ADDITIONAL INVESTIGATION REPORT
SEDIMENTS AOC
CIBA SITE, GLENS FALLS, NEW YORK

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1.0 INTRODUCTION

The delineation of the offshore limits of waste deposits in the Hudson River sub-area of the Sediments Area of Concern (AOC) that are associated with the Ciba site was presented in the reports entitled "Interim Report, Hudson River Sediment Evaluation, Supplemental RFI of Sediments AOC" (ECKENFELDER INC., March 1998)" and the "Supplemental RFI Report, Sediments AOC" (ECKENFELDER INC., May 1998). It was proposed in these reports that the designated site-related waste material be removed from the river, with the landward limit of removal being the landward limit of the river or the limit of the waste material where it does not extend to the limit of the river. The landward limit of the river is defined by the position of the Ordinary High Water Mark (OHWM) contour as established by the U.S. Army Corps of Engineers (USACE).

The New York State Department of Environmental Conservation (NYSDEC) provided comments on the Interim Report in a letter dated May 8, 1998 (see Appendix A). In this letter, the NYSDEC stated that where these waste deposits extend from the river under the river bank landward of the OHWM contour they are also to be delineated and, if physical conditions allow, removed. The NYSDEC also stated that if physical conditions such as destabilization of an adjacent slope or excessive overburden removal would be the result of the waste removal, the waste material may be left in place.

The results of soil and sediment sampling in the Ponded/Backwater Areas, which constitute another sub-area of the Sediments AOC, were presented in the "Supplemental RFI Report, Sediments AOC" (ECKENFELDER INC., May 1998). In a letter dated June 8, 1998 (see Appendix A), the NYSDEC required sampling and analysis of soil for total cadmium in the Ponded/Backwater Areas from deeper intervals than were sampled previously.

A work plan for the additional investigative tasks required by the NYSDEC, entitled "Work Plan for Additional RFI Work for the Sediments AOC" (ECKENFELDER INC., June 1998) (referred to herein as the "Work Plan") was

prepared and submitted to the NYSDEC on June 23, 1998. The NYSDEC conditionally approved the Work Plan in a letter dated July 3, 1998 (see Appendix A) provided that additional items, outlined in the letter, were included in the scope of the investigation.

In their conditional approval letter NYSDEC required preparation and submittal of an Interim Report to present the findings of the waste delineation field work soon after its completion and, as per subsequent discussions with the NYSDEC, prior to conducting the remaining field activities described in the Work Plan (e.g., soil sampling in the Ponded/Backwater Areas). The Interim Report, entitled "Interim Report, River Bank Waste Delineation, Sediments AOC" (ECKENFELDER INC., July 1998) was submitted to the NYSDEC on July 31, 1998, eight days after the field activities for the waste delineation was complete. Per the NYSDEC's letter, the Interim Report included a plan view showing the lateral extent of waste deposits and cross-sections showing the depth of waste and overburden above the waste.

This report presents the methods and procedures used for, and findings and conclusions of, the additional investigation of the Sediments AOC. Section 2.0 describes the objectives for the additional investigative tasks. Section 3.0 addresses the investigation in the Hudson River sub-area. The findings presented in the Interim Report are presented in this section, but with additional documentation of field measurements and observations. Section 4.0 addresses the investigation in the Ponded/Backwater Areas.

2.0 OBJECTIVES

The sections below describe the objectives of the additional investigative tasks for each sub-area of the AOC that was based on the Work Plan and the conditional approval letter.

2.1 HUDSON RIVER SUB-AREA

The objectives for the additional investigation in the Hudson River sub-area are as follows:

- Delineate the extent of site-related waste deposits in the river bank areas not addressed in the design for on-site Corrective Measures [see "Corrective Measures Design" (ECKENFELDER Engineering P.C., June 1997)]. These areas are described below. The river transect numbers used in the reports referenced in Section 1.0 (i.e., HT1 through HT22) are used as location references and are shown on the Drawings accompanying this report.

  - Off-site river bank areas where waste was identified in the river adjacent to the bank. This includes the areas along the north shore of the river, downstream of the site (from approximately 140 feet west HT14 to the proximity of HT21), and portions of the island located south of the industrial sewer lift station (between HT10 and HT15).

  - The relatively flat-lying on-site area at the base of the steep embankment south of the Building 45 foundation slab (between HT8 and HT10). In the areas of the Ciba site to the east and west of the flat-lying area, the steep embankment is adjacent to the river. The on-site portions of this steep slope are addressed in the on-site Corrective Measures [see "Corrective Measures Design" (ECKENFELDER Engineering P.C., June 1997)].

- For site-related waste deposits that are expected to be left in place, provide concentration data and Toxicity Characteristic Leaching Procedure (TCLP) data for metals (cadmium, chromium, lead and mercury).

The northern river bank in the vicinity of river transects HT14 through HT18 is owned by the Delaware and Hudson Railroad Company (DHRC). Access permission to this property for the investigation was not received during the course of the field work and thus the objectives described above could not be accomplished for this area. However, as required by the NYSDEC in their conditional approval letter, samples of the waste were collected from the river bank directly adjacent to the DHRC property and subjected to analysis for total and TCLP metals (cadmium, chromium, lead and mercury).

The Work Plan provides for a contingency TCLP evaluation of the waste to be removed if, based on the estimated volume, it is determined that a portion of the material to be removed will be considered for disposal in an area other than the Corrective Action Management Unit (CAMU). Materials being considered for non-CAMU disposal will be sampled and subjected to TCLP tests for metals (cadmium, chromium, lead and mercury) in accordance with the Work Plan, as modified by the conditional approval letter. As per the Work Plan, this evaluation will be conducted, if necessary, once the volume to be removed is established.

2.2 PONDED/BACKWATER AREAS

Previously in this RCRA Facility Investigation (RFI) [see "Supplemental RFI Report, Sediments AOC" (ECKENFELDER INC., May 1998)] soils from the 0- to 6-inch depth interval in the Ponded/Backwater Areas were collected and analyzed for total cadmium. The objective of the additional soil sampling in the Ponded/Backwater Areas conducted for this investigation is to provide cadmium concentration data for soil from deeper intervals. Specifically, as per the NYSDEC's letter dated June 8, 1998, the concentration of total cadmium in the following intervals was evaluated:

- 1-to 2-feet below ground surface.

- The shallower of the following: 3- to 4-feet below ground surface, the interval approximately one-foot above the water table, the interval approximately one-foot above a wood slash layer (if present), or the interval approximately one-foot above hand auger or corer refusal.

3.0 RIVER BANK WASTE DELINEATION – HUDSON RIVER SUB-AREA

3.1 INVESTIGATIVE APPROACH, METHODS, AND PROCEDURES

3.1.1 Property Access

The northern river bank in the vicinity of transects HT14 through HT18 is owned by the Delaware & Hudson Railroad Company (DHRC). The island across from the industrial sewer lift station (between HT10 and HT15) and the land area east of transect HT18, which includes the Ponded/Backwater Areas, are owned by Niagara Mohawk Power Corporation (Niagara Mohawk). These companies were contacted to request permission to conduct the field activities described in the Work Plan on their property. Niagara Mohawk granted permission to access their properties. Permission to access the DHRC property was not received during the course of the investigation.

3.1.2 Delineation of Waste Deposits

The field activities for the river bank waste deposit delineation were conducted from July 15 through 23, 1998. The field work was conducted in accordance with the approved Work Plan. The actual soil boring transect locations and sequence of borings were in some instances shifted from those initially proposed based on field observations and conditions. Soil borings were drilled along the north-south oriented river bank transects shown in Drawings 0432-001A and 0432-002A to evaluate if the waste deposits identified in the river adjacent to the transect are present within the river bank. If present, the thickness of the waste deposit and the distance the deposit extends into the river bank was evaluated. Although proposed in the Work Plan, this evaluation was not conducted on the portion of the northern river bank in the vicinity of river transects HT14 through HT18 because access permission from the owner, DHRC, was not received during the course of the investigation.

Hand augers were used to collect river bank materials because of the limited accessibility of the transect locations. At each boring the river bank materials were collected and observations made continuously from the ground surface to the base of the boring. The presence or absence of waste deposits was determined visually and the soils were described using the Burmister Soil Classification System and the Unified Soil Classification System (USCS). Each boring was continued until one or more of the following situations was encountered:

- The waste layer, if present, was penetrated to the underlying material;
- Drilling refusal of the hand auger; or
- No waste deposit was identified after sampling had progressed through the depth interval where the waste deposit is expected based on observations at the river's edge adjacent to the transect, or from a nearby boring.

If auger refusal was encountered before sampling had progressed through the depth interval where the waste deposit was expected based on field observations, the boring location was shifted a few feet and another attempt was made to drill the boring to the interval where the waste was expected.

The initial soil boring in each transect was positioned as close to the river as practical. If the waste deposit was not observed in the first boring, this indicated that the deposit does not extend into the river bank beyond the boring, and no further borings were required in the transect. If the waste deposit was observed, additional borings were drilled on the transect between the first boring and the closest physical boundary until:

- A maximum of 10 feet existed between adjacent borings in which the waste deposits were observed in the riverward boring and not observed in the landward boring; or

- The waste extends to, and possibly past, the physical boundary.

The physical boundaries are defined as follows:

- For the river bank transects along the north shore of the river between HT8 and HT10 and between HT14 and HT21, the boundary is the toe of the steep embankment to the north (see Drawings 0432-001A and 0432-002A). In the vicinity of HT21, the ponded area at the base of the embankment is the boundary.

- For the river bank transects on the large island between HT10 and HT15, the boundary is the topographic crest of the island (see Drawing 0432-001A).

Once the limit of the waste was identified along two adjacent transects, an attempt was made to identify the limit of the waste at a point between the two transects. Typically, this was accomplished by drilling borings along additional north-south transects positioned between the previous transects.

In addition to the soil borings, observations regarding the presence, absence and/or continuity of site-related waste deposits along the river banks in the area of this investigation were again made to confirm and refine those made in this area in February 1998 [see "Supplemental RFI Report, Sediments AOC (ECKENFELDER INC., May 1998)], because the lower river level during this field work allowed for clearer observations in some areas than were previously possible. Where the waste deposits along the river bank were identified as being discontinuous (e.g., along the island), soil borings were drilled along to evaluate and/or confirm the extent of the deposit parallel to the shoreline.

The soil boring transects along the river banks are designated by "BT" followed by the transect number (e.g., BT1, BT1A, BT2, etc.). Individual borings within a transect are designated by the transect designation, followed by a number to

indicate the boring. For example, BT1-1 and BT1-2 are the first two borings drilled within transect BT1. Logs containing the soil and/or waste descriptions made at each boring are provided in Appendix B.

The position of the first boring beyond the limit of the waste deposit in each north-south transect (i.e., the boring closest to the river in which no waste is identified) was marked with a stake. Where the waste layer extended to the physical boundary, the boring closest to this boundary was marked with a stake. The staked locations were then surveyed for ground surface elevation and location by personnel from Van Dusen and Steves, Licensed Land Surveyors. The location survey data are provided in Appendix C.

3.1.3 Waste Sampling and Analysis

According to the Work Plan, as modified by the conditional approval letter, if site-related waste deposits were encountered along off-site transects where the deposits are expected to be left in place due to physical constraints (e.g., beneath the railroad embankment) this material was to be characterized by collecting samples and subjecting them to total and TCLP analysis for metals (cadmium, chromium, lead and mercury). This situation was not encountered in the field at any of the off-site transects for which access permission was received.

Because access permission to evaluate the portion of the northern river bank in the vicinity of river transects HT14 through HT18 was not received from the DHRC, the NYSDEC required that samples of the waste deposits be collected from the river bank directly adjacent to the DHRC property and subjected to analysis for total and TCLP metals (cadmium, chromium, lead and mercury). These samples were collected at each of the five proposed transect locations (see Drawings 0432-001A and 0432-002A) using stainless steel hand augers. The samples were collected on August 3, 1998. Sample description, sample handling, equipment decontamination and quality control/quality assurance (QA/QC) procedures are described in Appendix D. The analyses were conducted by the ECKENFELDER INC. laboratory, which is certified by the New York State Department of Health (NYSDOH), and in

accordance with the QAPjP for the site, which reflects current NYSDEC and USEPA protocol. The analytical data were internally validated by the laboratory and reviewed by the Eckenfelder/Brown and Caldwell (E/BC) project manager. The data are considered usable. The laboratory data package is included in Appendix E. Field data sheets with descriptions are in Appendix F.

3.2 FINDINGS

3.2.1 Waste Delineation

Descriptions of the soil and waste deposits encountered at each boring location are presented in Appendix B. Table 3-1 presents a summary of the observations from the borings. Drawings 0432-001A and 0432-002A depict the horizontal extent of the site-related waste deposits based on the findings from the borings and river bank observation made during this and previous field work. At the transects, the line depicting the landward limit of the waste within the river bank is positioned between adjacent borings in which the waste deposit was observed in one and not in the other. The landward limit of waste deposits in the river bank along the portion of the northern shore owned by the DHRC was not evaluated because access permission was not received. Drawing 0432-003A presents cross-sections along transects where waste deposits were encountered. These cross-sections indicate the thickness and extent of the waste deposits. The ground surface configurations for the cross-sections in the area of transects BT1 through BT14 were estimated from the survey data for the transect borings (one boring location was surveyed per transect), the topographic map generated from the 1991 aerial photographic survey by Robinson Aerial Surveys, Inc., and field observations. A detailed topographic survey is not currently available for the area of transects BT15 through BT17, because these are beyond the area where accurate topographic information can be generated from the 1991 aerial photographic survey. Thus, the topographic surface for these cross-sections was estimated based on field observations and location survey data from this investigation and the investigation in the Ponded/Backwater Areas [see "Supplemental RFI Report, Sediments AOC (ECKENFELDER INC., May 1998)].

TABLE 3-1

SUMMARY OF OBSERVATIONS FROM RIVER BANK SOIL BORINGS

Transect	Distance from Shore-line (ft) (a)	Boring Identification	Approximate Depth to Waste Layer (ft)	Approximate Thickness of Waste Layer (ft) (b)	Total Depth (ft) (c)
BT1	0	BT1-1	1.0	1.5	3.5
	14	BT1-4	1.0	1.5	3.9 (R:wood)
	21	BT1-5	1.1	1.0	3.1 (R:wood)
	28	BT1-3	-- (d)	--	4.9
	56	BT1-2	--	--	3.7 (R:rock)
BT1A	15	BT1A-1	--	--	1.3 (R:wood)
BT1B	0	BT1B-2	--	--	4.3 (R)
	25	BT1B-1	--	--	2.8 (R:wood)
BT1C	0	BT1C-1	1.7	2.0	3.7 (R:wood)
BT2	0	BT2-1	--	--	4.6
BT3A	0	BT3A-1	--	--	3.8 (R)
	10	BT3A-2	--	--	2.8 (R:wood)
BT3	0	BT3-1	1.0	1.0	4.0
	16	BT3-5	1.0	0.9	4.3 (R)
	18.5	BT3-4	--	--	2.6 (R:wood)
	37	BT3-3	--	--	5.1 (R)
	74	BT3-2	0.5	2.5	3.3 (R:wood)
BT4A	0	BT4A-1	0.5	0.8	2.8 (R:wood)
	36	BT4A-2	2.0	1.8	3.8 (R:wood)
BT4	0	BT4-1	0.5	1.0	3.8 (R:wood)
	12	BT4-2	1.7	3.1+	4.8 (R:rock)
BT5	0	BT5-1	--	--	3.9 (R:wood)
BT6	0	BT6-1	2.0	0.8	3.4 (R:wood)
	10	BT6-2	--	--	4.9
BT7	0	BT7-1	--	--	3.2 (R:wood)
BT8	0	BT8-1	--	--	3.7 (R)
BT9	0	BT9-1	--	--	4.0 (R:wood)
BT10	0	BT10-1	--	--	4.0 (R)
BT10B	0	BT10B-1	--	--	3.7 (R:wood)

TABLE 3-1

SUMMARY OF OBSERVATIONS FROM RIVER BANK SOIL BORINGS

Transect	Distance from Shore-line (ft) (a)	Boring Identification	Approximate Depth to Waste Layer (ft)	Approximate Thickness of Waste Layer (ft) (b)	Total Depth (ft) (c)
BT10A	0	BT10A-1	1.8	<0.5	2.7 (R)
	10	BT10A-2	--	--	2.7 (R)
BT11	0	BT11-1	1.7	0.2	3.0
	10	BT11-2	--	--	3.2 (R)
BT12	0	BT12-1	0.7	0.1	3.5 (R:wood)
	10	BT12-2	1.0	0.1	2.1 (R:wood)
	20	BT12-3	--	--	3.0
BT13	0	BT13-1	0.5	0.7	2.0 (R:wood)
	10	BT13-2	--	--	3.0
BT14	0	BT14-1	0.3	0.5	2.0
	10	BT14-2	--	--	2.6 (R:wood)
BT15	0	BT15-1	1.4	0.2	3.0 (R)
	15	BT15-2	0.8	0.3	2.9
	25	BT15-3	--	--	1.9
BT15B	0	BT15B-1	1.6	0.3	4.9
	10	BT15B-2	2.0	0.2	4.6 (R:wood)
	20	BT15B-3	--	--	5.1
BT15A	0	BT15A-1	1.0	1.0	4.5 (R:wood)
	24	BT15A-2	1.3	0.2	5.0
	34	BT15A-3	--	--	4.9
BT16	0	BT16-1	0.9	0.2	4.0 (R:wood)
	10	BT16-2	1.4	0.2	2.9
	20	BT16-3	1.0	0.1	3.0
	30	BT16-5	--	--	2.6 (R:wood)
	40	BT16-4	--	--	3.1
BT16A	0	BT16A-1	1.5	1.0	5.1 (R)
	20	BT16A-2	1.5	0.1	4.3 (R:wood)
	30	BT16A-3	--	--	4.8 (R:wood)

TABLE 3-1

SUMMARY OF OBSERVATIONS FROM RIVER BANK SOIL BORINGS

Transect	Distance from Shore-line (ft) (a)	Boring Identification	Approximate Depth to Waste Layer (ft)	Approximate Thickness of Waste Layer (ft) (b)	Total Depth (ft) (c)
BT17	0	BT17-1	0.6	2.6	4.5
	20	BT17-2	1.0	2.2	3.2 (R:wood)
	40	BT17-3	1.5	1.3	2.8 (R:rock)
	60	BT17-5	2.4	0.5	3.5 (R:wood)
	70	BT17-6	--	--	3.7 (R:wood)
	80	BT17-4	--	--	4.5 (R:wood)
BT17A	40	BT17A-1	--	--	3.2 (R:rock)
	40	BT17A-2	2.5	0.1	4.6

(a) Measured from location of boring adjacent to river

(b) Approximate thickness of interval where waste deposits were observed. At some locations non-waste material is interlayered with the waste deposits and were included in the thickness estimate.

(c) Total depth of boring. If hand auger refusal was encountered, an "R" is noted in parentheses, followed by the material causing refusal, if known.

(d) "--" indicates waste layer was not observed in the boring.

The maps and cross-sections in Drawings 0432-001A, 0432-002A and 0432-003A are modifications of the drawings presented in the Interim Report, with minor revisions to the transect locations and ground surface elevations based on the survey data. The survey data were not available for the Interim Report. Additionally, Table 3-1 of this report is a modification of Table 1 in the Interim report, and incorporates corrections of a few minor typographical errors that were noted in the earlier table.

As discussed in the "Supplemental RFI Report, Sediments AOC" (ECKENFELDER INC., May 1998), two general types of site-related waste deposits were observed:

1. Red to brick red silt- to clay-sized material. Where encountered in the river bank, the material is generally soft. In the river, it is often relatively hard and often forms ledges or is present as a crust over coarse sediment or bedrock.

2. A layered, often multicolored, waste with the consistency of soft clay.

Described below are the findings of the waste deposit delineation, presented by area.

North Shore In Area of HT8 through HT10 (On-Site)

This is a relatively flat-lying area, up to approximately 100 feet wide, at the base of the steep embankment south of the Building 45 foundation slab and is part of the Ciba Main Plant Site. In the areas of the Ciba site to the east and west, the steep embankment is adjacent to the river The on-site portions of the steep slope are addressed in the on-site Corrective Measures [see "Corrective Measures Design (ECKENFELDER Engineering P.C., June 1997)].

In the western portion of this area, a multicolored waste deposit, up to at least 2 feet thick, extends laterally up to 28 feet from the shore into the river bank. The top of the waste layer is approximately one foot below ground surface. In the eastern

portion of this area, a red waste deposit, measuring up to at least 3 feet thick, locally extends northward from the shore at least to the base of the steep embankment. The top of the red waste layer is between approximately 0.5 and 2.0 feet below ground surface. No waste deposits were identified in the borings located in the middle portions of this area.

North Side of Island Between HT10 and HT15 (Off-Site)

Positioned near HT10 is the beginning of the small, northernmost channel of the Hudson River that flows past the eastern portion of the Ciba Site. The north side of the island forms the south bank of this channel. The land surface of the island is generally flat-lying.

In the western part of the island, between HT10 and HT11, a relatively hard red waste deposit was identified which extends approximately 70 feet along the north edge of the island. Based on the observations at the borings and along the shoreline, the red waste deposit extends a maximum of less than 10 feet into the river bank.

In the central and eastern part of the island, a multicolored, layered, clay-like deposit was identified which extends approximately 400 feet along the north edge of the island. The maximum measured thickness of the layer within the bank is 0.7 feet, although typically it was observed to be only a few tenths of a foot thick. The deposit typically extends less than 10 feet into the river bank.

North Shore In Area of HT14 through HT18 (Off-Site)

This shoreline forms the northern bank of the northernmost channel of the Hudson River in this area. The bank consists of a relatively gently sloping strip of land varying between approximately 10 and 25 feet wide. Directly to the north is the steep, south-facing embankment of the DHRC railroad line.

Observations made from the river adjacent to the river bank indicate that a multicolored layered waste deposit is present along the shore through most of this

area, varying in thickness from less than one foot, to approximately 8 feet in one area. As discussed in Section 3.1.1, this portion of the river bank is owned by the DHRC. Because access permission was not received, the extent and thickness of the waste deposits in the river bank were not evaluated. However, because construction of the railroad embankment pre-dates operations at the site, the site-related waste is not expected to extend under the embankment.

North Shore In Area of HT19 through HT21 (Off-Site)

This shoreline forms the northern bank of the northernmost channel of the Hudson River in this area. This channel meets with the main channel of the Hudson River just to the east of HT21. The land surface is generally flat lying. The edge of the river is generally steep to nearly vertical.

Observations made from the river adjacent to the river bank indicate that a multicolored layered waste deposit is present along the shore through most of this area, although in some areas it was observed to be intermittent. The maximum measured thickness of the layer within the bank was over 2.5 feet, although typically it was observed to be only a few tenths of a foot thick. The deposit typically extends approximately 20 feet into the bank. However, in an area near HT21 (transect BT17), the deposit extends 60 to 70 feet into the bank. This area is relatively low lying and may have been a small embayment at one time.

3.2.2 Characterization of Waste Deposits Adjacent to DHRC Property

The locations of the samples of the waste deposits collected from the river bank locations directly adjacent to the DHRC property are indicated on Drawings 0432-001A and 0432-002A. The waste deposits at these locations are generally layered, multicolored material with a clay-like consistency. A description of the waste deposits at each sample location is provided on the field data sheets in Appendix F.

Table 3-2 presents the results of the total and TCLP metals analyses conducted on the samples of the waste deposits collected from the river bank locations directly adjacent to the DHRC property. No metals were detected in the equipment blanks associated with these samples. The analytical data were internally validated by the laboratory and reviewed by the E/BC project manager in accordance with the Work Plan. The data are considered usable. Average constituent concentrations are also presented in Table 3-2. These values were calculated by substituting a value of one half the detection limit for non-detect analyses.

The results of the analyses of the TCLP extracts were compared to the regulatory limits used to identify characteristic hazardous waste. These limits are 1.0 mg/l for cadmium, 5.0 mg/l for chromium, 5.0 mg/l for lead and 0.20 mg/l for mercury. The average concentrations for the TCLP extracts from the five stations are below the regulatory limit for each metal. The results from the individual locations are below these limits with the exception of the lead concentration in the TCLP extract for location WHT17-1 (5.7 mg/l), which is slightly above the regulatory limit. Metal concentrations in the TCLP extract measured on the waste deposit samples average between zero percent (mercury) and 0.3 percent (cadmium) of the total metal concentrations.

3.3 CONCLUSIONS

The following conclusions are made relative to the Hudson River sub-area of the Sediments AOC based on the results of this additional investigation and previous investigations:

- The extent of site-related waste deposits in the river bank areas addressed in this investigation for which access permission was received, are depicted in Drawings 0432-001A and 0432-002A. Also shown in these drawings are the off-shore limits of the waste deposits. The extent of the deposits in the river bank on the property owned by the DHRC was not evaluated because access permission was not received.

TABLE 3-2

ANALYTICAL RESULTS - WASTE DEPOSITS IN RIVER BANK

Sample	Date Sampled	Total Cadmium (mg/kg)	Total Chromium (mg/kg)	Total Lead (mg/kg)	Total Mercury (mg/kg)	TCLP Cadmium (mg/l)	TCLP Chromium (mg/l)	TCLP Lead (mg/l)	TCLP Mercury (mg/l)
TCLP Regulatory Limit:		--	--	--	--	1.0	5.0	5.0	0.20
W-HT14-1	8/3/98	110	4500	5000	12	0.69	0.23	2.4	0.0020 U
DUP080398(a)	8/3/98	170	8200	7300	44	0.89	0.24	3.3	0.0020 U
W-HT15-1	8/3/98	8.9	4300	4900	1.9	0.010 U(b)	0.21	0.32	0.0020 U
W-HT16-1	8/3/98	26	5100	7500	0.67	0.010 U	0.14	0.47	0.0020 U
W-HT17-1	8/3/98	36	9700	12000	0.84	0.12	0.099	5.7	0.0020 U
W-HT18-1	8/3/98	76	3400	4300	0.82	0.38	0.050 U	1.6	0.0020 U
Average Concentration (c):		51	5400	6740	3.2	0.24	0.140	2.1	0.0010

(a) Duplicate is from sample W-HT14-1

(b) U - Below method detection limit. Number listed is reporting limit.

(c) For calculating average concentrations, 1/2 the reporting limit was substituted for a non-detect value. Also, the value of the duplicate sample (DUP080398) was not used in the calculation, since W-HT14-1 provides a representation of the value at the location.

- The average concentrations of metals in the waste deposit along the river bank adjacent to the DHRC property are as follows:

  Total cadmium: 51 mg/kg
  Total chromium: 5400 mg/kg
  Total lead: 6740 mg/kg
  Total mercury: 3.2 mg/kg

- The average concentrations of metals (cadmium, chromium, lead and mercury) in the TCLP extracts from the samples of the waste deposit adjacent to the DHRC property are below the regulatory limits for identifying a characteristic hazardous waste. The TCLP results from the individual samples are below these limits with the exception of the lead concentration in the extract from one sample, 5.7 mg/l, which is slightly above the regulatory limit of 5.0 mg/kg.

- The low ratio of metals concentration in the TCLP extract to the total metals concentration in the waste deposit indicates that the metal-bearing compounds in the waste deposits are low in solubility. Noteworthy is that TCLP is an aggressive procedure (designed to mimic conditions in a municipal waste landfill) and is expected to overestimate the solubility of constituents under the actual (non-landfill) conditions present in the field.

4.0 SOIL EVALUATION - PONDED/BACKWATER AREAS

4.1 INVESTIGATIVE APPROACH, METHODS, AND PROCEDURES

The Ponded/Backwater Areas lie within a former stream channel positioned north of the Hudson River channel and directly south of the steep, southward facing embankment below the DHRC railroad line. The approximate positions of the banks of this channel, as depicted in Drawing 0432-004, are based on field observations and a review of aerial photography. Topographic maps that resolve these banks are not currently available.

The previous investigation in this area, conducted in March 1998 [see "Supplemental RFI Report, Sediments AOC" (ECKENFELDER INC, May 1998)] evaluated cadmium concentrations in the submerged, fine-grained sediments and surficial (0-0.5 ft. depth) terrestrial soil between the banks of this channel. This current investigation focused on evaluating cadmium concentrations in the deeper soils, within the one- to four-foot depth interval.

Field work for the evaluation of the deeper soils in the Ponded/Backwater Areas was conducted from August 3 through 8, 1998. Soil borings were drilled along transects oriented perpendicular to the long axis of the former channel which encompasses the Ponded/Backwater Areas, as shown in Drawing 0432-004. The borings were drilled approximately every 100 feet along a transect, starting at the southern bank of the channel and ending either at the south shore of the ponds or backwater, or the northern bank of the channel (i.e., the toe of the railroad embankment), whichever was encountered first. The transects were be spaced approximately 400 feet apart, from the western shore of the westernmost ponded area, to the vicinity of the mouth of the backwater area at the eastern end of the channel. The soil boring locations were positioned adjacent to the locations of the surficial (0- to 0.5 ft. depth) soil samples that were collected previously for the RFI [see "Supplemental RFI Report, Sediments AOC" (ECKENFELDER INC., May 1998)].

The soil borings were drilled with a stainless steel hand auger (3.25-inch or 4-inch diameter) or corer (2-inch diameter). In each boring, soil samples were collected in one-foot depth increments from ground surface to the shallower of the following:

- Four feet below ground surface
- The water table, as indicated by standing water in the borehole
- A wood slash layer, if present
- Hand auger or corer refusal

The samples were described in the field with respect to grain size, presence of visible waste, discoloration, or other information considered pertinent to the investigation. Logs of the borings, which contain these descriptions, are provided in Appendix B.

Soil samples from the following depth intervals were submitted to the laboratory for total cadmium analysis by USEPA Method 6010A:

- 1- to 2-feet below ground surface.

- The shallower of the following: 3- to 4-feet below ground surface, the interval approximately one foot above the water table, the interval approximately one-foot above a wood slash layer (if present), or the interval approximately one-foot above hand auger or corer refusal. At each location, this sample was collected from either the 3- to 4-foot or 2- to 3-foot depth interval.

The analyses were conducted by the E/BC laboratory, which is certified by the NYSDOH, and in accordance with the QAPjP for the site, which reflects current NYSDEC and USEPA protocol. The analytical data were internally validated by the laboratory. The laboratory data package is included in Appendix E. The field data sheets are provided in Appendix F.

Upon completion of each boring, the borehole was backfilled with the drill cuttings. Because a ground surface elevation and location survey was conducted for the surficial soil samples collected previously, a survey of the boring locations is not necessary. Sample description, sample handling, equipment decontamination and QA/QC procedures are described in Appendix D.

The sample designations indicate the sample location relative to the surficial soil sample locations sampled in March 1998 for the previous investigation. The first number in the designation following "PBWD" is the transect number. The second number is the sample location within the transect. The third number indicates the sample depth interval. For example, sample PBWD-3-1-1 is from the 1- to 2-foot depth at the first location in the third transect. The designation for the surficial sample collected during the previous investigation lacks a "D" in the prefix of the designation, and does not have a third number indicating the depth interval (e.g., PBW-3-1). The designation for the sediment samples collected during the previous investigation includes an "S" following the transect number (e.g., PBW-1-S-1).

4.2 FINDINGS

4.2.1 Area Description

The Ponded/Backwater Areas lie within a former stream channel positioned north of the Hudson River channel and directly south of the steep, southward facing embankment below the DHRC railroad line. The approximate positions of the banks of this channel are depicted in 0432-04. Within this area, near the base of the steep embankment, lie two ponded areas and a backwater area. The land directly south of the ponds and backwater is relatively flat-lying, with occasional low areas which at times contain ponded water. South of the flat-lying area, the land rises, forming the southern bank of the former channel. The former channel area is heavily vegetated with trees and shrubs. The lands of the Ponded/Backwater Areas are owned by the Niagara Mohawk Power Corporation.

The Ponded/Backwater Areas receive drainage from streams, the area of the railroad line, industries, and roadways to the north. Surface water in the backwater area is typically continuous with the Hudson River. Water is also contributed to these areas from groundwater seepage. In the periods of high water stage in the Hudson River observed during field work conducted in late March 1998, water from the Hudson River flowed from west to east through the channel. However, at the river stages typically observed, surface water in the ponded areas is not continuous with the river. The ground surface elevations measured in the land area adjacent to the Ponded/Backwater Areas are generally higher than the river stage typically observed during this investigation or during groundwater monitoring at the site [see "Supplemental RFI Report, Sediments AOC' (ECKENFELDER INC., May 1998)].

Debris such as metal drums, automobiles and parts, televisions, appliances and general refuse were observed throughout the Ponded/Backwater Areas, particularly along the steep northern bank adjacent to the railroad tracks. Near the westernmost ponded area, layers of cement cover the steep bank from the top of the bank down to the level of the ponded area.

4.2.2 Soil Characterization

The soil sampling locations from this investigation and the previous investigation [see "Supplemental RFI Report, Sediments AOC' (ECKENFELDER INC., May 1998)] are shown in Drawing 0432-004. Also shown are the sediment sample locations from the previous investigation. Note that in Drawing 0432-004, three of the sediment sample locations (PBW-1-S-1, PBW-3-S-1, and PBW-4-S-1) are shown to be outside of the limits of the ponds. This is because the limits of the ponds and backwater are variable depending on water levels. These three locations were within the ponds at the time of sampling. Descriptions of the soil at each location are provided in the boring logs in Appendix B.

Table 4-1 presents the results of the total cadmium analyses of the deeper soils (1- to 2-foot and 2- to 3-foot or 3- to 4-foot depth intervals) collected in the

TABLE 4-1

SOIL AND SEDIMENT ANALYSIS RESULTS
PONDED/BACKWATER AREAS
SEDIMENTS AOC

Sample	Date Sampled	Matrix	Depth (ft.)	Total Cadmium (mg/kg)	TCLP			
					Cadmium (mg/l)	Chromium (mg/l)	Lead (mg/l)	Mercury (mg/l)
TCLP Regulatory Limit:					1.0	5.0	5.0	0.20
PBW-1-S-1	3/30/98	Sediment	Surficial	12 E	0.068	0.050 U	0.18	0.0020 U
PBW-1-1	3/26/98	Soil	0-0.5	68 E	--	--	--	--
PBWD-1-1-1	8/3/98	Soil	1-2	240	--	--	--	--
DUP080398B	8/3/98	Soil	1-2	250	--	--	--	--
PBWD-1-1-2	8/3/98	Soil	2-3	32	--	--	--	--
PBW-1-2	3/26/98	Soil	0-0.5	120 E	0.59	0.11	0.56	0.0020 U
PBWD-1-2-1	8/3/98	Soil	1-2	12	--	--	--	--
PBWD-1-2-2	8/3/98	Soil	3-4	1.0	--	--	--	--
PBW-1-3	3/26/98	Soil	0-0.5	280 E	--	--	--	--
PBWD-1-3-1	8/4/98	Soil	1-2	20	--	--	--	--
PBWD-1-3-2	8/4/98	Soil	3-4	0.091	--	--	--	--
PBW-2-S-1	3/30/98	Sediment	Surficial	90 E	0.29	0.050 U	0.21	0.0020 U
PBW-3-S-1	3/30/98	Sediment	Surficial	69 E	--	--	--	--
PBW-3-1	3/26/98	Soil	0-0.5	12 E	0.038	0.050 U	0.14	0.0020 U
PBWD-3-1-1	8/4/98	Soil	1-2	0.74	--	--	--	--
PBWD-3-1-2	8/4/98	Soil	3-4	0.33	--	--	--	--
PBW-3-2	3/26/98	Soil	0-0.5	80 E	--	--	--	--
PBWD-3-2-1	8/4/98	Soil	1-2	4.3	--	--	--	--
PBWD-3-2-2	8/4/98	Soil	3-4	3.5	--	--	--	--
PBWD-3-3-1	8/4/98	Soil	1-2	63	--	--	--	--
PBWD-3-3-2	8/4/98	Soil	2-3	16	--	--	--	--
PBW-4-S-1	3/30/98	Sediment	Surficial	60 E	--	--	--	--
PBW-5-S-1	3/30/98	Sediment	Surficial	19 E	0.10	0.050 U	1.4	0.0020 U
PBW-5-1	3/26/98	Soil	0-0.5	3.5 E	0.020	0.050 U	0.17	0.0020 U
PBWD-5-1-1	8/4/98	Soil	1-2	0.95	--	--	--	--
PBWD-5-1-2	8/4/98	Soil	2-3	0.54 *	--	--	--	--

TABLE 4-1

SOIL AND SEDIMENT ANALYSIS RESULTS
PONDED/BACKWATER AREAS
SEDIMENTS AOC

Sample	Date Sampled	Matrix	Depth (ft.)	Total Cadmium (mg/kg)	TCLP Cadmium (mg/l)	TCLP Chromium (mg/l)	TCLP Lead (mg/l)	TCLP Mercury (mg/l)
TCLP Regulatory Limit:					1.0	5.0	5.0	0.20
PBW-5-2	3/26/98	Soil	0-0.5	11 E	--	--	--	--
PBWD-5-2-1	8/4/98	Soil	1-2	7.3 *	--	--	--	--
PBWD-5-2-2	8/4/98	Soil	3-4	3.8 *	--	--	--	--
PBW-6-S-1	3/30/98	Sediment	Surficial	11 E	--	--	--	--
DUP033098	3/30/98	Sediment	Surficial	7.3 E	--	--	--	--
PBW-7-S-1	3/30/98	Sediment	Surficial	36 E	0.12	0.050 U	0.70	0.0020 U
PBW-7-1	3/26/98	Soil	0-0.5	6.9 E	0.027	0.050	0.72	0.0020 U
PBWD-7-1-1	8/5/98	Soil	1-2	1.2 *	--	--	--	--
PBWD-7-1-2	8/5/98	Soil	2-3	0.22 *	--	--	--	--
PBW-7-2	3/26/98	Soil	0-0.5	110 E	--	--	--	--
PBWD-7-2-1	8/5/98	Soil	1-2	5.7 *	--	--	--	--
PBWD-7-2-2	8/5/98	Soil	2-3	1.3 *	--	--	--	--
PBW-8-S-1	3/27/98	Sediment	Surficial	28 E	--	--	--	--
PBW-9-S-1	3/27/98	Sediment	Surficial	33 E	0.14	0.050 U	1.1	0.0020 U
PBW-9-1	3/26/98	Soil	0-0.5	89 E	0.46	0.069	0.99	0.0020 U
PBWD-9-1-1	8/5/98	Soil	1-2	9.4 *	--	--	--	--
PBWD-9-1-2	8/5/98	Soil	2-3	2.4 *	--	--	--	--
DUP080598	8/5/98	Soil	2-3	1.9 *	--	--	--	--
PBW-10-S-1	3/27/98	Sediment	Surficial	42 E	--	--	--	--
PBW-11-S-1	3/25/98	Sediment	Surficial	2.4 E	0.031	0.050 U	0.11	0.0020 U
TDUP032598	3/25/98	Sediment	Surficial	-- *	0.033	0.050 U	0.14	0.0020 U
PBW-11-1	3/26/98	Soil	0-0.5	100 E	0.59	0.050 U	0.90	0.0020 U
PBWD-11-1-1	8/5/98	Soil	1-2	16 *	--	--	--	--
PBWD-11-1-2	8/5/98	Soil	3-4	8.9 *	--	--	--	--
PBW-12-S-1	3/25/98	Sediment	Surficial	36 E	--	--	--	--
DUP032598	3/25/98	Sediment	Surficial	15 E	--	--	--	--
PBW-13-S-1	3/25/98	Sediment	Surficial	3.3 E	0.046	0.055	0.71	0.0020 U

TABLE 4-1

SOIL AND SEDIMENT ANALYSIS RESULTS
PONDED/BACKWATER AREAS
SEDIMENTS AOC

Sample	Date Sampled	Matrix	Depth (ft.)	Total Cadmium (mg/kg)	TCLP			
					Cadmium (mg/l)	Chromium (mg/l)	Lead (mg/l)	Mercury (mg/l)
TCLP Regulatory Limit:					1.0	5.0	5.0	0.20
PBW-13-1	3/26/98	Soil	0-0.5	49 E	0.22	0.050	0.67	0.0020 U
PBWD-13-1-1	8/5/98	Soil	1-2	3.2 *✓	--	--	--	--

U- Below method detection limit. Number listed in reporting limit.
*- Relative percent difference (RPD) or absolute difference for duplicate analysis not within control limits. This is an artifact of the inhomogeneity of the soil matrix. This type of matrix-related qualifier is commonly applied to analytical data for soil. The data are considered usable.
E- The reported value is estimated due to matrix interference.
-- - Not analyzed

Ponded/Backwater Areas in August 1998. The depth interval for the deepest sample (2- to 3-foot or 3- to 4-foot) was selected based on the criteria discussed in Section 4.1.

In March 1998, soil samples from the 0- to 0.5-foot depth interval were collected at the same locations as the deeper samples. Sediment samples from the ponds and backwater were also collected during the previous investigation. Each of the samples from the previous investigation was analyzed for total cadmium, while a subset of the samples was subjected to TCLP analysis for metals (cadmium, chromium, mercury and lead) [see "Supplemental RFI Report, Sediments AOC' (ECKENFELDER INC., May 1998)]. The data for these samples are also included in Table 4-1.

The analytical data were internally validated by the laboratory and reviewed by the E/BC project manager in accordance with the Work Plan. Some of the analytical data for the deeper soil samples collected in this investigation are qualified with a "*" symbol. This qualifier indicates that the relative percent difference (RPD) for the laboratory duplicate in the sample batch is not within the control limits. This is an artifact of the inhomogeneity of the soil matrix. This type of matrix-related qualifier is commonly applied to analytical data for soil. No constituents were detected in the equipment blanks associated with these samples. The qualifiers applied to the analytical data for the samples collected in March 1998 are discussed in "Supplemental RFI Report, Sediments AOC' (ECKENFELDER INC., May 1998). Both sets of data are considered usable.

The total cadmium concentrations are posted on Drawing 0432-004. The cadmium concentration generally decreases with depth over the sampled interval. At individual locations, the cadmium concentration in the 1- to 2-foot depth interval is generally about an order of magnitude less than in the 0- to 0.5-foot depth interval. Concentrations in the 2- to 3-foot/3- to 4-foot interval are lower than in either overlying interval. An exception to this general pattern is at location PBWD-1-1, where the cadmium concentration increases from 68 mg/kg in the 0- to 0.5-foot interval to 240 mg/kg in the 1- to 2-foot interval. The concentration then decreases

to 32 mg/kg in the 2- to 3-foot interval. Soil descriptions from PBWD-1-1 and nearby borings drilled for the river bank waste delineation (see Section 3.2.1) indicate that the boring intersects a waste deposit at a depth of approximately one foot, which likely accounts for the different vertical distribution of cadmium concentrations.

As discussed in the "Supplemental RFI Report, Sediments AOC" (ECKENFELDER INC., May 1998), for the 0- to 0.5 foot depth interval, where two or more samples were collected in a transect, the cadmium concentration in the southern part of the transect is less than in the northern part (see Drawing 0432-004). This general pattern is also evident in the 1- to 2-foot and the 2- to 3-foot/3- to 4-foot interval, with the exception of the westernmost transect, where the concentration is in the southernmost location, PBWD-1-1 is greater than those to the north. This exception to the pattern is likely related to the presence of the waste deposit intersected at PBWD-1-1, as described above.

4.3 CONCLUSIONS

The following conclusions are made relative to the Ponded/Backwater Areas portion of the Sediments AOC based on the results of this additional investigation and previous investigations:

- Total cadmium concentrations in the soil in the Ponded/Backwater Areas generally decrease with depth from the 0- to 0.5-foot to the 3- to 4-foot depth interval. The concentration decrease relative to the 0- to 0.5-foot interval is generally about one order of magnitude. One exception to this general pattern was noted near the river bank of the Hudson (PBWD-1-1) where the cadmium concentration in the 1- to 2-foot depth interval is greater than in the 0- to 0.5-foot interval. The presence of a layer of a site-related waste deposit beginning at approximately one foot below grade at this location accounts for this exception.

- Where two or more samples were collected in a transect (e.g., PBWD-1-1 through PBWD-1-3), the cadmium concentrations are greater in the northern portion of the transect. An exception to this pattern is in the soils sampled from 1-foot and deeper in the westernmost transect (PBWD-1-1 through PBWD-1-3), where the concentration at the southernmost location, PBWD-1-1, is greater than at the locations to the north. This exception to the pattern is likely related to the presence of the site-related waste deposit at this location, as described above.

- Sources of constituents to the Ponded/Backwater Areas are present that are not related to the Ciba site. The Ponded/Backwater Areas have been used for disposal of various items such as metal drums, automobiles and parts thereof, televisions, appliances, waste cement and general refuse. Further, these areas receive drainage from streams, the area of the railroad line, industries, and roadways to the north.

REFERENCES

ECKENFELDER Engineering P.C., June 1997. "Corrective Measures Design, Ciba Site, Glens Falls, New York".

ECKENFELDER INC., March 1998. "Interim Report, Hudson River Sediment Evaluation, Supplemental RFI of Sediments AOC, Ciba Site, Glens Falls, New York".

ECKENFELDER INC., May 1998. "Supplemental RFI Report, Sediments AOC, Ciba Site, Glens Falls, New York".

ECKENFELDER INC., June 1998. "Work Plan for Additional RFI Work for the Sediment AOC, Ciba Site, Glens Falls, New York".

ECKENFELDER INC., July 1998. "Interim Report, River Bank Waste Delineation, Sediments AOC, Ciba Site, Glens Falls, New York".

New York State Department of Environmental Conservation, May 1998. Letter from E. Dassatti to G. Schmiesing of Hercules, May 8, 1998.

New York State Department of Environmental Conservation, June 1998. Letter from V. Valaitis to G. Schmiesing of Hercules, June 8, 1998.

New York State Department of Environmental Conservation, July 1998. Letter to G. Schmiesing of Hercules, July 3, 1998.

APPENDIX A

CORRESPONDENCE BETWEEN HERCULES AND NYSDEC REGARDING SEDIMENTS AOC

New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
Bureau of Hazardous Waste Facilities, Room 460
50 Wolf Road, Albany, New York 12233-7252
Phone: (518) 457-9255 FAX: (518) 457-9240

John P. Cahill
Commissioner

May 8, 1998

cc: A. S. Cohen - Legal 8322 SE
F. K. Kinoshita - 1163 NW
B. J. Hough 9320 SE
W. F. Ashton 9281 SW

Mr. Glen Schmiesing
Hercules Incorporated
Hercules Plaza
1313 North Market Street
Wilmington, Delaware 19984

DUPLICATE - WORKING COPY
TO BE DESTROYED

Dear Mr. Schmiesing:

Re: Ciba/Hercules Main Plant Site
Glens Falls, NY
EPA I.D.# NYD 002069748

Review of the "Interim Report, Hudson Sediment Evaluation, Supplemental RFI of Sediments AOC" dated March 1998 has been completed.

During this review, the issue of delineating the limits of the waste material under the river bank (both on-shore and the island) and it's removal was raised. It is felt that if possible, this waste material must be removed and placed in the CAMU. Only if physical conditions such as destabilizing the adjacent slope, or excessive overburden are encountered, can this material be left in place. If all of the waste was removed and placed in the on site CAMU, no analytical testing would be required. Only if physical conditions dictate, and waste material is left in place, would testing be required to characterize this waste.

In a telephone conversation with Mr. Victor Valaitis of my staff, you indicated that a sampling/ delineation plan was being submitted to evaluate waste deposits extending back to the ordinary high water mark. It was also stated that if the waste material under the on-shore river bank extends back beyond the ordinary high water mark, this would involve going on railroad property for investigation and/or removal. It is our position that regardless of property ownership the extent of the waste deposit must be delineated and if physical conditions allow, the waste material must be removed.

At this time, the Bureau feels that it would prudent for Hercules to contact the Delaware & Hudson Railroad and any other property owner to obtain permission to investigate and potentially remediate off-site releases.

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MAY 14 1998
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6NYCRR Subpart 373-2.66(l)(3) requires the owner or operator of a RCRA facility subject to permitting to implement corrective action beyond the facility property boundary, when necessary to protect human health and the environment, unless despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission. Please refer to this Subpart for additional information regarding your responsibility.

If there are any questions concerning this request, please contact Mr. Victor Valaitis of my staff at (518) 457-9255.

Sincerely,

Edwin Dassatti, P.E.
Director
Bureau of Hazardous Waste Facilities
Div. of Solid & Hazardous Materials

cc: J. Reidy, USEPA R-II
K. Smith, Ciba Specialty Chemical

If there are any questions concerning this revision, please call me at (518) 457-9255.

Sincerely,

Victor A. Valaitis

Victor A. Valaitis, P.E.
Environmental Engineer II
Eastern Engineering Section
Bureau of Hazardous Waste Facilities

cc: J. Reidy, USEPA R-II
K. Smith, Ciba Specialty Chemical

New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
Bureau of Hazardous Waste Facilities, Room 460
50 Wolf Road, Albany, New York 12233-7252
Phone: (518) 457-9255 FAX: (518) 457-9240

John P. Cahill
Commissioner

June 8, 1998

Mr. Glen Schmiesing
Hercules Incorporated
Hercules Plaza
1313 N. Market Street
Wilmington, DE 19894

Dear Mr. Schmiesing:

Re: Ciba/Hercules Main Plant Site-Glens Falls, NY
EPA I.D. No. 002069748

During my telephone conversation with you on this date, we discussed additional core sampling to be conducted at the backwater ponded area to address Fish & Wildlife's concerns and the incorporation of this sampling in the river bank waste delineation work plan to be submitted.

For the backwater ponded area, the core samples are to be taken on the same transects and at approximately the same soil sampling locations used for the last round of surficial cadmium soil sampling. These locations are shown on Figure 3-1, Total Cadmium Concentration In Sediment And Soil Ponded/Backwater Areas, in the Supplemental RFI Report, Sediments AOC, Ciba Site, Glens Falls, New York dated May 1998. It is anticipated that hand auguring will be use to collect the soil samples. At each sampling location, one sample is to be taken from 1-2' below the surface and a second sample taken from the shallowest of the following: 3-4' below the surface, where wood "slash" or refusal is encountered, or standing water in the auger hole is reached. The sample is to be composited over the one foot interval sampled. Analysis is to be done for total cadmium.

Please incorporate this additional sampling in the sampling work plan for delineating the waste material extending under the riverbank. Submission of this revised work plan is to be on or before June 24, 1998.

Post-it® Fax Note 7671 | Date 7/3/98 | # of pages ▶ 2
To G. SCHMIESING | From V. VALAITIS
Co./Dept. HERCULES | Co. NYSDEC
Phone # | Phone # (518) 457-9255
Fax # (302) 594 7255 | Fax #

York State Depar
ision of Solid and Haz
ureau of Hazardous Waste Fac
50 Wolf Road, Albany, New Yo
Phone: (518) 457-9255 FAX: (5

John P. Cahill
Commissioner

July 3, 1998

Mr. Glen Schmiesing
Hercules Incorporated
Hercules Plaza
1313 North Market Street
Wilmington, Delaware 19984

Dear Mr. Schmiesing:

Re: Ciba/Hercules Main Plant Site
Glens Falls, NY
EPA I.D.# NYD 002069748

Review of the "Work Plan For Additional RFI Work For The Sediments AOC, Ciba Site, Glens Falls, New York" dated June 1998 has been completed.

It has been noted in the schedule that work plan implementation is to start two weeks after work plan approval and access permission is gained from property owners. During a telephone conversation with you on July 1, 1998 this issue was discussed. It was decided that Hercules is to send a formal letter to the Delaware & Hudson requesting access permission and a telephone call is to be made to Niagara Mohawk requesting access permission for their lands. Since gaining access to the Delaware & Hudson property is likely to be a lengthy process, while gaining access to the Niagra Mohawk can be done by telephone, site work is to start on facility owned and Niagara Mohawk property as soon as possible after work plan approval, but no later than the week of July 13, 1998.

This work plan is acceptable and may be implemented provided the following conditions are adhered to:

1. For any waste left in place on non facility owned land, in addition to TCLP testing, the total concentration of cadmium, chromium, lead and mercury shall be determined.

2. For that portion of waste removed and not placed in the CAMU (if any), one composite sample consisting of five representative aliquots shall be taken for each

100 cubic yards of waste for TCLP testing.

3. For those portions of the site related waste which extends under the riverbank, the RFI Report is to include cross sections showing the lateral extent of the waste, depth of waste and the depth of the overburden.

4. If access to the Delaware & Hudson property is not obtained prior to the initiation of field work, at each transect extending onto their land, a representative sample of waste is to be obtained immediately adjacent to their land and analyzed for both totals and TCLP metals (cadmium, chromium, lead and mercury).

5. Schedule For Work Plan Implementation

Within two weeks of completion of the waste delineation field work, an interim report is to be submitted to the Department which is to include a plan view showing the landward lateral extent of the waste deposits and cross sections showing the depth of waste and overburden at each transect.

6. In Appendix B, Procedures For Sampling And Analysis of Soil And Waste on the top of page B-2 it is stated "Soil and/or waste samples to be submitted to the laboratory for analysis will be mixed in the pan with a stainless or plastic spoon." This implies that waste samples will be mixed with soil samples during the mixing process. Soil samples are not to be mixed with waste samples. If both waste and soil samples are encountered at a sampling point, they are to be analyzed separately.

If there are any questions concerning this conditional approval, or additional information is needed, please contact me at (518) 457-9255.

Sincerely,

V. A. Valaitis

Victor A. Valaitis, P.E.
Environmental Engineer II
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APPENDIX B

SOIL BORING LOGS – RIVER BANK AND PONDED/BACKWATER AREAS

SOIL BORING LOGS – RIVER BANK

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/15/98* | Finish Date: *7/15/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *NA*

TWC: *NA*

TPC: *NA*

North: *NA*

East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA / NA	NA / NA	SM / SW / SW-GW / GW	NM / NM	Dark brown fmc SAND, little to some Silt, occ. red fleck @ 1.0' Gray, white, green clay-like material @ 1.2' Fmc SAND, little (+) Clayey Silt. Green-stained sand, green and red material, gravel and slag @1.5' Cm SAND and F Gravel, trace to little Silt. Green and red material. Wood fragments, saturated @ 2.0' Fm GRAVEL and cm SAND. Green and red clay-like material. Slag chips. Wet to saturated @ 2.5' Medium to dark brown, mf rounded GRAVEL and to some cmf Sand, trace to trace (+) Silt. Wood fragments and wood chips/sawdust. Some slag. Saturated End of boring at 3.5 feet.	Samples disturbed by hand augering
5									
10									
15									
20									
25									
30									

3.5

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1-2**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/15/98* | Finish Date: *7/15/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *NA*

TWC: *NA*

TPC: *NA*

North: *NA*

East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		GW SM	NM	Mf Gravel @ .5' Md-dk brown fmc SAND, some to little Silt, tr (+) fm Gravel. Wood, bark	Samples disturbed by hand augering
				NA	NA		SW	NM	@ 1.0' Md -dk brown fm (c) Sand, tr to tr (+) Silt, tr Gravel. Wood fragments. Few white crystalline grains (1.5'-2.0'). Few slag chips	Refusal at 3.7' on Rock/Gravel
5									@ 3.5' Orange-brown fm SAND (3.7)	
									End of boring at 3.7 feet.	
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1-3**

Project: *RFI of Sediments AOC* | Project No.: *0432.01*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Start Date: *7/15/98*

Finish Date: *7/15/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *213.46*

TWC: *NA*

TPC: *NA*

North: *1206178.1517*

East: *692667.8924*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SM	NM	Md brown fm SAND, some to little Silt, tr. Gravel. Piece of soft, white clay-like material at +/-1'. Rare chip of red material	Samples disturbed by hand augering
							GW		@ 1.4' GRAVEL (including slag) and c SAND. Wood fragments. Rare chip of red material. Slag stained green at 2'	
				NA	NA		SW	NM	@ 2.2'Md br fmc SAND and to little (+) GRAVEL (gravel includes slag). Wood fragments increase in abundance with depth. Rare chip of red material at 2.6-3.3'. Wet at @ 4.1'.	
5									4.9	
10									End of boring at 4.9 feet.	
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1-4**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/15/98*
Finish Date: *7/15/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SW	NM	Md-dk brown fmc SAND, little Silt, some slag fragments. Local green or red stain on sand. Flecks of green and red. Roots	Samples disturbed by hand augering
				NA	NA	CL-ML	NM	@ 1.0' White-green clay-like material (dry)	Refusal on wood at 3.9 feet.
						SW		@ 1.1' Dk brown fm SAND, some Silt w/ pieces of above described white-green dry clay-like material	
								@ 1.4' Kelly green clay/silt-like material mixed with wood fragments and slag or fm Sand and Silt. Some white clay-like material. Rare slag material	
								@ 2.5' Wood fragments	
								@ 2.7' Md brown fmc SAND, some Silt, slag chips. Abundant wood fragments. Green stain on some sands. Moist to wet.	
								@ 3.0' Md brown fm SAND, tr. (+) Silt, tr. Gravel, some slag fragments. Abundant wood fragments and wood chips. Saturated.	
5								End of boring at 3.9 feet. (3.9)	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1-5**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/15/98* | Finish Date: *7/15/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *NA*

TWC: *NA*

TPC: *NA*

North: *NA*

East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SW	NM	Md brown fm SAND, tr.-l. Silt, tr. f Gravel. Roots	Samples disturbed by hand augering
						SW,ML		@ 1.1' cmf SAND and to some fm GRAVEL, w/ green clay like coating and staining. , some white-green dry clay-like material	
				NA	NA	SW	NM	@ 2.1' cmf SAND and to some fm Gravel. Abundant wood fragments. Slag. Moist	Refusal on wood at 3.1 feet on wood.
5								@ 2.9' Wood fragments	
								End of boring at 3.1 feet. (3.1)	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1A-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/20/98* | Finish Date: *7/20/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM	NM	Dk brown fm (c) SAND, some to little Clayey-Silt, tr (+) Gravel. Roots, wood fragments. White plastic sheet.	Samples disturbed by hand augering
				NA	NA		NM	End of boring at 1.3 feet. (1.3)	Refusal on wood at 1.1-1.3 at 3 locations.
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1B-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/20/98* | Finish Date: *7/20/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SM,CL	NM	md-dk brown fm (c) SAND, s. to l. Clayey Silt, tr. Gravel. Slag fragments. Small piece of white-green clay-like material. Rare dk green or red chip.	Samples disturbed by hand augering
				NA	NA		GW SW-SM	NM	@ 1.7' Md-dk brown fm GRAVEL and cmf SAND, tr.-l. Clayey Silt. Gravel is mostly slag and cinders. Rare chip of red material	Refusal at @2.8 feet on wood.
5									@ 2.3' Md-lt brown cmf SAND and fm GRAVEL, little Silt to Clayey Silt. Gravel mostly slag and cinders. Wood fragments	
10									2.8 End of boring at 2.8 feet.	
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1B-2**

Project: *RFI of Sediments AOC* | Project No.: *0432.01*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Start Date: *7/20/98*

Finish Date: *7/20/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *210.69*

TWC: *NA*

TPC: *NA*

North: *1206136.0670*

East: *692687.8899*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA / NA	NA / NA	SM / SW-SM	NM / NM	Dk-md brown fm (c) SAND, little to some Clayey Silt, some to tr. fm Gravel. Gravel includes slag fragments. Rare chip of red material in 0.0'-0.8' interval. Roots, wood fragments. Wood fragments increase with depth. @ 2.4' Wood fragments and chips with fmc SAND, little to tr. Clayey Silt, tr. f Gravel. Wet at 2.7'. End of boring at 4.3 feet.	Samples disturbed by hand augering. Refusal on wood at 4.3 feet.
5									
10									
15									
20									
25									
30									

4.3

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT1C-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/20/98* | Finish Date: *7/20/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *210.06*

TWC: *NA*

TPC: *NA*

North: *1206139.5068*

East: *692616.0900*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA		SW-SM	NM	Md-dk brown fmc SAND, little Clayey Silt, little fm Gravel. Roots. Moist	Samples disturbed by hand augering
				NA	NA		SW-SM / CL	NM	@ 1.7' Black, clay-like material w/ local green tint, sl. irridescence, mixed with Sand. Wet	Refusal on wood at 3.7 feet.
5									@ 2.1' Black-brown cmf SAND and fm GRAVEL (abundant slag in gravel), little (+) Silt	
									@ 2.7' White, green, black layered clay-like material. Saturated	
10									@ 3.4' Fm GRAVEL (abundant slag and cinders), some cmf Sand, tr. Silt to Clayey-Silt. Some black staining. Small pieces of white-green clay-like material.	
									3.7	
15									End of boring at 3.7 feet.	
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT2-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/15/98* | Finish Date: *7/15/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *210.75*
TWC: *NA*
TPC: *NA*
North: *1206167.8514*
East: *692776.4898*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		NM	Dk-md brown fm (c) SAND, tr to tr to l Silt, tr f Gravel. Abundant wood fragments. Wood chips at +/- 3.7 feet. Saturated @ 2.0 feet	Samples disturbed by hand augering
				NA	NA	SW-SM	NM		
4.6								End of boring at 4.6 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT3-1

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Start Date: *7/15/98*
Finish Date: *7/15/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
		Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD			
0	Backfilled with cuttings		NA	NA	SW-SM / CL-ML	NM	Dk brown fm SAND, l to tr Silt. @ 0.8' F GRAVEL (includes slag). @ 1.0' Brick red clay-silt material.	Samples disturbed by hand augering
			NA	NA	SW	NM	@ 2.0' Cmf SAND and fm GRAVEL (gravel includes cinders and slag). Piece of hard red material at @ 3.5 feet. Some chips of red material. Wet @ +/- 2.0 feet. 4.0	Refusal at 4.0 feet.
5							End of boring at 4.0 feet.	
10								
15								
20								
25								
30								

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT3-2

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/15/98*
Finish Date: *7/15/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SM-ML	NM	Dk brown-black fm SAND and SILT to SILT and fm SAND, tr f Gravel.	Samples disturbed by hand augering
					CL		ML,SM-SC		@ 0.5' Red clay-silt material, locally grading to black material of same consistency. Fmc Sand, gravel, cinders, slag, and wood fragments within interval.	
				NA	NA			NM	@ 3.0' Lt brown-gray fm SAND, tr. f Gravel, tr. Silt. Wood fragments.	Refusal at 3.3 feet on wood.
5									3.3 End of boring at 3.3 feet.	
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT3-3**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Start Date: *7/15/98*
Finish Date: *7/15/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	SM	NM	Dk brown-black SILT and fm SAND to fm SAND and SILT-to-Clayey SILT, (angular gravel in upper 1 inch). Few red flecks. Local red stained sand and silt.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 0.7' Lt-md browm fm SAND, tr. f Gravel, few slag chips. Dark red stain in 0.7-1.3 foot interval. Wood fragments increase in abundance with depth. Wet at 4.8 feet.	Refusal at 5.1 feet.
5								5.1 End of boring at 5.1 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT3-4

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/15/98*
Finish Date: *7/15/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *211.94*
TWC: *NA*
TPC: *NA*
North: *1206216.3917*
East: *692862.1412*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		ML-SM	NM	Dk brown-black SILT/Clayey SILT and f SAND, tr. fm Gravel. Slag chips. Rare yellow and red fleck. Roots	Samples disturbed by hand augering
				NA	NA		SW	NM	@ 1.8' Md brown cmf SAND, little f Gravel (slag common in gravel). Rare red or yellow fleck. Wood fragments. Damp.	Refusal at 2.6 feet on wood.
5									2.6 End of boring at 2.6 feet.	
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT3-5**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/15/98* | Finish Date: *7/15/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM-ML	NM	Dk brown SILT and SAND. @ 1.0' Brick red silt material, locally grading to black	Samples disturbed by hand augering
						ML			
				NA	NA	SW	NM	@ 1.9' Md brown cmf SAND, tr. Silt, tr.-tr (+) f Gravel (gravel includes slag). Wood fragments increase in abundance with depth. Wet @ +/- 3.0 feet.	Refusal at 4.3 feet.
4.3								End of boring at 4.3 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT3A-1**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Start Date: *7/20/98*
Finish Date: *7/20/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *210.11*
TWC: *NA*
TPC: *NA*
North: *1206177.0436*
East: *692838.8671*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	SW-SM	NM	Md-dk brown fmc SAND, little Clayey Silt, tr. to little fm Gravel (includes abundant slag). Roots. Wood fragments. Small pieces of red material. Damp to moist	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 1.9' md gray to md brown fm SAND tr. Silt. Abundant wood fragments. Wet	Refusal at 3.8 feet.
3.8								End of boring at 3.8 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT3A-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/20/98*
Finish Date: *7/20/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	WS-SM	NM	Dk-md brown fm SAND, little (+) to tr. Clayey Silt to Silt, tr.-l. fm Gravel (some gravel is slag). Wood fragments abundant, roots. Wet @ 1.7 feet	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 2.0' Md brown to gray-brown fm SAND, tr. Silt. Wood fragments more abundant	Refusal at 2.8 feet on wood.
2.8								End of boring at 2.8 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT4-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM / ML	NM	Dk brown fm SAND, some Silt, roots. @ 0.5' Brick red silt material. Moist.	Samples disturbed by hand augering
				NA	NA	SW / SW	NM	@ 1.5' Md-lt brown cmf SAND, tr. (+) f gravel (includes slag chips). @ 1.7' Lt brown to lt gray cmf SAND and f GRAVEL, cinders and slag. Moist to wet. @ 2.9' Lt gray to lt brown cmf SAND, little f Gravel (includes slag and cinders). Wood and bark fragments increase with depth.	Refusal at 3.8 feet on wood.
5									
10									
15									
20									
25									
30								End of boring at 3.8 feet. (3.8)	

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT4-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *214.88*
TWC: *NA*
TPC: *NA*
North: *1206304.3777*
East: *692942.3954*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SM	NM	Md-dk brown fm SAND and SILT, tr (+) f Gravel. Roots. Dry.	Samples disturbed by hand augering
							SM-ML		@ 0.6' Dk brown-black SILT, and to little fm SAND, little (+) to some fm Gravel. Dry. Roots.	
				NA	NA		ML	NM	@ 1.7' Red silt material. Moist to wet.	Refusal at 4.8 feet on gravel.
5									4.8 End of boring at 4.8 feet.	
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT4A-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/20/98*
Finish Date: *7/20/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	OVA (ppm)	Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	VISUAL CLASSIFICATION	REMARKS
0						ML						Md-dk brown SILT/Clayey SILT, litte f Sand. Roots.	Samples disturbed by hand augering
	Backfilled with cuttings					CL	NM		NA	NA		@ 0.5' Brick red silty clay material. Moist.	
						GW						@ 1.3'Md brown mcf SAND, tr. Silt, tr. Gravel (mostly slag and cinders).	
5						SW	NM		NA	NA		@ 1.5' Gray-black f (m) GRAVEL and cm SAND, tr (-) Silt. Gravel includes cinders and slag. Damp.	
												@ 2.1' Md brown cmf SAND, little f (m) Gravel (including some slag and cinders), tr. Silt. Damp.	
10												2.8	Refusal at 2.8 feet on wood.
												End of boring at 2.8 feet.	
15													
20													
25													
30													

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT4A-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/20/98*
Finish Date: *7/20/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *216.70*
TWC: *NA*
TPC: *NA*
North: *1206298.4681*
East: *692907.5466*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML-SM	NM	Dk brown-black SILT/Clayey SILT, some f Sand, tr. f Gravel. Dry.	Samples disturbed by hand augering
				NA	NA	CL	NM	@ 2.0' Brick red to dk red-brown clay & silt material. Wet @ +/- 3.5 feet.	Refusal at 3.8 feet on wood.
3.8								End of boring at 3.8 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT5-1**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *210.40*
TWC: *NA*
TPC: *NA*
North: *1206252.9786*
East: *692997.2143*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SW	NM	Md brown fmc SAND, tr. Silt, tr. f Gravel. Roots. Wood fragments.	Samples disturbed by hand augering
				NA	NA		SW	NM	@ 1.6' Md brown fmc SAND, little f Gravel (includes some slag). Wood fragments increase with depth.	Refusal at 3.9 feet on wood.
3.9									End of boring at 3.9 feet.	
5										
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT6-1**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SW	NM	Lt-md brown fmc SAND, tr. little Gravel (includes some slag and cinders). Roots. Wood fragments. Moist.	Samples disturbed by hand augering
				NA	NA		ML-CL	NM	@ 2.0' Red silt-clay material.	Refusal at 3.4 feet on wood.
									@ 2.8' Dk. brown to black f GRAVEL (mostly slag), little cmf Sand, little Silt. Wet.	
5									@ 3.0'Brown cmf SAND, little to some Gravel (mostly slag and cinders). Local red staining. Small piece of gray clay-like material. Wood fragments @ 3.3-3.4 feet.	
									3.4	
10									End of boring at 3.4 feet.	
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT6-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *210.95*
TWC: *NA*
TPC: *NA*
North: *1206256.0312*
East: *693022.4918*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	SW	NM	Lt to d brown fm (c) SAND, tr. Silt. Slag chips. Roots. Wood fragments. Damp.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 1.6' Dk brown cmf SAND and f Gravel (includes abundant slag). Wood fragments, roots.	
5						SM		@ 2.4' Wood fragments, wood chips/sawdust with md brown fmc Sand, some to tr. Silt, some to tr. fm gravel (mostly slag). Wood fragments more abundant with depth. Wet.	
								4.9 End of boring at 4.9 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT7-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *210.25*
TWC: *NA*
TPC: *NA*
North: *1206274.6263*
East: *693049.1188*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SW	NM	Md-dk brown cmf SAND little (+) f Gravel (includes slag), tr. Silt. Wood fragments. Rare small piece of hard red material. Wet @ 1.3 feet.	Samples disturbed by hand augering
				NA	NA		GW	NM	@ 2.3' Md-dk brown f GRAVEL (mostly slag) and cmf SAND, tr. Silt. Wood fragments more abundant. Wet.	Refusal at 3.2 feet on wood.
5									@ 3.0' Md brown cmf SAND, little Gravel (mostly slag), tr. Silt. Wood fragments. Wet	
10									3.2 End of boring at 3.2 feet.	
15										
20										
25										
30										

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Subsurface Boring Log

Well Name/Location: BT8-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *210.59*
TWC: *NA*
TPC: *NA*
North: *1206296.3924*
East: *693083.9354*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SW-SL, CL	NM	Md brown fm SAND, little to tr. Silt, tr. f Gravel. wood fragments increase with depth. Rusty stained sand, silt,and clay around wood fragments. Locally, some md brown to gray brown clay & silt in sand. Damp to wet.	Samples disturbed by hand augering
				NA	NA	GM-GW	NM	@ 1.9' Md brown to black f GRAVEL (mostly slag) and cmf SAND, little Silt. Wood fragments. Wet	Refusal at 3.7 feet.
3.7								End of boring at 3.7 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT9-1**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *209.93*
TWC: *NA*
TPC: *NA*
North: *1206322.4434*
East: *693108.6516*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SW	NM	Md brown fm (c) SAND, little to tr. fm Gravel (includes slag). Wood fragments, roots. Wet @ 2.1 feet.	Samples disturbed by hand augering
				NA	NA		NM		Refusal at 4.0 feet on wood
4.0								End of boring at 4.0 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT10-1**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*
Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *211.68*
TWC: *NA*
TPC: *NA*
North: *1206374.9643*
East: *693391.2934*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM	NM	Md brown fm SAND, some to little Silt. Roots.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 1.5' Md-dk brown cmf SAND, little Gravel (includes slag), rare red fleck. Moist	
5								@ 1.9' Md brown fmc SAND, tr. Silt, tr. f Gravel (including slag). Wood fragments increase in abundance with depth. 4.0	Refusal at 4.0 feet.
								End of boring at 4.0 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT10A-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/17/98*
Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	SM	NM	Md brown fm SAND, some Clayey Silt. Roots. Damp.	Samples disturbed by hand augering
				NA	NA	SM	NM	@ 1.8' Md brown fm SAND, little to some Clayey Silt w/ rusty clay-like material. Pieces and "spots" of yellow material. Wood fragments.	Refusal at 2.7 feet.
5								@ 2.2' Md brown fm SAND, some Clayey Silt. Wood fragments.	
								End of boring at 2.7 feet. (2.7)	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT10A-2

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/17/98*
Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *211.44*
TWC: *NA*
TPC: *NA*
North: *1206372.5948*
East: *693435.6511*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	USCS	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SM	NM	Dk brown Clayey SILT/SILT & CLAY some to and fm SAND. Wood fragments.	Samples disturbed by hand augering
				NA	NA		SM	NM	@ 1.5' Md-dk brown fm (c) SAND, little to little (-) Clayey Silt. roots. Wood fragments.	Refusal at 1.7 feet on wood-shifted a few feet and continued boring. Refusal at 2.7 feet.
2.7									End of boring at 2.7 feet.	
5										
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT10B-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Start Date: *7/17/98*

Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *212.10*

TWC: *NA*

TPC: *NA*

North: *1206379.9240*

East: *693412.9874*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM-SW	NM	Md-dk brown fm SAND, little Clayey Silt. Occ black organic-rich zone. Fews zones containing greater percentage of Clayey Silt. Rare red or yellow fleck.	Samples disturbed by hand augering
				NA	NA	SW-SM	NM	@ 2.5' Md-lt brown fm (c) SAND, little to tr. Silt to Clayey Silt, tr. f Gravel (includes slag). Wood fragments. Saturated @ =/- 3.5 ft.	Refusal at 3.7 feet on wood.
5								3.7 End of boring at 3.7 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT11-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/16/98* | Finish Date: *7/16/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	SM	NM	Md brown fm SAND, some Silt. Few slag chips. Rare red and yellow flecks. Dry to damp.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 1.7' Rusty-brown layered clay-like material mixed with Sand.	
3.0								@ 1.9' Lt-md brown fm (c) SAND, tr. to little Silt. Few slag chips. Abundant wood fragments. Wet. End of boring at 3.0 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT11-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/16/98*
Finish Date: *7/16/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *211.34*
TWC: *NA*
TPC: *NA*
North: *1206375.7371*
East: *693573.8039*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	ML-SM	NM	Dk brown SILT, some fm Sand. Roots.	Samples disturbed by hand augering
						SM		@ 1.1' Dk brown fm SAND and SILT, tr. Gravel (includes slag), some rusty staining.	
				NA	NA	SW	NM	@ 2.0' Md brown fmc SAND, tr. Silt, tr. f Gravel. Small slag chips. Wood fragments.	Refusal at @3.2 feet.
3.2								End of boring at 3.2 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT12-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/17/98*
Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML	NM	DK brown Clayey SILT, little f Sand.	Samples disturbed by hand augering
						SW		@ 0.7' Rusty brown clay like material.	
				NA	NA	SW	NM	@ 0.8' Md brown fm (c) SAND, tr. to little Silt. Slag chips. Wood fragments. Rusty stained sand at +/- .8-.9 feet. Damp to moist.	Refusal at @3.5 feet on wood.
5								@ 1.9' Md brown to lt-md gray fm SAND, tr. Silt. Slag chips, wood fragments. Wet	
								End of boring at 3.5 feet. (3.5)	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT12-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/17/98*
Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML	NM	Dk brown Clayey SILT, little f Sand.	Samples disturbed by hand augering
								@ 1.0' Rusty brown clay-like material.	
				NA	NA	SW	NM	@ 1.1' Lt brown fmc SAND, tr. Silt. Slag chips. 2.1	Refusal at @2.1 feet on wood.
5								End of boring at 2.1 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT12-3

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/17/98*
Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *210.97*
TWC: *NA*
TPC: *NA*
North: *1206365.7573*
East: *693747.1893*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML	NM	Dk brown Clayey SILT/SILT & CLAY. Little f. Sand. Roots. Damp.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 1.1' Md-lt brown cmf SAND, tr. f Gravel. Slag chips. Wood and bark fragments. Damp to moist.	
						SW		@ 2.5' Lt-md gray fm SAND, tr. Silt. Slag chips. Abundant wood fragments at base. 3.0	
5								End of boring at 3.0 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT13-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/17/98* | Finish Date: *7/17/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		CL	NM	Dk brown CLAY & Silt, little f Sand.	Samples disturbed by hand augering
							CL		@ .5' Brown to rusty brown layered clay-like material mixed with Sand. Wood fragments. Moist.	
				NA	NA		SW	NM	@ 2.0' Md brown-md gray cmf SAND, tr. Silt. Abundant wood fragments. Wet.	Refusal at 2.0 feet on wood.
2.0									End of boring at 2.0 feet.	
5										
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT13-2

Project: *RFI of Sediments AOC*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Project No.: *0432.01*

Start Date: *7/17/98*

Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *210.27*

TWC: *NA*

TPC: *NA*

North: *1206376.0692*

East: *693810.1348*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML-SM	NM	Dk brown Clayey SILT, little f Sand.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 5' Md brown cmf SAND, little to tr. f Gravel (includes abundant slag fragments), tr. to little Silt. Roots, wood fragments. Rusty stained sands at 1 foot.	
						SW		@ 1.6' Md brown to md gray cmf SAND, tr Silt, tr. f Gravel (includes slag chips). Wood fragments. Wet	Refusal at 3.0 feet on wood.
3.0								End of boring at 3.0 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT14-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/17/98*
Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	CL	NM	Dk-md brown fm SAND and SILT&CLAY. Roots.	Samples disturbed by hand augering
								@ 0.3' Rusty, brown and green layered clay-like material.	
				NA	NA	SM-SW	NM	@ 1.0' Md brown to md gray fm (c) SAND, little Silt/Clayey Silt, tr. f Gravel (includes slag). Abundant wood fragments. Saturated.	Refusal on a log at +/-1 foot. Shifted boring a few feet.
2.0								End of boring at 2.0 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT14-2

Project: *RFI of Sediments AOC*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Project No.: *0432.01*

Start Date: *7/17/98*

Finish Date: *7/17/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *210.41*

TWC: *NA*

TPC: *NA*

North: *1206376.9003*

East: *693840.5382*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML	NM	Dk brown Clayey SILT, little fm Sand, tr. Gravel. Roots.	Samples disturbed by hand augering
				NA	NA	SW-SM	NM	@ 1.0' Md brown cmf SAND, little to tr. Silt/Clayey Silt, tr. f Gravel (includes slag chips). Wood fragments. 2.6	Refusal at 2.6 feet on wood.
5								End of boring at 2.6 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT15-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Start Date: *7/21/98*

Finish Date: *7/21/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *NA*

TWC: *NA*

TPC: *NA*

North: *NA*

East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA		SW-SM, SC	NM	Lt-md brown mfc SAND, little to tr. Clayey Silt, tr. fm Gravel (mostly slag). Locally more clay rich. Roots. Slightly damp.	Samples disturbed by hand augering
				NA	NA		SW	NM	@ 1.0' Lt brown cmf SAND, little to some f Gravel (abundant slag and cinders in gravel), tr. Silt.	
5									@ 1.4' Rusty-brown layered clay-like material.	
									@ 1.6' Lt-md brown cmf SAND, little to some fm Gravel (mostly slag and cinders), tr. Silt. Abundant wood fragments. Wet.	
									3.0 End of boring at 3.0 feet.	Refusal at 3.0 feet.
10										
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT15-2**

Project: *RFI of Sediments AOC* | Project No.: *04321*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Start Date: *7/21/98*

Finish Date: *7/21/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *NA*

TWC: *NA*

TPC: *NA*

North: *NA*

East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SW-SM	NM	Md brown fmc SAND, tr. to little Clayey Silt, tr. f Gravel (including slag, cinders). Roots, wood fragments. Moist.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 0.8' Rusty brown layered clay-like material.	
5								@ 1.1' Md brown cmf SAND and fm GRAVEL (mostly slag and cinders), tr. Silt. Wood fragments. Moist to wet.	
								@ 1.5' Md brown fm (c) SAND, tr.–little fm Gravel (includes slag, cinders), tr. Clayey Silt. Abundant wood fragments. Wet	
10								2.9 End of boring at 2.9 feet.	
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT15-3**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/21/98*
Finish Date: *7/21/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *209.22*
TWC: *NA*
TPC: *NA*
North: *1206386.1214*
East: *694609.9083*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SW, ML	NM	Md brown fm SAND, some Silt. @ 0.2' Md brown fm (c) SAND, tr. Silt, tr. f Gravel w/ few Clayey Silt layers, (brown) with matted vegetation. Local orange sand. Wet.	Samples disturbed by hand augering
							SW		@ 1.2' Md-lt gray fmc SAND, tr. to tr (+) Clayey Silt, tr. f Gravel.	Refusal at 1.9 feet.
				NA	NA			NM	End of boring at 1.9 feet.	
5										
10										
15										
20										
25										
30										

1.9

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT15A-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings		NA	NA	SM	NM	Md brown fm (c) SAND, little (+) Clayey Silt, little f Gravel (mostly slag).	Samples disturbed by hand augering
					CL-ML		@ 1.0' Whitish-green dry clay-like material, multi-colored stains/ specks (green, red), rusty brown layered clay & silt material.	Refusal at 4.5 feet on wood.
			NA	NA	SW-SM-SC, CL	NM	@ 2.0 Md brown cmf SAND, little f (m) Gravel, little Clayey Silt/ Clay& Silt. Local Silty Clay-rich layer. Few specks of red material. Wood fragments abundant.	
5					SW		@ 2.6' Md brown cmf SAND, some f Gravel (mostly slag, cinders), tr (+) to little Clayey Silt. Wood fragments. Rare red fleck. Moist.	
10							@ 3.0' Lt-md Brown to gray fmc SAND, tr. f Gravel (mostly slag), tr. Clayey Silt. Wood and bark fragments increase with depth. Wet	
15							End of boring at 4.5 feet. (4.5)	
20								
25								
30								

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT15A-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA / NA	NA / NA	SW-SM / SW	NM / NM	Md-dk brown fm & cmf SAND, little to tr. f Gravel (mostly slag, cinders), little to tr. Clayey Silt to Silt.	Samples disturbed by hand augering
						SW		@ 1.3' Clayey Silt w/ soft brown, white beads with greenish streaks.	
						GW		@ 1.5' Md brown fm SAND, tr. to tr (+) Clayey Silt, tr. f Gravel (mostly slag). Roots. Wood fragments.	
5								@ 3.1' Lt brown cmf SAND, little Gravel (mostly slag, cinders), tr Clayey Silt. Roots.	
								@ 3.6' Dk gray f (m) GRAVEL (mostly slag, cinders), little cmf Sand, tr. Silt. Amount of sand slightly greater with depth.	
10								5.0	
								End of boring at 5.0 feet.	
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT15A-3

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/22/98* | Finish Date: *7/22/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *214.02*
TWC: *NA*
TPC: *NA*
North: *1206283.3482*
East: *694771.8275*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA / NA	NA / NA	SM / SW-SM	NM / NM	Md brown fm SAND, some Clayey Silt, trace fm Gravel (mostly slag). Roots, wood fragments. @ 2.0' Md brown fm to fmc SAND, little to tr. Clayey Silt, little to tr. f Gravel (mostly slag chips, cinders). Roots, wood fragments. @ 2.7' Gray-brown fm GRAVEL (mostly slag, cinders), little to some cmf Sand, tr. Silt. Wood fragments. Wood fragments more abundant with depth. Yellow stained slag fragments at 3.5 feet.	Samples disturbed by hand augering
5						GW		4.9 End of boring at 4.9 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT15B-1

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/23/98*
Finish Date: *7/23/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA / NA	NA / NA	SW-SM / SW	NM	Md-lt brown fm SAND, little Clayey Silt/Silt, few slag chips @ 1.1' Md-lt brown fmc SAND and f (m) GRAVEL (mostly slag and cinders), tr. Clayey Silt @ 1.6' Red-brown Silty CLAY with faint layering @ 1.9' Md-lt Brown cmf SAND and f GRAVEL (mostly slag and cinders), tr (+) Clayey Silt. Locally gravel more abundant than sand. Wood fragments, wet @ +/-4.0'.	Samples disturbed by hand augering
5						SW-GW		4.9 End of boring at 4.9 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT15B-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/23/98*
Finish Date: *7/23/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM,SC	NM	Md brown fm SAND, little (+) Clayey Silt. Locally more clay-rich. Roots.	Samples disturbed by hand augering
						SW-SM		@ 1.2' Md-lt brown cmf SAND, little (+) f (m) Gravel (w/ abundant slag, cinders), tr. to little Clayey Silt. Thin layer of matted vegetation, wood, bark and roots.	
				NA	NA	GW	NM	@ 2.0' Red, brown Silty CLAY layer.	
5								@ 2.2' F (m) GRAVEL (mostly slag and cinders) and cmf SAND, tr. (+) Clayey Silt. Wood fragments. Amount of sand increases at 3.9 feet.	Refusal at 4.6 feet on wood.
								4.6 End of boring at 4.6 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT15B-3**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/23/98* | Finish Date: *7/23/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *213.78*
TWC: *NA*
TPC: *NA*
North: *1206330.1293*
East: *694691.1768*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM	NM	Md brown fm SAND, some to little Clayey Silt, tr. f Gravel. Roots.	Samples disturbed by hand augering
						SM		@ 1.0' Md brown fm SAND, some to little Clayey Silt, tr. f Gravel (includes slag, cinders). Few red & yellow flecks. Few soft brownish- white beads.	
				NA	NA	GW-SW	NM	@ 1.8' Lt-md brown fm GRAVEL (mostly slag, cinders) and cmf SAND, tr (+) Clayey Silt. Locally sand component is greater than gravel component. Roots, wood fragments increase with depth. Rare small, blue specks/stain at 4.5 feet. Moist to wet.	
5								5.1 End of boring at 5.1 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT16-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/21/98* | Finish Date: *7/21/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings		NA	NA	SM	NM	Md-dk brown fm (c) SAND, little (+) Silt/Clayey Silt, tr. f Gravel (includes some slag). Few red and yellow flecks.	Samples disturbed by hand augering
			NA	NA	SW-SM	NM	@ 0.9' Brown silty CLAY material.	Refusal at 4.0 feet on wood.
							@ 1.1' Md brown cmf SAND, tr. to little Clayey Silt/Silt, tr. f (m) Gravel includes slag, cinders). Roots, wood fragments abundant. Moist. to wet	
4.0							End of boring at 4.0 feet.	
5								
10								
15								
20								
25								
30								

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT16-2

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/21/98*
Finish Date: *7/21/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	USCS	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		SM	NM	Md-dk brown SILT and fm SAND to fm SAND, some Silt, tr. fm Gravel.	Samples disturbed by hand augering
				NA	NA		SW	NM	@ 1.4' Layered white and green clay-like material, locally appears to have dessication cracks/weathering.	
5									@ 1.6' Md-dk brown fm SAND, some to little Clayey Silt, tr. f Gravel (includes slag). Few fragments of white and green clay-like material.	
									@ 2.0' Lt brown fm (c) SAND, tr. Silt, tr. f Gravel. Damp.	
10									End of boring at 2.9 feet. (2.9)	
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT16-3**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/21/98* | Finish Date: *7/21/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings		NA	NA	SM	NM	Md brown SILT and fm SAND to fm SAND, some Silt, tr. fm Gravel.	Samples disturbed by hand augering
			NA	NA	SW-SM	NM	@ 1.0' Tan, rusty, multicolored silty clay material. Yellow and red flecks.	
5					SW		@ 1.1' Md-dk brown fm SAND, tr. to little Clayey Silt, tr. fm Gravel (includes slag).	
							@ 1.9' Lt brown fm SAND, tr. Silt, tr. (+) fm Gravel (includes slag). Wood fragments increase in abundance with depth.	
10							3.0	
							End of boring at 3.0 feet.	
15								
20								
25								
30								

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT16-4**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*
Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA / NA	NA / NA	SM,SC / SW	NM / NM	Dk-md brown fm SAND and Clayey SILT, tr. f Gravel. Local clay-rich zones. Few red and yellow flecks. @ 1.2' Md-lt brown fm (c) SAND, little (+) fm Gravel (includes abundant slag, cinders), tr. to little Silt/Clayey Silt. Roots, wood fragments, bark. 3.1 End of boring at 3.1 feet.	Samples disturbed by hand augering
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT16-5**

Project: *RFI of Sediments AOC* | Project No.: *0432.01*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Start Date: *7/22/98*

Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *212.15*

TWC: *NA*

TPC: *NA*

North: *1206243.9974*

East: *694914.9126*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	SM-SC	NM	Md-dk brown fmc SAND and Clayey SILT to SILT & CLAY, tr. fm Gravel (mostly slag). Roots. Slightly damp.	Samples disturbed by hand augering
				NA	NA	SW-SM,ML-CL	NM	@ 1.1'md brown grading to lt brown fm SAND, little to tr. (+) Clayey Silt. Local SILT & CLAY rich zone between 1.6 and 2.1 ft. Wood fragments more abundant with depth.	Refusal at 2.6 feet on wood.
2.6								End of boring at 2.6 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT16A-1**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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

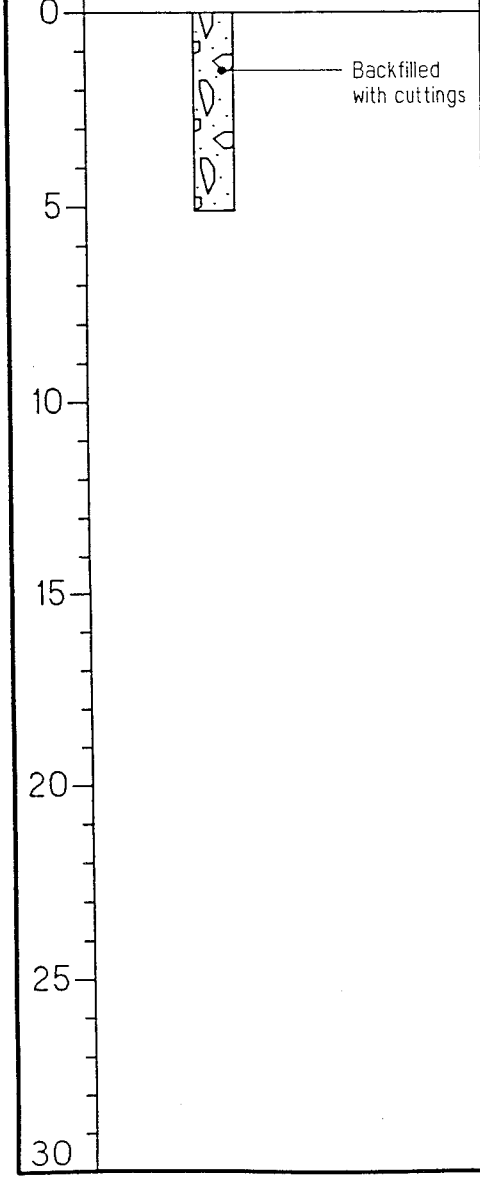
Method: *NA*
Duration: *NA*
Gals. Purged: *NA*
Slug Test: *NA* (cm/sec)

SURVEY DATA

DATUM: NGVD

Grade: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:



Samp. No. / Run No.	soil / rock	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
	soil	NA	NA	ML-CL, SW-SM	NM	Dk brown SILT & CLAY, little fm Sand, tr. f Gravel. Roots. Weakly cemented lt brown-lt gray f Sand at base of interval.	Samples disturbed by hand augering
	soil	NA	NA	SW	NM	@ 0.9' Md brown fm (c) SAND, tr. to little Clayey Silt, tr. f Gravel (includes slag)	Refusal at 5.1 feet.
	soil			SM		@ 1.5' Rusty brown to maroon brown layered Silt & Clay material. Some wood fragments. Sand mixed in locally.	
						@ 1.9' Cmf SAND, little f (m) Gravel (mostly slag, cinders), tr. Clayey Silt. Wood fragments. Moist.	
						@ 2.3' Rusty brown layered Silt & Clay material.	
						@ 2.5' Md brown mfc SAND, little Clayey Silt, tr (+) f. Gravel (mostly slag). Wood fragments. Grades downward into lt gray fm SAND, tr. Clayey Silt. Rare bright red or blue spot/stain. Wood fragments/wood chips.	
						@ 3.7' Wood chips and fragments mixed in with md gray fm SAND, some Clayey Silt. One blue spot. Wet.	
						End of boring at 5.1 feet. (5.1)	

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT16A-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA / NA	NA / NA	SM / SW	NM / NM	Md-Dk brown Clayey Silt, some fm Sand. Roots, wood fragments. @ 1.1' Md -lt brown fm SAND, little-tr. Clayey Silt, tr. f Gravel. Roots. @ 1.5' Brown to rusty brown CLAY & SILT material, w/layering. @ 1.6' Lt-md brown fm SAND, tr. Clayey Silt. Wood, bark fragments. Yellow fleck at @ 2 feet. Roots. @ 2.5' Lt brown fm (c) SAND, tr. Silt. Wood fragments increase in abundance with depth in this interval. @ 3.5' Lt gray fm SAND, tr. Silt. Layer of wood chips. Wet. @ 4.0' Lt gray-lt brown fm (c) SAND, tr. Clayey Silt, tr. f Gravel. Wood fragments. Wet. 4.3 End of boring at 4.3 feet.	Samples disturbed by hand augering. Refusal on wood at 3.1 feet. Moved a few feet and continued boring. Refusal at 4.3 feet on wood.
5						SW			
10						SW			
15						SW			
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT16A-3**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *7/22/98* | Finish Date: *7/22/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *212.24*

TWC: *NA*

TPC: *NA*

North: *1206246.9095*

East: *694978.6957*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	ML-CL-SC	NM	Dk-md brown SILT & CLAY, some to little f Sand. Local zones w/greater SILT & CLAY component. Roots. Few red and yellow flecks.	Samples disturbed by hand augering
						SM		@ 1.0' Md brown fm SAND, little Clayey Silt, tr (+) fm Gravel (includes slag). Rare red and yellow flecks. Slightly damp.	Refusal at 4.8 feet on wood.
				NA	NA	SW	NM	@ 2.0' Lt brown mfc SAND, tr. Silt, tr. f Gravel (includes slag). Wood fragments.	
5						SW		@ 3.2' Lt gray fm SAND, tr. Silt, tr. f Gravel. Wet. Wood fragments increase through interval. Mostly wood at end of interval.	
								4.8	
10								End of boring at 4.8 feet.	
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT17-1

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*
Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM	NM	Dk brown Clayey SILT and fm SAND. Roots.	Samples disturbed by hand augering
						CL-ML,SC	SM	@ 0.6' Thin layered CLAY & SILT material, multicolored (rusty brown, green, white), locally mixed with dk-md brown cmf Sand, little Gravel (mostly slag). Red flecks	
				NA	NA		NM	@ 2.9' Dk gray to black Silty CLAY material, slight layering visible, some greenish-white coloration. Saturated.	
5						SW-SM		@ 3.2' Interlayered fine wood chips and md brown to md gray fm (c) SAND, tr. to little Silt/Clayey Silt. Gravel at 3.3-3.4 feet (mostly slag). Wet.	
								4.5	
10								End of boring at 4.5 feet.	
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT17-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM	NM	Dk brown Clayey SILT and fm SAND. Roots.	Samples disturbed by hand augering
								@ 1.0' Brown, rusty brown, green SILT & CLAY material. Yellow and red flecks.	
				NA	NA	SW-SM,CL-ML	NM	@ 1.2' Md brown cmf SAND, tr.-little Silt, tr. Gravel (mostly slag), interlayered with layers of wood chips mixed with clay and silt or sand and silt. Few pieces of red and yellow material.	
5								@ 3.0' Rusty brown Clay & Silt material over dk gray Silty CLAY material. Few red, yellow and white-green specks.	
10								End of boring at 3.2 feet. (3.2)	Refusal at 3.2 feet on wood.
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT17-3**

Project: *RFI of Sediments AOC* | Project No.: *0432.01*

Client: *Hercules/Ciba Site, Glens Falls, NY*

Start Date: *7/22/98*

Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *NA*

TWC: *NA*

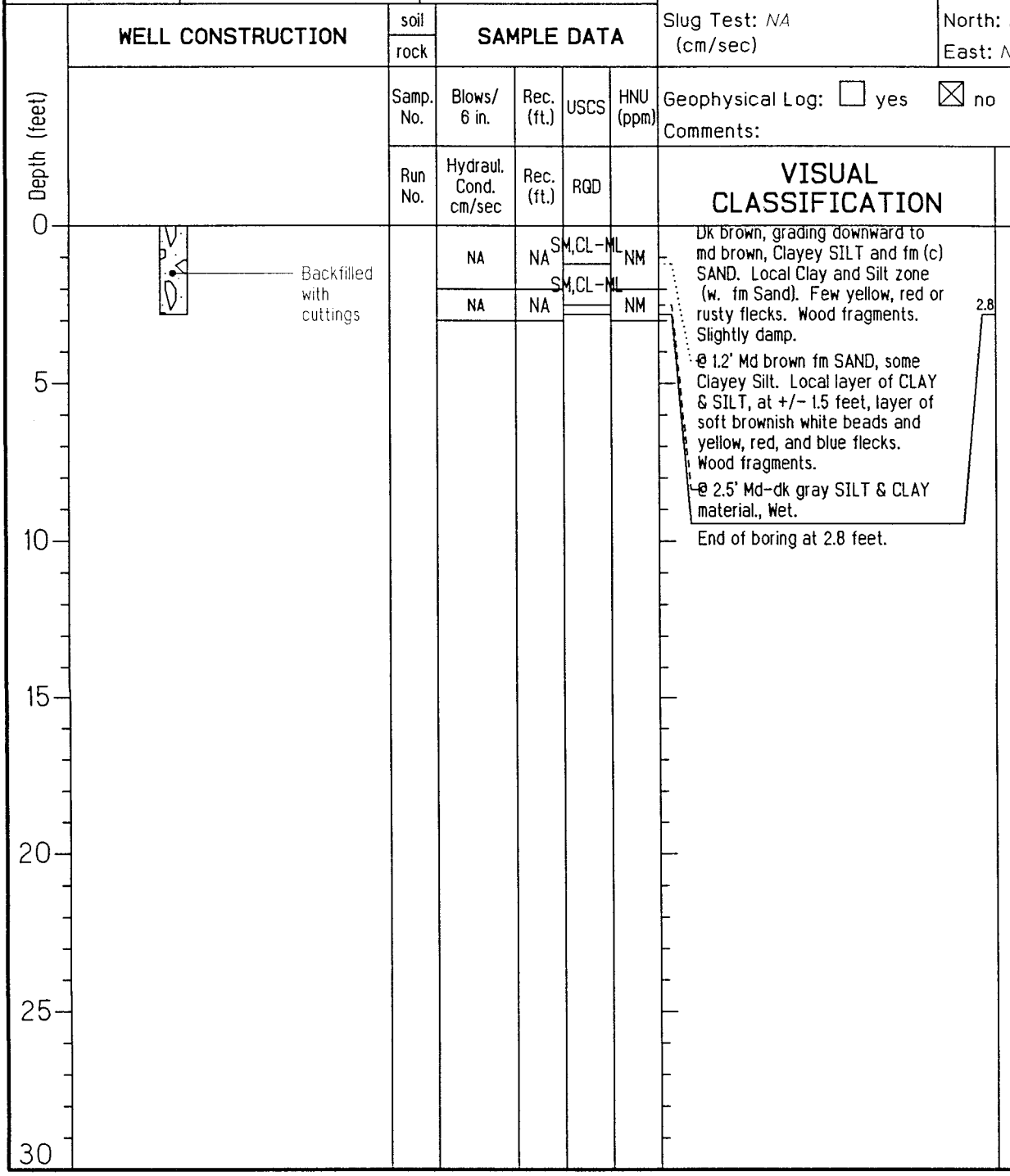
TPC: *NA*

North: *NA*

East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:



ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT17-4**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM	NM	Dk-md brown Clayey SILT and fm SAND, tr (-) f Gravel. Roots. Sl. damp.	Samples disturbed by hand augering
				NA	NA	SW	NM	@ 1.3' Md brown fm SAND, some Clayey Silt, tr. f Gravel (mostly slag, cinders).	
5								@ 1.7'lt brown to tan fm (c) SAND, tr f Gravel (includes slag, cinders), tr. Silt, interlayered with md brown fm Sand, tr, Clayey Silt, tr. f Gravel (includes slag, cinders). Layer of matted vegetation at +/- 2.0 feet. Wood and bark fragments (more abundant with depth).	Refusal at 4.5 feet on wood.
								4.5 End of boring at 4.5 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT17-5

Project: *RFI of Sediments AOC*

Project No.: *0432.01*

Start Date: *7/22/98*

Finish Date: *7/22/98*

Client: *Hercules/Ciba Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

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: *NA*

TWC: *NA*

TPC: *NA*

North: *NA*

East: *NA*

Geophysical Log: ☐ yes ☒ no

Comments:

WELL CONSTRUCTION

SAMPLE DATA (soil / rock)

Depth (feet)	Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	OVA (ppm)	Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD
0		NA	NA	ML-CL,SM-SC	NM		NA	NA	NM
5				SM					
10				SW			NA	NA	NM
15				ML,SM-SW					
20									
25									
30									

Backfilled with cuttings

VISUAL CLASSIFICATION

Md-dk brown Clayey SILT to SILT & CLAY, some fm (c) Sand, tr. f Gravel (includes slag). Roots. Rare green fleck.

@ 1.0' Dk-md brown fm (c) SAND, some to little Clayey Silt.

@ 1.5' Md brown SILT & CLAY, some fm Sand, tr (+) f Gravel (includes slag). Rare red fleck. Roots. Slightly damp.

@ 1.7' Dk brown cmf SAND, some (+) f Gravel (mostly slag, cinders), tr (+) Silt, Rare red flecks.

@ 2.4' Rusty brown layered CLAY & SILT material interlayered with dk brown fm SAND and Clayey SILT, tr. f Gravel (mostly slag, cinders)

@ 2.9' Lt-md brown fmc SAND, tr. Silt to Clayey Silt, tr f Gravel (mostly slag, cinders), wood fragments, wet

3.5

End of boring at 3.5 feet.

REMARKS

Samples disturbed by hand augering

Refusal at 3.5 feet on wood.

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: BT17-6

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *213.09*
TWC: *NA*
TPC: *NA*
North: *1206203.9307*
East: *695093.7079*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA		ML-CL, SM-SC	NM	Dk brown SILT & CLAY and-to-some fm SAND (minor amount of lt brown fm sand). Rare red fleck. Roots. Slightly damp.	Samples disturbed by hand augering
				NA	NA		SW,CL	NM	@ 1.2' Dk-md brown fm SAND, little Clayey Silt, tr. f Gravel (mostly slag cinders). Wood fragments. Damp.	Refusal at 3.7 feet on wood.
5									@ 1.6' Lt brown to tan fm SAND, tr. Silt, tr. f Gravel (includes slag). Few thin Silty Clay layers and layer of bark fragments between 3.0 and 3.4 feet. Damp.	
10									@ 3.4' Lt brown fmc SAND, tr. Silt, tr. f Gravel, lt gray fm Sand and abundant bark and wood fragments at base of interval. Moist. 3.7	
15									End of boring at 3.7 feet.	
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT17A-1**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *212.85*
TWC: *NA*
TPC: *NA*
North: *1206175.3557*
East: *695108.4520*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	ML-CL,SM-SC	NM	Md brown Clayey SILT/SILT & CLAY and-to-some fm SAND. Rare red fleck. Roots. Slightly damp.	Samples disturbed by hand augering
						SW		@ 1.1' Lt brown to tan fmc SAND, tr. Silt, tr fm Gravel (mostly slag, cinders). Roots. Slightly damp.	Refusal at 3.2 feet on rock.
				NA	NA	SW	NM	@ 2.0' Md-lt brown cmf SAND, tr. fm Gravel (includes slag, cinders), tr. Silt. Wood and bark fragments increasing toward base of interval.	
3.2								End of boring at 3.2 feet.	
5									
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **BT17A-2**

Project: *RFI of Sediments AOC*
Client: *Hercules/Ciba Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *7/22/98*
Finish Date: *7/22/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	ML-CL,SM-SC	NM	Dk-md brown Clayey SILT/SILT & CLAY and fm SAND. Rare yellow fleck. At +/- 2.5-2.6 rusty brown layering in Clayey Silt.	Samples disturbed by hand augering
				NA	NA		NM	@ 2.8' Md-dk brown cm SAND, little Clayey Silt, tr. f Gravel (mostly slag and cinders). Wood fragments.	
5						SW		@ 3.2' Lt brown to tan fm SAND, tr. Silt. Wood chips layer.	
								@ 3.6' Md brown cmf SAND, tr (+) Clayey Silt, tr. Gravel (mostly slag). Wet.	
10								@ 4.0' Lt gray to lt brown fm SAND, tr (+) Silt/Clayey Silt. Wet.	
								End of boring at 4.6 feet. (4.6)	
15									
20									
25									
30									

SOIL BORING LOGS – PONDED/BACKWATER AREAS

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-1-1**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/3/98*
Finish Date: *8/3/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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: *211.59*
TWC: *NA*
TPC: *NA*
North: *1206148.7629*
East: *695094.2247*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings	soil		NA	NA	ML	NM	Md-dk brown SILT to Clayey SILT, tr. to little f Sand. Few pieces of clay-rich material. Rare red and yellow flecks. Roots.	Samples disturbed by hand augering
		soil		NA	NA	SM,CL	NM	@ 1.0' Md-dk brown cmf SAND and Clayey SILT, tr. (+) f Gravel (Slag, etc.). Few pieces of brown-rusty brown Silty Clay material. Few red and yellow flecks. Roots.	Water table @ +/- 2.9 feet. Samples to Lab: PBWD-1-1-1 (1-2') PBWD-1-1-2 (2-3') DUP080398B (1-2')
5								@ 2.0' Md-dk brown cmf SAND and Clayey SILT to SILT & CLAY, tr. f Gravel. Pieces of md brown-rusty brown clay-rich material. Red, yellow and blue flecks. Soft brownish-white beads. Wood chips, Saturated.	
10								3.0 End of boring at 3.0 feet.	
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-1-2**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/3/98*
Finish Date: *8/3/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
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

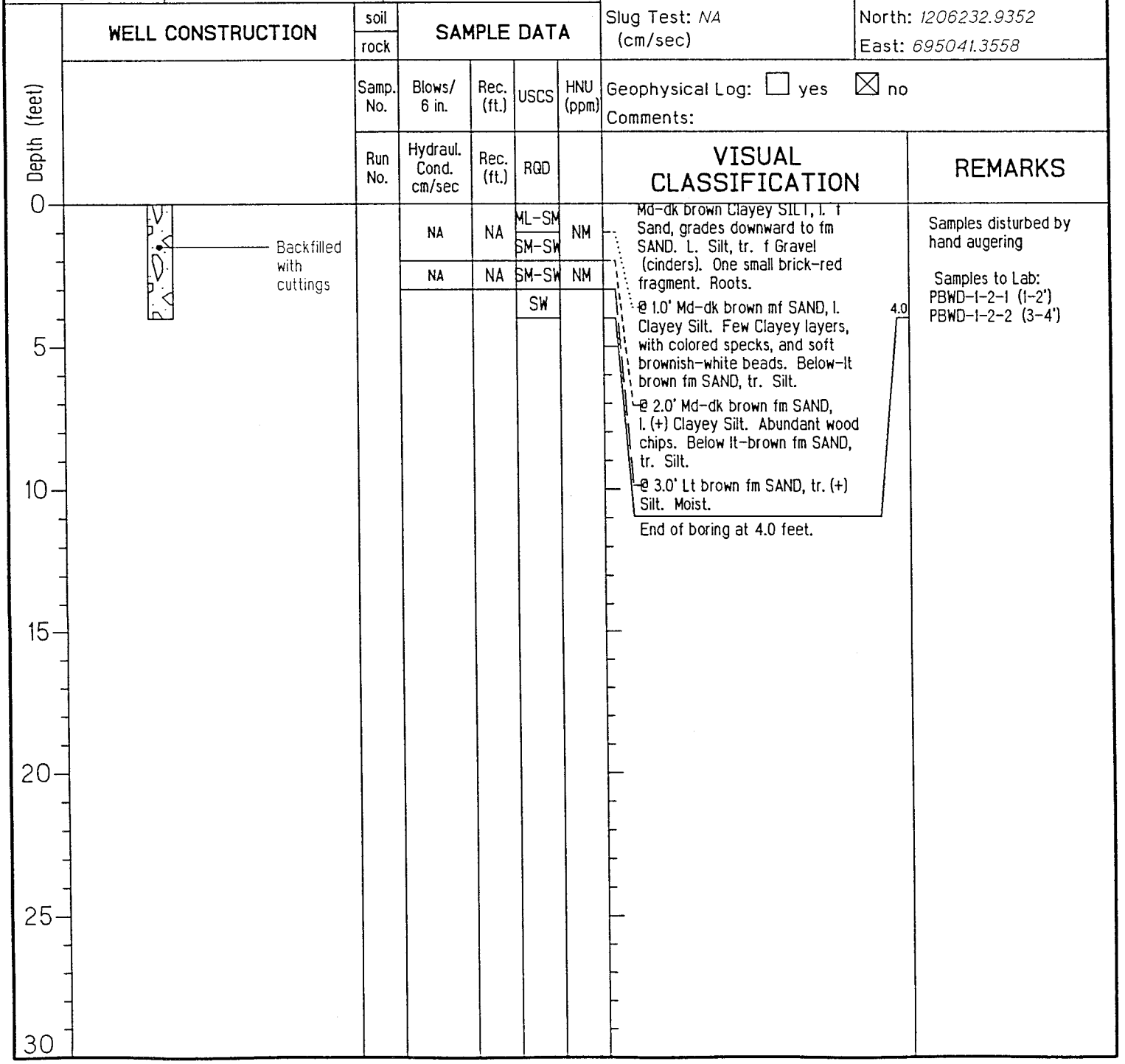
Method: *NA*
Duration: *NA*
Gals. Purged: *NA*
Slug Test: *NA* (cm/sec)

SURVEY DATA

DATUM: NGVD

Grade: *212.77*
TWC: *NA*
TPC: *NA*
North: *1206232.9352*
East: *695041.3558*

Geophysical Log: ☐ yes ☒ no
Comments:



VISUAL CLASSIFICATION

Md-dk brown Clayey SILT, l. f Sand, grades downward to fm SAND. L. Silt, tr. f Gravel (cinders). One small brick-red fragment. Roots.

@ 1.0' Md-dk brown mf SAND, l. Clayey Silt. Few Clayey layers, with colored specks, and soft brownish-white beads. Below-lt brown fm SAND, tr. Silt.

@ 2.0' Md-dk brown fm SAND, l. (+) Clayey Silt. Abundant wood chips. Below lt-brown fm SAND, tr. Silt.

@ 3.0' Lt brown fm SAND, tr. (+) Silt. Moist.

End of boring at 4.0 feet.

REMARKS

Samples disturbed by hand augering

Samples to Lab:
PBWD-1-2-1 (1-2')
PBWD-1-2-2 (3-4')

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-1-3**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/4/98*
Finish Date: *8/4/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *213.18*
TWC: *NA*
TPC: *NA*
North: *1206316.7350*
East: *694993.5659*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	USCS	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		ML, SM-SW	NM	Dk-md brown Clayey SILT, some fm Sand over lt brown fm SAND, tr. to little Silt w/ rare red and yellow fleck.	Samples to Lab: PBWD-1-3-1 (1-2') PBWD-1-3-2 (3-4')
				NA	NA		SW	NM	@ 1.0' F. GRAVEL and cmf SAND, tr. Silt. Gravel is mostly cinders and slag. Soft brownish-white beads.	
5									@ 1.4' Lt brown fm SAND, tr. Silt.	
									@ 1.6' Dk brown fm SAND and Clayey SILT.	
									@ 1.8' Brown fm SAND, tr. Silt. Thin layers of matted vegetation and/ or wood. Wood more abundant with depth.	
10									4.0	
									End of boring at 4.0 feet.	
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-3-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01* | Start Date: *8/4/98* | Finish Date: *8/4/98*

Client: *Hercules:CIBA Site, Glens Falls, NY*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

Contractor: *NA*

Equipment: *SS Hand Auger, SS Hand Corer*

Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *212.52*

TWC: *NA*

TPC: *NA*

North: *1206202.4367*

East: *695351.8813*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA		ML-SM	NM	Dk brown Clayey SILT and to some fm Sand, sandier toward base of interval. Roots.	Samples to Lab: PBWD-3-1-1 (1-2') PBWD-3-1-2 (3-4')
				NA	NA		SM, ML-SM	NM	@ 1.0' Lt brown fm (c) SAND, tr. Silt w/ layers of md-dk brown Clayey SILT. Some to and fm Sand every few inches, Sand coarsens slightly towards base. Roots.	
5							SM, ML-SM		@ 3.0' Lt brown-lt gray fm SAND, tr. Silt. Moist. @ 3.5-3.7 feet, layer of md brown to red-brown Clayey Silt, some fm Sand. Wood and bark fragments.	
10									4.0 End of boring at 4.0 feet.	
15										
20										
25										
30										

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-3-2**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/4/98*
Finish Date: *8/4/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *214.06*
TWC: *NA*
TPC: *NA*
North: *1206299.5670*
East: *695359.6085*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML, SM	NM	Md-dk brown Clayey SILT, tr. Sand over lt brown fm SAND, some Clayey SILT. Roots.	Samples to Lab: PBWD-3-2-1 (1-2') PBWD-3-2-2 (3-4')
						SW		@ 1.0' Md brown fm SAND, little (+) Clayey Silt w/ few slag and cinder chips.	
				NA	NA	SW	NM	@ 1.4' Lt brown fm (c) SAND, tr. Silt, tr. (+) f Gravel (Gravel is slag and cinder chips). Roots.	
5								@ 2.0' Lt brown fm SAND, tr. Silt w/ thin layers containing more abundant slag and cinder chips. Several wood/vegetation layers. Last 2-3 inches mostly wood and matted vegetation.	
								4.0	
10								End of boring at 4.0 feet.	
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-3-3**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Start Date: *8/4/98*
Finish Date: *8/4/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *NA*
TWC: *NA*
TPC: *NA*
North: *NA*
East: *NA*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No.	Blows/ 6 in.	Rec. (ft.)	USCS	OVA (ppm)	Run No.	Hydraul. Cond. cm/sec	Rec. (ft.)	RQD	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings					ML-SM	NM		NA	NA		Dk brown Clayey SILT, some fm Sand.	Water table @ +/- 2.7 feet.
						SM						@ 1.0' Lt brown fmc SAND, little to some Clayey SILT to SILT & CLAY (slightly less fines toward bottom of interval), tr (+) Gravel. Gravel is mostly slag and cinder chips. Rare chip of hard red material.	No Recovery 3-4 feet.
						SW	NM		NA	NA		@ 2.2' Wood fragments.	Samples to Lab: PBWD-3-3-1 (1-2') PBWD-3-3-2 (2-3')
5												@ 2.3' Md brown-lt gray brown fm SAND, tr. to little Silt, tr. to little f Gravel (Gravel is mostly slag). Zones of abundant wood fragments. Wet.	
10												4.0	
15												End of boring at 4.0 feet.	
20													
25													
30													

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-5-1**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/4/98*
Finish Date: *8/4/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *212.26*
TWC: *NA*
TPC: *NA*
North: *1206170.9230*
East: *695739.6425*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	 Backfilled with cuttings			NA	NA	SM	NM	Md brown to red brown fm SAND, some Clayey Silt, tr. Gravel (mostly slag chips). Roots.	Refusal at 3.1 feet on wood.
				NA	NA	SW, SM	NM	@ 1.5' Lt brown fm SAND, tr-tr. (+) Silt, (occ. slag chips near top) w/layers of fm SAND, some Clayey Silt and layers of wood fragments.	Samples to Lab: PBWD-5-1-1 (1-2') PBWD-5-2-2 (2-3')
5								@ 2.7' Wood fragments, saturated	
								End of boring at 3.1 feet. (3.1)	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-5-2**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/4/98*
Finish Date: *8/4/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *212.99*
TWC: *NA*
TPC: *NA*
North: *1206266.1605*
East: *695761.5246*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/ 6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	SM	NM	Md brown fm SAND, l. Clayey Silt, l.–tr. f Gravel (includes cinders and slag chips). Rare chips of brick red material. Roots.	Samples to Lab: PBWD-5-2-1 (1-2') PBWD-5-2-2 (3-4')
				NA	NA	SW, CL	NM	@ 1.0' Md-dk brown Clayey SILT and fm SAND, tr. fm Gravel	
4.0								@ 1.1' Md brown cmf SAND and fm GRAVEL (mostly slag and cinders), l. to tr. (–) Clayey SILT. Some soft brownish-white beads. Few yellow and red flecks. Rare fragments of purple and blue material. Wood fragments common, especially at bottom of interval. @ 1.5–1.6 feet brown to red –brown clay-rich zone containing wood fragments and few soft brownish– white beads. Bottom of interval saturated.	
5								End of boring at 4.0 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-7-1**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/5/98*
Finish Date: *8/5/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *212.95*
TWC: *NA*
TPC: *NA*
North: *1206104.1626*
East: *696125.3266*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML	NM	Md-dk brown Clayey SILT to SILT & CLAY, little f Sand.	No recovery 3-4 feet.
				NA	NA	SW, ML-CL	NM	@ 0.7' Lt brown fm (c) SAND, tr. Silt w/ layers of md brown CLAY & SILT to SILT & CLAY, tr.-l f Sand w/ wood or matted vegeation. Few slag and cinder chips in sand in 1-2 foot interval. Rusty colored zone in sand @ +/-2.5 feet.	Water table @+/- 3.0 feet.
5								4.0 End of boring at 4.0 feet.	Samples to Lab: PBWD-7-1-1 (1-2') PBWD-7-1-2 (2-3')
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-7-2**

Project: *RFI of Sediments AOC*
Project No.: *0432.01*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Start Date: *8/5/98*
Finish Date: *8/5/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *212.24*
TWC: *NA*
TPC: *NA*
North: *1206192.0147*
East: *696152.6572*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML-SM	NM	Md-dk brown Clayey SILT to SILT & CLAY, l to s fm Sand. Roots.	Water table @+/- 3.0 feet.
				NA	NA	SM, SW	NM	@ 1.0' Md-dk brown f to fm SAND, s Clayey Silt, tr. Gravel (slag and cinder chips). Some wood fragments, matted vegetation w/ layers of lt brown fm sand, tr. silt containing some slag and cinder chips.	
4.0						SW		@ 2.5' Fm SAND, tr. to l Silt to Clayey Silt. Abundant wood fragments. Wood fragments increase toward base of interval.	Samples to Lab: PBWD-7-2-1 (1-2') PBWD-7-2-2 (2-3')
5								End of boring at 4.0 feet.	
10									
15									
20									
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-9-1**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/5/98*
Finish Date: *8/5/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *211.92*
TWC: *NA*
TPC: *NA*
North: *1205967.8236*
East: *696501.5943*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML	NM	Dk brown Clayey SILT to SILT & CLAY, little f Sand. Roots. (Blue streak on latex glove after sample examination).	Saturated within 2.0-2.7 feet interval.
				NA	NA	SW, ML	NM	@ 1.0' Md brown fm SAND and to s SILT & CLAY to SILT & CLAY, and to s fm SAND. Rare red fleck. Roots.	Samples to Lab: PBWD-9-1-1 (1-2') PBWD-9-1-2 (2-3') DUP080598 (2-3)
5						SW		@ 1.3' Lt brown fm SAND, tr. Silt, tr. f Gravel (mostly slag and cinders). With two +/- 1 in thick layers of md red-brown SILT & CLAY containing red flecks. Small soft brownish-white beads. Wood fragments , very light laminations. Gravel content increases with depth (slag and cinder chips). Moist.	
10						SW		@ 2.0' Lt brown to gray-brown fmc SAND, l f Gravel (mostly slag and cinders), tr. to tr (+) Silt. Several layers of wood fragments. Wet.	
15								@ 2.7' Wood fragments and cmf Sand. Wet.	
20								End of boring at 4.0 feet.	
25									
30									

4.0

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-11-1**

Project: *RFI of Sediments AOC*
Client: *Hercules:CIBA Site, Glens Falls, NY*
Project No.: *0432.01*
Start Date: *8/5/98*
Finish Date: *8/5/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*
Contractor: *NA*
Equipment: *SS Hand Auger, SS Hand Corer*
Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *121.08*
TWC: *NA*
TPC: *NA*
North: *1205639.6472*
East: *696782.6561*

Geophysical Log: ☐ yes ☒ no
Comments:

Depth (feet)	WELL CONSTRUCTION	soil/rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.)	USCS / RQD	OVA (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML	NM	Dk brown SILT & CLAY, l. to s. f Sand. Roots.	
						ML		@ 1.0' Md to red brown SILT & CLAY, s. to tr. Sand. Zones of soft brownish-white beads. Some thin gray laminae. Some layers of wood fragments/matted vegetation. Red and yellow flecks. Some slag and cinder chips. Roots.	Water table @ +/-3.5 feet.
				NA	NA	SW	NM	@ 2.0' Md to red-brown fm (c) SAND, tr. to l. Clayey Silt, tr. to l. f Gravel, (gravel is mostly slag and cinder chips). Some soft brownish -white beads with gravel.	Samples to Lab: PBWD-11-1-1 (1-2') PBWD-11-1-2 (3-4')
5						SW-SM		@ 2.5' Brown SILT & CLAY with wood fragments and laminae.	
								@ 2.6' brown to lt-md gray to black Silty CLAY material w/ some fine laminae. Few rusty-colored zones.	
10								@ 2.8' Fmc SAND and f GRAVEL (Gravel mostly slag and cinders), some soft brown-white beads, wet at base.	
								@ 3.0' Gray cmf SAND, little (+) SILT & CLAY, little f Gravel (mostly cinders and slag). Some soft brown-white beads. Rare flecks of red, blue or yellow. Wood fragments.	
15								@ 3.5' Dk gray brown Silty CLAY (some laminations) with intermittent zones containing some sand and wood. Wet.	
								@ 3.9'Dk gray f SAND, s. to l. SILT & CLAY. Wet.	
20								End of boring at 4.0 feet.	
								4.0	
25									
30									

ECKENFELDER INC.

Subsurface Boring Log

Well Name/Location: **PBWD-13-1**

Project: *RFI of Sediments AOC* | Project No.: *0432.01*

Client: *Hercules:CIBA Site, Glens Falls, NY*

Start Date: *8/5/98*

Finish Date: *8/5/98*

DRILLING DATA

Inspector: *Bob O'Neill, Rich Worthington*

Contractor: *NA*

Equipment: *SS Hand Auger, SS Hand Corer*

Method: *NA*

SAMPLING METHODS

	Sampler	Tube	Core
Type:	*SS Hand Auger*	*SS Hand Corer*	*NA*
Diameter:	*4"*	*2"*	*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: *210.73*

TWC: *NA*

TPC: *NA*

North: *1205344.0720*

East: *696946.3289*

Geophysical Log: ☐ yes ☒ no

Comments:

Depth (feet)	WELL CONSTRUCTION	soil / rock	Samp. No. / Run No.	Blows/6 in. / Hydraul. Cond. cm/sec	Rec. (ft.) / Rec. (ft.)	USCS / RQD	HNU (ppm)	VISUAL CLASSIFICATION	REMARKS
0	Backfilled with cuttings			NA	NA	ML-SM / ML-SM	NM	Md-dk brown Clayey SILT, s. to and fm Sand, tr. f Gravel (mostly slag and cinders). Roots.	Water Table @ +/- 1.9 feet.
				NA	NA	SW	NM	@ 1.0' Lt brown fm SAND, tr. Silt w/ few zones containing brown Clayey Silt and wood.	
								@ 1.3' Md brown Clayey SILT to SILT & CLAY, s. t fm Sand. Abundant wood and bark fragments @ 1.7-1.8 feet lt brown sand rich zone with slag and cinder chips and one chip of blue material, moist to wet.	Samples to Lab: PBWD-13-1-1 (1-2')
5								@ 2.0' Lt gray fmc SAND, tr. Silt, tr. Gravel. Abundant wood fragments . Wet.	
10								End of boring at 3.0 feet. (3.0)	
15									
20									
25									
30									

APPENDIX C

SURVEY DATA

SURVEY DATA FOR BORING LOCATIONS
HUDSON RIVER BANK (a)

Location	Ground Surface Elevation (ft, NGVD)	Northing (ft) (b)	Easting (ft) (b)
BT1-3	213.46	1206178.1517	692667.8924
BT1B-2	210.69	1206136.0670	692687.8899
BT1C-1	210.06	1206139.5068	692616.0900
BT2-1	210.75	1206167.8514	692776.4898
BT3A-1	210.11	1206177.0436	692838.8671
BT3-4	211.94	1206216.3917	692862.1412
BT4A-2	216.70	1206298.4681	692907.5466
BT4-2	214.88	1206304.3777	692942.3954
BT5-1	210.40	1206252.9786	692997.2143
BT6-2	210.95	1206256.0312	693022.4918
BT7-1	210.25	1206274.6263	693049.1188
BT8-1	210.59	1206296.3924	693083.9354
BT9-1	209.93	1206322.4434	693108.6516
BT10-1	211.68	1206374.9643	693391.2934
BT10B-1	212.10	1206379.9240	693412.9874
BT10A-2	211.44	1206372.5948	693435.6511
BT11-2	211.34	1206375.7371	693573.8039
BT12-3	210.97	1206365.7573	693747.1893
BT13-2	210.27	1206376.0692	693810.1348
BT14-2	210.41	1206376.9003	693840.5382
BT15-3	209.22	1206386.1214	694609.9083
BT15B-3	213.78	1206330.1293	694691.1768
BT15A-3	214.02	1206283.3482	694771.8275
BT16-5	212.15	1206243.9974	694914.9126
BT16A-3	212.24	1206246.9095	694978.6957
BT17-6	213.09	1206203.9307	695093.7079
BT17A-1	212.85	1206175.3557	695108.4520

(a) Survey conducted by Van Dusen & Steves Land Surveyors, LLC in April 1998
(b) New York State Plane Coordinates

SURVEY DATA FOR SAMPLE LOCATIONS
PONDED/BACKWATER AREAS(a)

Location	Ground Surface Elevation (ft, NGVD)	Northing (ft) (b)	Easting (ft) (b)	Comments
PBW- 1-1	211.59	1206148.7629	695094.2247	
PBW- 1-2	212.77	1206232.9352	695041.3558	
PBW- 1-3	213.18	1206316.7350	694993.5659	
PBW- 1-S-1	212.67	1206388.8402	694967.0551	Location of shore marker(c)
PBW- 2-S-1	223.74	1206386.9179	695154.2207	Location of shore marker
PBW- 3-1	212.52	1206202.4367	695351.8813	
PBW- 3-2	214.06	1206299.5670	695359.6085	
PBW- 3-S-1	212.39	1206370.3608	695357.2653	Location of shore marker
PBW- 4-S-1	212.10	1206369.6807	695559.9187	Location of shore marker
PBW- 5-1	212.26	1206170.9230	695739.6425	
PBW- 5-2	212.99	1206266.1605	695761.5246	
PBW- 5-S-1	211.34	1206322.2574	695759.3113	Location of shore marker
PBW- 6-S-1	211.70	1206253.7225	695960.1586	Location of shore marker
PBW- 7-1	212.95	1206104.1626	696125.3266	
PBW- 7-2	212.24	1206192.0147	696152.6572	Also is shore marker for PBW-7-S-1
PBW- 8-S-1	211.75	1206076.1582	696330.9512	Location of shore marker
PBW- 9-1	211.92	1205967.8236	696501.5943	
PBW- 9-S-1	211.75	1205995.3479	696501.1033	Location of shore marker
PBW-10-S-1	211.14	1205868.7849	696668.1652	Location of shore marker
PBW-11-1	212.08	1205639.6472	696782.6561	
PBW-11-S-1	222.61	1205651.9216	696734.3090	Location of shore marker
PBW-12-S-1	216.40	1205532.7004	696927.8273	Location of shore marker
PBW-13-1	210.73	1205344.0720	696946.3289	
PBW-13-S-1	212.93	1205327.2919	696974.8464	Location of shore marker

(a) Survey conducted by Van Dusen & Steves Land Surveyors, LLC in April 1998.
(b) New York State Plane Coordinates
(c) Surveyed location for sediment samples (noted by "S" in location name) is marker position along shore south of sample location.

APPENDIX D

PROCEDURES FOR SAMPLING AND ANALYSIS OF SOIL AND WASTE

This appendix describes the methods and procedures used during the soil and waste sampling for this investigation. Discussed below sampling procedures, sample containers, sample preservation, sample analyses, chain-of-custody procedures, equipment decontamination, and field quality assurance/quality control (QA/QC).

Upon retrieval from the boring, the sample within the hand auger bucket or corer was extracted and placed in a stainless steel pan lined with aluminum foil. A separate pan was used to contain the material from each one-foot depth interval. Soil samples were described in accordance with the Burmister Soils Classification and the Unified Soils Classification System (USCS). Waste samples were also described based on color, consistency, layering, etc. The length of the recovered portion of the interval, and other distinguishing features of the sampled material (e.g., odor, color, presence of waste) was recorded.

Soil samples and waste samples submitted to the laboratory for analysis were mixed in the pan with a stainless steel or plastic spoon. The mixed sample was transferred to glass jars with TFE-lined caps.

The sample jars were labeled and placed in a cooler containing ice in sealed plastic bags. The samples were shipped in the cooler to the laboratory via overnight courier. The custody of the samples were documented using chain-of-custody forms. These forms were filled out by the samplers and placed in the sample cooler prior to relinquishing the cooler to the courier for delivery to the laboratory.

Soil samples from the Ponded/Backwater Areas were submitted to the laboratory for total cadmium analysis by USEPA Method 6010A. Waste samples from the Hudson River banks were submitted to the laboratory for Toxicity Characteristic Leaching Procedure (TCLP) testing for metals (cadmium, chromium, lead and mercury) by USEPA Method 1311. The analytical data was internally validated by the laboratory. The Eckenfelder/Brown and Caldwell (E/BC) project manager evaluated the significance of data qualifications to the objectives of the investigation.

To minimize the potential for cross-contamination of samples and the introduction of contamination to a sample location, non-disposable sampling equipment were decontaminated between sample locations. 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 10 percent nitric acid.
4. Rinse with tap water.
5. Rinse with deionized water.
6. Air dry.
7. Wrap in a polyethylene bag or sheeting until ready for use.

Clean disposable plastic spoons were used to mix the samples. The sample pans were lined with clean aluminum foil, and separate spoons were used for each individual depth interval at each location. Used disposable equipment was disposed of in the appropriate waste containers at the site.

For quality assurance and control, a duplicate sample was submitted for every 20 samples submitted for cadmium analysis and for every 20 samples submitted for TCLP testing. One equipment blank was also prepared for each day samples for total cadmium analysis were collected and submitted for total cadmium analysis to provide a check on field decontamination procedures for the non-dedicated sampling equipment. The equipment blanks were prepared by pouring analyte-free water over decontaminated sampling equipment and clean disposable sampling equipment, and into the sample container.

APPENDIX E

LABORATORY DATA PACKAGE – SOIL SAMPLES FROM PONDED/BACKWATER AREAS AND WASTE SAMPLES FROM RIVER BANK

INORGANIC DATA PACKAGE

CIBA-GEIGY SITE
GLEN FALLS, NEW YORK

Prepared for:

Hercules Incorporated
Hercules Plaza
Wilmington, Delaware 19894

Prepared by:

ECKENFELDER INC.®
227 French Landing Drive
Nashville, Tennessee 37228

September 15, 1998

Authorized for Release by:

1. _____
D. Rick Davis, Vice President

2. _____
Tom M. Black, Inorganic Manager

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INORGANIC CASE NARRATIVE
Hercules Incorporated #0432.01
August, 1998

All the analyses performed were completed meeting satisfactorily the corresponding specifications for Quality Control, with the following exceptions:

ICP Metals, Soil:
Batch 98H02:

1) With a specification limit of 20%, the matrix spike (MS)/matrix spike duplicate (MSD) relative percent differences (RPDs) for sample 9808022-04 (PBWD-7-2-2) were outside the specification limit for cadmium. **The associated samples are qualified with an "*" for this analyte.**

Mercury, Soil:
Batch 98H04:

1) With a specification limit of 20%, the MS/MSD RPD for sample 9808013-03 (W-HT15-1) was outside the specification limit. **The associated samples are qualified with an "*" for this analyte.**

Hercules Incorporated

Parameters Requested

Lab Sample ID	Field ID	Matrix	Date_Time Sampled	Parameters requested
9808013-01	EB080398	Groundwater	8/3/98 8:40:00 AM	Cadmium Chromium Lead Mercury
9808013-02	W-HT14-1	Soil	8/3/98 11:20:00 AM	Cadmium Cadmium-TCLP Chromium Chromium-TCLP Lead Lead-TCLP Mercury Percent Moisture
9808013-03	W-HT15-1	Soil	8/3/98 11:55:00 AM	Cadmium Cadmium-TCLP Chromium Chromium-TCLP Lead Lead-TCLP Mercury Percent Moisture
9808013-04	W-HT16-1	Soil	8/3/98 12:10:00 PM	Cadmium Cadmium-TCLP Chromium Chromium-TCLP Lead Lead-TCLP Mercury Percent Moisture
9808013-05	W-HT17-1	Soil	8/3/98 12:30:00 PM	Cadmium Cadmium-TCLP Chromium Chromium-TCLP Lead Lead-TCLP Mercury Percent Moisture

Lab Sample ID	Field ID	Matrix	Date Time Sampled	Parameters requested
9808013-06	W-HT18-1	Soil	8/3/98 12:50:00 PM	Cadmium Cadmium-TCLP Chromium Chromium-TCLP Lead Lead-TCLP Mercury Percent Moisture
9808013-07	DUP080398	Soil	8/3/98 12:01:00 AM	Cadmium Cadmium-TCLP Chromium Chromium-TCLP Lead Lead-TCLP Mercury Percent Moisture
9808013-08	DUP080398B	Soil	8/3/98 12:02:00 AM	Cadmium Percent Moisture
9808013-09	PBWD-1-1-1	Soil	8/3/98 3:30:00 PM	Cadmium Percent Moisture
9808013-10	PBWD-1-1-2	Soil	8/3/98 3:40:00 PM	Cadmium Percent Moisture
9808013-11	PBWD-1-2-1	Soil	8/3/98 4:10:00 PM	Cadmium Percent Moisture
9808013-12	PBWD-1-2-2	Soil	8/3/98 4:20:00 PM	Cadmium Percent Moisture
9808013-13	PBWD-1-3-1	Soil	8/4/98 8:55:00 AM	Cadmium Percent Moisture
9808013-14	PBWD-1-3-2	Soil	8/4/98 9:00:00 AM	Cadmium Percent Moisture
9808013-15	PBWD-3-1-1	Soil	8/4/98 9:35:00 AM	Cadmium Percent Moisture
9808013-16	PBWD-3-1-2	Soil	8/4/98 9:40:00 AM	Cadmium Percent Moisture
9808013-17	PBWD-3-2-1	Soil	8/4/98 10:05:00 AM	Cadmium Percent Moisture
9808013-18	PBWD-3-2-2	Soil	8/4/98 10:10:00 AM	Cadmium Percent Moisture
9808013-19	PBWD-3-3-1	Soil	8/4/98 10:45:00 AM	Cadmium Percent Moisture
9808013-20	PBWD-3-3-2	Soil	8/4/98 10:50:00 AM	Cadmium

Lab Sample ID	Field ID	Matrix	Date .Time Sampled	Parameters requested
9808013-20	PBWD-3-3-2	Soil	8/4/98 10:50:00 AM	Percent Moisture
9808013-21	PBWD-5-1-1	Soil	8/4/98 11:30:00 AM	Cadmium Percent Moisture
9808013-22	PBWD-5-1-2	Soil	8/4/98 11:35:00 AM	Cadmium Percent Moisture
9808013-23	PBWD-5-2-1	Soil	8/4/98 12:00:00 PM	Cadmium Percent Moisture
9808013-24	PBWD-5-2-2	Soil	8/4/98 12:05:00 PM	Cadmium Percent Moisture
9808013-25	EB080498	Groundwater	8/4/98 6:35:00 AM	Cadmium

Hercules Incorporated

Parameters Requested

Lab Sample ID	Field ID	Matrix	Date_Time Sampled	Parameters requested
9808022-01	PBWD-7-1-1	Soil	8/5/98 9:05:00 AM	Cadmium Percent Moisture
9808022-02	PBWD-7-1-2	Soil	8/5/98 9:10:00 AM	Cadmium Percent Moisture
9808022-03	PBWD-7-2-1	Soil	8/5/98 9:45:00 AM	Cadmium Percent Moisture
9808022-04	PBWD-7-2-2	Soil	8/5/98 9:50:00 AM	Cadmium Percent Moisture
9808022-05	PBWD-9-1-1	Soil	8/5/98 10:20:00 AM	Cadmium Percent Moisture
9808022-06	PBWD-9-1-2	Soil	8/5/98 10:25:00 AM	Cadmium Percent Moisture
9808022-07	PBWD-11-1-1	Soil	8/5/98 11:05:00 AM	Cadmium Percent Moisture
9808022-08	PBWD-11-1-2	Soil	8/5/98 11:10:00 AM	Cadmium Percent Moisture
9808022-09	PBWD-13-1-1	Soil	8/5/98 11:40:00 AM	Cadmium Percent Moisture
9808022-10	DUP080598	Soil	8/5/98 12:01:00 AM	Cadmium Percent Moisture
9808022-11	EB080598	Groundwater	8/5/98 4:15:00 PM	Cadmium

Sample Information Summary for Hercules Incorporated

FIELD ID	Eckenfelder Lab ID	Date and Time Sampled	Matrix
EB080398	9808013-01	8/3/98 8:40:00 AM	Groundwater
W-HT14-1	9808013-02	8/3/98 11:20:00 AM	Soil
W-HT15-1	9808013-03	8/3/98 11:55:00 AM	Soil
W-HT16-1	9808013-04	8/3/98 12:10:00 PM	Soil
W-HT17-1	9808013-05	8/3/98 12:30:00 PM	Soil
W-HT18-1	9808013-06	8/3/98 12:50:00 PM	Soil
DUP080398	9808013-07	8/3/98 12:01:00 AM	Soil
DUP080398B	9808013-08	8/3/98 12:02:00 AM	Soil
PBWD-1-1-1	9808013-09	8/3/98 3:30:00 PM	Soil
PBWD-1-1-2	9808013-10	8/3/98 3:40:00 PM	Soil
PBWD-1-2-1	9808013-11	8/3/98 4:10:00 PM	Soil
PBWD-1-2-2	9808013-12	8/3/98 4:20:00 PM	Soil
PBWD-1-3-1	9808013-13	8/4/98 8:55:00 AM	Soil
PBWD-1-3-2	9808013-14	8/4/98 9:00:00 AM	Soil
PBWD-3-1-1	9808013-15	8/4/98 9:35:00 AM	Soil
PBWD-3-1-2	9808013-16	8/4/98 9:40:00 AM	Soil
PBWD-3-2-1	9808013-17	8/4/98 10:05:00 AM	Soil
PBWD-3-2-2	9808013-18	8/4/98 10:10:00 AM	Soil
PBWD-3-3-1	9808013-19	8/4/98 10:45:00 AM	Soil
PBWD-3-3-2	9808013-20	8/4/98 10:50:00 AM	Soil
PBWD-5-1-1	9808013-21	8/4/98 11:30:00 AM	Soil
PBWD-5-1-2	9808013-22	8/4/98 11:35:00 AM	Soil
PBWD-5-2-1	9808013-23	8/4/98 12:00:00 PM	Soil
PBWD-5-2-2	9808013-24	8/4/98 12:05:00 PM	Soil
EB080498	9808013-25	8/4/98 6:35:00 AM	Groundwater
PBWD-7-1-1	9808022-01	8/5/98 9:05:00 AM	Soil
PBWD-7-1-2	9808022-02	8/5/98 9:10:00 AM	Soil
PBWD-7-2-1	9808022-03	8/5/98 9:45:00 AM	Soil
PBWD-7-2-2	9808022-04	8/5/98 9:50:00 AM	Soil
PBWD-9-1-1	9808022-05	8/5/98 10:20:00 AM	Soil
PBWD-9-1-2	9808022-06	8/5/98 10:25:00 AM	Soil
PBWD-11-1-1	9808022-07	8/5/98 11:05:00 AM	Soil
PBWD-11-1-2	9808022-08	8/5/98 11:10:00 AM	Soil
PBWD-13-1-1	9808022-09	8/5/98 11:40:00 AM	Soil
DUP080598	9808022-10	8/5/98 12:01:00 AM	Soil
EB080598	9808022-11	8/5/98 4:15:00 PM	Groundwater

ECKENFELDER INC. CHAIN OF CUSTODY RECORD

№ 16294

Ship to:
ECKENFELDER INC.
227 French Landing Drive
Nashville, TN 37228
Attn: Analytical Laboratory
(615) 255-2288 (phone)
(615) 256-8332 (fax)

Send Results to:
Name Bob O'Neill
Company
Address
City & State
Phone
Fax

Send Invoice To:
Name
Company Hercules (CC LLO for Review)
Address
City & State
Phone
Purchase Order Lab has a separate PO

Details:
Page 1 of 3
Cooler No. 1 of 1
Date Shipped 8/4/98
Shipped By Fedex
Turnaround Routine
(Routine-10-15 business days/There may be a surcharge for RUSH-contact Lab)

Project No./Name Hercules, Glens Falls 0432.01
Samplers (Signature)

Lab Use Only Lab #/Temp°C	Date Sampled	Time	Comp./ Grab	Sample Location/Description	Sample Matrix	Field pH/Temp	Field Cond.	ANALYSIS REQUIRED	No. of Bottles	Lab Use Only Containers/Pres
8013-01	8/3/98	0840	Grab	EB080398	Water			Cd, Cr, Hg, Pb	1	1P, HNO3 pH<2
8013-02		1120		W-HT14-1	waste/soil			TCLP* and Cd, Cr, Hg, Pb	2	2M
8013-03		1155		W-HT15-1					2	
8013-04		1210		W-HT16-1					2	
8013-05		1230		W-HT17-1					2	
8013-06		1250		W-HT18-1					2	
8013-07		0001		DUP080398					2	
8013-08		0002		DUP080398B	Soil			Cd	1	1M
8013-09		1530		PBWD-1-1-1					1	
8013-10		1540		PBWD-1-1-2					1	

	Date/Time	
Sample Kit Prep'd by: (Signature) B. Chamberlain	7-14-98/1300	Received By: (Signature)
Relinquished by: (Signature)	8-4-98/1700	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time 8-5-98/0715	*Laboratory Delivery No.*

REMARKS
*TCLP for Cr, Cd, Hg + Pb ONLY
Charge to PO Hercules has with lab (not internal)

4-7°C

Lab Use Only
VOA Headspace Y N NA
Field Filtered Y N NA
Correct Containers Y N NA
Discrepancies Y N NA
Cust. Seals intact Y N NA
Samples Intact Y N NA
Airbill # FX
CAR #

80007

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers

ECKENFELDER INC. CHAIN OF CUSTODY RECORD

№ 16293

Ship to:
ECKENFELDER INC.
227 French Landing Drive
Nashville, TN 37228
Attn: Analytical Laboratory
(615) 255-2288 (phone)
(615) 256-8332 (fax)

Send Results to:
Name Bob O'Neill
Company
Address
City & State
Phone
Fax

Send Invoice To:
Name
Company Hercules
Address
City & State
Phone
Purchase Order Lab has separate PO

Details:
Page 2 of 3
Cooler No. 1 of 1
Date Shipped 8/4/98
Shipped By Fedex
Turnaround Routine
(Routine-10-15 business days/There may be a surcharge for RUSH-contact Lab)

Project No./Name Hercules Glens Falls 0432.01
Samplers (Signature) Robert J. O'Neill

Lab Use Only Lab #/Temp°C	Date Sampled	Time	Comp./ Grab	Sample Location/Description	Sample Matrix	Field pH/Temp	Field Cond.	ANALYSIS REQUIRED	No. of Bottles	Lab Use Only Containers/Pres.
8013-11	8/3/98	1610	Grab	PBW-1-2-1	Soil			Cd	1	1M
8013-12	"	1620	"	PBW-1-2-2	"			"	1	"
8013-13	8/4/98	0855	"	PBWD-1-3-1	"			"	1	"
8013-14	"	0900	"	PBWD-1-3-2	"			"	1	"
8013-15	"	0935	"	PBWD-3-1-1	"			"	1	"
8013-16	"	0940	"	PBWD-3-1-2	"			"	1	"
8013-17	"	1005	"	PBWD-3-2-1	"			"	1	"
8013-18	"	1010	"	PBWD-3-2-2	"			"	1	"
8013-19	"	1045	"	PBWD-3-3-1	"			"	1	"
8013-20	"	1050	"	PBWD-3-3-2	"			"	1	"

	Date/Time		
Sample Kit Prep'd by: (Signature) B. Dawn Switzer	7-14-98/1300	Received By: (Signature) Robert J. O'Neill	
Relinquished by: (Signature) Robert J. O'Neill	8/4/1200	Received By: (Signature)	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)	
Received for Laboratory by: (Signature)	Date/Time 8-5-98/0915	Laboratory Delivery No.	

REMARKS
Charge to PO Hercules has own lab. (not internal.)

4 7°C

Lab Use Only

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals intact	Y	N	NA
Samples Intact	Y	N	NA

Airbill # FX
CAR #

80013

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers

ECKENFELDER INC. CHAIN OF CUSTODY RECORD

№ 16292

Ship to:
ECKENFELDER INC.
227 French Landing Drive
Nashville, TN 37228
Attn: Analytical Laboratory
(615) 255-2288 (phone)
(615) 256-8332 (fax)

Send Results to:
Name Bob O'Neill
Company
Address
City & State
Phone
Fax

Send Invoice To:
Name
Company Hercules
Address
City & State
Phone
Purchase Order Lab has separate Purchase Order

Details:
Page 3 of 3
Cooler No. 1 of 1
Date Shipped 8/4/98
Shipped By Fed-x
Turnaround Routine
(Routine-10-15 business days/There may be a surcharge for RUSH-contact Lab)

Project No./Name Hercules, Glens Falls E432.01

Samplers (Signature) [signature] [signature]

Lab Use Only Lab #/Temp°C	Date Sampled	Time	Comp./Grab	Sample Location/Description	Sample Matrix	Field pH/Temp	Field Cond.	ANALYSIS REQUIRED	No. of Bottles	Lab Use Only Containers/Pres.
8013-21	8/4/98	1130	Grab	PBWD-5-1-1	Soil	T	T	Cd	1	1m
8013-22	|	1135	|	PBWD-5-1-2	|	|	|	|	1	|
8013-23	|	1200	|	PBWD-5-2-1	|	|	|	|	1	|
8013-24	|	1205	|	PBWD-5-2-2	|	|	|	|	1	↓
8013-25	|	0635	|	EB080498	Water	|	|	|	1	1B-HNO, pH<2

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
B. [signature]	7-14-98/1300	
Relinquished by: (Signature) [signature]	Date/Time 8/4/98/1700	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature) [signature]	Date/Time 8-5-98/0715	*Laboratory Delivery No.*

REMARKS
Charge to P.O. Hercules has with laboratory. (not internal)

4.2°C

Lab Use Only
VOA Headspace Y N (NA)
Field Filtered Y (N) NA
Correct Containers (Y) N NA
Discrepancies Y (N) NA
Cust. Seals intact Y N (NA)
Samples Intact (Y) N NA
Airbill # FX
CAR #

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers

600009

ECKENFELDER REQUEST FOR CHAIN OF CUSTODY RECORD

№ 17222

Ship to:
ECKENFELDER INC.
227 French Landing Drive
Nashville, TN 37228
Attn: Analytical Laboratory
(615) 255-2288 (phone)
(615) 256-8332 (fax)

Send Results to:
Name Bob O'Neill
Company
Address
City & State
Phone
Fax

Send Invoice To:
Name
Company Hercules
Address
City & State
Phone
Purchase Order Separate PO w/ Lab

Details:
Page 1 of 2
Cooler No. 1 of 1
Date Shipped 8-5-98
Shipped By Fedex
Turnaround Standard Routine
(Routine-10-15 business days/There may be a surcharge for RUSH-contact Lab)

Project No./Name: Hercules, Glens Falls 0432.01
Samplers (Signature): Robert L O'Neill / [signature]

Lab Use Only Lab #/Temp°C	Date Sampled	Time	Comp./Grab	Sample Location/Description	Sample Matrix	Field pH/Temp	Field Cond.	ANALYSIS REQUIRED	No. of Bottles	Lab Use Only Containers/Pres.
8022-01	8-5-98	0905	Grab	PBWD-7-1-1	Soil			Cd	1	1M
8022-02		0910		PBWD-7-1-2					1	
8022-03		0945		PBWD-7-2-1					1	
8022-04		0950		PBWD-7-2-2					1	
8022-05		1020		PBWD-9-1-1					1	
8022-06		1025		PBWD-9-1-2					1	
8022-07		1105		PBWD-11-1-1					1	
8022-08		1110		PBWD-11-1-2					1	
8022-09		1140		PBWD-13-1-1					1	
8022-10		0001		DUP080598					1	

Signature	Date/Time	Received By
Sample Kit Prep'd by: (Signature) Mary Kelly I ranor	7-30-98 1600	Received By: (Signature) [signature]
Relinquished by: (Signature) Robert L O'Neill	8-5-98/1800	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature) [signature]	8-6-98 0920	Laboratory Delivery No.

REMARKS
Lab costs to separate Hercules P.O. (not to job #)
5.2°C

Lab Use Only

VOA Headspace	Y	N	NA
Field Filtered	Y	N	NA
Correct Containers	Y	N	NA
Discrepancies	Y	N	NA
Cust. Seals intact	Y	N	NA
Samples Intact	Y	N	NA

Airbill # FX 805350970589
CAR #

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers

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ECKENFELDER INC. CHAIN OF CUSTODY RECORD

№ 17223

Ship to:
ECKENFELDER INC.
227 French Landing Drive
Nashville, TN 37228
Attn: Analytical Laboratory
(615) 255-2288 (phone)
(615) 256-8332 (fax)

Send Results to:
Name Bob O'Neill
Company
Address
City & State
Phone
Fax

Send Invoice To:
Name
Company Hercules
Address
City & State
Phone
Purchase Order Separate PO for Lab

Details:
Page 2 of 2
Cooler No. 1 of 1
Date Shipped 8-5-98
Shipped By Fedex
Turnaround Routine
(Routine-10-15 business days/There may be a surcharge for RUSH-contact Lab)

Project No./Name Hercules, Glens Falls 0432.01

Samplers (Signature) [signature]

Lab Use Only Lab #/Temp°C	Date Sampled	Time	Comp./Grab	Sample Location/Description	Sample Matrix	Field pH/Temp	Field Cond.	ANALYSIS REQUIRED	No. of Bottles	Lab Use Only Containers/Pres.
8022-11	8-5-98	1615	Grab	EB080598	Water	—	—	Total Cd	1	1B-HNO2 pH<2

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
Mary Kelly Inanir	7-31-98 / 1600	[signature]
Relinquished by: (Signature) [signature]	Date/Time 8-5-98/1800	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature) [signature]	Date/Time 8-6-98 / 0920	Laboratory Delivery No.

REMARKS
Lab Costs to separate Hercules PO (not to job #)
5.2°C

Lab Use Only

	Y	N	NA
VOA Headspace	Y	N	NA (circled)
Field Filtered	Y	N (circled)	NA
Correct Containers	Y (circled)	N	NA
Discrepancies	Y	N (circled)	NA
Cust. Seals intact	Y (circled)	N	NA
Samples Intact	Y (circled)	N	NA

Airbill # FX 805350470
CAR #

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers

000011

ECKENFELDER INC.®

COOLER RECEIPT FORM

PROJECT: Hercules - Glens Falls LIMS# 8013-01 → 8013-25

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS AND/OR COMPLETE A CORRECTIVE ACTION CONCERNING CHECK-IN PROBLEMS.

A. PRELIMINARY EXAMINATION PHASE: DATE COOLER OPENED: 8/5/98 C-of-C Number 16294, 16293, 16292

by (print) Gary Forsythe (sign) [signature]

1. Did cooler come with a shipping slip (air bill, etc.)? YES NO

   If YES, enter carrier Name & air bill number here: Fed-Ex # 853509706 15

2. Were custody seals on outside of cooler? YES NO

   How many & where: NA, seal date NA, seal name NA

3. Were custody seals unbroken and intact at the date and time of arrival? NA YES NO

4. Did you screen samples for radioactivity using the Geiger Counter? YES NO

5. Were custody papers sealed in a plastic bag & taped inside to the lid? YES NO

6. Were custody papers filled out properly (ink, signed, etc.)? YES NO

7. Did you sign custody papers in the appropriate place? YES NO

8. Was project identifiable from custody papers? If yes, enter project name at the top of this form. YES NO

9. If required, was enough ice used? Type of ice: bagged cubes Temp 4.7 °C YES NO

10. Have designated person initial here to acknowledge receipt of cooler: BR (date) 8/5/98

B. LOG-IN PHASE: Date samples were logged in: 8/5/98

by (print) Brian Richard (sign) [signature]

11. Describe type of packing in cooler: Bubble wrap, Plastic bags, Ice, Vermiculite

12. Were all bottles sealed in separate plastic bags? YES NO

13. Did all bottles arrive unbroken & were labels in good condition? YES NO

14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? YES NO

15. Did all bottle labels agree with custody papers? YES NO

16. Were correct containers used for the tests indicated? YES NO

17. Were correct preservatives added to samples? YES NO

18. Was a sufficient amount of sample sent for tests indicated YES NO

19. Were bubbles absent in volatile samples? If NO, list by Sample # NA YES NO

20. Was the project manager called and status discussed? If yes, give details on the back of this form YES NO

21. Who was called? By whom? (date)

ECKENFELDER INC.®

COOLER RECEIPT FORM

PROJECT: Hercules - Glens Falls / Hercules

BR 8/6/98

~~8023-01 - 18023-14~~

LIMS# 8022-01 - 18022-11

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS AND/OR COMPLETE A CORRECTIVE ACTION CONCERNING CHECK-IN PROBLEMS.

A. PRELIMINARY EXAMINATION PHASE: DATE COOLER OPENED: 8/6/98 C-of-C Number 17222, 17223

by (print) Gary Forsythe (sign) [signature]

1. Did cooler come with a shipping slip (air bill, etc.)? YES NO

   If YES, enter carrier Name & air bill number here: Fed-Ex #805350970589

2. Were custody seals on outside of cooler? YES NO

   How many & where: 2-Lid, seal date 8/5/98, seal name RLO

3. Were custody seals unbroken and intact at the date and time of arrival? YES NO

4. Did you screen samples for radioactivity using the Geiger Counter? YES NO

5. Were custody papers sealed in a plastic bag & taped inside to the lid? YES NO

6. Were custody papers filled out properly (ink, signed, etc.)? YES NO

7. Did you sign custody papers in the appropriate place? YES NO

8. Was project identifiable from custody papers? If yes, enter project name at the top of this form. YES NO

9. If required, was enough ice used? Type of ice: bagged cubes Temp 5.2°C YES NO

10. Have designated person initial here to acknowledge receipt of cooler: BR (date) 8/6/98

B. LOG-IN PHASE: Date samples were logged in: 8/6/98

by (print) Brian Richard (sign) [signature]

11. Describe type of packing in cooler: Vermiculite, plastic bags, Ice

12. Were all bottles sealed in separate plastic bags? YES NO

13. Did all bottles arrive unbroken & were labels in good condition? YES NO

14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? YES NO

15. Did all bottle labels agree with custody papers? YES NO

16. Were correct containers used for the tests indicated? YES NO

17. Were correct preservatives added to samples? YES NO

18. Was a sufficient amount of sample sent for tests indicated YES NO

19. Were bubbles absent in volatile samples? If NO, list by Sample # NA YES NO

20. Was the project manager called and status discussed? If yes, give details on the back of this form YES NO

21. Who was called? By whom? (date)

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ECKENFELDER SAMPLE NUMBER				9808013-01
CLIENT SAMPLE DESCRIPTION				EB080398 8/3/98 8:40:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	1.0	6010A/200.7	µg/L	U
Chromium	5.0	6010A/200.7	µg/L	U
Lead	5.0	6010A/200.7	µg/L	U
Mercury	0.20	7470A/245.1	µg/L	U

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615.255.2288
FAX 615.256.8332

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ECKENFELDER SAMPLE NUMBER					9808013-02
CLIENT SAMPLE DESCRIPTION					W-HT14-1 8/3/98 11:20:00 AM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	NA	0.94	6010A/200.7	mg/kg (Dry)	110
Chromium	NA	0.47	6010A/200.7	mg/kg (Dry)	4500
Lead	NA	2.4	6010A/200.7	mg/kg (Dry)	5000
Mercury	NA	0.94	7470A/245.1	mg/kg (Dry)	12 *
% Moisture	NA	1.0	2540**	%	47
Cadmium-TCLP	1.0	0.010	6010A/200.7	mg/L	0.69
Chromium-TCLP	5.0	0.050	6010A/200.7	mg/L	0.23
Lead-TCLP	5.0	0.050	6010A/200.7	mg/L	2.4
Mercury - TCLP	0.20	0.0020	7470A/245.1	mg/L	U
Initial pH	NA	NA	9040B/150.1	units	7.0
Final pH	NA	NA	9040B/150.1	units	5.3

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ECKENFELDER SAMPLE NUMBER					9808013-03
CLIENT SAMPLE DESCRIPTION					W-HT15-1 8/3/98 11:55:00 AM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	NA	0.58	6010A/200.7	mg/kg (Dry)	8.9
Chromium	NA	0.58	6010A/200.7	mg/kg (Dry)	4300
Lead	NA	2.9	6010A/200.7	mg/kg (Dry)	4900
Mercury	NA	0.12	7470A/245.1	mg/kg (Dry)	1.9 *
% Moisture	NA	1.0	2540**	%	57
Cadmium-TCLP	1.0	0.010	6010A/200.7	mg/L	U
Chromium-TCLP	5.0	0.050	6010A/200.7	mg/L	0.21
Lead-TCLP	5.0	0.050	6010A/200.7	mg/L	0.32
Mercury - TCLP	0.20	0.0020	7470A/245.1	mg/L	U
Initial pH	NA	NA	9040B/150.1	units	6.8
Final pH	NA	NA	9040B/150.1	units	4.2

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ECKENFELDER SAMPLE NUMBER					9808013-04
CLIENT SAMPLE DESCRIPTION					W-HT16-1 8/3/98 12:10:00 PM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	NA	0.13	6010A/200.7	mg/kg (Dry)	26
Chromium	NA	0.64	6010A/200.7	mg/kg (Dry)	5100
Lead	NA	3.2	6010A/200.7	mg/kg (Dry)	7500
Mercury	NA	0.13	7470A/245.1	mg/kg (Dry)	0.67
% Moisture	NA	1.0	2540**	%	61
Cadmium-TCLP	1.0	0.010	6010A/200.7	mg/L	U
Chromium-TCLP	5.0	0.050	6010A/200.7	mg/L	0.14
Lead-TCLP	5.0	0.050	6010A/200.7	mg/L	0.47
Mercury - TCLP	0.20	0.0020	7470A/245.1	mg/L	U
Initial pH	NA	NA	9040B/150.1	units	6.5
Final pH	NA	NA	9040B/150.1	units	5.5

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ECKENFELDER SAMPLE NUMBER					9808013-05
CLIENT SAMPLE DESCRIPTION					W-HT17-1 8/3/98 12:30:00 PM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	NA	0.66	6010A/200.7	mg/kg (Dry)	36
Chromium	NA	3.3	6010A/200.7	mg/kg (Dry)	9700
Lead	NA	6.6	6010A/200.7	mg/kg (Dry)	12000
Mercury	NA	0.13	7470A/245.1	mg/kg (Dry)	0.84
% Moisture	NA	1.0	2540**	%	62
Cadmium-TCLP	1.0	0.010	6010A/200.7	mg/L	0.12
Chromium-TCLP	5.0	0.050	6010A/200.7	mg/L	0.099
Lead-TCLP	5.0	0.050	6010A/200.7	mg/L	5.7
Mercury - TCLP	0.20	0.0020	7470A/245.1	mg/L	U
Initial pH	NA	NA	9040B/150.1	units	6.7
Final pH	NA	NA	9040B/150.1	units	5.0

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ECKENFELDER SAMPLE NUMBER					9808013-06
CLIENT SAMPLE DESCRIPTION					W-HT18-1 8/3/98 12:50:00 PM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	NA	0.64	6010A/200.7	mg/kg (Dry)	76
Chromium	NA	0.64	6010A/200.7	mg/kg (Dry)	3400
Lead	NA	3.2	6010A/200.7	mg/kg (Dry)	4300
Mercury	NA	0.13	7470A/245.1	mg/kg (Dry)	0.82 *
% Moisture	NA	1.0	2540**	%	61
Cadmium-TCLP	1.0	0.010	6010A/200.7	mg/L	0.38
Chromium-TCLP	5.0	0.050	6010A/200.7	mg/L	U
Lead-TCLP	5.0	0.050	6010A/200.7	mg/L	1.6
Mercury - TCLP	0.20	0.0020	7470A/245.1	mg/L	U
Initial pH	NA	NA	9040B/150.1	units	6.6
Final pH	NA	NA	9040B/150.1	units	5.1

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ECKENFELDER SAMPLE NUMBER					9808013-07
CLIENT SAMPLE DESCRIPTION					DUP080398 8/3/98 12:01:00 AM
ANALYTES	REGULATORY LIMITS	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	NA	0.56	6010A/200.7	mg/kg (Dry)	170
Chromium	NA	2.8	6010A/200.7	mg/kg (Dry)	8200
Lead	NA	2.8	6010A/200.7	mg/kg (Dry)	7300
Mercury	NA	1.1	7470A/245.1	mg/kg (Dry)	44
% Moisture	NA	1.0	2540**	%	55
Cadmium-TCLP	1.0	0.010	6010A/200.7	mg/L	0.89
Chromium-TCLP	5.0	0.050	6010A/200.7	mg/L	0.24
Lead-TCLP	5.0	0.050	6010A/200.7	mg/L	3.3
Mercury - TCLP	0.20	0.0020	7470A/245.1	mg/L	U
Initial pH	NA	NA	9040B/150.1	units	6.8
Final pH	NA	NA	9040B/150.1	units	4.9

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ECKENFELDER SAMPLE NUMBER				9808013-08
CLIENT SAMPLE DESCRIPTION				DUP080398B 8/3/98 12:02:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.072 1.0	6010A/200.7 2540**	mg/kg (Dry) %	250 31

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ECKENFELDER SAMPLE NUMBER				9808013-09
CLIENT SAMPLE DESCRIPTION				PBWD-1-1-1 8/3/98 3:30:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.074 1.0	6010A/200.7 2540**	mg/kg (Dry) %	240 32

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ECKENFELDER SAMPLE NUMBER				9808013-10
CLIENT SAMPLE DESCRIPTION				PBWD-1-1-2 8/3/98 3:40:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.077 1.0	6010A/200.7 2540**	mg/kg (Dry) %	32 35

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ECKENFELDER SAMPLE NUMBER				9808013-11
CLIENT SAMPLE DESCRIPTION				PBWD-1-2-1 8/3/98 4:10:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.058	6010A/200.7	mg/kg (Dry)	12
% Moisture	1.0	2540**	%	14

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ECKENFELDER SAMPLE NUMBER				9808013-12
CLIENT SAMPLE DESCRIPTION				PBWD-1-2-2 8/3/98 4:20:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.058	6010A/200.7	mg/kg (Dry)	1.0
% Moisture	1.0	2540**	%	14

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ECKENFELDER SAMPLE NUMBER				9808013-13
CLIENT SAMPLE DESCRIPTION				PBWD-1-3-1 8/4/98 8:55:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.060	6010A/200.7	mg/kg (Dry)	20
% Moisture	1.0	2540**	%	16

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ECKENFELDER SAMPLE NUMBER				9808013-14
CLIENT SAMPLE DESCRIPTION				PBWD-1-3-2 8/4/98 9:00:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.065 1.0	6010A/200.7 2540**	mg/kg (Dry) %	0.091 23

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ECKENFELDER SAMPLE NUMBER				9808013-15
CLIENT SAMPLE DESCRIPTION				PBWD-3-1-1 8/4/98 9:35:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.055 1.0	6010A/200.7 2540**	mg/kg (Dry) %	0.74 9.8

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ECKENFELDER SAMPLE NUMBER				9808013-16
CLIENT SAMPLE DESCRIPTION				PBWD-3-1-2 8/4/98 9:40:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.060 1.0	6010A/200.7 2540**	mg/kg (Dry) %	0.33 17

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ECKENFELDER SAMPLE NUMBER				9808013-17
CLIENT SAMPLE DESCRIPTION				PBWD-3-2-1 8/4/98 10:05:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.053 1.0	6010A/200.7 2540**	mg/kg (Dry) %	4.3 6.3

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ECKENFELDER SAMPLE NUMBER				9808013-18
CLIENT SAMPLE DESCRIPTION				PBWD-3-2-2 8/4/98 10:10:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.059 1.0	6010A/200.7 2540**	mg/kg (Dry) %	3.5 15

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ECKENFELDER SAMPLE NUMBER				9808013-19
CLIENT SAMPLE DESCRIPTION				PBWD-3-3-1 8/4/98 10:45:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.069	6010A/200.7	mg/kg (Dry)	63
% Moisture	1.0	2540**	%	28

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ECKENFELDER SAMPLE NUMBER				9808013-20
CLIENT SAMPLE DESCRIPTION				PBWD-3-3-2 8/4/98 10:50:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.081	6010A/200.7	mg/kg (Dry)	16
% Moisture	1.0	2540**	%	38

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ECKENFELDER SAMPLE NUMBER				9808013-21
CLIENT SAMPLE DESCRIPTION				PBWD-5-1-1 8/4/98 11:30:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.068 1.0	6010A/200.7 2540**	mg/kg (Dry) %	0.95 27

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ECKENFELDER SAMPLE NUMBER				9808013-22
CLIENT SAMPLE DESCRIPTION				PBWD-5-1-2 8/4/98 11:35:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.096 1.0	6010A/200.7 2540**	mg/kg (Dry) %	0.54 * 48

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ECKENFELDER SAMPLE NUMBER				9808013-23
CLIENT SAMPLE DESCRIPTION				PBWD-5-2-1 8/4/98 12:00:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.065 1.0	6010A/200.7 2540**	mg/kg (Dry) %	7.3 * 23

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ECKENFELDER SAMPLE NUMBER				9808013-24
CLIENT SAMPLE DESCRIPTION				PBWD-5-2-2 8/4/98 12:05:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.081 1.0	6010A/200.7 2540**	mg/kg (Dry) %	3.8 * 38

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ECKENFELDER SAMPLE NUMBER				9808013-25
CLIENT SAMPLE DESCRIPTION				EB080498 8/4/98 6:35:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	1.0	6010A/200.7	µg/L	U

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ECKENFELDER SAMPLE NUMBER				9808022-01
CLIENT SAMPLE DESCRIPTION				PBWD-7-1-1 8/5/98 9:05:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.075	6010A/200.7	mg/kg (Dry)	1.2 *
% Moisture	1.0	2540**	%	33

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ECKENFELDER SAMPLE NUMBER				9808022-02
CLIENT SAMPLE DESCRIPTION				PBWD-7-1-2 8/5/98 9:10:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.089	6010A/200.7	mg/kg (Dry)	0.22 *
% Moisture	1.0	2540**	%	44

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ECKENFELDER SAMPLE NUMBER				9808022-03
CLIENT SAMPLE DESCRIPTION				PBWD-7-2-1 8/5/98 9:45:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.069 1.0	6010A/200.7 2540**	mg/kg (Dry) %	5.7 * 28

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ECKENFELDER SAMPLE NUMBER				9808022-04
CLIENT SAMPLE DESCRIPTION				PBWD-7-2-2 8/5/98 9:50:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.077 1.0	6010A/200.7 2540**	mg/kg (Dry) %	1.3 * 35

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ECKENFELDER SAMPLE NUMBER				9808022-05
CLIENT SAMPLE DESCRIPTION				PBWD-9-1-1 8/5/98 10:20:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	0.069	6010A/200.7	mg/kg (Dry)	9.4 *
% Moisture	1.0	2540**	%	28

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ECKENFELDER SAMPLE NUMBER				9808022-06
CLIENT SAMPLE DESCRIPTION				PBWD-9-1-2 8/5/98 10:25:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.083 1.0	6010A/200.7 2540**	mg/kg (Dry) %	2.4 * 40

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ECKENFELDER SAMPLE NUMBER				9808022-07
CLIENT SAMPLE DESCRIPTION				PBWD-11-1-1 8/5/98 11:05:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.096 1.0	6010A/200.7 2540**	mg/kg (Dry) %	16 * 48

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ECKENFELDER SAMPLE NUMBER				9808022-08
CLIENT SAMPLE DESCRIPTION				PBWD-11-1-2 8/5/98 11:10:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.11 1.0	6010A/200.7 2540**	mg/kg (Dry) %	8.9 * 56

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ECKENFELDER SAMPLE NUMBER				9808022-09
CLIENT SAMPLE DESCRIPTION				PBWD-13-1-1 8/5/98 11:40:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.088 1.0	6010A/200.7 2540**	mg/kg (Dry) %	3.2 * 43

SEE ATTACHED PAGE FOR DEFINITION OF TERMS AND QUALIFIERS

ECKENFELDER INC.®

CLIENT: Hercules Incorporated #0432.01
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/06/98
DATE REPORTED: 09/15/98

ECKENFELDER SAMPLE NUMBER				9808022-10
CLIENT SAMPLE DESCRIPTION				DUP080598 8/5/98 12:01:00 AM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium % Moisture	0.093 1.0	6010A/200.7 2540**	mg/kg (Dry) %	1.9 * 46

SEE ATTACHED PAGE FOR DEFINITION OF TERMS AND QUALIFIERS

ECKENFELDER INC.®

CLIENT: Hercules Incorporated #0432.01
DATE SAMPLED: 08/05/98
DATE RECEIVED: 08/06/98
DATE REPORTED: 09/15/98

ECKENFELDER SAMPLE NUMBER				9808022-11
CLIENT SAMPLE DESCRIPTION				EB080598 8/5/98 4:15:00 PM
ANALYTES	REPORTING LIMITS	USEPA METHOD	UNITS	CONC
Cadmium	1.0	6010A/200.7	µg/L	U

SEE ATTACHED PAGE FOR DEFINITION OF TERMS AND QUALIFIERS

ECKENFELDER INC.

D. RICK DAVIS
VICE PRESIDENT/ANALYTICAL & TESTING SERVICES

ANALYTICAL REPORT NOTES, TERMS AND QUALIFIERS (INORGANIC)

Notes:

The metals and cyanide reporting limits (RLs) have been statistically determined to be no less than 3 standard deviations as defined in 40 CFR 136, Appendix B, Revision 1.11. All other reporting limits are referenced from the specific analytical method.

Terms:

NA	Not Applicable
NR	Not Requested
U	Below Reporting Limits

Qualifiers:

B	The reported value is less than the practical quantitation limit (PQL, project defined) but greater than or equal to the RL.
E	The reported value is estimated due to the presence of matrix interference.
N	Predigested spike recovery not within control limits.
W	Post digestion spike recovery not within control limits.
*	RPD or absolute difference for Duplicate analysis not within control limits.
**	Reference Standard Methods 17th edition.
(1)	pH analyzed outside USEPA specified holding time. pH must be measured immediately after sample collection.
(2)	The sample pH did not meet the preservation guidelines. Therefore the pH was adjusted upon receipt.
(3)	The sample had to be diluted because of matrix interferences.
(4)	Reference Standard Methods 17th edition for the distillation method.
(5)	The sample was analyzed out of the USEPA holding time.
(6)	The sample was received in the laboratory out of the USEPA holding time.
(7)	The shipping cooler temperature exceeded 6°C upon receipt to ECKENFELDER INC.
(8)	When the concentration of the analyte is below the detection limit, the detection limit must be divided by the %Solids (in decimal form) in order to obtain the sample's true detection limit on a dry weight basis.
(9)	Analysis was subcontracted

Hercules Inc. # 0432.01
ICP Metals
Batch 98H01

Sample Number	Field ID	Date Sampled	Time Sampled	Date Received	Date Prepared	Date Analyzed	Time Analyzed	Dilution
PBW					08/05/98	08/11/98	22:58	1
PBS					08/10/98	08/12/98	4:44	1
LCSW					08/05/98	08/11/98	23:05	1
LCSS					08/10/98	08/12/98	4:52	1
9808013-01	EB080398	08/03/98	8:40	08/05/98	08/05/98	08/12/98	0:15	1
9808013-02	W-HT14-1	08/03/98	11:20	08/05/98	08/10/98	08/12/98	5:00	1
9808013-02	W-HT14-1	08/03/98	11:20	08/05/98	08/10/98	08/12/98	5:08	Pb X5
9808013-02	W-HT14-1	08/03/98	11:20	08/05/98	08/10/98	08/13/98	15:11	Cd X10
9808013-02 MS	W-HT14-1	08/03/98	11:20	08/05/98	08/10/98	08/12/98	5:17	1
9808013-02 MSD	W-HT14-1	08/03/98	11:20	08/05/98	08/10/98	08/12/98	5:25	1
9808013-03	W-HT15-1	08/03/98	11:55	08/05/98	08/10/98	08/12/98	5:41	1
9808013-03	W-HT15-1	08/03/98	11:55	08/05/98	08/10/98	08/13/98	15:24	Cd, Pb X5
9808013-04	W-HT16-1	08/03/98	12:10	08/05/98	08/10/98	08/12/98	5:49	1
9808013-04	W-HT16-1	08/03/98	12:10	08/05/98	08/10/98	08/13/98	16:11	Pb X5
9808013-05	W-HT17-1	08/03/98	12:30	08/05/98	08/10/98	08/13/98	16:19	5
9808013-05	W-HT17-1	08/03/98	12:30	08/05/98	08/10/98	08/13/98	16:29	Pb X10
9808013-06	W-HT18-1	08/03/98	12:50	08/05/98	08/10/98	08/12/98	6:31	1
9808013-06	W-HT18-1	08/03/98	12:50	08/05/98	08/10/98	08/13/98	16:36	Cd, Pb X5
9808013-07	DUP080398	08/03/98	0:01	08/05/98	08/10/98	08/13/98	16:44	5
9808013-08	DUP080398B	08/03/98	0:02	08/05/98	08/10/98	08/12/98	6:47	1
9808013-09	PBWD-1-1-1	08/03/98	15:30	08/05/98	08/10/98	08/12/98	6:56	1
9808013-10	PBWD-1-1-2	08/03/98	15:40	08/05/98	08/10/98	08/12/98	7:04	1
9808013-11	PBWD-1-2-1	08/03/98	16:10	08/05/98	08/10/98	08/12/98	7:12	1
9808013-12	PBWD-1-2-2	08/03/98	16:20	08/05/98	08/10/98	08/12/98	7:20	1
9808013-13	PBWD-1-3-1	08/04/98	8:55	08/05/98	08/10/98	08/12/98	7:28	1
9808013-14	PBWD-1-3-2	08/04/98	9:00	08/05/98	08/10/98	08/12/98	8:01	1
9808013-15	PBWD-3-1-1	08/04/98	9:35	08/05/98	08/10/98	08/12/98	8:09	1
9808013-16	PBWD-3-1-2	08/04/98	9:40	08/05/98	08/10/98	08/12/98	8:18	1
9808013-17	PBWD-3-2-1	08/04/98	10:05	08/05/98	08/10/98	08/12/98	8:26	1
9808013-18	PBWD-3-2-2	08/04/98	10:10	08/05/98	08/10/98	08/12/98	8:34	1
9808013-19	PBWD-3-3-1	08/04/98	10:45	08/05/98	08/10/98	08/12/98	8:42	1
9808013-20	PBWD-3-3-2	08/04/98	10:50	08/05/98	08/10/98	08/12/98	8:51	1
9808013-21	PBWD-5-1-1	08/04/98	11:30	08/05/98	08/10/98	08/12/98	8:59	1
9808013-25	EB080498	08/04/98	6:35	08/05/98	08/05/98	08/12/98	0:22	1

Hercules Inc. # 0432.01
ICP Metals
Batch 98H02

Sample Number	Field ID	Date Sampled	Time Sampled	Date Received	Date Prepared	Date Analyzed	Time Analyzed	Dilution
PBW					08/05/98	08/11/98	22:58	1
PBS					08/10/98	08/12/98	9:40	1
LCSW					08/05/98	08/11/98	23:05	1
LCSS					08/10/98	08/12/98	9:48	1
9808013-22	PBWD-5-1-2	08/04/98	11:35	08/05/98	08/10/98	08/12/98	9:56	1
9808013-23	PBWD-5-2-1	08/04/98	12:00	08/05/98	08/10/98	08/12/98	10:05	1
9808013-24	PBWD-5-2-2	08/04/98	12:05	08/05/98	08/10/98	08/12/98	10:13	1
9808022-01	PBWD-7-1-1	08/05/98	9:05	08/06/98	08/10/98	08/12/98	10:21	1
9808022-02	PBWD-7-1-2	08/05/98	9:10	08/06/98	08/10/98	08/12/98	10:29	1
9808022-03	PBWD-7-2-1	08/05/98	9:45	08/06/98	08/10/98	08/12/98	10:37	1
9808022-04	PBWD-7-2-2	08/05/98	9:50	08/06/98	08/10/98	08/12/98	10:46	1
9808022-04 MS	PBWD-7-2-2	08/05/98	9:50	08/06/98	08/10/98	08/12/98	11:26	1
9808022-04 MSD	PBWD-7-2-2	08/05/98	9:50	08/06/98	08/10/98	08/12/98	11:35	1
9808022-05	PBWD-9-1-1	08/05/98	10:20	08/06/98	08/10/98	08/12/98	11:51	1
9808022-06	PBWD-9-1-2	08/05/98	10:25	08/06/98	08/10/98	08/12/98	11:59	1
9808022-07	PBWD-11-1-1	08/05/98	11:05	08/06/98	08/10/98	08/12/98	12:07	1
9808022-08	PBWD-11-1-2	08/05/98	11:10	08/06/98	08/10/98	08/12/98	12:16	1
9808022-09	PBWD-13-1-1	08/05/98	11:40	08/06/98	08/10/98	08/12/98	12:24	1
9808022-10	DUP080598	08/05/98	0:01	08/06/98	08/10/98	08/12/98	12:32	1
9808022-11	EB080598	08/05/98	16:15	08/06/98	08/05/98	08/12/98	0:29	1

Hercules Inc. # 0432.01
ICP Metals - TCLP
Batch 98H03

Sample Number	Field ID	Date Sampled	Time Sampled	Date Received	Date Prepared	Date Analyzed	Time Analyzed	Dilution
PBW					08/16/98	08/19/98	5:31	1
LCSW					08/16/98	08/19/98	5:38	1
9808013-02	W-HT14-1	08/03/98	11:20	08/05/98	08/16/98	08/19/98	5:46	10
9808013-03	W-HT15-1	08/03/98	11:55	08/05/98	08/16/98	08/19/98	5:55	10
9808013-04	W-HT16-1	08/03/98	12:10	08/05/98	08/16/98	08/19/98	6:03	10
9808013-05	W-HT17-1	08/03/98	12:30	08/05/98	08/16/98	08/19/98	6:11	10
9808013-06	W-HT18-1	08/03/98	12:50	08/05/98	08/16/98	08/19/98	6:19	10
9808013-07	DUP080398B	08/03/98	0:01	08/05/98	08/16/98	08/19/98	6:27	10
9808013-07 MS	DUP080398B	08/03/98	0:01	08/05/98	08/16/98	08/19/98	6:35	10

Hercules Inc. # 0432.01
Mercury
Batch 98H04

Sample Number	Field ID	Date Sampled	Time Sampled	Date Received	Date Prepared	Date Analyzed	Time Analyzed	Dilution
PBW					08/12/98	08/13/98	13:41	1
PBS					08/12/98	08/13/98	10:58	1
LCSW					08/12/98	08/13/98	13:46	1
LCSS					08/12/98	08/13/98	11:07	1
9808013-01	EB080398	08/03/98	8:40	08/05/98	08/12/98	08/13/98	14:04	1
9808013-02	W-HT14-1	08/03/98	11:20	08/05/98	08/12/98	08/13/98	11:15	10
9808013-03	W-HT15-1	08/03/98	11:55	08/05/98	08/12/98	08/13/98	11:24	1
9808013-03 MS	W-HT15-1	08/03/98	11:55	08/05/98	08/12/98	08/13/98	11:33	1
9808013-03 MSD	W-HT15-1	08/03/98	11:55	08/05/98	08/12/98	08/13/98	11:41	1
9808013-04	W-HT16-1	08/03/98	12:10	08/05/98	08/12/98	08/13/98	11:59	1
9808013-05	W-HT17-1	08/03/98	12:30	08/05/98	08/12/98	08/13/98	12:07	1
9808013-06	W-HT18-1	08/03/98	12:50	08/05/98	08/12/98	08/13/98	12:16	1
9808013-07	DUP080398	08/03/98	0:01	08/05/98	08/12/98	08/13/98	12:24	10

Hercules Inc. # 0432.01
Mercury - TCLP
Batch 98H05

Sample Number	Field ID	Date Sampled	Time Sampled	Date Received	Date Prepared	Date Analyzed	Time Analyzed	Dilution
PBW					08/28/98	08/31/98	15:20	1
LCSW					08/28/98	08/31/98	15:23	1
9808013-02	W-HT14-1	08/03/98	11:20	08/05/98	08/28/98	08/31/98	15:26	10
9808013-03	W-HT15-1	08/03/98	11:55	08/05/98	08/28/98	08/31/98	15:29	10
9808013-04	W-HT16-1	08/03/98	12:10	08/05/98	08/28/98	08/31/98	15:32	10
9808013-05	W-HT17-1	08/03/98	12:30	08/05/98	08/28/98	08/31/98	15:35	10
9808013-06	W-HT18-1	08/03/98	12:50	08/05/98	08/28/98	08/31/98	15:38	10
9808013-07	DUP080398	08/03/98	0:01	08/05/98	08/28/98	08/31/98	15:40	10
9808013-07 MS	DUP080398	08/03/98	0:01	08/05/98	08/28/98	08/31/98	15:43	10

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

ab Name: Eckenfelder, Inc. Contract: Hercules Inc.

ab Code: Case No.: SAS No.: SDG No.: 98H01,98H02(ICP) 98H04 (Hg)

Initial Calibration Source: Spex lot # K4-161Na Accustandard lot #'s A7095021, A7075025, 035-742 Spex lot #'s K4-161Na, 11-63As

ntinuing Calibration Source: Accustandard lot#'s A7075025,035-742; High Purity lot # 709918

Concentration Units: ug/L

alyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									
timony									
rsenic									
Barium									
eryllium									
admium	1000.0	1054.80	105.5	1000.0	1009.00	100.9	1008.10	100.8	P
Calcium									
Chromium	1000.0	1027.30	102.7	1000.0	998.88	99.9	998.99	99.9	P
obalt									
opper									
Iron									
ead	1000.0	1035.10	103.5	1000.0	1002.50	100.3	997.63	99.8	P
agnesium									
Manganese									
ercury	2.0	2.04	102.0	2.0	1.88	94.0	2.19	109.5	CV
ickel									
Potassium									
Selenium									
ilver									
odium									
Thallium									
anadium									
inc									
Cyanide									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Eckenfelder, Inc. Contract: Hercules Inc.

Lab Code: Case No.: SAS No.: SDG No.: 98H01,98H02(ICP) 98H05 (Hg)

Initial Calibration Source: Spex lot # K4-161Na; Accustandard lot #'s A7095021, A7075025, 035-742; Spex lot #'s K4-161Na, 11-63As

Continuing Calibration Source: Accustandard lot#'s A7075025,035-742; High Purity lot # 709918

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium				1000.0	1011.40	101.1	1021.20	102.1	P
Calcium									
Chromium				1000.0	1009.40	100.9	1010.00	101.0	P
Cobalt									
Copper									
Iron									
Lead				1000.0	1007.60	100.8	1010.30	101.0	P
Magnesium									
Manganese									
Mercury	2.0	2.09	104.5	2.0	1.83	91.5			CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

ab Name: Eckenfelder, Inc. Contract: Hercules Inc.

ab Code: Case No.: SAS No.: SDG No.: 98H01,98H02(ICP)

Initial Calibration Source: Spex lot # K4-161Na
Accustandard lot #'s A7095021, A7075025, 035-742

ontinuing Calibration Source: Spex lot #'s K4-161Na, 11-63As
Accustandard lot#'s A7075025,035-742; High Purity lot # 709918

Concentration Units: ug/L

nalyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									
ntimony									
rsenic									
Barium									
eryllium									
admium				1000.0	996.05	99.6	998.81	99.9	P
Calcium									
hromium				1000.0	1004.20	100.4	1006.00	100.6	P
obalt									
opper									
Iron									
ead				1000.0	995.78	99.6			P
agnesium									
Manganese									
ercury									
ickel									
Potassium									
Selenium									
ilver									
odium									
Thallium									
anadium									
inc									
Cyanide									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

ab Name: Eckenfelder, Inc. Contract: Hercules Inc.

ab Code: Case No.: SAS No.: SDG No.: 98H01,98H02(ICP)

Initial Calibration Source: Spex lot # K4-161Na
Accustandard lot #'s A7095021, A7075025, 035-742
Spex lot #'s K4-161Na, 11-63As

ontinuing Calibration Source: Accustandard lot#'s A7075025,035-742; High Purity lot # 709918

Concentration Units: ug/L

nalyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									
ntimony									
rsenic									
Barium									
eryllium									
admium				1000.0	1026.40	102.6	1007.00	100.7	P
Calcium									
hromium									
obalt									
Copper									
Iron									
ead									
agnesium									
Manganese									
ercury									
ickel									
Potassium									
elenium									
ilver									
Sodium									
Thallium									
anadium									
inc									
Cyanide									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

ab Name: Eckenfelder, Inc. Contract: Hercules Inc.

ab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01,98H02(ICP)

Initial Calibration Source: Spex lot # K4-161Na
Accustandard lot #'s A7095021, A7075025, 035-742

ontinuing Calibration Source: Spex lot #'s K4-161Na, 11-63As
Accustandard lot#'s A7075025,035-742; High Purity lot # 709918

Concentration Units: ug/L

alyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									
ntimony									
rsenic									
Barium									
eryllium									
admium				1000.0	954.57	95.5	948.40	94.8	P
Calcium									
hromium									
obalt									
Copper									
Iron									
ead				1000.0			944.51	94.5	P
agnesium									
Manganese									
ercury									
ickel									
Potassium									
Selenium									
ilver									
Sodium									
Thallium									
anadium									
inc									
Cyanide									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

ab Name: Eckenfelder, Inc. Contract: Hercules Inc.

ab Code: Case No.: SAS No.: SDG No.: 98H01,98H02(ICP)

Initial Calibration Source: Spex lot # K4-161Na
Accustandard lot #'s A7095021, A7075025, 035-742
Spex lot #'s K4-161Na, 11-63As

ontinuing Calibration Source: Accustandard lot#'s A7075025,035-742; High Purity lot # 709918

Concentration Units: ug/L

alyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									
timony									
senic									
Barium									
eryllium									
dmium				1000.0	986.10	98.6	1007.20	100.7	P
Calcium									
Chromium				1000.0	982.52	98.3	1000.90	100.1	P
balt									
pper									
Iron									
ad				1000.0	981.31	98.1	997.40	99.7	P
gnesium									
Manganese									
rcury									
ckel									
Potassium									
Selenium									
lver									
dium									
Thallium									
nadium									
nc									
Cyanide									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Eckenfelder, Inc. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H03(ICP)

Initial Calibration Source: Spex lot # K4-161Na
Accustandard lot #'s A7095021, A7075025, 035-742
Spex lot #'s K4-161Na, 11-63As

Continuing Calibration Source: Accustandard lot#'s A7075025,035-742; High Purity lot # 709918

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium	1000.0	1047.20	104.7	1000.0	1047.00	104.7	1044.70	104.5	P
Calcium									
Chromium	1000.0	1021.70	102.2	1000.0	1034.40	103.4	1029.20	102.9	P
Cobalt									
Copper									
Iron									
Lead	1000.0	1027.60	102.8	1000.0	1040.20	104.0	1029.90	103.0	P
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

3

BLANKS

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01,98H02(ICP) 98H04 (Hg)

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Calcium											
Chromium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Cobalt											
Copper											
Iron											
Lead	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Magnesium											
Manganese											
Mercury	0.2	U	0.2	U					0.200	U	CV
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

3

BLANKS

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01,98H02(ICP) 98H04 (Hg)

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium			1.0	U	1.0	U	1.0	U	0.050	U	P
Calcium											
Chromium			5.0	U	5.0	U	5.0	U	0.250	U	P
Cobalt											
Copper											
Iron											
Lead			5.0	U	5.0	U			0.250	U	P
Magnesium											
Manganese											
Mercury									0.050	U	CV
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

3

BLANKS

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01,98H02(ICP) 98H05 (Hg)

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium			1.0	U	1.0	U	1.0	U	0.050	U	P
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury	0.2	U	0.2	U							CV
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

3

BLANKS

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01,98H02(ICP) 98H05 (Hg)

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium			1.0	U	1.0	U	1.0	U			P
Calcium											
Chromium					5.0	U	5.0	U			P
Cobalt											
Copper											
Iron											
Lead			5.0	U	5.0	U	5.0	U			P
Magnesium											
Manganese											
Mercury									0.200	U	CV
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

3

BLANKS

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H03(ICP)

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium	1.0	U	1.0	U	1.0	U			1.000	U	P
Calcium											
Chromium	5.0	U	5.0	U	5.0	U			5.000	U	P
Cobalt											
Copper											
Iron											
Lead	5.0	U	5.0	U	5.0	U			5.000	U	P
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

W-HT14-1 S

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 53

Concentration Units (ug/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium		143.3019		111.4057		11.79	See <1> Below		P
Calcium									
Chromium		5075.1887		4516.7925		18.87	See <1> Below		P
Cobalt									
Copper									
Iron									
Lead		7490.7547		5031.6981		23.58	See <1> Below		P
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:

<1> = The MS and MSD recoveries could not be evaluated due to the high concentration of analyte in the sample.

U.S. EPA - CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

W-HT14-1 SD

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 53

Concentration Units (ug/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium		170.2642		111.4057		11.79	See <1> Below		P
Calcium									
Chromium		4904.1509		4516.7925		18.87	See <1> Below		P
Cobalt									
Copper									
Iron									
Lead		7379.2453		5031.6981		23.58	See <1> Below		P
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:

<1> = The MS and MSD recoveries could not be evaluated due to the high concentration of analyte in the sample.

U.S. EPA - CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

PBWD-7-2-2 S

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H02

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 65

Concentration Units (ug/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium	75-125	8.7308		1.3373		9.62	76.9		P
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:

U.S. EPA - CLP

5A

SPIKE SAMPLE RECOVERY

00071

EPA SAMPLE NO.

PBWD-7-2-2 SD

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H02

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 65

Concentration Units (ug/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium	75-125	10.6969		1.3373		9.62	97.3		P
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:

U.S. EPA - CLP
5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.
DUP080398B S

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H03(ICP) 98H05 (Hg)

Matrix (soil/water) water Level (low/med): _____

% Solids for Sample: _____

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium	75-125	2219.1000		892.4800		1250.00	106.1		P
Calcium									
Chromium	75-125	2333.2000		244.8900		2000.00	104.4		P
Cobalt									
Copper									
Iron									
Lead	75-125	5899.9000		3270.8000		2500.00	105.2		P
Magnesium									
Manganese									
Mercury	75-125	18.8300		2.0000	U	20.00	94.2		CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:

U.S. EPA - CLP

5A

SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

W-HT15-1 S

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H04 (Hg)

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 43

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury		7.9814		1.8558		0.79	See <1> Below		CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:

<1> = The MS and MSD recoveries could not be evaluated due to the high concentration of analyte in the sample.

U.S. EPA - CLP
5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.
W-HT15-1 SD

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H04 (Hg)

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 43

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury		2.1674		1.8558		0.76	See <1> Below		CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

Comments:
<1> = The MS and MSD recoveries could not be evaluated due to the high concentration of analyte in the sample.

U.S. EPA - CLP

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DUPLICATES

00074A

EPA SAMPLE NO.

W-HT14-1 S

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 53 % Solids for Duplicate: 53

Concentration Units (ug/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium		143.3019		170.2642		17.2		P
Calcium								
Chromium		5075.1887		4904.1509		3.4		P
Cobalt								
Copper								
Iron								
Lead		7490.7547		7379.2453		1.5		P
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

U.S. EPA - CLP

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DUPLICATES

00074B

EPA SAMPLE NO.

PBWD-7-2-2 S

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: Case No.: SAS No.: SDG No.: 98H02

Matrix (soil/water) soil Level (low/med):

% Solids for Sample 65 % Solids for Duplicate: 65

Concentration Units (ug/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium		8.7308		10.6969		20.2	*	P
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

U.S. EPA - CLP

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DUPLICATES

EPA SAMPLE NO.

W-HT15-1 S

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H04

Matrix (soil/water) soil Level (low/med): _____

% Solids for Sample 43 % Solids for Duplicate: 43

Concentration Units (ug/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury		7.9814		2.1674		114.6	*	CV
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

U.S. EPA - CLP

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LABORATORY CONTROL SAMPLE

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01,98H02(ICP) 98H04 (Hg)

Solid LCS Source: _____

Aqueous LCS Source: Spex lot# 14-10As High Purity lot#'s 731635, 800705

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium	125.0	122.81	98.2						
Calcium									
Chromium	200.0	193.96	97.0						
Cobalt									
Copper									
Iron									
Lead	250.0	246.34	98.5						
Magnesium									
Manganese									
Mercury	2.0	2.19	109.5						
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01(ICP) 98H04 (Hg)

Solid LCS Source: Environmental Resource Lot #s 235, 232

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium				149.4	145.74		91.2	207.7	97.6
Calcium									
Chromium				63.8	60.13		43.4	84.2	94.2
Cobalt									
Copper									
Iron									
Lead				90.9	87.14		55.5	126.4	95.9
Magnesium									
Manganese									
Mercury				2.9	3.00		1.9	3.9	103.4
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

U.S. EPA - CLP

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LABORATORY CONTROL SAMPLE

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H02(ICP)

Solid LCS Source: Enviromental Resource lot# 235

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium				149.4	138.61		91.2	207.7	92.8
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

00076A

LABORATORY CONTROL SAMPLE

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: Case No.: SAS No.: SDG No.: 98H03(ICP)

Solid LCS Source: Spex lot# 14-10As

Aqueous LCS Source: High Purity lot#'s 731635, 800705

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium	125.0	129.40	103.5						
Calcium									
Chromium	200.0	205.36	102.7						
Cobalt									
Copper									
Iron									
Lead	250.0	258.22	103.3						
Magnesium									
Manganese									
Mercury	2.0	1.78	89.0						
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

U.S. EPA - CLP

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: ECKENFELDER INC. Contract: Hercules Inc.

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 98H01,98H02, 98H03

ICP ID Number: TJA 61E TRACE Serial # 332490 Date: 6/98

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	5.00		
Antimony	5.00		
Arsenic	5.00		
Barium	5.00		
Beryllium	5.00		
Cadmium	5.00	10000.0	P
Calcium	5.00		
Chromium	5.00	50000.0	P
Cobalt	5.00		
Copper	5.00		
Iron	5.00		
Lead	5.00	20000.0	P
Magnesium	5.00		
Manganese	5.00		
Mercury			
Nickel	5.00		
Potassium	5.00		
Selenium	5.00		
Silver	5.00		
Sodium	5.00		
Thallium	5.00		
Vanadium	5.00		
Zinc	5.00		

Comments:

Blank Spike Recovery
Hercules Inc.
Job #0432.01

ANALYTE	SPIKE RESULT	SPIKE ADDED	%REC	UNITS	METHOD
Cadmium	118	125	94	ug/L	ICAP
Chromium	219	200	110	ug/L	ICAP
Lead	239	250	96	ug/L	ICAP
Mercury	2.09	2.0	105	ug/L	Cold Vapor

APPENDIX F

FIELD DATA SHEETS – SOIL SAMPLES FROM PONDED/BACKWATER AREAS AND WASTE SAMPLES FROM RIVER BANK

FIELD DATA SHEETS – WASTE SAMPLES FROM RIVER BANK

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: W-HT14-1 (+DUP 0900398)
Sample I.D.: ___ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLD, RJW

Date: 8-3-98 Time: 1120
Weather Conditions: Clear
Air Temperature: upper 70°'s F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: ___
☐ DEEP SOIL: Depth Interval: ___
☐ SURFACE WATER: Depth Interval: ___
☐ BOTTOM SEDIMENT
☑ OTHER: Describe: Material in river bank

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: ___

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: ___

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: ___
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: red/brown ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: ___
GRAIN SIZE DESCRIPTION: (Use for soils only)
Red brown clay-like material. Thin laminae - white, green and blue

FIELD DETERMINATIONS: pH: ___ Meter Model: ___ Meter S/N: ___
Temperature: ___ Spec. Cond.: ___ Meter Model: ___ Meter S/N: ___
Other: ___
LABORATORY ANALYSIS: Total metals (Cd, Cr, Hg, Pb) and TCLP metals (Cd, Cr, Hg, Pb)

NO. OF CONTAINERS: 4 Field Blank I.D.: ~~EBO398~~ Trip Blank I.D.: ___ Replicate I.D.: DUP0398
REMARKS: Sampled 165' west of stormwater outfall structure

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Dell Date: 9-20-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: W-HT15-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-3-98 Time: 1155
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☐ DEEP SOIL: Depth Interval: _____
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☑ OTHER: Describe: Material in river bank

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☑ Hand auger
☐ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Brown clay-like material w/ rusty orange streaks at edge of riverbank, Material deeper in bank - black silty clay material

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Metals (Cd, Cr, Pb, Hg) and TCLP Metals (Cd, Cr, Pb, Hg)

NO. OF CONTAINERS: 2 Field Blank I.D.: EBW398 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS: Sampled 1100' East of HT15 marker

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert J. O'Neill Date: 8-20-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: GW-HT16-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-3-98 Time: 1210
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☐ DEEP SOIL: Depth Interval: _____
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☑ OTHER: Describe: Material in river bank

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☑ Hand auger
☐ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐	Teflon®	☐	PVC
☑	Stainless Steel	☐	Polyethylene
☐	Carbon Steel	☐	Polypropylene
☐	Glass	☐	Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☐ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only) Layered clay-like material. Red brown w/ layers of white Layered clay-like material. Red brown w/ layers of white and blue-green. Local layer of white & brownish white soft beads. Few red and yellow flecks. Sample deeper in bank, material is dark gray w/ layering and colors

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total metals (Cd, Cr, Pb, Hg) and TCLP Metals (Cd, Cr, Pb, Hg)

NO. OF CONTAINERS: 2 Field Blank I.D.: EQSS395 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS: Sampled ±15' East of HT16 marker

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. O'Neill Date: 8-20-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: W-HT17-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-3-95 Time: 1230
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☐ DEEP SOIL: Depth Interval: _____
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☑ OTHER: Describe: Material in riverbank

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☑ Hand auger
☐ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only) red to rusty brown layered clay-like material. Fine white and greenish-gray laminae

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total metals (Cd, Cr, Pb, Hg) and TCLP Metals (Cd, Cr, Pb, Hg)

NO. OF CONTAINERS: 2 Field Blank I.D.: EB082395 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS: Sampled near HT17 marker

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. O'Neill Date: 8-20-95

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: W-HT18-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-3-95 Time: 1250
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☐ DEEP SOIL: Depth Interval: _____
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☑ OTHER: Describe: Material in river bank

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☑ Hand auger
☐ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐	Teflon®	☐	PVC
☑	Stainless Steel	☐	Polyethylene
☐	Carbon Steel	☐	Polypropylene
☐	Glass	☐	Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: See below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Clay-like material. Rusty brown - red brown w/ fine laminae of white and green gray.

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Metals (Cd, Cr, Pb, Hg) TCLP Metals (Cd, Cr, Pb, Hg)

NO. OF CONTAINERS: 2 Field Blank I.D.: EB950395 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS: ~~Sampled 30-40' E of HT18 marker~~ RLO
Sampled 30-40' West of HT18 marker

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. O'Neill Date: 8-20-95

FIELD DATA SHEETS – SOIL SAMPLES FROM PONDED/BACKWATER AREAS

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-1-1-1 (and DUPOBC396B)
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0732.01
Personnel: RLD, RJW

Date: 8-3-95 Time: 1530
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☑ Hand auger
PW ☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Md-dk brown comf SAND and Clayey SILT, trc (+) f. Gravel (slag, cinders). Few pieces of f brown-rusty brown Silty Clay material. Few red + yellow flecks Roots (sm, c)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 2 Field Blank I.D.: EBOBC395 Trip Blank I.D.: _____ Replicate I.D.: DUPOBC396B
REMARKS:

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L Ollard Date: 8-20-95

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-1-1-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-3-98 Time: 1540
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 2-3 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☑ Hand auger
☐ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐	Teflon®	☐	PVC
☑	Stainless Steel	☐	Polyethylene
☐	Carbon Steel	☐	Polypropylene
☐	Glass	☐	Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☐ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
md-dk brown cmf SAND and Clayey SILT/SILT & CLAY, trf. Gravel. Pieces of md-dk brown-rusty brown clay-rich material. Red, yellow and blue flecks. Soft brownish wh, fc beads. wood chips. Saturated (SM, CL)
FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB060398 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Ortland Date: 8-20-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-1-2-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: ~~8-3-98~~ 6432.01
Personnel: RLD, RJW

Date: 8-3-98 Time: 1610
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 FT
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
md-dk brown fn SAND, little Clayey Silt, some colored specks and soft brownish-white beads. Below, lt brown fn SAND to Silt (SM-SW)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: ~~EB080398~~ Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Dillard Date: 8-20-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-1-2-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-3-95 Time: 1620
Weather Conditions: Clear
Air Temperature: 75-80°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 3-4 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐	Teflon®	☐	PVC
☑	Stainless Steel	☐	Polyethylene
☐	Carbon Steel	☐	Polypropylene
☐	Glass	☐	Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☐ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Lt. brown fine SAND, tr (+) Silt. Moist (SW)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080395 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Ethell Date: 8/21/95

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-1-3-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 0855
Weather Conditions: Partly ~~Cloud~~ sunny
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
1-1.4': F. GRAVEL and cmf SAND, tr. Silt. Ground is mostly slag + cinders. Soft brownish-white beads (Gw)
1.4-1.6 Lt. brown fm SAND, tr Silt (SW)
1.6-1.8 Dk brown fm SAND and CLAYEY SILT (SM)
1.8-2.0 Brown fm SAND, tr. Silt + thin layers of matted vegetation and wood. (SW)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: ~~EBERG498~~ Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: [signature] Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBW'D-1-3-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 6-4-98 Time: 0900
Weather Conditions: Partly sunny
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 3-4 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐	Teflon®	☐	PVC
☑	Stainless Steel	☐	Polyethylene
☐	Carbon Steel	☐	Polypropylene
☐	Glass	☐	Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: greenish ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Brown fn SAND, tr. Silt. Thin layers of matted vegetation and/or wood. Wood more abundant toward base of interval. (SW)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: 080498 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Ortland Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-3-1-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments ACC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 0935
Weather Conditions: Partly Sunny
Air Temperature: 75-65°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Lt brown fm (c) SAND, tr Silt w layers of md-dk brown Clayey SILT, some-trace fm Sand every few inches. (SW, ML-SM)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080498 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Ollwell Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-3-1-2
Sample I.D.: ______ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 043201
Personnel: RLO, RJW

Date: 8-4-98 Time: 0940
Weather Conditions: Partly Sunny
Air Temperature: 75-85 °F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: ______
☑ DEEP SOIL: Depth Interval: 3-4 ft
☐ SURFACE WATER: Depth Interval: ______
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: ______

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: ______

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®
☑ Stainless Steel
☐ Carbon Steel
☐ Glass
☐ PVC
☐ Polyethylene
☐ Polypropylene
☐ Other: ______

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: ______
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: ______
GRAIN SIZE DESCRIPTION: (Use for soils only)
Lt brown-lt gray fm SAND, tr. Silt, moist, At 3.5-3.7': layer of red brown to red brown Clayey SILT, some f. Sand, wood and bark fragments (SW, ML-SM)

FIELD DETERMINATIONS: pH: ______ Meter Model: ______ Meter S/N: ______
Temperature: ______ Spec. Cond.: ______ Meter Model: ______ Meter S/N: ______
Other: ______
LABORATORY ANALYSIS: Total C

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080498 Trip Blank I.D.: ______ Replicate I.D.: ______
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: [signature] Date: 8-21-98

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ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: FBWD-3-2-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 1005
Weather Conditions: Partly Sunny
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
1-1.4': md brown fm SAND, little (+) Clayey Silt w/ few slag and cinderchips (SM)
1.4-2': Lt brown fm(c) SAND, tr. Silt, tr (+) f. Gravel (mostly slag, cinders). Roots. (SW)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EBWD498 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L Olsen Date: 8/21/98

ECKENFELDER INC.

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☐ Mahwah, New Jersey
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ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-3-2-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 1010
Weather Conditions: Partly Sunny
Air Temperature: 75-85 °F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 3-4 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☐ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Lt brown fm SAND, tr. Silt, few slag + cinder chips. Matted vegetation/wood layer. Last 2-3" mostly wood and matted organics (SW)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cl

NO. OF CONTAINERS: 1 Field Blank I.D.: EBW0498 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Ollard Date: 8-21-98

ECKENFELDER INC.

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☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-3-3-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 1045
Weather Conditions: Partly Sunny
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon® ☐ PVC
☑ Stainless Steel ☐ Polyethylene
☐ Carbon Steel ☐ Polypropylene
☐ Glass ☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
lt. brown fine SAND, little-to-some Clayey Silt/Silt & Clay, trace Gravel (mostly slag, cinders). Trace chips of hard red material (brick) (SM)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total C

NO. OF CONTAINERS: 1 Field Blank I.D.: ~~EBPBWD-3~~ Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L O'Neil Date: 8-21-98

ECKENFELDER INC.

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☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-3-3-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 1050
Weather Conditions: Partly sunny
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 2-3 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon® ☐ PVC
☑ Stainless Steel ☐ Polyethylene
☐ Carbon Steel ☐ Polypropylene
☐ Glass ☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☐ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
2-2.2' lt brown fine SAND, little f. Gravel (mottled clay), tr(+) Silt. (SW)
2.2-2.3' wood fragments
2.3-3.0' md brown-lt gray brown fine SAND, tr. to little Silt, tr. to little f. Gravel (mottled clay). Zones of abundant wood fragments. wet (SW)
FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080498 Trip Blank I.D.: _____ Replicate 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: 8-21-98

ECKENFELDER INC.

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☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-5-1-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLD, RJW

Date: 8-4-98 Time: 1130
Weather Conditions: Partly sunny
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
md brown to red brown fine SAND, some Clayey Silt grading to lt brown fine SAND, to silt w/ some clay fragments (SM-SC)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080498 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L Dillard Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-5-1-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments ACC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 6-4-98 Time: 1135
Weather Conditions: Partly Sunny
Air Temperature: 75-65°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 2-3 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☐ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Lt. brown fm SAND, tr(+) Silt with zones of fm SAND, some Clayey Silt and wood fragment zones. Last 3"- all wet/Saturated. (SW, SM)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total C

NO. OF CONTAINERS: 1 Field Blank I.D.: EB980416 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert J. O'Neill Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-5-2-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 1200
Weather Conditions: Partly sunny
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: See Remarks ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
1-1.1: md-dk brown Clayey SILT and fine SAND, tr fine Gravel (ML-SM)
1.1-2: md brown Sandy CLAY (CL) and GRAVEL (mostly slag, cinders), little Clayey Silt, some soft brownish white beads; Few red and yellow flecks. Rare fragments of purple and blue material. wood fragments. At 1.5-1.6 - brownish red-brown clay-rich zone w/ wood fragments and soft brown-white beads (SM, CL)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total C

NO. OF CONTAINERS: 1 Field Blank I.D.: EB060498 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L Ollard Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-5-2-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments ACC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-4-98 Time: 1205
Weather Conditions: Partly sunny
Air Temperature: 75-85 °F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 3-4 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see remarks ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only) med brown cmf SAND and fm GRAVEL (mostly slag, cinders). Rare soft brownish white beads. Few yellow and red flakes. Wood abundant at bottom of interval.
FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EBO80498 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. O'Mull Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-7-1-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 0905
Weather Conditions: Partly cloudy
Air Temperature: 75-85° F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Lt brown fn (c) SAND, fr. Silt. Some chips of slag, cinder. 2 layers (±1" thick) of md brown CLAY & SILT, little ~~Sand~~ f. Sand. (SW, CL-ML)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total C L

NO. OF CONTAINERS: 1 Field Blank I.D.: ~~EBSOSPS~~ Trip Blank I.D.: _____ Replicate 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: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-7-1-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments ACC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 0910
Weather Conditions: Partly Cloudy
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 2-3 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☐ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐	Teflon®	☐	PVC
☑	Stainless Steel	☐	Polyethylene
☐	Carbon Steel	☐	Polypropylene
☐	Glass	☐	Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: ~~see below~~ ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
Lt brown fn SAND, tr Silt interlayered with md brown SILTY CLAY, tr-Gr. Little F. Sand, often with wood/mutted vegetation layers, Rusty zone in sand (SW, ML-CL)
FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB050598 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. O'Neil Date: 8-21-98

ECKENFELDER INC.

- ☐ Nashville, Tennessee
- ☐ Mahwah, New Jersey
- ☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-7-2-1
Sample I.D.: ______ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 0945
Weather Conditions: Partly cloudy
Air Temperature: 75-85 °F

SAMPLE MEDIUM:

- ☐ SURFICIAL SOIL: Depth Interval: ______
- ☑ DEEP SOIL: Depth Interval: 1-2 ft
- ☐ SURFACE WATER: Depth Interval: ______
- ☐ BOTTOM SEDIMENT
- ☐ OTHER: Describe: ______

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: ______

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: ______

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: ______
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: ______
GRAIN SIZE DESCRIPTION: (Use for soils only)
md-lt brown f-to-fm SAND, some Clayey Silt, tr Gravel (slag, cinders). Layers of fm SAND, tr silt containing slag and cinder chips. Some wood fragments mottled vegetation. (sm, sw).
FIELD DETERMINATIONS: pH: ______ Meter Model: ______ Meter S/N: ______
Temperature: ______ Spec. Cond.: ______ Meter Model: ______ Meter S/N: ______
Other: ______
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080598 Trip Blank I.D.: ______ Replicate 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: 9-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-7-2-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 0950
Weather Conditions: Partly Cloudy
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 2-3 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: See below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
2-2.5 md-dk brown f SAND, some Clayey Silt, tr f. Gravel (slag, cinders) with interval of lt brown fm SAND, tr Silt, Wood fragment/mottled vegetation layers (SM,SW)
2.5-3.0 fm SAND, tr-little Silt/Clayey Silt, Abundant wood fragments, wet at (SW) base
FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080598 Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L Gilmore Date: 8-21-98

ECKENFELDER INC.

- ☐ Nashville, Tennessee
- ☐ Mahwah, New Jersey
- ☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-9-1-1

Sample I.D.: ______ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY

Client: Hercules Incorporated Job No.: 0432.01

Personnel: RLD, RJW

Date: 8-5-98 Time: 1020

Weather Conditions: Partly cloudy

Air Temperature: 75-85°F

SAMPLE MEDIUM:

- ☐ SURFICIAL SOIL: Depth Interval: ______
- ☑ DEEP SOIL: Depth Interval: 1-2 ft
- ☐ SURFACE WATER: Depth Interval: ______
- ☐ BOTTOM SEDIMENT
- ☐ OTHER: Describe: ______

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: ______

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: ______

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: ______

SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):

☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid

ODOR?: ☐ Yes ☑ No , Description: ______

GRAIN SIZE DESCRIPTION: (Use for soils only)

-1.3': md brown f-m SAND and-to-some SILT & CLAY to SILT & CLAY and-to-some f. SAND. Rare red flecks. Roots (SM-ML)

1.3-2.0: lt brown f-m SAND, tr. Silt, tr. f. Gravel (mostly slag, cinders). Two ≤ 1-inch layers of md-rd brown SILT & CLAY w/ red flecks, small soft wh. brown beads, wood frags, fine laminae. Gravel content incr. w/ depth (SW, ML)

FIELD DETERMINATIONS: pH: ______ Meter Model: ______ Meter S/N: ______

Temperature: ______ Spec. Cond.: ______ Meter Model: ______ Meter S/N: ______

Other: ______

LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EB080598 Trip Blank I.D.: ______ Replicate 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: 8-21-98

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ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-9-1-2 (& DUP080598)
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 1025
Weather Conditions: Partly cloudy
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 2-3 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: See Below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
1ft brown to gray fine SAND, little f. Gravel (mostly slag, cinders), ft to ft (+) 5; 1 ft. Abundant layers of wood fragments. Bottom 3" mostly wood fragments and is wet.

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS:

NO. OF CONTAINERS: 2 Field Blank I.D.: EB080598 Trip Blank I.D.: _____ Replicate I.D.: DUP080598
REMARKS:

certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. O'Neill Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-11-1-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 1105
Weather Conditions: Partly Cloudy
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
red-rd brown SILT & CLAY, some f to fr. Sand. Zones of ~~soft~~ soft brown-blk beads. Some thin grey laminae, some layers of wood fragments and matted vegetation, some red+yellow tufts, some clay and cinder chips. Roots (ML)

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: ~~EB000598~~ Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert K. Ellard Date: 8-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-11-1-2
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments AOC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 1110
Weather Conditions: Partly Cloudy
Air Temperature: 75-85°F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 3-4 ft.
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐	Teflon®	☐	PVC
☑	Stainless Steel	☐	Polyethylene
☐	Carbon Steel	☐	Polypropylene
☐	Glass	☐	Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

FIELD MEASUREMENT DATA:

APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: See below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☐ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
3.5': Gray sandy SAND, little (+) SILT & CLAY, little f. Gravel (mostly slag, cinders). Some soft brush bands not black at fed, yellow, blue. Wood fragments (SW-SM).
3.5-3.9: Dk gray-brown silty CLAY (some laminae) w/ interm. thin zones containing sand + wood (CL)
3.9-4.0: Dk gray f. SAND, some-Cu-little Silt & Clay (SW-SM)
FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

NO. OF CONTAINERS: 1 Field Blank I.D.: EBOEC598 Trip Blank I.D.: _____ Replicate 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: 9-21-98

ECKENFELDER INC.

☐ Nashville, Tennessee
☐ Mahwah, New Jersey
☐ Rochester, New York

ENVIRONMENTAL SAMPLING FIELD DATA SHEET

Sample Number: PBWD-13-1-1
Sample I.D.: _____ (if different from samp no.)

Project: RFI of Sediments ACC, Glens Falls, NY
Client: Hercules Incorporated Job No.: 0432.01
Personnel: RLO, RJW

Date: 8-5-98 Time: 1140
Weather Conditions: Partly cloudy
Air Temperature: 75-85 °F

SAMPLE MEDIUM:

☐ SURFICIAL SOIL: Depth Interval: _____
☑ DEEP SOIL: Depth Interval: 1-2 ft
☐ SURFACE WATER: Depth Interval: _____
☐ BOTTOM SEDIMENT
☐ OTHER: Describe: _____

SAMPLING DATA:

SAMPLE COLLECTION EQUIPMENT:

☐ Scoop ☐ Shovel ☐ Direct into sample container ☐ Split-spoon sampler ☐ Hand auger
☑ Hand Corer ☐ Petite Ponar Dredge ☐ Eckman Dredge ☐ Bottle Sampler
☐ Peristaltic Pump ☐ Automated Interval Sampler ☐ Other: _____

SAMPLER CONSTRUCTION: (Check as many as apply)

☐ Teflon®	☐ PVC
☑ Stainless Steel	☐ Polyethylene
☐ Carbon Steel	☐ Polypropylene
☐ Glass	☐ Other: _____

SAMPLE TYPE: ☑ Grab ☐ Composite ☐ Other: _____
SAMPLING EQUIPMENT: ☐ Dedicated ☐ Prepared Off-Site ☑ Field Cleaned

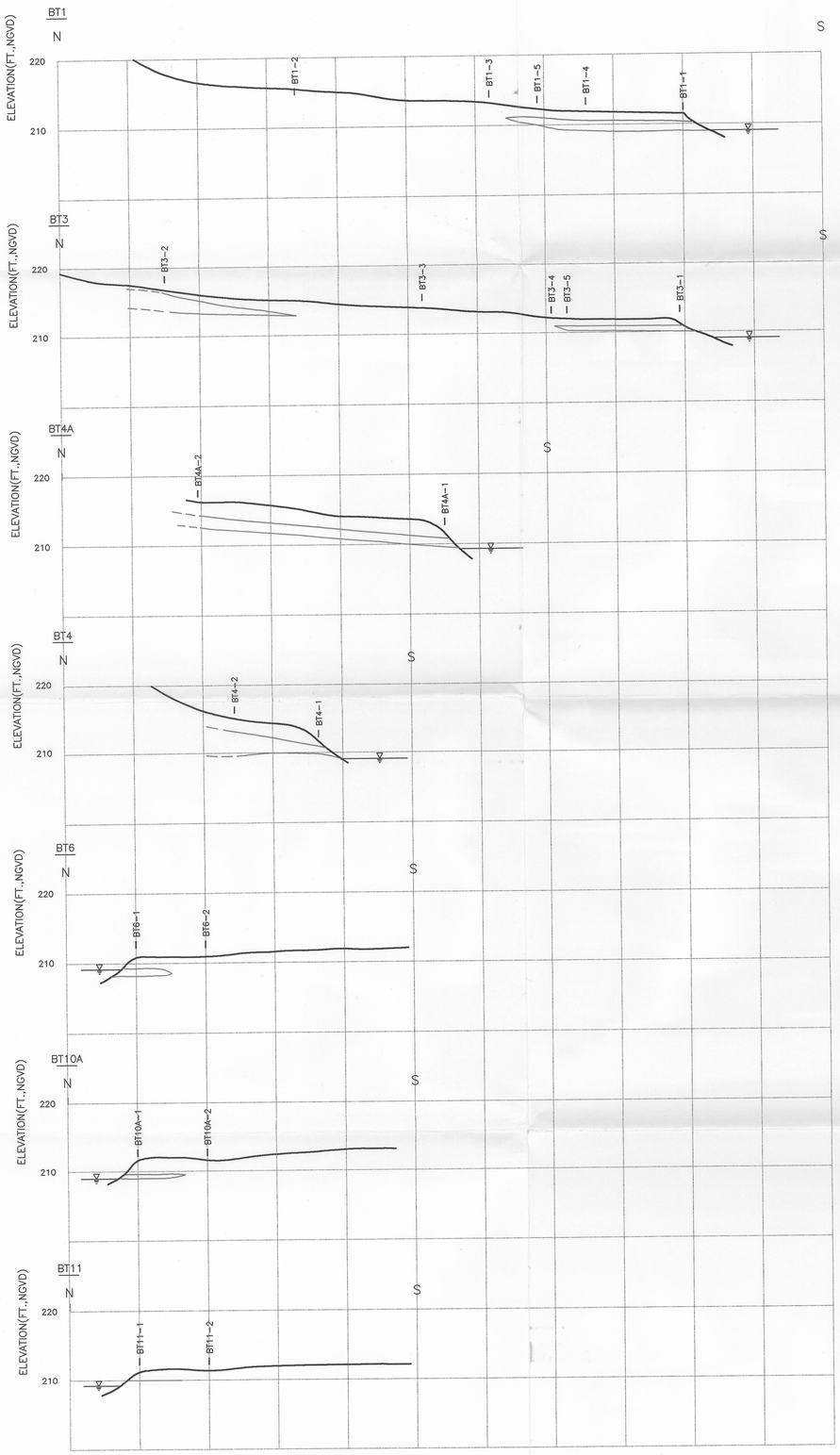
FIELD MEASUREMENT DATA:

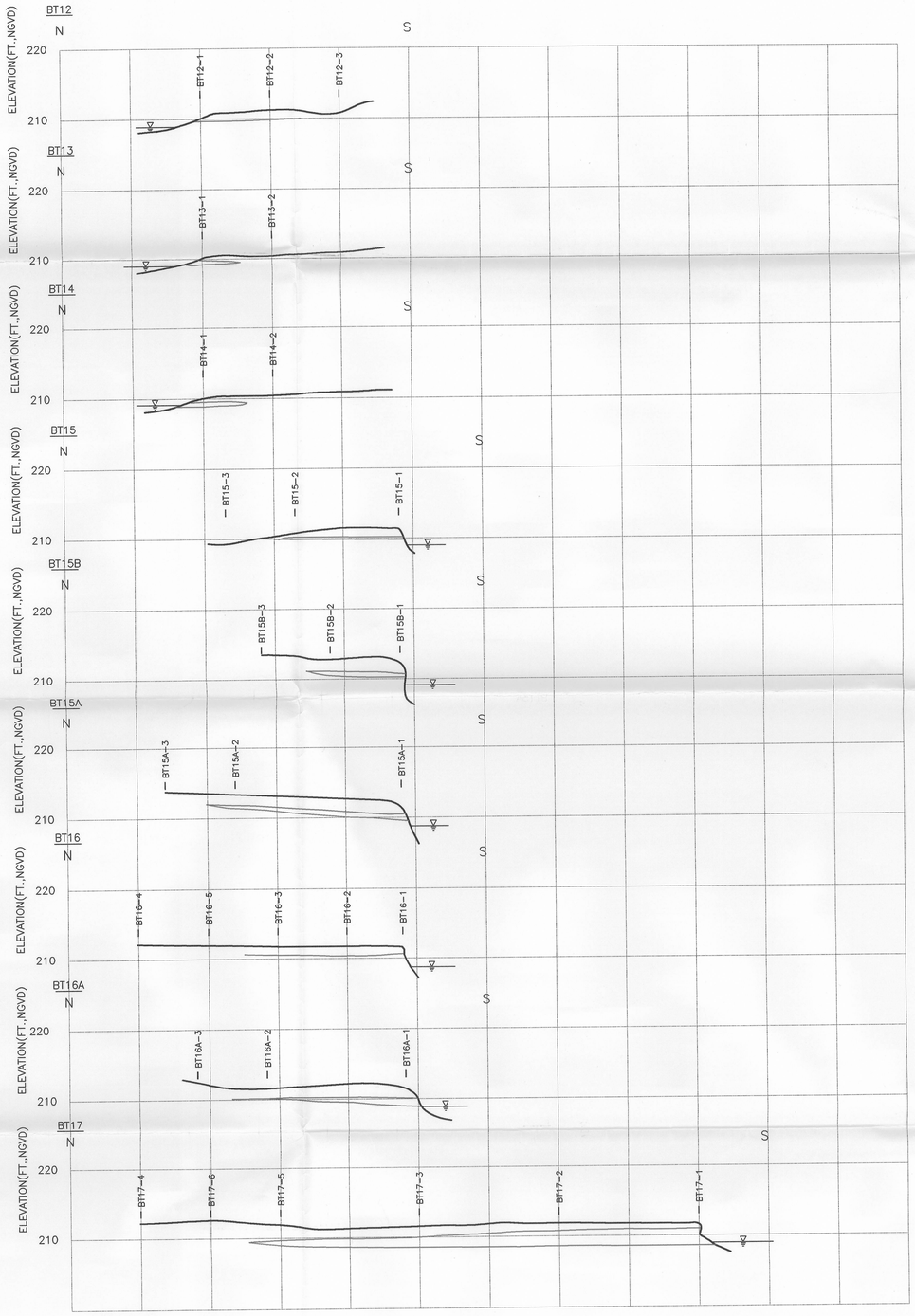
APPEARANCE (describe):
☐ Oily ☐ "Clean" ☐ Clear ☐ Turbid ☑ Color: see below ☐ Contains Immiscible Liquid
ODOR?: ☐ Yes ☑ No , Description: _____
GRAIN SIZE DESCRIPTION: (Use for soils only)
0-3.2': md brown fn SAND, tr. silt w/ few zones containing brown Clayey Silt & sandy wood (SW, mc)
-2.0': md brown Clayey SILT/SILT & CLAY, some f. Sand. Abundant wood and bark fragments.
At 1.7-1.8': 1" brown sand-rich zone w/ slag and cinder chips and one chip of blue material

FIELD DETERMINATIONS: pH: _____ Meter Model: _____ Meter S/N: _____
Temperature: _____ Spec. Cond.: _____ Meter Model: _____ Meter S/N: _____
Other: _____
LABORATORY ANALYSIS: Total Cd

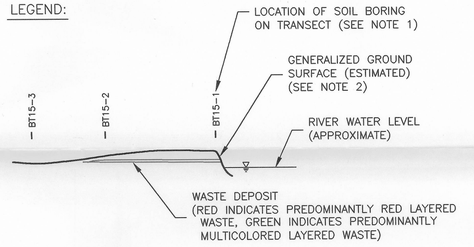
NO. OF CONTAINERS: 1 Field Blank I.D.: ~~EB080598~~ Trip Blank I.D.: _____ Replicate I.D.: _____
REMARKS:

I certify that this sample was collected and handled in accordance with applicable regulatory and project protocols.
Signature: Robert L. Ottman Date: 8-21-98





LEGEND:



NOTE:

1. ONLY ONE BORING LOCATION WAS SURVEYED PER TRANSECT (SEE TEXT). THE POSITIONS OF OTHER BORINGS ARG APPROXIMATE.
2. GROUND SURFACE CONFIGURATIONS FOR CROSS-SECTIONS IN AREA OF BT1 THROUGH BT14 WERE ESTIMATED USING SURVEY DATA ON TRANSECT BORINGS (ONE PER CROSS-SECTION) AND FROM TRANSPONSING INFORMATION FROM THE TOPOGRAPHIC MAP GENERATED FROM THE 1991 AERIAL PHOTOGRAPHIC SURVEY BY ROBINSON AERIAL SURVEYS INC. ACCURATE TOPOGRAPHIC INFORMATION CAN NOT BE GENERATED FROM THE AERIAL SURVEY IN THE AREA OF BT15 THROUGH BT17, THUS, THE GROUND SURFACE CONFIGURATION FOR THESE TRANSECTS WAS ESTIMATED BASED ON FIELD OBSERVATIONS AND NEARBY LOCATION SURVEY DATA (SEE TEXT).
3. SEE DRAWING 0432-001A AND -002A FOR LOCATION OF CROSS-SECTIONS.

VERTICAL AND HORIZONTAL SCALE: 1"=10'

NO.	REVISIONS	REV'D BY	DATE	APPRO'D BY

ECKENFELDER INC.
Nashville,Tennessee
Mahwah,New Jersey

HERCULES INCORPORATED
CIBA PLANT SITE
GLENS FALLS, N.Y.

CROSS-SECTIONS

SCALE: AS SHOWN

DRAWN BY	DATE	CHECKED BY	APPROVED BY	DRAWING NUMBER
PL	09/98	RLO	-	0432-003A

0432-07 09/22/98 PLOT 1=1 (0432-03.PCP)