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ECKENFELDER INC.

**RFI REPORT FOR THE
PRETREATMENT PLANT SWMU
CIBA-GEIGY SITE
GLENS FALLS, NEW YORK**

**VOLUME I
TEXT AND APPENDICES A THROUGH F**

Prepared for:

**Hercules Incorporated
Hercules Plaza
Wilmington, Delaware 19894**

Prepared by:

**ECKENFELDER INC.®
1200 MacArthur Boulevard
Mahwah, New Jersey 07430**

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RFI SUMMARY REPORT

INTRODUCTION

The goal of this investigation was to complete the characterization and evaluation of the extent of soil and groundwater contamination at the Pretreatment Plant SWMU. To achieve this goal, the following objectives were identified:

- Evaluate the spatial extent of contaminated soil in the eastern portion of the Pretreatment Plant where constituent concentrations were found to exceed soil action levels and in areas where cadmium concentrations are elevated relative to the majority of the Pretreatment Plant.
- Evaluate the spatial distribution of hazardous constituent concentrations in groundwater which exceed Groundwater Protection Concentrations (GWPCs) (i.e., cyanide) and evaluate if off-site migration of hazardous constituents in groundwater has occurred.

SOIL AND GROUNDWATER INVESTIGATION

Soil borings were drilled around the eastern perimeter and in the central portion of the Pretreatment Plant area. Samples from these borings were analyzed in the laboratory.

Water levels were measured in the wells, piezometers and staff gauges associated with the Pretreatment Plant area. Groundwater samples from the existing piezometers and monitoring wells and from locations in the western portion of the Pretreatment Plant area and south of the Feeder Canal, along an area southeast of the Pretreatment Plant area, were analyzed for total cyanide.

CONCLUSIONS

The following conclusions are made based on the findings of the soil and groundwater investigations conducted for this RFI:

Soil Investigation

- The highest concentrations of hazardous constituents in the soil are within the easternmost portion of the Pretreatment Plant area and decrease markedly away from this area.
- In a small area within the central portion of the Pretreatment Plant area, cadmium concentrations are elevated slightly above concentrations in surrounding areas.
- The maximum concentrations of constituents in the soils were typically in the zero- to two-foot depth interval.

Groundwater Investigation

- Cyanide concentrations in the groundwater are highest beneath the area extending from north of Tank T-110 to the vicinity of piezometer P-6. To the west, south and east, cyanide concentrations steadily decrease. The northern extent of the high concentrations is limited by the stream located to the north, since this serves as a groundwater flow divide.
- Cyanide concentrations exceed the GWPC to the northern, eastern and southern boundaries of the Pretreatment Plant area. Along the western border of the site, concentrations decrease to below or near the GWPC. Concentrations in two of the four samples collected south of the Feeder Canal exceed the GWPC.

RECOMMENDATIONS

A site-specific risk assessment was initiated to establish soil cleanup levels for the Pretreatment Plant SWMU. A Supplemental RFI Report will be submitted presenting the results of the risk assessment and recommendations regarding cleanup levels for the desired post-remedial uses of the Pretreatment Plant SWMU. If the risk assessment indicates a need for modifications to the previously submitted "Corrective Measure Study for On-Site Soil and Groundwater, CIBA-GEIGY Site, Glens Falls, New York" (ECKENFELDER Engineering P.C., August 1994) (referred to as "CMS Report") with respect to soils at the Pretreatment Plant SWMU an addendum to the CMS Report will be submitted.

Concentrations of total cyanide in the groundwater exceed the GWPC within the overburden water-bearing zone beneath the Pretreatment Plant SWMU and off site. Based on the findings in this investigation, an addendum to the CMS Report is recommended to address corrective measures for groundwater in the overburden at the Pretreatment Plant SWMU.

The Supplemental RFI Report will be submitted within 60 days of the submittal of this report. The Addendum to the CMS Report will be submitted within 60 days of receiving approval of this report and the Supplemental RFI Report.

1.0 INTRODUCTION

A RCRA Facility Assessment (RFA) of the Pretreatment Plant Solid Waste Management Unit (SWMU) at the CIBA-GEIGY Site in the Town of Queensbury near Glens Falls, New York (Figure 1-1) was conducted pursuant to the 6 NYCRR Part 373 Hazardous Waste Management (HWM) Permit and the Hazardous Solid Waste Amendments (HSWA) Permit for the site. Based on the findings of the RFA soil investigation, as presented in the report entitled "RFA Sampling Visit, Pretreatment Plant, CIBA-GEIGY Site, Glens Falls, New York" (ECKENFELDER Engineering P.C., July 1992) (referred to hereafter as the "RFA-SV Report"), the New York State Department of Environmental Conservation (NYSDEC) and the U.S. Environmental Protection Agency (USEPA) issued a notification to Hercules in a letter dated October 29, 1992 that a RCRA Facility Investigation (RFI) was required for the Pretreatment Plant SWMU. This report presents the findings of the RFI of the Pretreatment Plant SWMU.

The notification requiring a RFI was issued prior to the completion of the groundwater investigation for the RFA. The RFA groundwater investigation included the installation of monitoring wells, based on the results of the water level monitoring presented in the RFA-SV Report, and the sampling of groundwater from these wells. In the notification, the Agencies stated that the development of the RFI work plan could be postponed until the results of the groundwater sampling from the RFA monitoring wells were available. The results of the RFA groundwater investigation were submitted upon completion of one round of groundwater quality sampling (second quarter 1993) in an addendum to the RFA-SV Report, entitled "Groundwater Addendum to RFA Report for Pretreatment Plant SWMU, CIBA-GEIGY Plant Site, Glens Falls, New York" (ECKENFELDER Engineering P.C., September 1993) (hereafter referred to as the "RFA Groundwater Addendum Report"). Although the Work Plan for the RFA ["Work Plan for RFA Sampling Visit at Pretreatment Plant, CIBA-GEIGY Site, Glens Falls, New York" (ECKENFELDER INC., September 1991)] specified that the evaluation of groundwater would include two quarters of sampling from the Pretreatment Plant monitoring wells, the RFA Groundwater Addendum Report was submitted based on the results of only one round to expedite the completion of the RFA and the initiation of the RFI. An expeditious initiation of the RFI was intended



SOURCE: GLENS FALLS, N.Y. (1966)
HUDSON FALLS, N.Y. (1966)
N.Y. 7.5' QUADRANGLE



2000 0 2000
scale feet

FIGURE I-1

PRETREATMENT PLANT LOCATION MAP

HERCULES INCORPORATED
CIBA-GEIGY SITE
GLENS FALLS, N.Y.

ECKENFELDER Nashville, Tennessee
INC. Mahwah, New Jersey

to allow the Corrective Measure Study (CMS) for the Pretreatment Plant SWMU to be incorporated into, and conducted on the same schedule as the CMS for the main plant site. However, approval of the RFI Work Plan was not received in time for the RFI data to be incorporated into the CMS. Therefore, the evaluations for the Pretreatment Plant SWMU in the CMS Report ["Corrective Measure Study for On-Site Soil and Groundwater" (ECKENFELDER Engineering P.C., August 1994)] are based on the RFA sampling results. The results of the second quarter of sampling were presented in the 1993 Third Quarter Groundwater Monitoring Report (ECKENFELDER INC., December 1993).

The original draft of the Work Plan was submitted to the NYSDEC and USEPA on November 5, 1993. Comments on the draft work plan were provided by the Agencies in letters dated February 17, 1994 and March 8, 1994 and in a meeting between Hercules, ECKENFELDER INC., and the Agencies on March 10, 1994. The Work Plan was revised based on these comments and submitted to the Agencies on April 20, 1994. On June 7, 1994, the Agencies issued a letter conditionally approving the revised Work Plan.

1.1 GOAL AND OBJECTIVES

The goal of this investigation was to complete the characterization and evaluation of the extent of soil and groundwater contamination at the Pretreatment Plant SWMU. To achieve this goal, the following objectives were identified:

- Further evaluate the spatial extent of contaminated soil in the eastern portion of the Pretreatment Plant area where constituent concentrations were found to exceed action levels during the RFA.
- Evaluate the spatial extent of soil with concentrations of cadmium elevated relative to the majority of the Pretreatment Plant area in the vicinity of boring PT-8.
- Refine the interpretation of groundwater flow in the overburden.

- Evaluate the spatial distribution of hazardous constituent concentrations in groundwater which exceed the Groundwater Protection Concentrations (GWPCs) listed in Table V-2 of the HWM permit, and evaluate if off-site migration of hazardous constituents in groundwater has occurred.

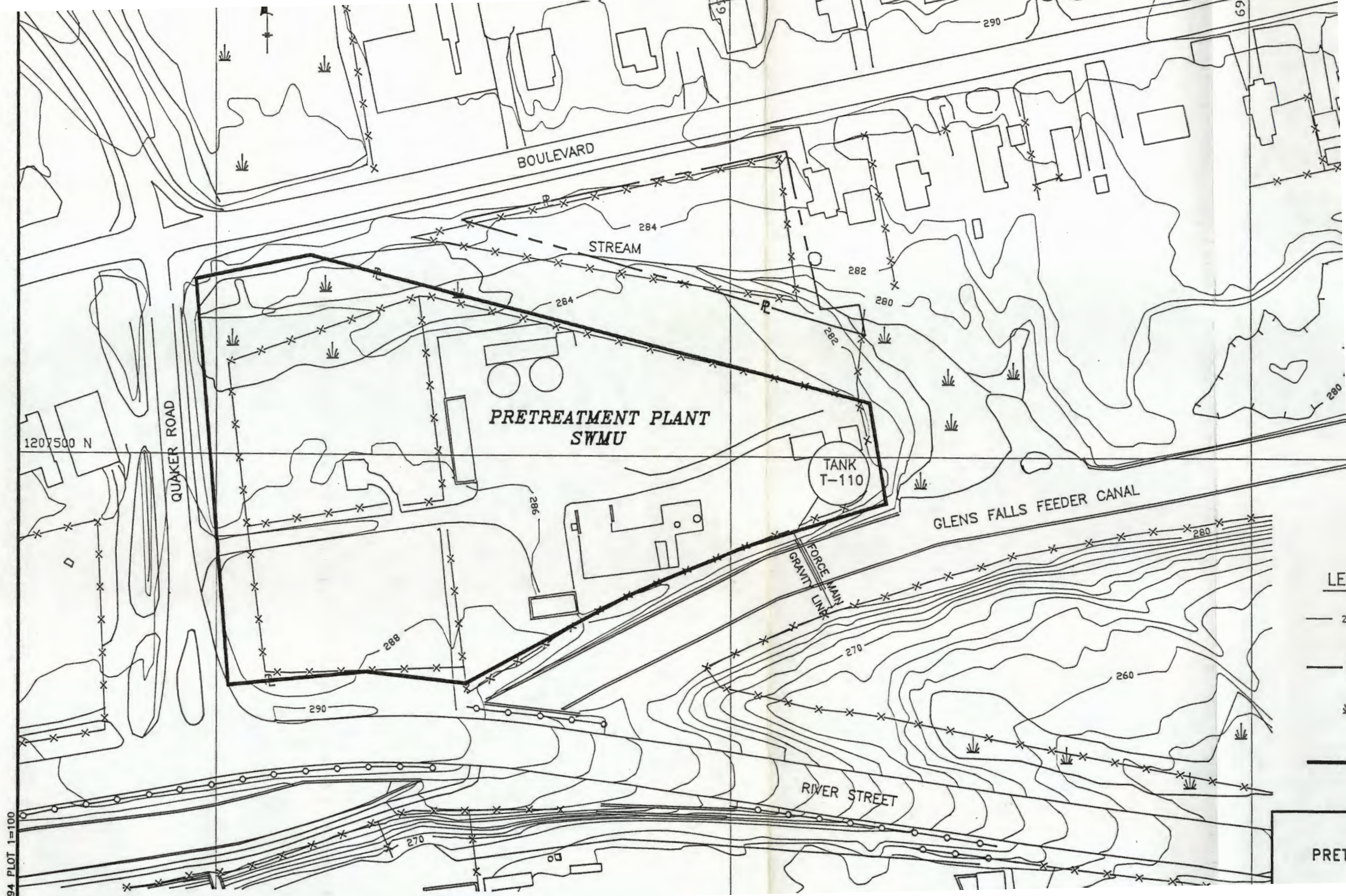
The evaluation of cadmium concentrations in the soil near boring PT-8 was requested by the Agencies in their February 17, 1994 letter.

1.2 SITE DESCRIPTION

The Pretreatment Plant SWMU is part of the CIBA-GEIGY Site, which is located in the Town of Queensbury in Warren County, New York, just east of the City of Glens Falls (Figure 1-1). It occupies approximately four acres of the site, situated north of the Glens Falls Feeder Canal and River Street and east of Quaker Road (Figure 1-2).

The topography of the Pretreatment Plant SWMU is generally flat (see Figure 1-2) and consists of both paved and unpaved surfaces. The eastern two-thirds of the Pretreatment Plant area is predominantly paved surfaces, and remnant foundations mark the locations of several former structures. Several operating structures exist here, including a treatment building and an above-ground wastewater storage tank. The western one-third of the Pretreatment Plant area consists of open fields with grass and other vegetation. Directly to the north and east are vegetated and marshy areas that grade away from the plant. A small stream flows near the northern boundary of the Pretreatment Plant area and into a marshy area east of the Pretreatment Plant. This marsh area drains to the Feeder Canal through an open section in the northern wall of the Feeder Canal. The Feeder Canal is situated adjacent to the Pretreatment Plant area and comprises much of its southern boundary. South of the Feeder Canal, the land surface slopes to the south-southeast towards another marsh area and stream situated in a topographically low area. Paved roads (River Street and Quaker Road) comprise the remainder of the southern and western boundaries of the Pretreatment Plant area, respectively.

The Pretreatment Plant is situated in an area of mixed development consisting of industrial, commercial and residential properties. The property adjacent to the



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northern boundary of the Pretreatment Plant area is a corridor for electrical power lines operated by the Niagara Mohawk Power Corporation. The strip of property directly east of the Pretreatment Plant is denoted in the Town of Queensbury Tax Assessment Office as being residential. However, it is not a buildable lot because it is very narrow and isolated. Immediately beyond this strip to the east is property associated with the Feeder Canal and owned by the State of New York.

1.3 HISTORY AND OPERATION

In 1972 through 1973, Hercules constructed a wastewater treatment plant (now the Pretreatment Plant) to treat the wastewater generated at the main plant site prior to discharge to the Hudson River. The treatment process removed solids by settling and neutralized acidity with slaked lime. A second treatment stage was added in 1974 through 1975, which removed heavy metals by closer control of pH in addition to utilizing fine sand and pressure filtration. Wastewater from the industrial sewer was fed into a 420,000 gallon holding tank (tank T-110). From the holding tank, the water was then piped to the neutralization tanks for pH adjustment. The water was then transferred to the clarifiers. The top water from the clarifiers was passed through sand filters. Water passing through the sand filters was discharged to the Hudson River until 1983, when it was diverted to the effluent pump station and pumped to the City of Glens Falls Wastewater Treatment Plant (City WWTP) via a dedicated pipeline. Sludge from the sand filters was transferred to the press holding tanks, and subsequently pressed to remove water. The water removed by the presses was transferred back to the holding tank. The tanks at the Pretreatment Plant were cleaned annually. Solids in the tanks, as well as press filter cakes, press cloths, and filter media were disposed in a secure landfill. Figure 2-2 in the "Pretreatment Plant Addendum to RFI Task I Report, CIBA-GEIGY Site, Glens Falls, New York", (ECKENFELDER Engineering P.C., January, 1992) depicts the location of former and existing plant facilities. (Personal Communication, 1991 and 1992)

Subsequent to the construction of the Pretreatment Plant, measures were taken to control stormwater runoff. A curb was installed around the entire Pretreatment Plant area. Storm sewers and catch basins were then installed which conveyed stormwater to the holding tank. (Personal Communication, 1992)

A major portion of the Pretreatment Plant was decommissioned in 1990 in conjunction with the decommissioning and demolition of the main plant site. A scaled down version remains in operation to treat water collected in the industrial and sanitary sewer systems. Currently, the wastewater is mixed with a ferrous sulfate solution to precipitate and flocculate heavy metals and is piped to the holding tank. The water is then pumped through filters and gravity fed to the effluent pump station, from where it is pumped to the City WWTP. Sludge from the holding tank and filter bags are disposed in a secure landfill. (Personal Communication, 1992)

1.4 PREVIOUS INVESTIGATIONS

In November 1991, the RFA of the Pretreatment Plant was initiated. The purpose of the RFA, as stated in the RFA Work Plan, was to characterize soil and groundwater conditions to evaluate potential environmental impacts, if any, from Pretreatment Plant operations.

The RFA was conducted in two phases. In the first phase, soil quality at the Pretreatment Plant was evaluated. Also included in the first phase were the installation of piezometers and staff gauges, and subsequent water level monitoring, to evaluate groundwater flow direction in the overburden beneath the plant. The results of the first phase of the RFA were presented in the RFA-SV Report, which included proposed locations for three monitoring wells to characterize groundwater quality beneath the plant. The second phase of the RFA included the installation of the monitoring wells, subsequent sampling and analysis of groundwater from these wells, and additional water level monitoring. The monitoring well locations proposed in the RFA-SV Report were revised in a letter dated December 18, 1992, based on comments from the Agencies in an October 29, 1992 letter. The locations were approved in a February 24, 1993 letter from the Agencies. The wells were installed in May 1993, and sampled in June and September of 1993. Water levels in the wells and piezometers were measured prior to sampling. The results of the RFA groundwater evaluation were presented in the RFA Groundwater Addendum Report. However, the results of the September 1993 groundwater sampling were not available at the time the RFA Groundwater Addendum Report was submitted,

as previously noted. These results were presented in the 1993 Third Quarter Groundwater Monitoring Report (ECKENFELDER INC., December 1993). The results of the RFA soil and groundwater investigations are discussed in the following sections.

1.4.1 Soil

The soil borings drilled during the RFA were advanced to bedrock or to a depth two feet below the top of a lacustrine clay unit which overlies bedrock, whichever was encountered first. The Pretreatment Plant was found to be underlain by approximately 10 to 23 feet of unconsolidated overburden material. "Clean" fill material was encountered over most of the site. The fill typically overlies a unit of lacustrine sand, silt and clay interbeds, which in turn overlies the more massive lacustrine clay unit.

The soil samples were analyzed for a group of "target" metals -- barium, cadmium, chromium and lead -- and screened for volatile and semivolatile organic compounds. Approximately five percent of the samples were analyzed for an "expanded" list of inorganic constituents based on the results of the target metal analysis. Samples were subjected to an expanded analysis for volatiles or semivolatile organics if concentrations measured during the screening procedure were above the method detection limit.

The NYSDEC and USEPA determined that soil action levels for lead (500 mg/kg) and hexavalent chromium (400 mg/kg) were exceeded in the eastern portion of the Pretreatment Plant area based on the results of two of the soil samples -- one sample from boring PT-10 and one from boring PT-15 (see Figure 1-2). Noteworthy is that the analysis for chromium was conducted for total chromium only. The exceedance of the action level for hexavalent chromium was conservatively determined by assuming all chromium present in the sample was hexavalent. Both samples were from the zero to two-foot depth interval from their respective borings. Mercury was also detected in the zero to two foot interval from boring PT-10 at a concentration (31 mg/kg) above the soil action level (20 mg/kg). However, holding times for this sample were exceeded prior to analysis, and the location was consequently resampled at the same depth interval. The mercury analysis of the

resample indicated a concentration of 0.64 mg/kg, well below the mercury action level. Polychlorinated biphenyl (PCB) compounds Aroclor 1232 and 1248 were tentatively identified compounds (TICs) in the semivolatile analysis of the zero to two foot interval from PT-10. The total estimated PCB concentration (4,580 $\mu\text{g/kg}$) exceeds the action level for soil (1,000 $\mu\text{g/kg}$). The detection of PCBs at this location was not confirmed by analysis specifically for PCBs. Noteworthy is that PCBs reportedly were not handled at the Pretreatment Plant and are not known to have been in the waste stream at the site.

In summary, based on the RFA, the soil contamination at the Pretreatment Plant SWMU was found to be limited to local areas of surficial soil, primarily within the eastern portion of the SWMU. Both samples which exceeded action levels were from the zero to two-foot depth interval.

1.4.2 Groundwater

The nature of groundwater flow beneath the Pretreatment Plant SWMU was evaluated during the RFA, based on the information from soil borings and the monitoring of water levels in the wells, piezometers and staff gauges, as described in the RFA Groundwater Addendum Report. Groundwater quality was evaluated based on the sampling of the monitoring wells installed for the RFA. A summary of the understanding of groundwater conditions based on the RFA is presented in the following paragraphs.

Groundwater beneath the Pretreatment Plant area flows laterally through the relatively permeable fill and lacustrine sands in the overburden. The massive lacustrine clay unit, situated in the lower portion of the natural overburden deposits, forms the lower boundary of this zone. Locally, where the clay unit is absent, the top of the bedrock surface forms the base of this zone. The topography of the top of clay surface influences groundwater flow in the overburden, especially in areas within saturated zones.

Groundwater flow is generally east toward the stream and associated marsh which lie to the east and north (see Figure 1-2). There was no discernible effect on groundwater elevations or flow directions in the Pretreatment Plant area when

water levels were monitored during the filling of the canal. This indicated that the groundwater beneath the Pretreatment Plant area is not in direct hydraulic communication with the Feeder Canal west of the open section of the canal.

The hydraulic gradient and direction of groundwater flow in the western part of the Pretreatment Plant area were observed to vary with time. Also, on occasion a groundwater flow divide was observed to form in this area creating a component of groundwater flow to the west or southwest toward the main plant site.

It is unlikely that an underlying bedrock water-bearing zone receives a significant contribution of groundwater flow from the overburden zone in the area of the Pretreatment Plant. The downward migration of groundwater flow is greatly restricted by the lacustrine clay unit. Further, the two upper bedrock zones defined at the main plant site, Horizons A and B, subcrop southwest of the Pretreatment Plant and thus are not present [see the "RCRA Facility Investigation Report for Groundwater, CIBA-GEIGY Site, Glens Falls, New York" (ECKENFELDER Engineering P.C., March 1993)]. Based on projections of structural contours, the lower bedrock zone, Horizon C, is separated from the overburden by a 60- to 70-foot thick section of competent rock.

The monitoring wells were sampled in June and September of 1993 and analyzed for metals (filtered and unfiltered), cyanide, volatile and semivolatile organic compounds, and indicator and field parameters. Based on the results of these analyses, cyanide was the only constituent detected in the groundwater at concentrations above the GWPC. Total cyanide was detected in samples from each of the three monitoring wells during both sampling events (see Table 1-1). Cyanide concentrations in samples from wells MW-OB18 and MW-OB19 were at concentrations above the GWPC of 100 µg/L in both sampling events. The cyanide concentration in well MW-OB17 was below the GWPC in June, but increased by approximately ten times in September to concentrations above the action level. Few other constituents for which GWPCs are established were detected, and these were present at concentrations below GWPCs.

TABLE 1-1
CYANIDE CONCENTRATIONS IN GROUNDWATER
SECOND AND THIRD QUARTERS 1993

	Total Cyanide (ug/L)	
	June 1993	September 1993
MW-OB17	83	928
MW-OB18	237	387
MW-OB19	2,000	1,080

2.0 INVESTIGATIVE METHODS AND PROCEDURES

The RFI of the Pretreatment Plant SWMU was conducted in accordance with the approved Work Plan. The following sections describe the methods and procedures used to conduct the RFI of the Pretreatment Plant SWMU.

2.1 SOIL INVESTIGATION

2.1.1 Soil Boring Locations

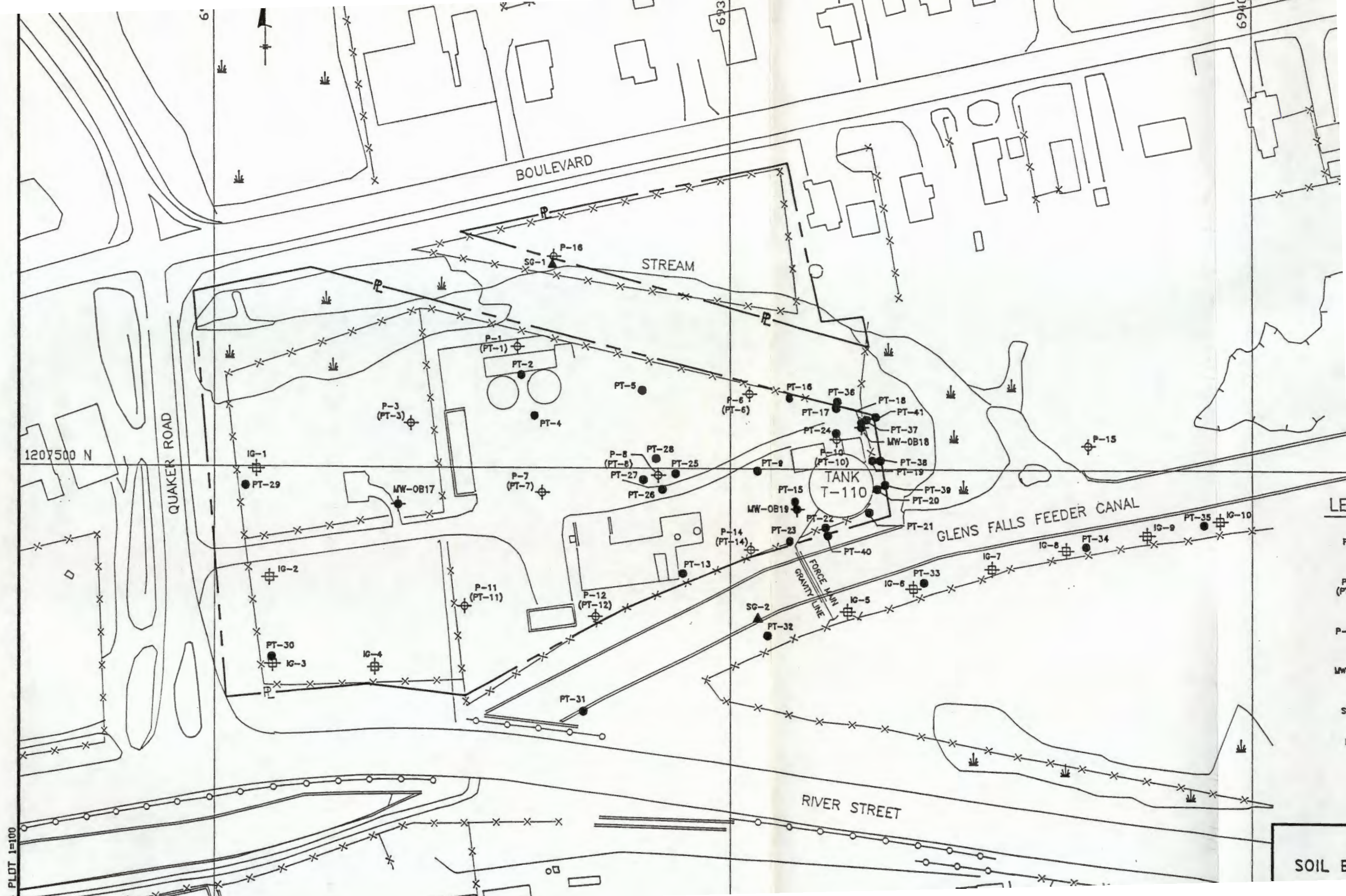
Borings for Analytical Samples

Soil samples were collected for laboratory analysis during this investigation to provide for the following:

- An evaluation of the extent of soil contamination in the eastern portion of the Pretreatment Plant area where soil samples collected during the RFA were found to exceed action levels.
- An evaluation of the extent of soil near boring PT-8 with concentrations of cadmium that are elevated relative to the majority of the Pretreatment Plant area.

As discussed in Section 1.4, based on sampling results from the RFA, the soil in the eastern portion of the Pretreatment Plant area (borings PT-10 and PT-15) was identified as exceeding action level concentrations in the zero to two-foot depth interval for chromium and lead. Further, sampling results from the RFA indicated that the highest constituent concentrations were typically within the zero to two-foot depth interval. Accordingly, hand auger borings to a depth of approximately four feet were drilled around the area of the borings PT-10 and PT-15 to evaluate the extent of soil contamination in the eastern portion of the Pretreatment Plant SWMU.

The soil boring locations in the eastern portion of the Pretreatment Plant area are shown in Figure 2-1. The sampling in this investigation focused on soil along the



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northern, eastern and southern boundaries of the eastern portion of the Pretreatment Plant. The initial set of eight borings, PT-16 through PT-23, extended around the eastern portion of the Pretreatment Plant area just inside of the fence surrounding the Pretreatment Plant, from approximately 40 feet east of PT-6, around the northern, eastern, and southern perimeter, to approximately 40 feet east of PT-14 (see Figure 2-1).

The samples from these borings were submitted to the laboratory for analyses, as described in Section 2.1.3. The sample analyses were expedited and preliminary results were provided within two weeks of sampling. Soil action levels were used to screen the results of the initial samples. The action levels used are listed in Appendix I of NYSDEC Technical Administrative Guidance Document (TAGM) 3028 (NYSDEC, November 1992). The borings for which sample concentrations exceed soil action levels were identified. The borings identified were PT-17, PT-18, PT-19, PT-20, and PT-22. Borings PT-36 through PT-41 were subsequently drilled adjacent to the identified locations but outside of the fence which surrounds the Pretreatment Plant area. Samples from these borings were submitted for analysis. Visual examination of the uppermost sample from boring PT-37, drilled outside of the fence from PT-18, indicated the presence of waste material. Accordingly, another boring, PT-41, was drilled and sampled approximately ten feet farther away from the fence. Samples from PT-41 did not show visible evidence of contamination.

In addition to the soil borings described above, boring PT-24 was drilled in the eastern portion of the Pretreatment Plant area adjacent to the PT-10 location (see Figure 2-1). This boring was sampled and analyzed to further characterize the soil in the area where action levels were found to be exceeded during the RFA (see Section 1.4).

Four soil borings, PT-25 through PT-28, were drilled in the central portion of the Pretreatment Plant area in a pattern surrounding boring PT-8 (see Figure 2-1). These borings were sampled and analyzed to evaluate the extent of soil in this area with elevated concentrations of cadmium relative to the majority of the Pretreatment Plant area.

Borings for Descriptive Samples

Two soil borings in the western portion of the Pretreatment Plant area, PT-29 and PT-30, and five soil borings along the canal towpath, PT-31 through PT-35, were drilled to provide information on the depth of saturation (i.e., water table) and the depth of the lacustrine clay unit in these areas (see Figure 2-1). This information was used to select the depth for in-situ groundwater sampling as described in Section 2.2.3, as well as to provide additional information on the configuration of the surface of the clay unit.

2.1.2 Soil Sampling Procedures

The borings for the collection of analytical samples, PT-16 through PT-28 and PT-36 through PT-41, were drilled with a stainless steel hand auger to a depth of four feet, or to auger refusal, whichever was encountered first. Soil samples were collected from each two-foot interval in the boring. At several locations one to two layers of asphalt pavement were present. The pavement and associated roadbed gravel were removed with a jackhammer to a depth where samplable material was encountered. At these locations sampling was conducted from the depth to which the pavement and associated material was removed to four feet below this depth, or to auger refusal. Upon completion, each boring was backfilled with its auger cuttings. The soil borings were surveyed for location and elevation by a licensed surveyor from Thermo Consulting Engineers.

The borings for the collection of descriptive samples, PT-29 through PT-35, were drilled using a drill rig equipped with 3 1/4-inch inside diameter hollow-stem augers and 2-inch diameter split-spoons. At these locations, soil samples were collected in two-foot intervals during the advancement of each boring, in accordance with ASTM D-1586-87 protocols, from ground surface to a depth of approximately two feet into the lacustrine clay unit. The soil borings were completed by filling the boring with cement grout. These locations were also surveyed for location and elevation.

Soil samples from both sets of borings were visually classified and described in accordance with the Burmister Soils Classification System and the Unified Soil Classification System. The description and classification, along with other pertinent

information such as boring depths, length of recovered portion of the sample interval, blow counts (for split-spoon samples), depth to saturation and other distinguishing characteristics of the soil (e.g., odor, color, presence of waste), if present, were recorded. These observations are contained in the boring logs in Appendix A.

The soil samples submitted for analysis from each location were collected from a homogenized mixture of the soil from the sample interval to minimize sample bias. Homogenization was accomplished by placing the sample from the hand auger into a stainless steel pan and mixing it with a stainless steel spoon. Samples of the homogeneous mixture were transferred to 125 mL and 250 mL glass jars with Teflon® (TFE) lined caps.

Two duplicate soil samples and three equipment blanks were collected and submitted for analysis. The equipment blanks were prepared by pouring analyte-free water over decontaminated sampling equipment, and into the sample containers.

Upon sample collection, the sample jars were labeled, sealed with chain-of-custody tape, and placed in a cooler containing ice in sealed plastic bags. The samples were shipped to the laboratory via overnight courier, Federal Express, in sealed coolers containing ice. The custody of the samples was documented using chain-of-custody forms. These forms were filled out by the samplers and placed in the sample coolers prior to relinquishing the coolers to the courier for delivery to the laboratory. The chain-of-custody forms are included with the laboratory data package (see Appendix G).

To minimize the potential for sample cross-contamination and the introduction of contamination to a sample location, the sampling equipment (e.g., split-spoons, hand augers, spoons, pans, etc.) was decontaminated between samples. Decontamination of this equipment was conducted according to the following protocol:

1. Scrub with tap water and non-phosphate detergent.
2. Rinse with tap water.
3. Rinse with 1% nitric acid.

4. Rinse with tap water.
5. Rinse with hexane.
6. Rinse with methanol.
7. Rinse with deionized water.
8. Air dry.
9. Wrap in polyethylene bag or sheeting until ready for use.

2.1.3 Soil Sample Analysis

Soil samples from borings PT-16 through PT-28 and PT-36 through PT-41 were analyzed for the parameters listed in Table 2-1 pursuant to the approved Work Plan. As noted in Table 2-1, the samples were subjected to screening for semivolatile organic compounds. All samples failed the screen (i.e., total semivolatile organics were detected above the detection limit) and were analyzed for the individual semivolatile organic compounds listed in Table 2-2. The sample from the zero to two-foot depth interval in the soil boring PT-24, drilled adjacent to the PT-10 location was subjected to the Toxicity Characteristic Leaching Procedure (TCLP) for metals, in addition to the other analyses.

The soil analyses were conducted by the ECKENFELDER INC. laboratory in Nashville, Tennessee, which is certified by the NYSDOH. A summary of the analytical results is presented in Appendix B. The laboratory data package is contained in Appendix G. The analyses, were conducted in accordance with the site QAPjP (July, 1993), which reflects current NYSDEC and USEPA protocol. Twenty-five percent of the analytical data were validated by an independent data validator. The data validation report and comments on the report are included in Appendix H.

2.2 GROUNDWATER INVESTIGATION

The groundwater investigation was focused on evaluating the distribution of cyanide in the overburden water-bearing zone and whether off-site migration of cyanide via groundwater has occurred. This approach was based on the findings of previous investigations (as described in Section 1.4.2). Based on the findings of the RFI for groundwater conducted at the main plant site, it is unlikely that underlying bedrock

TABLE 2-1

PARAMETER LIST FOR SOIL ANALYSIS

Chromium, total
Cadmium, total
Lead, total
Mercury, total
Cyanide, total
Semivolatile Organic Compounds^a
TCLP Metals (only on boring PT-24)

- a Screened for semivolatile organics. If sample failed screen (i.e., total semivolatiles were detected above the detection limit), the analysis for individual semivolatile organic compounds was conducted on the sample (see Table 2-3). All samples failed the screen.
- b TCLP-Toxicity Characteristic Leaching Procedure.

TABLE 2-2

SEMIVOLATILE ORGANIC COMPOUND LIST FOR SOIL ANALYSIS

Compound	Soil Reporting Limit (µg/kg)
2,4,6-Trichlorophenol	330
p-Chloro-m-cresol	330
2-Chlorophenol	330
2,4-Dichlorophenol	330
2,4-Dimethylphenol	330
2-Nitrophenol	330
4-Nitrophenol	1600
2,4-Dinitrophenol	1600
4,6-Dinitro-2-methylphenol	1600
Pentachlorophenol	1600
Phenol	330
Benzoic Acid	1600
2-Methylphenol	330
4-Methylphenol	330
2,4,5-Trichlorophenol	1600
Acenaphthene	330
1,2,4-Trichlorobenzene	330
Hexachlorobenzene	330
Hexachloroethane	330
Bis(2-chloroethyl)ether	330
2-Chloronaphthalene	330
1,2-Dichlorobenzene	330
1,3-Dichlorobenzene	330
1,4-Dichlorobenzene	330
3,3'-Dichlorobenzidine	330
2,4-Dinitrotoluene	330
2,6-Dinitrotoluene	330
Fluoranthene	330
4-Chlorophenyl phenyl ether	330
4-Bromophenyl phenyl ether	330
Bis(2-chloroisopropyl)ether	330
Bis(2-chloroethoxy)methane	330
Hexachlorobutadiene	330
Hexachlorocyclopentadiene	330
Isophorone	330
Naphthalene	330
Nitrobenzene	330
N-nitrosodiphenylamine	330
N-nitrosodipropylamine	330
Bis(2-ethylhexyl)phthalate	330
Butylbenzylphthalate	330
Di-n-butylphthalate	330
Di-n-octylphthalate	330
Diethylphthalate	330

TABLE 2-2 (CONTINUED)

SEMIVOLATILE ORGANIC COMPOUND LIST FOR SOIL ANALYSIS

Compound	Soil Reporting Limit ($\mu\text{g/kg}$)
Dimethylphthalate	330
Benzo[a]anthracene	330
Benzo[a]pyrene	330
Benzo[b]fluoranthene	330
Benzo[k]fluoranthene	330
Chrysene	330
Acenaphthylene	330
Anthracene	330
Benzo[g,h,i]perylene	330
Fluorene	330
Phenanthrene	330
Dibenz[a,h]anthracene	330
Indeno[1,2,3-cd]pyrene	330
Pyrene	330
Benzyl Alcohol	330
4-Chloroaniline	330
Dibenzofuran	330
2-Methylnaphthalene	330
2-Nitroaniline	1600
3-Nitroaniline	1600
4-Nitroaniline	1600
Aniline	1600
Benzidine	660

water-bearing zones receive a significant contribution of groundwater flow from the overburden zone in the area of the Pretreatment Plant. Thus, the investigation was concentrated on the overburden zone. Further, the evaluation of groundwater conducted during the RFA of the Pretreatment Plant indicated that cyanide was the only constituent for which a GWPC was exceeded.

2.2.1 Piezometer Installation

Two shallow piezometers were installed in the overburden to evaluate the apparent groundwater flow divide along the stream and marsh to the north and east of the Pretreatment Plant area. As shown in Figure 2-1, one piezometer, P-16 was installed north of the stream, near staff gauge SG-1, and a second piezometer, P-15, was installed on the east side of the marsh, just north of the northern wall of the Feeder Canal. Water levels in these piezometers were measured in conjunction with the water level measurements described below.

The piezometers are constructed of approximately 1-1/4-inch diameter black steel pipe, with an approximately 1.5-foot long interval of stainless steel screen and a cast iron drive-point at the base. The boring for each piezometer was drilled using a hand-auger to a depth approximately one foot below the water level in the boring. The piezometer was then placed in the bottom of the borehole. The annulus between the piezometer and the boring was backfilled with auger cuttings. The piezometers were surveyed for location, ground surface elevation and top-of-casing elevation by a licensed surveyor from Thermo Consulting Engineers. The boring logs for these piezometers are included in Appendix A.

2.2.2 Water Level Measurements

Water levels in the wells, piezometers and staff gauges associated with the Pretreatment Plant area, including the two piezometers described in Section 2.2.1, were measured on two occasions during the field investigation -- July 7 and July 13, 1994. The first round of water levels (July 7, 1994) was conducted just prior to the initiation of groundwater sampling for this investigation (see Section 2.2.3). The second round (July 13, 1994) was conducted following a four-day hiatus in sampling, during which water levels at the sampled locations recovered to static conditions.

The round of water level measurements from July 13, 1994 also included measurements from four temporary piezometers in the western portion of the Pretreatment Plant area, IG-1 through IG-4, installed for the in-situ groundwater sampling described in Section 2.2.3. These locations were installed after the July 7, 1994 round. The water level measurements and the calculated water elevations are listed in Appendix C.

The water levels were measured using an electronic water level indicator. The indicator probe was lowered into the well or piezometer (or alongside a staff gauge) until the instrument indicated water was reached. The probe was then raised above the water level and slowly lowered again until water was indicated. The indicator cable was held against the innermost casing at the reference point designated for water level measurements and a depth reading recorded. This procedure was conducted three times or until a consistent value was obtained. The value was recorded to the nearest 0.01 feet. The probe was then raised to the surface and together with the length of cable that entered the well, was decontaminated with a non-phosphate detergent (Alconox®) wash and a distilled water rinse.

2.2.3 Groundwater Sampling and Analysis

Sampling Locations

To evaluate the spatial distribution of cyanide in groundwater in the Pretreatment Plant area, samples from the nine one-inch diameter piezometers and the three monitoring wells installed during the RFA (see Table 2-3 and Figure 2-1) were collected and analyzed for total cyanide. Although the one-inch piezometers do not meet the construction specifications for a monitoring well with regards to surface completion and prior well development, samples collected from these piezometers provide an indication of the groundwater quality with respect to cyanide. The distribution of the piezometers and wells provide coverage across the Pretreatment Plant area both in the central locations and at the boundaries of the Pretreatment Plant. Samples were collected from piezometers P-1, P-3, P-7, and P-8 on July 8, 1994. The remaining piezometers and the monitoring wells were sampled on July 13 and 14, 1994.

TABLE 2-3**WELLS AND PIEZOMETERS SAMPLED**

Monitoring Wells	Piezometers
MW-OB17	P-1
MW-OB18	P-3
MW-OB19	P-6
	P-7
	P-8
	P-10
	P-11
	P-12
	P-14

In addition to the sampling of the existing wells and piezometers, in-situ groundwater samples were collected from the overburden from eight locations. Four locations, IG-1 through IG-4, were sampled west and southwest of MW-OB17, in the western portion of the Pretreatment Plant area. Four other locations, IG-7 through IG-10, were sampled south of the Feeder Canal, along an area southeast of the Pretreatment Plant and directly south of the marsh area which drains to the Feeder Canal. Nine in-situ sampling locations were originally proposed in the Work Plan for the area south of the Feeder Canal. However, the soil borings drilled along the canal prior to the sampling (see Section 2.1.1) indicated that no saturation was present above the lacustrine clay unit west of the pipe bridge across the canal south of Tank T-110 (see Figure 2-1). Thus, in-situ sampling was not attempted west of the pipe bridge. Attempts were made to collect in-situ samples from two locations, IG-5 and IG-6, within the area approximately 80 feet east of the pipe bridge where the soil borings indicated a thin wet zone above the clay. No water was recovered from these locations despite allowing a day for water to enter the sampling pipe. The in-situ samples were collected on July 12 and July 13, 1994.

Purging and Sampling of Wells and Piezometers

Prior to groundwater sampling, each monitoring well or piezometer was sounded for total depth and the depth to the static water level was measured. These measurements were used to calculate the volume of water within the well. Water levels were measured as described in Section 2.2.2. The wells were sounded by lowering the water level probe to the bottom of the well. The tape was then raised until the tension indicated the probe tip is positioned at total depth bottom. A measurement from the measuring point on the top of the well casing was recorded (accounting for the length of the probe).

The well or piezometer was purged of three well volumes of water or completely evacuated, depending on recharge rates, prior to sampling. Purging was performed by bailing with a disposable Teflon® bailer for the monitoring wells, and through disposable polyethylene tubing using a peristaltic pump equipped with disposable Tygon tubing for the piezometers. New tubing or bailers were used for each

location. Purged groundwater was collected in buckets and transferred to the CIBA-GEIGY industrial sewer system for disposal. Information regarding the volumes purged from each location is provided in the field data sheets (see Appendix D).

Groundwater samples were collected from the monitoring wells using a disposable Teflon® bailer with nylon bailer cord. Samples from the one-inch diameter piezometers were collected through disposable polyethylene tubing using a peristaltic pump.

Typically, groundwater samples were collected immediately after purging. However, low yielding wells and piezometers which recover insufficiently to collect the entire sample volume immediately following purging required samples to be collected in stages. Attempts were made to collect a 1,000 mL sample volume, although volumes of approximately 200 mL were adequate for the required analysis. The samples were collected in 1,000 mL plastic bottles and preserved with sodium hydroxide to maintain a pH of greater than 12. The sample bottles were then placed in a cooler containing ice in a sealed plastic bag.

If adequate sample volume was available, specific conductance, pH, and temperature measurements (i.e., field parameters) were recorded after the collection of the sample (see Appendix E). If adequate sample volume was not available, the sample was collected without measuring the field parameters.

In-Situ Groundwater Sampling

In situ groundwater samples were collected using Geoprobe® equipment provided by Burlington Environmental. Based on information from the nearby soil borings, it was decided that the saturated thickness of the overburden is too thin to provide an adequate volume of sample using the typical Geoprobe system of driving a steel rod to depth and collecting a sample through the rod. This situation was anticipated as a possibility in the Work Plan, and as such the alternate method of in-situ sampling proposed in the Work Plan was utilized. This method involved the installation of a temporary 1-inch or 1 1/4-inch I.D. PVC pipe, with a three- to six-foot long screen section (0.010-inch slot screen) and a 1.5-inch diameter drive-point threaded to the

base. A steel rod connected to the Geoprobe unit was inserted through the PVC pipe, down to the drive-point. The pipe was then driven hydraulically to a depth below the water table, and the rod extracted from inside the pipe. The depth of the water table was estimated based on the borings drilled for descriptive samples, as described in Section 2.2.1. The water level in the pipe was then allowed to stabilize to allow for collecting an adequate sample volume.

The groundwater sample was collected using disposable 1/4-inch diameter polyethylene tubing using a peristaltic pump equipped with disposable Tygon tubing. The sample was poured directly from the tubing into the sample container. A minimum of 200 mL of sample was collected from each of the eight locations. Several locations required repeated sampling over an approximately 24-hour period to obtain the 200 mL volume for the cyanide analysis. The samples were collected in 1,000 mL plastic bottles and preserved with sodium hydroxide to maintain a pH of greater than 12. The sample bottles were then placed in a cooler containing ice in a sealed plastic bag. If adequate sample volume was available after the collection of the sample for cyanide analysis, the pH, specific conductivity, and temperature (i.e., field parameters) of the sample were measured in the field (see Appendix E).

Upon completion of the sampling, attempts were made to withdraw the PVC pipe from the soil at the locations south of the Feeder Canal. At each of these locations, portions of the PVC could not be removed. The remaining hole and the portions of PVC pipe in the hole, were filled with bentonite. The PVC pipe in IG-1 through IG-4, which are located on CIBA-GEIGY property, was left in the hole to serve as a temporary water level monitoring point.

Each of the in-situ sampling locations was surveyed for location and ground surface elevation by a licensed surveyor from Thermo Consulting Engineers. The elevation of the top of the PVC pipe remaining in IG-1 through IG-4 was also surveyed for a water level measurement reference point.

Field Measures for Quality Control/Quality Assurance

Two duplicate groundwater samples and two equipment blanks were collected and submitted for analysis. One equipment blank was prepared by pumping

analyte-free water through new disposable polyethylene tubing using the peristaltic pump equipped with a new section of disposable Tygon tubing. The second equipment blank was prepared by pouring analyte-free water into a new disposable Teflon® bailer and into the sample container.

Upon sample collection, the bottles were labeled, sealed with chain-of-custody tape, and placed in a cooler containing ice in sealed plastic bags. The samples were shipped to the laboratory via overnight courier, Federal Express, in sealed coolers containing ice. The custody of the samples was documented using chain-of-custody forms. These forms were filled out by the samplers and placed in the sample coolers prior to relinquishing the coolers to the courier for delivery to the laboratory. The chain-of-custody forms are included with the laboratory data package (see Appendix G).

Groundwater Sample Analysis

The analyses of the groundwater samples for total cyanide were conducted by the ECKENFELDER INC. laboratory in Nashville, Tennessee, which is certified by the NYSDOH. A summary of the analytical results is presented in Appendix E. The laboratory data package is contained in Appendix G. The analyses were conducted in accordance with the site QAPjP (July, 1993), which reflects current NYSDEC and USEPA protocol. Twenty-five percent of the analytical data were validated by an independent data validator. The data validation report and comments on the report are included in Appendix H.

3.0 INVESTIGATIVE FINDINGS

3.1 SOIL INVESTIGATION

3.1.1 Overburden Geology

Descriptions of the overburden material encountered in each soil boring during this investigation are presented in the soil boring logs in Appendix A. Soil boring logs for the previously drilled borings, PT-1 through PT-15 are included in Appendix A of the RFA-SV Report. Soil boring logs for the three monitoring wells, MW-OB17, MW-OB18, and MW-OB19, are included in Appendix A of the RFA Groundwater Addendum Report. The nature of the various overburden deposits is described in the following sections based on the findings from this investigation and those presented in the reports for the RFA.

Fill

Fill material consisting of sand, silt, clay, gravel, and occasional concrete fragments was encountered over most of the site. The maximum thickness of fill encountered was 10.3 feet in PT-1, located in the northern portion of the Pretreatment Plant area. Fill was not encountered on site in borings PT-4, PT-12, PT-14, PT-29, and PT-30. An isopachous map of total fill thickness was included in Figure 4-3 of the RFA-SV Report.

Lacustrine Deposits

The lacustrine deposits consist of sand, silt and clay interbeds overlying a massive lacustrine clay unit. Above the massive clay, sand is the predominant grain size, with varying amounts of silt. The sand is often interbedded with clay or silt intervals.

The lacustrine clay unit comprises a relatively thick accumulation of predominantly silty clay. Based on the borings in this area which were drilled to bedrock, the

lacustrine clay unit directly overlies bedrock, and thicknesses up to 12.5 feet have been recorded. The lacustrine clay unit is typically varved, exhibiting very thin partings along more silt- or sand-rich layers.

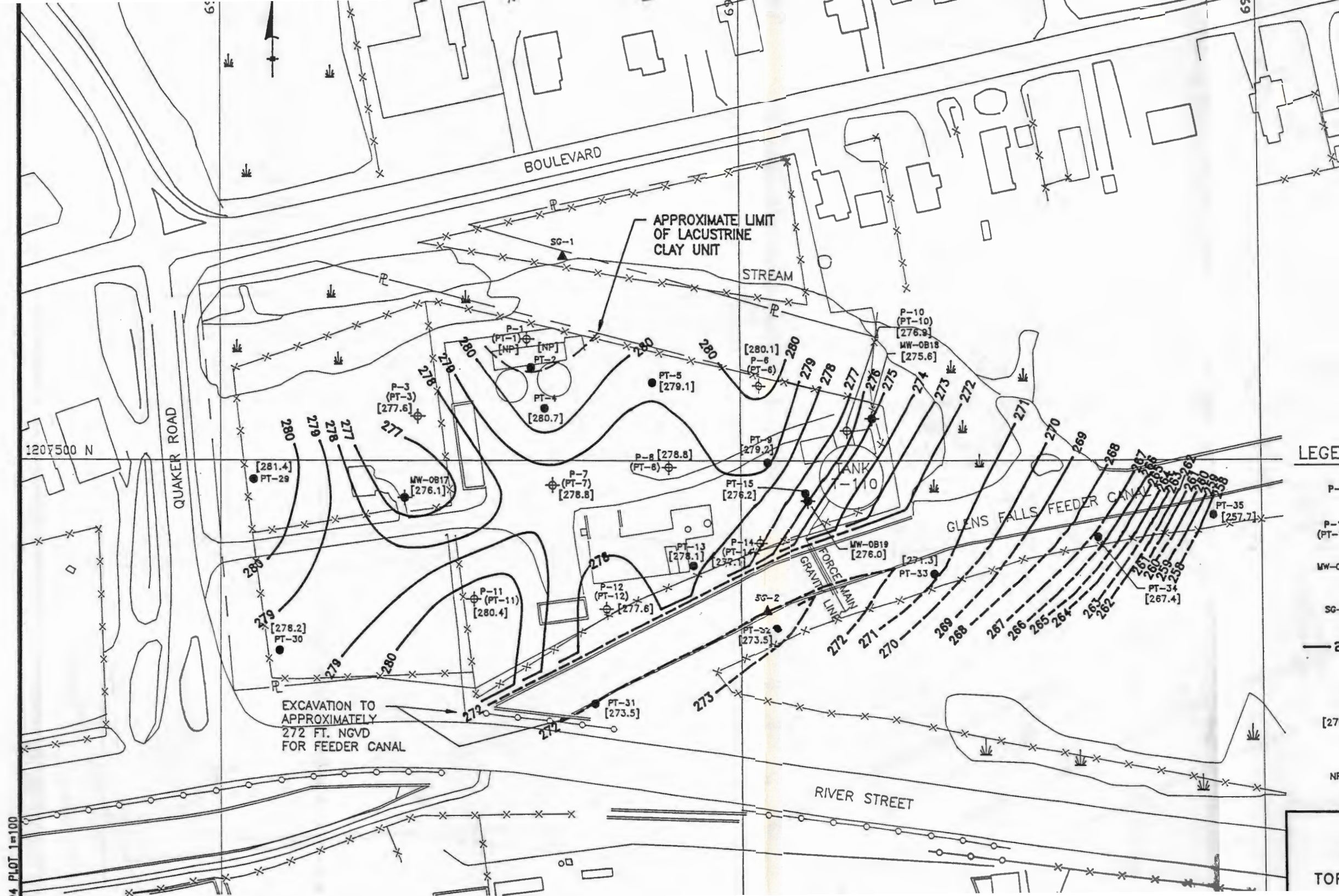
Figure 3-1 depicts the configuration of the surface of the massive lacustrine clay unit. Beneath most of the Pretreatment Plant area, the clay surface undulates between relatively high and low areas. In the vicinity of borings PT-1 and PT-2, the lacustrine clay unit is absent, and fill directly overlies the bedrock. The clay was likely removed by excavation associated with construction of Pretreatment Plant facilities.

In the eastern portion of the Pretreatment Plant area, the clay surface dips toward the southeast. This southeasterly dip continues to at least south of the Feeder Canal. The top of clay surface elevation decreases from 279.2 feet NGVD to 257.7 NGVD over the approximately 430-foot distance between PT-9, located in the eastern portion of the Pretreatment Plant area, and PT-35, located south of the Feeder Canal and south of the Pretreatment Plant area.

To the south of the Pretreatment Plant, the clay was apparently partially excavated to construct the Feeder Canal. The elevation of the base of the Feeder Canal is approximately 272 feet NGVD. Based on structural projections from soil borings, the clay surface on both sides of the canal is above the base of the Feeder Canal along the southern boundary of the Pretreatment Plant area. Directly east of the Pretreatment Plant area, the clay surface apparently dips below the base of the Feeder Canal.

3.1.2 Soil Quality

In this section, the results of the soil sample analyses from this investigation and previous investigations are evaluated with respect to the spatial distribution of constituents. Isoconcentration maps were constructed by plotting the maximum concentration measured in each boring and are presented in Figures 3-2 through 3-6



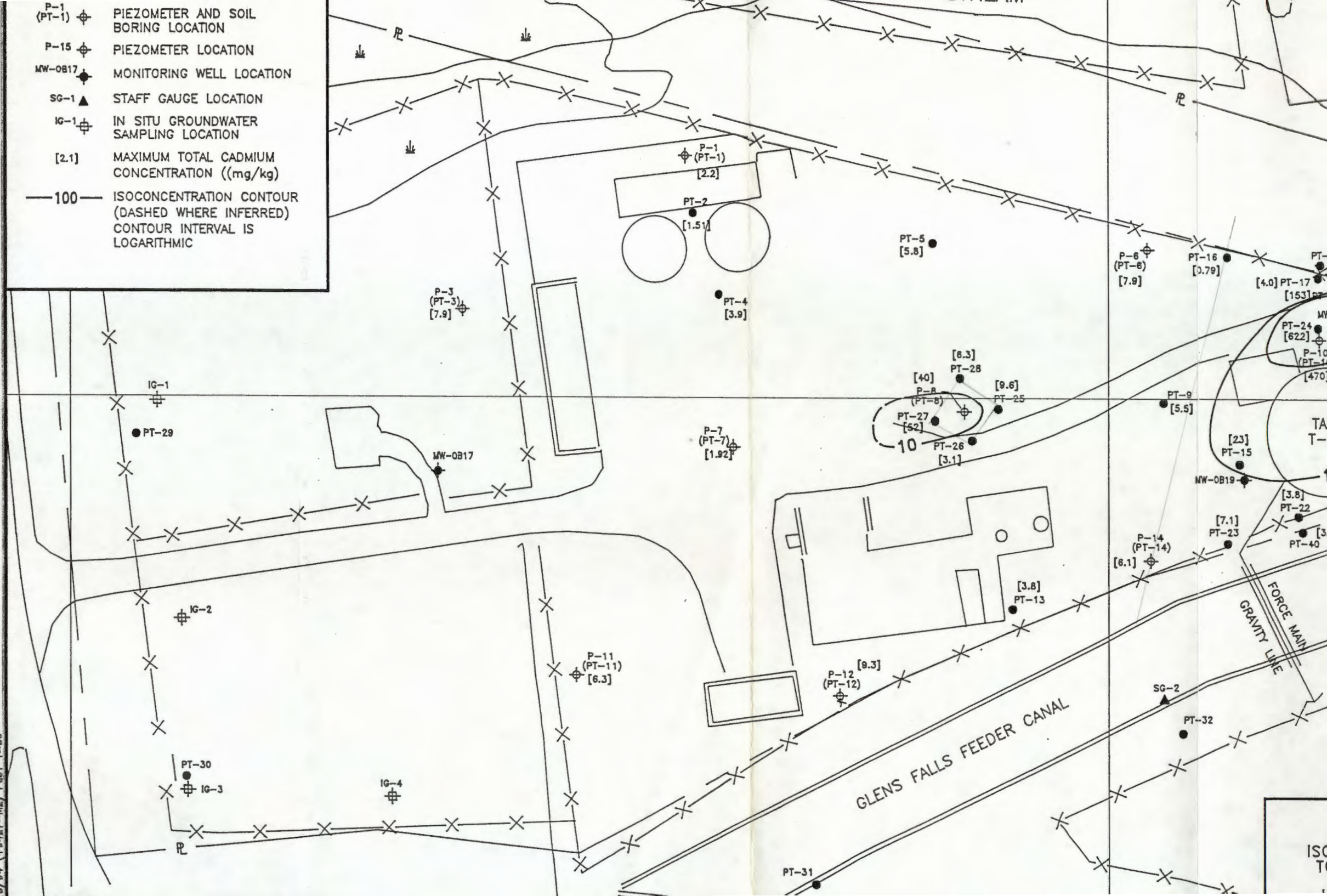
LEGEND

- P-1
- P-1 (PT-1)
- MW-OB17
- SG-1
- 2
- [278.1]
- NP

TOP

- P-1 (PT-1)  PIEZOMETER AND SOIL BORING LOCATION
- P-15  PIEZOMETER LOCATION
- MW-0817  MONITORING WELL LOCATION
- SG-1  STAFF GAUGE LOCATION
- IG-1  IN SITU GROUNDWATER SAMPLING LOCATION
- [2.1] MAXIMUM TOTAL CADMIUM CONCENTRATION ((mg/kg)
- 100— ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL IS LOGARITHMIC

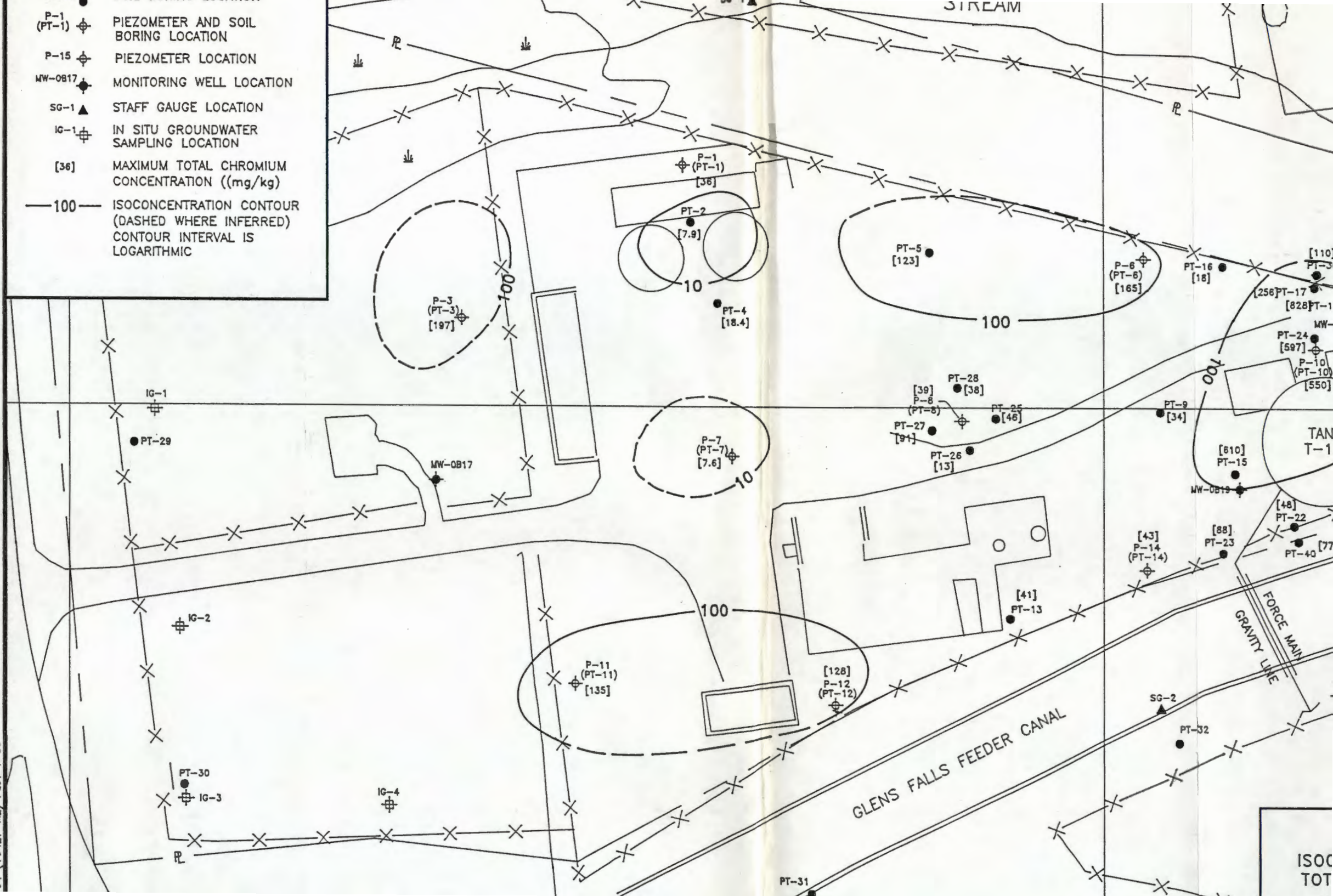
3/04 (+9427-M2) PLOT 1=50



- P-1 (PT-1)  PIEZOMETER AND SOIL BORING LOCATION
- P-15  PIEZOMETER LOCATION
- MW-0817  MONITORING WELL LOCATION
- SG-1  STAFF GAUGE LOCATION
- IG-1  IN SITU GROUNDWATER SAMPLING LOCATION
- [36] MAXIMUM TOTAL CHROMIUM CONCENTRATION ((mg/kg))

—100— ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)
CONTOUR INTERVAL IS LOGARITHMIC

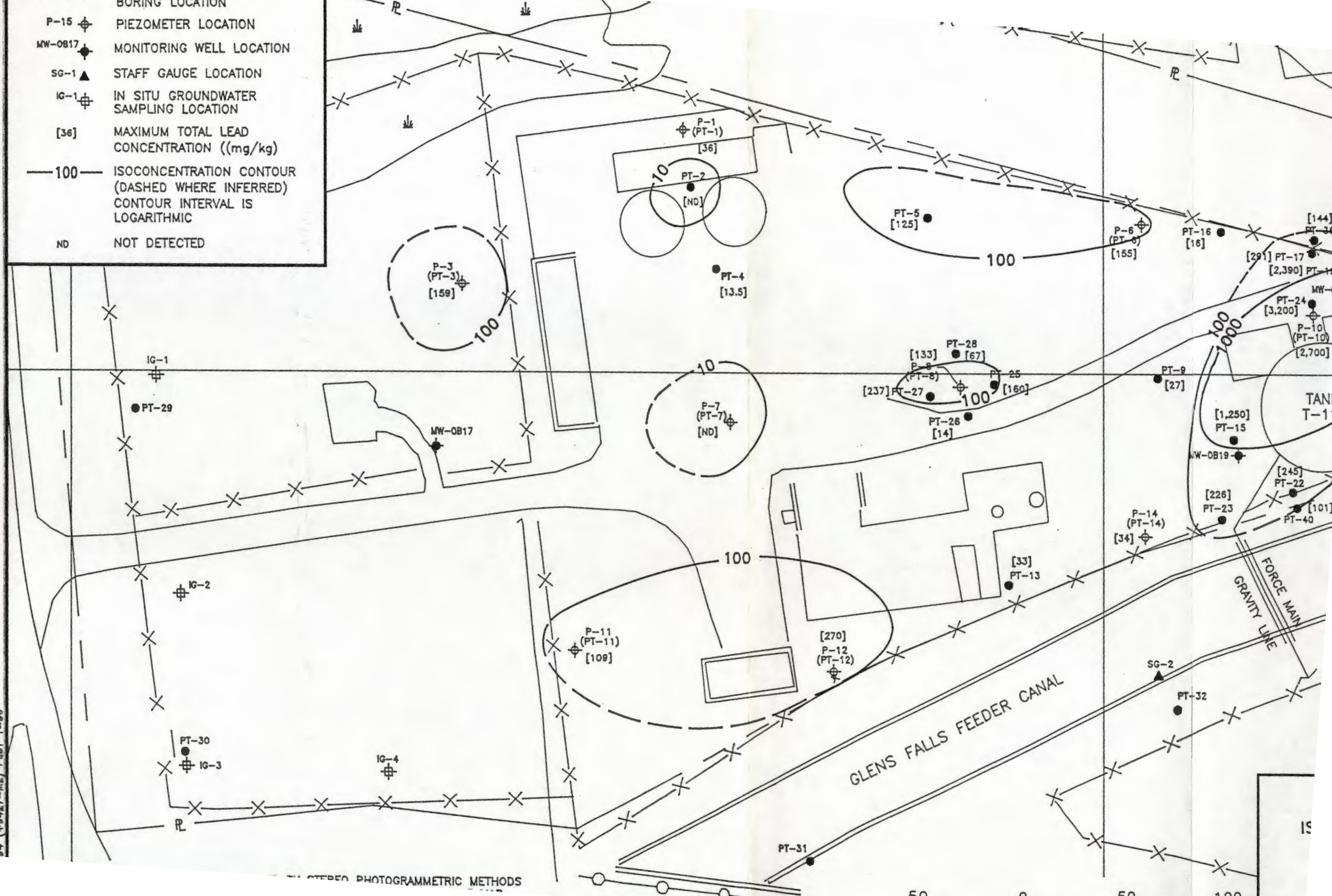
94 (+9427-M2) PLOT 1-50



ISOC
TOT

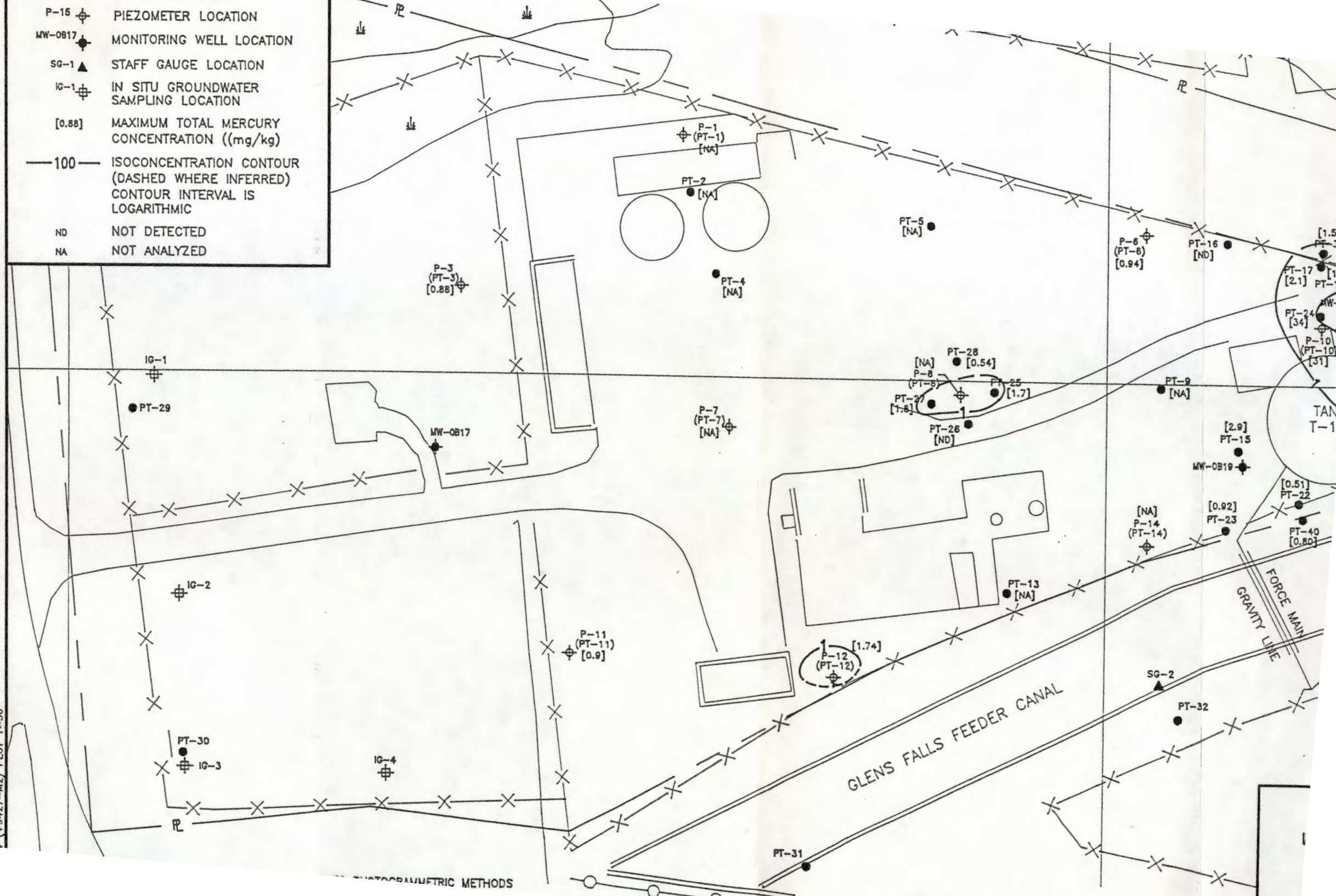
- P-15  PIEZOMETER LOCATION
 MW-OB17  MONITORING WELL LOCATION
 SG-1  STAFF GAUGE LOCATION
 IG-1  IN SITU GROUNDWATER SAMPLING LOCATION
 [36] MAXIMUM TOTAL LEAD CONCENTRATION ((mg/kg))
 —100— ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL IS LOGARITHMIC
 ND NOT DETECTED

94 (+9427-M2) PLOT 1=50

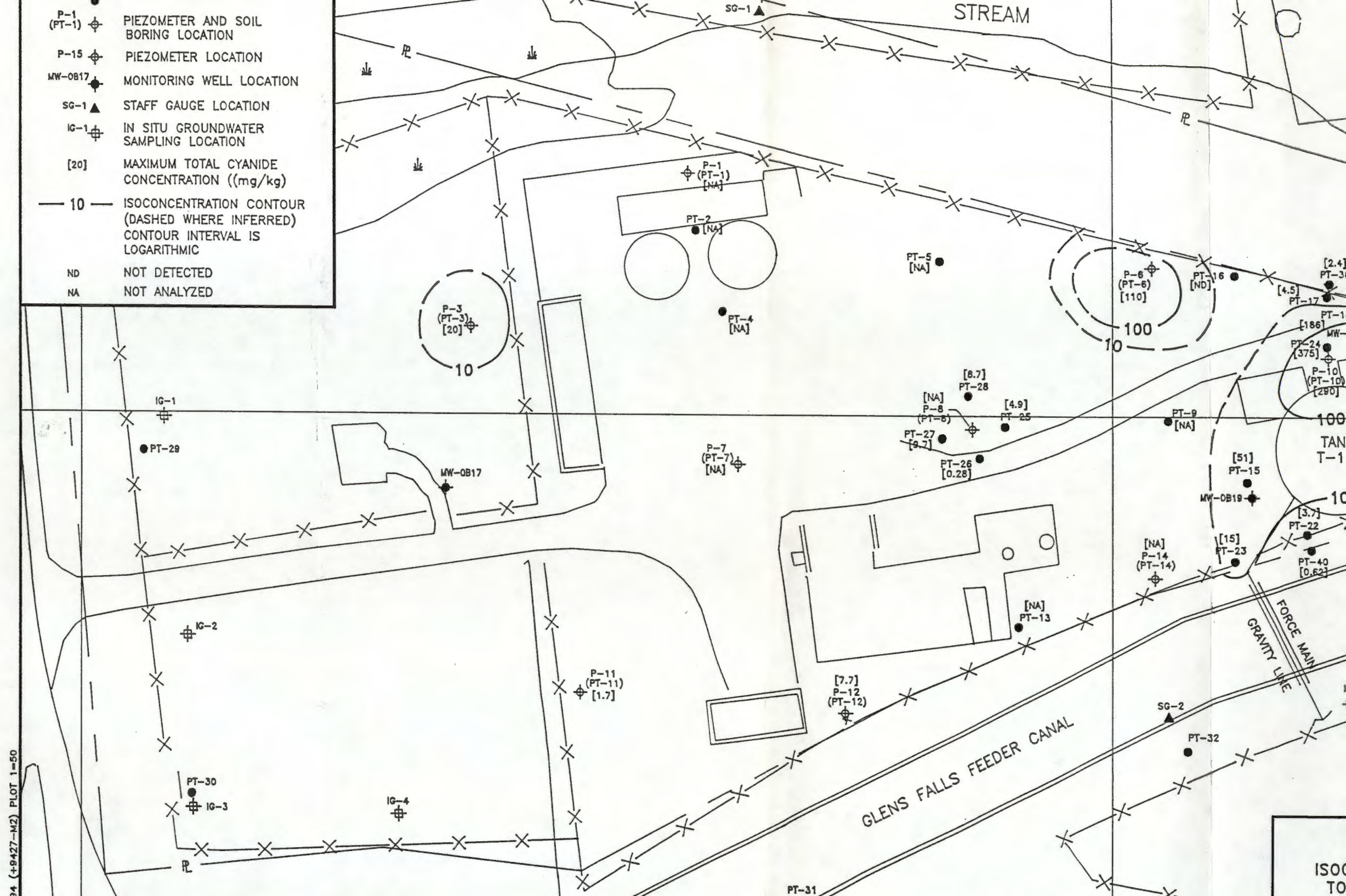


- P-15  PIEZOMETER LOCATION
 MW-OB17  MONITORING WELL LOCATION
 SG-1  STAFF GAUGE LOCATION
 IG-1  IN SITU GROUNDWATER SAMPLING LOCATION
 [0.88] MAXIMUM TOTAL MERCURY CONCENTRATION ((mg/kg))
 —100— ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL IS LOGARITHMIC
 ND NOT DETECTED
 NA NOT ANALYZED

1 (+9427-M2) PLOT 1-50



- P-1 (PT-1)  PIEZOMETER AND SOIL BORING LOCATION
 P-15  PIEZOMETER LOCATION
 MW-OB17  MONITORING WELL LOCATION
 SG-1  STAFF GAUGE LOCATION
 IG-1  IN SITU GROUNDWATER SAMPLING LOCATION
 [20] MAXIMUM TOTAL CYANIDE CONCENTRATION ((mg/kg))
 — 10 — ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL IS LOGARITHMIC
 ND NOT DETECTED
 NA NOT ANALYZED



for each inorganic constituent analyzed during this investigation. Isoconcentration maps for the semivolatile organic compounds were not prepared since their occurrence was sporadic and because most of the compounds detected are not likely related to Pretreatment Plant operations, as discussed below.

Figures 3-2 through 3-6 indicate that the highest concentrations of constituents are in the easternmost portion of the Pretreatment Plant area. Within this area, the highest concentrations were measured north of Tank T-110. To the west, concentrations decrease to levels typical of the remainder of the Pretreatment Plant area, as indicated by the concentrations measured in samples from borings PT-16, PT-9 and PT-14. Concentrations also decrease markedly in the soil outside the fence surrounding the eastern portion of the Pretreatment Plant area to concentration ranges typical of the western portion of the Pretreatment Plant area.

In the central portion of the Pretreatment Plant area, cadmium concentrations are elevated slightly above typical concentrations in the surrounding areas, as indicated by borings PT-8 and PT-27 (see Figure 3-2). The lower concentrations measured in nearby borings indicate this is a very localized occurrence.

The cyanide concentration in soil from PT-6, located along the northern fence line in the eastern half of the Pretreatment Plant area is comparable to levels typical of the area north of tank T-110 (see Figure 3-6). Cyanide concentrations in adjacent borings are within the range typical of the central and western portions of the Pretreatment Plant area.

Semivolatile organic compounds were detected in soil samples in the surface to four-foot depth interval at several locations across the Pretreatment Plant area. The compounds are predominantly polynuclear aromatic hydrocarbons (PAHs). The PAH concentrations appear to be more sporadically distributed than the inorganic constituents described above. Non-PAH semivolatile compounds were only detected in the eastern portion of the Pretreatment Plant area, within the area of the highest concentrations of inorganic constituents.

During the RFA, the soil borings were sampled to a depth of eight feet or more and thus provided a depth profile of constituent concentrations. The maximum

concentrations of constituents in the soil at these borings were typically in the zero- to two-foot depth interval. In general, concentrations decreased markedly below a depth of two to four feet. During this investigation, samples were collected to a depth of four feet or less from the top of each boring. Concentrations in the zero- to two-foot interval from these borings were typically much higher than those from the two- to four-foot interval, with very few exceptions, thus confirming the findings of the RFA.

The source of the elevated concentrations of constituents in the surficial soils of the Pretreatment Plant area was likely minor spills and leaks which occurred during past operations, prior to the decommissioning of most of the treatment facilities in 1990 (see Section 1.3). The presence of the highest concentrations in the eastern portion of the Pretreatment Plant area is explained by the type of facilities which were located there. During operations at the main plant site, wastewater from the main plant was initially fed into Tank T-110, located in the eastern portion of the Pretreatment Plant, which served as a holding tank. As such, the water and bottom sludge in this tank had the highest constituent concentrations of the materials handled at the Pretreatment Plant. Thus, the likelihood of causing elevated concentrations in the soils due to spills or leaks was greater in this area than for other areas. Several other treatment tanks were located in this area as well. Evaluations and inspections of the Pretreatment Plant facilities which are currently operating indicate that these facilities are of satisfactory integrity [see report on "Phase I Industrial Sewer Integrity Evaluation, CIBA-GEIGY Plant Site, Glens Falls, New York", (ECKENFELDER Engineering P.C., February 1992)].

The PAH compounds detected at several locations across the site are probably not related to site operations. This is supported by the dissimilarity in the concentration patterns between the constituents known to be related to site operations, and the PAH compounds, as discussed above. These compounds were likely derived from a number of potential sources, such as asphalt pavement, internal combustion engine emissions, coal burning, etc.

3.1.3 Soil Leachate Quality

The results of the analysis of the leachate from the zero- to two-foot soil sample at boring PT-24, extracted using the TCLP method (see Section 2.1.3) are presented in Appendix B. The leachate concentrations of cadmium, 1.87 mg/L, and lead, 18.0 mg/L, exceed the regulatory limits for characteristic hazardous waste of 1.0 and 5.0 mg/L, respectively. This sample has the highest concentrations of inorganic constituents of those measured for this or previous investigations of the Pretreatment Plant area.

3.2 GROUNDWATER INVESTIGATION

In the following sections the findings of the groundwater investigation of the Pretreatment Plant area are presented. Section 3.2.1 provides a description of the hydrogeologic character of the overburden water-bearing zone. Section 3.2.2 discusses the nature of groundwater flow within this zone. Finally, Section 3.2.3 describes the distribution and source of groundwater contamination. The general understanding of groundwater flow within the overburden water-bearing zone gained from this investigation is consistent with that developed during the RFA (see Section 1.4). However, several refinements to the conceptual model of groundwater flow in this area were made based on the findings in this investigation.

3.2.1 Overburden Water-Bearing Zone

The nature of the lacustrine deposits and fill in the overburden at the Pretreatment Plant was described in Section 3.1.1. Groundwater beneath the Pretreatment Plant flows laterally through the relatively permeable fill and lacustrine sands in the overburden. The massive lacustrine clay unit, situated in the lower portion of the natural overburden deposits, has a relatively low hydraulic conductivity and retards the downward migration of groundwater towards the bedrock. Thus, the clay unit forms the lower boundary of the overburden water-bearing zone. In the one area identified where the clay unit is absent due to excavation, near soil borings PT-1 and PT-2, the top of the bedrock forms the base of this zone. Due to the thin saturated

thickness throughout most of the Pretreatment Plant area, the topography of the clay surface likely influences horizontal groundwater flow directions in the more permeable material overlying the clay unit (see Figure 3-1).

Slug tests were conducted in the monitoring wells to estimate the hydraulic conductivity of the overburden water-bearing zone during the RFA. The hydraulic conductivity estimates for MW-OB17, MW-OB18, and MW-OB19 are 1.0×10^{-4} cm/sec, 4.3×10^{-6} cm/sec, and 2.1×10^{-5} cm/sec, respectively (see Appendix B of RFA Groundwater Addendum Report for slug test evaluations). This large range in hydraulic conductivity values is expected, considering the variety of materials comprising this zone.

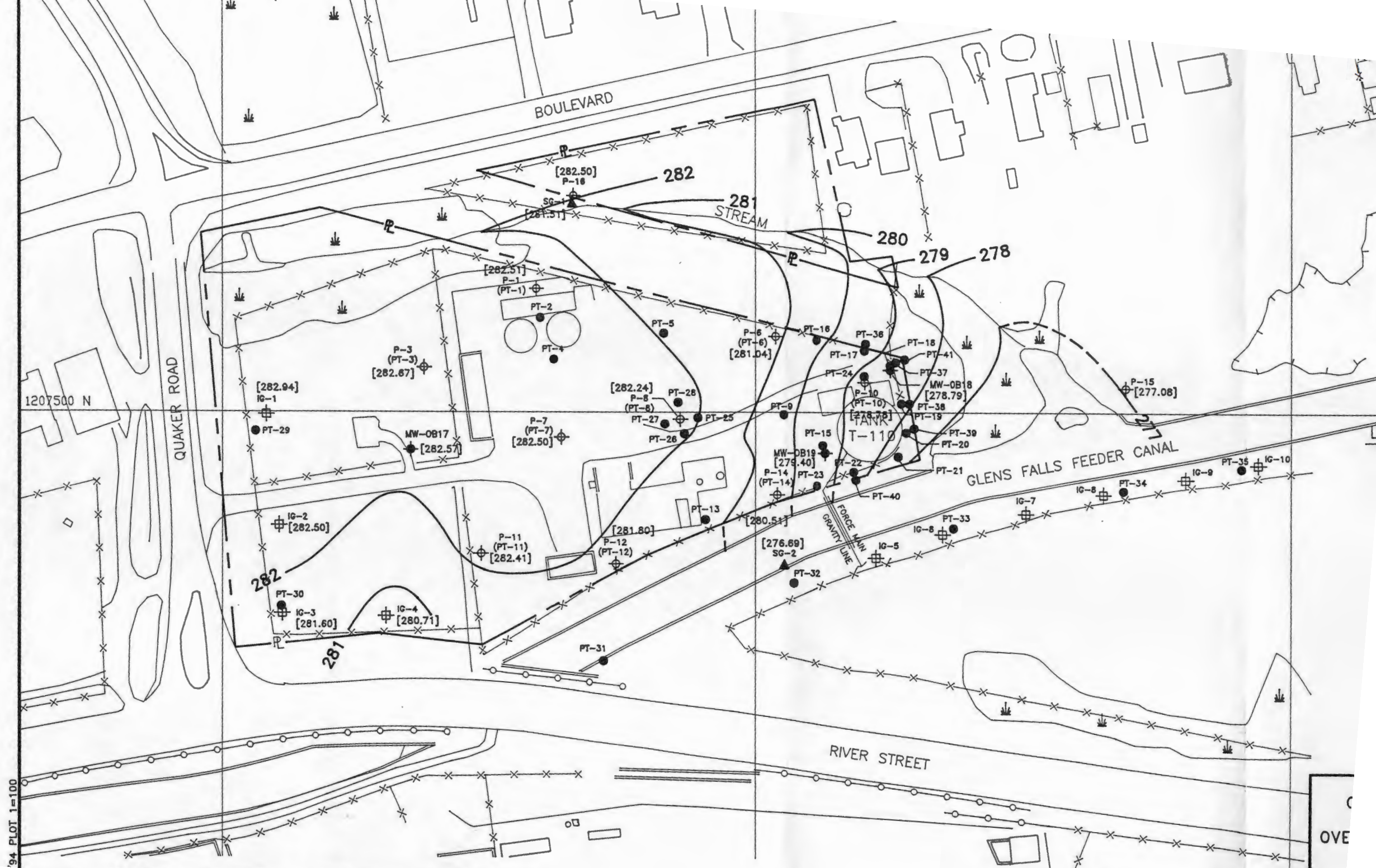
3.2.2 Groundwater Flow

Groundwater potentiometric surface maps (i.e., groundwater table maps) of the overburden water-bearing zone at the Pretreatment Plant were prepared for the two rounds of water level measurements, July 7 and July 13, 1994, made during this investigation (see Figures 3-7 and 3-8). Potentiometric surface maps prepared from previous rounds of water level measurements are included in Appendix F. These include three maps presented in the RFA-SV Report, prepared from measurements made prior to the installation of the three monitoring wells, and one map presented in the RFA Groundwater Addendum Report, which includes data from the monitoring wells. Additionally, a west-to-east oriented hydrogeologic cross section extending from the Pretreatment Plant area to across the stream and marsh area to the east is provided in Figure 3-9. This cross section was prepared using water levels measured on July 7, 1994.

The potentiometric surface maps indicate that in general groundwater beneath the Pretreatment Plant area flows toward the small stream and associated marsh areas which lie to the north and east. Groundwater elevations measured in the piezometers on the opposite side of the stream from the Pretreatment Plant, P-15 and P-16, were greater than the surface water elevations in the stream and marsh. This indicates that the stream serves as a groundwater flow divide in the overburden. Thus, groundwater does not flow past this stream, but either discharges to the stream or marsh, or flows parallel to it toward the Feeder Canal.



GEN
OVERB

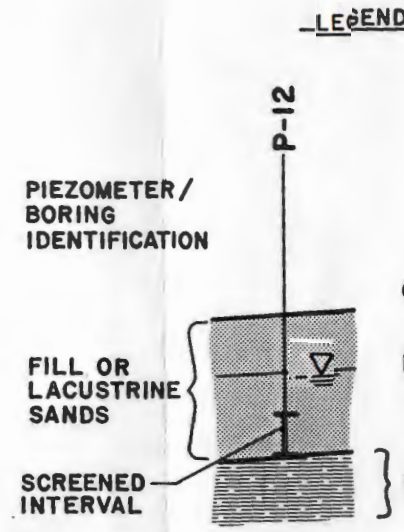
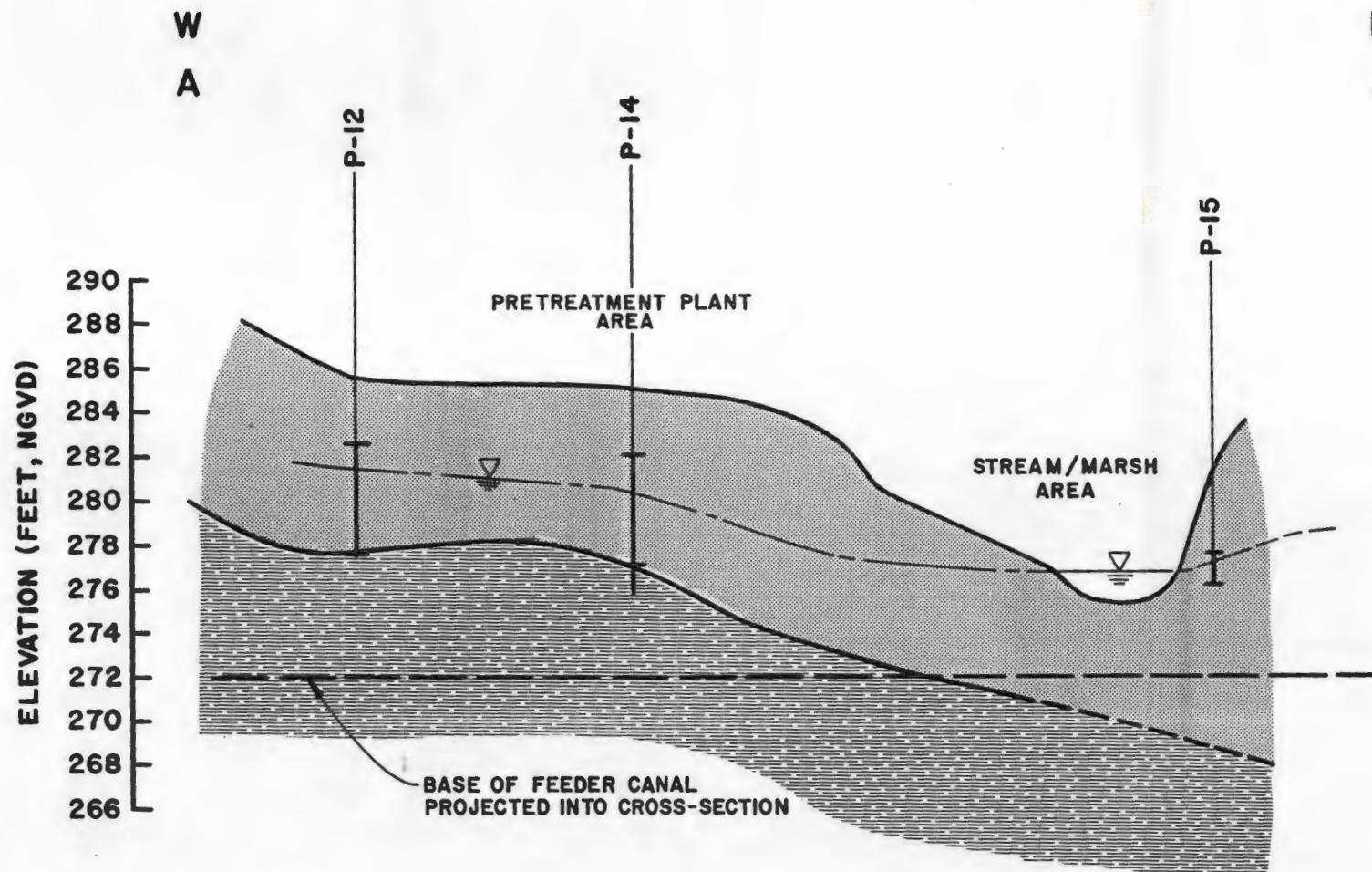


94 PLOT 1=100

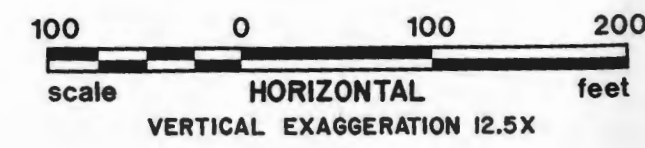
MAP WAS CONSTRUCTED BY STEREO PHOTOGRAMMETRIC METHODS
 NOVEMBER 3, 1991. BASE MAP

100 0 100 200

OVE



NOTE:
REFER TO FIGURE 3-8



GE

EC

As described in Section 3.1.1, the surface of the lacustrine clay unit dips to elevations below the base of the Feeder Canal east of the Pretreatment Plant beneath the marsh area (see Figures 3-1 and 3-9). Thus, groundwater flowing toward the stream and marsh can either discharge to the surface water and eventually flow to the Feeder Canal, or flow under the canal. Groundwater passing under the Feeder Canal would likely flow toward the stream and marsh area located approximately 150 feet south and downslope from the canal.

To the west, where the surface of the lacustrine clay is above the base of the canal, groundwater apparently does not flow past the Feeder Canal. This conclusion is based on the lack of saturation in the overburden deposits above the lacustrine clay sampled in borings PT-31 and PT-32, located south of the Feeder Canal, and the lack of groundwater above the clay indicated at in-situ sample locations IG-5 and IG-6.

It is possible that groundwater from the southern portions of the Pretreatment Plant area discharges to the canal through leaks in the canal wall. However, the Feeder Canal is lined with plastic south of the Pretreatment Plant up to the open section in the north wall of the canal. Further, monitoring of water levels in the piezometers at the Pretreatment Plant during the seasonal filling of the Feeder Canal in April 1992, as reported in the "RCRA Facility Investigation Report for Groundwater, CIBA-GEIGY Site, Glens Falls New York" (ECKENFELDER Engineering P.C., March 1993), indicated that the water level in the Feeder Canal had no discernible effect on groundwater levels or flow directions in the overburden beneath the Pretreatment Plant area. Thus, groundwater beneath the southern portion of the Pretreatment Plant is apparently not in direct hydraulic communication with the water in the canal. However, groundwater from the southern area of the Pretreatment Plant could flow into a potential zone of enhanced permeability which may exist between the bottom and sides of the canal and the lacustrine clay. The occurrence of a zone of enhanced permeability, if present, might be attributed to soil disturbance or backfilling during excavation for canal construction. Groundwater in such a zone would likely flow eastward, parallel to the course and gradient of the Feeder Canal, to where the clay surface dips below

the bottom of the canal. In the absence of an enhanced permeability zone, groundwater from the southern portion of the Pretreatment Plant area likely flows eastward, parallel to, and north of, the wall of the canal.

The potentiometric surface maps also indicate that the gradient and the flow direction in the western part of the Pretreatment Plant area is variable. The potentiometric surface configurations for July 7 and 13, 1994 (Figures 3-7 and 3-8) indicate a small, generally eastward gradient with components of flow to the north and south. A significant component of southward flow was identified on the July 13, 1994 map based on the additional water level monitoring points provided by in-situ sampling locations IG-1 through IG-4. The potentiometric surface configurations for February 12 and April 22, 1992 (see Appendix F) also indicate a small to nearly flat gradient in the western portion of the site. The configuration of the potentiometric surface from June 21, 1993 (see Appendix F) indicates a groundwater mound, or flow divide, in the western area, near piezometers P-1 and P-7, with radial flow away from the mound. In contrast, the potentiometric surface configuration for December 4, 1991 (see Appendix F) indicates a steep eastward gradient in this area. It is likely that groundwater flowing to the west and south from the Pretreatment Plant area eventually flows toward the main plant site, since the general slope of the lacustrine clay unit in this area, based on investigations at the main plant site, is to the south toward the Hudson River.

This variability in groundwater flow directions is likely caused by local variations in rates of recharge to the groundwater from precipitation due to the variable nature of the ground surface features (see Section 1.2), the influence of the topography of the clay unit surface due to the thin of the saturated thickness above the clay, and/or local variations in hydraulic conductivity. In a hydrogeologic setting such as this, complex, local flow patterns can develop which cannot be fully defined by the monitoring of water levels in wells. For example, it is possible during periods of low recharge for the groundwater flow to be locally controlled by the slope of the clay unit depending on the distribution of groundwater elevations relative to the topography of the clay surface in the area. In this situation, local flow paths may be opposite or cross-gradient from the flow direction interpreted from water levels

measured across the site. The uncertainty in the direction of flow diminishes as the saturated thickness becomes large relative to the relief on the clay surface, or where the clay surface is demonstrated to dip in the same general direction as the potentiometric surface interpreted from the water level monitoring data.

3.2.3 Groundwater Quality

In this section, the results of the total cyanide analyses of the groundwater samples collected from the monitoring wells, piezometers and in-situ groundwater monitoring locations are evaluated with respect to the spatial distribution of concentrations. An isoconcentration map of the total cyanide concentrations is presented in Figure 3-10, using a logarithmic contour interval beginning at the GWPC for cyanide, 100 µg/L.

Figure 3-10 indicates that the highest cyanide concentrations in the groundwater, above 5,000 µg/L, are located in the area extending from north of tank T-110 to the vicinity of piezometer P-6. Relatively high concentrations continue from this area to the vicinity of P-8, where a concentration of 2,230 µg/L was measured. To the west, south and east of this area, cyanide concentrations decrease. The northern extent of the area of high concentrations is limited by the stream north of the Pretreatment Plant, since this is a groundwater divide (see Section 3.2.2).

Cyanide concentrations exceed the GWPC to the northern, eastern and southern boundaries of the Pretreatment Plant area. Along the western border of the Pretreatment Plant area, concentrations further decrease to below or near the GWPC. Concentrations in two of the four samples collected south of the Feeder Canal, directly south of the section of the canal open to the marsh area, exceed the GWPC.

The likely source of the cyanide in groundwater is spills and possible leaks from a treatment tank which was located northwest of tank T-110, within the area of highest cyanide concentrations in both the groundwater and the soil (see Figure 3-6). The tank was used to hold cyanide-bearing sludge prior to introduction into the treatment system. The tank was open-topped and was buried three-quarters below ground level. The tank was removed during decommissioning

in 1990. Analyses of soil samples collected near the former location of this tank (i.e., PT-6, PT-10, and PT-24) indicate elevated levels of cyanide relative to the remainder of the Pretreatment Plant area (see Figure 3-6).

The occurrence of cyanide in the groundwater east of the suspected source area, such as the locations south of the Feeder Canal, is readily explained by the discussion of groundwater flow presented in Section 3.2.2. Groundwater containing cyanide flows eastward from the source area toward the stream and marsh area. Since this area serves as a groundwater divide, groundwater is directed to the south and under the canal where the lacustrine clay unit is below the base of the Feeder Canal.

Cyanide concentrations to the west of the suspected source are likely the result of the complex groundwater flow patterns caused by the interaction between the undulating surface of the lacustrine clay unit, the relatively thin saturated thickness above the clay, and fluctuations in groundwater elevations, as discussed in Section 3.2.2. One possible scenario for cyanide migration to these areas involves the mound in the clay surface in the area of highest cyanide concentrations. Groundwater moving from this area down the slope of the clay surface likely contributed to the elevated concentrations in piezometer P-8. Since the area of P-8 at times is located where on occasion a groundwater "mound" has been observed to develop, cyanide would be able to migrate to any of the remaining portions of the Pretreatment Plant area. This scenario is supported by the steady decrease in concentrations with distance from the suspected source area.

4.0 CONCLUSIONS

The following conclusions are made based on the findings of the soil and groundwater investigations conducted for this RFI:

Soil Investigation

- The overburden material in the Pretreatment Plant area consists of lacustrine deposits overlain throughout most of the area by fill deposits. The fill consists of sand, silt, clay, gravel and occasional concrete fragments. The lacustrine deposits consist of a unit of predominantly sand with silt and clay intervals overlying a massive lacustrine clay unit. The lacustrine clay unit directly overlies bedrock throughout most of the area.
- The surface of the lacustrine clay unit undulates beneath most of the Pretreatment Plant area. In the eastern portion of the Pretreatment Plant area, the clay unit dips toward the southeast. This southeastward dip continues beyond the south side of the Feeder Canal. Directly south of the Pretreatment Plant area, the excavation for the Feeder Canal partially extends into the clay unit. The base of the Feeder Canal is below the top of the clay surface on either side of the canal. East of the Pretreatment Plant, the surface of the clay unit dips below the base of the Feeder Canal.
- The highest concentrations of hazardous constituents in the soil are within the easternmost portion of the Pretreatment Plant area. To the west, concentrations decrease to levels typical of the remainder of the Pretreatment Plant area. Concentrations also decrease markedly in the soils outside the fence surrounding the eastern portion of the Pretreatment Plant to the north, east, and south.
- In a small area within the central portion of the Pretreatment Plant area, near boring PT-8, cadmium concentrations are elevated slightly above concentrations in surrounding areas.

- Semivolatile organic compounds were detected in soil samples in the surface to four-foot depth interval at several locations across the Pretreatment Plant area. The compounds are predominantly polynuclear aromatic hydrocarbons (PAHs). The PAH concentrations appear to be more sporadically distributed than the inorganic constituents. Non-PAH semivolatile compounds were detected only in the eastern portion of the site, within the area of the highest concentrations of inorganic constituents.
- The maximum concentrations of constituents in the soils were typically in the zero- to two-foot depth interval.
- The source of the elevated concentrations of constituents in the surficial soils of the Pretreatment Plant area is likely minor spills and leaks which occurred during past operations, prior to the decommissioning of most of the treatment facilities in 1990. The PAH compounds detected at several locations across the Pretreatment Plant area are probably not related to Pretreatment Plant operations.
- TCLP analysis of the soil sample from the zero- to two-foot depth interval of boring PT-24, located in the center of the eastern portion of the Pretreatment Plant area, indicates that cadmium and lead concentrations exceed the regulatory limits for characteristic hazardous waste.

Groundwater Investigation

- Groundwater beneath the site flows laterally through the relatively permeable fill and lacustrine sands in the overburden. The massive lacustrine clay unit, situated in the lower portion of the natural overburden deposits, forms the lower boundary of the overburden water-bearing zone. Where the clay unit is absent due to excavation (in the vicinity of PT-1 and PT-2), the top of the bedrock surface forms the base of this zone.
- The general direction of groundwater flow beneath the Pretreatment Plant area is to the east toward the small stream and associated marsh areas which lie to the north and east. The stream is a local groundwater flow

divide. Thus, groundwater does not flow past the stream, but discharges to the stream and marsh, or flows parallel to the stream. Groundwater flowing toward the stream and marsh will either discharge to the surface water and flow into the Feeder Canal, or flow under the canal where the surface of the lacustrine clay unit dips below the bottom of the canal.

- Where the surface of the clay unit is above the base of the Feeder Canal, adjacent to the southern portions of the Pretreatment Plant, groundwater could possibly flow into a potential zone of enhanced permeability which may exist between the bottom and sides of the canal and the lacustrine clay. Groundwater in such a zone would likely flow eastward, parallel to the course and gradient of the Feeder Canal, to where the clay surface dips below the bottom of the canal. In the absence of the enhanced permeability zone, groundwater from the southern portion of the Pretreatment Plant area likely flows eastward, parallel to, and north of, the wall of the canal.
- The groundwater gradient and flow direction in the western part of the Pretreatment Plant area are variable. The gradient varies from a steep to nearly flat eastward gradient. Components of flow to the north and south are often developed. Also, on occasion, a groundwater flow divide forms in this area, thus creating a component of flow from the western Pretreatment Plant area to the west or southwest. Groundwater flowing west or south from the Pretreatment Plant area likely flows toward the main plant site to the south.
- The variability in groundwater flow directions is likely caused by local variations in rates of recharge to the groundwater from precipitation, the influence of the topography of the clay unit surface due to the thin saturated thickness above the clay, and/or local variations in hydraulic conductivity. In this setting, complex, local flow patterns can develop which cannot be resolved by the monitoring of water levels in wells.
- Cyanide concentrations in the groundwater are highest beneath the area extending from north of tank T-110 to the vicinity of piezometer P-6. To

the west, south, and east, cyanide concentrations steadily decrease. The northern extent of the elevated concentrations is limited by the stream to the north, since this serves as a groundwater flow divide.

- Cyanide concentrations exceed the GWPC to the northern, eastern, and southern boundaries of the Pretreatment Plant area. Along the western border of the site, concentrations decrease to below or near the GWPC. Concentrations in two of the four samples collected south of the Feeder Canal exceed the GWPC.
- The likely source of the cyanide in groundwater is spills and possible leaks from a former holding tank for cyanide-bearing sludge located northwest of Tank T-110. The tank was removed in 1990.
- The complex, local groundwater flow patterns created by the interaction among the undulating surface of the lacustrine clay unit, the relatively thin saturated thickness above the clay, and fluctuations in groundwater elevations resulted in the migration of cyanide-bearing groundwater from the source to the western portions of the Pretreatment Plant area.

5.0 RECOMMENDATIONS

In a January 10, 1994 letter to the NYSDEC, the NYSDOH provided soil cleanup criteria for attaining an unrestricted use designation for soils at the Pretreatment Plant SWMU in the event that unrestricted use is the desired remediation goal. This letter was included as an attachment to the February 17, 1994 letter from the NYSDEC and the USEPA which contained the comments on the original draft of the Work Plan for this investigation. These soil cleanup criteria were provided prior to the collection and analysis of samples from the "background sample area", sampled as part of the RFI of the Adjacent Off-Site Land AOC, to guide the RFI for the Pretreatment Plant SWMU. In accordance with the notification requiring a CMS for on-site soils and groundwater, dated March 15, 1993, the concentrations of metals measured in the background sample area are to be used as the Target Cleanup Levels (i.e., levels that would allow for unrestricted use) for on-site soils. Corrective measures for on-site soil, including soil within the Pretreatment Plant SWMU, were evaluated in the "Corrective Measure Study for On-Site Soil and Groundwater, CIBA-GEIGY Site, Glens Falls, New York" (ECKENFELDER Engineering P.C., August, 1994) (hereafter referred to as the "CMS Report"). The background sample data were not available for use in the CMS.

The soil cleanup criteria provided for the Pretreatment Plant SWMU in the January 10, 1994 letter from the NYSDOH are generally higher than the concentrations measured in the background sample area. Given this inconsistency and the need for health-based criteria to evaluate potential future uses and corrective measure alternatives, a site-specific risk assessment was initiated to establish soil cleanup levels for the Pretreatment Plant SWMU. A Supplemental RFI Report will be submitted presenting the methods, procedures, and findings of the risk assessment, as well as recommendations regarding cleanup levels for the desired post-remedial uses of the Pretreatment Plant SWMU. Any modifications to the CMS Report with respect to soils at the Pretreatment Plant SWMU, based on the results of the risk assessment, will be submitted as an addendum to the CMS Report.

Concentrations of total cyanide in the groundwater are above the GWPC within the overburden water-bearing zone beneath the Pretreatment Plant SWMU. Further,

cyanide-bearing groundwater has migrated off site, where locally, concentrations are above the GWPC. The CMS Report was submitted prior to the evaluation of groundwater quality at the Pretreatment Plant SWMU conducted as part of this RFI. Section 5.1 of the CMS Report states that if the RFI data indicate that corrective measures for groundwater are required for the Pretreatment Plant SWMU, this would be addressed at a later date. Based on the findings in this investigation, an evaluation of corrective measures for groundwater in the overburden at the Pretreatment Plant SWMU is required. This evaluation will be provided in an addendum to the CMS Report.

The supplemental RFI Report, containing the results of the risk assessment, will be submitted to the Agencies within 60 days of the submittal of this report. The addendum to the CMS Report, containing an evaluation of corrective measure alternatives for groundwater at the Pretreatment Plant SWMU and any modifications to the recommended corrective measures for soil at the Pretreatment Plant SWMU, will be submitted within 60 days of receiving approval of this report and the Supplemental RFI Report.

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- Bodek, Lyman, Reehl, and Rosenblatt, eds., 1988. "Environmental Inorganic Chemistry, Properties, Processes and Estimation Methods", Pergamon Press, New York.
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- Personal Communication, 1992. Warren Cutler, Hercules Incorporated.
- Personal Communication, 1991. Glen Schmiesing, Hercules Incorporated.

**APPENDIX A
SOIL BORING LOGS**

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-16

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 6/30/94
Finish Date: 6/30/94

DRILLING DATA

Inspector: Bob O'Neill, David Puentes
Contractor: NA
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 285.66
TWC: NA
TPC: NA
North: 1207566.7393
East: 693557.7523

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)
-----------	--------------	------------	------	-----------

Geophysical Log: ☐ yes ☒ no
Comments:

Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD
---------	-----------------------	------------	-----

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

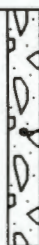
0

5

10

15

24



Backfilled
with
cuttings

1	NA	NA	SW-SM CL	NM
2	NA	NA	SW-SC	NM

ASPHALT AND GRAVEL 0.9'

FILL
Md. brown cmf SAND, little to
some Silt, little to some fmc
Gravel (angular to round), some
pieces of md. brown Silty CLAY

Removed asphalt and
gravel to 0.9' below grade
(2 layers of asphalt)

Samples disturbed by
hand augering

Water in hole to 1.9'

End of boring at 4.9 feet.

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-17

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 6/30/94
Finish Date: 6/30/94

DRILLING DATA

SAMPLING METHODS

Inspector: Bob O'Neill, David Puentes
Contractor: NA
Equipment: SS Hand Auger
Method: NA

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

WELL DEVELOPMENT

SURVEY DATA DATUM: NGVD

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

Grade: 285.61
TWC: NA
TPC: NA
North: 1207556.9881
East: 693602.7938

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Geophysical Log: ☐ yes ☒ no
Comments:

Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)
-----------	--------------	------------	------	-----------

Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RGD
---------	-----------------------	------------	-----

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

0

5

10

15

24



Backfilled
with
cuttings

1	NA	NA	SW,CL	NM
2	NA	NA	SM,ML CL	NM

ASPHALT AND GRAVEL 0.8'
FILL
Md. brown to orange-brown cmf
SAND, little (-) fine Gravel,
(angular to sub-rounded), tr (+)
Silt, pieces of Silty CLAY 2.8'
Md. to dk. brown f SAND and
Clayey SILT, rootlets 3.8'
Orange-red Silty CLAY, some
Sand (brick red) 4.8'
End of boring at 4.8 feet.

Removed asphalt and
gravel to 0.8' below grade
(2 layers of asphalt)
Samples disturbed by
hand augering
Moist @ approx. 3.8'

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-18

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 6/30/94
Finish Date: 6/30/94

DRILLING DATA

Inspector: Bob O'Neill, David Puentes
Contractor: NA
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 285.16
TWC: NA
TPC: NA
North: 1207543.0381
East: 693626.7304

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp. No. Blows/ 6 in. Rec. (ft.) USCS PID (ppm)

Run No. Hydraul. Cond. cm/sec Rec. (ft.) RQD

Geophysical Log: ☐ yes ☒ no
Comments:

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

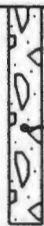
0

5

10

15

24



Backfilled
with
cuttings

1 NA NA GM-GC NM

2 NA NA SM,CL, ML NM

ASPHALT AND GRAVEL

FILL
Md. brown, md. gray, black cmf
Gravel and cmf SAND, some to
little Clayey Silt to Silty Clay,
rootlets, metal band, occ. black
or greenish coating on gravel
Dk. brown fm SAND and Clayey
SILT, tr f Gravel, occ. piece of
Silty CLAY, rootlets

End of boring at 4.5 feet.

0.5

2.5

4.5

Removed asphalt and
gravel to 0.5' below grade

Samples disturbed by
hand augering

ECKENFELDER INC.				Subsurface Boring Log		Well Name/Location: PT-19		Page 1 of 1		
Project: RFI of Pretreatment Plant SWMU				Project No.: 9427		Start Date: 6/30/94				
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY						Finish Date: 6/30/94				
DRILLING DATA					SAMPLING METHODS					
Inspector: Bob O'Neill, David Puentes Contractor: NA Equipment: SS Hand Auger Method: NA					Type:	Sampler	Tube	Core		
						SS Hand Auger	NA	NA		
						Diameter: 4" and 3.25"	NA	NA		
						Other: NA	NA	NA		
WELL CONSTRUCTION					WELL DEVELOPMENT		SURVEY DATA			
		Riser	Screen		Method: NA Duration: NA Gals. Purged: NA Slug Test: NA (cm/sec)		DATUM: NGVD Grade: 286.25 TWC: NA TPC: NA North: 1207508.0230 East: 693637.1674			
Material:	NA	NA								
Diameter (ID):	NA	NA								
Coupling:	NA	NA								
Depth (feet)	WELL CONSTRUCTION		soil rock	SAMPLE DATA			Geophysical Log: ☐ yes ☒ no Comments:			
			Samp. No.	Blows/ 8 in.	Rec. (ft.)	USCS				PID (ppm)
			Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD		VISUAL CLASSIFICATION		REMARKS
			1	NA	NA	GW,CL	NM	FILL Dk. gray c Gravel (angular) and dk. brown fnc SAND, little Clayey Silt, occ. piece of Silty CLAY Md. brown to tan cmf SAND, some fm Gravel, trace to little Silt, occ. piece of Silty CLAY End of boring at 4.0 feet.	Samples disturbed by hand augering Samples damp	
			2	NA	NA	SW,CL	NM			
0										
5										
10										
15										
24										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-20

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 6/30/94
Finish Date: 6/30/94

DRILLING DATA

Inspector: Bob O'Neill, David Puentes
Contractor: NA
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

Type:	Sampler	Tube	Core
SS Hand Auger	NA	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 284.87
TWC: NA
TPC: NA
North: 1207480.8980
East: 693641.5733

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)
-----------	--------------	------------	------	-----------

Geophysical Log: ☐ yes ☒ no
Comments:

Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD
---------	-----------------------	------------	-----

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

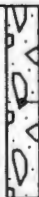
0

5

10

15

24



Backfilled with cuttings

1	NA	NA	SW,CL	NM
2	NA	NA	SW	NM

FILL
Md. to dk. brown fnc SAND and mc GRAVEL, little Clayey Silt, occ. piece of Silty CLAY, roots

2.0

LACUSTRINE DEPOSITS
Tan to orange fm (c) SAND, little Gravel, trace Silt

4.0

End of boring at 4.0 feet.

Samples disturbed by hand augering
Samples dry to damp

ECKENFELDER INC.				Subsurface Boring Log				Well Name/Location: PT-21				Page 1 of 1	
Project: RFI of Pretreatment Plant SWMU						Project No.: 9427				Start Date: 6/30/94			
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY										Finish Date: 6/30/94			
DRILLING DATA						SAMPLING METHODS							
Inspector: Bob O'Neill, David Puentes Contractor: NA Equipment: SS Hand Auger Method: NA						Type: Diameter: Other:		Sampler		Tube		Core	
								SS Hand Auger		NA		NA	
								4" and 3.25"		NA		NA	
								NA		NA		NA	
WELL CONSTRUCTION						WELL DEVELOPMENT				SURVEY DATA			
Material: Diameter (ID): Coupling:		Riser		Screen		Method: NA Duration: NA Gals. Purged: NA Slug Test: NA (cm/sec)				Datum: NGVD Grade: 284.77 TWC: NA TPC: NA North: 1207458.6550 East: 693634.0796			
		NA		NA									
		NA		NA									
		NA		NA									
Depth (feet)	WELL CONSTRUCTION		soil rock	SAMPLE DATA			Geophysical Log: ☐ yes ☒ no				REMARKS		
			Samp. No.	Blows/ 8 in.	Rec. (ft.)	USCS	PID (ppm)	Comments:					
			Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD							
									VISUAL CLASSIFICATION				
0	 Backfilled with cuttings		1	NA	NA	SW, CL	NM	FILL Md. to dk. brown fmc SAND, some mc Gravel, trace (+) Silt, occ. piece of Silty CLAY, roots Md. to dk. brown fmc SAND and to some c GRAVEL, occ. piece of Silty CLAY, rootlets End of boring at 3.0 feet.				Samples disturbed by hand augering	
2			NA	NA	SW-SM, CL	NM	Samples damp						
5												Refusal @ 3.0'	
10													
15													
20													
24													

ECKENFELDER INC.				Subsurface Boring Log		Well Name/Location: PT-22		Page 1 of 1		
Project: <i>RFI of Pretreatment Plant SWMU</i>				Project No.: <i>9427</i>		Start Date: <i>6/30/94</i>				
Client: <i>Hercules/CIBA-GEIGY Site, Glens Falls, NY</i>						Finish Date: <i>6/30/94</i>				
DRILLING DATA					SAMPLING METHODS					
Inspector: <i>Bob O'Neill, David Puentes</i> Contractor: <i>NA</i> Equipment: <i>SS Hand Auger</i> Method: <i>NA</i>					Type:	Sampler	Tube	Core		
						<i>SS Hand Auger</i>	<i>NA</i>	<i>NA</i>		
						Diameter:	<i>4" and 3.25"</i>	<i>NA</i>	<i>NA</i>	
						Other:	<i>NA</i>	<i>NA</i>	<i>NA</i>	
WELL CONSTRUCTION					WELL DEVELOPMENT		SURVEY DATA			
		Riser	Screen		Method: <i>NA</i> Duration: <i>NA</i> Gals. Purged: <i>NA</i> Slug Test: <i>NA</i> (cm/sec)		Datum: NGVD Grade: <i>284.67</i> TWC: <i>NA</i> TPC: <i>NA</i> North: <i>1207444.2635</i> East: <i>693683.0407</i>			
Material:	<i>NA</i>	<i>NA</i>								
Diameter (ID):	<i>NA</i>	<i>NA</i>								
Coupling:	<i>NA</i>	<i>NA</i>								
Depth (feet)	WELL CONSTRUCTION		soil rock	SAMPLE DATA			Geophysical Log: ☐ yes ☒ no Comments:			
			Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS				PID (ppm)
			Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD		VISUAL CLASSIFICATION		REMARKS
	 Backfilled with cuttings		1	<i>NA</i>	<i>NA</i>	<i>SW-SM CL</i>	<i>NM</i>	FILL Md. to dk. brown fnc SAND, some Clayey Silt, trace to little Gravel. Grades to SAND and Silty CLAY, trace Gravel, rootlets, pieces of plastic Dk. brown Clayey SILT to Silty CLAY, tr (+) f Sand, tr f Gravel End of boring at 4.0 feet.		Samples disturbed by hand augering Samples dry to damp
2			<i>NA</i>	<i>NA</i>	<i>ML</i>	<i>NM</i>				
0										
5										
10										
15										
24										

ECKENFELDER INC.				Subsurface Boring Log		Well Name/Location: PT-23		Page 1 of 1	
Project: <i>RFI of Pretreatment Plant SWMU</i>				Project No.: <i>9427</i>		Start Date: <i>6/30/94</i>			
Client: <i>Hercules/CIBA-GEIGY Site, Glens Falls, NY</i>						Finish Date: <i>6/30/94</i>			

DRILLING DATA					SAMPLING METHODS				
Inspector: <i>Bob O'Neill, David Puentes</i> Contractor: <i>NA</i> Equipment: <i>SS Hand Auger</i> Method: <i>NA</i>					Type: Diameter: Other:	Sampler	Tube	Core	
						<i>SS Hand Auger</i>	<i>NA</i>	<i>NA</i>	
						<i>4" and 3.25"</i>	<i>NA</i>	<i>NA</i>	
						<i>NA</i>	<i>NA</i>	<i>NA</i>	

WELL CONSTRUCTION				WELL DEVELOPMENT		SURVEY DATA DATUM: NGVD	
Material: Diameter (ID): Coupling:	Riser	Screen	Method: <i>NA</i> Duration: <i>NA</i> Gals. Purged: <i>NA</i> Slug Test: <i>NA</i> (cm/sec)		Grade: <i>284.86</i> TWC: <i>NA</i> TPC: <i>NA</i> North: <i>1207431.2232</i> East: <i>683558.0150</i>		
	<i>NA</i>	<i>NA</i>					
	<i>NA</i>	<i>NA</i>					

Depth (feet)	WELL CONSTRUCTION		soil rock	SAMPLE DATA				Geophysical Log: ☐ yes ☒ no Comments:	
	Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)				
	Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RGD		VISUAL CLASSIFICATION		REMARKS	
	0	 Backfilled with cuttings		1	<i>NA</i>	<i>NA</i>	<i>SW</i>	<i>NM</i>	FILL Md. to dk. brown fmc SAND, some to little Clayey Silt, tr (+) Gravel, occ. pieces of Silty CLAY, rootlets End of boring at 1.7 feet.
5									
10									
15									
24									

ECKENFELDER INC.				Subsurface Boring Log		Well Name/Location: PT-24		Page 1 of 1	
Project: <i>RFI of Pretreatment Plant SWMU</i>				Project No.: <i>9427</i>		Start Date: <i>7/1/94</i>			
Client: <i>Hercules/CIBA-GEIGY Site, Glens Falls, NY</i>						Finish Date: <i>7/1/94</i>			
DRILLING DATA					SAMPLING METHODS				
Inspector: <i>Bob O'Neill, David Puentes</i> Contractor: <i>NA</i> Equipment: <i>SS Hand Auger</i> Method: <i>NA</i>					Type:	Sampler	Tube	Core	
						<i>SS Hand Auger</i>			
						<i>NA</i>			
						<i>NA</i>			
					Diameter:	<i>4" and 3.25"</i>		<i>NA</i>	
						Other:	<i>NA</i>		
							<i>NA</i>		
WELL CONSTRUCTION					WELL DEVELOPMENT		SURVEY DATA		
Material: Diameter (ID): Coupling:		Riser	Screen		Method: <i>NA</i> Duration: <i>NA</i> Gals. Purged: <i>NA</i> Slug Test: <i>NA</i> (cm/sec)		Datum: <i>NGVD</i> Grade: <i>285.42</i> TWC: <i>NA</i> TPC: <i>NA</i> North: <i>1207533.1779</i> East: <i>693602.6313</i>		
		<i>NA</i>	<i>NA</i>						
		<i>NA</i>	<i>NA</i>						
		<i>NA</i>	<i>NA</i>						
Depth (feet)	WELL CONSTRUCTION		soil rock	SAMPLE DATA			Geophysical Log: ☐ yes ☒ no Comments:		
				Samp. No.	Blows/ 8 in.	Rec. (ft.)			USCS
				Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	VISUAL CLASSIFICATION REMARKS	
0	 Backfilled with cuttings							ASPHALT 0.7' FILL Md. to dk. brown, black, orange-brown cmf SAND, some to little fmc Gravel, trace to little Silt or Clayey Silt, pieces of asphalt @ 2.0' some to little Clayey Silt to Silty Clay End of boring at 3.4 feet.	Removed asphalt to 0.7' below grade Samples disturbed by hand augering Green and blue staining, occ. flecks of red and yellow material from 0'-2' Samples damp Refusal @ 3.4'
1			NA	NA	SW	NM			
2			NA	NA	SM-SC	NM			
5									
10									
15									
24									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-25

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/1/94
Finish Date: 7/1/94

DRILLING DATA

Inspector: Bob O'Neill, David Puentes
Contractor: NA
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA (cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 284.77
TWC: NA
TPC: NA
North: 1207494.6868
East: 693447.1123

WELL CONSTRUCTION

SAMPLE DATA

Geophysical Log: ☐ yes ☒ no
Comments:

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

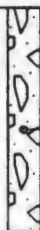
0

5

10

15

24



Backfilled with cuttings

Samp. No.	Blows/ 8 in.	Rec. (ft.)	USCS	PID (ppm)	Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	SAMPLE DATA	
									SM-SC	NM
1	NA	NA	SM-SC	NM						
2	NA	NA	SW-SM	NM						

ASPHALT AND GRAVEL

0.6'

FILL
Md. to lt. brown cmf SAND and to little Clayey SILT, little cmf Gravel, occ. pieces of Silty CLAY

2.0'

Lt. to md. brown cmf SAND and cmf GRAVEL, some to little Clayey Silt to Silty Clay

4.0'

End of boring at 4.6 feet.

Removed asphalt and coarse gravel to 0.6' below grade

Samples disturbed by hand augering

Water in hole @ 1.6'

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-26

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/1/94
Finish Date: 7/1/94

DRILLING DATA

Inspector: Bob O'Neill, David Puentes
Contractor: NA
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 284.82
TWC: NA
TPC: NA
North: 1207479.7674
East: 683434.6665

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp. No. Blows/ 6 in. Rec. (ft.) USCS PID (ppm)

Run No. Hydraul. Cond. cm/sec Rec. (ft.) RQD

Geophysical Log: ☐ yes ☒ no
Comments:

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

0

Backfilled with cuttings

Backfilled with cuttings

I

NA

NA

SW,CL

NM

ASPHALT and GRAVEL

0.8

Removed asphalt and gravel to 0.8' below grade

FILL

Md. brown to orange-brown cmf SAND and fm GRAVEL (angular to sub-rounded), tr Silt/Clayey Silt; to cmf SAND, some (-) Gravel, tr (+) to little Clayey Silt, occ. pieces of Silty CLAY

2.5

Samples disturbed by hand augering

Sample damp
Refusal @ 2.5'

End of boring at 2.5 feet.

5

10

15

24

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-27

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/1/94
Finish Date: 7/1/94

DRILLING DATA

Inspector: Bob O'Neill, David Puentes
Contractor: NA
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

Type:	Sampler	Tube	Core
SS Hand Auger	NA	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA (cm/sec)

SURVEY DATA

DATUM: NGVD
Grade: 284.74
TWC: NA
TPC: NA
North: 1207488.9068
East: 693416.5998

WELL CONSTRUCTION

SAMPLE DATA

Depth (feet)

Samp. No.	Blows/ 8 in.	Rec. (ft.)	USCS	PID (ppm)
1	NA	NA	SW,CL	NM
2	NA	NA	SM,CL	NM

Geophysical Log: ☐ yes ☒ no
Comments:

VISUAL CLASSIFICATION

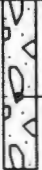
REMARKS

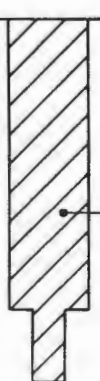
0.2' ASPHALT AND GRAVEL
2.2' FILL/LACUSTRINE
Md. brown cml SAND and fm (c) GRAVEL (sub-rounded to angular), little Clayey Silt, occ. pieces of Silty CLAY
4.2' Md. brown to orange-brown cml SAND, some (+) Clayey Silt, tr fm (c) Gravel, some large pieces of gray to brown Silty CLAY
End of boring at 4.2 feet.

Removed asphalt and gravel to 0.2' below grade
Samples disturbed by hand augering
Water in hole to 1.0' below grade

Backfilled with cuttings

24

ECKENFELDER INC.				Subsurface Boring Log				Well Name/Location: PT-28				Page 1 of 1	
Project: RFI of Pretreatment Plant SWMU						Project No.: 9427				Start Date: 7/1/94			
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY										Finish Date: 7/1/94			
DRILLING DATA								SAMPLING METHODS					
Inspector: Bob O'Neill, David Puentes Contractor: NA Equipment: SS Hand Auger Method: NA								Type:	Sampler	Tube	Core		
									SS Hand Auger	NA	NA		
									Diameter: 4" and 3.25"	NA	NA		
									Other: NA	NA	NA		
WELL CONSTRUCTION								WELL DEVELOPMENT				SURVEY DATA	
		Riser		Screen						Datum: NGVD			
Material:		NA		NA		Method: NA				Grade: 285.08			
Diameter (ID):		NA		NA		Duration: NA				TWC: NA			
Coupling:		NA		NA		Gals. Purged: NA				TPC: NA			
						Slug Test: NA (cm/sec)				North: 1207509.0227			
										East: 693428.8789			
Depth (feet)	WELL CONSTRUCTION			soil	SAMPLE DATA					Geophysical Log: ☐ yes ☒ no Comments:			
				rock									
				Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)					
				Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	ROD		VISUAL CLASSIFICATION		REMARKS		
0	 Backfilled with cuttings								<u>ASPHALT AND CONCRETE</u> 0.8		Removed asphalt and broken concrete to 0.8' below grade Samples disturbed by hand augering		
				1	NA	NA	SW,CL	NM	<u>FILL/LACUSTRINE</u> Md. brown cmf SAND, little to some fm (c) Gravel, trace Silt to Clayey Silt, Silty CLAY at base of boring End of boring at 3.5 feet.				3.5 Water in hole @ 2.8' below grade, running sands Refusal @ 3.5'
				2	NA	NA	SW,CL	NM					
5													
10													
15													
24													

ECKENFELDER INC.				Subsurface Boring Log				Well Name/Location: PT-29				Page 1 of 1					
Project: <i>RFI of Pretreatment Plant SWMU</i>						Project No.: <i>9427</i>				Start Date: <i>7/6/94</i>							
Client: <i>Hercules/CIBA-GEIGY Site, Glens Falls, NY</i>										Finish Date: <i>7/6/94</i>							
DRILLING DATA								SAMPLING METHODS									
Inspector: <i>Bob O'Neill</i> Contractor: <i>Empire Soils Investigations</i> Equipment: <i>CME-55</i> Method: <i>3 1/4" ID HS Augers</i>								Type: Diameter: Other:		Sampler		Tube		Core			
										<i>Split spoon</i>		<i>NA</i>		<i>NA</i>			
										<i>2 inch</i>		<i>NA</i>		<i>NA</i>			
										<i>140#/30"</i>		<i>NA</i>		<i>NA</i>			
WELL CONSTRUCTION								WELL DEVELOPMENT				SURVEY DATA					
Material: Diameter (ID): Coupling:		Riser		Screen		Method: <i>NA</i> Duration: <i>NA</i> Gals. Purged: <i>NA</i> Slug Test: <i>NA</i> (cm/sec)				Datum: <i>NGVD</i> Grade: <i>286.25</i> TWC: <i>NA</i> TPC: <i>NA</i> North: <i>1207461.6425</i> East: <i>693030.9761</i>							
		<i>NA</i>		<i>NA</i>													
		<i>NA</i>		<i>NA</i>													
		<i>NA</i>		<i>NA</i>													
WELL CONSTRUCTION								soil rock		SAMPLE DATA							
Depth (feet)								Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)	Geophysical Log: ☐ yes ☒ no Comments:				
								Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD						
								1	3-3-3-4	1.2	ML-OL SW	NM	TOPSOIL Dark brown organic SILT, little f Sand, rootlets LACUSTRINE DEPOSITS Tan, orange-brown fine SAND, trace (+) of Gravel, trace Silt Medium gray Silty CLAY with occasional thin brown siltier layers				REMARKS @ 4.0 feet wet to moist Siltier layers (0.5" thick) Split spoon refusal at 7.5 feet
								2	5-5-5-5	1.1	SW	NM					
								3	8-5-4-2	1.2	SW CL	NM					
4								3-4-4	1.5	CL	NM						
								End of boring at 7.5 feet.									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:

PT-30

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU

Project No.:

Start Date: 7/6/94

Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

9427

Finish Date: 7/6/94

DRILLING DATA

Inspector: Bob O'Neill

Contractor: Empire Soils Investigations

Equipment: CME-55

Method: 3 1/4" ID HS Augers

SAMPLING METHODS

Type:	Sampler	Tube	Core
	Split spoon	NA	NA
Diameter:	2 inch	NA	NA
Other:	140#/30"	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 286.54
TWC: NA
TPC: NA
North: 1207319.1566
East: 693054.6949

Depth (feet)	WELL CONSTRUCTION		soil rock		SAMPLE DATA				Slug Test: NA (cm/sec)		North: 1207319.1566 East: 693054.6949	
			Samp. No.	Blows/ 8 in.	Rec. (ft.)	USCS	PID (ppm)	Geophysical Log: ☐ yes ☒ no Comments:				
								Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	VISUAL CLASSIFICATION
0		1	5-4-4-4	1.1	CL-OL SW	NM	TOPSOIL Med. gray to dk. brown Silty CLAY, little fm Sand, rootlets		0.7	@ 8.5' wet		
		2	3-3-3-4	1.1	SW	NM	LACUSTRINE DEPOSITS Orange, tan, md. brown fm to fmc SAND, tr (+) Silt, little to no f Gravel (rounded)					
5		3	7-6-5-5	1.1	SW SW	NM						
		4	8-7-7-7	2.0	SW CL	NM	Md. gray Silty CLAY, occasional thin brown siltier layers		8.5			
		5	4-8-8-4	2.0	CL	NM	Orange, md. brown fm SAND, tr Silt		8.9			
10							md. gray to md. brown Silty CLAY, with occ. thin layers of Clayey SILT (0.5")		10.0			
						End of boring at 10.0 feet.						
15												
24												

Cement
Grout

@ 8.5' wet

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-31

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU

Project No.:

Start Date: 7/6/94

Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

9427

Finish Date: 7/6/94

DRILLING DATA

Inspector: Bob O'Neill

Contractor: Empire Soils Investigations

Equipment: CME-55

Method: 3 1/4" ID HS Augers

SAMPLING METHODS

Type:	Sampler	Tube	Core
	Split spoon	NA	NA
Diameter:	2 inch	NA	NA
Other:	140#/30"	NA	NA

WELL CONSTRUCTION

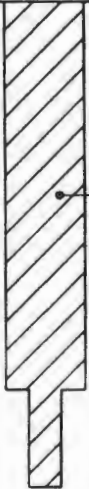
	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 281.9
TWC: NA
TPC: NA
North: 1207268.9097
East: 693369.5453

WELL CONSTRUCTION		soil	SAMPLE DATA					Slug Test: NA (cm/sec)		North: 1207268.9097 East: 693369.5453	
		rock						Geophysical Log: ☐ yes ☒ no Comments:			
Depth (feet)		Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)	VISUAL CLASSIFICATION		REMARKS		
		Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RGD						
0		1	8-8-8-8	1.4	ML CL-ML	NM	TOPSOIL Dk. brown organic SILT, tr (+) f Sand		0.8'		
		2	4-18-50/0'	0.5	ML	NM	FILL Md. to dk. brown Silty CLAY to SILT & CLAY, tr fine Sand, tr Gravel				
5		3	8-7-8-4	NR		NM			Dk. gray limestone fragments in base of spoon, refusal @ 3.0'		
		4	7-7-7-11	1.6	CL-ML	NM	LACUSTRINE DEPOSITS Md. brown Silty CLAY w/ thin SILT & CLAY layers; to SILT & CLAY, tr Sand, tr Gravel Orange fm SAND layer @ 8.3'		6.3'		
		5	7-8-7-7	1.9	CL	NM	Md. brown to md. gray Silty CLAY w/ occ. thin SILT & CLAY layers		8.4'		
10							End of boring at 10.0 feet.		10.0'		
15											
24											



Cement Grout

TOPSOIL
Dk. brown organic SILT, tr (+) f Sand

FILL
Md. to dk. brown Silty CLAY to SILT & CLAY, tr fmc Sand, tr Gravel

LACUSTRINE DEPOSITS
Md. brown Silty CLAY w/ thin SILT & CLAY layers; to SILT & CLAY, tr Sand, tr Gravel
Orange fm SAND layer @ 8.3'

Md. brown to md. gray Silty CLAY w/ occ. thin SILT & CLAY layers

End of boring at 10.0 feet.

Dk. gray limestone fragments in base of spoon, refusal @ 3.0'
No recovery 4.0'-8.0'
Angular limestone fragments @ 8.0'

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-32

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/6/94
Finish Date: 7/6/94

DRILLING DATA

Inspector: Bob O'Neill
Contractor: Empire Soils Investigations
Equipment: CME-55
Method: 3 1/4" ID HS Augers

SAMPLING METHODS

Type:	Sampler	Tube	Core
Diameter:	Split spoon	NA	NA
Other:	2 inch	NA	NA
	140#/30"	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 281.57
TWC: NA
TPC: NA
North: 1207340.9784
East: 693535.4358

Depth (feet)	WELL CONSTRUCTION		SAMPLE DATA					Slug Test: NA (cm/sec)		North: 1207340.9784 East: 693535.4358	
	Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)	Geophysical Log: ☐ yes ☒ no		Comments:	VISUAL CLASSIFICATION	REMARKS	
						Run No.	Hydraul. Cond. cm/sec				Rec. (ft.)
0											
5											
10											
15											

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-33

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU

Project No.:

Start Date: 7/6/94

Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

9427

Finish Date: 7/6/94

DRILLING DATA

SAMPLING METHODS

Inspector: Bob O'Neill

Contractor: Empire Soils Investigations

Equipment: CME-55

Method: 3 1/4" ID HS Augers

Type:

Diameter:

Other:

Sampler

Split spoon

2 inch

140#/30"

Tube

NA

NA

NA

Core

NA

NA

NA

WELL CONSTRUCTION

WELL DEVELOPMENT

SURVEY DATA

Material:

NA

NA

Method: NA

Grade: 281.72

Diameter (ID):

NA

NA

Duration: NA

TWC: NA

Coupling:

NA

NA

Gals. Purged: NA

TPC: NA

Slug Test: NA
(cm/sec)

North: 1207392.0652
East: 693686.4906

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp.
No.

Blows/
6 in.

Rec.
(ft.)

USCS

PID
(ppm)

Geophysical Log: ☐ yes ☒ no
Comments:

Run
No.

Hydraul.
Cond.
cm/sec

Rec.
(ft.)

RQD

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

0

5

10

15

24



Cement
Grout

1

12-8-8-10

0.4

ML-OL

NM

TOPSOIL/FILL

Dk. brown SILT (and organic SILT), little fm (c) Sand, tr (+) fc Gravel, rootlets

2.0

2

7-9-7-5

0.6

SM-SW

NM

LACUSTRINE DEPOSITS

Md. brown to orange-brown fmc-fm SAND, tr to some Silt, tr fc Gravel, occasional Silt layers

3

4-4-3-2

1.3

SW

NM

4

3-3-4-5

1.3

SW

NM

5

4-4-7-9

1.4

SW

NM

Lt. to dk. brown SILT, tr to some f Sand, few CLAY layers, occ. grades to Clayey SILT

9.1

6

3-4-8-9

1.8

NM

Md. brown Silty CLAY, thin CLAY & SILT or SILT layers

10.4

7

12-14-14-14

1.8

CL

NM

14.0

End of boring at 14.0 feet.

Moist to damp @ 9.1

Small amount of water in hole

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:

PT-34

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU

Project No.:

Start Date: 7/6/94

Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

9427

Finish Date: 7/6/94

DRILLING DATA

SAMPLING METHODS

Inspector: Bob O'Neill

Contractor: Empire Soils Investigations

Equipment: CME-55

Method: 3 1/4" ID HS Augers

Type:

Diameter:

Other:

Sampler

Split spoon

2 inch

140#/30"

Tube

NA

NA

NA

Core

NA

NA

NA

WELL CONSTRUCTION

WELL DEVELOPMENT

SURVEY DATA

Material:

Riser

NA

Screen

NA

Diameter (ID):

NA

NA

Coupling:

NA

NA

Method: NA

Duration: NA

Gals. Purged: NA

Slug Test: NA
(cm/sec)

Grade: 281.41

TWC: NA

TPC: NA

North: 1207426.9880

East: 693844.1645

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp.
No.

Blows/
6 in.

Rec.
(ft.)

USCS

PID
(ppm)

Geophysical Log: ☐ yes ☒ no
Comments:

Run
No.

Hydraul.
Cond.
cm/sec

Rec.
(ft.)

RQD

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

0

5

10

15

24



Cement
Grout

1

4-4-6-8

0.5

ML-OL

NM

TOPSOIL/FILL

Dk. brown SILT (and organic SILT), some fm Sand, tr Gravel, rootlets

2.0

2

6-6-5-5

1.2

SW-SM

NM

LACUSTRINE DEPOSITS

Md. brown, orange-brown, gray fmc SAND, trace to little Silt, trace Gravel, interbedded w/ layers of dk. brown, md. brown, gray Silt, Clayey SILT, Silty CLAY

3

9-6-4-5

1.8

ML,CL

NM

4

6-6-6-6

1.3

ML,SW

NM

5

5-5-4-2

1.2

ML,SW

NM

6

2-WOR-1-WOR

1.5

SW,ML

NM

7

WOH-2-4-3

2.0

SW,ML

NM

Wet to Saturated @ 12.0'

14.0

8

3-4-6-9

0.8

CL

NM

Gray-brown to dk. gray Silty CLAY w/ thin layers of SILT & CLAY

9

2-3-3-8

2.0

CL

NM

18.0

End of boring at 18.0 feet.

Page 1 of 2

Start Date: 7/7/94
Finish Date: 7/7/94

Sampler	Tube	Core
Split spoon	NA	NA
2 inch	NA	NA
140#/30"	NA	NA

Grade: 281.77
TWC: NA
TPC: NA
North: 1207447.8958
East: 693593.2999

Depth (feet)	WELL CONSTRUCTION		soil	SAMPLE DATA					Slug Test: NA (cm/sec)	North: 1207447.8958 East: 693593.2999	
			rock	Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)	Geophysical Log: ☐ yes ☒ no		
									Comments:		
				Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD		VISUAL CLASSIFICATION		REMARKS
0											
				1	3-5-5-10	1.1	ML-OL SW,SM	NM	TOPSOIL Dk. brown organic SILT, little fm Sand, tr fm Gravel, rootlets		
				2	5-8-5-8	1.0	SW	NM	LACUSTRINE DEPOSITS Orange-brown, md.-dk. brown, md. gray fmc SAND, trace to little Silt, trace Gravel (sub-rounded to rounded)		
5				3	4-4-4-4	0.8	SW	NM			
				4	4-3-2-2	2.0	SW	NM			
				5	1-1-1-3	1.4	SM-SW	NM			
				6	3-3-8-8	1.8	SM-SW	NM			
				7	8-10-12-14	2.0	SW	NM			
15				8	4-8-8-10	2.0	SW	NM			
				9	8-10-10-15	2.0	SW	NM			
				10	3-8-17-19	NR	-	NM			
				11	12-14-14-18	1.3	SW	NM			
24				12	20-20-14-18	2.0	SW	NM			

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-36

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/19/94
Finish Date: 7/19/94

DRILLING DATA

SAMPLING METHODS

Inspector: Bob O'Neill
Contractor: ECKENFELDER INC.
Equipment: SS Hand Auger
Method: NA

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

WELL DEVELOPMENT

SURVEY DATA DATUM: NGVD

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

Grade: 284.25
TWC: NA
TPC: NA
North: 1207563.2102
East: 693603.8895

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)

Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)
1	NA	NA	SM,CL	NM
2	NA	NA	CL,SC	NM

Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD
1	NA	NA	
2	NA	NA	

VISUAL CLASSIFICATION

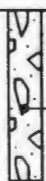
REMARKS

Backfilled with cuttings

MARSH/LACUSTRINE DEPOSITS
Md. to dk. brown fm (c) SAND and Clayey SILT to SILT & CLAY, little fm Gravel, pieces of Silty CLAY, roots, leaves, etc. @ grade
@ 2.0' CLAY & SILT and fmc SAND, trace f Gravel, then brick red fmc SAND and CLAY & SILT, then lt. brown Silty CLAY
End of boring at 4.0 feet.

Samples disturbed by hand augering
Samples damp

24

ECKENFELDER INC.				Subsurface Boring Log				Well Name/Location: PT-37				Page 1 of 1	
Project: RFI of Pretreatment Plant SWMU						Project No.: 9427				Start Date: 7/19/94			
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY										Finish Date: 7/19/94			
DRILLING DATA						SAMPLING METHODS							
Inspector: Bob O'Neill						Type: Diameter: Other:		Sampler		Tube		Core	
Contractor: ECKENFELDER INC.								SS Hand Auger		NA		NA	
Equipment: SS Hand Auger								4" and 3.25"		NA		NA	
Method: NA								NA		NA		NA	
WELL CONSTRUCTION						WELL DEVELOPMENT				SURVEY DATA			
Material: Diameter (ID): Coupling:		Riser		Screen		Method: NA Duration: NA Gals. Purged: NA Slug Test: NA (cm/sec)				Datum: NGVD Grade: 283.48 TWC: NA TPC: NA North: 1207548.2336 East: 693631.8634			
		NA		NA									
		NA		NA									
Depth (feet)	WELL CONSTRUCTION		soil rock	SAMPLE DATA				Geophysical Log: ☐ yes ☒ no					
			Samp. No.	Blows/6 in.	Rec. (ft.)	USCS	PID (ppm)	Comments:					
			Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD		VISUAL CLASSIFICATION		REMARKS			
0	 Backfilled with cuttings		1	NA	NA	SC, ML	NM	FILL Dk. brown, black fine SAND and Silty CLAY		1.0' Samples disturbed by hand augering			
			2	NA	NA	ML-CL	NM	LACUSTRINE DEPOSITS Brown to orange-brown Clayey SILT, and to little (+) fine Sand, grading to Silty CLAY (also some cavings from above)		Occ. red and yellow flecks, dk. green and blue staining on soils from 0'-1.0' Samples damp			
5								End of boring at 3.5 feet.		3.5' Refusal @ 3.5'			
10													
15													
24													

Page 1 of 1

Start Date: 7/19/94
Finish Date: 7/19/94

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

Grade: 283.78
TWC: NA
TPC: NA
North: 1207507.9454
East: 693644.4711

0.5

Samples disturbed by hand augering

Samples dry to damp

3.2

Refusal @ 3.2'

24

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-39

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/19/94
Finish Date: 7/19/94

DRILLING DATA

Inspector: Bob O'Neill
Contractor: ECKENFELDER INC.
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 283.21
TWC: NA
TPC: NA
North: 1207484.7523
East: 693209.0123

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp. No. Blows/ 6 in. Rec. (ft.) USCS PID (ppm)

Run No. Hydraul. Cond. cm/sec Rec. (ft.) RQD

Geophysical Log: ☐ yes ☒ no
Comments:

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

0

5

10

15

24



Backfilled
with
cuttings

1

NA

NA

SM
SW

NM

TOPSOIL
Dk. brown fm SAND and SILT
(organic), roots

0.5

Samples disturbed by
hand augering

2

NA

NA

SW

NM

LACUSTRINE DEPOSITS
Md. brown to tan fmc SAND,
little (+) fmc Gravel, tr Silt

4.0

Samples dry to damp

End of boring at 4.0 feet.

ECKENFELDER INC.				Subsurface Boring Log		Well Name/Location: PT-40		Page 1 of 1	
Project: <i>RFI of Pretreatment Plant SWMU</i>				Project No.: <i>9427</i>		Start Date: <i>7/19/94</i>			
Client: <i>Hercules/CIBA-GEIGY Site, Glens Falls, NY</i>						Finish Date: <i>7/19/94</i>			

DRILLING DATA					SAMPLING METHODS				
Inspector: <i>Bob O'Neill</i> Contractor: <i>ECKENFELDER INC.</i> Equipment: <i>SS Hand Auger</i> Method: <i>NA</i>					Type: Diameter: Other:	Sampler	Tube	Core	
						<i>SS Hand Auger</i>	NA	NA	
						<i>4" and 3.25"</i>	NA	NA	
						<i>NA</i>	NA	NA	

WELL CONSTRUCTION				WELL DEVELOPMENT		SURVEY DATA DATUM: NGVD	
Material: Diameter (ID): Coupling:	Riser	Screen	Method: <i>NA</i> Duration: <i>NA</i> Gals. Purged: <i>NA</i> Slug Test: <i>NA</i> (cm/sec)		Grade: <i>282.12</i> TWC: <i>NA</i> TPC: <i>NA</i> North: <i>1207436.7849</i> East: <i>693595.1067</i>		
	NA	NA					
	NA	NA					

Depth (feet)	WELL CONSTRUCTION		soil rock	SAMPLE DATA				Geophysical Log: ☐ yes ☒ no	
		Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)	Comments:		
		Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD				
	0			1	NA	NA	ML-OL CL	NM	TOPSOIL/COLLUVIUM Dk. brown SILT to Clayey SILT (mostly organic), some fm Sand occ. pieces of Silty CLAY 2.0 LACUSTRINE DEPOSITS Md. brown Clayey SILT to SILT & CLAY, some fm Sand, large pieces of Silty CLAY common 4.0

Backfilled with cuttings

5

10

15

24

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
PT-41

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/19/94
Finish Date: 7/19/94

DRILLING DATA

Inspector: Bob O'Neill
Contractor: ECKENFELDER INC.
Equipment: SS Hand Auger
Method: NA

SAMPLING METHODS

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	4" and 3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	NA	NA
Diameter (ID):	NA	NA
Coupling:	NA	NA

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA (cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 283.1
TWC: NA
TPC: NA
North: 1207548.8808
East: 693639.8879

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp. No. Blows/ 6 in. Rec. (ft.) USCS PID (ppm)

Run No. Hydraul. Cond. cm/sec Rec. (ft.) RQD

Geophysical Log: ☐ yes ☒ no
Comments:

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

0

5

10

15

24



Backfilled with cuttings

1

NA

NA

SM

NM

TOPSOIL/FLOOD PLAIN/FILL
Dk. brown to black (organic), then md. brown fm SAND and SILT to Clayey SILT, tr fmc Gravel

LACUSTRINE/FILL
Md. brown to orange-brown SILT to Clayey SILT, some f Sand, tr (+) cmf Gravel (sub-rounded)

End of boring at 2.2 feet.

Samples disturbed by hand augering

Samples dry to damp
Refusal @ 2.2'

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:
P-15

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU
Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

Project No.:
9427

Start Date: 7/5/94
Finish Date: 7/5/94

DRILLING DATA

Inspector: Bob O'Neill
Contractor: NA
Equipment: SS Hand Auger
Method: Hand Auger

SAMPLING METHODS

	Sampler	Tube	Core
Type:	SS Hand Auger	NA	NA
Diameter:	3.25"	NA	NA
Other:	NA	NA	NA

WELL CONSTRUCTION

	Riser	Screen
Material:	Steel, Sch. 40	CI/SS Well Point
Diameter (ID):	1.25"	1.25"
Coupling:	SS	SS

WELL DEVELOPMENT

Method: NA
Duration: NA
Gals. Purged: NA
Slug Test: NA
(cm/sec)

SURVEY DATA DATUM: NGVD

Grade: 281.13
TWC: 284.40
TPC: NA
North: 1207522.9536
East: 693846.4547

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

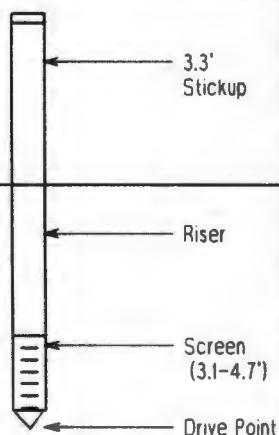
Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	PID (ppm)
Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	

Geophysical Log: ☐ yes ☒ no
Comments:

VISUAL CLASSIFICATION

REMARKS

Depth (feet)



TOPSOIL/FILL
Dk. brown fmc SAND, little (+)
Clayey Silt, little c Gravel
(angular)

LACUSTRINE DEPOSITS
Tan, orange-brown fm (c) SAND,
tr rounded f Gravel, occ. Silty
Clay layer

End of boring at 5.4 feet.

Samples disturbed by
hand augering

Water in hole @ approx.
4.7'

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location:

P-16

Page 1 of 1

Project: RFI of Pretreatment Plant SWMU

Project No.:

Start Date: 7/5/94

Client: Hercules/CIBA-GEIGY Site, Glens Falls, NY

9427

Finish Date: 7/5/94

DRILLING DATA

Inspector: Bob O'Neill

Contractor: NA

Equipment: SS Hand Auger

Method: Hand Auger

SAMPLING METHODS

Type:

SS Hand Auger

Diameter:

3.25"

Other:

NA

Sampler

NA

NA

NA

Core

NA

NA

NA

WELL CONSTRUCTION

Riser

Screen

Material:

Steel, Sch. 40

CI/SS Well Point

Diameter (ID):

1.25"

1.25"

Coupling:

SS

SS

WELL DEVELOPMENT

Method: NA

Duration: NA

Gals. Purged: NA

Slug Test: NA

(cm/sec)

SURVEY DATA

DATUM: NGVD

Grade: 283.60

TWC: 285.55

TPC: NA

North: 1207700.2911

East: 693331.1887

WELL CONSTRUCTION

soil
rock

SAMPLE DATA

Samp.
No.

Blows/
6 in.

Rec.
(ft.)

USCS

PID
(ppm)

Geophysical Log: ☐ yes ☒ no

Comments:

Run
No.

Hydraul.
Cond.
cm/sec

Rec.
(ft.)

RQD

VISUAL CLASSIFICATION

REMARKS

Depth (feet)

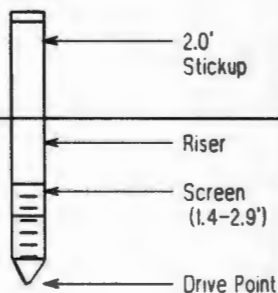
0

5

10

15

24



TOPSOIL/MARSH DEPOSITS
Dk. brown Silty CLAY to Clayey SILT, tr Sand, roots, moist

LACUSTRINE DEPOSITS
Cmf SAND and Clayey SILT to Silty CLAY

Gray Silty CLAY

End of boring at 3.0 feet.

0.8
ft
Samples disturbed by hand augering
Water in hole to 1.8'

APPENDIX B
SOIL QUALITY DATA SUMMARY

RESULTS OF SOIL SAMPLE ANALYSES (a)
RFI OF PRETREATMENT PLANT SWMU
INORGANIC CONSTITUENTS AND MISCELLANEOUS PARAMETERS

Sample Name	Date	Cadmium	Chromium	Lead	Mercury	Total Cyanide	% Solids
PT-16-1	06/30/94	0.79	18.	16.	0.05 U	0.60 U	82.8
PT-16-2	06/30/94	0.13	6.0	3.3	0.05 U	0.60 U	89.8
PT-17-1	06/30/94	4.0	256.	291.	2.1	4.5	88.5
PT-17-2	06/30/94	2.8	123.	105.	0.39	3.0	82.7
PT-18-1	06/30/94	153.	828.	2,390.	11.	186.	86.0
PT-18-2	06/30/94	10.	77.	133.	0.83	3.5	86.3
PT-19-1	06/30/94	57.	216.	4,570.	22.	65.	88.4
PT-19-2	06/30/94	2.1	9.3	99.	0.32	3.1	93.8
PT-20-1	06/30/94	15.	79.	641.	6.1	76.	90.4
PT-20-2	06/30/94	0.71	7.0	24.	0.05 U	7.5	95.8
PT-21-1	06/30/94	2.7	38.	51.	0.53	4.6	90.6
PT-21-2	06/30/94	5.5	60.	78.	0.92	3.8	89.2
PT-22-1	06/30/94	3.3	48.	245.	0.51	3.7	89.5
PT-22-2	06/30/94	1.1	20.	115.	0.41	0.58	86.3
PT-23-1	06/30/94	7.1	88.	226.	0.92	15.	90.4
* PT-24-1	07/01/94	622. ^{+618 = 618}	597. ^{+707 = 707}	3,200. ^{+3670 = 3670}	34. ^{+52 = 52}	375. ^{+252 = 252}	88.2
PT-24-2	07/01/94	22.	44.	156.	0.70	22.	88.0
PT-25-1	07/01/94	7.6	46.	160.	0.35	2.9	83.6
PT-25-2	07/01/94	9.6	36.	49.	1.7	4.9	83.7
PT-26-1	07/01/94	3.1	13.	14.	0.05 U	0.28	90.0
PT-27-1	07/01/94	52.	91.	237.	1.8	9.7	87.9
PT-27-2	07/01/94	30.	61.	132.	1.2	7.8	79.4
PT-28-1	07/01/94	6.3	38.	67.	0.54	8.7	89.5
PT-28-2	07/01/94	0.95	9.8	8.6	0.05 U	0.59	85.4
PT-36-1	07/19/94	5.6	110.	144.	1.5	2.4	88.4
PT-36-2	07/19/94	1.6	49.	34.	0.35	0.64	85.4
PT-37-1	07/19/94	116.	885.	3,560.	4.2	77.	88.6
PT-37-2	07/19/94	2.8	54.	96.	0.05 U	7.1	84.9
PT-38-1	07/19/94	2.0	26.	31.	0.17	0.58	94.4
PT-38-2	07/19/94	0.44	9.6	9.3	0.05 U	0.60 U	96.6
PT-39-1	07/19/94	4.6	60.	60.	0.81	0.60 U	94.3
PT-39-2	07/19/94	0.26	5.4	3.8	0.05 U	0.60 U	96.4
PT-40-1	07/19/94	3.8	77.	101.	0.80	0.62	89.1
PT-40-2	07/19/94	0.71	18.	54.	0.05 U	0.60 U	90.0
PT-41-1	07/19/94	6.5	76.	93.	0.48	6.9	89.0
PT-41-2	07/19/94	1.7	25.	26.	0.05 U	3.1	87.8

÷ 29

1055.24 To.

36.29 AVG

3909.3

134.8 AVG

19,555.4

570.39 AVG

89.44

3.08 AVG

875.22

30.18 AVG

25.94

PT-24-1
 DUPLICATE
 with 3016

DUPLICATE
 2

> 36

38.56
 J.E.S. NEXT

3.39

U - analyzed for but not detected, number is the reporting limit

RESULTS OF SOIL SAMPLE ANALYSES (a)(Continued)
RFI OF PRETREATMENT PLANT SWMU
INORGANIC CONSTITUENTS AND MISCELLANEOUS PARAMETERS

Sample Name	Date	Cadmium	Chromium	Lead	Mercury	Total Cyanide	% Solids
	1/31	1669.81 for 53.86 avg					
PT16-1 DUP-063094 (d)	06/30/94	0.57	17.	15.	0.05 U	0.60 U	85.1
PT24-1 DUP-070194 (d)	07/01/94	614.	817.	4,140.	52.	129.	88.5
EB-063094	06/30/94	5.0 U	10. U	5.0 U	0.5 U	10. U	-- (e)
EB-070194	07/01/94	5.0 U	10. U	5.0 U	0.5 U	10. U	--

- (a) Sediment results reported in milligrams/kilogram, except where noted. Equipment blank ("EB") results reported in milligrams/liter.
- (b) Action levels for hexavalent and trivalent chromium, respectively
- (c) NA indicates not available
- (d) DUP-063094 is a duplicate sample of PT-16-1
DUP-070194 is a duplicate sample of PT-24-1
- (e) -- indicates parameter not analyzed

*Equip
Blank*

RESULTS OF SOIL SAMPLE ANALYSES (a)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 1 of 6)

0.224
0.224
0.061
0.224
50

Sample Name	Date	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PT-16-1	06/30/94	0.3 U	0.3 U	1.7 U	0.3 U	1.7 U	0.3 U	0.3 U	0.01 J	0.3 U
PT-16-2	06/30/94	0.3 U	0.3 U	1.7 U	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-17-1	06/30/94	0.3 U	0.3 U	1.7 U	0.3 U	1.7 U	0.02 J	0.3 U	0.02 J	0.3 U
PT-17-2	06/30/94	0.3 U	0.01 J	1.7 U	0.3 U	1.7 U	0.03 J	0.3 U	0.04 J	0.01 J
PT-18-1	06/30/94	0.3 U	0.3 U	0.8 J	0.01 J	1.7 U	0.3 U	0.3 U	0.04 J	0.3 U
PT-18-2	06/30/94	0.3 U	0.01 J	0.1 J	0.01 J	1.7 U	0.02 J	0.3 U	0.05 J	0.01 J
PT-19-1	06/30/94	0.3 U	0.3 U	0.4 J	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-19-2	06/30/94	0.3 U	0.3 U	1.7 U	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-20-1	06/30/94	0.3 U	0.03 J	0.2 J	0.02 J	1.7 U	0.1 J	0.3 U	0.1 J	0.03 J
PT-20-2	06/30/94	0.3 U	0.3 U	1.7 U	0.004 J	1.7 U	0.02 J	0.02 J	0.02 J	0.01 J
PT-21-1	06/30/94	0.3 U	0.3 U	0.1 J	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-21-2	06/30/94	0.3 U	0.01 J	0.1 J	0.01 J	1.7 U	0.1 J	0.1 J	0.1 J	0.02 J
PT-22-1	06/30/94	0.03 J	1.0	1.7 U	0.7	1.7 U	4.4	4.6	5.9	1.1
PT-22-2	06/30/94	0.3 U	0.02 J	0.01 J	0.01 J	1.7 U	0.1 J	0.1 J	0.1 J	0.02 J
PT-23-1	06/30/94	0.3 U	0.04 J	0.02 J	0.03 J	1.7 U	0.2 J	0.2 J	0.2 J	0.04 J
PT-24-1	07/01/94	1.5 U	1.5 U	2.7 JD	1.5 U	8.5 U	0.04 JD	1.5 U	0.06 JD	1.5 U
PT-24-2	07/01/94	0.3 U	0.3 U	0.04 J	0.004 J	1.7 U	0.02 J	0.3 U	0.3 U	0.3 U
PT-25-1	07/01/94	1.5 U	1.5 U	8.5 U	1.5 U	8.5 U	1.5 U	1.5 U	1.5 U	1.5 U
PT-25-2	07/01/94	0.3 U	0.3 U	0.03 J	0.003 J	1.7 U	0.01 J	0.3 U	0.3 U	0.003 J
PT-26-1	07/01/94	0.3 U	0.3 U	1.7 U	0.3 U	1.7 U	0.005 J	0.3 U	0.3 U	0.3 U
PT-27-1	07/01/94	1.5 U	1.5 U	0.2 JD	1.5 U	8.5 U	0.02 JD	1.5 U	1.5 U	1.5 U
PT-27-2	07/01/94	1.5 U	1.5 U	0.1 JD	0.06 JD	8.5 U	0.1 JD	1.5 U	0.1 JD	1.5 U
PT-28-1	07/01/94	0.3 U	0.3 U	0.03 J	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-28-2	07/01/94	0.3 U	0.3 U	1.7 U	0.3 U	1.7 U	0.005 J	0.3 U	0.3 U	0.3 U
PT-36-1	07/19/94	0.03 J	0.01 J	0.01 J	0.06 J	1.7 U	0.1 J	0.09 J	0.1 J	0.04 J

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 1 of 6)

Sample Name	Date	Acenaphthene		Acenaphthylene		Aniline		Anthracene		Benzidine	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene					
PT-36-2	07/19/94	0.3	U	0.3	U	1.7	U	0.3	U	1.7	U	0.01	J	0.01	J	0.02	J	0.01	J
PT-37-1	07/19/94	0.3	U	0.01	J	0.7	J	0.02	J	1.7	U	0.07	J	0.3	U	0.08	J	0.02	J
PT-37-2	07/19/94	0.3	U	0.3	U	1.7	U	0.3	U	1.7	U	0.3	U	0.3	U	0.3	U	0.3	U
PT-38-1	07/19/94	0.09	J	1.1		0.01	J	1.1		1.7	U	3.4		2.3		3.4		0.7	J
PT-38-2	07/19/94	0.3	U	0.3	U	1.7	U	0.3	U	1.7	U	0.02	J	0.01	J	0.01	J	0.01	J
PT-39-1	07/19/94	0.3	U	0.008	J	1.7	U	0.005	J	1.7	U	0.04	J	0.03	J	0.04	J	0.02	J
PT-39-2	07/19/94	0.3	U	0.3	U	1.7	U	0.3	U	1.7	U	0.3	U	0.3	U	0.3	U	0.3	U
PT-40-1	07/19/94	0.03	J	0.8		1.7	U	0.5		1.7	U	3.2		3.0		4.4		0.4	
PT-40-2	07/19/94	0.04	J	0.8		1.7	U	0.7		1.7	U	3.4		3.2		3.0		0.8	
PT-41-1	07/19/94	0.3	U	0.006	J	0.01	J	0.008	J	1.7	U	0.03	J	0.03	J	0.04	J	0.02	J
PT-41-2	07/19/94	0.3	U	0.3	U	1.7	U	0.3	U	1.7	U	0.3	U	0.3	U	0.3	U	0.3	U
DUP-063094(c)	06/30/94	0.3	U	0.3	U	1.7	U	0.3	U	1.7	U	0.3	U	0.3	U	0.01	J	0.3	U
DUP-070194(c)	07/01/94	0.009	J	0.01	J	2.3		0.3	U	1.7	U	0.04	J	0.3	U	0.3	U	0.3	U
EB-063094	06/30/94	10.	U	10.	U	50.	U	10.	U	50.	U	10.	U	10.	U	10.	U	10.	U
EB-070194	07/01/94	10.	U	10.	U	50.	U	10.	U	50.	U	10.	U	10.	U	10.	U	10.	U

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 2 of 6)

Sample Name	Benzo (k) fluoranthene	Benzoic Acid	Benzyl Alcohol	bis (2-Chloroethyl) Ether	bis (2-Chloroisopropyl) Ether	bis (2-Ethylhexyl) Phthalate	bis (2-Chloroethoxy) Methane	4-Bromo-phenyl-Phenylether	Butyl Benzyl Phthalate	4-Chloro-aniline
PT-16-1	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U
PT-16-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U
PT-17-1	0.02 J	1.7 U	0.3 U	0.3 U	0.3 U	0.05 JB	0.3 U	0.3 U	0.3 U	0.3 U
PT-17-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.03 JB	0.3 U	0.3 U	0.3 U	0.3 U
PT-18-1	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 J	0.3 U	0.3 U	0.3 U	0.2 J
PT-18-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U
PT-19-1	0.3 U	0.4 J	0.3 U	0.3 U	0.3 U	1.6	0.3 U	0.3 U	0.3 U	0.3 U
PT-19-2	0.3 U	1.7 U	0.3 U	0.02 J	0.3 U	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U
PT-20-1	0.2 J	1.7 U	0.3 U	0.3 U	0.3 U	2.1	0.3 U	0.3 U	0.3 U	0.1 J
PT-20-2	0.02 J	1.7 U	0.3 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-21-1	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-21-2	0.1 J	1.7 U	0.3 U	0.3 U	0.3 U	0.05 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-22-1	3.1	1.7 U	0.3 U	0.3 U	0.3 U	0.05 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-22-2	0.1 J	1.7 U	0.3 U	0.3 U	0.3 U	0.2 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-23-1	0.1 J	1.7 U	0.3 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-24-1	0.05 JD	8.5 U	1.5 U	1.5 U	1.5 U	1.6 JD	1.5 U	1.5 U	1.5 U	0.3 JD
PT-24-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-25-1	1.5 U	8.5 U	1.5 U	1.5 U	1.5 U	0.5 JD	1.5 U	1.5 U	1.5 U	1.5 U
PT-25-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.02 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-26-1	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-27-1	1.5 U	8.5 U	1.5 U	1.5 U	1.5 U	3.0 JD	1.5 U	1.5 U	1.5 U	1.5 U
PT-27-2	0.04 JD	8.5 U	1.5 U	1.5 U	1.5 U	1.1 JD	1.5 U	1.5 U	1.5 U	1.5 U
PT-28-1	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.08 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-28-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-36-1	0.08 J	1.7 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 2 of 6)

Sample Name	Benzo (k) fluoranthene	Benzoic Acid	Benzyl Alcohol	bis (2-Chloroethyl) Ether	bis (2-Chloroisopropyl) Ether	bis (2-Ethylhexyl) Phthalate	bis (2-Chloroethoxy) Methane	4-Bromo-phenyl-Phenylether	Butyl Benzyl Phthalate	4-Chloro-aniline
PT-36-2	0.01 J	1.7 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-37-1	0.05 J	1.7 U	0.3 U	0.3 U	0.3 U	0.08 J	0.3 U	0.3 U	0.3 U	0.1 J
PT-37-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.008 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-38-1	1.2	1.7 U	0.3 U	0.3 U	0.3 U	0.08 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-38-2	0.01 J	1.7 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-39-1	0.02 J	1.7 U	0.3 U	0.3 U	0.3 U	0.06 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-39-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.004 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-40-1	1.6	1.7 U	0.3 U	0.3 U	0.3 U	0.06 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-40-2	2.9	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-41-1	0.03 J	1.7 U	0.3 U	0.3 U	0.3 U	0.02 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-41-2	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U
DUP-063094(c)	0.3 U	1.7 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U
DUP-070194(c)	0.04 J	1.7 U	0.3 U	0.3 U	0.3 U	1.7	0.3 U	0.3 U	0.3 U	0.3 U
EB-063094	10. U	50. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U
EB-070194	10. U	50. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 3 of 6)

Sample Name	4-Chloro-3-Methyl-phenol	2-Chloro-naphthalene	2-Chloro-phenol	4-Chloro-phenyl-Phenylether	Chrysene	Di-N-Butyl-phthalate	Di-N-Octyl-phthalate	Dibenz (a,h) anthracene	Dibenzo-furan	1,2-Dichloro-benzene	1,3-Dichloro-benzene
PT-16-1	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-16-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-17-1	0.3 U	0.3 U	0.3 U	0.3 U	0.03 J	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-17-2	0.3 U	0.3 U	0.3 U	0.3 U	0.04 J	0.2 JB	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U
PT-18-1	0.3 U	0.3 U	0.3 U	0.3 U	0.03 J	0.2 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J
PT-18-2	0.3 U	0.3 U	0.3 U	0.3 U	0.03 J	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-19-1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J
PT-19-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.1 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-20-1	0.3 U	0.3 U	0.3 U	0.3 U	0.1 J	0.03 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-20-2	0.3 U	0.3 U	0.3 U	0.3 U	0.03 J	0.02 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-21-1	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	0.02 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-21-2	0.3 U	0.3 U	0.3 U	0.3 U	0.1 J	0.02 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-22-1	0.3 U	0.3 U	0.3 U	0.3 U	4.2	0.02 JB	0.3 U	0.4 J	0.1 J	0.3 U	0.3 U
PT-22-2	0.3 U	0.3 U	0.3 U	0.3 U	0.1 J	0.02 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-23-1	0.3 U	0.3 U	0.3 U	0.3 U	0.2 J	0.01 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-24-1	1.5 U	1.5 U	1.5 U	1.5 U	0.06 JD	0.06 JBD	1.5 U	1.5 U	1.5 U	1.5 U	0.07 JD
PT-24-2	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J	0.04 JB	0.02 J	0.3 U	0.3 U	0.3 U	0.3 U
PT-25-1	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.05 JBD	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
PT-25-2	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J	0.03 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-26-1	0.3 U	0.3 U	0.3 U	0.3 U	0.006 J	0.04 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-27-1	1.5 U	1.5 U	1.5 U	1.5 U	0.04 JD	0.05 JBD	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
PT-27-2	1.5 U	1.5 U	1.5 U	1.5 U	0.1 JD	0.06 JBD	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
PT-28-1	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	0.05 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-28-2	0.3 U	0.3 U	0.3 U	0.3 U	0.008 J	0.03 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-36-1	0.3 U	0.3 U	0.3 U	0.3 U	0.1 J	0.03 JB	0.3 U	0.01 J	0.02 J	0.3 U	0.3 U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 3 of 6)

Sample Name	4-Chloro-3-Methyl-phenol	2-Chloro-naphthalene	2-Chloro-phenol	4-Chloro-phenyl-Phenylether	Chrysene	Di-N-Butyl-phthalate	Di-N-Octyl-phthalate	Dibenz (a,h) anthracene	Dibenzo-furan	1,2-Dichloro-benzene	1,3-Dichloro-benzene
PT-36-2	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J	0.04 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-37-1	0.3 U	0.3 U	0.3 U	0.3 U	0.08 J	0.03 JB	0.3 U	0.3 U	0.007 J	0.03 J	0.05 J
PT-37-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.03 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-38-1	0.3 U	0.3 U	0.3 U	0.3 U	3.6	0.04 JB	0.3 U	0.2 J	0.1 J	0.3 U	0.3 U
PT-38-2	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J	0.02 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-39-1	0.3 U	0.3 U	0.3 U	0.3 U	0.04 J	0.02 JB	0.3 U	0.003 J	0.004 J	0.3 U	0.3 U
PT-39-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.01 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-40-1	0.3 U	0.3 U	0.3 U	0.3 U	3.1	0.02 JB	0.3 U	0.3 J	0.04 J	0.3 U	0.3 U
PT-40-2	0.3 U	0.3 U	0.3 U	0.3 U	3.2	0.02 JB	0.3 U	0.3 J	0.04 J	0.3 U	0.3 U
PT-41-1	0.3 U	0.3 U	0.3 U	0.3 U	0.04 J	0.02 JB	0.3 U	0.003 J	0.3 U	0.3 U	0.3 U
PT-41-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.02 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DUP-063094(c)	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	0.03 JB	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
DUP-070194(c)	0.3 U	0.3 U	0.3 U	0.3 U	0.05 J	0.02 JB	0.3 U	0.3 U	0.01 J	0.03 J	0.2 J
EB-063094	10. U	10. U	10. U	10. U	10. U	2.5 JB	10. U	10. U	10. U	10. U	10. U
EB-070194	10. U	10. U	10. U	10. U	10. U	2.6 JB	10. U	10. U	10. U	10. U	10. U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 4 of 6)

Sample Name	1,4-Dichloro-benzene	3,3'-Dichloro-benzidine	2,4-Dichloro-phenol	Diethyl-phthalate	2,4-Dimethyl-phenol	2,4-Dimethyl-phthalate	4,6-Dinitro-2-Methyl-phenol	2,4-Dinitro-phenol	2,4-Dinitro-toluene	2,6-Dinitro-toluene	Fluor-anthene	Fluorene	Hexa-chloro-benzene
PT-16-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U
PT-16-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-17-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.04 J	0.3 U	0.3 U
PT-17-2	0.3 U	0.7 U	0.3 U	0.01 J	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U
PT-18-1	0.2 J	0.1 J	0.3 U	0.01 J	0.3 U	0.3 J	1.7 U	1.7 U	0.3 U	0.3 U	0.1 J	0.3 U	0.1 J
PT-18-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.04 J	0.3 U	0.3 U
PT-19-1	0.03 J	0.7 U	0.3 U	0.02 J	0.3 U	21. D	1.7 U	1.7 U	0.3 U	0.3 U	0.02 J	0.3 U	0.03 J
PT-19-2	0.3 U	0.7 U	0.3 U	0.01 J	0.3 U	0.3 J	1.7 U	1.7 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U
PT-20-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	2.1	1.7 U	1.7 U	0.3 U	0.3 U	0.2 J	0.3 U	0.02 J
PT-20-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.1 J	1.7 U	1.7 U	0.3 U	0.3 U	0.03 J	0.3 U	0.3 U
PT-21-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.2 J	1.7 U	1.7 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U
PT-21-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.1 J	1.7 U	1.7 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U
PT-22-1	0.3 U	0.7 U	0.3 U	0.01 J	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	3.9	0.1 J	0.3 U
PT-22-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.1 J	1.7 U	1.7 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U
PT-23-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.6	1.7 U	1.7 U	0.3 U	0.3 U	0.2 J	0.3 U	0.3 U
PT-24-1	1.5 U	0.8 JD	1.5 U	1.5 U	1.5 U	0.1 JD	8.5 U	8.5 U	1.5 U	1.5 U	0.1 JD	1.5 U	0.2 JD
PT-24-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.03 J	0.3 U	0.3 U
PT-25-1	1.5 U	3.5 U	1.5 U	1.5 U	1.5 U	0.3 JD	8.5 U	8.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
PT-25-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.03 J	0.3 U	0.3 U
PT-26-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U
PT-27-1	1.5 U	3.5 U	1.5 U	1.5 U	1.5 U	0.2 JD	8.5 U	8.5 U	1.5 U	1.5 U	0.06 JD	1.5 U	1.5 U
PT-27-2	1.5 U	3.5 U	1.5 U	1.5 U	1.5 U	0.07 JD	8.5 U	8.5 U	1.5 U	1.5 U	0.2 JD	1.5 U	1.5 U
PT-28-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.03 J	1.7 U	1.7 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U
PT-28-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.009 J	0.3 U	0.3 U
PT-36-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.3 J	0.03 J	0.3 U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 4 of 6)

Sample Name	1,4-Dichloro-benzene	3,3'-Dichloro-benzidine	2,4-Dichloro-phenol	Diethyl-phthalate	2,4-Dimethyl-phenol	Dimethyl-phthalate	4,6-Dinitro-2-Methyl-phenol	2,4-Dinitro-phenol	2,4-Dinitro-toluene	2,6-Dinitro-toluene	Fluor-anthene	Fluorene	Hexa-chloro-benzene
											50 PPA REMEDIATION CLOSURE LEVEL		
PT-36-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.03 J	0.3 U	0.3 U
PT-37-1	0.08 J	0.03 J	0.3 U	0.3 U	0.3 U	0.04 J	1.7 U	1.7 U	0.3 U	0.3 U	0.1 J	0.3 U	0.1 J
PT-37-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.008 J	0.3 U	0.3 U
PT-38-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.03 J	1.7 U	1.7 U	0.3 U	0.3 U	8.4 D	1.7	0.3 U
PT-38-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.02 J	0.3 U	0.3 U
PT-39-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.05 J	1.7 U	1.7 U	0.3 U	0.3 U	0.05 J	0.3 U	0.3 U
PT-39-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
PT-40-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.03 J	1.7 U	1.7 U	0.3 U	0.3 U	3.7	0.06 J	0.3 U
PT-40-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	4.2	0.3 J	0.3 U
PT-41-1	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.01 J	1.7 U	1.7 U	0.3 U	0.3 U	0.07 J	0.3 U	0.3 U
PT-41-2	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.005 J	0.3 U	0.3 U
DUP-063094(c)	0.3 U	0.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U
DUP-070194(c)	0.1 J	0.5 J	0.3 U	0.3 U	0.3 U	0.1 J	1.7 U	1.7 U	0.3 U	0.3 U	0.08 J	0.01 J	0.2 J
EB-063094	10. U	20. U	10. U	0.4 JB	10. U	10. U	50. U	50. U	10. U	10. U	10. U	10. U	10. U
EB-070194	10. U	20. U	10. U	0.3 JB	10. U	10. U	50. U	50. U	10. U	10. U	10. U	10. U	10. U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 5 of 6)

Sample Name	Hexa-chloro-butadiene	Hexachloro-cyclopentadiene	Hexa-chloro-ethane	Indeno (1,2,3-cd) Pyrene	Isophorone	2-Methyl-naphthalene	2-Methyl-phenol	4-Methyl-phenol	N-Nitroso-Di-N-Propyl-amine	N-Nitroso-diphenyl-amine	Naphthalene	2-Nitro-aniline
PT-16-1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-16-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-17-1	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-17-2	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.02 J	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	1.7 U
PT-18-1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-18-2	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.02 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-19-1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J	1.7 U
PT-19-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-20-1	0.3 U	0.3 U	0.3 U	0.04 J	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	1.7 U
PT-20-2	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-21-1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-21-2	0.3 U	0.3 U	0.3 U	0.03 J	0.3 U	0.02 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-22-1	0.3 U	0.3 U	0.3 U	1.4 J	0.3 U	0.1 J	0.3 U	0.3 U	0.3 U	0.01 J	0.1 J	1.7 U
PT-22-2	0.3 U	0.3 U	0.3 U	0.02 J	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	1.7 U
PT-23-1	0.3 U	0.3 U	0.3 U	0.1 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-24-1	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.2 JD
PT-24-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.007 J	1.7 U
PT-25-1	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	8.5 U
PT-25-2	0.3 U	0.3 U	0.3 U	0.003 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-26-1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-27-1	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	8.5 U
PT-27-2	1.5 U	1.5 U	1.5 U	0.02 JD	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	8.5 U
PT-28-1	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-28-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-36-1	0.3 U	0.3 U	0.3 U	0.04 J	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	1.7 U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 5 of 6)

Sample Name	Hexa-chloro-butadiene	Hexachloro-cyclopentadiene	Hexa-chloro-ethane	Indeno (1,2,3-cd) Pyrene	Isophorone	2-Methyl-naphthalene	2-Methyl-phenol	4-Methyl-phenol	N-Nitroso-Di-N-Propyl-amine	N-Nitroso-diphenyl-amine	Naphthalene	2-Nitro-aniline
PT-36-2	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.008 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-37-1	0.3 U	0.3 U	0.3 U	0.02 J	0.3 U	0.03 J	0.3 U	0.3 U	0.3 U	0.3 U	0.02 J	0.03 J
PT-37-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-38-1	0.3 U	0.3 U	0.3 U	0.8	0.3 U	0.07 J	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	1.7 U
PT-38-2	0.3 U	0.3 U	0.3 U	0.01 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-39-1	0.3 U	0.3 U	0.3 U	0.02 J	0.3 U	0.02 J	0.3 U	0.3 U	0.3 U	0.3 U	0.01 J	1.7 U
PT-39-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-40-1	0.3 U	0.3 U	0.3 U	1.0	0.3 U	0.06 J	0.3 U	0.3 U	0.3 U	0.3 U	0.06 J	1.7 U
PT-40-2	0.3 U	0.3 U	0.3 U	1.0	0.3 U	0.1 J	0.3 U	0.3 U	0.3 U	0.3 U	0.05 J	1.7 U
PT-41-1	0.3 U	0.3 U	0.3 U	0.009 J	0.3 U	0.009 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
PT-41-2	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
DUP-063094(c)	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U
DUP-070194(c)	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.04 J	0.3 U	0.3 U	0.3 U	0.01 J	0.1 J	0.3 J
EB-063094	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	50. U
EB-070194	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	50. U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 6 of 6)

Sample Name	3-Nitro-aniline	4-Nitro-aniline	Nitro-benzene	2-Nitro-phenol	4-Nitro-phenol	Penta-chloro-phenol	Phen-anthrene	Phenol	Pyrene	1,2,4-Trichloro-benzene	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol
PT-16-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.01 J	0.3 U	0.01 J	0.3 U	1.7 U	1.7 U
PT-16-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U
PT-17-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.03 J	0.02 JB	0.03 J	0.3 U	1.7 U	1.7 U
PT-17-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.04 J	0.02 JB	0.1 J	0.3 U	1.7 U	1.7 U
PT-18-1	1.7 U	0.03 J	0.05 J	0.3 U	1.7 U	1.7 U	0.02 J	0.04 JB	0.1 J	0.3 U	1.7 U	1.7 U
PT-18-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.02 J	0.03 JB	0.05 J	0.3 U	1.7 U	1.7 U
PT-19-1	1.7 U	1.7 U	0.03 J	0.3 U	1.7 U	1.7 U	0.01 J	0.05 JB	0.05 J	0.3 U	1.7 U	1.7 U
PT-19-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.005 J	0.03 JB	0.03 J	0.3 U	1.7 U	1.7 U
PT-20-1	1.7 U	0.02 J	0.3 U	0.3 U	1.7 U	1.7 U	0.1 J	0.3 U	0.3 J	0.3 U	1.7 U	1.7 U
PT-20-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.01 J	0.02 JB	0.04 J	0.3 U	1.7 U	1.7 U
PT-21-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.01 J	0.03 JB	0.01 J	0.3 U	1.7 U	1.7 U
PT-21-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.04 J	0.3 U	0.1 J	0.3 U	1.7 U	1.7 U
PT-22-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	1.5	0.04 JB	8.7 D	0.3 U	1.7 U	1.7 U
PT-22-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.04 J	0.02 JB	0.2 J	0.3 U	1.7 U	1.7 U
PT-23-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.1 J	0.3 U	0.3 J	0.3 U	1.7 U	1.7 U
PT-24-1	8.5 U	0.5 JD	0.2 JD	1.5 U	8.5 U	8.5 U	0.05 JD	0.03 JBD	0.2 JD	1.5 U	8.5 U	8.5 U
PT-24-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.02 J	0.03 JB	0.04 J	0.3 U	1.7 U	1.7 U
PT-25-1	8.5 U	8.5 U	1.5 U	1.5 U	8.5 U	8.5 U	1.5 U	1.5 U	1.5 U	1.5 U	8.5 U	8.5 U
PT-25-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.02 J	0.03 JB	0.02 J	0.3 U	1.7 U	1.7 U
PT-26-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.007 J	0.03 JB	0.008 J	0.3 U	1.7 U	1.7 U
PT-27-1	8.5 U	8.5 U	1.5 U	1.5 U	8.5 U	8.5 U	0.05 JD	1.5 U	0.05 JD	1.5 U	8.5 U	8.5 U
PT-27-2	8.5 U	8.5 U	1.5 U	1.5 U	8.5 U	8.5 U	0.3 JD	1.5 U	0.2 JD	1.5 U	8.5 U	8.5 U
PT-28-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.009 J	0.03 JB	0.02 J	0.3 U	1.7 U	1.7 U
PT-28-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.007 J	0.02 JB	0.01 J	0.3 U	1.7 U	1.7 U
PT-36-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 J	0.02 JB	0.2 J	0.3 U	1.7 U	1.7 U

U - analyzed for but not detected, number is the reporting limit; J - estimated value; B - present in the method blank; D - diluted sample

RESULTS OF SOIL SAMPLE ANALYSES (a) (Continued)
RFI OF PRETREATMENT PLANT SWMU
SEMIVOLATILE ORGANIC COMPOUNDS
(GROUP 6 of 6)

Sample Name	3-Nitro-aniline	4-Nitro-aniline	Nitro-benzene	2-Nitro-phenol	4-Nitro-phenol	Penta-chloro-phenol	Phen-anthrene	Phenol	Pyrene	1,2,4-Trichloro-benzene	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol
PT-36-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.02 J	0.03 JB	0.03 J	0.3 U	1.7 U	1.7 U
PT-37-1	1.7 U	0.03 J	0.06 J	0.3 U	1.7 U	1.7 U	0.06 J	0.03 JB	0.1 J	0.3 U	1.7 U	1.7 U
PT-37-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.006 J	0.03 JB	0.008 J	0.3 U	1.7 U	1.7 U
PT-38-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	14. D	0.02 JB	9.8 D	0.3 U	1.7 U	1.7 U
PT-38-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.007 J	0.02 JB	0.03 J	0.3 U	1.7 U	1.7 U
PT-39-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.03 J	0.3 U	0.06 J	0.3 U	1.7 U	1.7 U
PT-39-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.3 U	0.3 U	0.3 U	1.7 U	1.7 U
PT-40-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	1.2	0.03 JB	5.3	0.3 U	1.7 U	1.7 U
PT-40-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	2.7	0.03 JB	5.2	0.3 U	1.7 U	1.7 U
PT-41-1	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.03 J	0.02 JB	0.06 J	0.3 U	1.7 U	1.7 U
PT-41-2	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.3 U	0.02 JB	0.005 J	0.3 U	1.7 U	1.7 U
DUP-063094(c)	1.7 U	1.7 U	0.3 U	0.3 U	1.7 U	1.7 U	0.01 J	0.3 U	0.01 J	0.3 U	1.7 U	1.7 U
DUP-070194(c)	0.06 J	0.2 J	0.3 J	0.3 U	1.7 U	1.7 U	0.07 J	0.06 JB	0.2 J	0.1 J	1.7 U	1.7 U
EB-063094	50. U	50. U	10. U	10. U	50. U	50. U	10. U	10. U	10. U	10. U	50. U	50. U
EB-070194	50. U	50. U	10. U	10. U	50. U	50. U	10. U	10. U	10. U	10. U	50. U	50. U

(a) Sediment results reported in milligrams/kilogram, except where noted. Equipment blank ("EB") results reported in milligrams/liter.

(b) NA indicates not available

(c) DUP-063094 is a duplicate sample of PT-16-1
DUP-070194 is a duplicate sample of PT-24-1

TCLP EXTRACT ANALYSIS (a)
Sample PT-24-1

Parameter	Concentration (mg/l)
Arsenic	0.060 U (b)
Barium	4.73
Cadmium	1.87
Chromium	0.088
Lead	18.0
Mercury	0.002 U
Selenium	0.050 U
Silver	0.005 U

- (a) TCLP-Toxicity Characteristic
Leaching Procedure
- (b) Analyzed for but not detected.
Number is method detection limit.

Appendix C
WATER LEVEL DATA
July 7, 1994 and July 13, 1994

WATER LEVEL DATA
PRETREATMENT PLANT SWMU
July 7, 1994

Location	Reference Elevation (ft., NGVD)	Ground Surface Elevation (ft., NGVD)	Depth to Water from Reference (ft.)	Water Elevation (ft., NGVD)
MW-OB17	289.91	287.07	7.79	282.12
MW-OB18	287.82	284.83	9.37	278.45
MW-OB19	287.69	285.00	8.51	279.18
P-1	287.76	284.70	5.89	281.87
P-3	287.37	285.60	5.20	282.17
P-6	287.75	285.10	dry	#VALUE!
P-7	288.18	285.80	6.07	282.11
P-8	286.95	284.80	5.17	281.78
P-10	287.82	285.20	9.35	278.47
P-11	291.06	288.40	9.05	282.01
P-12	287.81	285.60	6.27	281.54
P-14	287.41	285.10	7.22	280.19
SG-1	283.96	NA	2.56	281.40
SG-2	281.06	NA	4.51	276.55
P-15	284.40	281.13	7.54	276.86
P-16	285.55	283.60	3.26	282.29
IG-1	286.06	285.61	NA	#VALUE!
IG-2	287.02	286.92	NA	#VALUE!
IG-3	287.00	286.48	NA	#VALUE!
IG-4	288.96	288.36	NA	#VALUE!

NA=Not available

WATER LEVEL DATA
PRETREATMENT PLANT SWMU
July 13, 1994

Location	Reference Elevation (ft., NGVD)	Ground Surface Elevation (ft., NGVD)	Depth to Water from Reference (ft.)	Water Elevation (ft., NGVD)
MW-OB17	289.91	287.07	7.34	282.57
MW-OB18	287.82	284.83	9.03	278.79
MW-OB19	287.69	285.00	8.29	279.40
P-1	287.76	284.70	5.25	282.51
P-3	287.37	285.60	4.70	282.67
P-6	287.75	285.10	6.71	281.04
P-7	288.18	285.80	5.68	282.50
P-8	286.95	284.80	4.71	282.24
P-10	287.82	285.20	9.04	278.78
P-11	291.06	288.40	8.65	282.41
P-12	287.81	285.60	6.01	281.80
P-14	287.41	285.10	6.90	280.51
SG-1	283.96	NA	2.45	281.51
SG-2	281.06	NA	4.37	276.69
P-15	284.40	281.13	7.32	277.08
P-16	285.55	283.60	3.05	282.50
IG-1	286.06	285.61	3.12	282.94
IG-2	287.02	286.92	4.52	282.50
IG-3	287.00	286.48	5.40	281.60
IG-4	288.96	288.36	8.25	280.71

NA=Not available

**APPENDIX D
FIELD DATA SHEETS**

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~75°F, mostly sunny

SAMPLE ID: MW-0317

DATE: 7-14-94 TIME: 10:10

WELL DATA:

CASING, DIAMETER: 2"

INTAKE, DIAMETER: 2"

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 284.91 (NGVD) GROUND SURFACE ELEVATION: 297.07 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 11 ELEVATION: 276.1

DEPTH TO (from datum):

ELEVATION:

WELL CLEAN TO BOTTOM?

VOLUME OF WATER:

WELL NUMBER: MW-0317

WELL DESIGNATION: _____

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

STATIC WATER LEVEL: 7.42

BOTTOM OF WELL: 14.00

STATIC WATER LEVEL: 282.49

BOTTOM OF WELL: 275.91

☒ YES ☐ NO

WELL IN GOOD CONDITION?

☒ YES ☐ NO

IN WELL 1.1 gal

TO BE PURGED 3.3 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☒ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☒ TEFLON

☐ STAINLESS STEEL

☐ PVC

☐ OTHER: _____

TUBING/ROPE:

☐ TEFLON

☐ POLYPROPYLENE

☒ NYLON

☐ OTHER: _____

PUMPING RATE: 0.23 gpm

WAS WELL EVACUATED?

START TIME: 9:50

STOP TIME: 10:05 VOLUME PUMPED: 3.5 gal

☐ YES ☒ NO

NUMBER OF WELL VOLUMES PURGED: 3+

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

17.8°C

7.1

0.738 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED
(bailers)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: NM

TIME: 10:10

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☒ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☒ TEFLON ☐ PVC

☐ STAINLESS STEEL

☐ OTHER: _____

TUBING/ROPE:

☐ TEFLON ☒ NYLON

☐ POLYPROPYLENE

☐ OTHER: _____

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED?

☒ DEDICATED
(bailers)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

☐ YES ☐ NO

METHOD: _____

APPEARANCE:

☐ CLEAR

☒ TURBID

☒ COLOR: brown

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 7.1

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 17.8°C

SPECIF. COND.: 0.738 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Hill

Date: 7-14-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

SAMPLE ID: MW-0818

DATE: 7-14-94 TIME: 8:45

WEATHER CONDITIONS: ~75°F, mostly sunny

WELL DATA:

WELL NUMBER: MW-0818

WELL DESIGNATION: _____

CASING, DIAMETER: 2"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 2"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.82 (NGVD) GROUND SURFACE ELEVATION: 284.83 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 129.5 ELEVATION: 274.90

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 9.14

BOTTOM OF WELL: 12.88

ELEVATION: _____

STATIC WATER LEVEL: 278.68

BOTTOM OF WELL: 274.84

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.6 gal.

TO BE PURGED 1.8 gal.

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☒ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: TEFLON

☒ TEFLON

☐ STAINLESS STEEL

☐ PVC

☐ OTHER: _____

TUBING/ROPE: TEFLON

☐ TEFLON

☐ POLYPROPYLENE

☒ NYLON

☐ OTHER: _____

PUMPING RATE: 0.15 gpm

START TIME: 8:30

STOP TIME: 8:43

VOLUME PUMPED: 2 gal

WAS WELL EVACUATED? ☒ YES ☐ NO

☐ YES ☒ NO

NUMBER OF WELL VOLUMES PURGED: 3+

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

15.2°C

7.4

1.62 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED (disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 9.14

TIME: 8:23

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☒ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: TEFLON

☒ TEFLON ☐ PVC

☐ STAINLESS STEEL

☐ OTHER: _____

TUBING/ROPE: TEFLON

☐ TEFLON

☒ NYLON

☐ POLYPROPYLENE

☐ OTHER: _____

SAMPLING EQUIPMENT:

☒ DEDICATED (disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☒ CLEAR ☐ TURBID ☐ COLOR: _____

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 7.4

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 15.2°C

SPECIF. COND.: 1.62 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____ TRIP BLANK I.D. _____ DUPLICATE I.D. _____

REMARKS: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Neill

Date: 7-14-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE
GLENS FALLS, NEW YORK

PERSONNEL: RLC

JOB NUMBER: 9427

WEATHER CONDITIONS: ~75°F, mostly sunny

SAMPLE ID: MW-0519

DATE: 7-14-94 TIME: 9:25

WELL DATA:

WELL NUMBER: MW-0519

WELL DESIGNATION: _____

CASING, DIAMETER: 2"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 2"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.69 (NGVD) GROUND SURFACE ELEVATION: 285.00 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 10 ELEVATION: 274.80

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 8.35

BOTTOM OF WELL: 13.00

ELEVATION: _____

STATIC WATER LEVEL: 274.34

BOTTOM OF WELL: 274.69

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.76 gal

TO BE PURGED 2.3 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☒ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: TEFLON

☒ TEFLON
☐ STAINLESS STEEL
☐ PVC
☐ OTHER: _____

TUBING/ROPE: TEFLON
☐ POLYPROPYLENE
☒ NYLON
☐ OTHER: _____

PUMPING RATE: 0.5 gpm

START TIME: 9:13

STOP TIME: 9:22

VOLUME PUMPED: 2.5 gal

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: 3

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

15.6°C

7.4

1.373 mV/cm

PURGING EQUIPMENT: ☒ DEDICATED (disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 2

TIME: 9:25

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☒ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: TEFLON

☒ TEFLON ☐ PVC
☐ STAINLESS STEEL
☐ OTHER: _____

TUBING/ROPE: TEFLON ☒ NYLON
☐ POLYPROPYLENE
☐ OTHER: _____

SAMPLING EQUIPMENT: ☒ DEDICATED (disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☒ CLEAR ☐ TURBID ☐ COLOR: _____

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS: pH: 7.4

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 15.6°C

SPECIF. COND.: 1.373 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____ TRIP BLANK I.D. _____ DUPLICATE I.D. _____

REMARKS: _____

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Ruby J. O'Neill

Date: 7-14-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~80°F Humid, Overcast

SAMPLE ID: P-1

DATE: 7-8-94 TIME: 9:05

WELL DATA:

WELL NUMBER: P-1

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.76 (NGVD) GROUND SURFACE ELEVATION: 284.70 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 8 ELEVATION: 276.7

DEPTH TO (from datum):

STATIC WATER LEVEL: 4.22

BOTTOM OF WELL: 11.6

ELEVATION:

STATIC WATER LEVEL: 283.54

BOTTOM OF WELL: 276.16

WELL CLEAN TO BOTTOM?

☒ YES ☐ NO

WELL IN GOOD CONDITION?

☒ YES ☐ NO

VOLUME OF WATER:

IN WELL 0.3 gal

TO BE PURGED 0.9 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: (PUMP) BAILER:

☐ TEFLON

☐ STAINLESS STEEL

☐ PVC

☒ OTHER: Tygon

TUBING/ROPE:

☐ TEFLON

☒ POLYPROPYLENE

☐ NYLON

☐ OTHER: _____

PUMPING RATE: ~0.2 gal/min

START TIME: 8:54

STOP TIME: 8:54

VOLUME PUMPED: 1.0

WAS WELL EVACUATED?

☐ YES ☒ NO

NUMBER OF WELL VOLUMES PURGED: 3+

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE-PURGE

PRE-SAMPLE

POST SAMPLE

21.5°C

7.1

0.43 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: NM

TIME: 9:05

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: (PUMP) BAILER:

☐ TEFLON ☐ PVC

☐ STAINLESS STEEL

☐ OTHER: _____

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

TUBING/ROPE:

☐ TEFLON

☐ NYLON

☒ POLYPROPYLENE

☐ OTHER: _____

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED?

☐ YES ☒ NO

METHOD: _____

APPEARANCE:

☐ CLEAR

☒ TURBID

COLOR: brown

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 7.1

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 21.5°C

SPECIF. COND.: 0.43 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyan. de

NO. OF CONTAINERS: 2

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. DUP070894

REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: T. L. O'Neill

Date: 7-8-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE
GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~80°F, Humid, overcast

SAMPLE ID: P-3

DATE: 7-8-94 TIME: 10:20

WELL DATA:

WELL NUMBER: P-3

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.37 (NGVD) GROUND SURFACE ELEVATION: 285.6 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 8 ELEVATION: 277.6

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 4.08

BOTTOM OF WELL: 10.26

ELEVATION: _____

STATIC WATER LEVEL: 283.29

BOTTOM OF WELL: 277.1

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.25 gal

TO BE PURGED 0.75 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☐ PVC

☐ NYLON

☒ OTHER: Tygon

☐ OTHER: _____

PUMPING RATE: 0.33 gpm

START TIME: 10:09

STOP TIME: 10:12

VOLUME PUMPED: 1 gal

WAS WELL EVACUATED? ☐ YES ☒ NO

☐ YES ☒ NO

NUMBER OF WELL VOLUMES PURGED: 3+

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE-PURGE

PRE-SAMPLE

POST SAMPLE

16.8°C

7.3

1.31 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: NM

TIME: 10:20

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☒ NO

METHOD: _____

APPEARANCE: ☒ CLEAR ☐ TURBID ☐ COLOR: None

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 7.3

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 16.8°C

SPECIF. COND.: 1.31 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 2

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: T. R. O. H. A. L.

Date: 7-8-94

**ECKENFELDER
INC.**

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLD

JOB NUMBER: 9427

WEATHER CONDITIONS: ~85°F humid, overcast

SAMPLE ID: P-6

DATE: 7-13-94 TIME: 15:20

WELL DATA:

WELL NUMBER: P-6

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.75 (NGVD) GROUND SURFACE ELEVATION: 285.10 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 5' ELEVATION: 280.1

DEPTH TO (from datum):

STATIC WATER LEVEL: 6.71

BOTTOM OF WELL: 7.08

ELEVATION:

STATIC WATER LEVEL: 281.04

BOTTOM OF WELL: 280.67

WELL CLEAN TO BOTTOM?

☐ YES ☒ NO

WELL IN GOOD CONDITION?

☒ YES ☐ NO

VOLUME OF WATER:

IN WELL 0.02

TO BE PURGED 0.06

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: (PUMP/BAILER):

☐ TEFLON
☐ STAINLESS STEEL
☐ PVC
☒ OTHER: Tygon

(TUBING/ROPE):

☐ TEFLON
☒ POLYPROPYLENE
☐ NYLON
☐ OTHER: _____

PUMPING RATE: 0.014 gpm

START TIME: 15:11

STOP TIME: 15:20 VOLUME PUMPED: 0.1

WAS WELL EVACUATED?

☒ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: 3+

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

NM

NM

NM

PURGING EQUIPMENT:

☒ DEDICATED
(disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 6.71

TIME: 15:10

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: (PUMP/BAILER):

☐ TEFLON ☐ PVC
☐ STAINLESS STEEL
☒ OTHER: Tygon
☒ DEDICATED
(disposable)

(TUBING/ROPE):

☐ TEFLON ☐ NYLON
☒ POLYPROPYLENE
☐ OTHER: _____

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED?

☐ YES ☐ NO

METHOD: _____

APPEARANCE:

☒ CLEAR

☐ TURBID

COLOR: none

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: NM

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: NM

SPECIF. COND.: NM

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: _____

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS:

In-site Sample. Insufficient volume for field parameters

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert J. O'Neil

Date: 7-13-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE
GLENS FALLS, NEW YORK

PERSONNEL: RLD

JOB NUMBER: 9427

WEATHER CONDITIONS: ~80°F humid, overcast

SAMPLE ID: P-7

DATE: 7-8-94 TIME: 13:40

WELL DATA:

WELL NUMBER: P-7

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 288.13 (NGVD) GROUND SURFACE ELEVATION: 295.8 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 7 ELEVATION: 278.8

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 5.34

BOTTOM OF WELL: 9.60

ELEVATION: _____

STATIC WATER LEVEL: 282.84

BOTTOM OF WELL: 278.58

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.17

TO BE PURGED 0.5

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON
☐ STAINLESS STEEL
☐ PVC
☒ OTHER: Tygon

TUBING/ROPE:

☐ TEFLON
☒ POLYPROPYLENE
☐ NYLON
☐ OTHER: _____

PUMPING RATE: 0.2 gpm
WAS WELL EVACUATED? ☐ YES ☒ NO

START TIME: 13:30 STOP TIME: 13:35 VOLUME PUMPED: 1 gal
NUMBER OF WELL VOLUMES PURGED: 6

TIME SERIES DATA:

TEMPERATURE
pH
SPEC. COND.

PRE-PURGE

PRE-SAMPLE

POST SAMPLE

24.6°C

6.85

0.85 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED ☐ PREPARED OFF-SITE ☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: NM

TIME: 13:40

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC
☐ STAINLESS STEEL
☒ OTHER: Tygon
☒ DEDICATED ☐ PREPARED OFF-SITE ☐ FIELD CLEANED

TUBING/ROPE:

☐ TEFLON ☐ NYLON
☒ POLYPROPYLENE
☐ OTHER: _____

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☒ NO

METHOD: _____

APPEARANCE: ☒ CLEAR ☐ TURBID ☐ COLOR: None ☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS: pH: 6.9 METER MODEL: _____ METER SERIAL NO.: _____

TEMP: 24.6°C SPECIF. COND.: 0.85 mV/cm METER MODEL: _____ METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____ TRIP BLANK I.D. _____ DUPLICATE I.D. _____

REMARKS: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Neill

Date: 7-8-94

**ECKENFELDER
INC.**

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE
GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~90°F, humid, overcast

SAMPLE ID: P-8

DATE: 7-8-94 TIME: 14:40

WELL DATA:

WELL NUMBER: P-8

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 286.95 (NGVD) GROUND SURFACE ELEVATION: 284.8 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 6' ELEVATION: 278.8'

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 4.04

BOTTOM OF WELL: 7.50

ELEVATION: _____

STATIC WATER LEVEL: 282.91

BOTTOM OF WELL: 279.45

WELL CLEAN TO BOTTOM? ☐ YES ☒ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.14

TO BE PURGED 0.42

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☐ PVC

☐ NYLON

☒ OTHER: Tygon

☐ OTHER: _____

PUMPING RATE: 0.03 gpm

START TIME: 14:25

STOP TIME: 14:35

VOLUME PUMPED: 0.25

WAS WELL EVACUATED? ☒ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: 1.5+

TIME SERIES DATA:

TEMPERATURE

PRE-PURGE

PRE-SAMPLE

POST SAMPLE

PH

SPEC. COND.

8.03 28.6°C

8.03

0.54 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: NM

TIME: 14:40

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☒ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID ☐ COLOR: black ☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 8.03

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 28.6

SPEC. COND.: 0.54 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS:

Collected Sample between 14:40 and 15:15 - slow recovery

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Rubén L. Orellana

Date: 7-8-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: _____

SAMPLE ID: P-10

DATE: 7-14-94 TIME: 7:50

WELL DATA:

CASING, DIAMETER: 1"

INTAKE, DIAMETER: 1"

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.82 (NGVD) GROUND SURFACE ELEVATION: 285.20 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 8 ELEVATION: 277.20

DEPTH TO (from datum): _____

ELEVATION: _____

WELL CLEAN TO BOTTOM? ☐ YES ☒ NO

VOLUME OF WATER: _____

WELL NUMBER: P-10

WELL DESIGNATION: _____

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

STATIC WATER LEVEL: 9.13

BOTTOM OF WELL: 10.47

STATIC WATER LEVEL: 278.69

BOTTOM OF WELL: 277.35

☐ YES ☒ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

IN WELL 0.05 gal

TO BE PURGED 0.15 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ STAINLESS STEEL

☐ PVC

☒ OTHER: Tygon

☐ TEFLON

☒ POLYPROPYLENE

☐ NYLON

☐ OTHER: _____

PUMPING RATE: 0.03 gpm

WAS WELL EVACUATED? ☐ YES ☒ NO

START TIME: 7:39

STOP TIME: 7:49 VOLUME PUMPED: 0.25 gal

NUMBER OF WELL VOLUMES PURGED: 5

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

NM

6.9

NM

PURGING EQUIPMENT:

☒ DEDICATED
(disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 9.13

TIME: 7:22

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ STAINLESS STEEL

☒ OTHER: Tygon

☒ DEDICATED
(disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

☐ TEFLON ☐ NYLON

☒ POLYPROPYLENE

☐ OTHER: _____

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☒ NO

METHOD: _____

APPEARANCE: ☒ CLEAR ☐ TURBID ☒ COLOR: None ☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 6.9

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: NM

SPECIF. COND.: NM

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: _____

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Neill

Date: 7-14-94

ECKENFELDER
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Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING
FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE
GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: 285°F, Humid, overcast

SAMPLE ID: P-11

DATE: 7-13-94 TIME: 14:25

WELL DATA:

WELL NUMBER: P-11

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 291.06 (NGVD) GROUND SURFACE ELEVATION: 288.40 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 11' ELEVATION: 277.4

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 9.65

BOTTOM OF WELL: 13.53

ELEVATION: _____

STATIC WATER LEVEL: 282.41

BOTTOM OF WELL: 277.53

WELL CLEAN TO BOTTOM? ☐ YES ☒ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.002 gal

TO BE PURGED 0.6 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: _____

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE: _____

☒ POLYPROPYLENE

☐ PVC

☐ NYLON

☒ OTHER: Tygon

☐ OTHER: _____

PUMPING RATE: 0.15 gpm

START TIME: 14:20

STOP TIME: 14:25 VOLUME PUMPED: 0.75

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

19.8°C

7.7

0.62 uS/cm

PURGING EQUIPMENT: ☒ DEDICATED (disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 9.65

TIME: 14:20

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: _____

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE: _____

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

☒ DEDICATED (disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID ☐ COLOR: _____

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 7.7

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 19.8°C

SPECIF. COND.: 0.62 uS/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Ammonia

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: to be Sample

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Hall

Date: 7-13-94

**ECKENFELDER
INC.**

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~85°F, humid, overcast

SAMPLE ID: P-12

DATE: 7-13-94 TIME: 13:47

WELL DATA:

WELL NUMBER: _____

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.81 (NGVD) GROUND SURFACE ELEVATION: 285.60 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 8 ELEVATION: 277.60

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 6.01

BOTTOM OF WELL: 9.41

ELEVATION: _____

STATIC WATER LEVEL: 281.80

BOTTOM OF WELL: 277.9

WELL CLEAN TO BOTTOM? ☐ YES ☒ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.16 gal

TO BE PURGED 0.48 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON
☐ STAINLESS STEEL
☐ PVC

☒ OTHER: Tygon

TUBING/ROPE:

☐ TEFLON
☒ POLYPROPYLENE
☐ NYLON
☐ OTHER: _____

PUMPING RATE: 0.17 gpm

START TIME: 13:43

STOP TIME: 13:46

VOLUME PUMPED: 0.5 gal

WAS WELL EVACUATED? ☐ YES ☒ NO

NUMBER OF WELL VOLUMES PURGED: 3+

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

20.7°C

9.1

0.805 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED
(disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 6.01

TIME: 13:40

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC
☐ STAINLESS STEEL
☒ OTHER: Tygon

☒ DEDICATED
(disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

TUBING/ROPE:

☐ TEFLON ☐ NYLON
☒ POLYPROPYLENE
☐ OTHER: _____

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☒ NO

METHOD: _____

APPEARANCE: ☒ CLEAR ☐ TURBID ☐ COLOR: lightly black

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 9.1

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 20.7

SPECIF. COND.: 0.805 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 2

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. DP071394

REMARKS: In Situ Sample

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Hall

Date: 7-13-94

ECKENFELDER Nashville, Tennessee
INC. Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

SAMPLE ID: P-14

DATE: 7-13-94 TIME: 13:07

WEATHER CONDITIONS: 285°F, Humid, overcast

WELL DATA:

WELL NUMBER: P-14

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☒ TOP OF WELL CASING ☐ OTHER: _____

DATUM ELEVATION: 287.41 (NGVD) GROUND SURFACE ELEVATION: 285.10 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 8' ELEVATION: 277.1

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 6.90

BOTTOM OF WELL: 10.18

ELEVATION: _____

STATIC WATER LEVEL: 280.51

BOTTOM OF WELL: 277.23

WELL CLEAN TO BOTTOM? ☐ YES ☒ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL 0.13 gal

TO BE PURGED 0.4 gal

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☐ PVC

☐ NYLON

☒ OTHER: Tygon

☐ OTHER: _____

PUMPING RATE: 0.1 gal/min

START TIME: 13:00

STOP TIME: 13:05 VOLUME PUMPED: 0.5 gal

WAS WELL EVACUATED? ☐ YES ☒ NO

NUMBER OF WELL VOLUMES PURGED: 3+

TIME SERIES DATA:

TEMPERATURE

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

pH

SPEC. COND.

19.5°C

7.2

0.667 mV/cm

PURGING EQUIPMENT:

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 6.90

TIME: 12:55

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

SAMPLING EQUIPMENT:

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

METALS SAMPLE FIELD FILTERED? ☐ YES ☒ NO

METHOD: _____

APPEARANCE: ☒ CLEAR ☐ TURBID ☐ COLOR: _____

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 7.2

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 19.5°C

SPECIF. COND.: 0.667 mV/cm

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 3

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: 1st Site Sample

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert J. O'Hall

Date: 7-13-94

**ECKENFELDER
INC.**

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

SAMPLE ID: IG-1

DATE: 7-12-94 TIME: 8:05

WEATHER CONDITIONS: 27°F, Clear

WELL DATA:

WELL NUMBER: IG-1

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☐ TOP OF WELL CASING ☒ OTHER: Ground Surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 285.61 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 5.5' ELEVATION: _____

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 2.99

BOTTOM OF WELL: 5.5

ELEVATION: _____

STATIC WATER LEVEL: _____

BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: _____

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE: _____

☐ POLYPROPYLENE

☐ PVC

☐ NYLON

☐ OTHER: _____

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____

STOP TIME: _____

VOLUME PUMPED: _____

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

PURGING EQUIPMENT: _____

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 2.99

TIME: 8:05

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: _____

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE: _____

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

SAMPLING EQUIPMENT: _____

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID ☐ COLOR: H. brown ☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS: pH: NM METER MODEL: _____ METER SERIAL NO.: _____

TEMP: NM SPECIF. COND.: NM METER MODEL: _____ METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: In-Site Sample. Insufficient volume for field parameters

Screen - 2.5 to 5.5' below G.S.

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Hall

Date: 7-12-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~75°F, Clear

SAMPLE ID: IG-2

DATE: 7-12-94 TIME: 8:25

WELL DATA:

CASING, DIAMETER: 1"

INTAKE, DIAMETER: 1"

DATUM: ☐ TOP OF PROT. CASING ☐ TOP OF WELL CASING ☒ OTHER: Ground surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 288.92 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 8.75' ELEVATION: _____

DEPTH TO (from datum):

STATIC WATER LEVEL: 4.47

BOTTOM OF WELL: 8.75

ELEVATION:

STATIC WATER LEVEL: _____

BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM?

☒ YES ☐ NO

WELL IN GOOD CONDITION?

☒ YES ☐ NO

VOLUME OF WATER:

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ STAINLESS STEEL

☐ PVC

☐ OTHER: _____

☐ TEFLON

☐ POLYPROPYLENE

☐ NYLON

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____

STOP TIME: _____

VOLUME PUMPED: _____

WAS WELL EVACUATED?

☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

PURGING EQUIPMENT:

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 4.47

TIME: 8:25

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ STAINLESS STEEL

☒ OTHER: Tygon

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

☐ TEFLON

☐ NYLON

☒ POLYPROPYLENE

☐ OTHER: _____

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED?

☐ YES ☐ NO

METHOD: _____

APPEARANCE:

☐ CLEAR

☒ TURBID

COLOR: brown

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: NM

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: NM

SPECIF. COND.: NM

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: _____

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS:

In-Situ Sample. Insufficient volume for field parameters
Screen 5.75 to 8.75' below GS

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [Signature]

Date: 7-12-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLD

JOB NUMBER: 9427

WEATHER CONDITIONS: ~75°F, Clear

SAMPLE ID: IG-3

DATE: 7-12-94 TIME: 8:44

WELL DATA:

WELL NUMBER: IG-3

WELL DESIGNATION: _____

CASING, DIAMETER:

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER:

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM:

☐ TOP OF PROT. CASING ☐ TOP OF WELL CASING ☒ OTHER: Ground Surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 288.48 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 8.5 ELEVATION: _____

DEPTH TO (from datum):

STATIC WATER LEVEL: 5.38

BOTTOM OF WELL: ~8.5

ELEVATION:

STATIC WATER LEVEL: _____

BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM?

☒ YES ☐ NO

WELL IN GOOD CONDITION?

☒ YES ☐ NO

VOLUME OF WATER:

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE:

☐ POLYPROPYLENE

☐ PVC

☐ NYLON

☐ OTHER: _____

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____

STOP TIME: _____

VOLUME PUMPED: _____

WAS WELL EVACUATED?

☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

PURGING EQUIPMENT:

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 5.38

TIME: 8:44

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

SAMPLING EQUIPMENT:

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

METALS SAMPLE FIELD FILTERED?

☐ YES ☐ NO

METHOD: _____

APPEARANCE:

☐ CLEAR

☒ TURBID

COLOR: brown

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: NM

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: NM

SPECIF. COND.: NM

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS:

In 5.5 to 8.5' below GS
Insufficient volume for field parameters

Certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [Signature]

Date: 7-12-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLU

JOB NUMBER: 9427

WEATHER CONDITIONS: ~75°F Clear

SAMPLE ID: IG-4

DATE: 7-12-94 TIME: 9:05

WELL DATA:

WELL NUMBER: IG-4

WELL DESIGNATION: _____

CASING, DIAMETER: 1"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☐ TOP OF WELL CASING ☒ OTHER: Ground Surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 288.36 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 9.5' ELEVATION: _____

DEPTH TO (from datum): _____

STATIC WATER LEVEL: 8.31

BOTTOM OF WELL: 4.5

ELEVATION: _____

STATIC WATER LEVEL: _____

BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: _____

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE: _____

☐ POLYPROPYLENE

☐ PVC

☐ NYLON

☐ OTHER: _____

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____

STOP TIME: _____

VOLUME PUMPED: _____

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

TEMPERATURE

pH

SPEC. COND.

PURGING EQUIPMENT: _____

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 8.31

TIME: 9:05

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER: _____

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE: _____

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING EQUIPMENT: _____

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID

COLOR: brown

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS: pH: NM

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: NM SPECIF. COND.: NM

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: In Situ Sample

Screen 5.5 to 8.5' below GS

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: Robert L. O'Neill

Date: 7-12-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING
FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE
GLENS FALLS, NEW YORK

PERSONNEL: RLD

JOB NUMBER: 9427

WEATHER CONDITIONS: ~85°F, mostly sunny

SAMPLE ID: IG-7

DATE: 7-12-94 TIME: 16:30

WELL DATA:

WELL NUMBER: IG-7

WELL DESIGNATION: _____

CASING, DIAMETER: 1.25"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1.25"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☐ TOP OF WELL CASING ☒ OTHER: Ground Surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 282.03 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 13.0' ELEVATION: _____

DEPTH TO (from datum): _____

STATIC WATER LEVEL: NM

BOTTOM OF WELL: 13.0'

ELEVATION: _____

STATIC WATER LEVEL: _____

BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE: ☐ POLYPROPYLENE

☐ PVC

☐ NYLON

☐ OTHER: _____

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____

STOP TIME: _____

VOLUME PUMPED: _____

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

TEMPERATURE

pH

SPEC. COND.

PURGING EQUIPMENT:

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 14.16 feet by casing TIME: 16:24

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE: ☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

☒ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID ☒ COLOR brown ☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS: pH: NM METER MODEL: _____ METER SERIAL NO.: _____

TEMP: NM SPECIF. COND.: NM METER MODEL: _____ METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Copper, etc

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS:

In-Site Sample. Insufficient Volume for field determinations
Screen: 7' to 13' below GS

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [Signature]

Date: 7-12-94

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~85°F, mostly sunny

SAMPLE ID: IG-8

DATE: 7-12-94 TIME: 16:10

WELL DATA:

WELL NUMBER: IG-8

WELL DESIGNATION: _____

CASING, DIAMETER: 1.25"

☐ Stainless Steel ☐ Steel ☐ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1.25"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☐ TOP OF WELL CASING ☒ OTHER: Ground Surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 281.49 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 13.5 ELEVATION: _____

DEPTH TO (from datum): _____

STATIC WATER LEVEL: NM BOTTOM OF WELL: 13.5

ELEVATION: _____

STATIC WATER LEVEL: _____ BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE: ☐ POLYPROPYLENE

☐ PVC

☐ NYLON

☐ OTHER: _____

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____ STOP TIME: _____ VOLUME PUMPED: _____

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

TEMPERATURE

pH

SPEC. COND.

PURGING EQUIPMENT:

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 14.35 from stick-up TIME: 16:05

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE: ☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

☒ DEDICATED
(as possible)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID ☒ COLOR: brown ☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS: pH: 7.1 METER MODEL: _____ METER SERIAL NO.: _____

TEMP: NM SPECIF. COND.: NM METER MODEL: _____ METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS:

10-5.5m Sample 115m. Highest volume for Conductivity + Temperature
Screen: 7.5 to 13.5' below GS

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: [Signature]

Date: 7-12-94

**ECKENFELDER
INC.**

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~85°F Mostly Sunny

SAMPLE ID: IG-9

DATE: 7-12-94 TIME: 15:50

WELL DATA:

WELL NUMBER: IG-9

WELL DESIGNATION: _____

CASING, DIAMETER: 1.25"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1.25"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING ☐ TOP OF WELL CASING ☒ OTHER: Ground Surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 281.42 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 13.5' ELEVATION: _____

DEPTH TO (from datum): _____

STATIC WATER LEVEL: NM

BOTTOM OF WELL: 13.5

ELEVATION: _____

STATIC WATER LEVEL: _____

BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

☐ TEFLON

☐ TEFLON

MATERIALS: PUMP/BAILER:

☐ STAINLESS STEEL

TUBING/ROPE:

☐ POLYPROPYLENE

☐ PVC

☐ NYLON

☐ OTHER: _____

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____

STOP TIME: _____

VOLUME PUMPED: _____

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

TEMPERATURE

pH

SPEC. COND.

PURGING EQUIPMENT:

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 7.39 from Static TIME: 15:42

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

MATERIALS: PUMP BAILER:

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

SAMPLING EQUIPMENT:

☒ DEDICATED disposable

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID ☐ COLOR: dk brown ☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS: pH: 7.2 METER MODEL: _____ METER SERIAL NO.: _____

TEMP: 15.5°C SPECIF. COND.: 0.598 uS/cm METER MODEL: _____ METER SERIAL NO.: _____

LABORATORY ANALYSIS: Total Cyanide

NO. OF CONTAINERS: 1

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS: In situ sample

Screen: 7.5 & 13.5 ft below grade

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: _____

Date: _____

ECKENFELDER
INC.

Nashville, Tennessee
Mahwah, New Jersey

GROUNDWATER SAMPLING

FIELD DATA SHEET

HERCULES INCORPORATED CIBA-GEIGY PLANT SITE

GLENS FALLS, NEW YORK

PERSONNEL: RLO

JOB NUMBER: 9427

WEATHER CONDITIONS: ~85°F, mostly sunny

SAMPLE ID: IG-10

DATE: 7-12-94 TIME: 15:00

WELL DATA:

WELL NUMBER: IG-10

WELL DESIGNATION: _____

CASING, DIAMETER: 1.25"

☐ Stainless Steel ☐ Steel ☒ PVC ☐ Teflon ☐ Other: _____

INTAKE, DIAMETER: 1.25"

☐ Stainless Steel ☐ Galv. Steel ☒ PVC ☐ Teflon ☐ Open rock

DATUM: ☐ TOP OF PROT. CASING

☐ TOP OF WELL CASING

☒ OTHER: Ground Surface

DATUM ELEVATION: _____ (NGVD) GROUND SURFACE ELEVATION: 281.69 (NGVD)

TOTAL DEPTH AT INSTALLATION (from gs): 10.5' ELEVATION: _____

DEPTH TO (from datum): _____

STATIC WATER LEVEL: NM

BOTTOM OF WELL: 10.5

ELEVATION: _____

STATIC WATER LEVEL: _____

BOTTOM OF WELL: _____

WELL CLEAN TO BOTTOM? ☒ YES ☐ NO

WELL IN GOOD CONDITION? ☒ YES ☐ NO

VOLUME OF WATER: _____

IN WELL _____

TO BE PURGED _____

PURGE DATA:

METHOD: ☐ BLADDER PUMP ☐ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON

☐ TEFLON

☐ STAINLESS STEEL

TUBING/ROPE:

☐ POLYPROPYLENE

☐ PVC

☐ NYLON

☐ OTHER: _____

☐ OTHER: _____

PUMPING RATE: _____

START TIME: _____

STOP TIME: _____

VOLUME PUMPED: _____

WAS WELL EVACUATED? ☐ YES ☐ NO

NUMBER OF WELL VOLUMES PURGED: _____

TIME SERIES DATA:

TEMPERATURE

pH

SPEC. COND.

PRE- PURGE

PRE-SAMPLE

POST SAMPLE

PURGING EQUIPMENT:

☐ DEDICATED

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING DATA:

WATER LEVEL: 7.39 ^{from stick-up} TIME: 15:00/14:55

METHOD: ☐ BLADDER PUMP ☒ PERISTALTIC PUMP ☐ BAILER ☐ SUB. PUMP ☐ OTHER: _____

MATERIALS: PUMP/BAILER:

☐ TEFLON ☐ PVC

☐ TEFLON ☐ NYLON

☐ STAINLESS STEEL

TUBING/ROPE:

☒ POLYPROPYLENE

☒ OTHER: Tygon

☐ OTHER: _____

☒ DEDICATED (Disposable)

☐ PREPARED OFF-SITE

☐ FIELD CLEANED

SAMPLING EQUIPMENT:

METALS SAMPLE FIELD FILTERED? ☐ YES ☐ NO

METHOD: _____

APPEARANCE: ☐ CLEAR ☒ TURBID ☒ COLOR: Brown

☐ CONTAINS IMMISCIBLE LIQUID

FIELD DETERMINATIONS:

pH: 6.4

METER MODEL: _____

METER SERIAL NO.: _____

TEMP: 20.5°C

SPECIF. COND.: 0.363 uM

METER MODEL: _____

METER SERIAL NO.: _____

LABORATORY ANALYSIS: Telluride

NO. OF CONTAINERS: 3

FIELD BLANK I.D. _____

TRIP BLANK I.D. _____

DUPLICATE I.D. _____

REMARKS:

In situ Sample
Screen 4.5 to 10.5' below GS

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.

Signature: R. L. O'Neil

Date: 7-12-94

APPENDIX E
GROUNDWATER QUALITY DATA SUMMARY

**RFI REPORT FOR THE
PRETREATMENT PLANT SWMU**

FIELD PARAMETERS

**FIELD PARAMETERS
GROUNDWATER AND SURFACE WATER**

Sample Location	Date	Temperature (° C)	pH	Conductivity (mS/cm) (a)
MW-OB17	7/14/94	17.8	7.1	0.738
MW-OB18	7/14/94	15.2	7.4	1.692
MW-OB19	7/14/94	15.6	7.4	1.373
P-1	7/8/94	21.5	7.1	0.430
P-3	7/8/94	16.8	7.3	1.310
P-6	7/13/94	NM	NM	NM
P-7	7/8/94	26.6	6.9	0.800
P-8	7/8/94	28.6	8.0	0.540
P-10	7/14/94	NM	6.9	NM
P-11	7/13/94	19.8	7.7	0.682
P-12	7/13/94	20.7	9.1	0.805
P-14	7/13/94	19.5	7.2	0.667
IG-1	7/12/94	NM	NM	NM
IG-2	7/12/94	NM	NM	NM
IG-3	7/12/94	NM	NM	NM
IG-4	7/12/94	NM	NM	NM
IG-7	7/12/94	NM	NM	NM
IG-8	7/12/94	NM	7.1	NM
IG-9	7/12/94	15.5	7.2	0.598
IG-10	7/12/94	20.5	6.9	0.363
Feeder Canal	7/12/94	25.6	NM	0.089

(a) mS/cm indicates millisiemens per centimeter

(b) NM indicates parameter was not measured

SUMMARY OF TOTAL CYANIDE ANALYSES

APPENDIX F

**Potentiometric Surface Maps from
"RFA Sampling Visit, Pretreatment Plant CIBA-GEIGY Site,
Glens Falls, New York"
(ECKENFELDER Engineering P.C., July 1992)**

and

**"Groundwater Addendum to RFA Report for
Pretreatment Plant SWMU, CIBA-GEIGY Site,
Glens Falls, New York"
(ECKENFELDER Engineering P.C., September 1993)**

TOTAL CYANIDE IN GROUNDWATER

Sample Location	Total Cyanide (ug/L)
IG-1	86
IG-2	103
IG-3	74
IG-4	147
IG-7	121
IG-8	29
IG-9	195
IG-10	28
MW-OB17	123
MW-OB18	380
MW-OB19	229
P-1	624
P-3	91
P-6	5280
P-7	417
P-8	2230
P-10	5700
P-11	448
P-12	531
P-14	277
DUP-070894	618
DUP-071394	777
EB-071294	10 U
EB-071494	10 U

U - analyzed for but not detected,
number is the reporting limit

