

**2012 Fourth Quarter Groundwater Monitoring Report
October-December 2012
Claremont Polychemical Corporation Site
505 Winding Road
Old Bethpage, Nassau County, NY 11804
Site Code: 130015
WA# D006130-19**

Prepared for:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

Prepared by:

HRP Engineering, P.C.
1 Fairchild Square Suite 110
Clifton Park, New York 12065
518.877.7101



**Tom Sicilia
Project Geologist**



**Adam Fox, P.E.
Project Manager**

Submitted: January 17, 2012

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Old Bethpage, New York 11804**

Report Submittal Date: January 17, 2012
Prepared by: Adam Fox, Tom Sicilia

HRP Engineering, Inc
1 Fairchild Square, Suite 110
Clifton Park, New York 12065
Phone: (518) 877-7101 / Fax: (518) 877-8561

Project Address: Claremont Polychemical, 505 Winding Rd, Old Bethpage, NY

CERTIFICATION

I, Adam Fox, certify that I am currently a Qualified Environmental Professional as defined in 6 Part NYCRR Part 375 and that this report, 2012 First Quarter Groundwater Monitoring Report, was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER - 10).

Environmental Contractor: HRP Engineering, P.C.

By:



Adam Fox, P.E.

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Claremont Polychemical Corporation Site
Old Bethpage, New York 11804**

1.0 INTRODUCTION

HRP Engineering, P.C. is pleased to submit this report containing groundwater quality data, discussions and data deliverables related to the Fourth Quarter 2012 (October – December 2012) groundwater monitoring event conducted at the Claremont Polychemical Corporation Site (hereinafter referred to as the “Site”). The groundwater monitoring event and the preparation of this deliverable are part of the routine groundwater monitoring program being conducted at the Site. This report represents the fourth quarterly monitoring period for 2012. This report has been prepared for submittal to the New York State Department of Environmental Conservation (NYSDEC) and includes the following:

- Brief overview of historical site activities;
- Discussion of On-site treatment System;
- Brief description of the scope of the field activities;
- Groundwater elevation contours;
- tetrachloroethylene (PCE) and trichloroethylene (TCE) contaminant concentration profiles in groundwater;
- Maximum groundwater PCE and TCE contaminant concentrations;
- Brief discussion of the groundwater quality data;
- Comparison of data from this monitoring period to data from previous periods; and
- Groundwater Well Sampling Forms.

2.0 SITE BACKGROUND

2.1 Site Overview

The Claremont Polychemical Corporation, a former manufacturer of pigments for plastics and inks, coated metal flakes, and vinyl stabilizers, operated on-site from 1966 to 1980. The Site was proposed for inclusion on the Environmental Protection Agency (EPA) National Priorities List in October 1984 and was listed in June 1986. A comprehensive Remedial Investigation/ Feasibility Study (RI/FS) for the entire site was initiated in March 1988 by the EPA. Under this RI/FS, EPA sampled the surface and subsurface soil, the groundwater, underground storage tanks, and the building. The EPA RI/FS reports were released to the public in August 1990. The EPA RI/FS findings indicated that on-site soils contaminated with PCE, located in the former "spill area", constituted a potential threat to groundwater resources. A comprehensive remedy for the Site was completed and documented in several EPA Records of Decisions (ROD) issued in 1989-1990. The Site was divided into six operable units (OU). Each OU had specific remedial activities pursuant to that OU that needed to be completed. Operable Unit No.4 (OU IV) is designated "Remedial Program" and involves the treatment of the on-site volatile organic compounds (VOC) that have contaminated the groundwater via a pump and treat system with air stripping/carbon absorption.

A groundwater collection, treatment and injection system was installed on-site by the EPA and Army Corp of Engineers (ACOE) to control OU IV. Full-scale operation of the groundwater remedial system began in February 2000, reportedly pumping 470 gallons per day. SAIC Inc. operated and maintained the treatment facility from 2000 to May 2011. During that period SAIC monitored the treatment system operation on a regular basis by collecting system discharge and quarterly groundwater samples. In May 2011, the operation of the system was relinquished from the ACOE/EPA to the NYSDEC and subsequently the NYSDEC retained HRP Engineering to operate the system.

During the turnover of operations from the EPA to the NYSDEC, the NYSDEC requested copies of reports generated during the EPA's operations of the treatment system including quarterly groundwater sampling data from SAIC, EPA Region 2 and the ACOE. Based upon data that was received during the transfer of operators, it was determined that SAIC collected quarterly groundwater sampling data. Previous groundwater monitoring reports were not available for HRP's review. Therefore the historical groundwater data was reviewed by HRP and incorporated into this report.

2.2 Location

The site is located on a 9.5-acre parcel located in an industrial section of Old Bethpage, Nassau County, New York (see Figure 1 for location). The property has one large two-story building, covering approximately 35,000 square feet (the former processing plant) and a smaller water treatment building. The site lies approximately 800 feet east of the border between Nassau and Suffolk County

and the site is accessed via Winding Road on the property's western border. Adjacent properties include:

South and Southeast - Bethpage State Park and a golf course;
East - State University of New York-Farmingdale Campus;
West - Oyster Bay Solid Waste Disposal Complex; and
North - Commercial and light industrial.

The Oyster Bay Solid Waste Disposal Complex is a NYSDEC Superfund Site with the Town of Oyster Bay as the responsible party. The Nassau County Fireman's Training Center, which has also contributed to soil and groundwater contamination in the area, is located approximately 500 feet south of the Oyster Bay Solid Waste Disposal Complex. The Oyster Bay Solid Waste Disposal Complex and Fireman's Training Center have groundwater extraction and treatment systems in operation. In addition, the golf course has a number of pump/irrigation wells, which are used for watering their fairways. The closest residences are approximately one-half mile from the site immediately west of the Old Bethpage Landfill Superfund site. The nearest public supply well is located 3,500 feet northwest of the site and nearly 47,000 people are drawing water from private-use wells located within three miles of the site.

2.3 Site History

According to the "Five - Year Review Report for Claremont Polychemical Corporation" prepared by EPA Region 2, dated September 2008, the Claremont Polychemical Corporation manufactured pigments for plastics and inks, coated metal flakes, and vinyl stabilizers operated from 1966 to 1980. During its operation, Claremont disposed of liquid waste in three leaching basins and deposited solid wastes and treatment sludges in drums or in old, aboveground metal tanks. The principal wastes generated were organic solvents, resins and wash wastes (mineral spirits). Located inside the process building were a solvent recovery system (steam distillation), two pigment dust collectors and a sump. To the west of the building, there were five concrete treatment basins, each with a capacity of 5,000 gallons, which contained sediments and water. Six aboveground tanks, three of which contained wastes, were located east of the process building. Other features included an underground tank farm, construction and demolition debris, dry wells and a water supply well.

2.4 Site Geological Setting

The "Claremont Polychemical Superfund Site Long-term Groundwater Monitoring Old Bethpage, New York" report prepared by SAIC and dated December 2001 reported that site-specific subsurface investigations from a variety of soil borings and monitoring/injection/extraction well installations to a maximum depth of 250 feet below ground surface (bgs) identified "well-stratified fine to medium sand with silt lenses, abundant peat laminae, and discontinuous

sand layers” (Ebasco, 1990). Borings in the northern portion of the site also encountered numerous interbedded silt and clay horizons. A comparison of site logs with municipal supply well logs to the north suggest that the site is located within a transitional area between the predominately sandy southern portion of the Magothy Formation and an interbedded clayey-sand portion to the north (Ebasco, 1990).

Further the report indicated that historically groundwater flow is generally to the south-southeast with historical gradients ranging from 0.001-0.002 ft/ft and horizontal flow velocities of 0.43 ft/day or 157 ft/yr (Ebasco, 1990). Groundwater elevations are depressed in the areas of the extraction wells. Hydraulic permeability (slug) tests performed during the EPA RI calculated hydraulic conductivities ranging between 200 and 400 gdp/ft² which is significantly lower than historical data from actual pump tests. The vertical component of flow was historically less than 0.5 ft/ft and lacked any consistency or pattern. It was thus determined to be insignificant with respect to contaminant movement (Ebasco, 1990).

The report also indicated that the direction of groundwater flow from the western portion of the site is to the east, south and southeast and reverses on the eastern and southeastern portions of the site. The gradient was reported to be approximately 0.024 ft/ft as measured between monitoring wells SW-1 and SW-2 over a distance of approximately 500 ft. The semi-radial component of flow and steep gradient are indicative of the groundwater extraction system’s capture zone. However, groundwater levels were recorded from five sets of clustered monitoring wells or 13 data points in and around the source area. Hence, the report concluded that the capture zone is not realistically defined as it tends to center around monitoring well cluster SW-2/DW-2 instead of the three extraction wells slightly to the southeast. HRP agrees that additional definition is warranted to better define Claremont’s contribution to regional groundwater contamination and to refine our understanding of the capture zone of the onsite system.

3.0 GROUNDWATER TREATMENT SYSTEM

The EPA's construction of the Claremont Polychemical Corp. Site pump-and-treat system began in 1997 and the system went into full-scale operation in February 2000. A description of the groundwater treatment system and a review of its effectiveness are provided below.

3.1 Groundwater Treatment System Description

The system which is designed to treat metals, organic contaminants, and provide final pH adjustment consists of an extraction system, above-ground treatment, and a reinjection system. Each of the system components is discussed below. The extraction wells were temporarily shut down beginning in December 2012 to evaluate contaminant profiles across the screened intervals based on discussions following submittal of the 2012 Remedial System Optimization (2012 RSO).

Extraction System

The groundwater collection system consists of three extraction wells (EXT-1, EXT-2, and EXT-3) installed approximately 150 feet apart south of the site oriented in a southwest-northeast line. The wells are screened from approximately 60 feet mean sea level (MSL) (just below the water table) to -30 feet MSL and are outfitted with 10 horsepower pumps. Each well is capable of pumping up to 200 gpm individually. However, when they are all on, EXT-1, EXT-2, and EXT-3 respectively extract 190 gpm, 188 gpm, and 175 gpm for a total of approximately 553 gpm. The average flow rate over the course of a month is approximately 350 to 390 gpm. This average flow rate translates to approximately 500,000 to 560,000 per day which meets the onsite remedy goal of treating 500,000 gallons per day.

It is important to note that in April/May 2011, SAIC replaced the Equalization Tank level controllers, which formerly controlled the extraction well pumps, with level transducers located in the extraction wells. The level transducers allow the extraction pumps to maintain a static water level in the extraction wells and a more consistent capture zone. Each well pump is controlled by a well transducer that maintains a groundwater elevation of 38.3 to 46.7 feet MSL.

Treatment System

Water from the extraction system enters a 60,000-gallon equalization tank situated adjacent to the treatment building. Water from the equalization tank flows through two parallel metals-removal trains that are each rated for 250 gpm. Each train includes a reaction tank, a flocculation tank, a clarifier, and a filter and is followed by air-stripper feed tanks. These feed tanks send the water through a single packed tower air stripper rated at an average rate of 500 gpm and then through parallel liquid phase carbon units each rated at 250 gpm. The air emissions from the air stripper are treated with vapor phase carbon. The treated water is then stored in two 42,000-gallon vessels before reinjection to the

subsurface via four injection wells and/or two infiltration galleries. Flow to the injection wells and galleries, located on the adjacent SUNY Farmingdale campus, is controlled by a butterfly valve. The wells are equipped with high-level alarms and are regularly gauged, however the infiltration galleries are not equipped with level sensors or alarms.

After the first nine months of operation the addition of oxidizing chemicals (potassium permanganate) to the metals removal system was discontinued as the influent to the plant already met discharge standards for metals. Water continues to flow through the metals portion of the treatment system.

The plant is manned by two operators working 40- to 50-hour weeks, and an autodialer is installed to contact the operators in case of plant alarms. The operators typically respond to alarms within 30 minutes.

System Operating Permits

Water Permit

The plant was issued a water discharge permit dated January 1, 1998. According to Brian Baker, NYSDEC Section Chief, Western Section, Bureau of Water Permits the permit was extended to the end of calendar year 2013, therefore a permit renewal application needs to be submitted to the NYSDEC Bureau of Water permits by July 1, 2013 in order to review the application and complete a permit reauthorization. It is important to note that the NYSDEC Bureau of Water does not have regulatory authority over a discharge from a State, PRP, or Federal Superfund Site. Therefore, Effluent Limitations and Monitoring Requirements outlined in the permit must be submitted to the NYSDEC Division of Environmental Remediation, Remedial Bureau E.

Air Permit

No air permit is required for the system operation, in particular, 6 NYCRR Part 375-1.7 states that “no permit is required when the substantive compliance is achieved as indicated by the NYSDEC approval of the workplan”. Based on a review of the information pertaining to the treatment system, VOC air emissions from the treatment system should be negligible, therefore substantive requirements of an air permit would be achieved and no air permit would be required.

3.2 System Evaluation Performance

3.2.1 Flow Rate

The volume of treated water discharged by the treatment plant to the injection well field is determined daily from readings of the magnetic flow meter on the plant effluent line. Since startup, the system has treated more than 1.86 billion gallons of groundwater. During this quarter

(October 2012 - December 2012), 31.2 million gallons of groundwater were extracted, treated, and re-injected.

Flow to infiltration galleries IG-1 and IG-3 is restricted so that flow to IW-1 and IW-3 is maximized. Both galleries are draining adequately. The plant's effluent discharge flow is maximized and is limited by injection pump system capacity.

3.2.2 Treatment System Contaminant Removal

To evaluate the treatment system's contaminant removal rate, HRP reviewed available treatment system inlet (Charts 1, 1a, 1b, 1c and 2) and effluent analytical results from quarterly O&M sampling. A plot of mass removal rate and cumulative PCE and TCE mass removed is presented as Chart 5.

3.2.3 System Discharge Monitoring

Effluent data for select VOC compounds (PCE, TCE, and 1,1-DEC) and metals (Iron and Manganese) were analyzed to evaluate compliance with established effluent discharge limits. Charts 3 and 4 show that the effluent concentrations remain below permissible levels.

4.0 GROUNDWATER MONITORING PROGRAM

From December 17-19 and December 27, 2012 HRP sampled a total of 44 monitoring wells and extraction wells (41 monitoring wells and 3 extraction wells) located both on- and off-site. On-site monitoring wells included DW-1, DW-2, EW-5, EW-7C, EW-7D, EW-8D, EW-9D, and SW-1. Off-site wells included BP-3A, BP-3B, BP-3C, EW-1A, EW-1B, EW-1C, EW-2A, EW-2B, EW-2C, EW-2D, EW-3A, EW-3B, EW-3C, EW-4A, EW-4B, EW-4C, EW-4D, EW-6A, EW-6C, EW-10C, EW-11D, EW-12D, EW-13D, EW-14D, LF-02, MW-6D, MW-8A, MW-8B, MW-8C, MW-10B, MW-10C, MW-10D, WT-01, EXT-1, EXT-2, and EXT-3 (EXTs are extraction wells). The monitoring well and extraction well locations are depicted in Figure 2a. Additional vertical contaminant profile data was collected from the extraction wells, and is discussed in section 5.0. A description of the groundwater sampling event is provided below.

4.1 Hydrological Data

At the time of sample collection, static groundwater levels were measured at all 44 locations on December 17, 18, and 19, 2012. Depths to groundwater ranged from 42.52 ft (EW-14D) to 100.00 ft (EW-11D) below ground surface (bgs). Overall, groundwater elevations (Table 1) and inferred flow directions based on groundwater elevation contours (Figure 2b) were consistent with previous data.

4.2 Groundwater Sample Collection

The Fourth Quarter of 2012 monitoring event samples were collected using passive diffusion bags (PDBs). PDBs were placed at fixed depths (Appendix A) following the third quarter 2012 sampling event (August 6, 7, and 8, 2012). At the time of sample collection, the bag is retrieved, pierced and the water inside is collected in VOA vials and preserved with HCl. The vials are labeled and placed in a cooler with ice.

The samples were submitted to Test America Laboratory, of Edison, New Jersey, an NYSDOH ELAP approved laboratory, to be analyzed for VOCs via EPA Method 8260. A list of wells and analytical results are presented in Table 2. Groundwater sampling for metals was discontinued following the July 2011 sampling event.

4.3 Groundwater Test Results

To assess the status of groundwater quality at the site and surrounding area, HRP compared collected analytical data from the December 2012 sampling event to historical conditions and to applicable NYSDEC water quality criteria. Compounds detected above criteria during the December 2012 sampling event include tetrachloroethylene, trichloroethylene, cis-1,2-dichloroethylene, 1,1-dichloroethylene, vinyl chloride, 1,1,1-trichloroethane, 1,2-dichloroethane, 1,1-dichloroethane, 1,1,2-trichlorotrifluoroethane, 1,4-dichlorobenzene, benzene, chlorobenzene, isopropyl benzene and m/p xylenes. See Table 2 for complete results. The measured VOC concentrations during this event are generally

consistent with historical results.

Comparisons to historical groundwater monitoring data enabled assessment of the general effectiveness of the treatment system. Comparisons to applicable criteria facilitated evaluation of compliance with water quality standards (Table 2).

4.3.1 Comparison to Historical Groundwater Quality

The attached charts (Chart 6a through Chart-6c) illustrate the historical concentration trends for PCE and/or TCE in three wells (EW-1a, EW-4c, SW-1). These wells were selected due to consistent elevated VOC analytical results and the presence of sufficient historical data. In all cases, the results indicate a general downward trend in VOC concentrations (Charts 6a through 6c).

4.3.2 VOC Plume Evaluation

An assessment of groundwater contamination distribution was conducted by creating contaminant isopleth maps for PCE and TCE (Figures 3a and 3b). Historically, isopleths were generated for three distinct horizons, based on the screen elevations of site wells. These horizons are comparable to those identified in a 2001 SAIC groundwater report for the site. However, to provide a more complete understanding of the plume behaviors, cross sections and plume footprint maps were generated for this sampling event (Figures 3a and 3b).

PCE Contamination (Figure 3a)

PCE has historically been present above groundwater criteria in two zones of the monitored area. Cross section A-A' east of the site shows an on-site migrating PCE plume with maximum observed concentrations of 28 ug/l at EW-4d. A separate plume appears to originate on-site, with maximum concentrations of 130 ug/l in SW-1 (cross section C-C'). These plumes seem to be separate (Cross section B-B'). Additional exceedances were noted in the southern portion of the study area, centered on well BP-3c (62 ug/l).

TCE Contamination (Figure 3b)

TCE contamination is predominant to the east of the site building (Cross section A-A'), and is at its highest concentration (480 ug/l) in well EW-7c, upgradient of the site. This plume appears to be separate from an onsite generated plume (Cross section B-B'), and may extend to the southeast towards EW-14d (270 ug/l). The on-site generated plume has maximum observed concentrations of 16 ug/l in SW-1 (Cross section C-C'). As with PCE contamination, additional exceedances were noted in the southern portion of the study area, centered on well BP-3c (17 ug/l).

5.0 EXTRACTION WELL CONTAMINANT PROFILE

In December 2012, the pumps were removed from the extraction wells and a series of PDBs were deployed to evaluate the contributing zones of contamination in each extraction well. This data will be used to optimize future pump placements and to identify data gaps.

PDBs were deployed on December 6, 2012. The 18-inch samplers were centered at the following depths:

EX-1: 83', 93', 103', 129', 139', 149', 159', 169',
EX-2: 99', 109', 119', 141', 151', 161', 171', 181',
EX-3: 99', 109', 119', 129', 139', 155', 165', 175', 185'.

On December 27, 2012, the PDBs were retrieved, pierced, and the water inside was collected in VOA vials and preserved with HCl. The vials were labeled and placed in a cooler with ice.

The samples were submitted to Test America Laboratory, of Edison, New Jersey, an NYSDOH ELAP approved laboratory, to be analyzed for VOCs via EPA Method 8260. A list of wells and analytical results are presented in Table 3. Contaminant profiles for PCE and TCE are presented in Appendix B.

EXT-1 – No VOCs were detected above applicable water quality standards.

EXT-2 – TCE (6.0 ug/L) and PCE (17.0 ug/L) were detected above water quality standards in only the shallow most sample (99' b.g.). These shallow impacts indicate that the source of contamination may be local to EXT-2 and may be a result of contamination from the Claremont site.

EXT-3 – TCE exceeded water quality standards in all sampled horizons, with minimum concentrations at 99' (5.3 ug/L) and maximum concentrations detected at the 175' interval (20 ug/L). While this indicates the predominance of an off-site plume, impacts from the Claremont site cannot be ruled out. PCE exceedances were observed in the uppermost three sampling horizons [99' (8.7 ug/L), 109' (7.4 ug/L), 119' (5.9 ug/L)] indicating a potential local release from the Claremont site.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

HRP completed a groundwater monitoring event in December 2012 at the Claremont Polychemical Corporation site, in which groundwater samples from 44 wells were collected. Analysis of the data has resulted in the following conclusions:

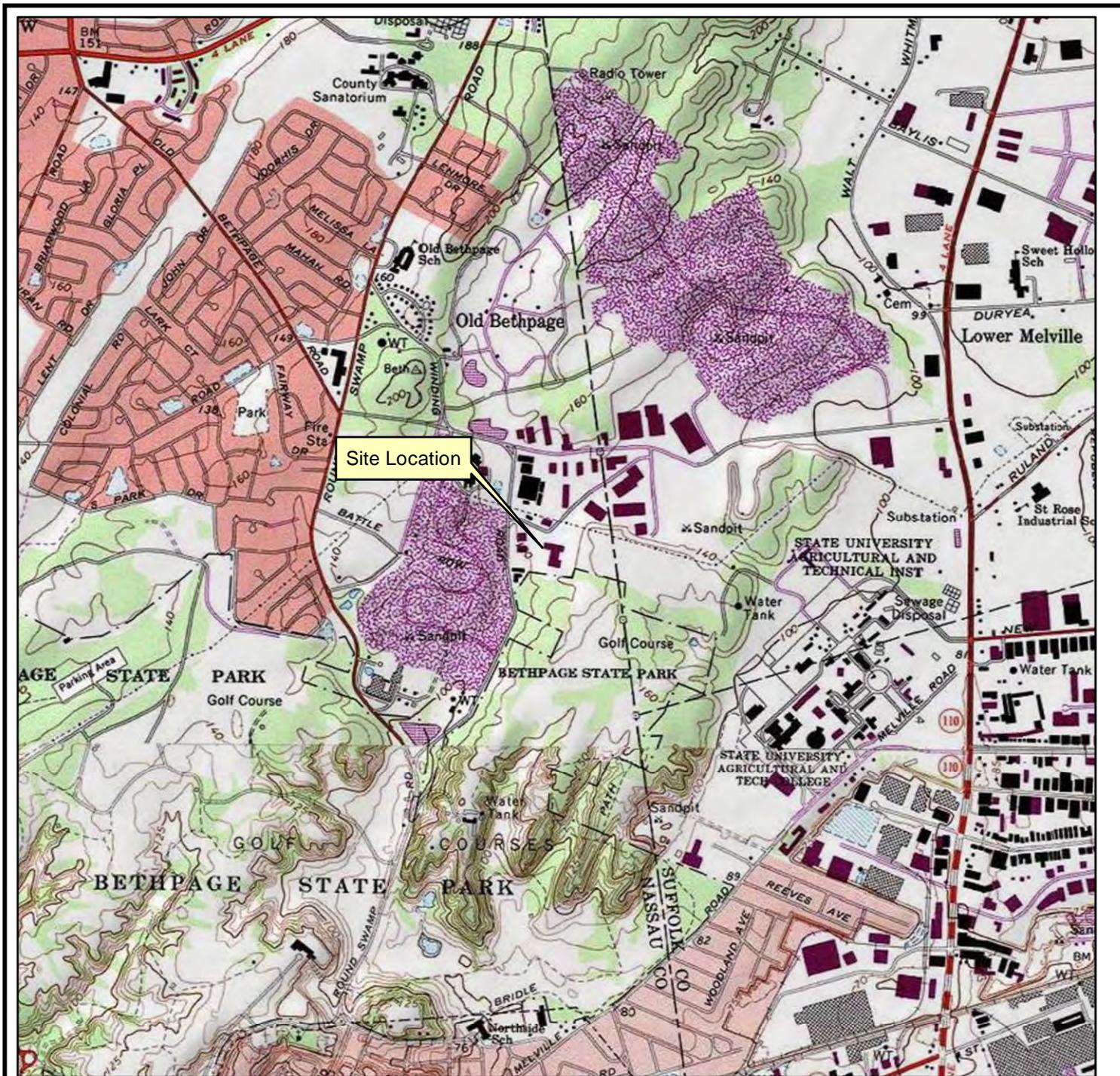
- A groundwater plume of VOCs, primarily PCE originates from the south of the main site building;
- Up to three other plumes migrate into the study area, and are marked by TCE predominance;
- Some or all of the TCE plume originating northeast of the site is not being captured by the current treatment system;
- Two plumes identified southeast of the site may be related to the northernmost plume, although data gaps between the plumes exist based on the current monitoring network;
- The VOC data collected through PDB sampling is generally consistent with historically observed concentrations in samples collected via low flow sampling protocols; and
- Data gaps reported in the 2012 RSO have been confirmed. Additional information is needed to evaluate potential source areas in the southern and eastern portions of the site and their contributions to shallow groundwater contamination observed in EXT-2 and EXT-3.

6.2 Recommendations

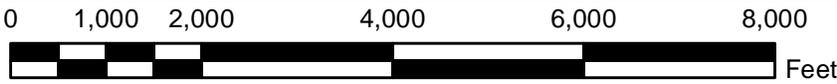
Based on analysis of data collected during this and historical events, HRP has the following recommendations for the Claremont Polychemical Corporation site:

- Continued shutdown of the site system to allow for an additional profile sampling event in wells EXT-2 and EXT-3 to assess plume stability and seasonal variation;
- Continued quarterly VOC monitoring of 41 observation wells using PDBs; and
- Investigation of shallow groundwater and soils in the southern and eastern portions of the site and down gradient to identify the source and connectivity of the plumes or elevated concentrations identified in the MW-10 well cluster, the BP-3 well cluster and at EW-14d (Figure 3d).

FIGURES



USGS Quadrangle Information
 Quad ID: 40073-G4
 Name: Huntington, New York
 Date Rev: 1977
 Date Pub: 1979



1 inch = 2,000 feet



Figure 1
Site Location
Claremont Polychemical Corporation
Old Bethpage, New York
HRP # NEW9625.OM
Site Code 130015
Scale 1" = 2,000'

HRP Associates, Inc.
 Environmental/Civil Engineering & Hydrogeology
 Creating the Right Solutions Together
 Offices in CT, SC, NY, FL, MA, and TX
 197 Scott Swamp Road
 Farmington, Connecticut 06032
 Ph: (860)674-9570 Fax: (860)674-9624
 www.hrpassociates.com

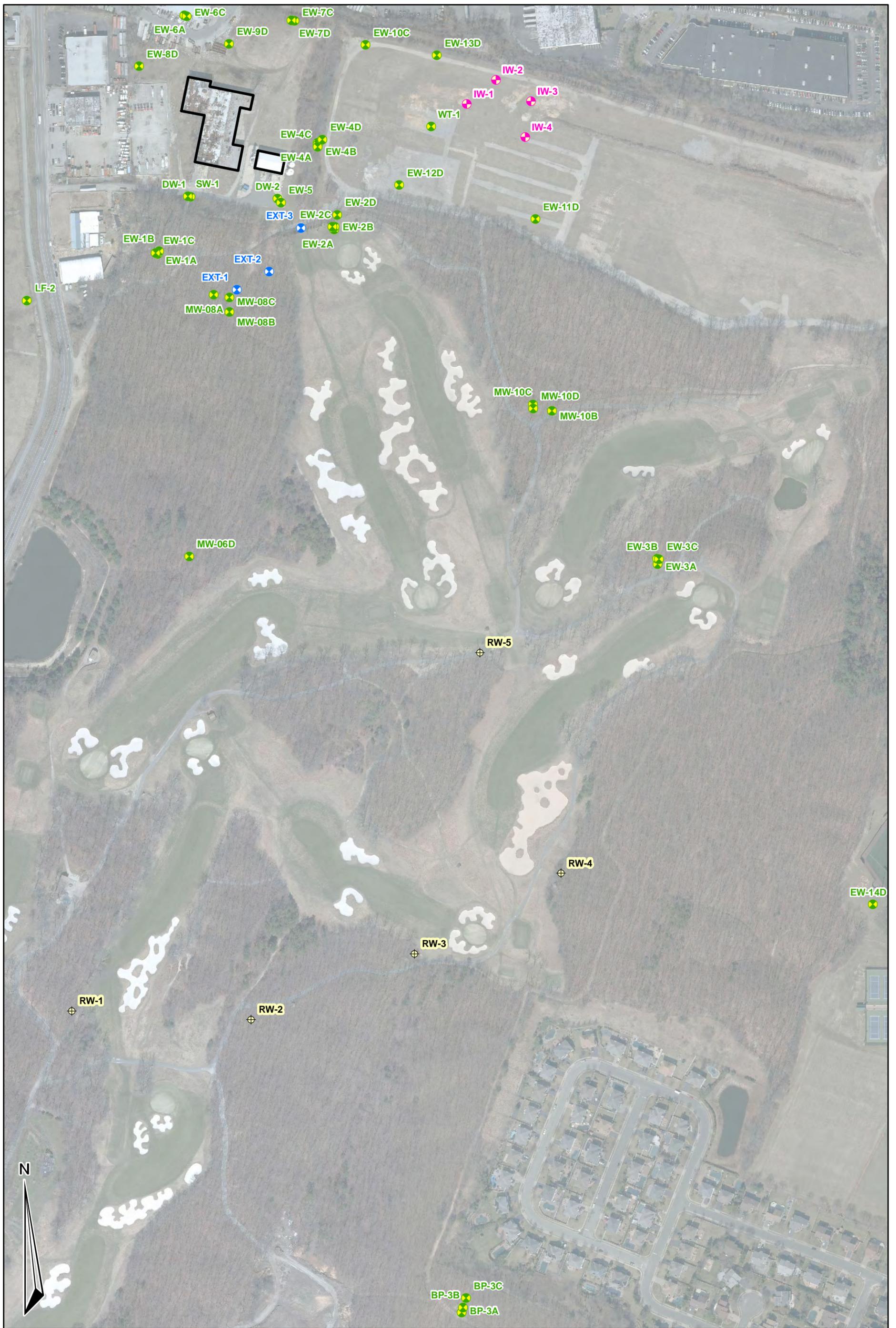


Figure 5 - GWTS Well Network
Claremont Polychemical Corporation
Old Bethpage, New York
HRP # NEW9625.OM Site Code 130015
Scale 1" = 300'

Legend

- Monitoring Well
- Extraction Well
- Injection Well
- ⊕ Oyster Bay Extraction Well
- Site Buildings

300 150 0 300
 Feet
1 inch = 300 feet

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 c/o HRP Engineering P.C.
 Environmental/Civil Engineering & Hydrogeology
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 Farmington, Connecticut 06032
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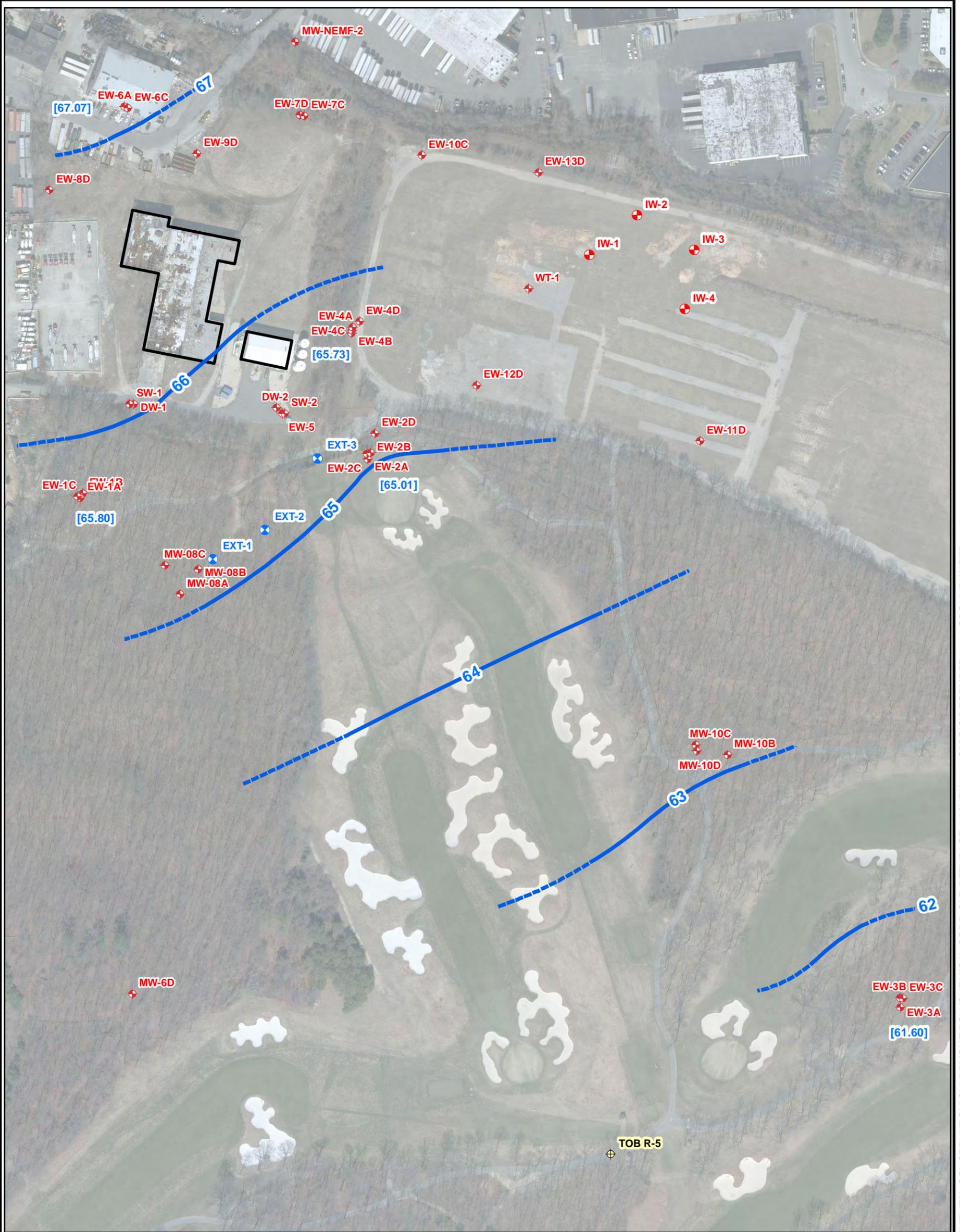


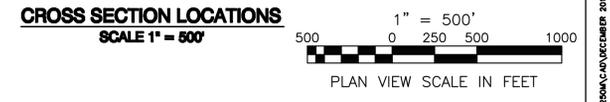
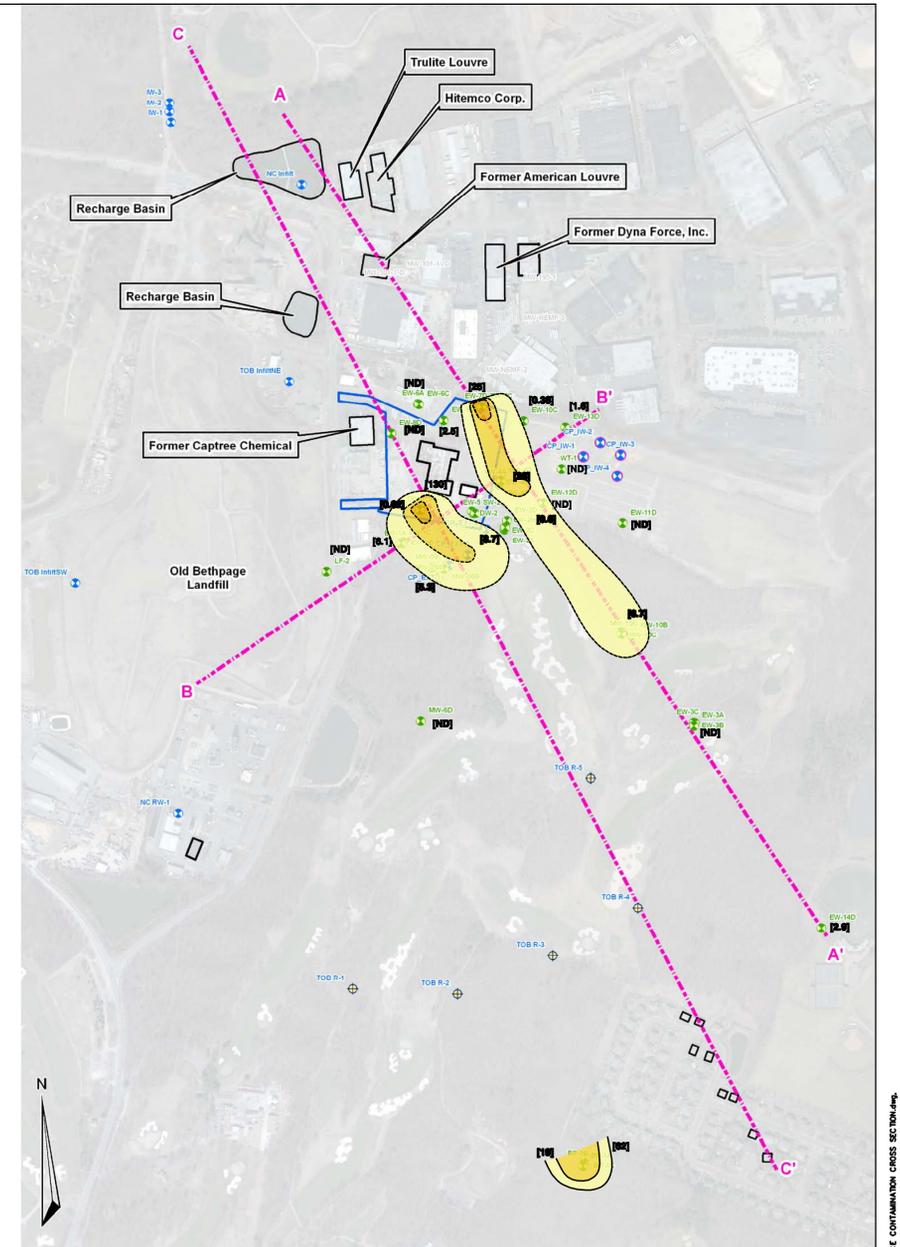
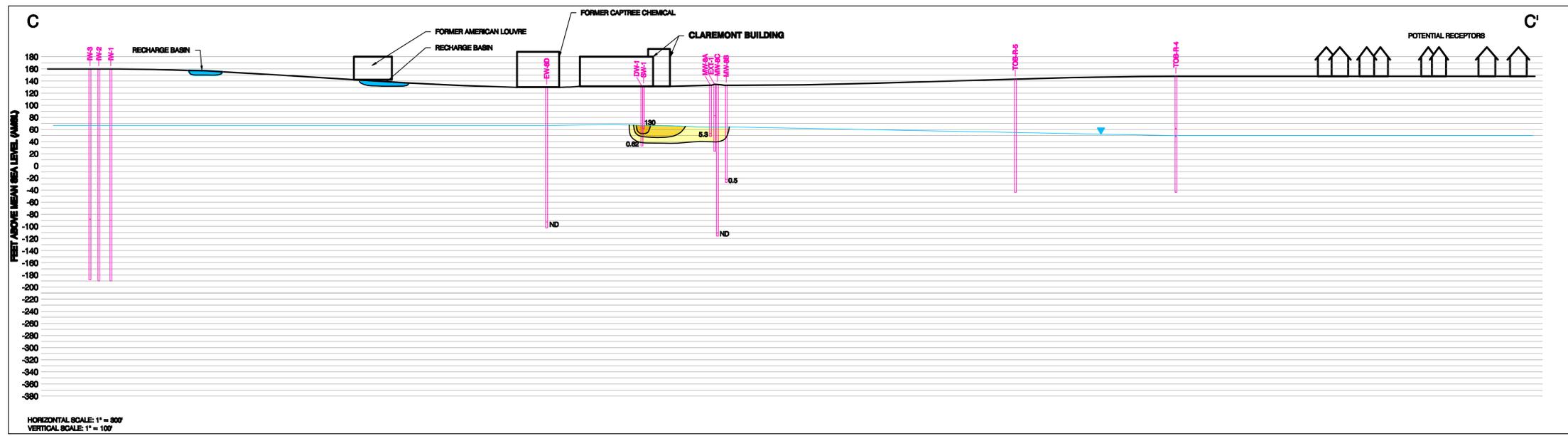
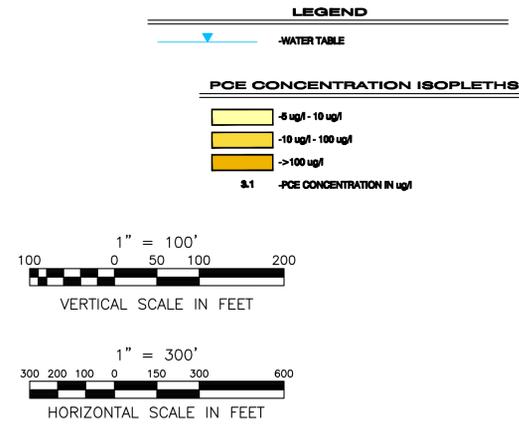
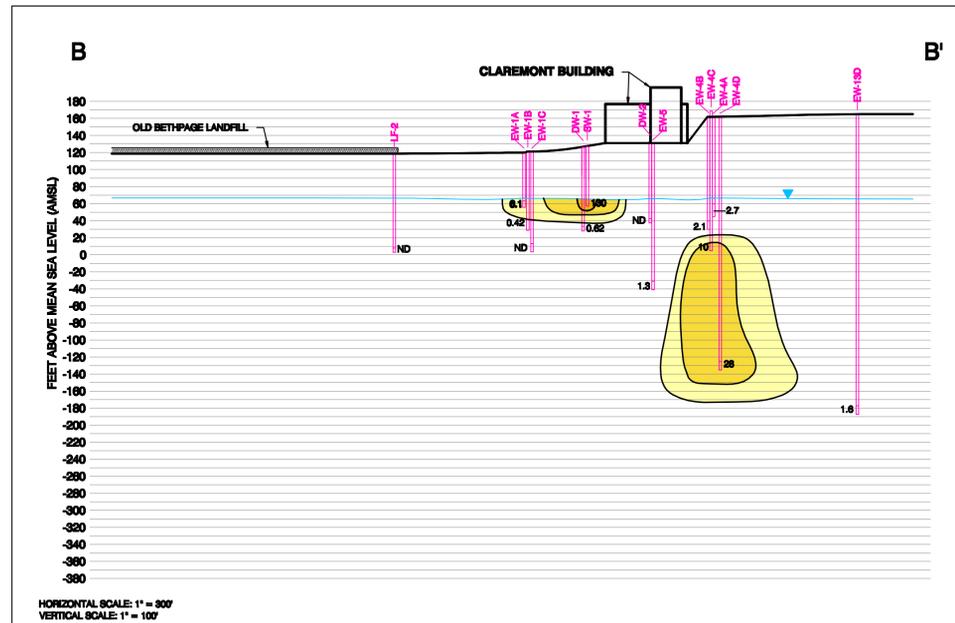
Figure 2b
Shallow Groundwater
Elevation Contours
December 2012
Claremont Polychemical Corporation
Old Bethpage, New York
HRP # NEW9625.OM
Site Code 130015
Scale 1" = 200'

Legend

- ◆ Monitoring Well
- ⊗ Extraction Well
- ⊕ Injection Well
- ⊕ Oyster Bay Extraction Well
- December 2012 Groundwater Contours

Note: Contours dashed where inferred.

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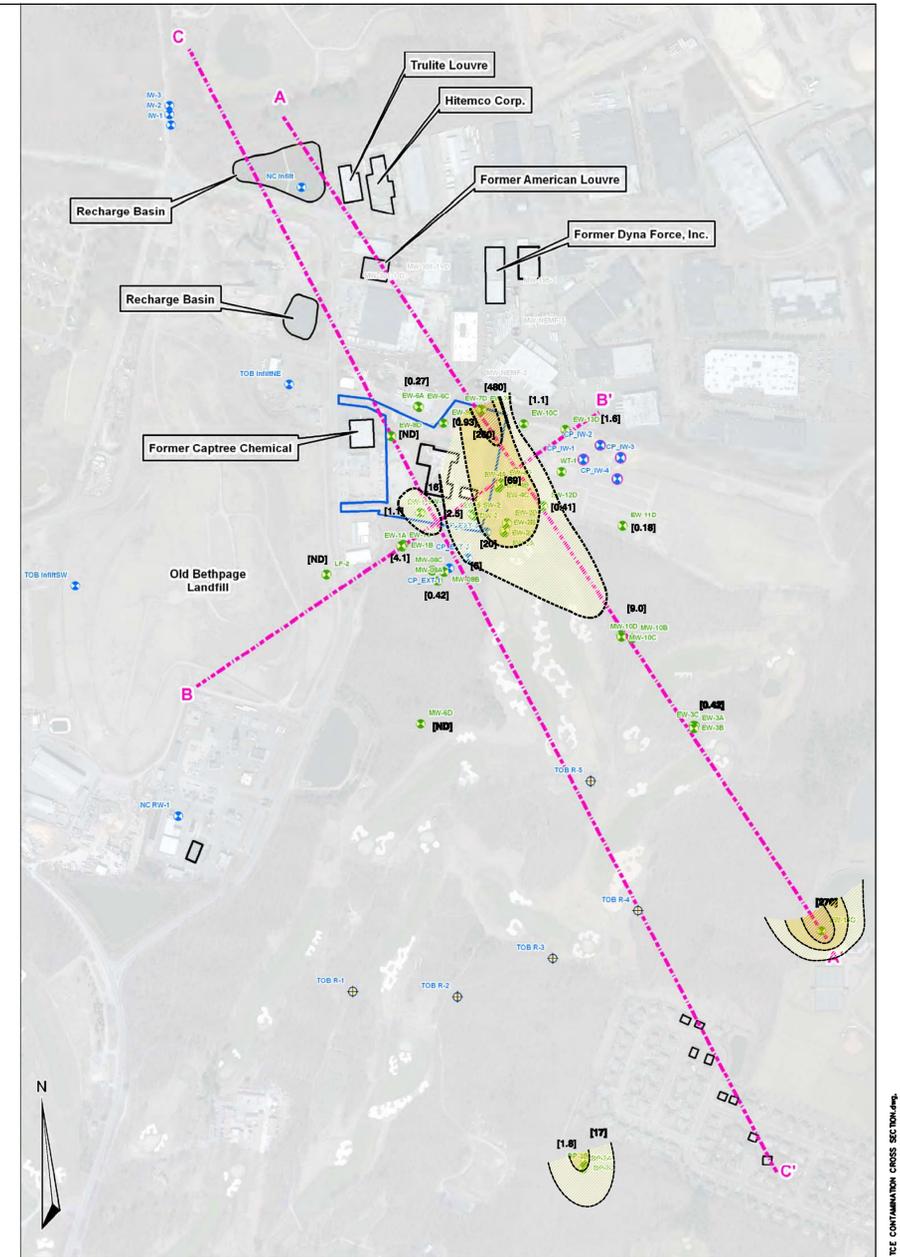
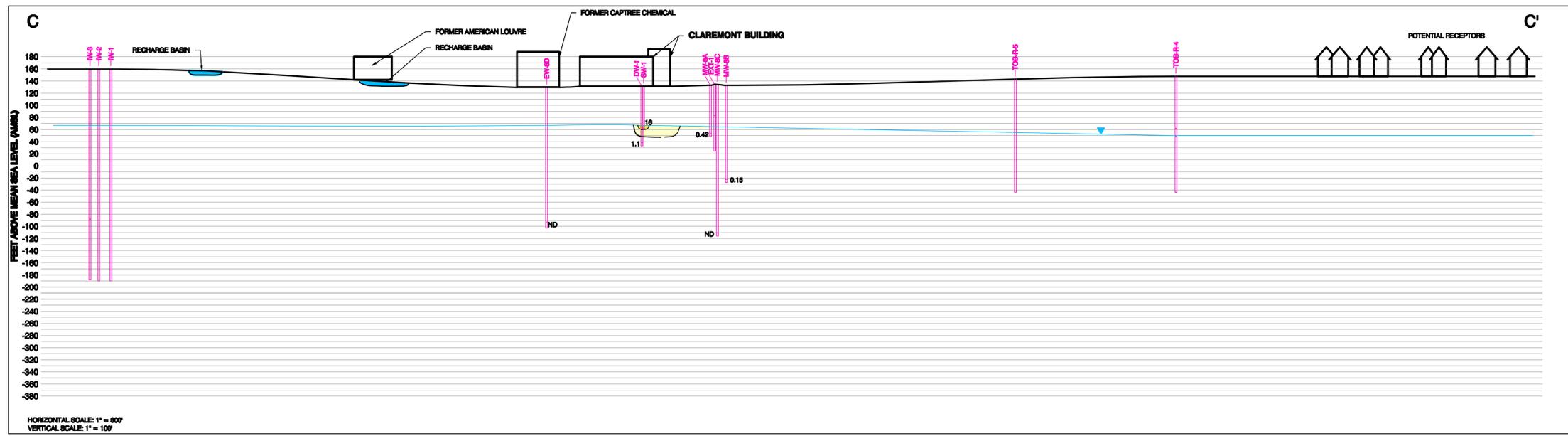
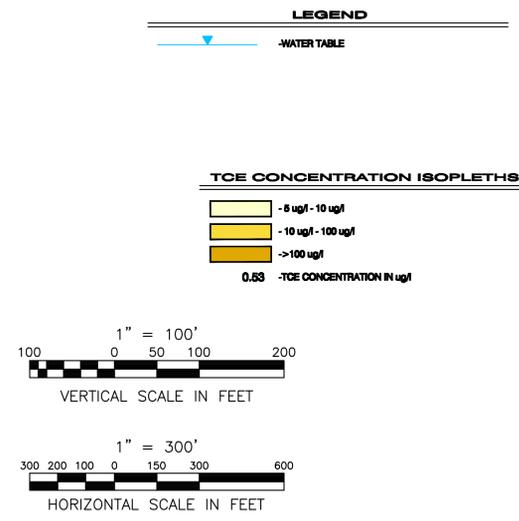
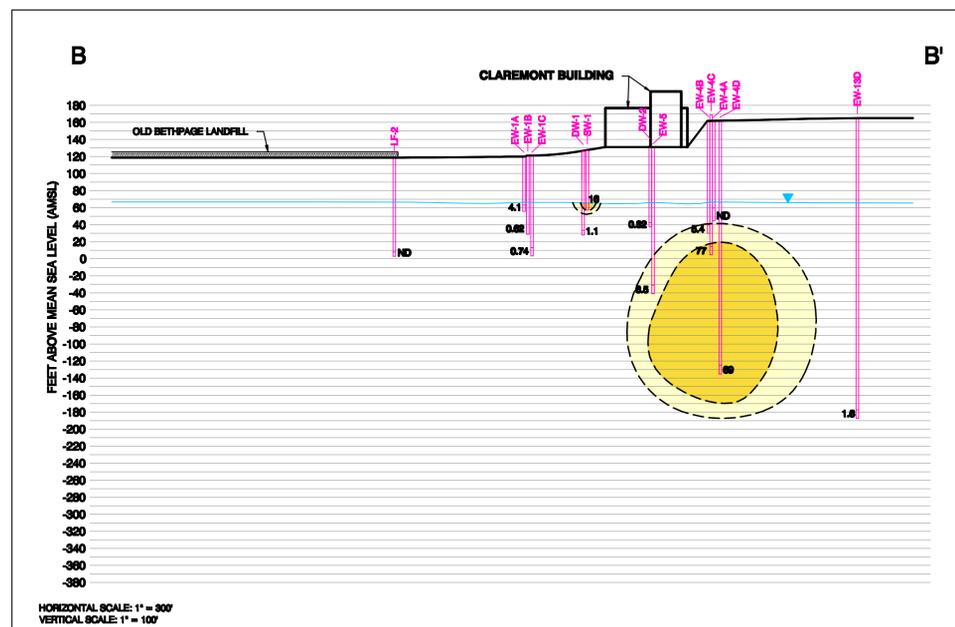
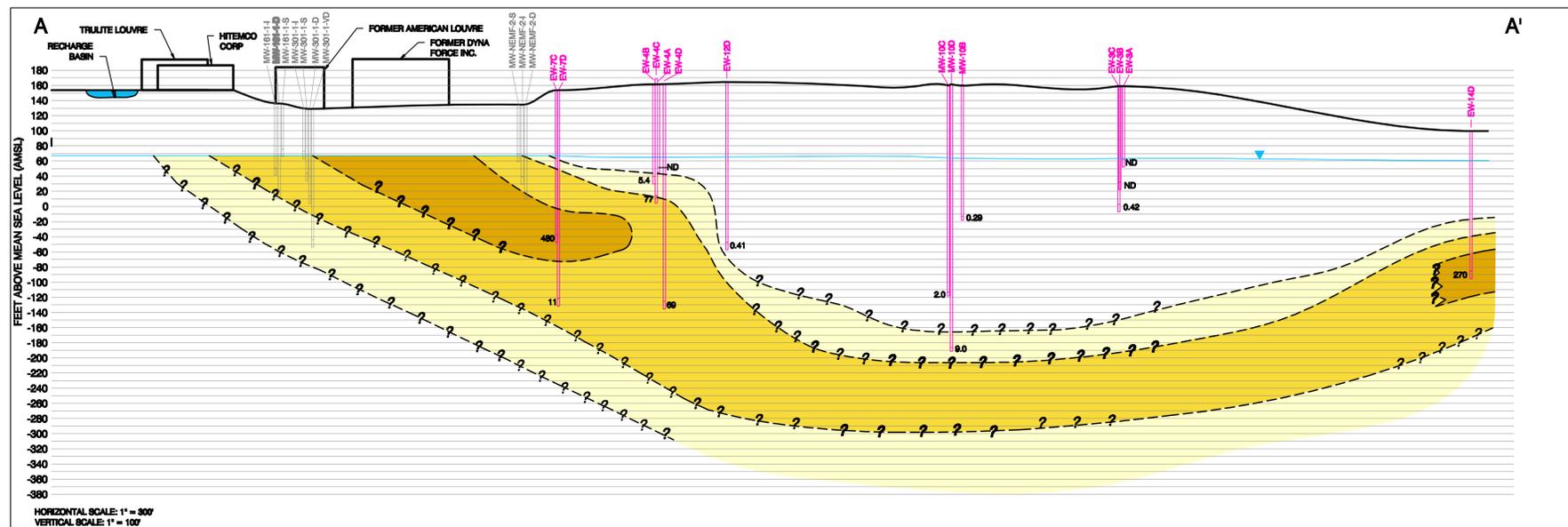
NO.	DATE	DESCRIPTION

PCE CONTAMINATION - DECEMBER 2012

CLAREMONT POLYCHEMICAL CORP.
OLD BETHPAGE, NEW YORK

HRP Associates, Inc. <small>Environmental Engineering & Hydrogeology</small> Creating the Right Solutions Together 197 Scott Swamp Road Farmington, Connecticut 06032 Ph: (860)674-9570 Fax: (860)674-9524 www.hrpsociates.com	JMP DESIGNED	BPW APPROVED	AS NOTED SCALE	FIG. 3A SHEET NO.
	DML DRAWN	GTS CHECKED	JAN., 2013 DATE	
NEW9625.OM PROJECT NO.				

J:\MNHEN - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\CLAREMONT POLYCHEMICAL CORP. OLD BETHPAGE, NY\NEW9625\NOVEMBER 2012 - PCE CONTAMINATION CROSS SECTION.dwg
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CROSS SECTION LOCATIONS
SCALE 1" = 500'
PLAN VIEW SCALE IN FEET

NO.	DATE	DESCRIPTION

TCE CONTAMINATION - DECEMBER 2012

CLAREMONT POLYCHEMICAL CORP.
OLD BETHPAGE, NEW YORK

HRP Associates, Inc. <small>Environmental/Civil Engineering & Hydrogeology Creating the Right Solutions Together Offices in CT, SC, NY, FL, MA, TX and PA 197 Scott Swamp Road Farmington, Connecticut 06032 Ph: (860)674-9870 Fax: (860)674-9824 www.hrpassociates.com</small>	JMP DESIGNED	BPW APPROVED	AS NOTED SCALE
	DML DRAWN	GTS CHECKED	OCT. 2012 DATE NEW9625.OM PROJECT NO.

FIG. 3B
SHEET NO.

J:\M\NEW - NY STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\CLAREMONT POLYCHEMICAL CORP. OLD BETHPAGE, NY\NEW9625\06\DECEMBER 2012 - TCE CONTAMINATION CROSS SECTION.dwg
Layout: 1/17/2013 8:08:29 AM DWG IS PLOT 2/3

TABLES

Table 1: Groundwater Elevations
 Claremont Polychemical Superfund Site
 December 2012 (4Q12) Groundwater Sampling Event
 Old Bethpage, NY
 HRP#NEW9625.OM
 Site Code: 130015
 WA# D006130-19

		Dec-12		
Well ID	Elev.of Screened Interval (ft AMSL)	Sample Date	Depth to Water Below Ref El ^b (ft)	Water Elevation (ft AMSL)
Monitoring Wells				
EW-1A	53.34 to 63.17	28-Dec-12	64.20	65.80
EW-1B	28.75 to 38.58	17-Dec-12	65.05	65.48
EW-1C	3.43 to 13.26	17-Dec-12	64.53	65.91
EW-2A	65.19 to 55.36	28-Dec-12	92.35	65.01
EW-2B	28.74 to 38.57	17-Dec-12	92.40	65.33
EW-2C	7.60 to 17.43	17-Dec-12	92.84	64.82
EW-2D	-132.55 to -142.55	17-Dec-12	93.53	64.71
EW-3A	52.28 to 62.11	28-Dec-12	97.35	61.60
EW-3B	22.32 to 32.15	17-Dec-12	97.20	61.89
EW-3C	2.99 to -6.84	17-Dec-12	97.10	61.85
EW-4A	44.86 to 59.69	28-Dec-12	96.05	65.73
EW-4B	29.8 to 39.63	17-Dec-12	96.33	65.47
EW-4C	4.59 to 14.42	17-Dec-12	96.08	65.46
EW-4D	-125.26 to -135.26	17-Dec-12	96.55	65.22
EW-5	-31.16 to -40.99	18-Dec-12	72.30	64.68
EW-6A	57.66 to 67.49	28-Dec-12	63.25	67.07
EW-6B	10.79 to 20.62	abandoned		
EW-6C	-29.60 to -39.43	18-Dec-12	63.80	66.60
EW-7C	-37.47 to -47.47	18-Dec-12	87.62	66.17
EW-7D	-121.47 to -131.47	18-Dec-12	87.59	66.12
EW-8D	-102.49 to -112.49	18-Dec-12	65.32	66.22
EW-9D	-108.6 to -118.6	18-Dec-12	70.37	67.16
EW-10C	19.11 to 9.11	17-Dec-12	94.92	66.02
EW-11D	-106.75 to -116.75	17-Dec-12	100.00	65.33
EW-12D	-47.33 to -57.33	17-Dec-12	99.40	65.02
EW-13D	-177.28 to -187.28	17-Dec-12	99.80	64.93
EW-14D	-85.27 to -95.27	18-Dec-12	42.52	59.61
SW-2	65.10 to 75.10	dry		
DW-2	37.35 to 42.35	18-Dec-12	65.60	70.82
SW-1	61.50 to 66.50	18-Dec-12	65.80	65.69
DW-1	32.89 to 38.39	18-Dec-12	71.40	59.98
LF-02	3 to 8	19-Dec-12	52.54	66.16
PPW-1	-166.15 to -196.15	Permanently closed Oct. 2008		
WT-01	56.98 to 66.98	18-Dec-12	95.05	69.52
MW-6D	-26.1 to -31.1	18-Dec-12	96.05	64.34
MW-8A	48.5 to 53.5	18-Dec-12	69.98	63.20
MW-8B	-22.2 to -27.2	18-Dec-12	68.90	65.34
MW-8C	-110.7 to -115.7	18-Dec-12	71.30	64.42
MW-10B	-13 to -18	18-Dec-12	98.55	62.57
MW-10C	-113.1 to -118.1	17-Dec-12	97.30	62.97
MW-10D	-186.2 to -191.2	17-Dec-12	98.15	63.02
BP-3A	51 to 71	18-Dec-12	64.10	60.44
BP-3B	-91 to -111	18-Dec-12	65.90	57.67
BP-3C	-156 to -176	18-Dec-12	64.10	59.58
RW-01	Abandoned	abandoned		

Table 3: Summary of Extraction Well Profiles
December 2012 (4Q12) Sampling Event
Claremont Polychemical Superfund Site
Old Bethpage, NY
HRP#NEW9625.OM
Site Code: 130015
WA# D006130-19

Note	Method		8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B
Values in blue italics are "J" flagged Shaded cells indicate detection exceeds criteria	CAS		127-18-4	79-01-6	156-59-2	71-55-6	110-82-7	75-25-2	67-66-3	67-64-1	78-93-3	75-27-4	124-48-1
	Unit		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
	NYSDEC Class GA Criteria		5	5	5	5	NS	50	7	50	50	50	50
Sample Name	PDB Center Depth (feet below grade)	Date Collected	Tetrachloroethylene	Trichloroethylene	cis-1,2-Dichloroethylene	1,1,1-Trichloroethane	Cyclohexane	Bromoform	Chloroform	Acetone	2-Butanone (MEK)	Bromodichloromethane	Dibromochloromethane
EX1-083-CP-00-122712	83	12/27/2012	0.51	1.9	1.3	0.16	0.66	<1	<1	11	<5	<1	<1
EX1-093-CP-00-122712	93	12/27/2012	0.53	1.6	1.1	<1	0.65	<1	<1	12	<5	<1	<1
EX1-103-CP-00-122712	103	12/27/2012	0.56	1.8	0.92	<1	0.52	<1	<1	10	<5	<1	<1
EX1-129-CP-00-122712	129	12/27/2012	0.29	1.1	0.55	<1	0.51	<1	<1	10	<5	<1	<1
EX1-139-CP-00-122712	139	12/27/2012	0.2	0.48	<1	<1	0.43	<1	<1	10	<5	<1	<1
EX1-149-CP-00-122712	149	12/27/2012	0.26	0.44	<1	<1	0.5	<1	<1	9.5	<5	<1	<1
EX1-159-CP-00-122712	159	12/27/2012	0.25	0.45	<1	<1	0.44	<1	<1	13	2.5	<1	<1
EX1-169-CP-00-122712	169	12/27/2012	0.21	0.45	<1	<1	0.6	<1	<1	11	<5	<1	<1
EX2-099-CP-00-122712	99	12/27/2012	17	6	8.2	<1	0.64	<1	<1	13	<5	<1	<1
EX2-109-CP-00-122712	109	12/27/2012	3.5	2.7	1.6	<1	0.52	<1	<1	11	<5	<1	<1
EX2-119-CP-00-122712	119	12/27/2012	2.8	2.6	1.5	<1	0.59	<1	<1	13	<5	<1	<1
EX2-141-CP-00-122712	141	12/27/2012	1.9	2.8	1.4	<1	0.55	<1	<1	13	<5	<1	<1
EX2-151-CP-00-122712	151	12/27/2012	1.6	2.8	1.2	<1	0.53	<1	<1	13	<5	<1	<1
EX2-161-CP-00-122712	161	12/27/2012	1.3	2.6	1.2	<1	0.86	<1	<1	12	<5	<1	<1
EX2-171-CP-00-122712	171	12/27/2012	1.4	2.5	1.1	<1	0.47	<1	<1	13	<5	<1	<1
EX2-181-CP-00-122712	181	12/27/2012	1.5	2.4	1.1	<1	0.35	<1	<1	13	<5	<1	<1
EX2-181-CP-01-122712	181	12/27/2012	1.7	2.8	1.3	<1	0.31	<1	<1	14	<5	<1	<1
EX3-099-CP-00-122712	99	12/27/2012	8.7	5.3	0.41	0.23	0.63	<1	0.38	12	<5	<1	<1
EX3-109-CP-00-122712	109	12/27/2012	7.4	5.9	<1	0.34	0.45	<1	0.29	10	<5	<1	<1
EX3-119-CP-00-122712	119	12/27/2012	5.9	11	0.56	0.5	0.64	<1	0.26	11	<5	<1	<1
EX3-129-CP-00-122712	129	12/27/2012	3	8.4	0.35	0.49	0.55	<1	<1	9.6	<5	<1	<1
EX3-139-CP-00-122712	139	12/27/2012	2.2	12	0.42	0.65	0.59	<1	<1	10	<5	<1	<1
EX3-155-CP-00-122712	155	12/27/2012	3	18	0.47	0.92	0.53	<1	<1	11	<5	<1	<1
EX3-165-CP-00-122712	165	12/27/2012	2.4	16	0.45	0.78	0.52	<1	<1	11	<5	<1	<1
EX3-175-CP-00-122712	175	12/27/2012	3	20	0.57	0.88	0.51	<1	<1	11	<5	<1	<1
EX3-185-CP-00-122712	185	12/27/2012	2.3	17	0.37	0.79	0.46	<1	<1	10	<5	<1	<1

CHARTS

Chart 1a: EXT-1 Concentration (PCE, TCE, 1,1-DCE) vs Time

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

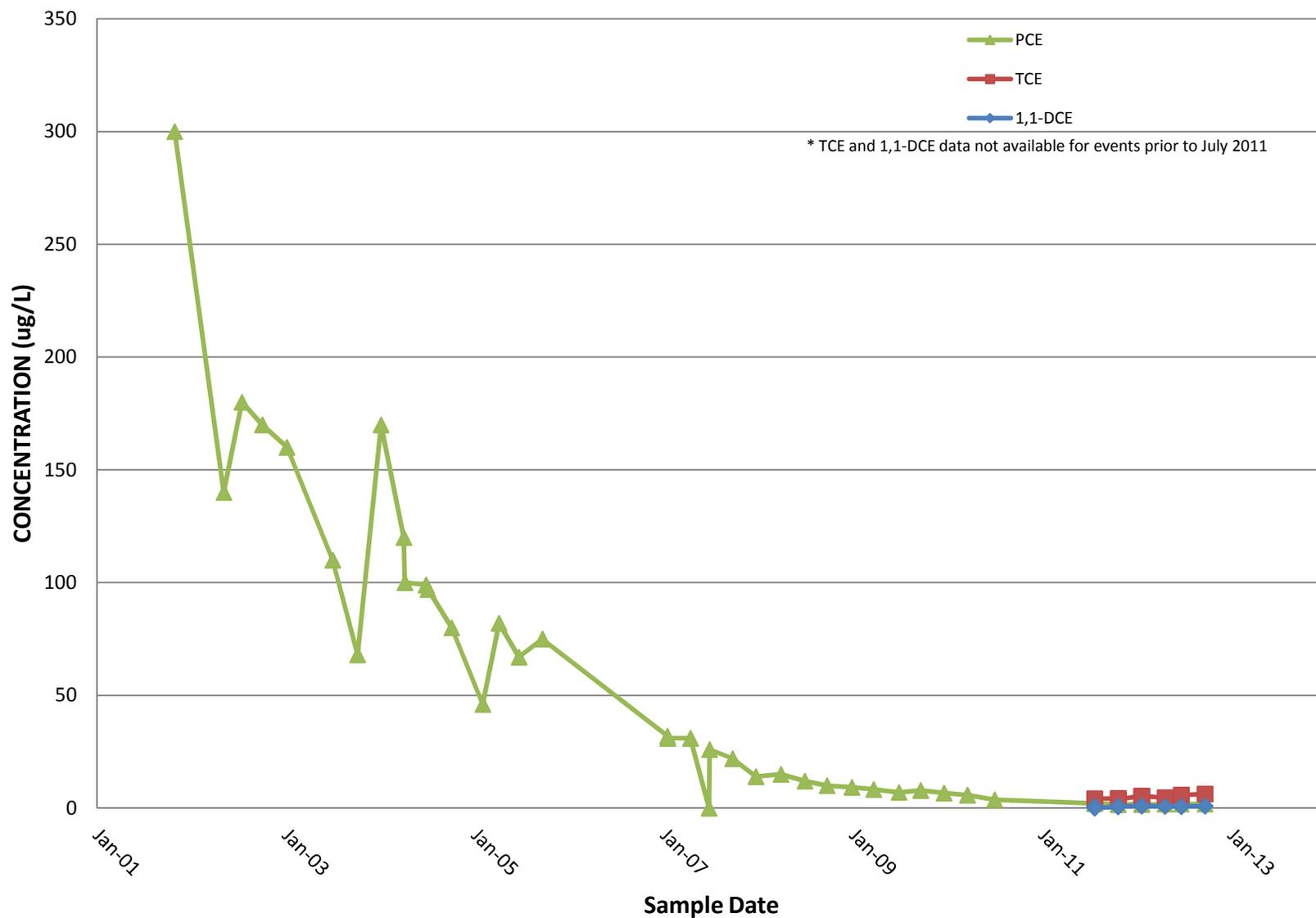
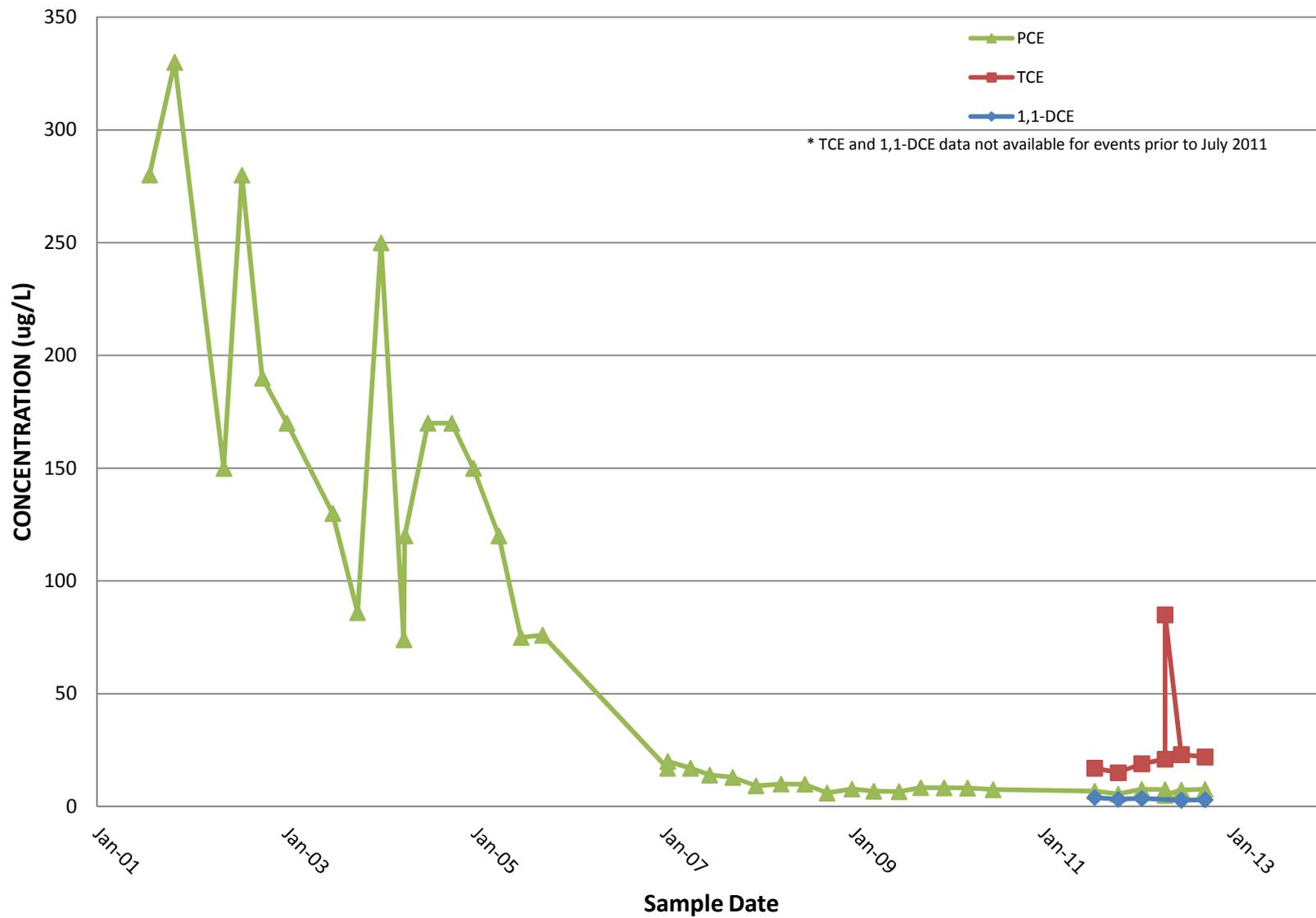


Chart 1b: EXT-2 Concentration (PCE, TCE, 1,1-DCE) vs Time

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19



* TCE and 1,1-DCE data not available for events prior to July 2011

Chart 1c: EXT-3 Concentration (PCE, TCE, 1,1-DCE) vs Time

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

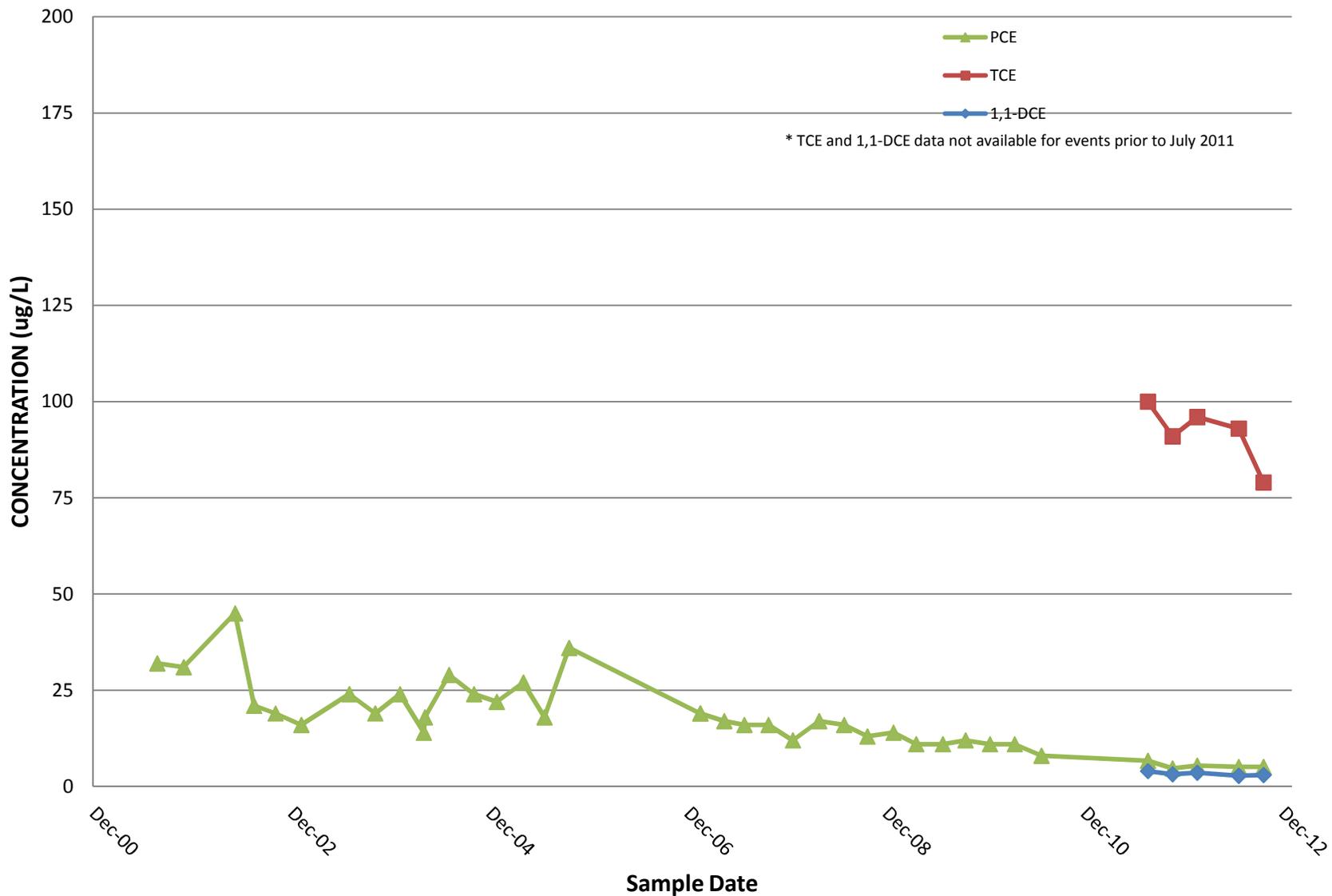


Chart 2: Groundwater Influent Concentration (Iron and Manganese) vs. Time

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

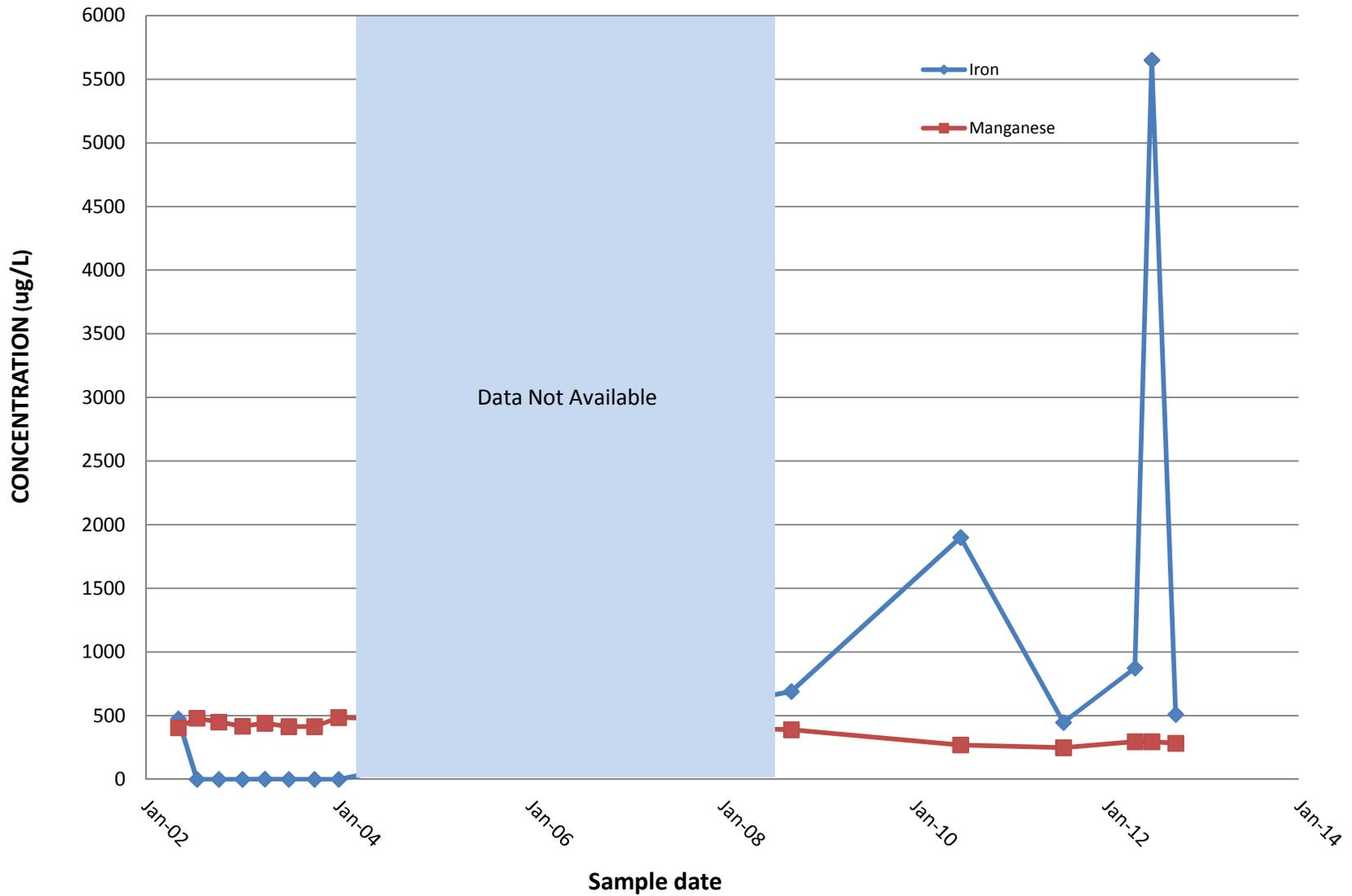


Chart 4: Treated System Effluent Concentration (Iron and Manganese) vs Time

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

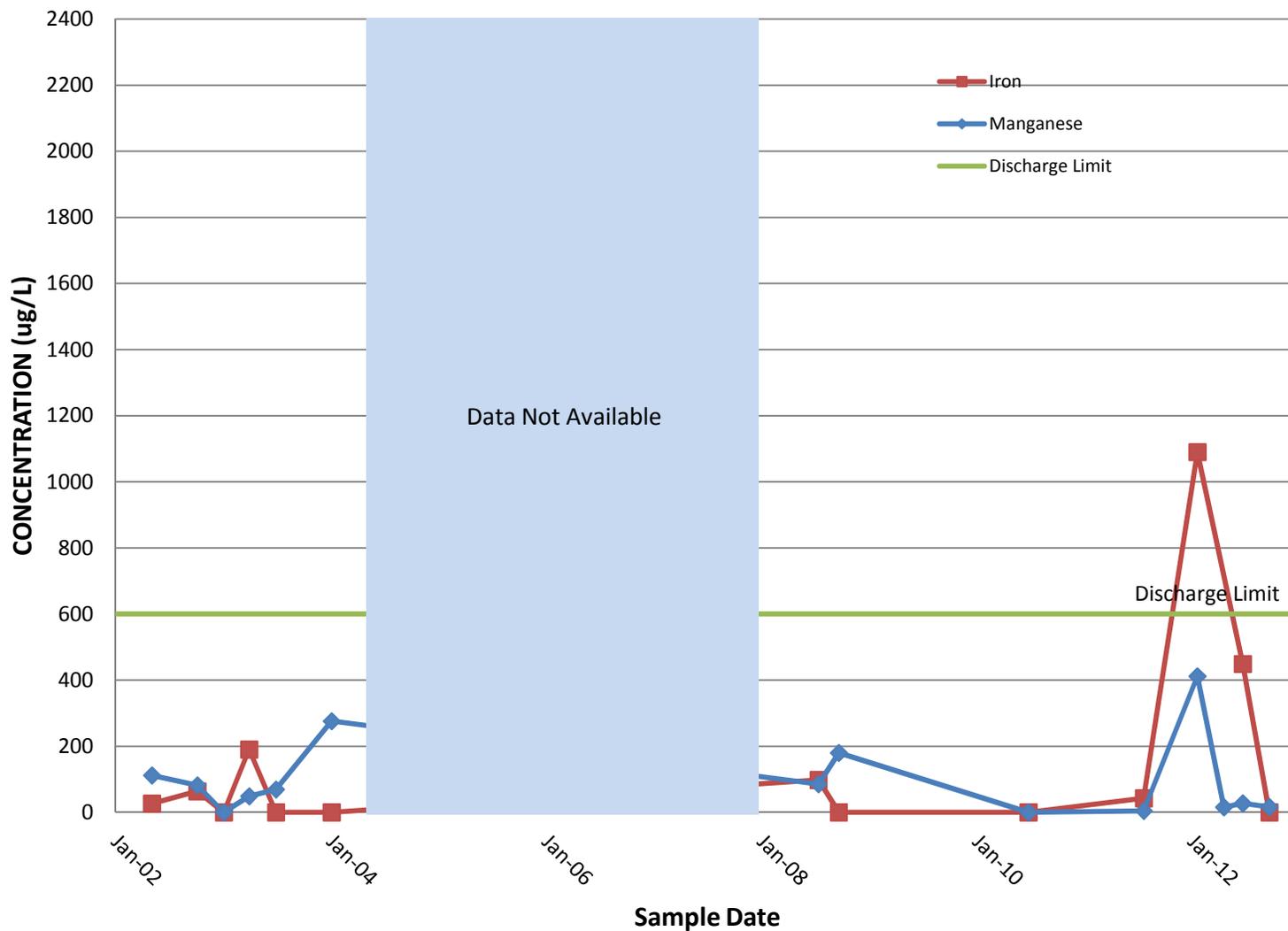


Chart 5: VOC Removal vs Time (PCE, TCE)

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

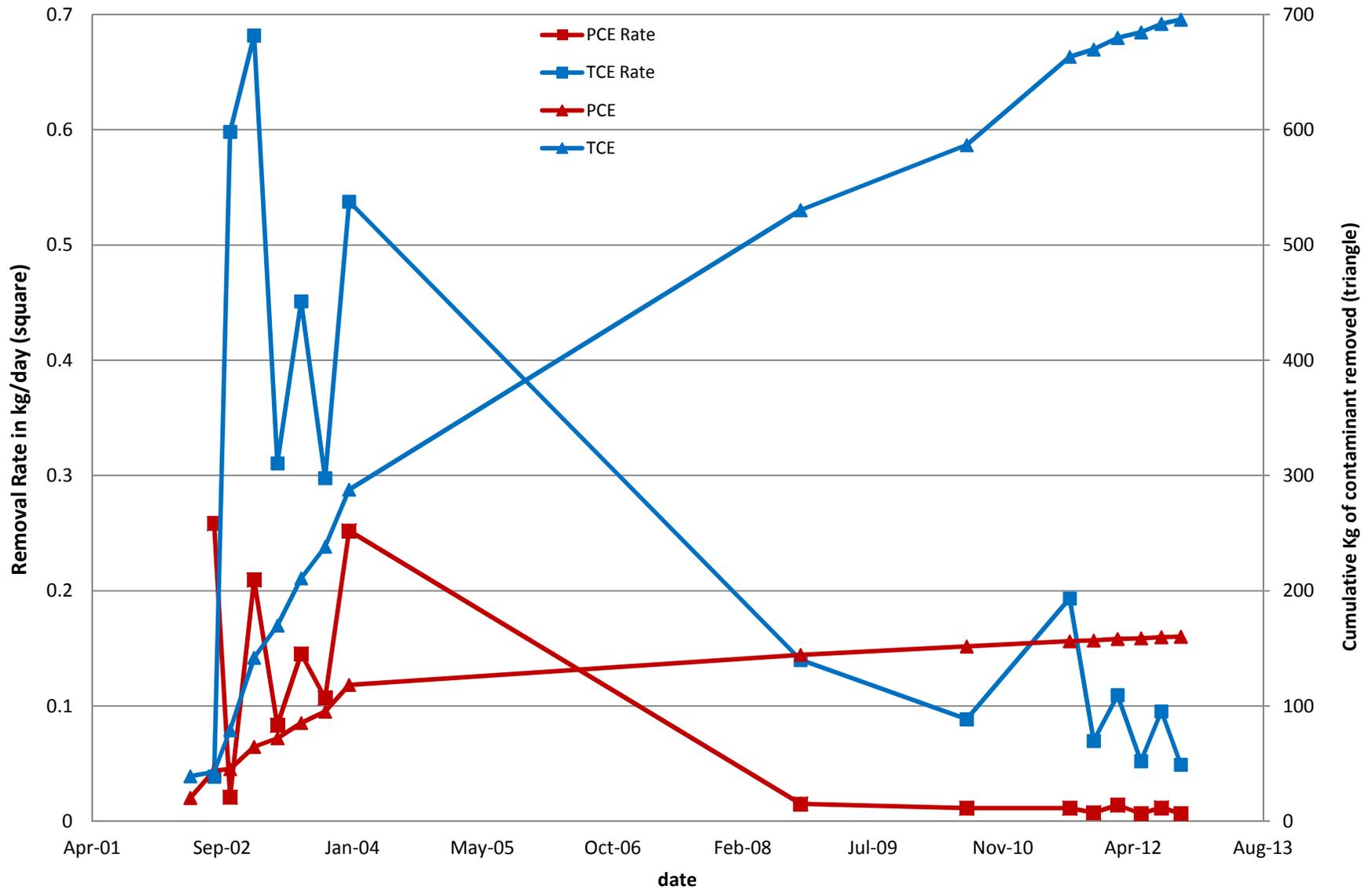


Chart 6a - PCE and TCE Concentrations In EW-1a

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

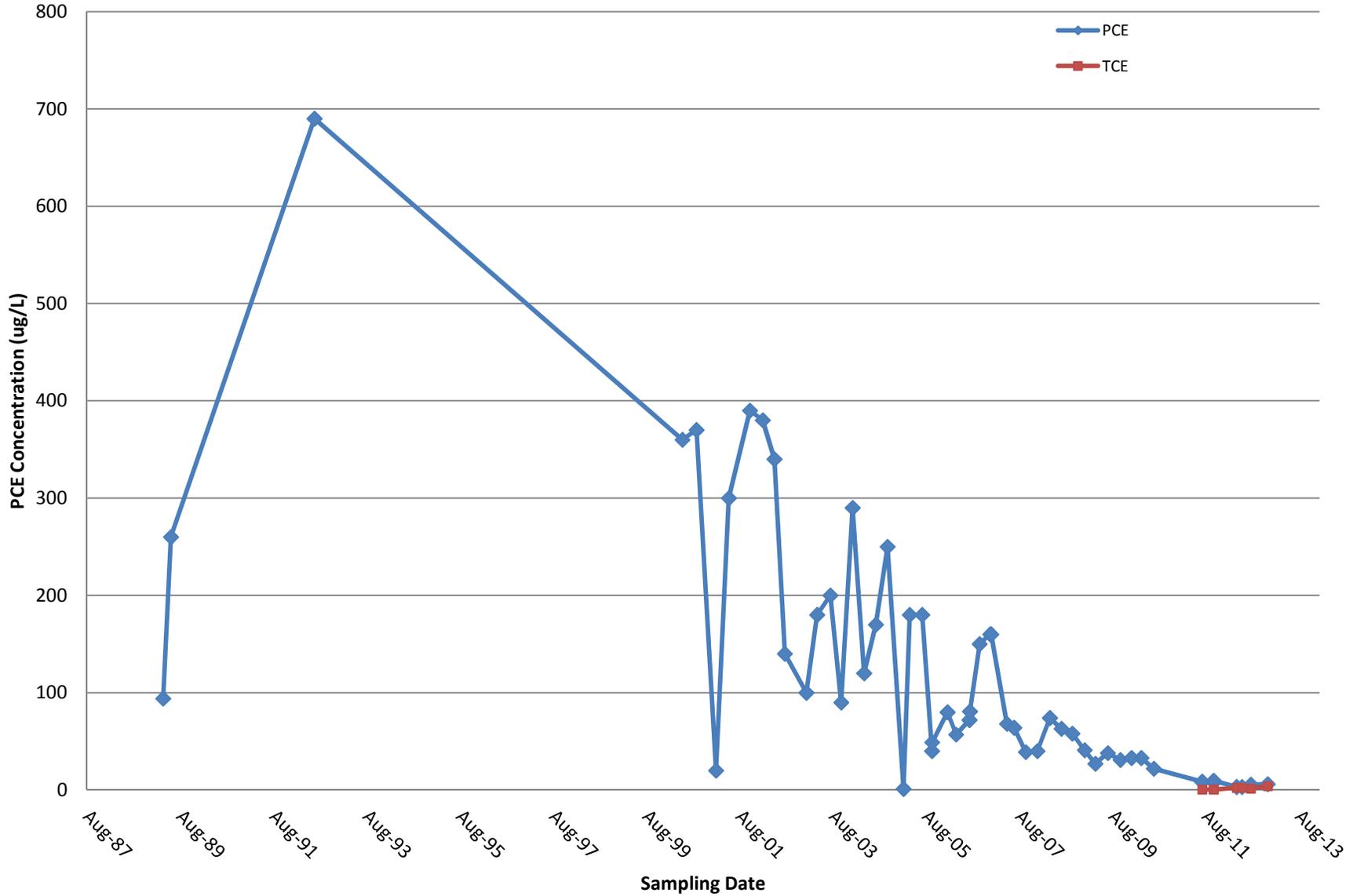


Chart 6b - PCE and TCE Concentrations in EW-4c

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

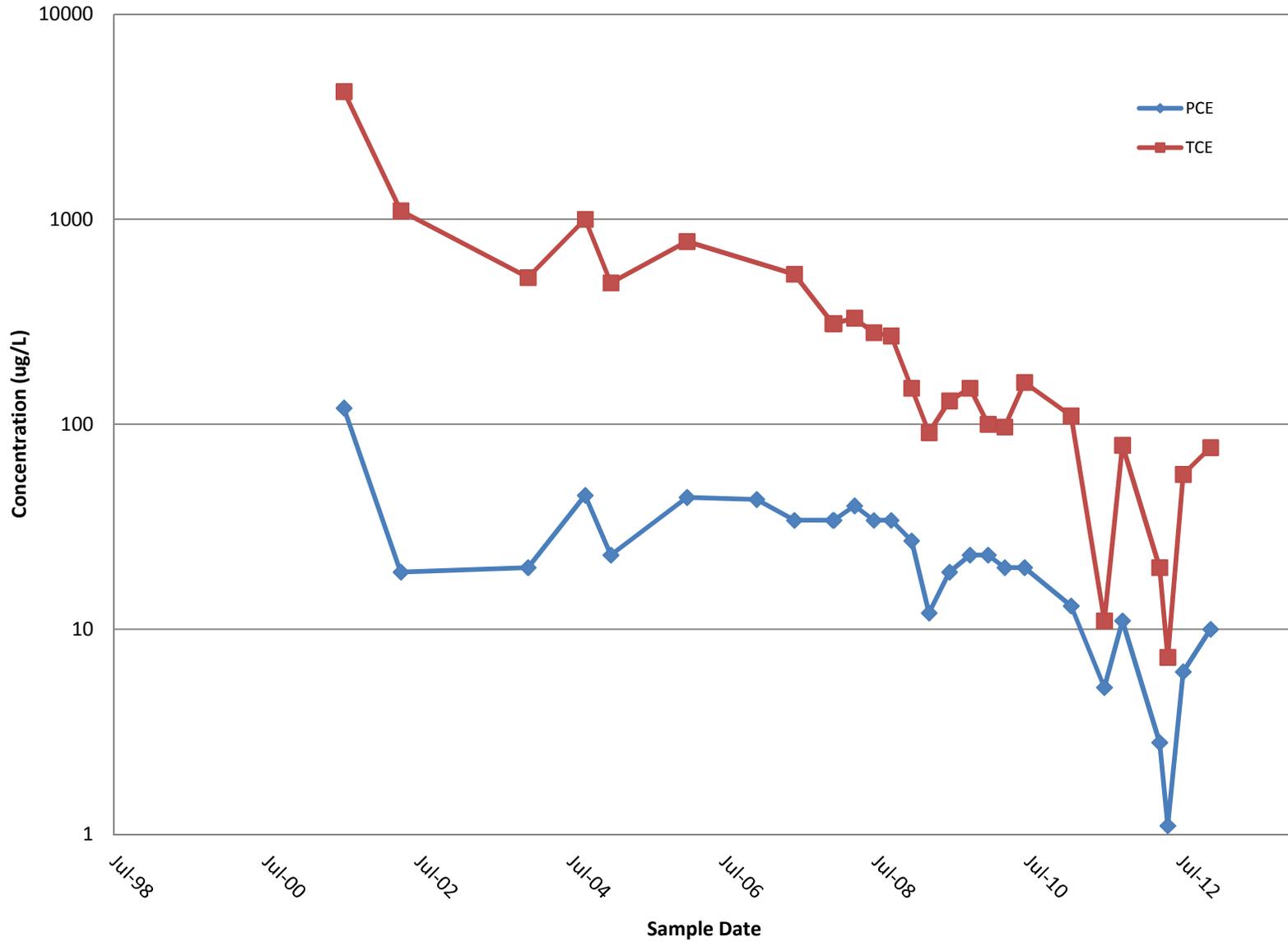
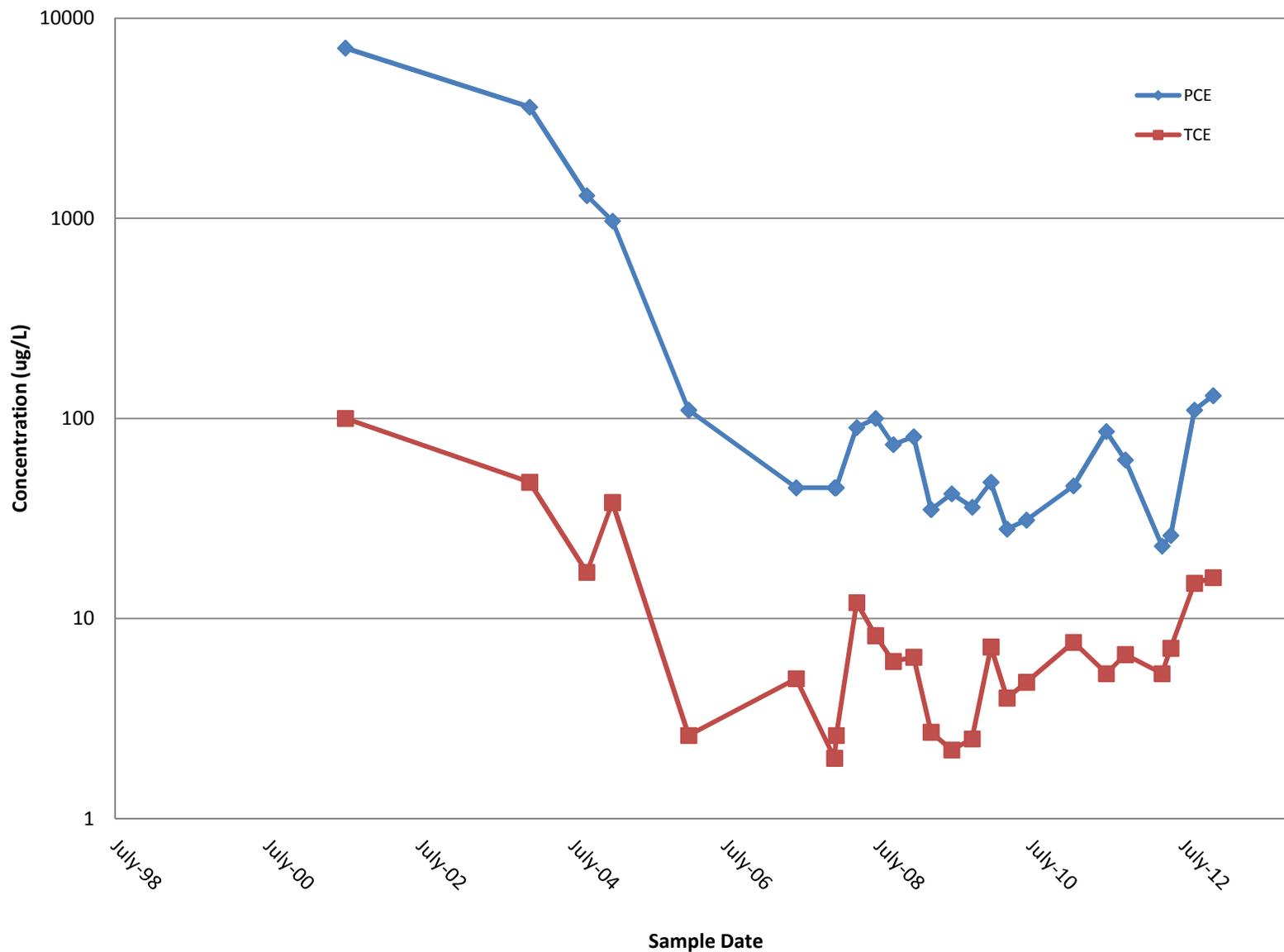


Chart 6c - PCE and TCE Concentrations in SW-1

December 2012 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19



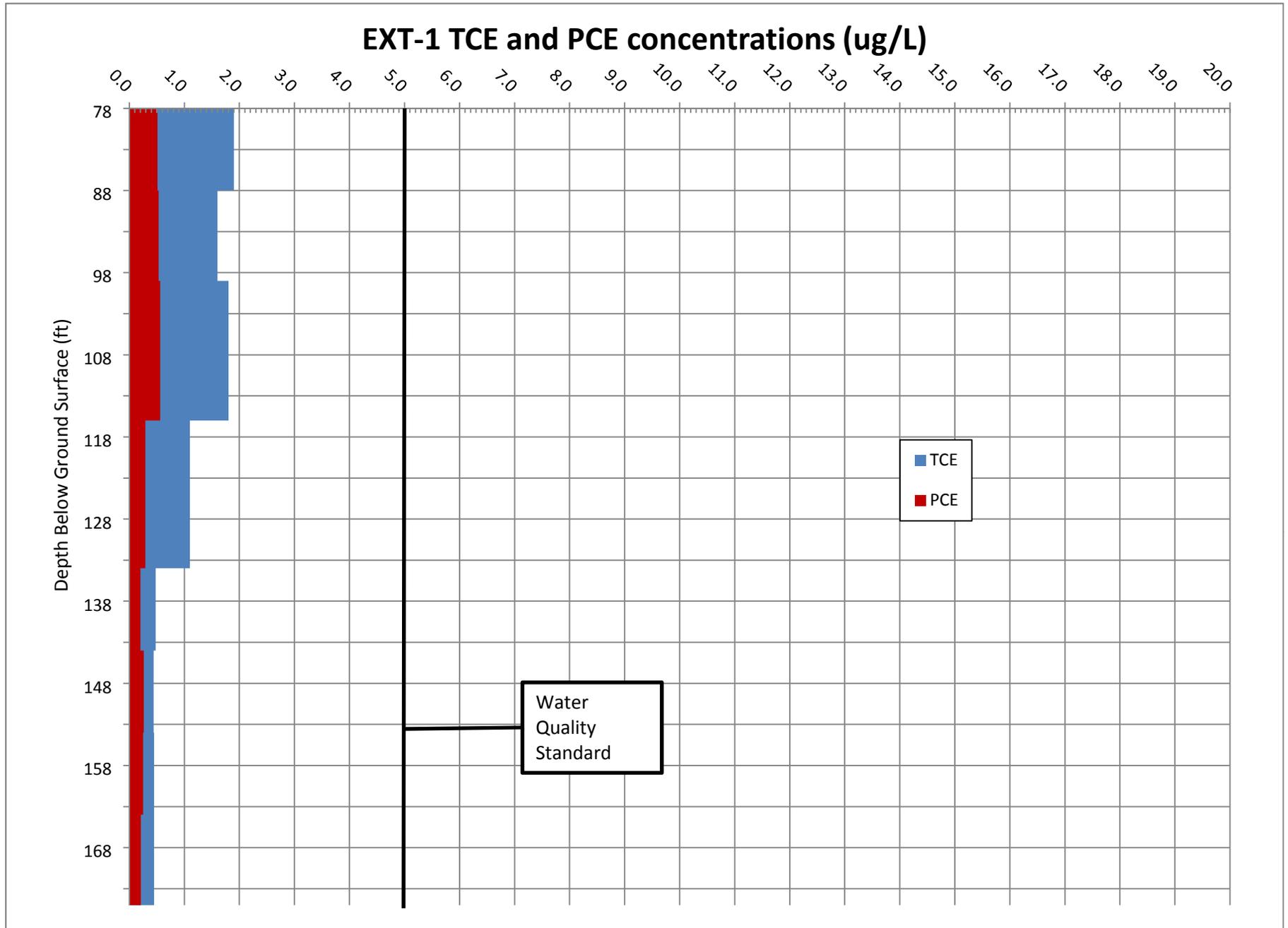
APPENDIX A
Groundwater Sample Log

WELL	TOC-PDB	Date Bag Installed	DTW at Install	Sample Date	Sample Time	DTW at sample	TOB Split	Notes:
BP3A	65	6-Aug	63.00	18-Dec	8:22	64.10	2VOA	
BP3B	225	6-Aug	65.20	18-Dec	8:28	65.90	2VOA	
BP3C	390	6-Aug	65.60	18-Dec	8:38	64.10	2VOA	
DW1	94	19-Sep	65.75	18-Dec	13:40	65.60		
DW2	100	7-Aug	71.80	18-Dec	13:58	71.40		
EW01A	72	7-Aug	64.31	17-Dec	9:01	64.05	2VOA	
EW01B	96	7-Aug	64.95	17-Dec	9:08	65.05	2VOA	
EW01C	122	7-Aug	65.04	17-Dec	9:14	64.53	2VOA	
EW02A	95	6-Aug	92.45	17-Dec	8:01	92.60	2VOA	
EW02B	124	6-Aug	92.90	17-Dec	8:06	92.40	2VOA	
EW02C	143	6-Aug	92.75	17-Dec	8:14	92.84	2VOA	
EW02D	295	6-Aug	92.63	17-Dec	8:20	93.53		
EW03A	100	6-Aug	96.75	17-Dec	8:31	97.10	2VOA	
EW03B	130	6-Aug	96.90	17-Dec	8:41	97.20	2VOA	
EW03C	159	6-Aug	96.27	17-Dec	8:48	97.10	2VOA	
EW04A	108	7-Aug	95.70	17-Dec	10:31	96.30		
EW04B	126	7-Aug	96.20	17-Dec	10:28	96.33		
EW04C	151	7-Aug	95.45	17-Dec	10:21	96.08		
EW04D	291	7-Aug	95.95	17-Dec	10:15	96.55		
EW05	170	7-Aug	71.04	18-Dec	14:07	72.30		
EW06A	66	6-Aug	62.20	18-Dec	10:39	63.50		
EW06C	165	6-Aug	62.70	18-Dec	10:31	63.80		
EW07C	198	6-Aug	86.40	18-Dec	10:54	87.62		
EW07D	279	6-Aug	86.45	18-Dec	10:47	87.59		
EW08D	239	7-Aug	64.60	18-Dec	11:17	65.32		
EW09D	251	6-Aug	70.25	18-Dec	11:05	70.37		
EW10C	146	8-Aug	93.90	17-Dec	10:43	94.92		
EW11D	277	8-Aug	100.50	17-Dec	11:06	100.00		
EW12D	216	8-Aug	99.04	17-Dec	11:17	99.40		
EW13D	346	8-Aug	99.03	17-Dec	10:51	99.80		
EW14D	191	6-Aug	41.60	18-Dec	7:58	42.52		
LF02	112	7-Aug	52.50	19-Dec	7:45	52.54	2VOA	
MW06D	187	7-Aug	96.20	18-Dec	9:51	96.05	2VOA	
MW08A	87	7-Aug	70.30	18-Dec	10:12	69.98	2VOA	
MW08B	157	7-Aug	69.90	18-Dec	10:04	68.90	2VOA	
MW08C	248	7-Aug	70.47	18-Dec	10:17	71.30	2VOA	
MW10B	175	6-Aug	97.80	18-Dec	7:31	98.55	2VOA	
MW10C	273	6-Aug	96.70	17-Dec	9:45	97.30	2VOA	
MW10D	347	6-Aug	97.00	17-Dec	9:55	98.15	2VOA	
SW1	68	19-Sep	65.99	18-Dec	13:48	65.80		
WT01	102	8-Aug	97.35	18-Dec	9:31	95.05		
ew01a	Dup			17-Dec	9:01			
wt01	Dup			18-Dec	9:31			
	TB			17-Dec	6:00			

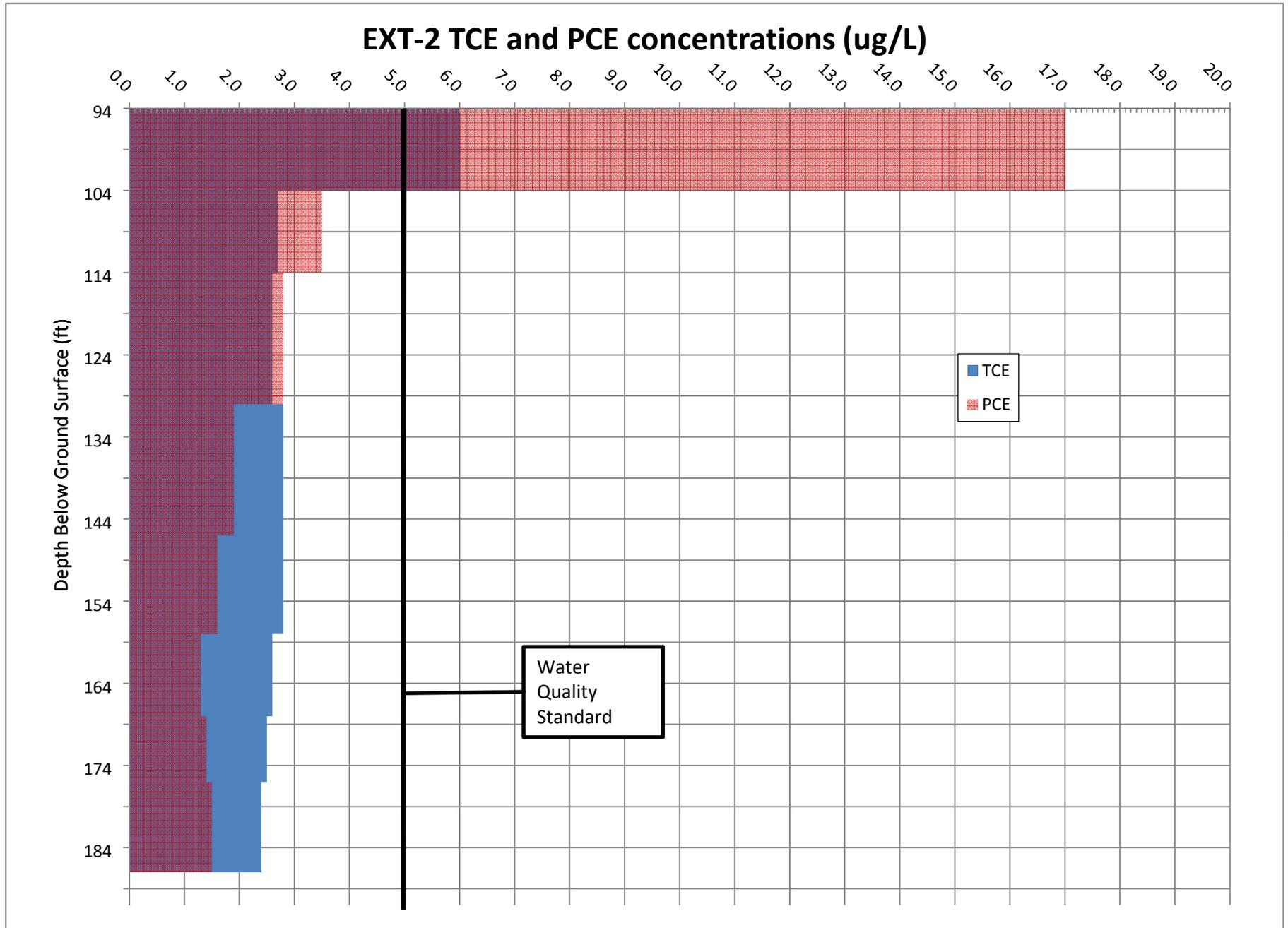
APPENDIX B

Extraction Well Vertical Profiles

Vertical Profile of EXT-1
December 2012



Vertical Profile of EXT-2
December 2012



Vertical Profile of EXT-3
December 2012

