Periodic Review Report (PRR)
June 12, 2011 – September 1, 2014

Claremont Polychemical Corporation Site
505 Winding Road
Old Bethpage, New York 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

Submitted: October 1, 2014

HRP Associates, Inc.

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Report Submittal Date: October 1, 2014

Prepared by:

HRP Engineering, P.C.

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Phone: (518) 877-7101 / Fax: (518) 877-8561

Project Address: Claremont Polychemical Corporation Site, Old Bethpage, New York

I certify that regarding the above referenced project and/or environmental assessment work:

Certification

For each instructional control identified for the site, I certify that all of the following statements are true;

(a) the intuitional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by DER;
(b) nothing has occurred that would impair the ability of such a control to protect public health and the environment;
(c) nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control; and
(d) access to the site will continue to be provided to DER to evaluate the remedy, including access to evaluate the continued maintains of this control.

Environmental Contractor: HRP Engineering, P.C.

By: 

Nancy Garry, P.E

1.0 EXECUTIVE SUMMARY

The Claremont Polychemical Corporation Site (Site # 130015)(Site), located at 505 Winding Road, Old Bethpage, Nassau County, New York (parcel 47.A-026-70) is an approximately 9.5 acre Site located within an industrial area (see Figure 1 for location). An inspection of the engineering control (ECs) and institutional controls (ICs) including two Records of Decision (RODs), Site Management Plan (SMP), and operation of a groundwater pump and treat system (GWTS) was conducted for this PRR. As part of the on-going site maintenance activities the NYSDEC performs the monitoring and mainatence on the GWTS and performs quarterly groundwater monitoring at forty-one monitoring well (41) locations, last occurring in June 2014.

The Site ECs/ICs are in compliance with the requirements stated in the regulatory reports; the SMP, the 1988 Remedial Investigation and Feasibility Study (RI/FS), and the two RODs (September 22, 1989 and September 28, 1990), and two Explanations of Significant Differences (ESDs). The remedy to control and treat the contaminated water plume emanating from the Site was met through an on-site groundwater treatment system (GWTS) that began operation in February 2000. 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. Progress towards the remediation goals has include the system influent and effluent analytical results and the groundwater wells analytical data indicating that the plume from the Site is decreasing in size and concentration through remediation and naturally occurring attenuation. Historical analytical data suggests that the system is approaching asymptotic conditions. The remedial program is achieving the remedial objectives for the Site.

No operations, monitoring and maintenance (OM&M) deficiencies were reported during the reporting period. A remedial System Optimization (RSO) report completed by HRP Engineering P.C., dates August 2013, evaluated the performance of remediation at the Site in order to assess progress towards closure, determine the efficiency of the treatment process, and identify modifications which could improve efficiency, reduce operating costs including a reduction in pumping rates, and accelerate site closure. Recommendations include decreasing the number of monitoring wells sampled as part of the quarterly monitoring program, an evaluation of the area between OU IV and the three (3) extraction wells (EXT-1 through EXT-3) connected to the GWTS, and HRP is recommending the installation of four additional monitoring wells, to evaluate if the continued OM&M of the GWTS is required.

2.0 SITE OVERVIEW

This site specific Periodic Review Report (PRR) has been prepared to evaluate the overall effectiveness of the remedies chosen and their implementation at the Site. HRP Engineering P.C. (HRP) services the New York State Department of Environmental Conservation (NYSDEC) under Work Assignment D006130-19 of the Engineering Services Contract. This PRR is required under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program. This document is intended to meet the requirements of the Site's Plans as defined in Regulation 6 NYCRR 375-1.2 and in accordance with Technical Guidance for Site Investigation and Remediation (DER-10), dated May 2010.

The property had one two-story building, covering approximately 35,000 square feet (the former processing plant) that was removed in 2013 and has a water treatment building, covering approximately 5,200 square feet. The site lies approximately 800 feet east of the border between Nassau and Suffolk County and is accessed via Winding Road on the property's western border. Adjacent properties include:

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

The Oyster Bay Solid Waste Disposal Complex is an adjacent 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.

The Site is a former manufacturer of pigments for plastics, inks, coated metallic tanks, and vinyl stabilizers from 1966 to 1980. The Site was proposed for inclusion on the Environmental Protection Agency (EPA) National Priorities List (NPL) in October 1984 and was listed as a superfund site in June 1986. A Comprehensive Remedial Investigation Feasibility Study (RI/FS) for the Site was initiated in March 1988 by the EPA. Under this RI/FS, the EPA sampled the surface and subsurface soil, the groundwater, underground storage tanks, and the building. The RI/FS findings indicated that on-site soils contaminated with PCE, located in the former "spill area", constituted a potential threat to groundwater resources. The first ROD addressed the contamination of soil and groundwater. The second ROD addressed the physical removal of source material, specifically wastes found in drums, storage tanks and treatment basins. The removal of wastes specified in the second ROD was completed in 1990.

Operable Unit No. 4 (OU IV) is designated as "Remedial Program" and involves the treatment of the on-site volatile organic compounds (VOC) that have contaminated groundwater. A groundwater treatment 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 and treating 470 gpd (gallons per day). In May 2011, the operation, maintenance, and sampling of the remediation system was relinquished from the ACOE/EPA to the NYSDEC, who subsequently retained HRP to operate, maintain and sample the remediation system.

3.0 EVALUATE REMEDY, PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

A description of the GWTS and a review of its effectiveness of contamination recovery and hydraulic control and the groundwater monitoring program are provided below.

Groundwater Treatment System (GWTS)

The GWTS was designed to treat metals, VOCs, and provide final pH adjustment, however the system influent is currently only remediating VOCs and low level metals. Since startup, the system has treated more than 2.05 billion gallons of groundwater. In August 2012, HRP completed a RSO as a multi-tiered approach to improving the efficiency, effectiveness and net environmental benefit of the remedial solution. The NYSDEC determined that the goal of the system is to maintain capture of the Claremont plume to ensure it does not migrate past the treatment area and to achieve remedial action objectives outlined in the RODs and the RSO.

The groundwater collection system consists of three extraction wells (EX-1, EX-2, and EX-3) installed approximately 150 feet apart, south of the Site oriented in a southwest-northeast line. In May 2013, fixed end packers (packers) were installed in EX-1 and EX-2, effectively blocking the non-contaminated, bottom portion of EX-1 and EX-2 extraction well, at 115 feet MSL and 125 feet MSL, respectively. Based on the step-down test completed in June 2013, the pumping rate of EX-1 and EX-2 were reduced to 110 gpm and 120 gpm, a 10% reduction in the pumping rates. On August 11, 2014, as directed by the NYSDEC, the pumping rates in EX-1 and EX-2 were decreased to approximate pumping rates of 57 gpm and 88 gpm, respectively. The pump in EX-2 was shut off on August 25, 2014 at the request of the NYSDEC.

3.1 Groundwater Treatment System Contaminant Removal

To evaluate the treatment system's contaminate influent rate (Chart 1) removal rate, HRP reviewed available treatment system inlet (Charts 1a, 1b, 1c and 2) and effluent analytical results from monthly operation and maintenance (O&M) sampling when the system is operational. Approximately 908 kilograms of chlorinated solvents have been removed since 2002. Effluent data for select VOC compounds (PCE, TCE, and 1,1-DEC) and metals (Iron and Manganese) are analyzed to evaluate compliance with established effluent discharge limits. Chart 3 shows that the past and current effluent concentrations remained below permissible discharge limit levels. Chart 4 shows that the concentrations of iron were under the permissible levels for the second quarter 2014 sampling results. Refer to the monthly O&M and the Significant Events reports for additional information on remediation system performance and daily operations. A plot of historic mass removal rates and cumulative PCE and TCE mass removal is presented as Chart 5. In addition, HRP prepares and submits monthly Groundwater Treatment System O&M Activities reports which discusses monthly O&M activities, technical support, remediation system sample results and project goals met.

3.1.1 Plume Evaluation

An assessment of groundwater contamination distribution was conducted by creating contaminant isopleth charts depicting PCE and TCE concentrations versus time (Charts 6a through 6c). In addition, cross sections and plume footprint maps (Figures 3a and 3b) were generated for this sampling event. In general, a decreasing level of contamination was observed.

3.1.2 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 with the exception of EW-4C EW-4D, and BP-3C, the results continue to indicate a general downward trend in VOC concentrations. EW-4C and EW-4D are sidegradient and upgradient from Claremont and the increases are not attributed to the Claremont spill. BP-3C is located downgradient from Claremont and are assumed to be attributed to off-site sources.

Also, as part of the site groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards to have become asymptotic at an acceptable level over an extended period.

3.1.3 Performance and Effectiveness Monitoring Groundwater Monitoring Program

During the period of June 12, 2011 through September 1, 2014 HRP sampled a total of 41 on-site and off-site monitoring wells with the most recent sampling event discussed below occurring on June 16 and 17, 2014. 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, and WT-01. In addition, the three extraction wells were sampled by isolating each recovery well pumps production water. The monitoring well locations are depicted in Figure 2. Groundwater flow through the shallow site aquifer is to the southeast. A description of the groundwater sampling event is provided below.

3.2 June 2014 Groundwater Analytical Results

To assess the status of groundwater quality at the Site and adjacent area which has monitoring wells, HRP compared collected analytical data from the June 2014 sampling event to historical conditions and to applicable NYSDEC water quality criteria. Compounds detected above criteria during the June 2014 sampling event include tetrachloroethylene; trichloroethylene; cis-1,2-dichloroethylene; 1,1-dichloroethylene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; 1,2-dichloroethane; acetone; benzene; and isopropylbenzene. See Table 2 for complete results. Groundwater flow through the shallow site aquifer is to the southeast.

June 2014 PCE Contamination (Figure 3a)

PCE has historically been present above groundwater criteria in two zones of the sampling area for the site. Cross section A-A' east of the site shows an on-site migrating PCE plume with maximum observed concentrations of 13 ug/l at EW-4D and EW-7C. A separate plume appears to originate on-site, with maximum concentrations of 55 ug/l in SW-1 (Cross Section C-C'). These plumes seem to be separate (Figure 3A, Cross Section Location cutout). Additional exceedances were noted in the southern portion of the study area, centered on wells BP-3B (32 ug/l) and BP-3C (160 ug/l).

June 2014 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 (340 ug/l) in well EW-7C, upgradient of the site, and in the furthest downgradient monitoring well to the southeast towards EW-14D (380 ug/l). This plume appears to be separate from an onsite generated plume (Cross section B-B'). The on-site generated plume has maximum observed concentrations of 9 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 EW-3C.

4.0 EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

4.1 Remedial Action Objectives

The Site contains contamination not removed during the previous remedial action. EC/ICs have been incorporated into the Site remedy to control exposure to remaining contamination during the use of the Site to ensure protection of public health and the environment.

The RODs and SMP provides a detailed description of all procedures required to manage remaining contamination at the Site after completion of the remedial action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) performance of periodic inspections, certification of results, and submittal of this Periodic Review Reports; and (4) defining criteria for termination of oversight operations.

4.2 Institutional and Engineering Control Plan Compliance

The EC/IC plan describes the procedures for the implementation and management of all EC/ICs at the Site.

A series of ICs are required by the ROD to: (1) implement, maintain and monitor EC systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) restrict the use and development of the Site. Adherence to these IC's on the Site is required during the reporting period. A review of the O&M manual and *DER-10: Technical Guidance for Site Investigation and Remediation* suggest the following remedial goals should be applied to the Site:

- Prevent ingestion of groundwater outside of the Site boundaries with contaminant levels exceeding drinking water standards;
- Prevent contact with or inhalation of volatiles from contaminated groundwater;
- Prevent discharge of contaminants to surface water; and
- Maintenance and compliance of engineering and institutional controls.

4.3 Institutional and Engineering Control Plan

Institutional Controls at the Site consist of:

- Decision Documents;
- Groundwater Use Restriction;
- Site Management Plan; and
- OM&M Plan.

Engineering Controls at the Site consist of:

- Fencing/access control; and
- GWTS.

4.4 Site Monitoring Plan Compliance

Site monitoring consists of:

- Regularly scheduled System OM&M;
- Remediation system sampling and analysis;
- Visual inspection of the system, GWTS, and well fields;

- Groundwater sampling and analysis;
- Air monitoring;
- Building and grounds mainatence;
- Data evaluation; and
- Report preparation including monthly reports and daily logbooks.

The EC/IC controls are all in place and are effective. No deficiencies have been noted during the period of time covered under this PRR. Please see the attached completed Enclosure 1 Engineering Controls – Standby Consultant/Contractor Certification Form (Appendix B).

4.4.1 Monitoring Plan Compliance Report

4.4.2 Compliance with Monitoring Plan completed during the period of time covered under this PRR includes;

Activity	Required Frequency		Compliance Dates
	Monthly	Quarterly	
Influent/Effluent Sampling	X		Monthly
Effluent Air Monitoring	X		Monthly
Reports	X		Monthly
Water Level Gauging		X	September 2014
Groundwater Sampling		X	September 2014
Groundwater Monitoring Report		X	October 2014

*Next Quarterly Monitoring Report is due in October 2014.

Operation and Maintenance Plan Compliance

HRP has performed OM&M of the GWTS in compliance with the treatment system's Operation and Maintenance Plan and has completed quarterly groundwater sampling during WA D006130-19 for the period June 12, 2011 through September 1, 2014. Inspections are completed daily and recorded on an Inspection Forms and miscellaneous logs. The results of all monitoring to the remedial objectives of the site show a decreasing trend in the contamination levels in both the GWTS analytical samples and the groundwater analytical samples.

4.4.3 Performance and Effectiveness Monitoring

The effluent limitations for the discharge to the infiltration galleys are found in the 1989 State Pollution Discharge Elimination System (SPDES) permit for the Site. The effluent limitations in the EC/ICs are based on the NYSDEC, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1), "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations", dated June 1998.

4.4.4 Monitoring Deficiencies

No monitoring deficiencies were noted. However, the following should be noted:

- Extraction well 2 was taken off line in August 2014 as per the NYSDEC. HRP will monitor the extraction well and surrounding groundwater wells for rebound in contamination levels, however rebound is not expected.

- The injection wells are silting in, losing surface area and may need to be serviced if the effluent flow becomes too prohibited.

- Based on the analytical results of the system sampling, the liquid granular active carbon (L-GAC's) vessels are not needed in the treatment train the VOC contamination concentrations well below the remediation system's final effluent discharge limitations and monitoring requirements limits seen in the pre-carbon and post carbon water samples. The post carbon analytical results show no appreciable removal of contamination constituents when compared to the pre-carbon analytical results, which also supports that the L-GAC's are redundant in the treatment train based on current contamination levels.

The existing GWTS should remain in operation to treat elevated metals and VOC concentrations detected above NYSDEC TOGS 1.1.1 groundwater standards. However, the subsurface between OU IV and the extraction wells should be evaluated to confirm that the GWTS and monitored natural attenuation have remediated the Site and that of the nature and extent of the contamination meets remediation levels and is protective of human health and the environment.

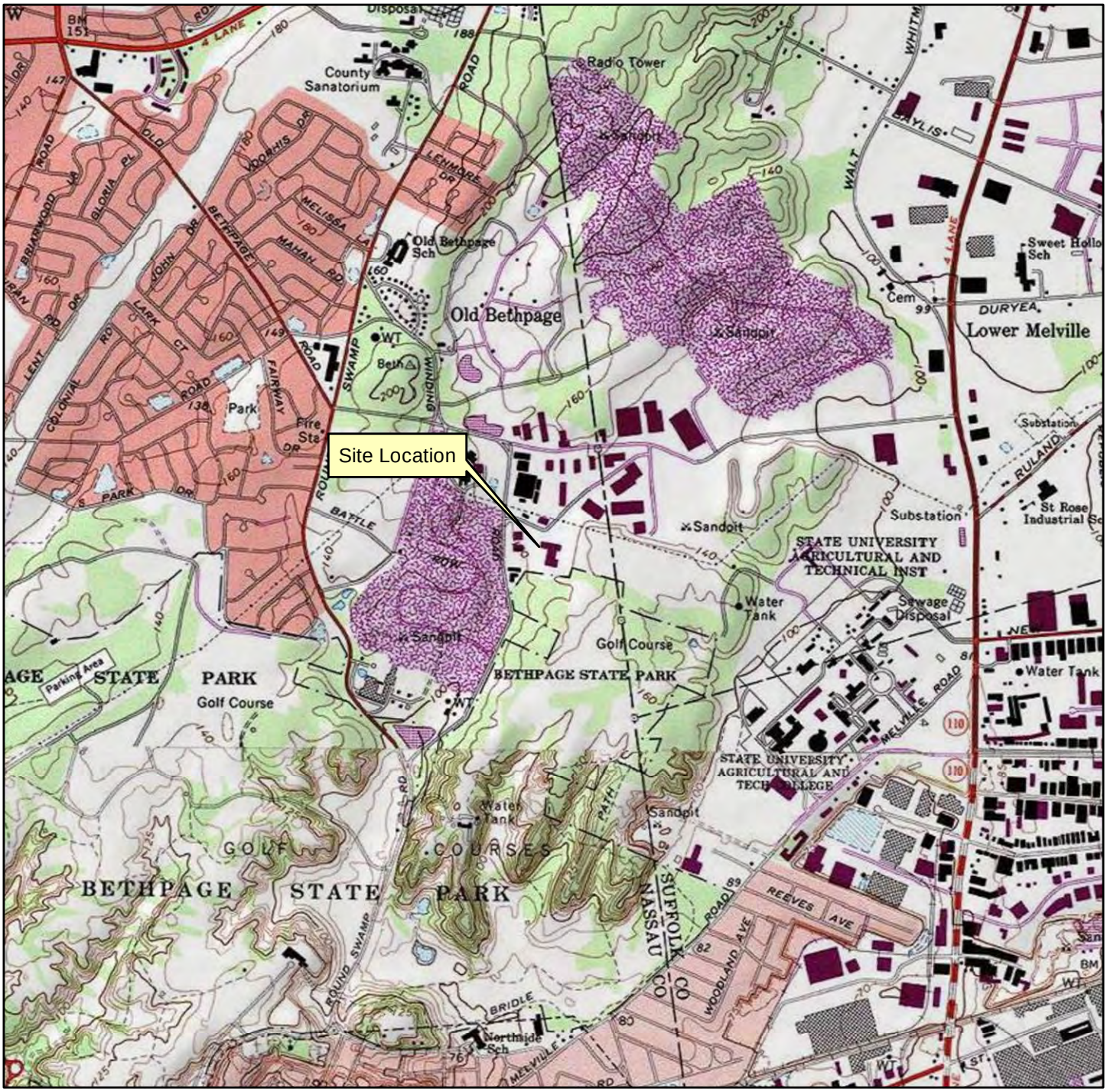
5.0 CONCLUSIONS AND RECOMMENDATIONS

The periodic review process (PRR) is used for determining if a remedy continues to be properly managed, and if the remedy continues to be protective of human health and the environment. The remedial measures in place are effective in protecting human health and the environment and are compliant with provisions specified in the RODs and SMP.

Based on HRP's operation and mainatence of the GWTS and the groundwater monitoring events, the GWTS appears to be operational and is remediating the plume originating from OU IV while maintaining hydraulic control. The ICs/ECs are being implemented to conduct monitoring of the site in accordance with the SMP and the RODs. This GWTS is in good repair and fully operational and is being maintained as outlined in the OM&M for the Site. No OM&M deficiencies were reported during the reporting period.

Appendix A

Figures and Tables



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

0 1,000 2,000 4,000 6,000 8,000 Feet

1 inch = 2,000 feet

N

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

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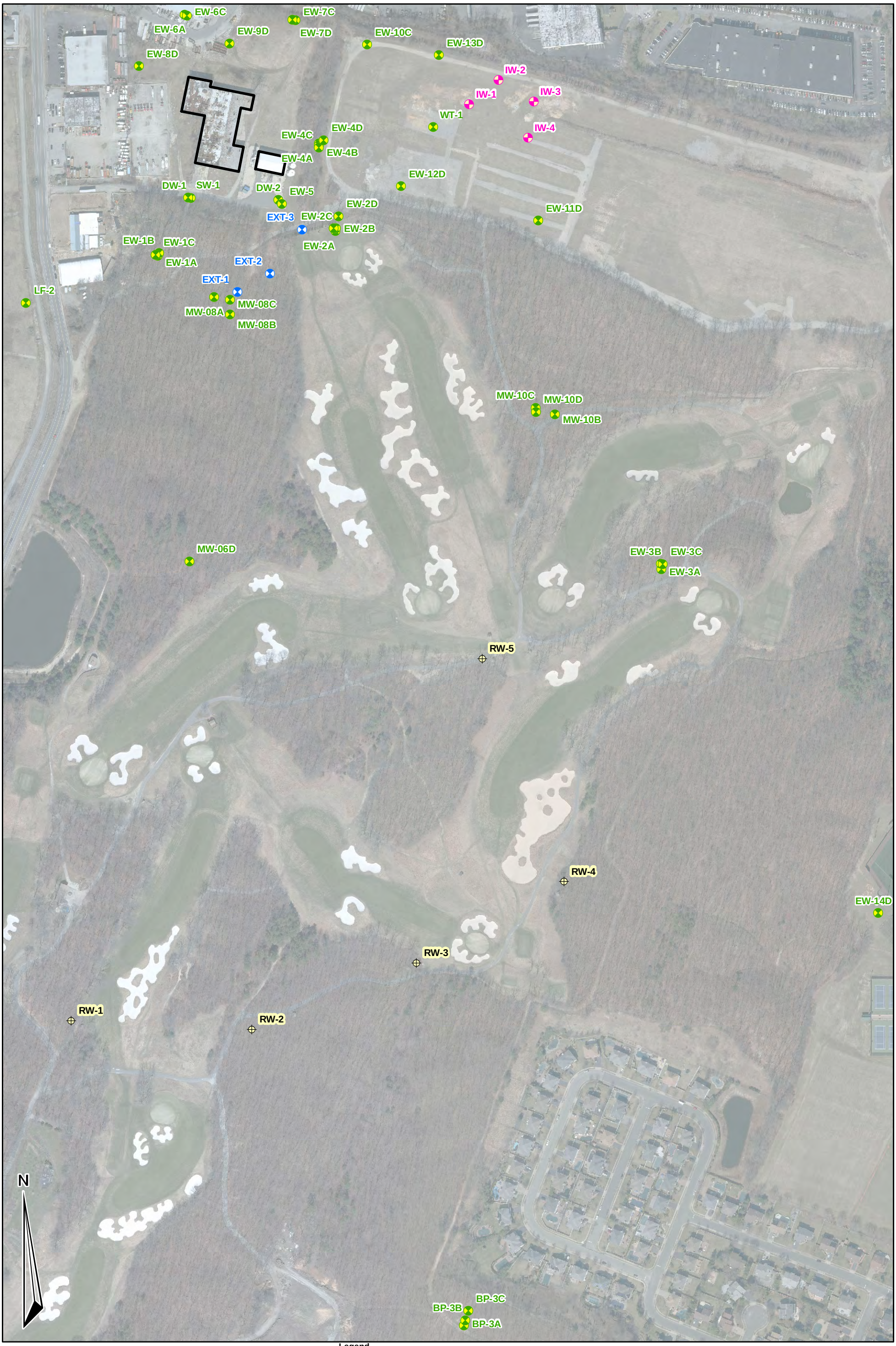

Figure 2a- GWTS Well Network
Claremont Polychemical Corporation
Old Bethpage, New York
HRP # NEW9625.OM Site Code 130015
Scale 1" = 300'

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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[65.82]
EW-6A
EW-6C
EW-7D
EW-7C
EW-9D
EW-10C
EW-13D
EW-8D
IW-2
IW-1
IW-3
Inferred groundwater flow direction
65
WT-1
IW-4
EW-4A
EW-4D
EW-4C
EW-4B
[64.33]
EW-12D
SW-1
DW-1
DW-2
SW-2
EW-5
EW-2D
EW-11D
EXT-3
EW-2B
64
EW-2C
EW-2A
EW-1C
EW-1A
[63.36]
[64.06]
EXT-2
EXT-1
MW-08C
MW-08B
MW-08A
63
MW-10C
MW-10B
MW-10D
MW-6D
EW-3B
EW-3C
EW-3A
[62.05]
RW-5

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

N

200 100 0 200 400 Feet

1 inch = 200 feet

Legend

- Monitoring Well
- Extraction Well
- Injection Well
- Oyster Bay Extraction Well
- June 2014 Contour

Note: Contours dashed where inferred.

Figure 2b
Shallow Groundwater Elevation Contours
June 2014
Claremont Polychemical Corporation
Old Bethpage, New York
HRP # NEW9625.OM
Site Code 130015
Scale 1" = 200'

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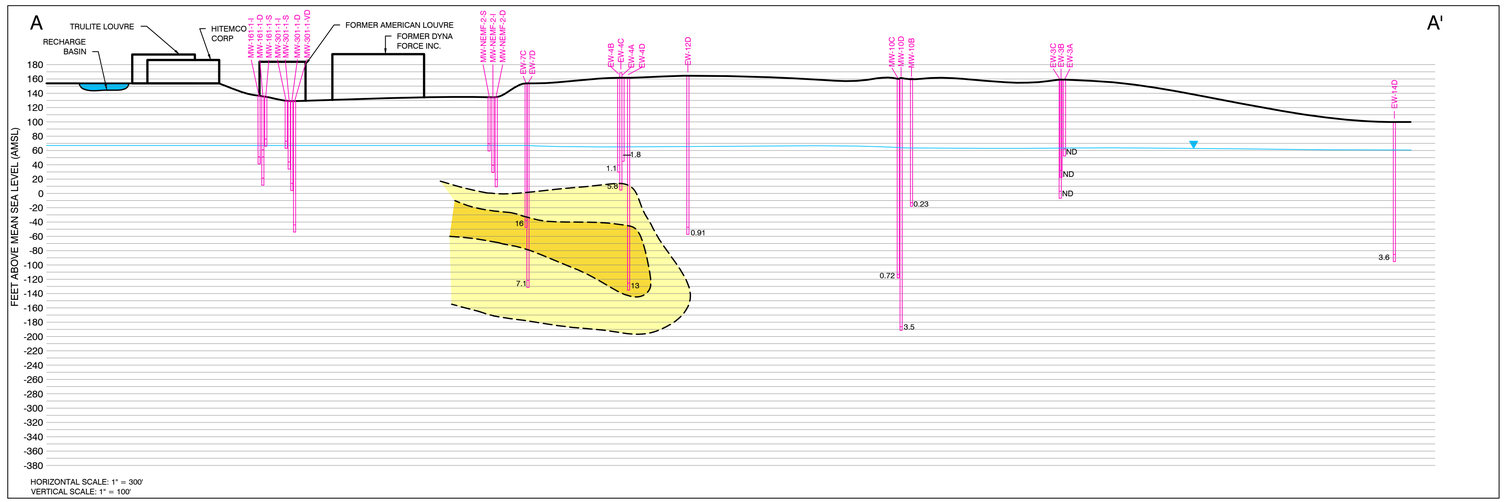
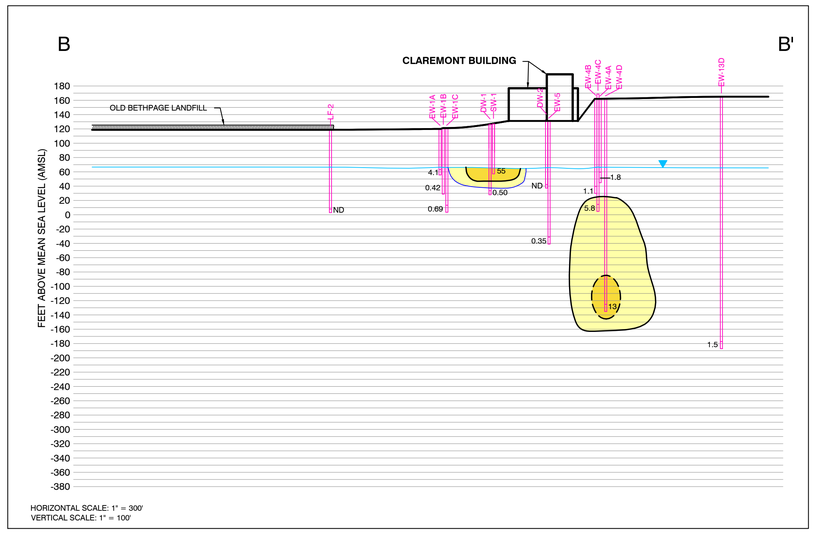




LEGEND

-WATER TABLE

PCE CONCENTRATION ISOPLETHS

-5 ug/l - 10 ug/l

-10 ug/l - 100 ug/l

-> 100 ug/l

3.1 -PCE CONCENTRATION IN ug/l

-MONITOR WELL

-SCREENED INTERVAL

1" = 100'

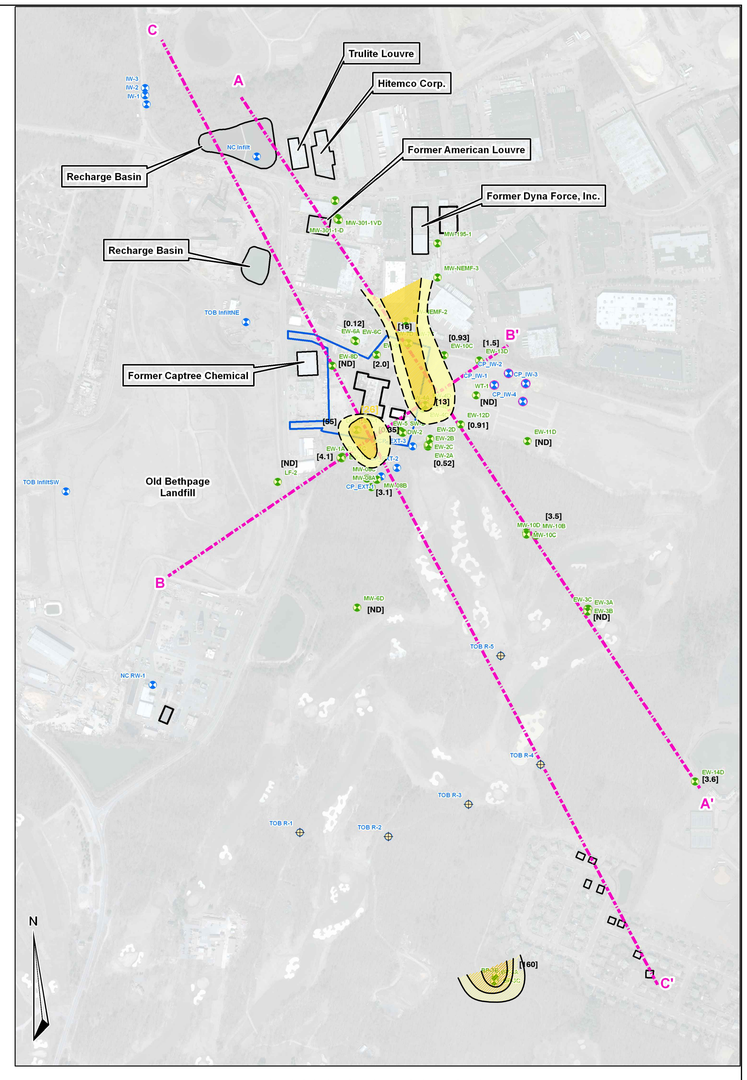
100 0 50 100 200

VERTICAL SCALE IN FEET

1" = 300'

300 200 100 0 150 300 600

HORIZONTAL SCALE IN FEET



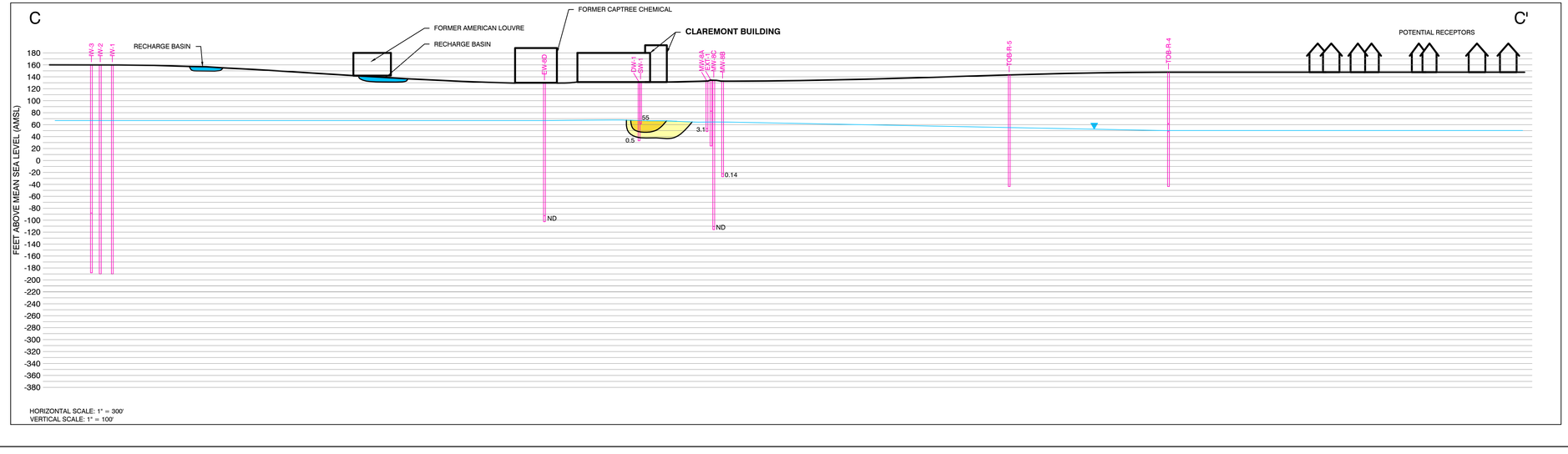
CROSS SECTION LOCATIONS

SCALE 1" = 500'

1" = 500'

500 0 250 500 1000

PLAN VIEW SCALE IN FEET



NO.	DATE	DESCRIPTION

PCE CONTAMINATION - JUNE 2014

CLAREMONT POLYCHEMICAL CORP.
OLD BETHPAGE, NEW YORK

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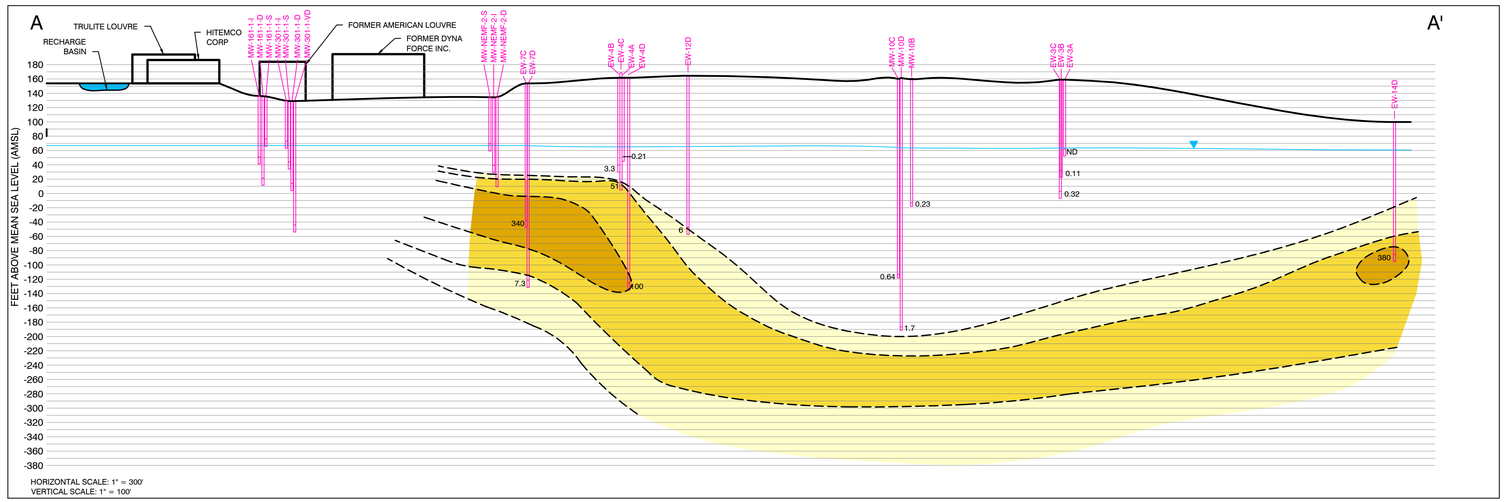
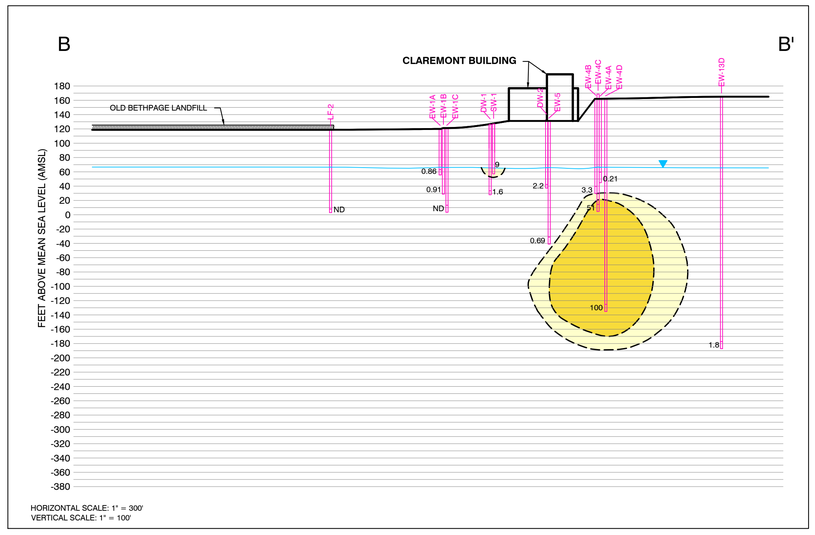
GTS	NEG	AS NOTED	
DESIGNED	APPROVED	SCALE	
BOB	1/15/2014		FIG. 3A
DRAWN	DATE		
BPW	NEW9625.OM		SHEET NO.
CHECKED	PROJECT NO.		





LEGEND

-WATER TABLE

TCE CONCENTRATION ISOPLETHS

- 5 ug/l - 10 ug/l
- 10 ug/l - 100 ug/l
- -> 100 ug/l

0.53 -TCE CONCENTRATION IN ug/l

- - - - - -DASHED WHERE INFERRED

1" = 100'

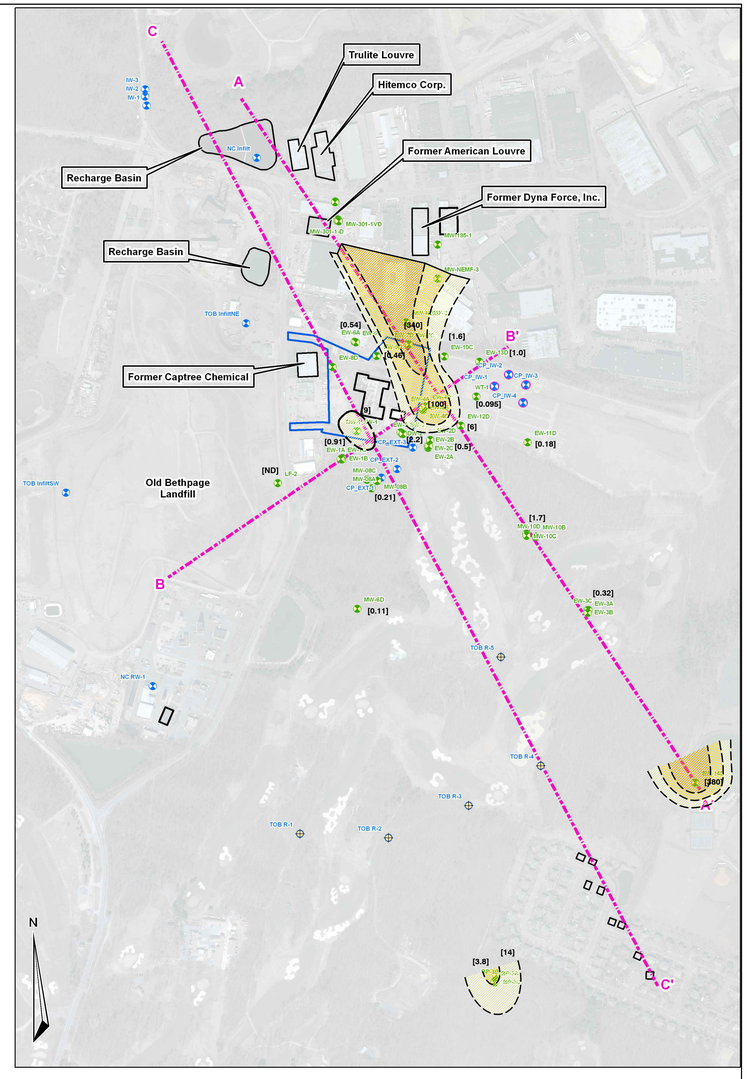
100 0 50 100 200

VERTICAL SCALE IN FEET

1" = 300'

300 200 100 0 150 300 600

HORIZONTAL SCALE IN FEET



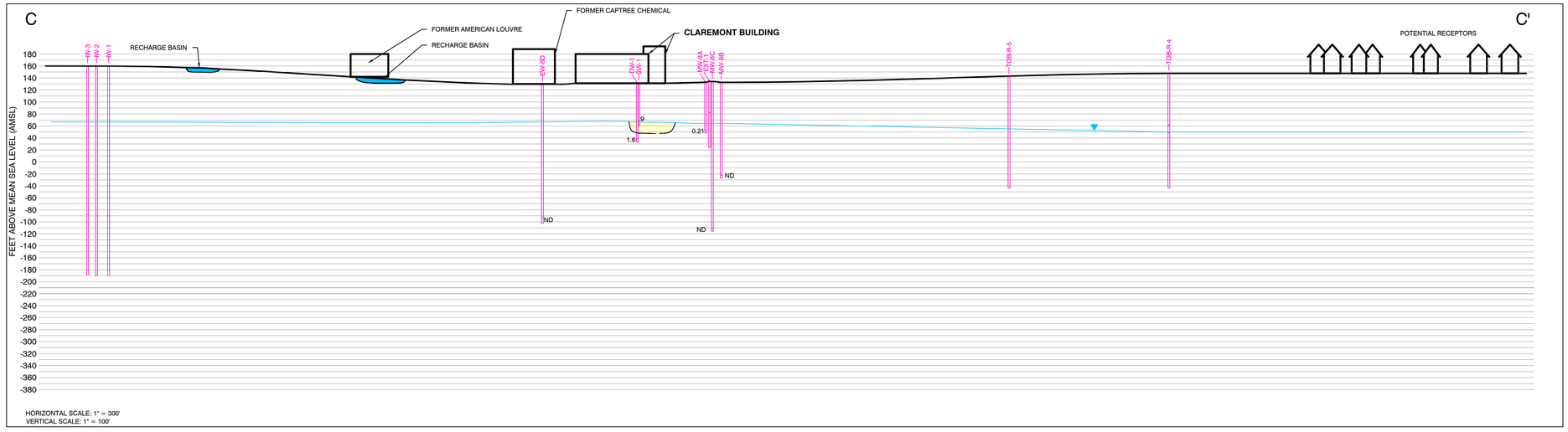
CROSS SECTION LOCATIONS

SCALE 1" = 500'

1" = 500'

500 0 250 500 1000

PLAN VIEW SCALE IN FEET



NO.	DATE	DESCRIPTION

TCE CONTAMINATION - JUNE 2014

CLAREMONT POLYCHEMICAL CORP.
OLD BETHPAGE, NEW YORK

HRP Associates, Inc.
dba HRP Engineering P.C.
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)674-9570 Fax:(860)674-9624
www.hrpassociates.com

GTS DESIGNED	NEG APPROVED	AS NOTED SCALE	
BOB DRAWN	1/15/2014 DATE		FIG. 3B
BPW CHECKED	NEW9625.OM PROJECT NO.		SHEET NO.

Chart 1: Groundwater Influent Concentration (PCE, TCE, and 1,1-DCE) vs. Time

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

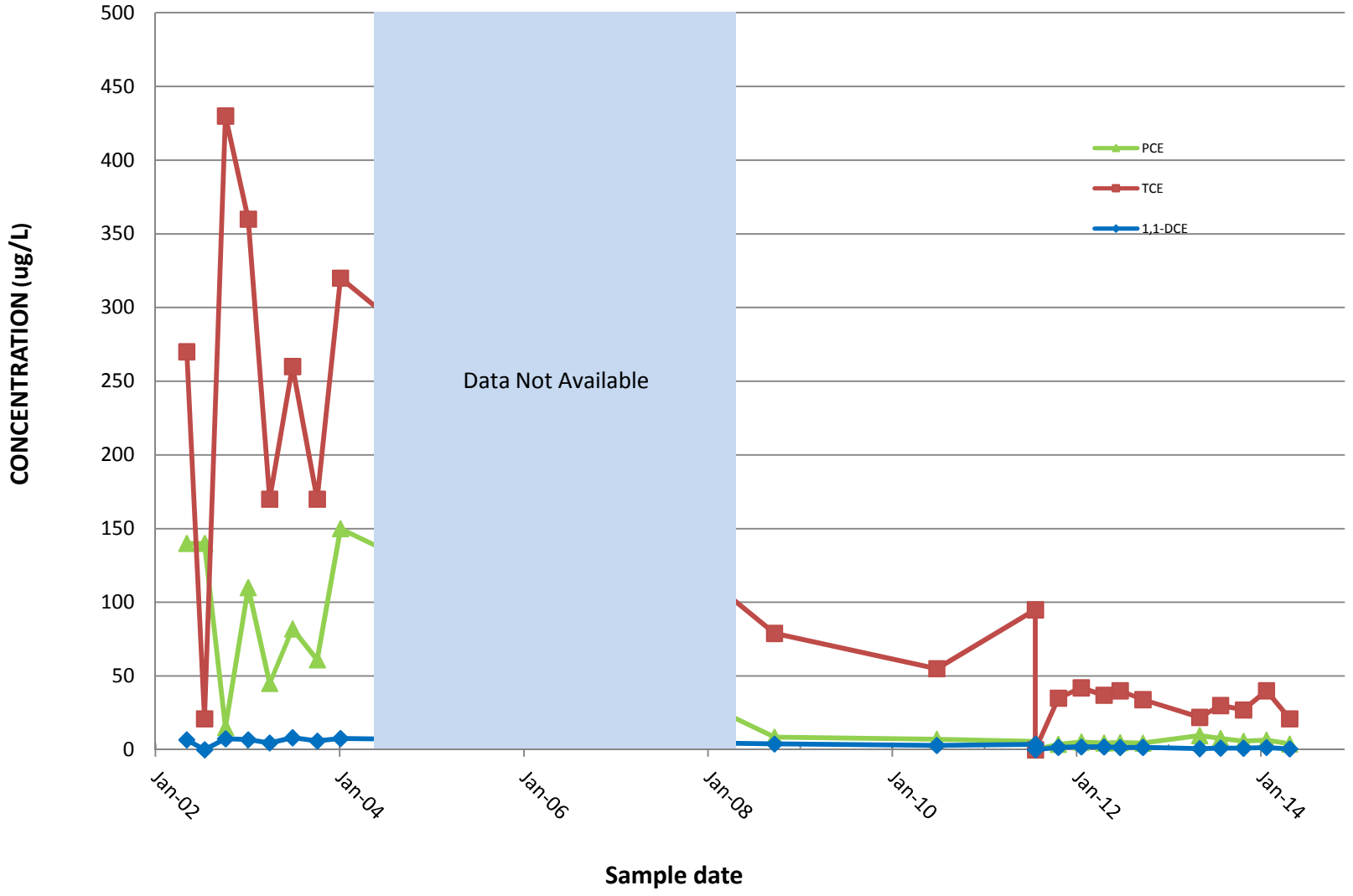


Chart 1a: EXT-1 Concentration (PCE, TCE, 1,1-DCE) vs Time

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

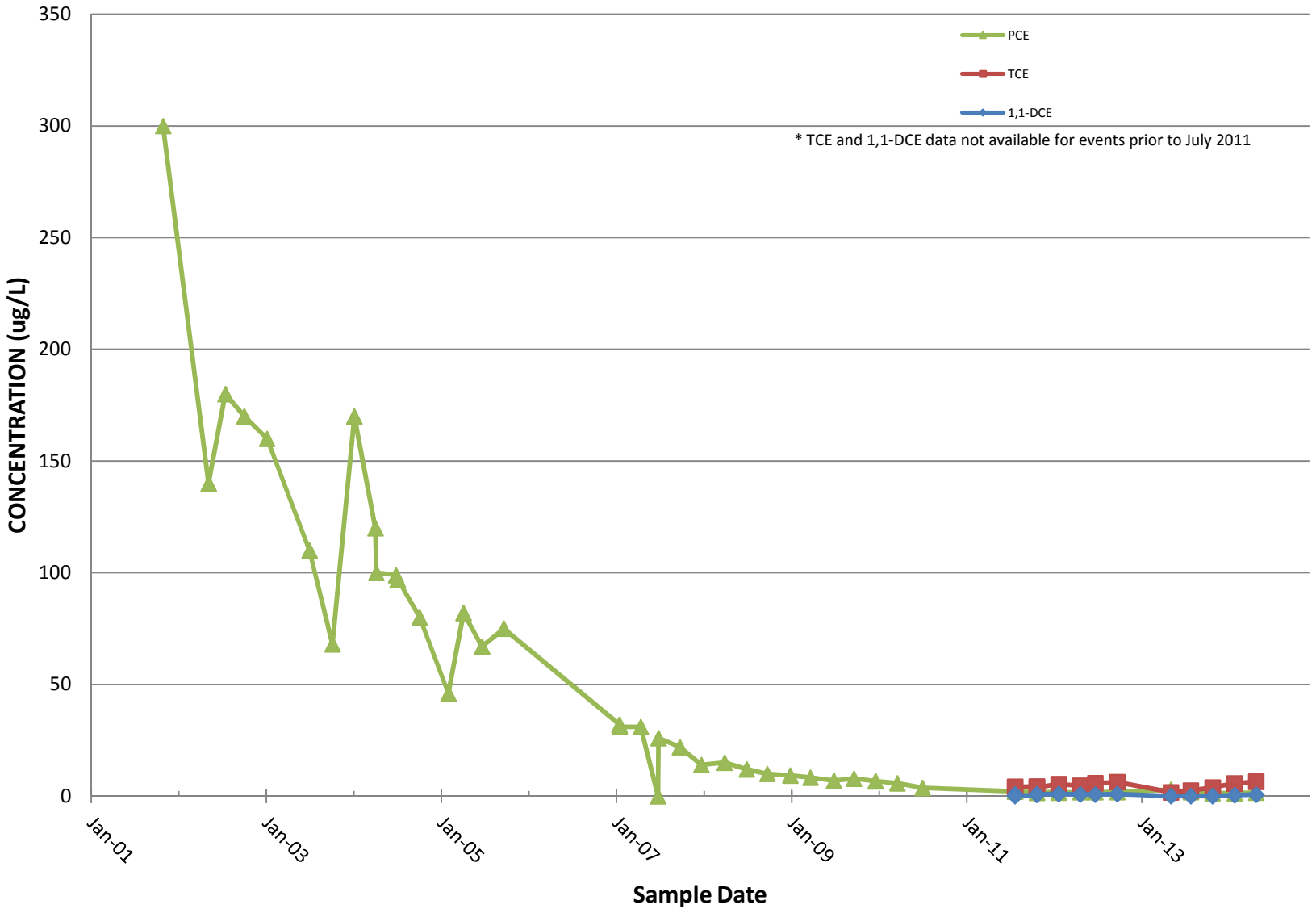


Chart 1b: EXT-2 Concentration (PCE, TCE, 1,1-DCE) vs Time

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

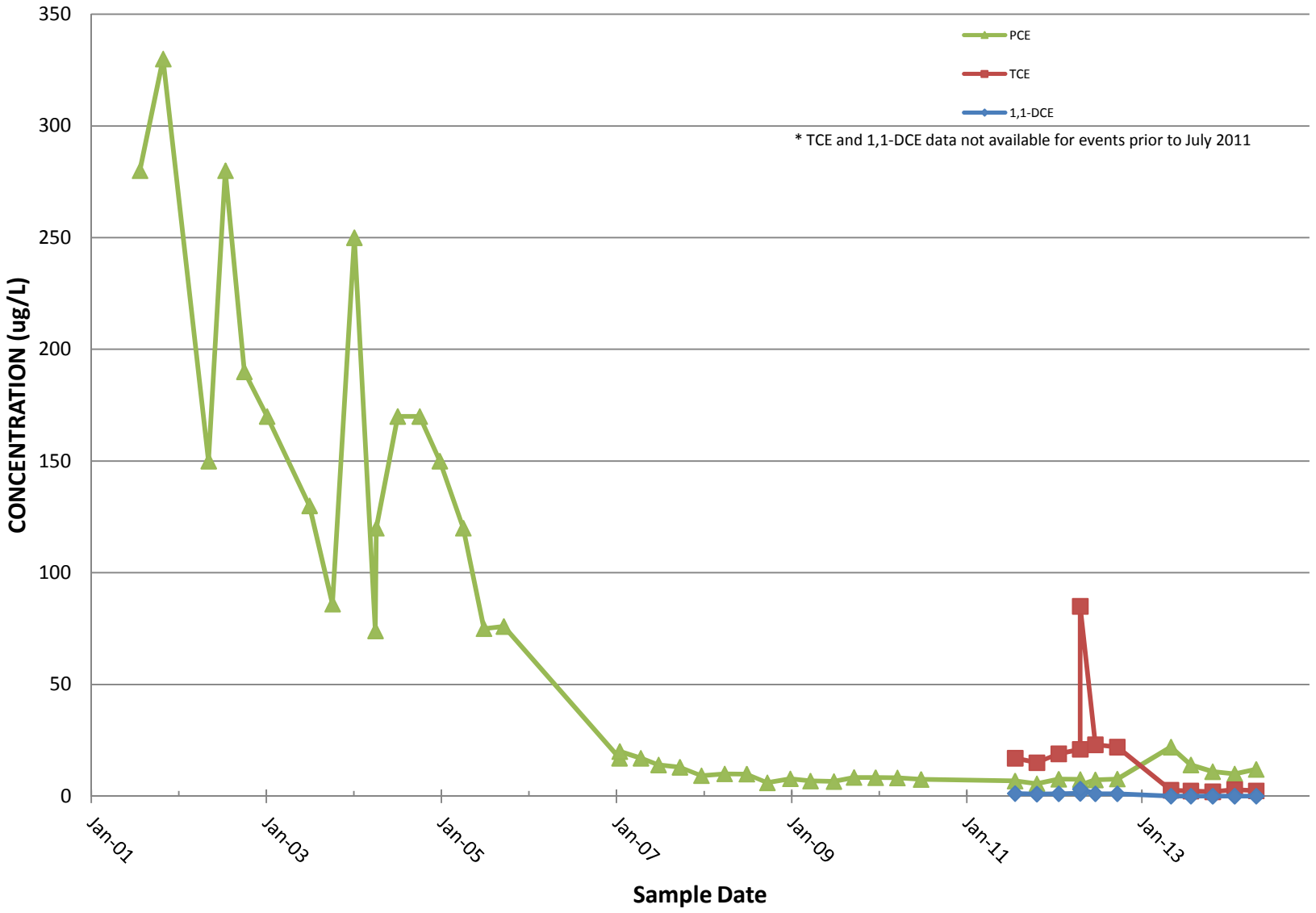


Chart 1c: EXT-3 Concentration (PCE, TCE, 1,1-DCE) vs Time

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

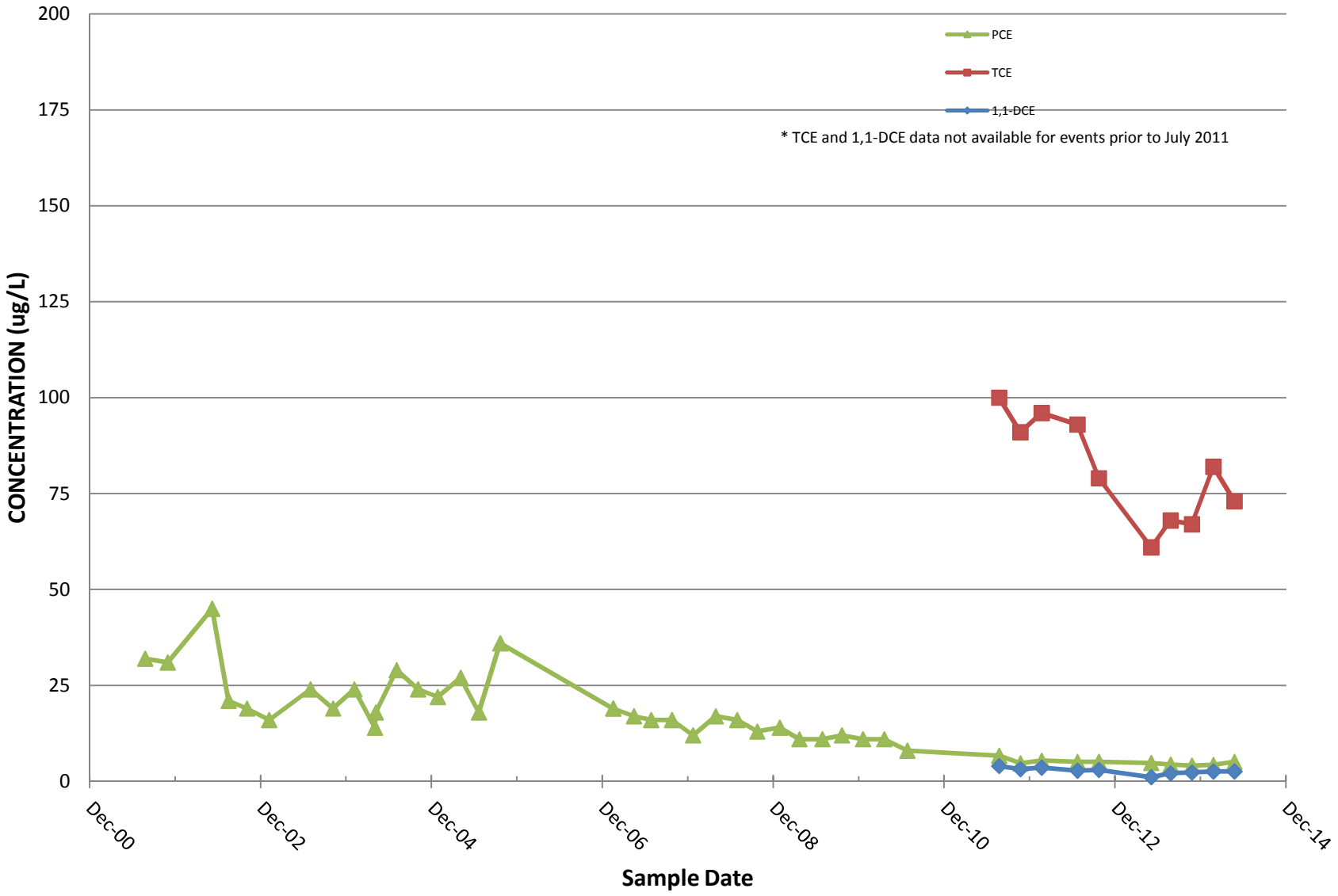


Chart 2: Groundwater Influent Concentration (Iron and Manganese) vs. Time

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

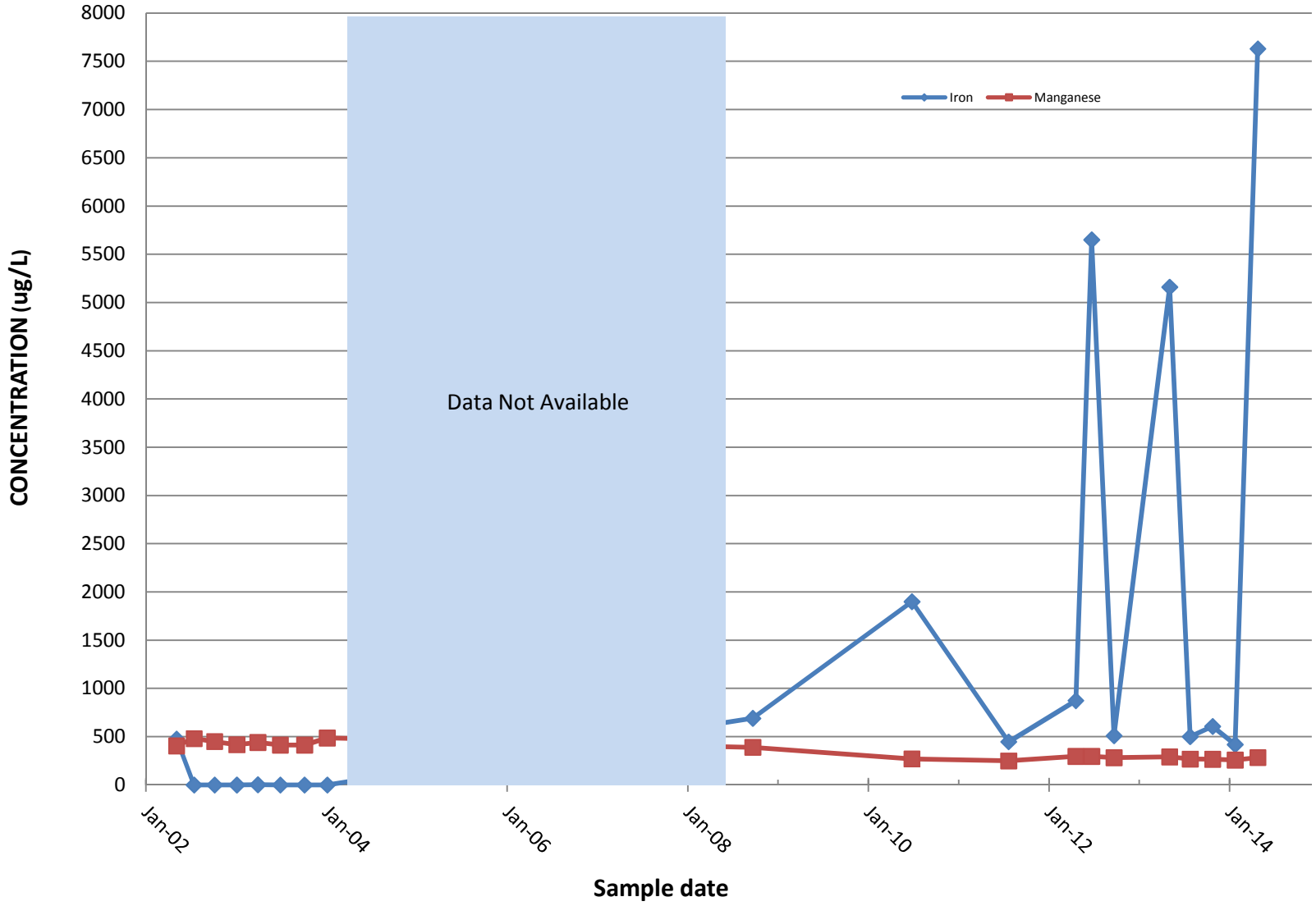


Chart 3: Treated Effluent Concentration (PCE, TCE, 1,1-DCE) vs Time

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

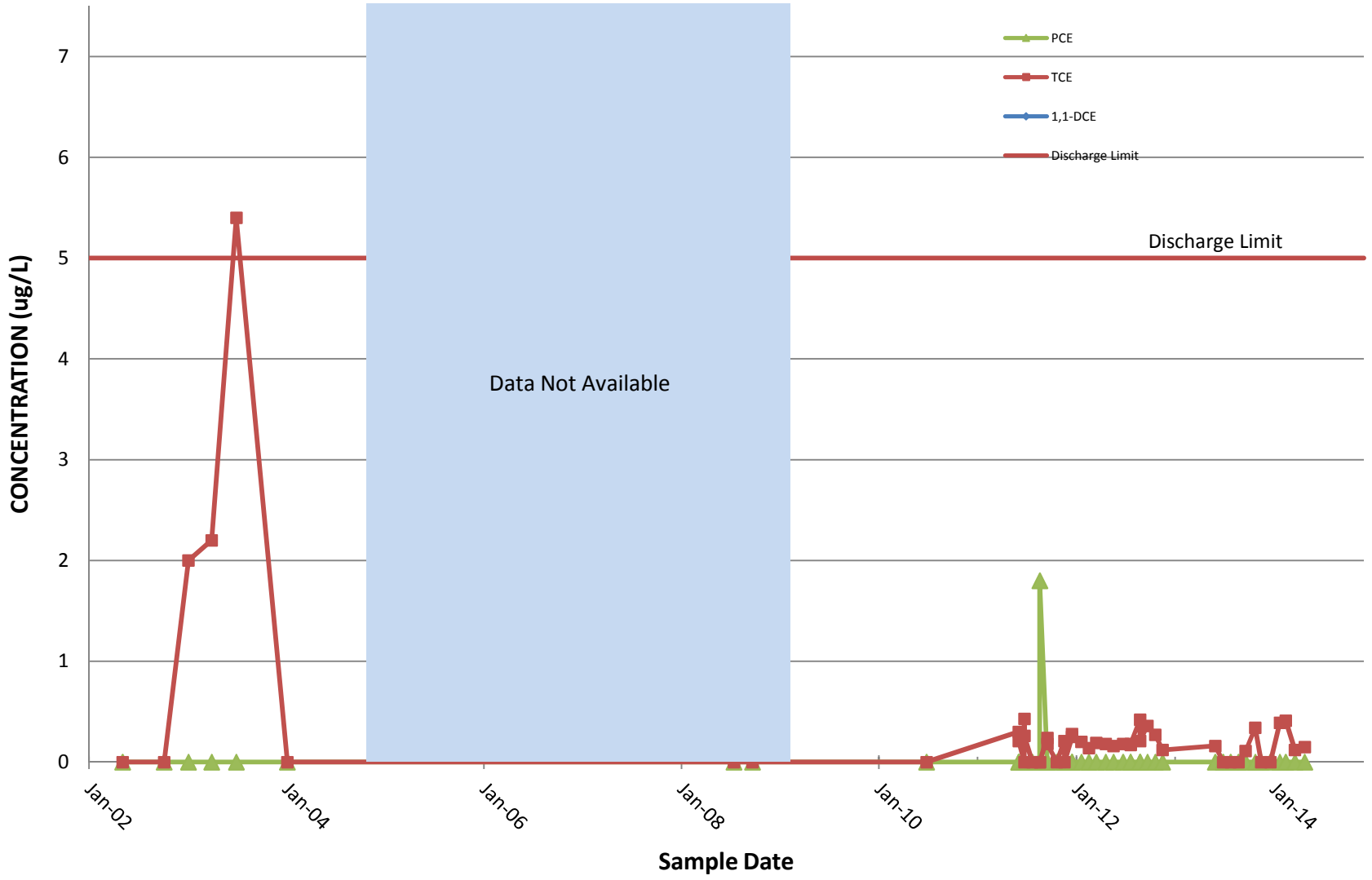


Chart 4: Treated System Effluent Concentration (Iron and Manganese) vs Time

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

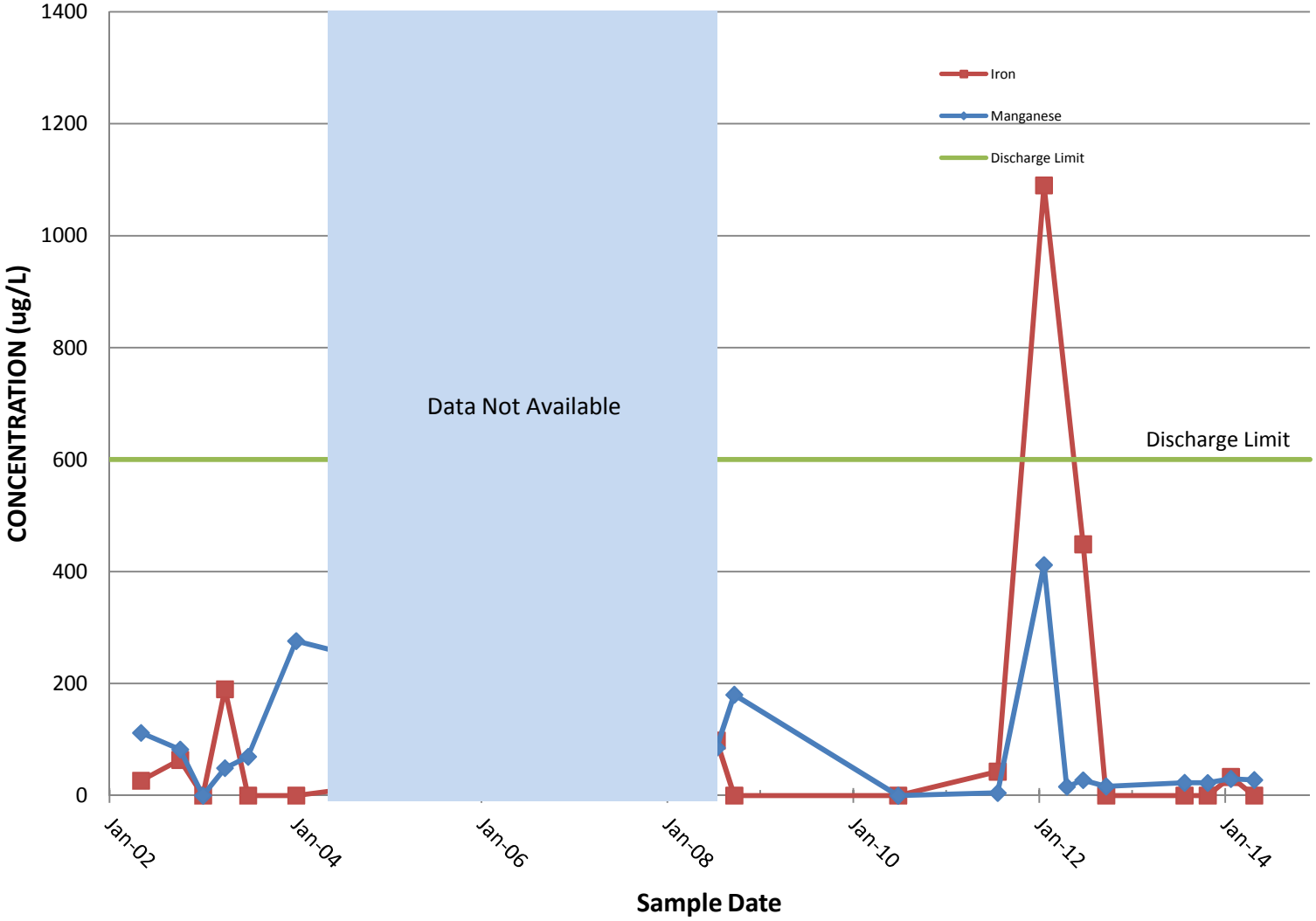


Chart 5: VOC Removal vs Time (PCE, TCE)

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

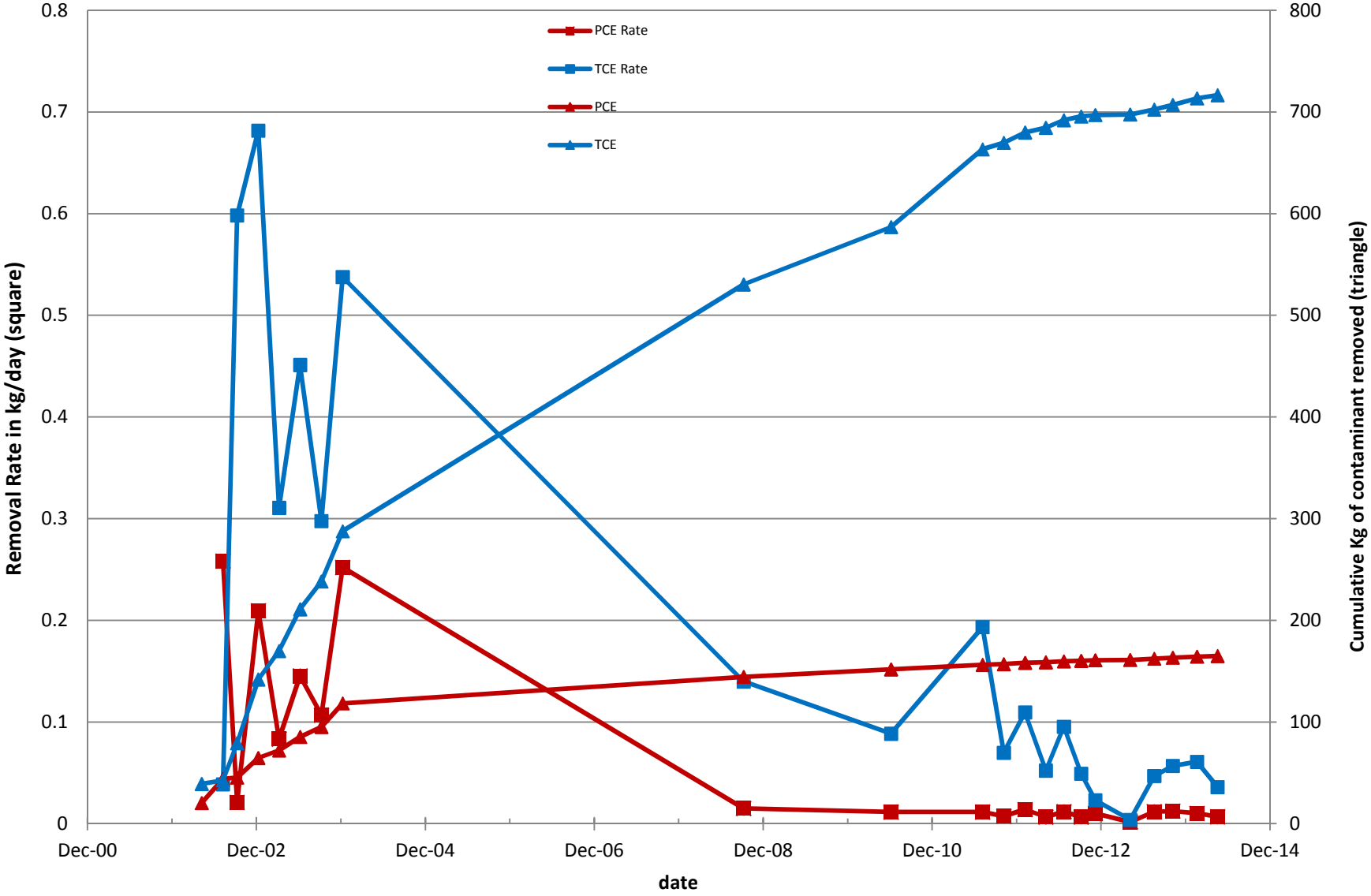


Chart 6a - PCE and TCE Concentrations In EW-1a

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

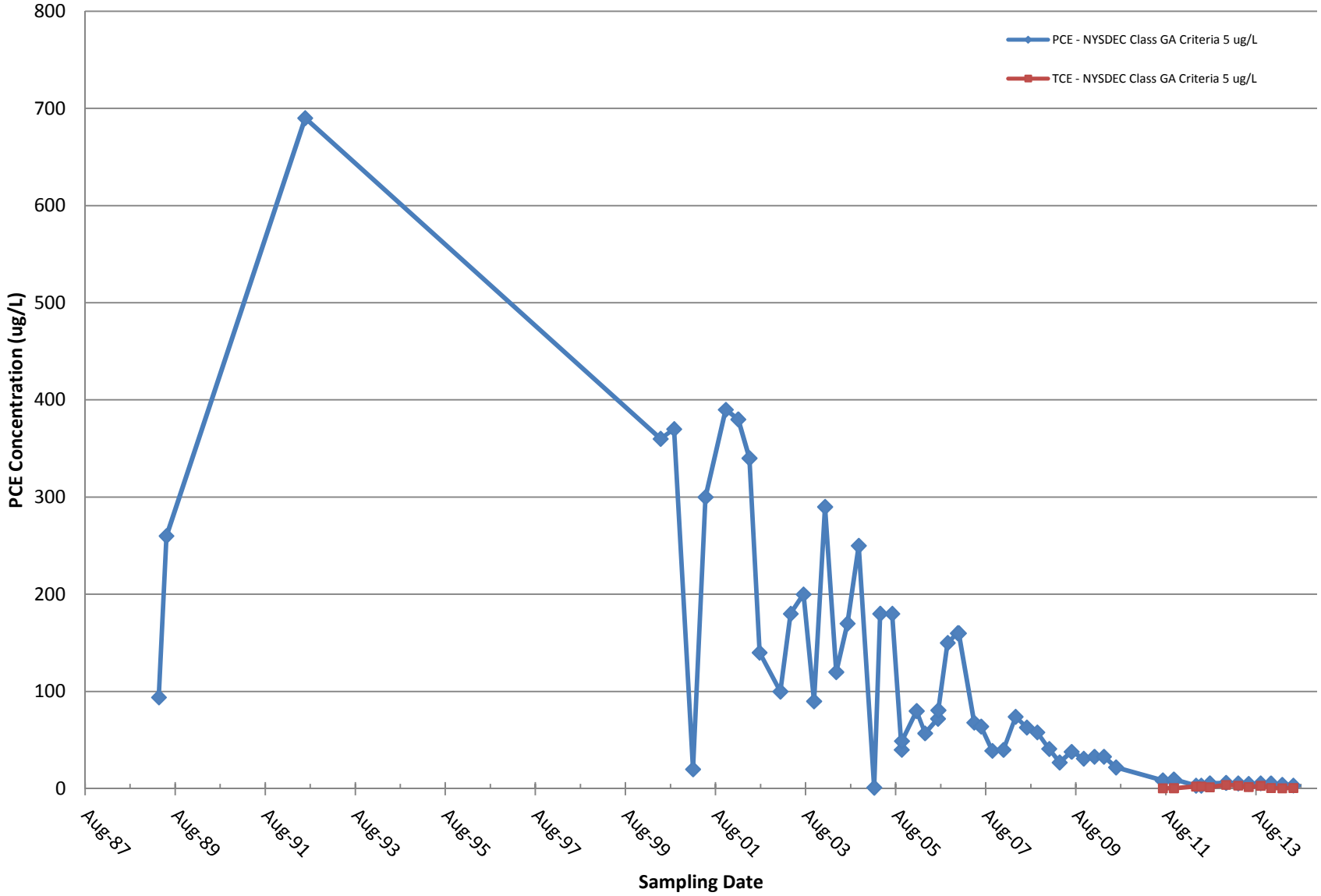


Chart 6b - PCE and TCE Concentrations in EW-4c

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19

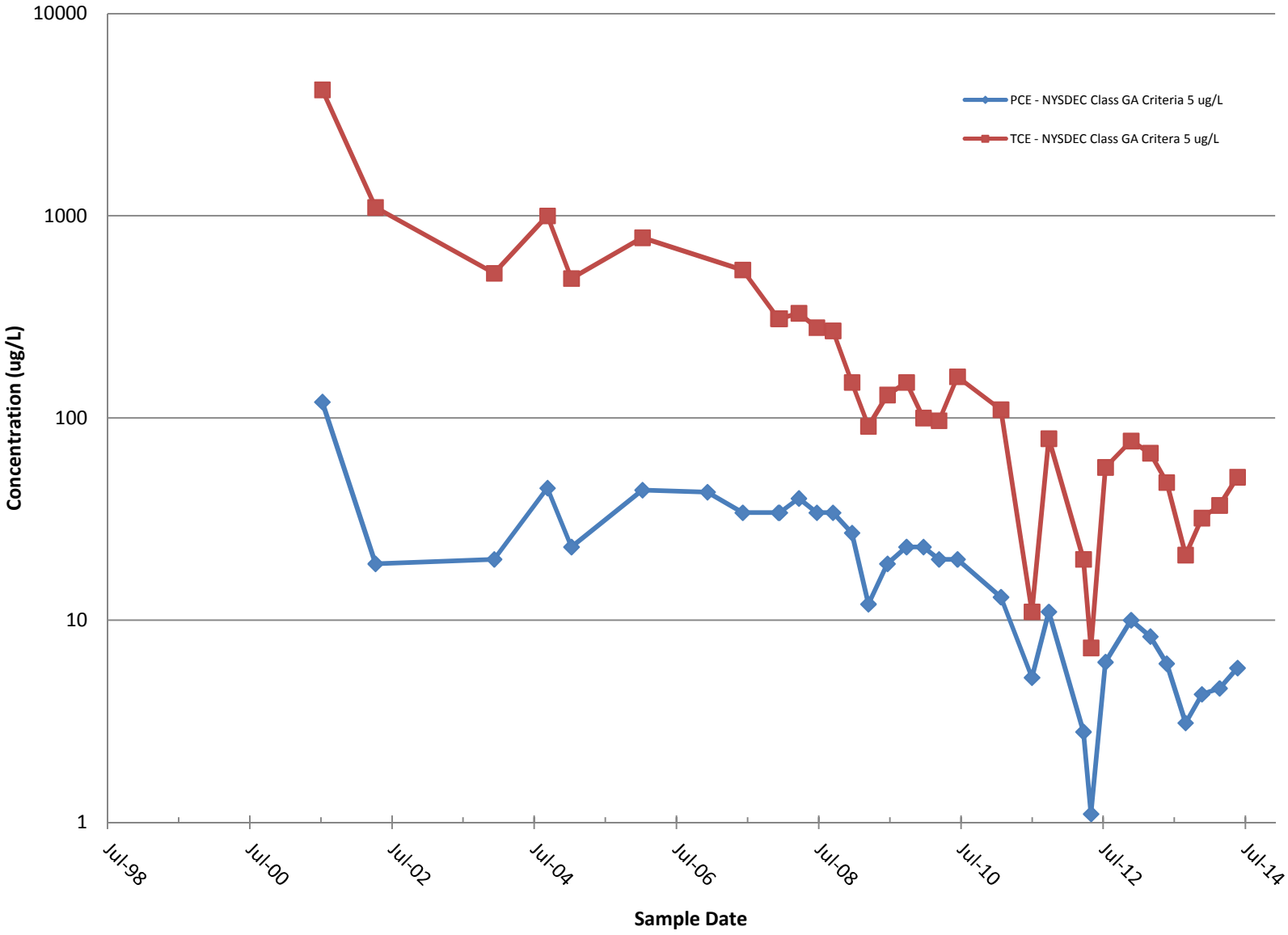
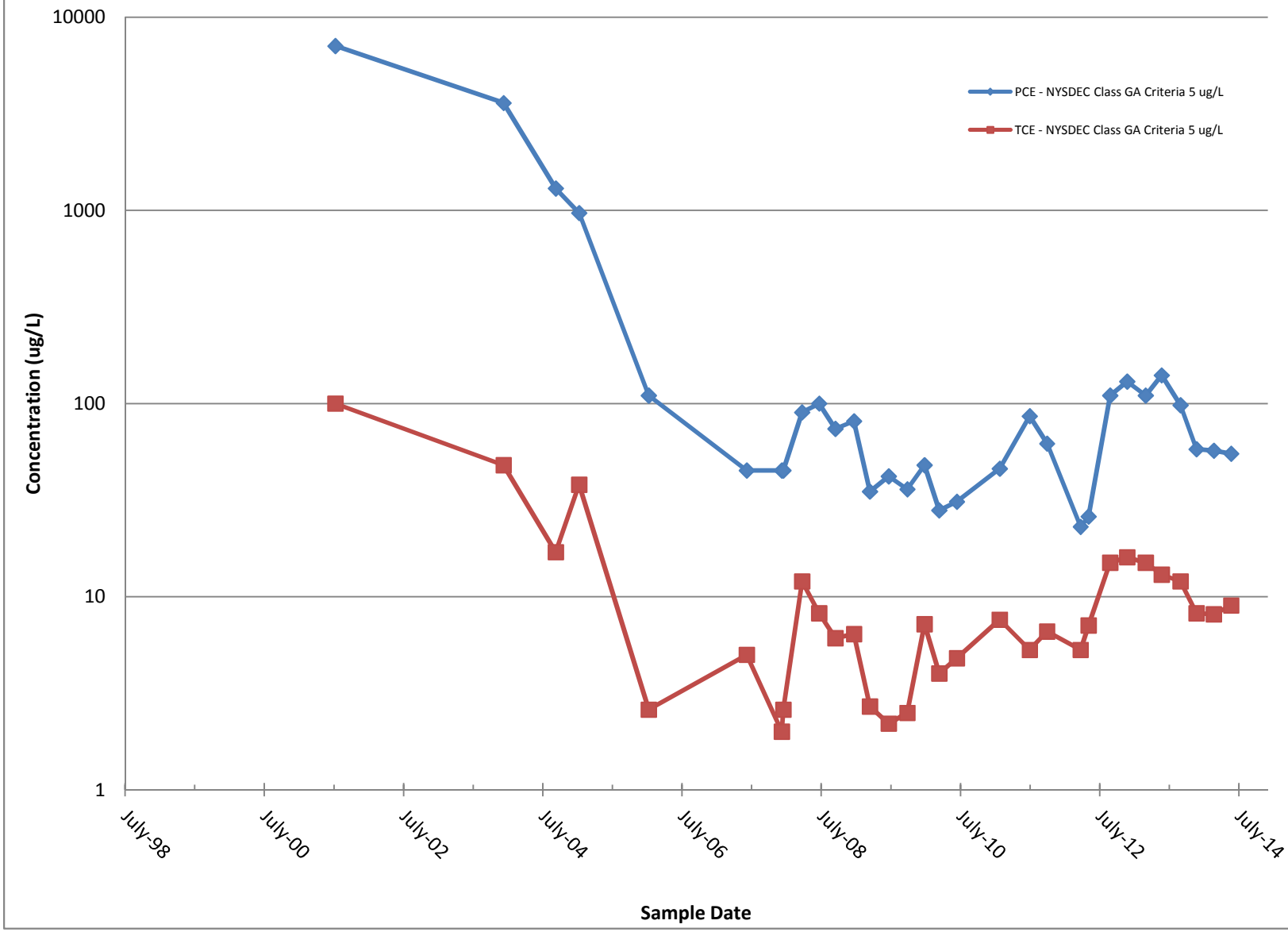


Chart 6c - PCE and TCE Concentrations in SW-1

June 2014 Sampling Event, Claremont Polychemical Superfund Site, Old Bethpage, NY
HRP#NEW9625.OM, Site Code: 130015, WA# D006130-19



Appendix B

Institutional Certifications (IC) Form

Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form

Site Details **Box 1**

Site No. 130015

Site Name Claremont Poly Chemical Corp.

Site Address: 505 Winding Road Zip Code: 11804
City/Town: Old Bethpage
County: Nassau
Site Acreage: 9.5

Reporting Period: June 12, 2011 to September 01, 2014

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. To your knowledge is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor Date

SITE NO. 130015 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
47.A-026-70	WINDING ROAD PROP INC	Ground Water Use Restriction Monitoring Plan Site Management Plan IC/EC Plan O&M Plan

Environmental Easements

Box 4

Description of Engineering Controls

Parcel	Engineering Control
47.A-026-70	Groundwater Treatment System Groundwater Containment Fencing/Access Control

Groundwater Collection and Treatment

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor

Date

IC/EC CERTIFICATIONS

Box 6

Signature

I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Nancy Garry at HRP Engineering, P.C.
print name

1 Fairchild Square, Suite 110

Clifton Park, NY 12065
(print business address)

am certifying as a .

Signature of

Stamp (Required for PE)

Date 10/1/14

Enclosure 2

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the "YES/NO" questions in the Verification of Site Details Section. The Engineering Standby Contractor may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (Boxes 3, 4, and 5)

1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Engineering Standby Contractor should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered. The DEC PM should be contacted to begin development of a plan of proposed corrective measures and an associated schedule for completing the corrective measures, including detailed cost information in a proposed budget. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule and budget, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a revised Periodic Review Report (with a signed IC/EC Certification) must be submitted which covers both the period for which a certification initially could not be provided and the ensuing time period until the correction measure was completed. This revised PRR should be submitted within 45 days after completion of the corrective measures to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6):

Where the site has Institutional and Engineering Controls, the certification statement in Box 6 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

If you certified "YES" for each Institutional and Engineering Control, please complete and sign the IC/EC Certification page.

IV. Certification Form Modifications

Changes to the Certification Form shall be discussed with the Project Manager prior to submission. Any approved changes must be made on the Certification Form provided by Site Control and supporting documentation or reasoning shall be attached.

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)

A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.
D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.
E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations
A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
1. whether all requirements of each plan were met during the reporting period
2. any requirements not met
3. proposed plans and a schedule for coming into full compliance.
B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.
C. Future PRR Submittals
1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.