONS: Location on property of R. Pfohl residence.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Brown Clay, Trace F Sand. Landfill Material: black shiny slag. Slightly moist.	0
2'-4'	Brown Clay, Trace F Sand. Landfill Material: yellow rock fragments, lots of glass, brick fragments. Slightly moist.	0

**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

<u>PROJECT:</u>	Pfohl Brothers Landfill	<u>CONTRACTOR:</u>	Burlington Environmental, Inc.
<u>WEATHER:</u>	Very cold, sunny	<u>INSPECTOR:</u>	MIKE EHNOT
<u>DATE:</u>	December 15, 1992	<u>TIME START/END:</u>	16:03-16:32
<u>SOIL BORING NO.:</u>	L	<u>LOCATION:</u>	90 feet due West and 10 feet further South of SB K.
<u>LEVEL OF PROTECTION:</u>	MODIFIED "D"		
<u>MONITORING INSTRUMENT:</u>	HNu		

GENERAL OBSERVATIONS: Location on property of R. Pfohl residence.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
0-2'	Dark Brown Clay, soft, Trace F Sand. Moist.	0
2'-4'	Orange-brown and Brown Clay, Trace F Sand. Landfill Material: lots of black shiny slag, glass.	0



**CAMP DRESSER & McKEE**

**LANDFILL SOIL BORING LOG**

<u>PROJECT:</u>	Pfohl Brothers Landfill	<u>CONTRACTOR:</u>	Burlington Environmental, Inc.
<u>WEATHER:</u>	Very cold, breezy	<u>INSPECTOR:</u>	MIKE EHNOT
<u>DATE:</u>	December 16, 1992	<u>TIME START/END:</u>	11:44-12:00
<u>SOIL BORING NO.:</u>	M	<u>LOCATION:</u>	8.5 feet West of fenceline; 95 feet North of corner fencepost.
<u>LEVEL OF PROTECTION:</u>	MODIFIED "D"		
<u>MONITORING INSTRUMENT:</u>	HNu		

GENERAL OBSERVATIONS: Location on property of Pfohl Trucking Co.

LANDFILL MATERIAL ENCOUNTERED: YES

(RETAIN SAMPLES)

Sample No.	Description	HNu (ppm)
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Sample No.	Description	HNu (ppm)
0-2'	Brown Clay, Little light brown F-M Sand. Landfill Material: lots of bricks, black shiny slag. 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 10, 1992      TIME START/END: 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)

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 DRESSER & McKEE

LANDFILL SOIL BORING LOG

<u>PROJECT:</u>	Pfohl Brothers Landfill	<u>CONTRACTOR:</u>	Burlington Environmental, Inc.
<u>WEATHER:</u>	Very cold, snow	<u>INSPECTOR:</u>	MIKE EHNOT
<u>DATE:</u>	December 10, 1992	<u>TIME START/END:</u>	14:50-15:26
<u>SOIL BORING NO.:</u>	Z	<u>LOCATION:</u>	64 feet South of fenceline; 22 feet West of corner fencepost; 30 feet North of Pfohl Road shoulder.
<u>LEVEL OF PROTECTION:</u>	MODIFIED "D"		
<u>MONITORING INSTRUMENT:</u>	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 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

TABLE 1

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

COMPOUND	UNITS	MW 2S	MW 2D
Chloromethane	PPB	ND	ND
Bromomethane	PPB	ND	ND
Vinyl chloride	PPB	ND	ND
Chloroethane	PPB	ND	ND
Methylene chloride	PPB	12	ND
Acetone	PPB	ND	ND
Carbon disulfide	PPB	ND	ND
1,1-Dichloroethene	PPB	ND	ND
1,1-Dichloroethane	PPB	270	ND
trans-1,2-Dichloroethene	PPB	ND	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	PPB	ND	ND
Bromodichloromethane	PPB	ND	ND
1,1,2,2-Tetrachloroethane	PPB	ND	ND
1,2-Dichloropropane	PPB	ND	ND
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	PPB	ND	ND
Total Chlorotoluene	PPB	ND	ND
Total Dichlorobenzene	PPB	ND	ND

TABLE 2

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

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW 7D	BACKGROUND	BACKGROUND
						MW 6D	MW 18D
Chloromethane	PPB	ND	ND	ND	ND	ND	ND
Bromomethane	PPB	ND	ND	ND	ND	ND	ND
Vinyl chloride	PPB	ND	ND	ND	ND	ND	ND
Chloroethane	PPB	ND	ND	ND	ND	ND	ND
Methylene chloride	PPB	ND	ND	ND	ND	ND	ND
Acetone	PPB	ND	ND	ND	ND	ND	ND
Carbon disulfide	PPB	ND	ND	ND	ND	ND	ND
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	PPB	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	PPB	ND	ND	ND	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	ND	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	ND
1,1,2-Trichloroethane	PPB	ND	ND	ND	ND	ND	ND
Benzene	PPB	ND	ND	ND	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	ND	ND
2-Hexanone	PPB	ND	ND	ND	ND	ND	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	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



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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
Chloromethane	PPB	ND	ND	ND	ND	ND	ND
Bromomethane	PPB	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	PPB	ND	ND	ND	ND	ND	ND
Acetone	PPB	ND	ND	ND	ND	ND	ND
Carbon disulfide	PPB	ND	ND	ND	ND	ND	ND
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	PPB	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	PPB	ND	ND	ND	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	ND	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	ND
1,1,2-Trichloroethane	PPB	ND	ND	ND	ND	ND	ND
Benzene	PPB	ND	5	ND	2	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	ND	ND
2-Hexanone	PPB	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	PPB	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	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



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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	ND	ND
Bromomethane	PPB	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	PPB	ND	ND	ND	ND	ND	ND	ND
Chloroethane	PPB	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	PPB	ND	ND	ND	ND	ND	ND	ND
Acetone	PPB	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	PPB	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	PPB	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	PPB	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethane	PPB	ND	ND	ND	ND	ND	ND	ND
Chloroform	PPB	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	PPB	ND	ND	ND	ND	ND	ND	ND
2-Butanone	PPB	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	PPB	ND	ND	ND	ND	ND	ND	ND
Carbontetrachloride	PPB	ND	ND	ND	ND	ND	ND	ND
Vinyl Acetate	PPB	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	PPB	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	PPB	ND	ND	ND	ND	ND	ND	ND
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	ND
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	ND	ND	ND
Tetrachloroethene	PPB	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
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

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

COMPOUND	UNITS	MW 2S	MW 2D
Alpha-BHC	UG/L	ND	ND
Beta-BHC/Gamma-BHC*	UG/L	ND	ND
Delta-BHC	UG/L	ND	ND
Heptachlor	UG/L	ND	ND
Aldrin	UG/L	ND	ND
Heptachlor Epoxide	UG/L	ND	ND
Endosulfan I	UG/L	ND	ND
4,4'-DDE	UG/L	ND	ND
Dieldrin	UG/L	ND	ND
Endrin	UG/L	ND	ND
Endrin Aldehyde	UG/L	ND	ND
Endosulfan II	UG/L	ND	ND
4,4"-DDD	UG/L	ND	ND
Endosulfan Sulfate	UG/L	ND	ND
4,4'-DDT	UG/L	ND	ND
Endrin Ketone	UG/L	ND	ND
Methoxychlor	UG/L	ND	ND
Chlordane	UG/L	ND	ND
Toxaphene	UG/L	ND	ND

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

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW 7D	BACKGROUND	BACKGROUND
						MW 6D	MW 18D
Alpha-BHC	UG/L	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	ND
Aldrin	UG/L	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	UG/L	ND	ND	ND	ND	ND	ND
Endosulfan I	UG/L	ND	ND	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	ND	ND	ND	ND	ND
4,4"-DDD	UG/L	ND	ND	ND	ND	ND	ND
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	ND	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	ND	ND

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

COMPOUND	UNITS	MW 19D	MW 20D	MW 21D	MW 22D	MW 23D	MW 23DD	BACKGROUND	BACKGROUND
								MW 6D	MW 18D
Alpha-BHC	UG/L	ND	ND		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	ND	ND	ND
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	ND		ND	ND	ND	ND	ND
Dieldrin	UG/L	ND	ND		ND	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	ND	ND		ND	ND	ND	ND	ND
4,4"-DDD	UG/L	ND	ND		ND	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	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

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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	ND	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	ND	ND	ND	ND	ND	ND
Aldrin	UG/L	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	UG/L	ND	ND	ND	ND	ND	ND
Endosulfan I	UG/L	ND	ND	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	ND	ND	ND	ND	ND
4,4"-DDD	UG/L	ND	ND	ND	ND	ND	ND
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	ND	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	ND	ND

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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
Alpha-BHC	UG/L	ND	ND	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	ND	ND	ND
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	ND	ND	ND	ND	ND	ND
Dieldrin	UG/L	ND	ND	ND	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	ND	ND	ND	ND	ND	ND	ND
4,4"-DDD	UG/L	ND	ND	ND	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	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

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

COMPOUND	UNITS	MW 2S	MW 2D
Aroclor-1016	UG/L	ND	ND
Aroclor-1221	UG/L	ND	ND
Aroclor-1232	UG/L	ND	ND
Aroclor-1242	UG/L	ND	ND
Aroclor-1248	UG/L	ND	ND
Aroclor-1254	UG/L	ND	ND
Aroclor-1260	UG/L	ND	ND

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

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW 7D	BACKGROUND	BACKGROUND
						MW 6D	MW 18D
Aroclor-1016	UG/L	ND	ND	ND	ND	ND	ND
Aroclor-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	ND	ND
Aroclor-1254	UG/L	ND	ND	ND	ND	ND	ND
Aroclor-1260	UG/L	ND	ND	ND	ND	ND	ND



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

COMPOUND	UNITS	MW 19D	MW 20D	MW 21D	MW 22D	MW 23D	MW 230D	BACKGROUND	BACKGROUND
								MW 60	MW 18D
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	ND	ND	ND	ND
Aroclor-1260	UG/L	ND	ND		ND	ND	ND	ND	ND

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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
Aroclor-1016	UG/L	ND	ND	ND	ND	ND	ND
Aroclor-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	ND	ND
Aroclor-1254	UG/L	ND	ND	ND	ND	ND	ND
Aroclor-1260	UG/L	ND	ND	ND	ND	ND	ND

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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
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	ND	ND	ND	ND
Aroclor-1260	UG/L	ND	ND	ND	ND	ND	ND	ND

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

COMPOUND	UNITS	MW 2S	MW 2D
Arsenic	UG/L	LT 10	LT 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

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

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW 7D	BACKGROUND	BACKGROUND
						MW 6D	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









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

COMPOUND	UNITS	MW 2S	MW 2D
pH		7.76	7.2
Conductivity		1500	550
Temperature ( C )		6	6.5
Dissolved Oxygen (mg/l)		8.0	6
Turbidity ( ntu )		44	12

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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
pH		7.15	7.4	6.61	7.25	7.17	7.18
Conductivity		600	400	600	325	925	420
Temperature ( C )		8	6.0	6.0	6.5	8	5.5
Dissolved Oxygen (mg/L)		3	5.0	8	8	7.0	5
Turbidity ( ntu )		4	6	100+	10	25	1.1

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

COMPOUND	UNITS	MW 19D	MW 20D	MW 21D	MW 22D	MW 23D	MW 23DD	BACKGROUND	BACKGROUND
								MW 6D	MW 18D
pH		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

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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
pH		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

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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
pH		7.06	7.35	7.81	7.39	7.35	7.01	7.04
Conductivity		85	325	300	300	360	1050	1950
Temperature ( C )		5.0	6.0	7.1	7.5		5	6.2
Dissolved Oxygen (mg/l)		6	8	8.0	8	9.2	8	5.5
Turbidity ( ntu )		10	7		18	17	14	16

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PFOHL BROTHERS LANDFILL 09-15-043  
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	ND
1 2-Dichlorobenzene	UG/L	ND	ND
Benzyl Alcohol	UG/L	ND	ND
2-Methylphenol	UG/L	ND	ND
bis(2-chloroisopropyl)Ether	UG/L	ND	ND
Hexachloroethane	UG/L	ND	ND
4-Methylphenol	UG/L	ND	ND
N-Nitroso-di-propylamine	UG/L	ND	ND
Nitrobenzene	UG/L	ND	ND
Isophorone	UG/L	ND	ND
2-Nitrophenol	UG/L	ND	ND
2 4-Dimethylphenol	UG/L	ND	ND
bis(2-chloroethoxy)Methane	UG/L	ND	ND
2 4-Dichlorophenol	UG/L	ND	ND
1 2 4-Trichlorobenzene	UG/L	ND	ND
Naphthalene	UG/L	ND	ND
Benzoic acid	UG/L	ND	ND
4-Chloroaniline	UG/L	ND	ND
Hexachlorodutadiene	UG/L	ND	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	ND
Acenaphthylene	UG/L	ND	ND
Dimethyl Phthalate	UG/L	ND	ND
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	ND
4-Nitroaniline	UG/L	ND	ND
4-Bromophenyl-phenylether	UG/L	ND	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

TABLE 26 (cont)

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

COMPOUND	UNITS	MW 2S	MW 2D
Fluoranthene	UG/L	ND	ND
Pyrene	UG/L	ND	ND
Butylbenzylphthalate	UG/L	ND	ND
Chrysene	UG/L	ND	ND
Benzo (a) Anthracene	UG/L	ND	ND
bis(2-Ethylhexyl)Phthalate	UG/L	ND	ND
Di-N-Octyl Phthalate	UG/L	ND	ND
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

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

COMPOUND	UNITS	MW 1D	MW 3D	MW 4D	MW 7D	BACKGROUND	BACKGROUND
						MW 6D	MW 18D
Phenol	UG/L	ND	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
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	ND	ND	ND	ND	ND
bis(2-chloroisopropyl)Ether	UG/L	ND	ND	ND	ND	ND	ND
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	ND	ND
Nitrobenzene	UG/L	ND	ND	ND	ND	ND	ND
Isophorone	UG/L	ND	ND	ND	ND	ND	ND
2-Nitrophenol	UG/L	ND	ND	ND	ND	ND	ND
2 4-Dimethylphenol	UG/L	ND	ND	ND	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	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	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	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	ND	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	ND	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



TABLE 27 (cont)

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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	MW 18D
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	ND	ND
Chrysene	UG/L	ND	ND	ND	ND	ND	ND
Benzo (a) Anthracene	UG/L	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)Phthalate	UG/L	ND	ND	ND	ND	ND	ND
Di-N-Octyl Phthalate	UG/L	ND	ND	ND	ND	ND	ND
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	ND	ND	ND	ND
Benzo(b/k)Fluoranthene	UG/L	ND	ND	ND	ND	ND	ND





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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
Phenol	UG/L	ND	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
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	ND	ND	ND	ND	ND
bis(2-chloroisopropyl)Ether	UG/L	ND	ND	ND	ND	ND	ND
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	ND	ND
Nitrobenzene	UG/L	ND	ND	ND	ND	ND	ND
Isophorone	UG/L	ND	ND	ND	ND	ND	ND
2-Nitrophenol	UG/L	ND	ND	ND	ND	ND	ND
2 4-Dimethylphenol	UG/L	ND	ND	ND	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	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	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	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	ND	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	ND	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

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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
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	ND	ND
Chrysene	UG/L	ND	ND	ND	ND	ND	ND
Benzo (a) Anthracene	UG/L	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)Phthalate	UG/L	ND	ND	ND	ND	ND	ND
Di-N-Octyl Phthalate	UG/L	ND	ND	ND	ND	ND	ND
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	ND	ND	ND	ND
Benzo(b/k)Fluoranthene	UG/L	ND	ND	ND	ND	ND	ND

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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
Phenol	UG/L	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	UG/L	ND	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	ND
1 4-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND
1 2-Dichlorobenzene	UG/L	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	UG/L	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	UG/L	ND	ND	ND	ND	ND	ND	ND
bis(2-chloroisopropyl)Ether	UG/L	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	UG/L	ND	ND	ND	ND	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	ND	ND	ND	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	ND
2 4-Dichlorophenol	UG/L	ND	ND	ND	ND	ND	ND	ND
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	ND
4-Chloro-3-Methylphenol	UG/L	ND	ND	ND	ND	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	ND	ND	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	ND	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	ND	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	ND	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	ND	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

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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
Pyrene	UG/L	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	UG/L	ND	ND	ND	ND	ND	ND	ND
Chrysene	UG/L	ND	ND	ND	ND	ND	ND	ND
Benzo (a) Anthracene	UG/L	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)Phthalate	UG/L	ND	ND	ND	ND	ND	ND	ND
Di-N-Octyl Phthalate	UG/L	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	UG/L	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	UG/L	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)Anthracene	UG/L	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)Perylene	UG/L	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	UG/L	ND	ND	ND	ND	ND	ND	ND
Benzo(b/k)Fluoranthene	UG/L	ND	ND	ND	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043  
CHEEKTOWAGA, ERIE CO.  
AREA A SOIL BORINGS

COMPOUND	UNITS	B-18 6'-8'	B-18 10'-12'	MW-18D 0'-2'	MW-18D 2'-4'	B-19SS 6'-8'	B-19SS 10'-12'
Chloromethane	PPB	ND	ND	ND	ND	ND	ND
Bromomethane	PPB	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	PPB	ND	ND	ND	ND	30	5
Acetone	PPB	ND	ND	ND	ND	ND	ND
Carbon disulfide	PPB	ND	ND	ND	ND	ND	ND
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	PPB	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	PPB	ND	ND	ND	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	ND	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	ND
1,1,2-Trichloroethane	PPB	ND	ND	ND	ND	ND	ND
Benzene	PPB	ND	ND	ND	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	ND	ND
2-Hexanone	PPB	ND	ND	ND	ND	ND	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	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



PFOHL BROTHERS LANDFILL 09-15-043  
CHEEKTOWAGA, ERIE CO.  
AREA A SOIL BORINGS

COMPOUND	UNITS	B-18	B-18	MW-18D	MW-18D	B-19SS	B-19SS
		6'-8'	10'-12'	0'-2'	2'-4'	6'-8'	10'-12'
Phenol		ND	ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND	ND
Bis (2-Chloroethyl) Ether		ND	ND	ND	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	ND	ND	ND
Benzyl Alcohol		ND	ND	ND	ND	ND	ND
2-Methylphenol		ND	ND	ND	ND	ND	ND
bis(2-chloroisopropyl)Ether		ND	ND	ND	ND	ND	ND
Hexachloroethane		ND	ND	ND	ND	ND	ND
4-Methylphenol		ND	ND	ND	ND	ND	ND
N-Nitroso-di-propylamine		ND	ND	ND	ND	ND	ND
Nitrobenzene		ND	ND	ND	ND	ND	ND
Isophorone		ND	ND	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	ND
Hexachlorodutadiene		ND	ND	ND	ND	ND	ND
4-Chloro-3-Methylphenol		ND	ND	ND	ND	ND	ND
2-Methylnaphthalene		ND	ND	ND	ND	110	ND
Hexachlorocyclopentadiene		ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND
2,4,5-trichlorophenol		ND	ND	ND	ND	ND	ND
2-Chloronaphthalene		ND	ND	ND	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-Nitrophenol		ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		ND	ND	ND	ND	ND	ND
Fluorene		ND	ND	ND	ND	2200	ND
4-Chlorophenyl-phenylether		ND	ND	ND	ND	ND	ND
Diethylphthalate		ND	ND	ND	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-Bromophenyl-phenylether		ND	ND	ND	ND	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

PFOHL BROTHERS LANDFILL 09-15-043  
CHEEKTOWAGA, ERIE CO.  
AREA A SOIL BORINGS

COMPOUND	UNITS	B-18 6'-8'	B-18 10'-12'	MW-18D 0'-2'	MW-18D 2'-4'	B-19SS 6'-8'	B-19SS 10'-12'
Fluoranthene		390	ND	1400	280	21000	ND
Pyrene		310	ND	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		ND	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		ND	ND	ND	ND	2000	ND
Benzo(g,h,i)Perylene		ND	ND	500	ND	2800	ND
3-Nitroaniline		ND	ND	ND	ND	ND	ND
Benzo(b/k)Fluoranthene		190	ND	ND	ND	10000	ND

PFOHL BROTHERS LANDFILL 09-15-043  
CHEEKTOWAGA, ERIE CO.  
AREA A SOIL BORINGS

COMPOUND	UNITS	B-18 6'-8'	B-18 10'-12'	MW-18D 0'-2'	MW-18D 2'-4'	B-19SS 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
Aroclor-1242	UG/KG	ND	ND	ND	ND	ND	ND
Aroclor-1248	UG/KG	ND	ND	ND	ND	ND	ND
Aroclor-1254	UG/KG	ND	ND	1980	250	ND	ND
Aroclor-1260	UG/KG	ND	ND	ND	ND	ND	ND

PFOHL BROTHERS LANDFILL 09-15-043  
CHEEKTOWAGA, ERIE CO.  
AREA A SOIL BORINGS

COMPOUND	UNITS	B-18 6'-8'	B-18 10'-12'	MW-18D 0'-2'	MW-18D 2'-4'	B-19SS 6'-8'	B-19SS 10'-12'
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	LT 0.1	0.1	0.1	LT 0.1	LT 0.1