



## 2020 Third Quarter Groundwater Monitoring Report

July – September 2020

Claremont Polychemical Corporation Site

*505 Winding Road*

*150 Winding Road (Groundwater Treatment Facility)*

*Old Bethpage, Nassau County, New York 11804*

*Contract/WA No. D0076025-28; Site No. 130015*

Prepared for:

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Department of Environmental Conservation

Division of Environmental Remediation

625 Broadway Albany, New York 12233

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**Department of  
Environmental  
Conservation**

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**Attachments** (following figures)

Attachment A: Summary of Analytical Results – Third Quarter 2020 Groundwater Samples

Attachment A1: Summary of Emerging Contaminant Results – Third Quarter 2020 Groundwater Samples

Attachment B: Synoptic Water Level Data

Attachment C: Laboratory Data Deliverable

Attachment D: Field Documentation

# 1 Introduction

This quarterly groundwater monitoring report prepared by Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) presents groundwater sampling analytical results for the third quarter of 2020 (July through September) and supporting information on the history, groundwater extraction and treatment (GWE&T) system configuration and hydrogeologic conditions at the Claremont Polychemical Corporation Site (NYSDEC Site #130015); hereinafter referred to as CPC or the “Site” (Figure 1). The groundwater monitoring event was historically part of the on-going site management and long-term monitoring (LTM) activities associated with Work Assignment #28 under contract D007625-28. In February 2020 the quarterly collection of groundwater samples and the preparation of this deliverable were transferred to WA#43 and includes the following:

- Brief overview of historical Site activities;
- Discussion of the on-site GWE&T system including discharge monitoring;
- Hydrological data;
- Brief description of the field activities;
- Analytical results of monitoring well sampling, specifically those for chlorinated volatile organic compounds (VOCs) including trends and plume evaluation;
- Analytical results of the six monitoring wells installed in the downgradient investigation for VOCs, and emerging contaminants including per- and polyfluoroylalkyl substances (PFAS) and 1,4-dioxane; and
- Conclusions and Recommendations.

## 2 Site Background

### 2.1 Site History

Claremont Polychemical Corporation, a former manufacturer of pigments for plastics and inks, coated metal flakes, and vinyl stabilizers, operated at the Site from 1966 to 1980. According to the “Second Five-Year Review Report for Claremont Polychemical Corporation” prepared by the Environmental Protection Agency (EPA), dated March 2014, during its operation, CPC disposed of liquid waste in three leaching basins and deposited solid wastes and treatment sludges in drums or in aboveground metal tanks. The principal wastes generated were organic solvents, resins, and wash wastes (mineral spirits). A solvent recovery system (steam distillation), two pigment dust collectors and a sump were located inside the Process Building. Five concrete treatment basins, each with a capacity of 5,000 gallons which contained sediments and water, were to the west of the building. Six aboveground tanks, three of which contained wastes, were located east of the

building. Other features included an underground tank farm, construction and demolition debris, dry wells and a water supply well (EPA 2014).

In 1979, the Nassau County Department of Health (NCDH) found 2,000 to 3,000 drums of inks, resins, and organic solvents throughout the Site during a series of inspections. Inspectors identified releases associated with damaged or mishandled drums in several areas including one larger release located east of the Process Building (referred to as the "spill area"). CPC sorted and removed the drums in 1980 (EPA 2014). In October 1980, the New York State Department of Environmental Conservation (NYSDEC) ordered CPC to commence clean-up activities at the Site. CPC did not perform the clean-up activities required by NYSDEC and CPC ceased operations at the Site in 1980 (EPA 2014). EPA proposed the Site for listing on the National Priorities List (NPL) in October 1984 (because of CPC's refusal to perform the clean-up) and CPC was subsequently listed on the NPL as a Superfund site in June 1986.

A Remedial Investigation Feasibility Study (RI/FS) was initiated in March 1988 under the oversight of the EPA. Surface and subsurface soil, groundwater, underground storage tanks, and the Process Building were sampled as part of the RI. The RI/FS reports were released to the public in August 1990. The RI/FS findings indicated that on-site soils contaminated with tetrachloroethylene (PCE), located in the former "spill area", constituted a potential threat to groundwater resources. The spill area is adjacent to and east of the former Process Building. Other VOCs including 2-butanone, toluene, xylene, 1,2-dichloroethene (DCE), trichloroethene (TCE), 1,1,1-trichloroethane (TCA), ethylbenzene, 1,2-dichloroethane (DCA), methylene chloride, and vinyl chloride were detected in groundwater at concentrations exceeding federal and state standards. EPA issued two Records of Decision (RODs) signed in September 1989 and September 1990 and two Explanations of Significant Differences (ESDs) signed in September 2000 and April 2003 since completion of the RI/FS. The operable units (OUs) addressed by the RODs and ESDs are described in Table 1.

**Table 1 – CPC Operable Units**

<b>Operable Unit</b>	<b>Description</b>	<b>Remedy</b>
OU-1	Treatment and removal of wastes in 14 underground storage tanks	14 USTs and contents removed. Achieved cleanup levels allowing for unlimited use and unrestricted exposure.
OU-2	Wastes stabilized during the Sept. 1988 removal action	Testing, consolidation, treatment, and disposal of wastes in containers and basins performed. Achieved unlimited use and unrestricted exposure, later changed to commercial/light industrial because of remaining contamination below the building.  2003 ESD added additional remedial actions for OU-2 under the former Process Building including an SVE system and using the building's concrete slab as a cap for cadmium contaminated soil.



Operable Unit	Description	Remedy
OU-3	Soil contaminated with PCE at the “spill area”	Approximately 8,800 tons of PCE contaminated soils excavated, treated and backfilled on Site. Achieved cleanup levels allowing for unlimited use and unrestricted exposure.
OU-4	Contaminated groundwater on the CPC property	Extraction and treatment of groundwater via metals precipitation, air stripping and carbon adsorption. On-site reinjection.
OU-5	Contaminated groundwater offsite of the CPC property.	Extraction and treatment of groundwater via air stripping and off-site reinjection using the Old Bethpage Landfill treatment system extraction wells south-southeast of the CPC Site.
OU-6	Decontamination of the former Process Building	Vacuuming and dusting surfaces, asbestos abatement, pressure washing walls and interior surfaces. Achieved cleanup levels allowing for unlimited use and unrestricted exposure.

A GWE&T system was installed on-site by the EPA and Army Corps of Engineers (ACOE) to hydraulically contain VOCs in groundwater as the OU-4 remedy. GWE&T system operation began in February 2000, reportedly pumping and treating over 400 gallons per day (gpd). SAIC Inc. (SAIC) operated and maintained the GWE&T system, collected plant effluent samples and performed quarterly groundwater sampling at 41 wells from 2000 to May 2011. In May 2011, the project was transferred from the ACOE/EPA to the NYSDEC. HRP Associates, Inc. (HRP) performed the same scope of work as SAIC under contract to NYSDEC from May 2011 to August 2015. HDR, also under contract to NYSDEC, took over HRP’s scope of work on September 1, 2015.

EPA issued an Explanation of Significant Differences (ESD) on September 29, 2000 that the Old Bethpage Landfill’s (OBL) GWE&T was inadvertently capturing the CPC OU-5 off-site groundwater plume; therefore the OBL GWE&T would be used to capture the off-site plume instead of constructing a new treatment facility. At that time the Town of Oyster Bay owned and operated the OBL GWE&T (USEPA 2000).

The Town of Oyster Bay operated the OBL GWE&T under a Municipal Response Action Reimbursement Agreement for treating the contaminated groundwater associated with CPC OU-5 from January 1997 through January 2007, followed by a State Assistance Contract (SAC No. C303223) from January 2007 through 2017. The NYSDEC terminated the SAC with the Town of Oyster Bay in August 2016 in a Site Transfer Agreement that outlined the schedule, terms, and responsibilities of the transfer (NYSDEC 2016).

NYSDEC’s Division of Environmental Remediation (DER) issued HDR Work Assignment (WA# 28) under contract D007625 for CPC OU-5. The purpose of the assignment was to transfer operations, maintenance, and monitoring of the OBL/CPC OU-5 GWE&T from Town of Oyster Bay’s consultant Lockwood, Kessler & Barlett, Inc. (LKB) to HDR. In October 2016, the OU-4 GWE&T was shut down, and HDR took over the operation of the OBL/OU-5 GWE&T. At that time, NYSDEC had also given



the Town of Oyster Bay permission to discontinue treatment for the OBL plume which involved shutting down recovery wells RW-1 and RW-2. HDR continued operations, maintenance and monitoring activities (collectively Site Management or SM) for CPC OU-5 consisting of former OBL GWE&T recovery wells RW-3, RW-4 and RW-5 for the period October 1, 2016 through February 28, 2018. Amendment #1 was approved April 16, 2018 for HDR to extend the operations and maintenance of the treatment facility through February 28, 2019, and Amendment #2 was approved on April 11, 2019 further extending the period of performance through February 28, 2020. NYSDEC approved Amendment #3 on February 13, 2020, extending the operations and maintenance of the Claremont OU5 facility through February 28, 2022. The monitoring and reporting task including LTM with quarterly collection of groundwater samples was transferred to WA#43 through February 28, 2022. This task includes the field efforts, coordination, oversight, and reporting for eight quarterly sampling events, with the addition of the six downgradient monitoring wells into the sampling network.

In 2018 an investigation downgradient from the Claremont Polychemical Site was performed as part of the NYSDEC Contract D007625, Work Assignment #43. This RI was conducted to further delineate the extent of off-site VOC contamination in the underlying aquifers and to evaluate the potential for contamination to reach downgradient public supply wells. The investigation involved installation of six vertical profile borings (VPBs) with push ahead groundwater sampling up to 450 ft. below ground surface (bgs), and installation and sampling of six permanent monitoring wells. The RI field activities were conducted in two phases from July 2018 through November 2018 for the installation of the first four VPBs south southeast of the CPC Site, and December 2019 through January 2020 for two VPBs to the south southwest.

All groundwater samples were analyzed for Target Compound List (TCL) VOCs by EPA method 8260C; 1,4-Dioxane by EPA Method 8270C SIM; Perfluorooctane sulfonic acid (PFOS), Perfluorooctanoic acid (PFOA), and 19 other perfluorinated compounds by modified EPA method 537. Groundwater samples collected during the RI contained elevated concentrations of VOCs and the emerging contaminants PFOS, PFOA, and 1,4-dioxane. Refer to the Final Remedial Investigation Report Claremont Polychemical RI/FS Offsite Groundwater Plume (March 2019) for additional details. The six monitoring wells associated with the RI were added to the Claremont OU5 well program in March 2020.

## 2.2 Location

The CPC site is located on a 9.5-acre parcel in an industrial section of Old Bethpage, Nassau County, New York (Figure 1). The former 35,000 square foot Process Building, demolished in 2012, was the only building historically on the property. The concrete slab from this building remains. The 5,200 square foot GWE&T system building was constructed as part of the OU-4 remedy. The OU-4 GWE&T system was shut down on October 1, 2016 and has not been in operation since that time.

The OU-5 GWE&T system is located across the street at 150 Winding Road within the Town of Oyster Bay Solid Waste Disposal Complex (OBSWDC). The OU-5 GWE&T system includes a groundwater recovery system, water conveyance system, discharge system, monitoring wells, air

stripper, and a 3,100 square foot facility for monitoring and controlling the system. The treated effluent discharges to Recharge Basin No. 1 located west of the OBL. Secondary discharge is directed to Recharge Basin No. 33 west of the Bethpage State Park Black Course for golf course irrigation in the summer (Figure 2). The five extraction/recovery well pump houses (RW-1, RW-2, RW-3, RW-4 and RW-5) are located on the Bethpage Black Course (Figure 2).

The CPC Site lies approximately 800 feet west of the border between Nassau and Suffolk Counties and is accessed via Winding Road on the property's western border. Adjacent properties include (Figure 1):

- South and Southeast – Bethpage State Park and golf course;
- East – State University of New York (SUNY) - Farmingdale Campus;
- West – OBSWDC and OU-5 GWE&T; and
- North – Commercial and Light Industrial.

The OBSWDC includes the closed OBL, solid waste transfer operations and the OU-5 GWE&T system currently operated by HDR under contract to NYSDEC. The Nassau County Fireman's Training Center (FTC), which has also contributed to soil and groundwater contamination in the area, is located approximately 500 feet south of the OBL portion of the OBSWDC. FTC had a GWE&T system that ceased operations in 2013 having achieved the cleanup objectives. The closest residences are approximately one-half mile from the Site, immediately west of the OBL. The nearest public supply well is located 3,500 feet northwest of the Site.

## 2.3 Site Hydrogeological Setting

The CPC site is underlain primarily by sand with interbedded, discontinuous silt and lignitic clay lenses. Upper glacial aquifer deposits that are observed are mostly absent in the area, rather the Magothy Formation is the uppermost geologic unit with a thickness of approximately 750 feet. The Raritan clay below acts as a barrier between the Magothy and Lloyd aquifers.

The "Claremont Polychemical Superfund Site Long-Term Groundwater Monitoring Old Bethpage, New York" report dated December 2001 prepared by SAIC indicated historical gradients ranging from 0.001-0.002 feet/foot and horizontal flow velocities of 0.43 feet/day or 157 feet/year (Ebasco, 1990). Historically, groundwater contour maps produced from wells screened in both the upper glacial aquifer and the deeper Magothy aquifer depict a south-southeast flow direction across the site. The recent CPC contour maps are generally consistent with previous maps produced from the CPC monitoring well network and from investigations by others. The current hydrogeologic conditions and groundwater contour mapping (Figures 3, 4 and 5) are discussed in Section 4.1

### 3 Groundwater Extraction and Treatment System

A description of the GWE&T system and a review of its contaminant recovery and hydraulic control effectiveness are provided below.

#### 3.1 Groundwater Extraction and Treatment System Description

The OU-5 GWE&T system was originally designed to capture and treat organic contaminants associated with the contaminated groundwater plume identified as a result of the disposal of hazardous substances at the Old Bethpage Landfill site (NYDEC Site No. 130001). The system consists of groundwater recovery through three extraction wells, water conveyance, treatment via an air stripper and discharge to recharge basins. Each of the system components are discussed below.

##### GWE&T System Extraction Wells

The groundwater collection system originally consisted of five extraction wells known as RW-1, RW-2, RW-3, RW-4 and RW-5 approximately 800 feet apart located in Bethpage State Park Black Golf Course south of the CPC site (Figure 2). The recovery wells were designed with the total maximum pumping capacity of 1.76 million gpd and a designed flow of 1.5 million gpd to the treatment system (LKB, 1993). Table 2 provides extraction well screen intervals and total depths.

**Table 2 – Extraction Well Construction Details**

Well	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
RW-1*	280	185	265
RW-2*	290	230	271
RW-3	275	163	255
RW-4	270	147	250
RW-5	283	153	263

\*RW-1 and RW-2 captured the OBL plume which has been remediated. These wells are no longer online or operated for purposes of groundwater remediation.

Recovery wells RW-1 and RW-2 were petitioned to be discontinued by the Town of Oyster Bay prior to the transition to HDR operating the OU-5 GWE&T (Town of Oyster Bay, 2016). These recovery wells historically had non-detectable or very low values for total VOCs and did not capture the CPC off-site plume. The individual VOC results were lower than their Consent Decree and Class GA standards as stated in the LKB Quarterly Remedial Action Report dated June 2016. On October 2, 2016 at the direction of the NYSDEC, RW-1 and RW-2 were taken off-line.

Prior to October 2017, the system’s average influent flow rate was 628 gallons per minute (gpm), or 904,396 gpd, and the average effluent flow rate was 624 gpm, or 899,233 gpd. In October 2017, pump failures stemming from a possible power surge resulted in substantial system downtime

and, thus, decreased average flow rates for influent (539 gpm, or 775,450 gpd) and effluent (532 gpm, or 765,700 gpd). The suspected power surge also caused process control issues that precluded automatic operation of the system. As such, the system was only run manually and only during working hours from November 2017 through July 2018. The restricted operation of the system in manual mode, along with the process alarms and interlock gauges not functioning required oversight of the facility while online. In early July, NYSDEC instructed HDR to add a second shift operator to accommodate NYS Parks, Recreation and Historic Preservation (Parks) request for additional irrigation water for the golf course. Recovery wells RW-1 and RW-2 were brought on-line to increase the water level in Basin 33 from which Parks obtains its irrigation water. On September 6, 2018, the control system was fully functional, and RW-1 and RW-2 were taken off-line.

In September 2018, the process control system, controls and alarm system became fully functional which allowed the treatment system to operate without onsite staff supervision. The recovery wells currently run in automatic mode with remote start up, and the process pumps are operated in fully automatic mode.

On December 31, 2019 RW-4 tripped offline and diagnostic efforts confirmed the motor and pump needed replacement. The pump and motor for RW-4 were replaced April 7, 2020 and RW-4 was again fully functional.

Refer to the Monthly O&M reports for July through September 2020 for details on the status of GWE&T system upgrades, issues encountered, and impacts on system operations and performance. Average daily system flow rates during the third quarter of 2020 were 676 gpm in July, 668 gpm in August, and 663 gpm in September.

Under current conditions, the PLC and the control system are stable and fully functional. Flows from the individual recovery wells are remotely read, transmitted, and totaled. The treatment system was down for 170 minutes in July due to maintenance tasks and a power interruption; 396 minutes in August due to power interruptions and maintenance tasks; and for 533 minutes in September due to power interruptions, process alarm conditions, and maintenance tasks.

#### GWE&T System - Path of Remediation

Groundwater is pumped from three extraction wells; designated RW-3, RW-4 and RW-5, that were installed in 1992 at what was then the leading edge of the off-site VOC plume from the OBL. The combined flow from the extraction wells is directed through common conveyance piping to the air stripper wet-well. A triplex pump arrangement delivers the collected groundwater into the top of the air stripper, which contains packing media. As the groundwater passes through and saturates the packing, it contacts air that is directed from the bottom of the air stripper via the blower. Dissolved VOCs pass from the liquid phase (groundwater) into the gas phase (air) and exit the stripper through an exhaust stack. Non-volatile organic compounds and inorganic contaminants, if any, are not removed by the treatment system.

The effluent is directed into a receiving wet-well, where another triplex pump arrangement delivers it to two recharge basins. Recharge Basin No. 1 contains a system of eight diffusion wells

and is located upgradient of the OBL. Recharge Basin No. 33 receives effluent in the summer that is used beneficially for watering the golf course.

The GWE&T system is staffed by a plant manager/operator working 40-hour weeks, and an autodialer (telemetry unit) is installed to contact the plant manager in case of plant alarms. Typical response time is 30 minutes. The plant manager can monitor the plant remotely from the FactoryTalk View Site Edition Client control system and adjust the system operations as needed.

GWE&T System Operating Permits

*Water Permit*

The OU-5 GWE&T operates under a State Pollutant Discharge Elimination System (SPDES) permit equivalency dated October 24, 2012 which was valid until May 11, 2016. A permit equivalency renewal application was submitted to the NYSDEC Bureau of Water Permits on March 30, 2016 and is pending approval. Effluent Limitations and Monitoring Requirements outlined in the permit are enforced by the NYSDEC Division of Environmental Remediation, Remedial Bureau E.

*Air Permit*

An air permit is not required for the GWE&T system operation since 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.” Emissions from the air stripper have historically been negligible and are compliant with air guideline concentrations.

## 3.2 Groundwater Extraction and Treatment System Performance Evaluation

### 3.2.1 Flow Rate

Since startup, the OU-4 GWE&T system treated more than approximately 2.41 billion gallons of groundwater associated with the CPC site until operation was suspended and transitioned to the OU-5 plant. The OU-5 GWE&T system historically operated at a rate of approximately one million gpd. Daily flow readings are provided in the O&M reports submitted monthly to NYSDEC (refer to the September 2020 O&M report for the most recent data). A summary of the flow in each recovery well is included in the table below.

**Table 3 – Recovery Well Monthly Flow Summary for this Quarter**

Location	July Total Flow (gallons)	August Total Flow (gallons)	September Total Flow (gallons)
RW-1*	6,450	2,724	1,260
RW-2*	12,826	3,081	4,392
RW-3	10,589,000	10,408,000	9,968,000
RW-4	11,542,000	11,353,000	11,184,000



Location	July Total Flow (gallons)	August Total Flow (gallons)	September Total Flow (gallons)
RW-5	8,734,000	8,630,000	8,334,000
Total Influent	31,142,000	30,615,000	29,312,000
Total Effluent	30,073,829	29,564,906	28,306,598
*Recovery wells RW-1 and RW-2 were taken offline at the conclusion of the Remedial System Optimization evaluation. Flows associated with RW-1 and RW-2 are from monthly operational tests.			

The volume of treated water discharged by the GWE&T system to the recharge basins is determined daily from readings of the magnetic flow meter on the plant effluent line. The difference between the total influent and total effluent is due to a calibration error in the existing flow meters. The recharge basins are designed to receive 1.5 million gpd of effluent.

During the third quarter of 2020, the system processed 87.9 million gallons with the following average daily flow rates:

**Table 4 – Average Daily Flow by Month for this Quarter**

	Average Daily Flow (gallons per day)	Discharge Location
July	970,124	Basin-33
August	953,707	Basin-33
September	943,553	Basin-33
Quarterly Average	955,795	

### 3.2.2 Groundwater Extraction and Treatment System Contaminant Removal

To quantify the treatment system contaminant removal rate, HDR reviewed available GWE&T system influent and effluent analytical results from monthly operation and maintenance records. The OU-4 GWE&T system removed 947 kg cumulatively (combined mass of TCE, PCE and 1,1-DCE) from 2002 until October 2016, when it was taken offline. Most of the mass removed by the OU-4 GWE&T system was TCE (749 kilograms or 1,651 pounds) and PCE (170 kilograms or 375 pounds).

Since October 1, 2016, when HDR took over operations of the OU-5 GWE&T system, approximately 393 kilograms (866 pounds) of TCE and 48 kilograms (106 pounds) of PCE have been removed by the OU-5 system. The previous OU-5 operator (prior to October 1, 2016) did not calculate VOC load, or track the contaminants of concern cumulatively over time. The LKB reports provided to HDR did not include historical data for daily flow rates.

**Table 5 – VOC Mass Removed per Quarter for 2019 and 2020 (kg)**

Year	Quarter	OU-4 GWE&T	OU-5 GWE&T
2019	Q1	Offline	38.75
	Q2	Offline	32.54
	Q3	Offline	36.95
	Q4	Offline	49.64
2020	Q1	Offline	8.35
	Q2	Offline	31.72
	Q3	Offline	37.09
Cumulative Total		947 *	449.27 **

\*Cumulative totals presented for OU-4 are from 2002 through 2016.

\*\*Cumulative totals presented for OU-5 are from October 1<sup>st</sup>, 2016 to present.

### 3.2.3 Groundwater Extraction and Treatment System Discharge Monitoring

System effluent samples are collected and analyzed quarterly for: VOCs, base neutral acid (BNA) semi-volatile list, metals, total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), cyanide, and anions. Effluent data for select VOC compounds (PCE, TCE, and 1,1-DCE) and semi-volatiles (BNA) are analyzed to evaluate compliance with effluent discharge limits. Figure 6 shows that effluent concentrations for the main contaminants, PCE and TCE, were below permissible discharge limits of 5 µg/L at the OU-5 GWE&T system during the third quarter of 2020. In addition, the effluent concentration of iron (not detected) and manganese (146 µg/L) were both under the permissible levels of 600 µg/L in the third quarter of 2020. All other constituents monitored for discharge requirements met their respective discharge limitations as indicated in the monthly O&M reports relevant to this quarter.

System effluent pH remained above or equal to the 6.50 su minimum requirement with the following average monthly readings:

**Table 6 – Average Monthly Discharge pH**

	July	August	September
Average Effluent pH (su)	6.9	6.8	6.8

Refer to the September Monthly O&M report for additional information on remediation system performance and daily operations.

## 4 Groundwater Monitoring Program

A network of 55 monitoring wells is used to monitor groundwater quality and effectiveness of the GWE&T system (Figure 2). The groundwater monitoring program includes wells on the CPC property (OU-4) and off the CPC property (OU-5).

OU-4 monitoring wells included in the network are:

- DW-1, DW-2, EW-5, EW-7C, EW-7D, SW-1 and WT-01.

OU-5 monitoring wells included in the network are:

- BP-3A, BP-3B, BP-3C, EW-1A, EW-1B, EW-1C, EW-2A, EW-2B, EW-2C, EW-2D, EW-4A, EW-4B, EW-4C, EW-4D, EW-11D, EW-12D, EW-14D, LF-1, M-30B-R, MW-5B, MW-6A, MW-6B, MW-6C, MW-6D, MW-6E, MW-6F, MW-7B-R, MW-8A, MW-8B, MW-8C, MW-9B, MW-9C, MW-10D, MW-11A, MW-11B, and OBS-1.

Following approval from the NYSDEC on August 21, 2019, an additional six wells from the western extent of the study area were added to the program. These wells are:

- BP-5B, BP-5C, BP-12B, BP-12C, BP-13B, and BP-13C.

In February 2020 under WA#43 an additional six downgradient monitoring wells were added to the quarterly monitoring.

- MW-CPC-36, MW-CPC-37, MW-CPC-38, MW-CPC-39, MW-CPC-40, and MW-CPC-41.

A description of the groundwater sampling event and results is provided below.

### 4.1 Hydrological Data

HDR and Nassau County perform a synoptic round water level measurement. The network of gauged wells includes wells that are not in the sampling program. Measurements from 67 wells collected by HDR are combined with data provided by Nassau County. Measurements collected by HDR are provided in Attachment B. The synoptic groundwater level measurement for this quarter was performed on September 18, 2020.

The average water table elevation across the OU-5 site is 60.69 feet (vertical datum NAVD88). Depths to groundwater (DTW) in September 2020 ranged from 19.56 feet (well MW-CPC-41) to 101.78 feet (well EW-11D) below ground surface (bgs) (see Attachment B). Potentiometric surface elevations at each well were calculated for each well by subtracting the DTW from the top of casing elevation. HDR plotted the water level elevations, grouping wells by the aquifer unit they are screened in, to develop and interpret potentiometric contours of the in the upper (water table), middle, and lower Magothy aquifers.

Groundwater flow direction is predominantly south-southeast at the water table (Figure 3), middle Magothy (Figure 4), and in the lower Magothy (Figure 5). The potentiometric surface contours in the middle Magothy depict notable pumping influence near and immediately down gradient from the OU5 recovery wells, RW-3 through RW-5. The pumping influence is expressed in the upper Magothy as well. In the vicinity of BP-13, MW-CPC-40 and MW-CPC-41 within the



lower Magothy aquifer there is a south-southwest component to groundwater flow. Horizontal gradients increase in this in the area ranging from 0.003-0.004 feet/foot. Overall, groundwater elevations and the inferred groundwater flow directions are consistent with previous quarterly observations.

## 4.2 Groundwater Sample Collection

The monitoring well groundwater samples were collected for this quarter between September 14<sup>th</sup> and 21<sup>st</sup>, 2020. HDR sampled 48 of the 49 CPC monitoring well network wells. No sample was collected at MW-6A due to insufficient water to collect a sample.

The groundwater samples were collected using passive diffusion bags (PDBs) inserted at mid-point in the screens in each monitoring well. Each PDB bag was retrieved, pierced with a decontaminated sharp object and the water inside was collected in VOC vials with septum caps, and preserved with hydrochloric acid (HCl). The VOC vials are labeled, recorded on a chain of custody, and placed in a cooler with ice.

Groundwater samples from the downgradient MW-CPC series wells (MW-CPC-##) were collected using the low-flow sampling method "USEPA Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from monitoring Wells" dated January 19, 2010. The intake of the Geo-Tech PFC free portable bladder pump was installed at the mid-point of the screened zone or biased to a depth where a higher VOC concentration was observed during the VPB sampling. Monitoring wells were purged until low-flow parameters (turbidity, dissolved oxygen, specific conductivity, temperature, pH, and oxidation/reduction potential) stabilized in accordance with EPA's low flow method. Low flow sampling logs, chains of custody (COC), and PFC daily checklists are provided in Attachment D. A list of wells sampled, and analytical results are presented in Table 5, and Attachments A and A1.

Sixty-two samples (including four field duplicates and four trip blanks) were collected and submitted to Test America Laboratory, of Edison, New Jersey, an NYSDOH ELAP-approved laboratory (#12028), to be analyzed for VOCs via EPA Method 8260. Seven samples (including one field duplicate) were collected from the MW-CPC wells and analyzed for PFAS by modified EPA modified Method 537 and 1,4-dioxane by method 8270D SIM.

## 4.3 Groundwater Analytical Results

### 4.3.1 Groundwater VOC Analytical Results

Third quarter 2020 groundwater sampling VOC exceedances are summarized on Table 7 and are plotted in trend charts provided as Figures 7 through 28; treatment system effluent and influent water sampling results are shown in trend charts on Figures 6 and 29, respectively. The six downgradient MW-CPC monitoring well VOC exceedances are summarized on Figure 37. Water classification GA standards and guidance values obtained from Table 1 of NYSDEC's *Division of Water Technical and Operational Guidance Series (TOGS) (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations* dated June 1998 and subsequent



addenda were used to evaluate VOC results. TOGS 1.1.1 incorporates 6 NYCRR Part 703.5 Class GA groundwater criteria and supplements with additional guidance values.

In addition to the results below, acetone was detected in 52 field samples (including field duplicates) and two trip blanks. Detected concentrations of acetone did not exceed the NYSDEC TOGS 1.1.1. guidance value of 50 µg/L in any groundwater sample. Although acetone is a common laboratory contaminant, its continued detection in the quarterly samples indicate that it may be present in the groundwater rather than a laboratory contaminant.

**Table 7 – Monitoring Well VOC Exceedances (in µg/L)**

	PCE	TCE	cis-1,2-DCE	1,1-DCA	1,2-DCA	VC	1,4-DCB	Benzene	Chloro-benzene
<b>Criteria:</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>0.6</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>5</b>
MW-CPC-36	<u>32</u>	<u>5.5</u>	<u>63</u>	1.1	<u>2.8</u>	0.87 J	ND	<u>38</u>	ND
MW-CPC-37	ND	ND	<u>8.5</u>	2.2	ND	<u>2.2 J+</u>	ND	ND	ND
MW-CPC-40	ND	1.8	ND	<u>5.3</u>	ND	ND	ND	ND	ND
MW-CPC-41	<u>7.6</u>	0.37 J	0.52 J	ND	ND	ND	ND	ND	ND
BP-12B	0.62 J	ND	0.4 J	ND	ND	ND	ND	0.75 J	ND
BP-13B	ND	1.7	ND	1.1	ND	ND	ND	ND	ND
BP-3B	<u>23</u>	3.6	<u>24</u>	3.8	ND	ND	ND	ND	ND
BP-3C	<u>73</u>	<u>6.5</u>	<u>40</u>	<u>7.5</u>	0.47 J	<u>2.7</u>	ND	0.8 J	ND
BP-5C	ND	1.4	0.66 J	<u>5.8</u>	ND	ND	ND	ND	ND
DW-1	<u>7</u>	2	<u>29</u>	ND	ND	ND	ND	ND	ND
DW-2	0.44 J	ND	ND	ND	ND	ND	ND	ND	ND
EW-01A	2.7	ND	0.25 J	ND	ND	ND	ND	ND	ND
EW-01B	0.93 J	2.9	3.7	ND	ND	ND	ND	ND	ND
EW-01C	ND	2.7	0.53 J	ND	ND	ND	ND	ND	ND
EW-02A	ND	0.5 J	1.3	ND	ND	ND	ND	ND	ND
EW-02C	0.29 J	3	ND	ND	ND	ND	ND	ND	ND
EW-02D	1.3	ND	ND	ND	ND	ND	ND	ND	ND
EW-04A	<u>54</u>	<u>9.5</u>	<u>150</u>	ND	ND	ND	ND	ND	ND
EW-04B	1.1	3.5	0.72 J	ND	ND	ND	ND	ND	ND
EW-04C	4	<u>36</u>	0.8 J	ND	ND	ND	ND	ND	ND
EW-04D	2.4	0.46 J	ND	ND	ND	ND	ND	ND	ND
EW-05	0.33 J	0.6 J	ND	ND	ND	ND	ND	ND	ND
EW-07C	<u>22</u>	<u>290</u>	4.9	0.3 J	ND	ND	ND	ND	ND
EW-07D	1.9	0.63 J	ND	ND	ND	ND	ND	ND	ND
EW-11D	2	<u>24</u>	1.8	ND	ND	ND	ND	ND	ND
EW-12D	<u>26</u>	<u>490</u>	<u>9.6</u>	1.2	ND	ND	ND	ND	ND
EW-14D	1.3	<u>36</u>	0.58 J	ND	0.57 J	ND	ND	ND	ND
MW-05B	0.36 J	1.4	ND	ND	ND	ND	ND	ND	ND
MW-06B	ND	ND	ND	ND	ND	0.21 J	2.5	<u>1.4</u>	<u>5.2</u>
MW-06C	ND	ND	0.42 J	ND	ND	0.19 J	0.89 J	<u>1.5</u>	3

	PCE	TCE	cis-1,2-DCE	1,1-DCA	1,2-DCA	VC	1,4-DCB	Benzene	Chlorobenzene
<b>Criteria:</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>0.6</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>5</b>
MW-06D	ND	ND	ND	ND	ND	ND	1.5	0.51 J	1.7
MW-06E	ND	ND	ND	ND	ND	ND	<b><u>3.1</u></b>	0.39 J	<b><u>6.4</u></b>
MW-06F	ND	ND	0.33 J	0.67 J	ND	ND	ND	ND	ND
MW-08A	<b><u>5.3</u></b>	0.71 J	0.99 J	ND	ND	ND	ND	ND	ND
MW-08B	ND	1.1	ND	ND	ND	ND	ND	ND	ND
MW-09B	0.46 J	1.9	ND	ND	ND	ND	ND	ND	ND
MW-09C	ND	0.85 J	ND	ND	ND	ND	ND	ND	ND
MW-10D	0.95 J	3	0.95 J	0.29 J	<b><u>0.71 J</u></b>	ND	ND	ND	ND
MW-11A	3.8	4.4	<b><u>32</u></b>	2.7	ND	ND	ND	ND	ND
MW-11B	0.92 J	4.2	<b><u>37</u></b>	<b><u>14</u></b>	<b><u>0.69 J</u></b>	1.8	ND	0.47 J	ND
MW-7B-R	2.3	<b><u>110</u></b>	3.7	ND	ND	ND	ND	ND	ND
OBS-1	ND	ND	ND	ND	ND	ND	0.5 J	ND	0.68 J
SW-1	<b><u>310</u></b>	<b><u>18</u></b>	<b><u>7.7</u></b>	ND	ND	ND	ND	ND	ND

Results units are µg/L. ND – not detected above the reporting limit; J – estimated value. Bold, underlined results are exceedances of the NYSDEC Part 703 Class GA criteria, which is incorporated into the TOGS 1.1.1 (June 1998 and subsequent addenda). See Attachment A for complete analytical results and comparison criteria. PCE – tetrachloroethylene; TCE – trichloroethylene; cis-1,2-DCE – cis-1,2-dichloroethylene; 1,1-DCA – 1,1-dichloroethane; 1,2-DCA – 1,2-dichloroethane; VC – vinyl chloride; 1,4-DCB – 1,4-dichlorobenzene.

### 4.3.2 Groundwater Emerging Contaminant Results

In the third quarter of 2020, the six downgradient MW-CPC series monitoring wells (Figure 2) were analyzed for the emerging contaminants 1,4-Dioxane and the PFAS group of contaminants.

The criteria used to evaluate 1,4-dioxane results is the New York State Department of Health Drinking Water Program Maximum Contaminant Level (MCL) of 1 µg/L, which is effective as of August 26<sup>th</sup>, 2020.

Per- and polyfluoroalkyl substances (PFAS) results were evaluated against *NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remediation Programs* dated October 2020. The compounds perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) individually have criteria of 10 ng/L (nanograms per liter) while all other PFAS compounds have the criterion of 100 ng/L. The criteria for total PFAS (including PFOS and PFOA) is 500 ng/L. The sum of PFOS and PFOA were compared to the United States Environmental Protection Agency's *Fact Sheet PFOA & PFOS Drinking Water Health Advisories*, which was published in November 2016, value of 70 parts per trillion (ppt, equivalent to ng/L).

Detected concentrations of compounds exceeding their respective criteria as listed above are shown on Figures 35 and 36 and summarized in the table below.



**Table 8 - Monitoring Well Emerging Contaminant Exceedances**

	<b>1,4-D</b>	<b>PFNA</b>	<b>PFOS</b>	<b>PFOA</b>	<b>PFOA+PFOS</b>	<b>Total PFAS</b>
<b>Criteria:</b>	1 (a)	100 (b)	10 (b)	10 (b)	70 (c)	500 (b)
<b>Reporting Unit:</b>	(µg/L)	(ng/L)				
MW-CPC-36	<b><u>4.7</u></b>	<b><u>348</u></b>	<b><u>158</u></b>	<b><u>133</u></b>	<b><u>291</u></b>	<b><u>927.98</u></b>
MW-CPC-37	<b><u>13</u></b>	ND	<b><u>19.9</u></b>	<b><u>43.2</u></b>	63.1	110.97
MW-CPC-38	0.2	ND	<b><u>20.2</u></b>	ND	20.2	49.59
MW-CPC-40	<b><u>2.6</u></b>	ND	ND	ND	ND	13.4
MW-CPC-41	<b><u>2.6</u></b>	65.1	<b><u>22.6</u></b>	<b><u>29.8</u></b>	52.4	205.52

No detected concentrations of the compounds presented above exceeded their respective criteria in the sample from MW-CPC-39. Bold and underlined results indicate exceedance of the criteria indicated as follows:

- (a) For 1,4-dioxane: New York State Department of Health Drinking Water Program Part 5, Subpart 5-1, Section 5-1.52 Maximum Contaminant Level (MCL) for 1,4-dioxane adopted on August 26<sup>th</sup>, 2020.
- (b) For PFAS compounds: *NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remediation Programs* (October 2020).
- (c) For PFOA + PFOS: *USEPA Fact Sheet PFOA & PFOS Drinking Water Health Advisories*, November 2016.

Abbreviations: 1,4-D – 1,4-Dioxane; PFNA - Perfluorononanoic acid; PFOS - Perfluorooctanesulfonic acid; PFOA - Perfluorooctanoic acid; PFOA+PFOS – sum of PFOA and PFOS; Total PFAS – sum of all detected Per- and polyfluoroalkyl substances (a total of 21 substances, not all of which are listed above); ND – not detected; J – estimated value.

### 4.3.3 Evaluation of Plumes

Figures 30 and 31 depict the horizontal plume location with approximated isoconcentration lines for PCE and TCE in plan view. The groundwater contamination distribution was further evaluated by creating sample location pie charts depicting the relative contributions of the chlorinated VOC contaminants PCE, TCE, 1,1-Dichloroethene, trans-1,2-Dichloroethene, cis-1,2-Dichloroethylene, and vinyl chloride to their sum in cross section (Figures 32 and 33) and plan view (Figure 34). The horizontal and vertical distribution of PCE and TCE continues to demonstrate a shallow PCE plume comingled with a deeper TCE plume.

OU-4 on-site plume. This plume originates on the CPC site with the highest PCE concentrations historically measured at well SW-1, a water table well. Currently, the on-site plume is predominantly PCE with concentrations an order of magnitude greater than those of TCE. In 2015, PCE showed an increasing trend in well SW-1, with spikes in the second quarter (210 µg/L) and in the fourth (190 µg/L) of that year. However, in 2016 the PCE concentration steadily decreased from 150 µg/L during the first quarter down to 30 µg/L in the fourth. SW-1 was not sampled between the fourth quarter of 2016 and the second quarter of 2019, due to it becoming dry and subsequent low water levels. The PDB bag in SW-1, which was in the well since the fourth quarter of 2016, was submerged in the first and second quarter of 2019, due to an increase in the water table elevation. It was subsequently sampled in the second quarter of 2019 and had the highest concentration of PCE (180 µg/L) out of all on-site wells.

The PCE concentration in SW-1 was consistent for the third and fourth quarter of 2019, with concentrations of 200 and 190 µg/L, respectively. PCE concentrations rose in the first two quarters

of 2020 with concentrations of 260 µg/L and 310 µg/L, respectively; however, the trend flattened out in the third quarter of 2020 with a concentration of 310 µg/L. See Figure 8 for overall trends.

At well EW-4C, PCE was the dominant contaminant of concern observed until concentrations decreased from 110 µg/L in the first quarter of 2017 to 34 µg/L in the third quarter of 2017 (Figure 13). The decreasing trend of PCE at EW-4C continued in the third quarter of 2020 with a concentration of 4 µg/L compared to the previous quarter's concentration of 4.4 µg/L. TCE at EW-4C has been the dominant contaminant of concern since the third quarter of 2017 through present, where concentrations have ranged from 24 µg/L to 52 µg/L. TCE has shown an overall decreasing trend in 2020 (see Figure 13). TCE at EW-4C was detected at 36 µg/L during the third quarter of 2020.

Off-site plume upgradient of CPC site. This plume contains VOCs from upgradient sources such as Former Aluminum Louvre (FAL). The plume can be detected as far upgradient as the EW-7-series well cluster and stretches southeast into OU5 as far as well MW-7B-R. The FAL (OU-1) and off-site (OU-2) investigations were completed in 2015, with the most recent Record of Decision (ROD) for OU-2 issued in March 2019. Groundwater containing VOCs, primarily TCE, migrated from FAL to beneath the Bethpage State Park Black Golf Course. The source area at FAL is at the east side of the facility and a large storm water recharge basin at Winding Road and Old Bethpage-Sweethollow Road is thought to influence shallow groundwater flow direction beneath FAL in an easterly direction. The FAL plume contains TCE, PCE, and 1,1,1-TCA and flows south-southeast after it moves off-site. When it reaches the CPC site, the FAL plume is found to the east of the CPC source areas.

The plume is predominantly TCE, with TCE concentrations typically an order of magnitude greater than those of PCE in EW-7C (Figure 15). TCE-dominant wells include EW-4B, EW-4C, EW-7C, EW-12D, EW-14D, and MW-7B-R. The overall trend in TCE concentrations since 2011 has been decreasing in the EW-7 well cluster (Figure 15 and 16). EW-7C, EW-12D, and MW-7B-R have the highest TCE concentration compared to the other wells, with concentrations at 290 µg/L, 290 µg/L, and 110 µg/L respectively in the third quarter of 2020. MW-7B-R TCE concentrations have been generally trending downward since the OU-4 plant was shut down (Figure 25); however, TCE has a strong upward trend in EW-12D since that time (Figure 18).

The selected remedy for FAL (OU-1) and off-site (OU-2) outlined in the March 2019 ROD includes enhanced bioremediation, vapor mitigation, and various institutional controls.

Well EW-14D. Groundwater contamination at EW-14D is high in TCE, similar to the off-site, upgradient plume. The PCE concentration is below the criterion of 5 µg/L. Well EW-14D has the greatest variability in TCE concentrations. In the first quarter of 2018, concentrations decreased to 29 µg/L (from 250 µg/L in the fourth quarter of 2017), increased to 59 µg/L in the second quarter, increased to 100 µg/L in the third quarter, and then decreased to 45 µg/L in the fourth quarter of 2018. The TCE concentration in each of the four quarters of 2019 were 32, 19, 24, and 36 µg/L, respectively. During 2020, TCE concentrations were 19 µg/L in the first quarter, 30 µg/L in the second quarter, and 36 µg/L in the third quarter (Figure 19).

Southern Area. This location is centered on the BP-3 series wells far south of the CPC site and downgradient of the extraction wells (Figures 20 through 22). The PCE concentrations at BP-3B



and BP-3C are historically higher than those for TCE; BP-3B had a PCE concentration of 23 µg/L compared to a TCE concentration of 3.6 µg/L in the third quarter of 2020; BP-3C had a PCE concentration of 73 µg/L compared to a TCE concentration of 6.5 µg/L in the third quarter of 2020. TCE concentrations in BP-3A are typically higher than the PCE concentrations; however, neither were detected during the third quarter of 2020. The source(s) of the PCE groundwater contamination at the BP-3 series wells is unknown.

**Cross Sections.** Two cross section figures depict the contaminants of concern along two transects (Figures 32 and 33). Cross section A-A' (Figure 32) begins at DW-1 and continues along the direction of groundwater flow (south-southeast) to the BP-3 series wells. The PCE-dominant plume is at a higher elevation than the TCE-dominant plume in the vicinity of the CPC site and moves south-southeast to well MW-08A. PCE is detected deeper in the BP-3-series wells, which are the farthest downgradient wells from the CPC site.

Cross section B-B' (Figure 33) begins east of A-A' at the EW-7-series wells and continues along the direction of groundwater flow to well MW-7B-R. PCE concentrations observed in wells in this cross section are below the 5 µg/L standard in the EW-2 series wells, DW-2, EW-5, EW-4B, EW-4C, EW-4D, EW-7D, and MW-7B-R. TCE concentrations observed in wells in this cross section are below the 5 µg/L standard in the EW-2 series wells and at wells DW-2, EW-4B, EW-4D, EW-5, and EW-7D.

#### 4.3.4 Comparison to Historical Groundwater Quality

Figures 7 through 29 illustrate the historical trends for VOC concentrations in multiple wells. The following table summarizes the concentration trends of PCE and TCE in each of the wells.

**Table 9 – PCE and TCE Concentration Trends in Select Monitoring Wells**

Well	Screen Depth	Location	PCE Trend	TCE Trend	Figure
<b>CPC Plume Wells</b>					
DW-1	93-98	South-southwest of CPC	Increasing	Slightly decreasing	Figure 7
SW-1	65-70	South-southwest of CPC	Increasing	Slightly increasing	Figure 8
EW-1A	65-75	Southwest of CPC	Slightly decreasing	Slightly decreasing	Figure 9
EW-5	165-175	South-southeast of CPC	Slightly increasing	Decreasing	Figure 10
<b>Off-Site Plume(s) Wells</b>					
EW-4A	100-115	East of CPC	Increasing	Increasing	Figure 11
EW-4B	120-130	East of CPC	Slightly decreasing	Slightly decreasing	Figure 12
EW-4C	145-155	East of CPC	Slightly increasing	Slightly decreasing	Figure 13
EW-4D	285-295	East of CPC	Decreasing	Decreasing	Figure 14

Well	Screen Depth	Location	PCE Trend	TCE Trend	Figure
EW-7C	189-199	Upgradient, North of CPC	Decreasing	Decreasing	Figure 15
EW-7D	273-283	Upgradient, North of CPC	Decreasing	Decreasing	Figure 16
MW-10D	346-351	Southeast of CPC	Decreasing	Decreasing	Figure 17
EW-12D	209-219	East of CPC	Increasing	Increasing	Figure 18
EW-14D	185-195	Southeast of CPC	Slightly decreasing	Decreasing	Figure 19
BP-3A	54-74	South-southeast of CPC	Slightly decreasing	Slightly decreasing	Figure 20
BP-3B	215-235	South-southeast of CPC	Increasing	Increasing	Figure 21
BP-3C	280-300	South-southeast of CPC	Increasing	Slightly decreasing	Figure 22
MW-11A	140-145	South-southeast of CPC	Increasing	Increasing	Figure 23
MW-11B	240-245	South-southeast of CPC	Slightly increasing	Slightly increasing	Figure 24
MW-7B-R	230-235	South-southeast of CPC	Decreasing	Decreasing	Figure 25
<b>Extraction Wells and OU5 Plant Influent</b>					
RW-3	163-255	Extraction well south-southeast of CPC	Decreasing	Decreasing	Figure 26
RW-4	147-250	Extraction well south-southeast of CPC	Decreasing	Decreasing	Figure 27
RW-5	153-263	Extraction well south-southeast of CPC	Decreasing	Decreasing	Figure 28
OU5 Plant Influent	NA	Plant influent	Slightly decreasing	Increasing	Figure 29

Decreasing trends indicate mass removal from groundwater in the area around the well. Increasing and stable trends indicate partial capture and/or additional source(s) contributing to groundwater contamination in the area of the well.

## 5 Conclusions and Recommendations

### 5.1 Conclusions

The third quarter 2020 groundwater monitoring event at the CPC site covered the on-site plume (OU-4), off-site plume (OU-5), and the downgradient area covered by the newly added MW-CPC series monitoring wells. Analysis of the data has resulted in the following conclusions:

- A groundwater plume of VOCs, primarily PCE, originates proximate to the former Process Building (on-site plume). Recent data obtained from OU-4 monitoring well SW-1, which had been dry for an extended period, indicates localized PCE concentrations are similar to those prior to the cessation of OU-4 pumping. The recently completed Remedial System Optimization (RSO) report for the OU-5 GWE&T concluded that the combined capture zone of recovery wells RW-3, RW-4 and RW-5 captures the estimated width of the OU-4 plume migrating directly south from the CPC Site (HDR, 2019).
- An off-site, upgradient plume consisting mostly of TCE originates to the north or northwest of the former CPC site. The TCE contamination was only partially captured by the CPC OU-4 GWE&T system. Similarly, the combined capture zone of OU-5 recovery wells RW-3, RW-4 and RW-5 is not sufficient to capture the upgradient TCE plume, only extending about 200 feet to the east of RW-4, the eastern-most recovery well based on the RSO report finding.
- 37.09 kilograms (81.77 pounds) of PCE, TCE, and 1,1-DCE combined were removed during the third quarter of 2020 via operation of the OU-5 GWE&T system. This removal rate is commensurate with the four quarters of 2019 and previous quarter of 2020 (refer to Table 5 for specific quantities).
- The OU-5 GWE&T system influent concentrations of PCE, TCE, and cis-1,2-DCE have continued to increase since the first quarter of 2020 (see Figure 29).
- Contaminant concentrations in effluent groundwater samples collected during the reporting period met discharge limits.
- The results from the third quarter 2020 groundwater sampling event show the following VOC compounds detected above the NYSDEC Part 703 Class GA groundwater criteria: PCE, TCE, cis-1,2-DCE, 1,1-DCA, 1,2-DCA, 1,4-dichlorobenzene, benzene, chlorobenzene, and vinyl chloride.
- BP-3C: The current OU-5 recovery well network is not capable of capturing groundwater contamination around the BP-3 series of wells as indicated by the continued fluctuation of PCE concentrations. It is possible that contaminant mass is migrating beneath the limited influence of the combined capture zones of RW-3, RW-4, and RW-5 in the deeper aquifer aided by the vertical anisotropy created by the presence of clay beds within the formation.
- EW-12D: TCE and PCE concentrations have fluctuated significantly since 2018 and have shown an upward trend throughout 2020 (see Figure 18). Concentrations of cis-1,2-DCE have fluctuated to a lesser degree than TCE or PCE; however, concentrations have been increasing since the middle of 2018.



- TCE concentrations at MW-7B-R have continued to show a decline since treatment was transferred from the OU-4 facility to the OU-5 facility. The TCE concentration in the third quarter of 2020 was almost one order of magnitude lower than its post OU-4 shutdown peak (see Figure 25). This reduction is likely due to the OU-5 recovery wells intercepting the contaminant mass, given the well's position downgradient of the OU-5 recovery wells.
- The direction of groundwater flow at the site remains predominately south-southeast with no regionally significant changes observed in flow direction during and since operation of the OU-4 GWE&T system ceased.
- The results from the third quarter 2020 groundwater sampling event show 1,4-Dioxane was detected above the NYSDOH Maximum Contaminant Level of 1 µg/L at four of the downgradient MW-CPC series monitoring wells: MW-CPC-36, MW-CPC-37, MW-CPC-40, and MW-CPC-41. The highest result values were found in MW-CPC-36 and MW-CPC-37 which are approximately upgradient from a public water supply well.
- PFNA, PFOS, and PFOA continue to be the dominant PFAS compounds detected at the MW-CPC series of wells. Exceedances are limited to MW-CPC-36, MW-CPC-37, and MW-CPC-41, which are located approximately upgradient to side gradient of the public water supply wells. Total PFAS results remain highest in MW-CPC-36.

## 5.2 Recommendations

- Recondition recovery wells RW-3, RW-4 and RW-5 to improve performance and well efficiency which may improve contaminant mass removal.
- Evaluate defective, non-functioning, and critical components of the conveyance and treatment system to confirm the capacity of the piping system, condition of conveyance vaults, adequacy of treatment and recharge, and potential modifications as deemed necessary. Perform repairs to components adversely affecting current capacity and treatment (e.g. replacing defective air inlets on conveyance line).
- Determine vertical extent of TVOC contamination and depth of clay units at the location of the recovery wells and horizontal and vertical extent of the plume to the east by installing vertical profile borings (VPB) between RW-3 and RW-4 and east of monitoring well EW-14D.
- Based on the findings of the VPB investigation, upgrade and/or expand the system with additional extraction wells. Upgrade via installation of new pumps/motors in one or more of the existing recovery wells to increase pumping capacity and extend capture to the east. Install one or two new extraction wells screened deeper and further east.
- Recovery wells RW-1 and RW-2 should remain offline.

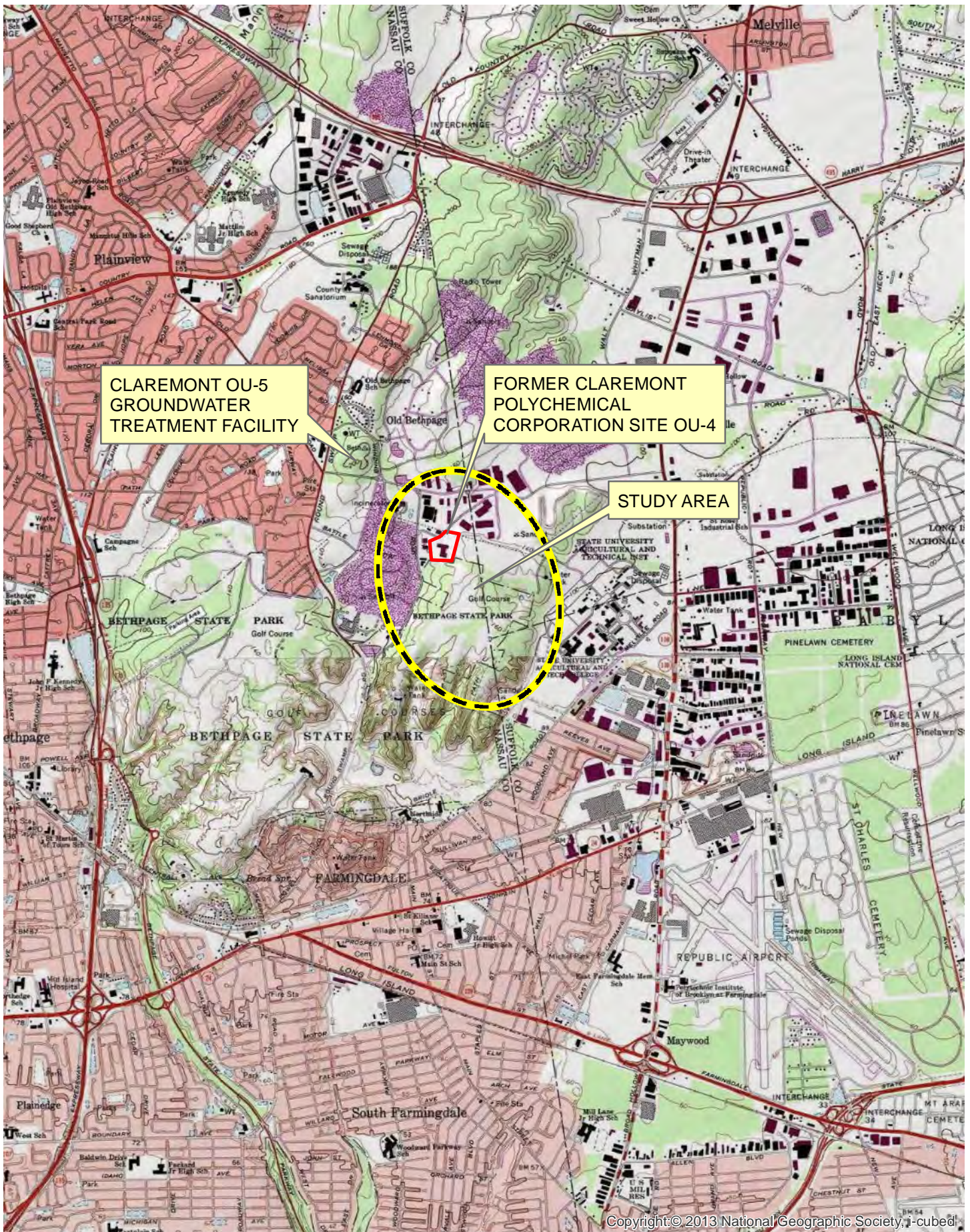
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US Environmental Protection Agency, Region 2. "Explanation of Significant Differences Claremont Polychemical Corporation Superfund Site, Town of Oyster Bay, Nassau County, New York." New York, NY, 2003.

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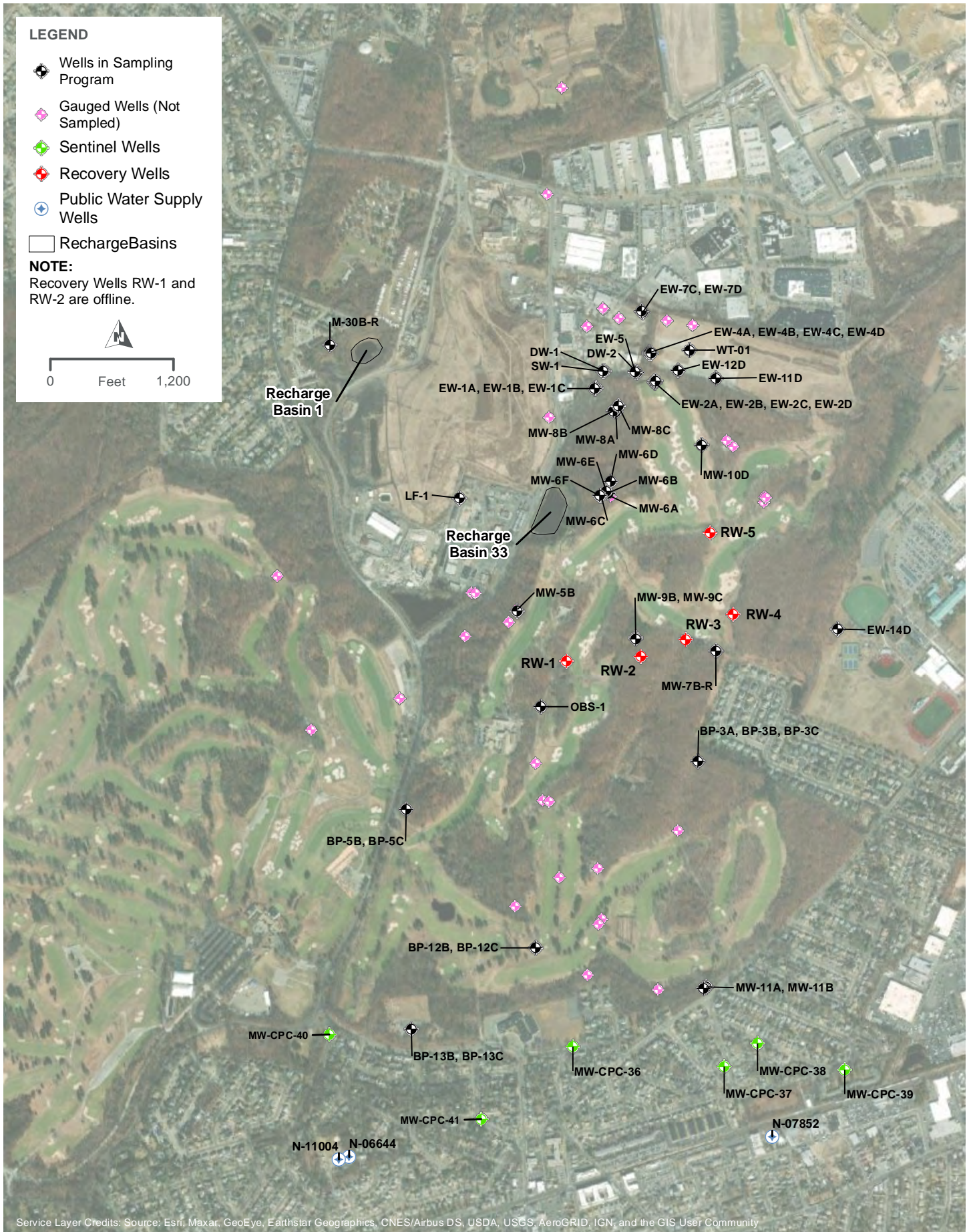
**SITE LOCATION**  
**CLAREMONT POLYCHEMICAL CORPORATION**

FIGURE 1

**LEGEND**

-  Wells in Sampling Program
-  Gauged Wells (Not Sampled)
-  Sentinel Wells
-  Recovery Wells
-  Public Water Supply Wells
-  Recharge Basins

**NOTE:**  
Recovery Wells RW-1 and RW-2 are offline.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community











Department of  
Environmental  
Conservation

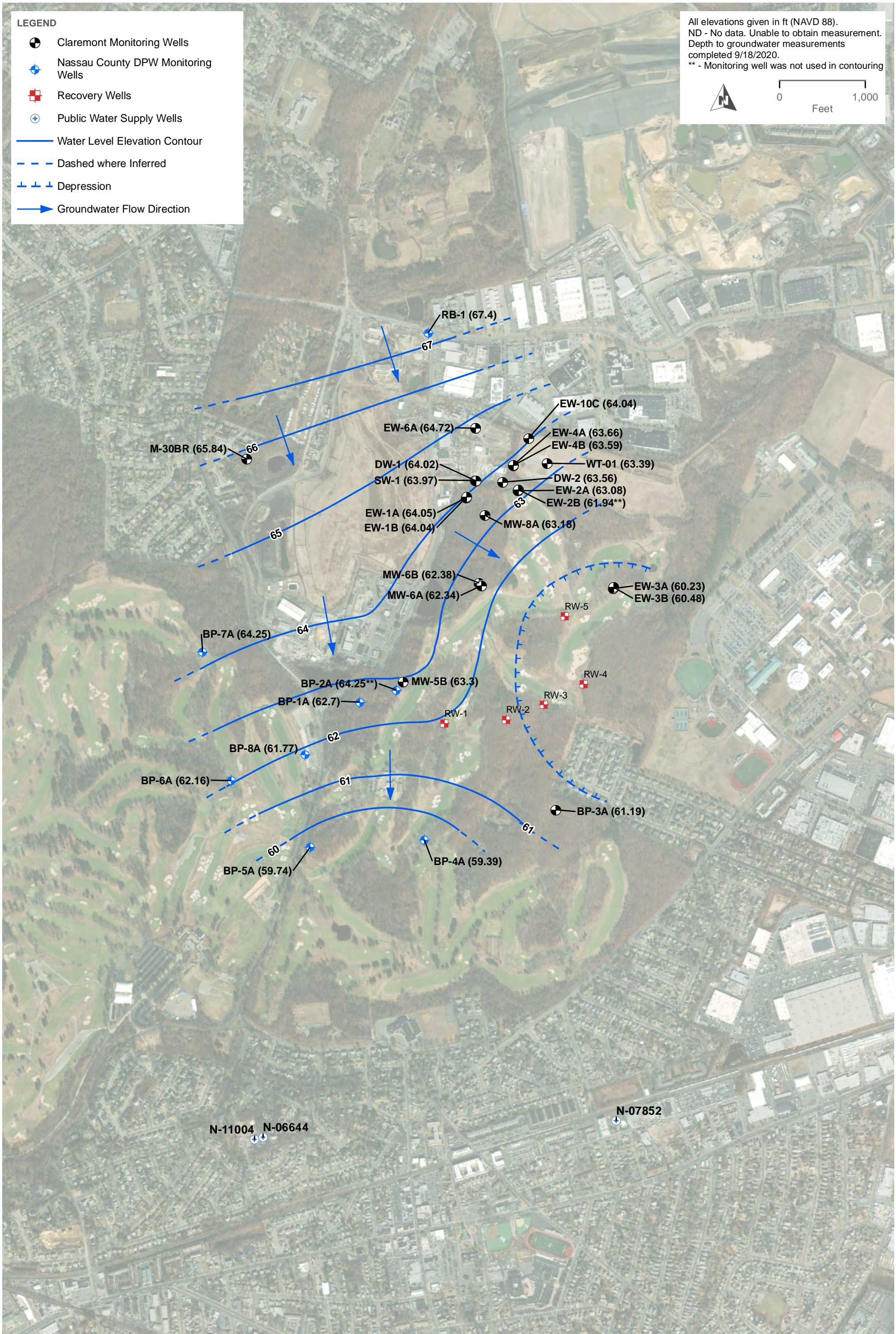
**WELLS SAMPLED  
CLAREMONT POLYCHEMICAL CORPORATION**

FIGURE 2

**LEGEND**

-  Claremont Monitoring Wells
-  Nassau County DPW Monitoring Wells
-  Recovery Wells
-  Public Water Supply Wells
-  Water Level Elevation Contour
-  Dashed where Inferred
-  Depression
-  Groundwater Flow Direction

All elevations given in ft (NAVD 88).  
 ND - No data. Unable to obtain measurement.  
 Depth to groundwater measurements completed 9/18/2020.  
 \*\* - Monitoring well was not used in contouring



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

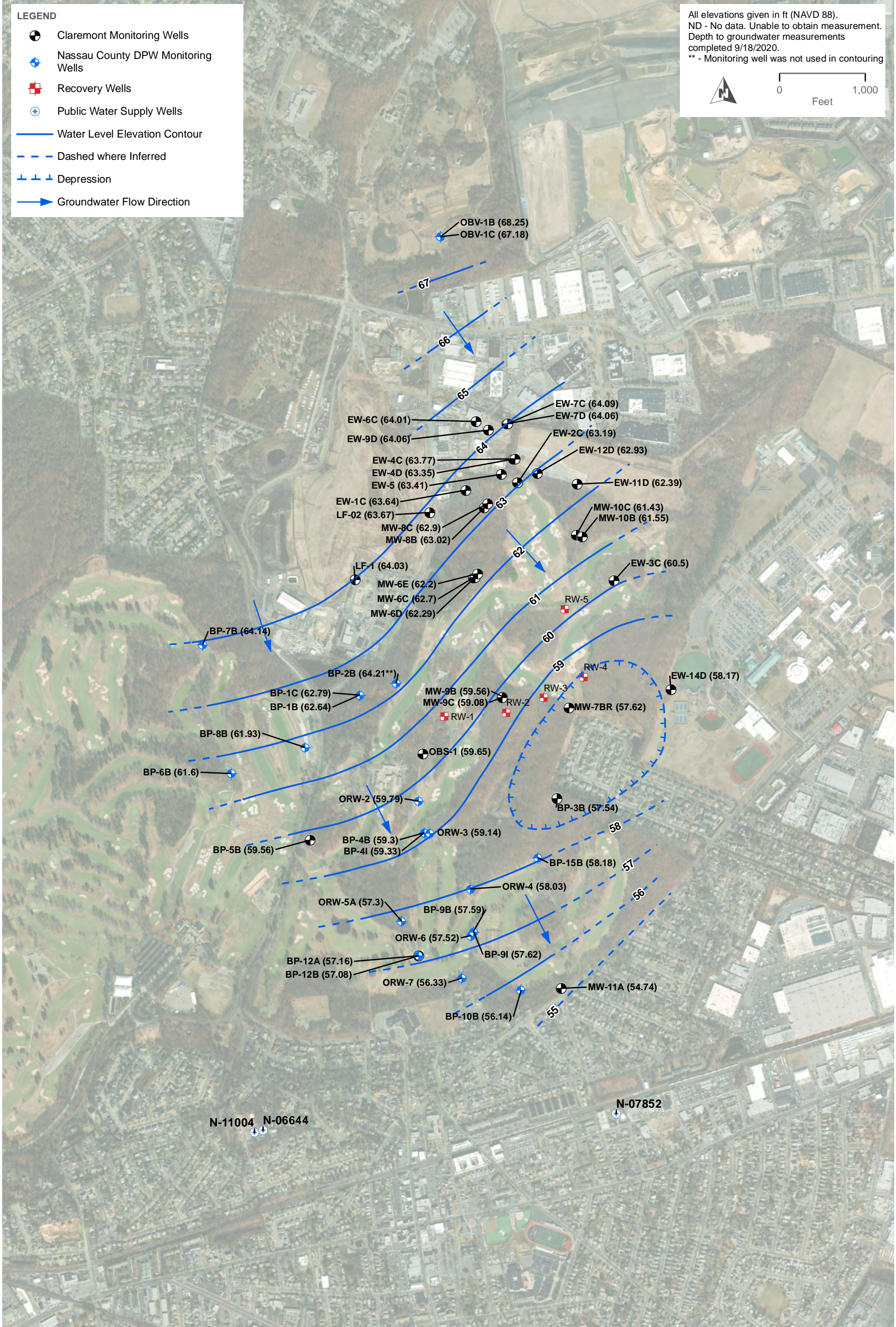
**SEPTEMBER 2020 POTENTIOMETRIC SURFACE - UPPER MAGOTHY  
 +78 TO +20 FT (NAVD88)  
 CLAREMONT POLYCHEMICAL CORPORATION  
 FIGURE 3**



**LEGEND**

- Claremont Monitoring Wells
- Nassau County DPW Monitoring Wells
- Recovery Wells
- Public Water Supply Wells
- Water Level Elevation Contour
- Dashed where Inferred
- Depression
- Groundwater Flow Direction

All elevations given in ft (NAVD 88).  
 ND - No data. Unable to obtain measurement.  
 Depth to groundwater measurements completed 9/18/2020.  
 \*\* - Monitoring well was not used in contouring










Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

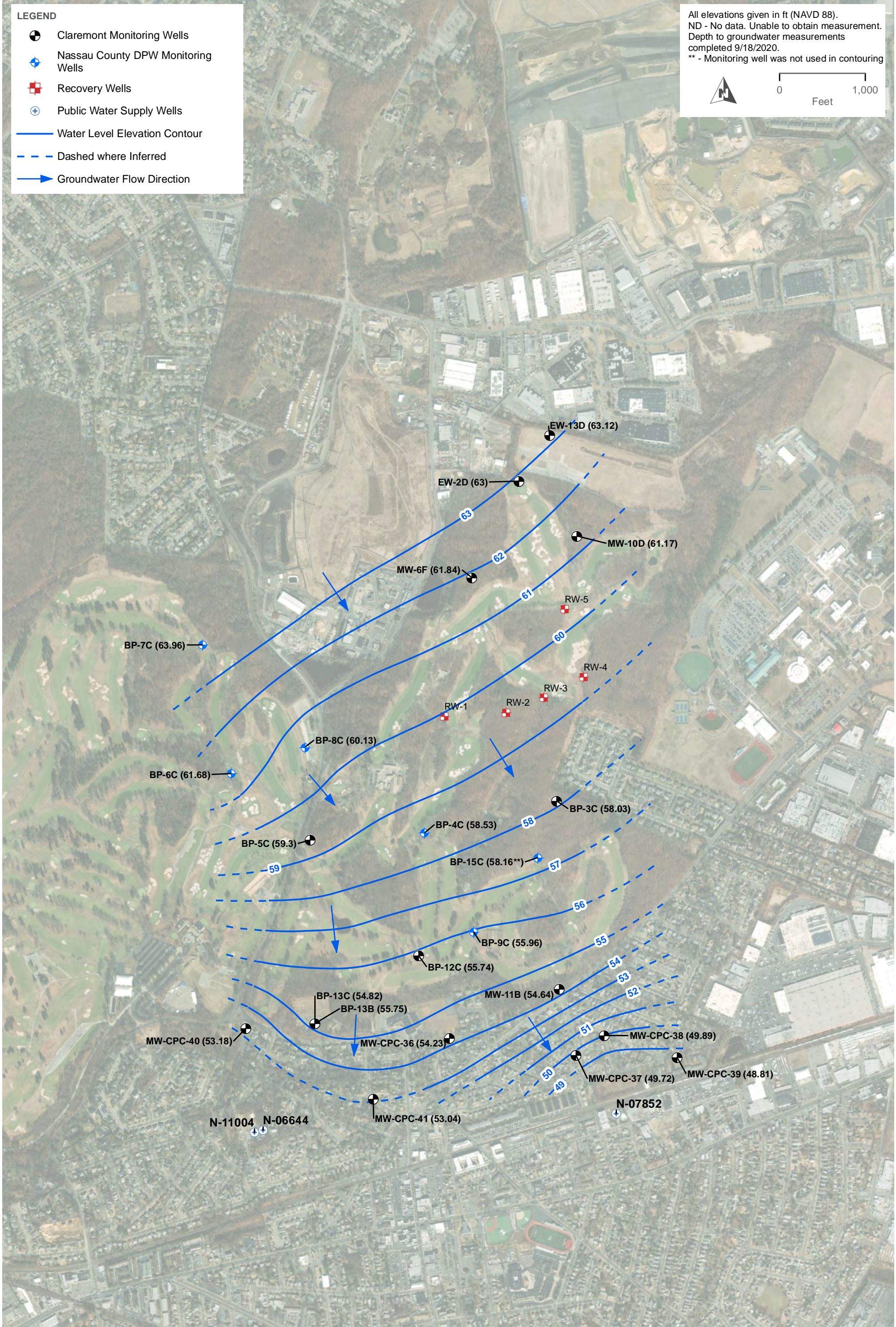
**SEPTEMBER 2020 POTENTIOMETRIC SURFACE - MIDDLE MAGOTHY  
 +20 TO -131 FT (NAVD88)  
 CLAREMONT POLYCHEMICAL CORPORATION  
 FIGURE 4**



**LEGEND**

-  Claremont Monitoring Wells
-  Nassau County DPW Monitoring Wells
-  Recovery Wells
-  Public Water Supply Wells
-  Water Level Elevation Contour
-  Dashed where Inferred
-  Groundwater Flow Direction

All elevations given in ft (NAVD 88).  
 ND - No data. Unable to obtain measurement.  
 Depth to groundwater measurements completed 9/18/2020.  
 \*\* - Monitoring well was not used in contouring

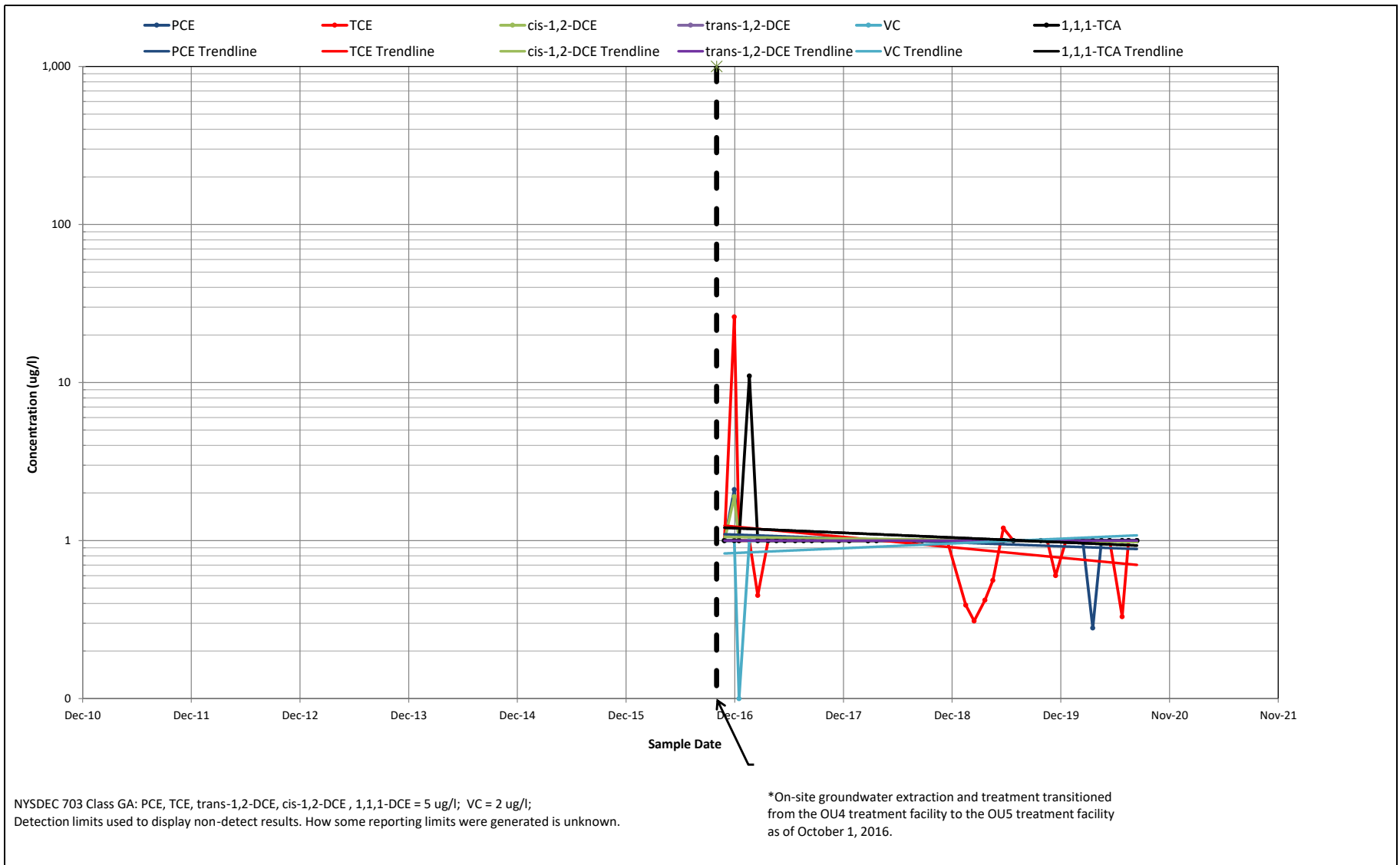


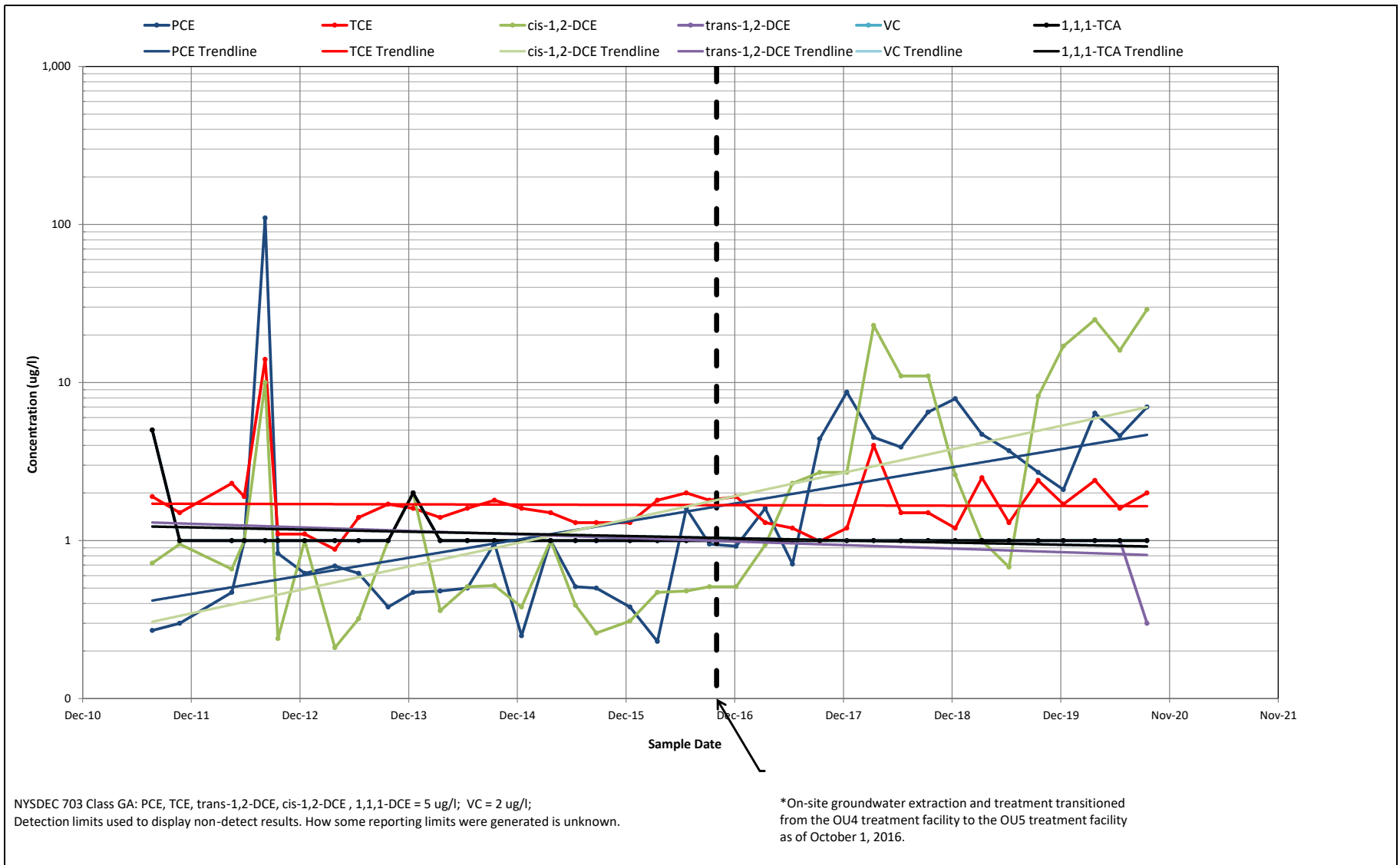
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**SEPTEMBER 2020 POTENTIOMETRIC SURFACE - LOWER MAGOTHY  
 DEEPER THAN -131 (NAVD88)  
 CLAREMONT POLYCHEMICAL CORPORATION  
 FIGURE 5**





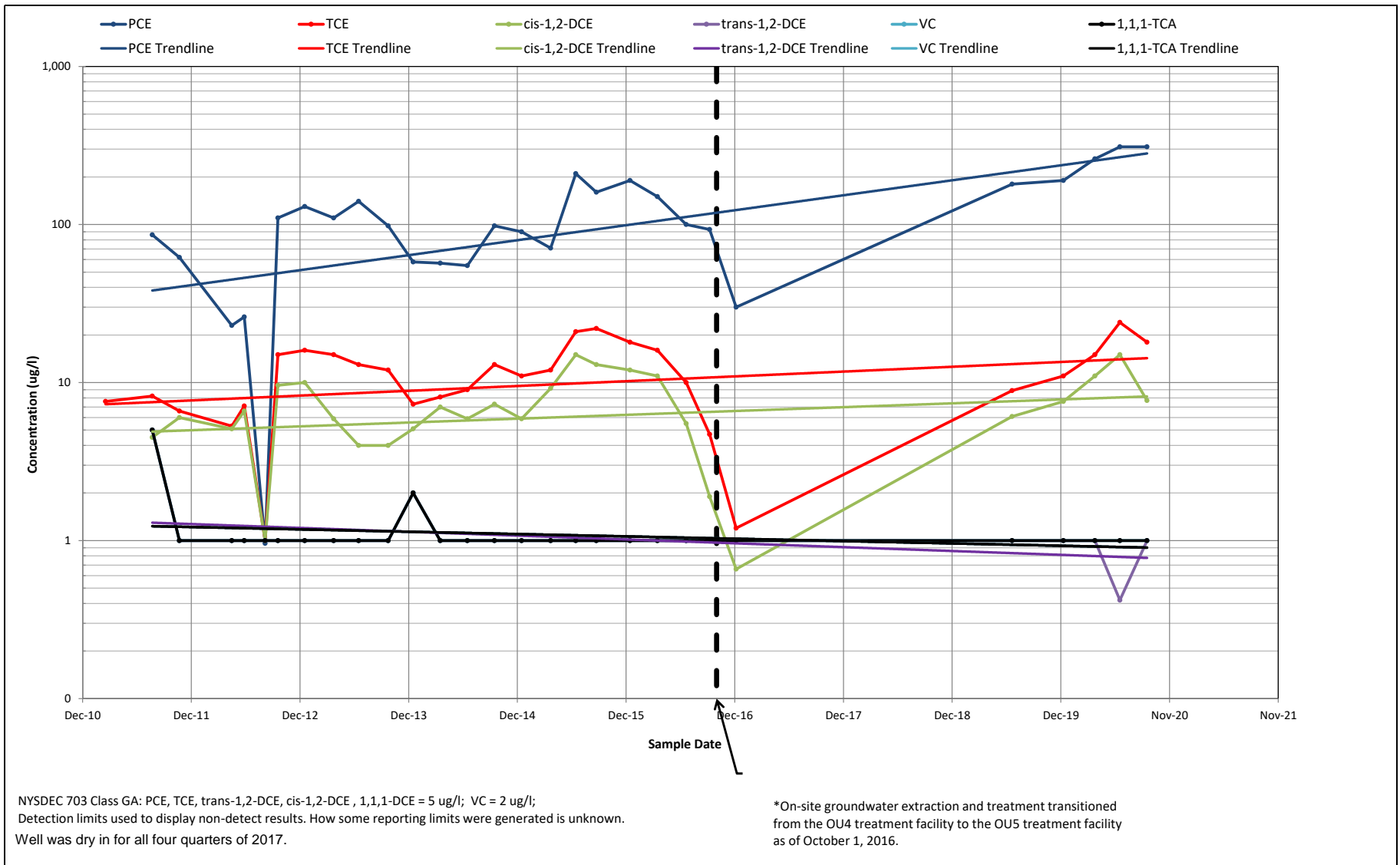


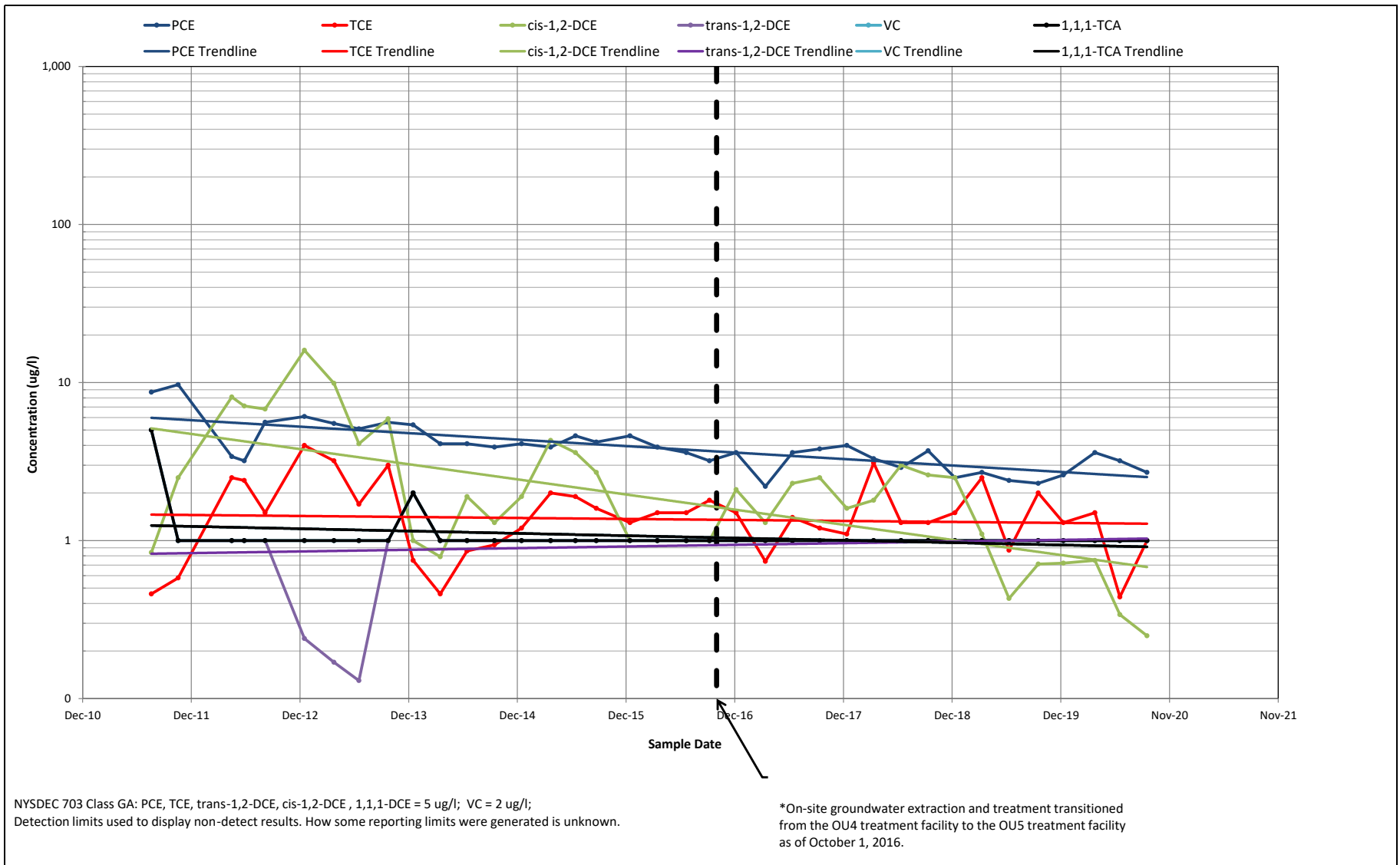


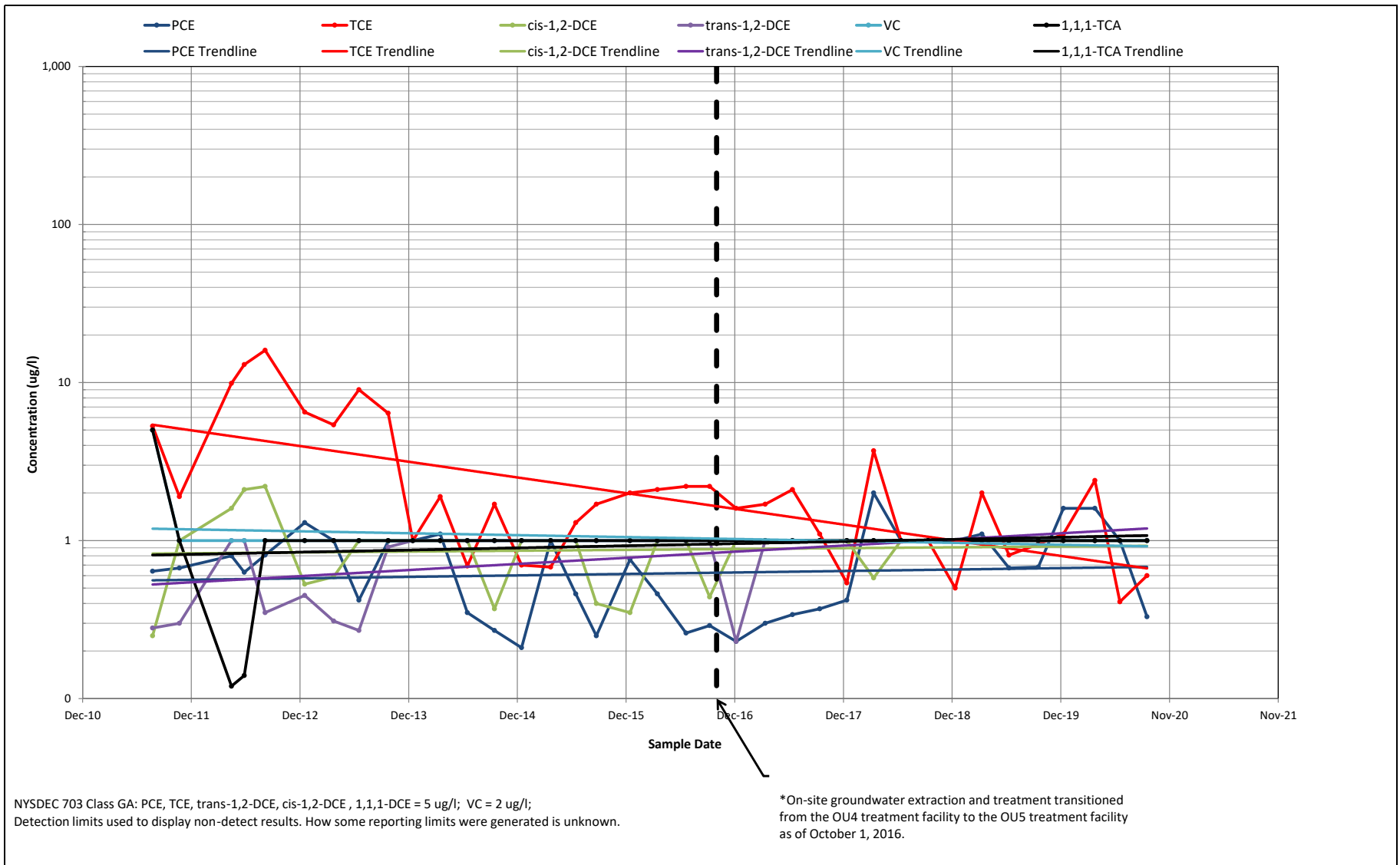
**CHLORINATED VOC CONCENTRATIONS**  
**WELL DW-1**  
**CLAREMONT POLYCHEMICAL CORPORATION OPERABLE UNIT 5**  
**NYSDEC SITE #130015**

**DATE**  
 SEPTEMBER 2020

**FIGURE**



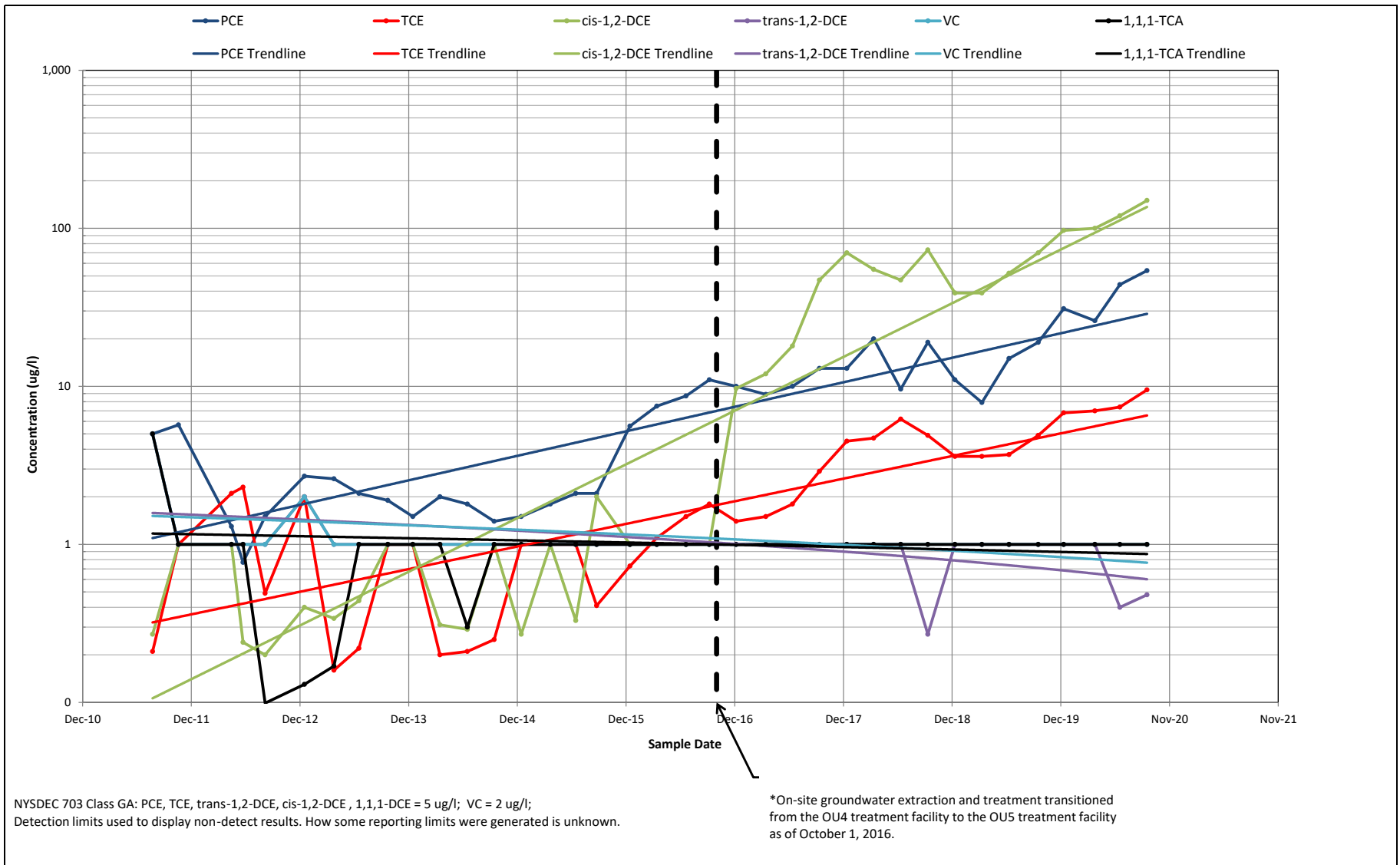


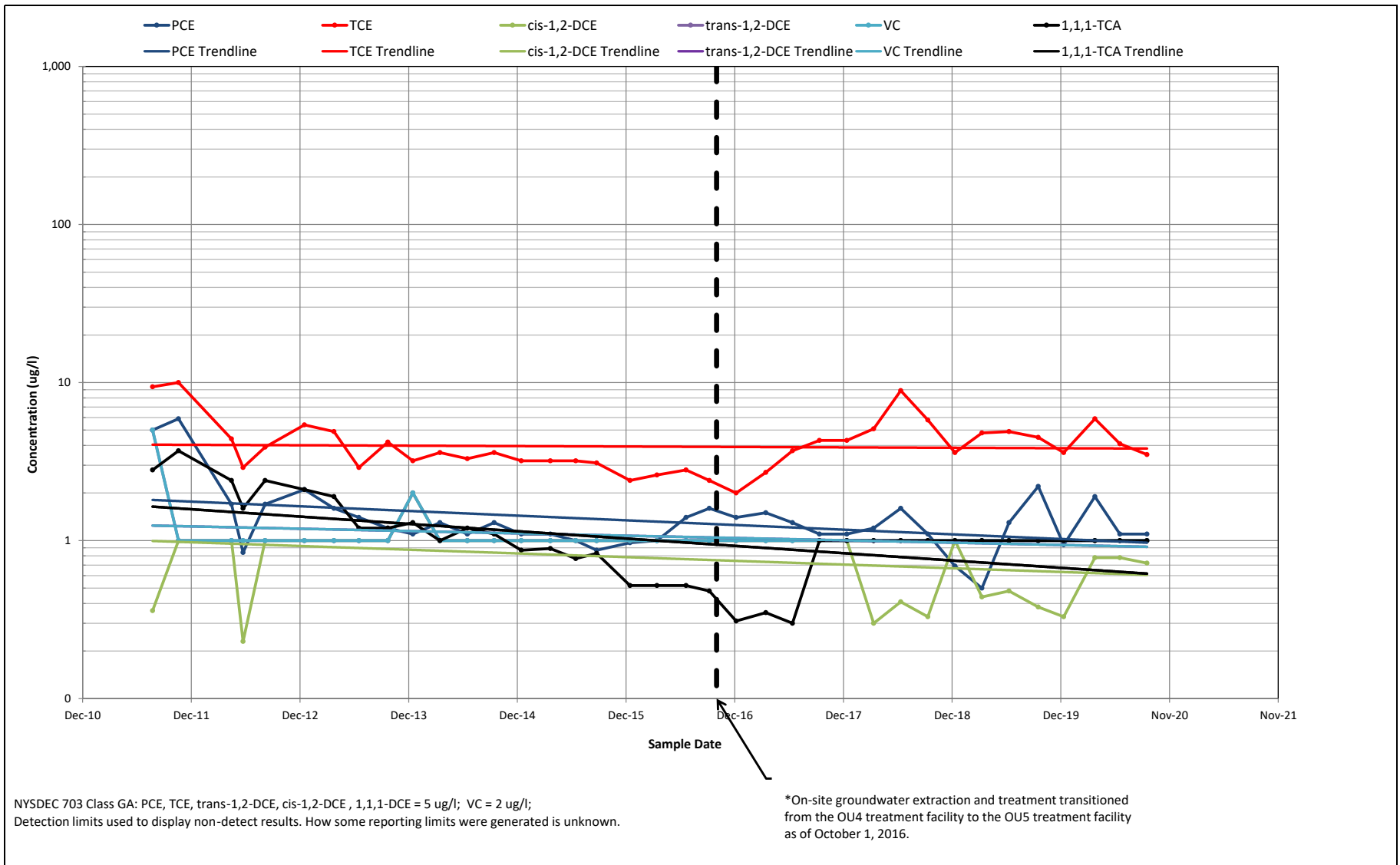


CHLORINATED VOC CONCENTRATIONS  
 WELL EW-5  
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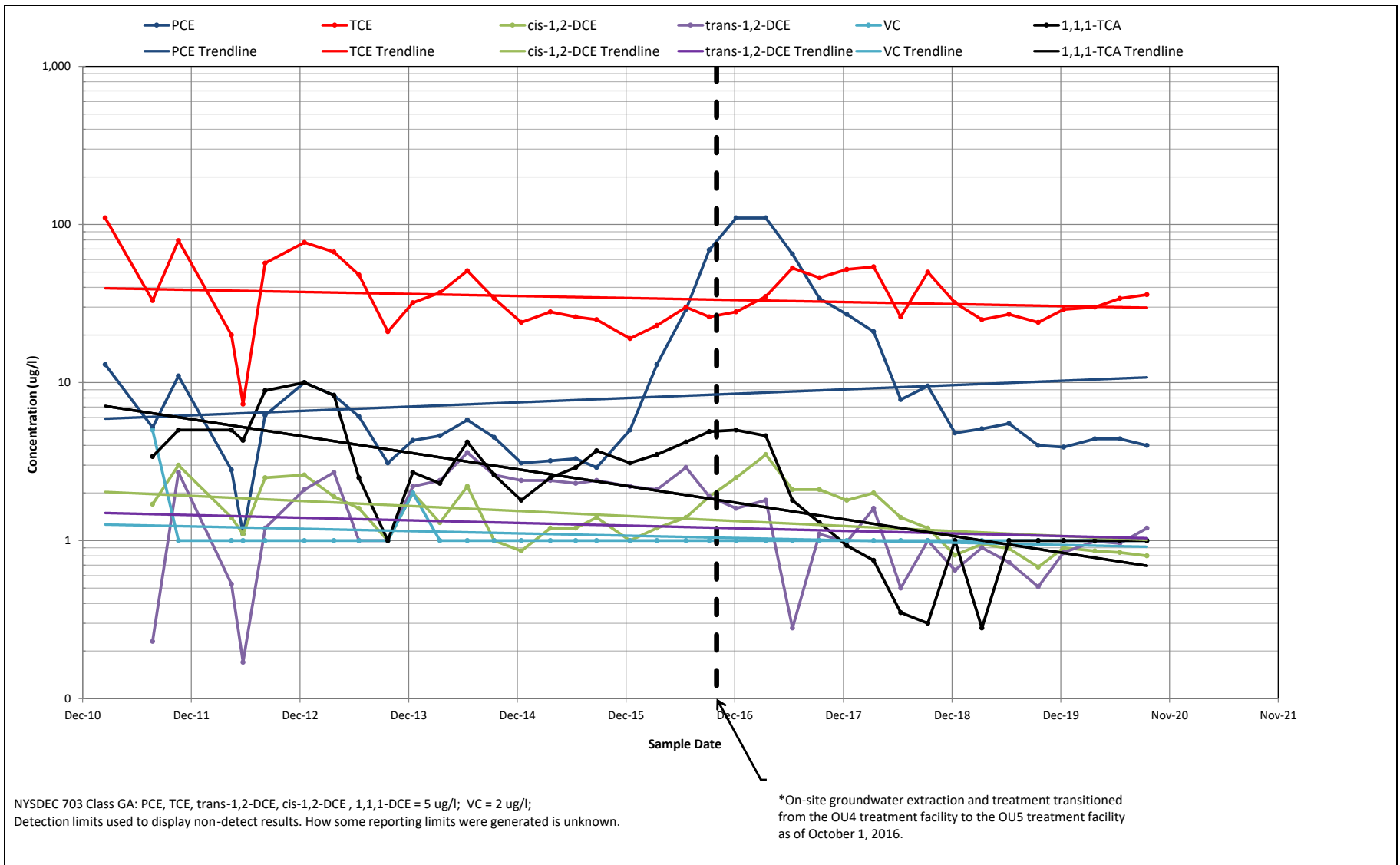
FIGURE



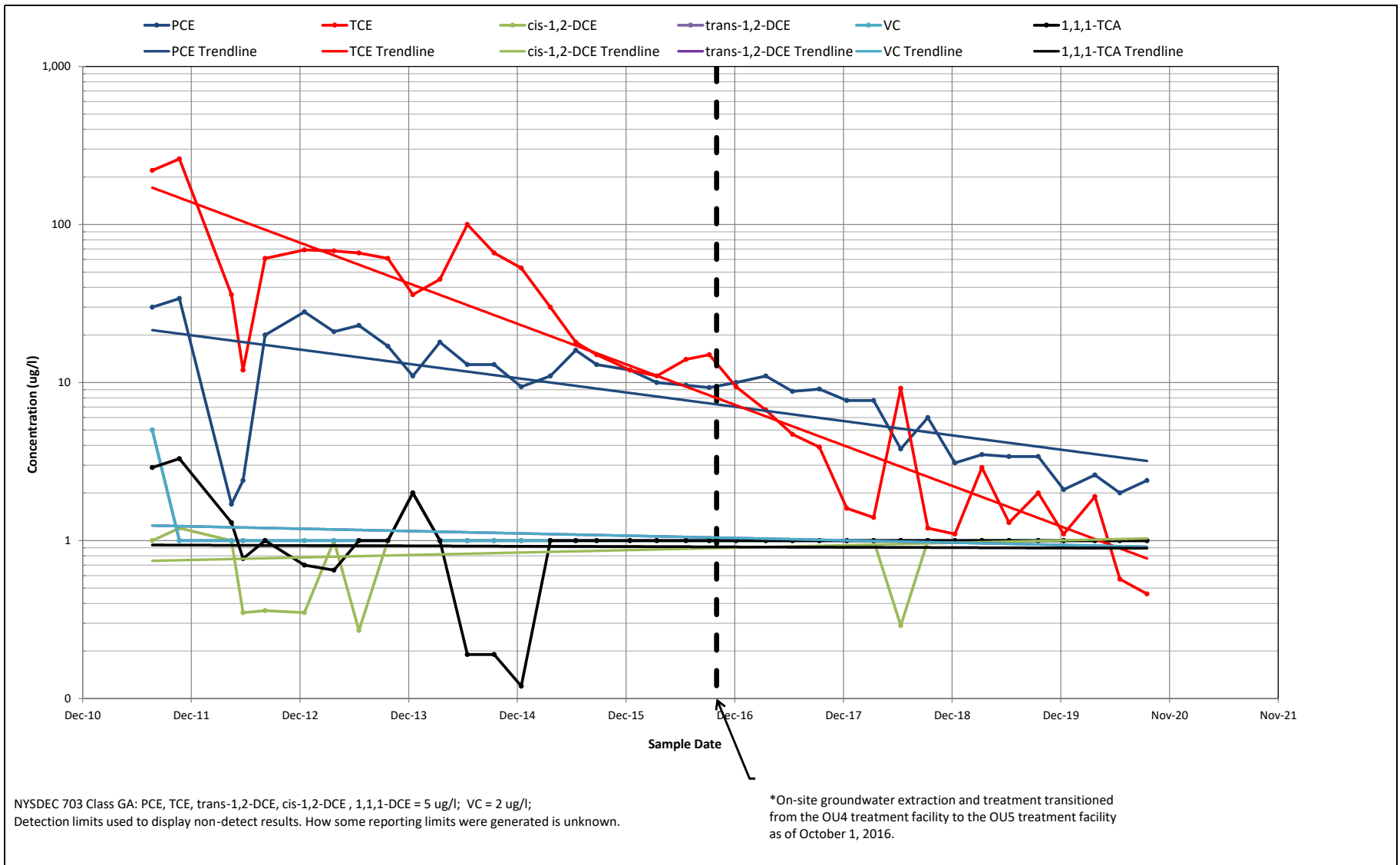


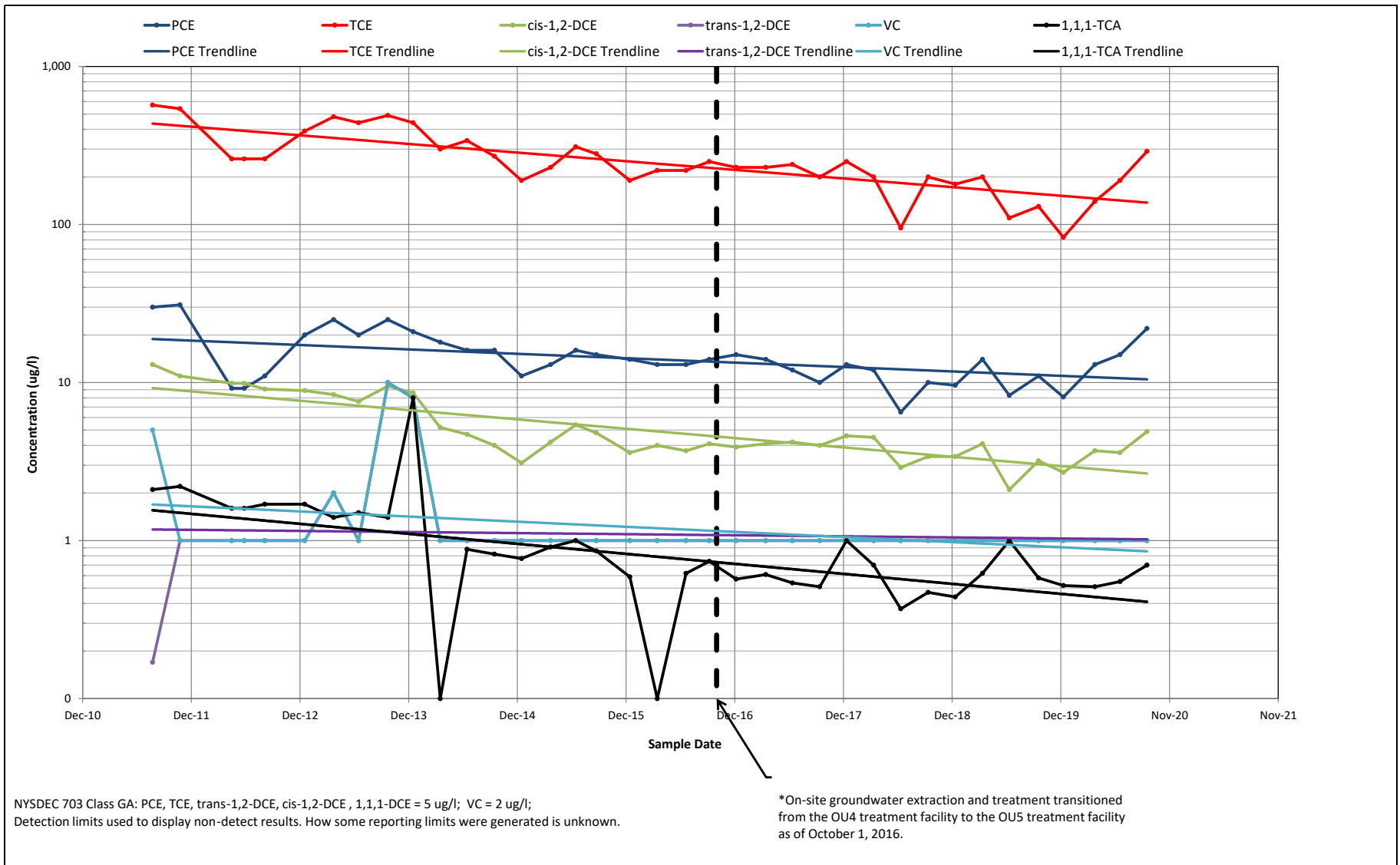
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**WELL EW-4B**  
**CLAREMONT POLYCHEMICAL CORPORATION OPERABLE UNIT 5**  
**NYSDEC SITE #130015**

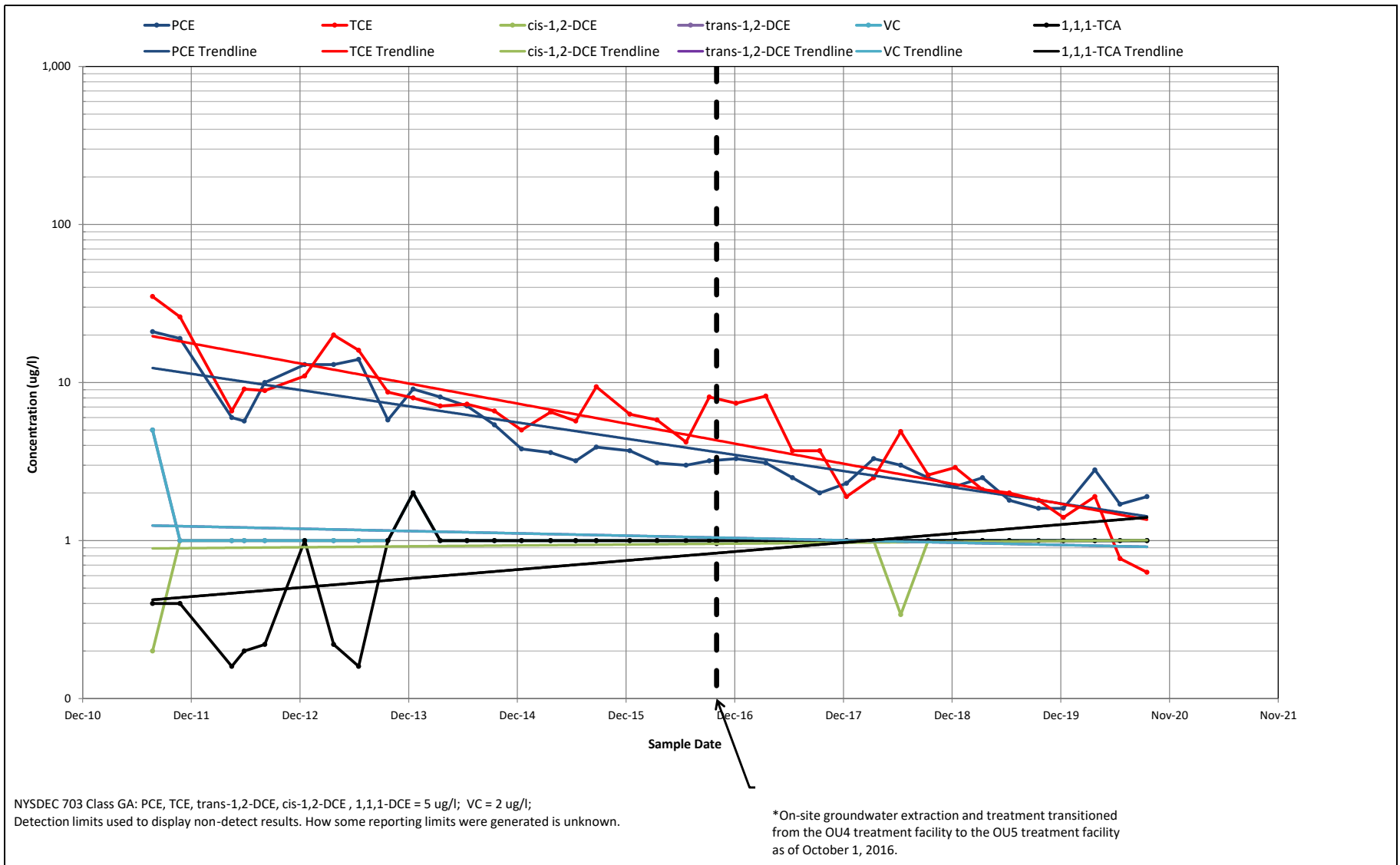
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**FIGURE**  
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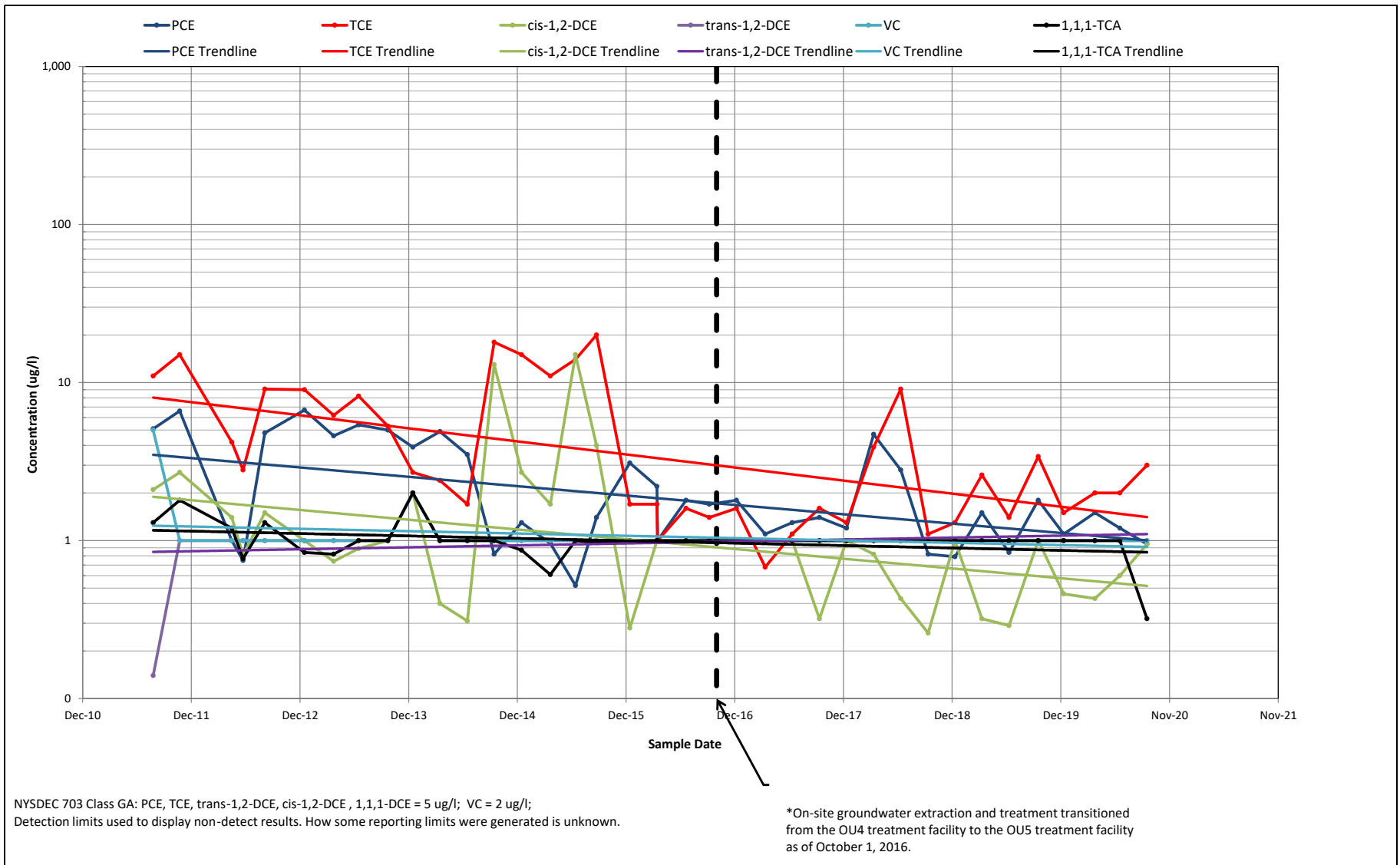


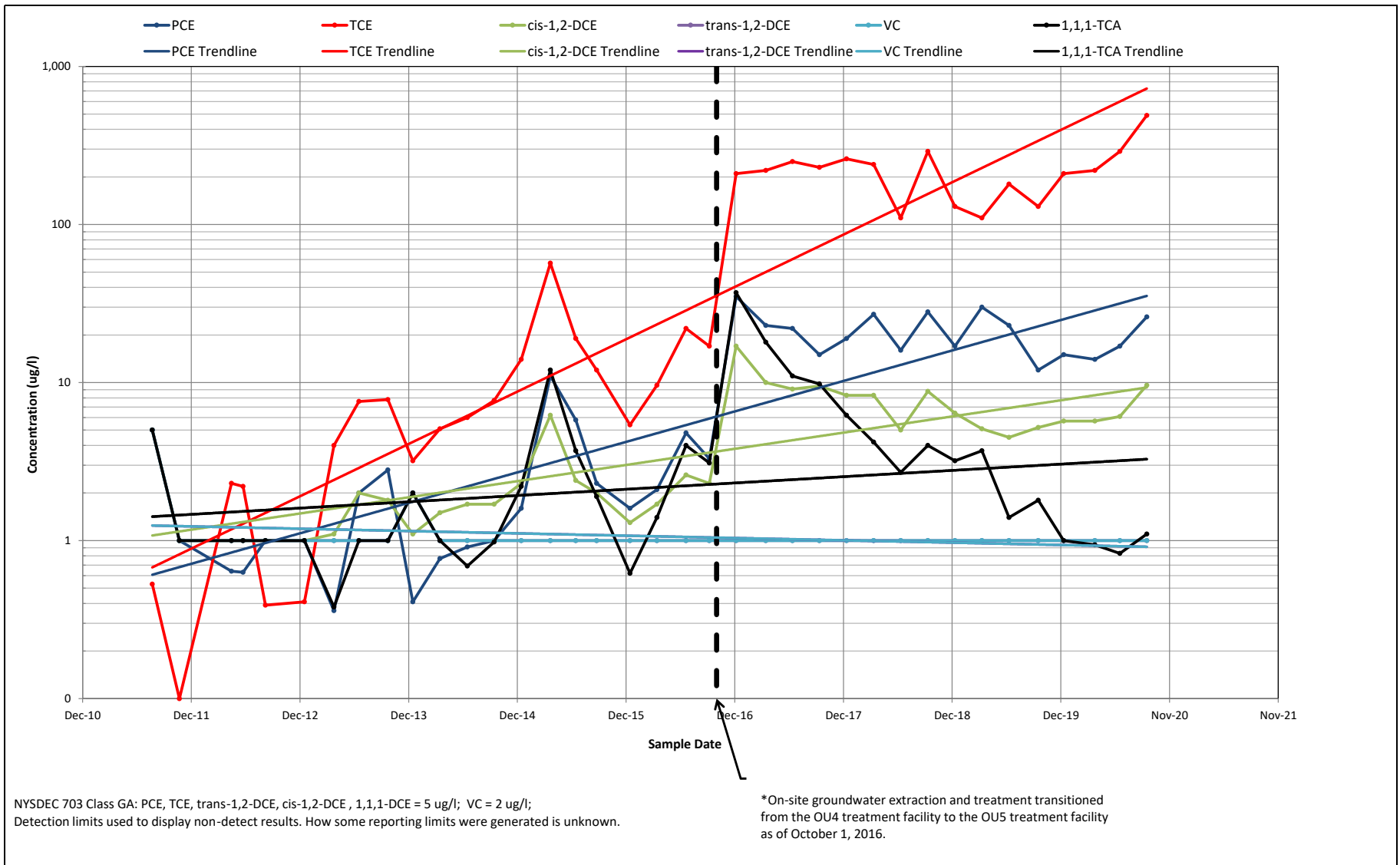


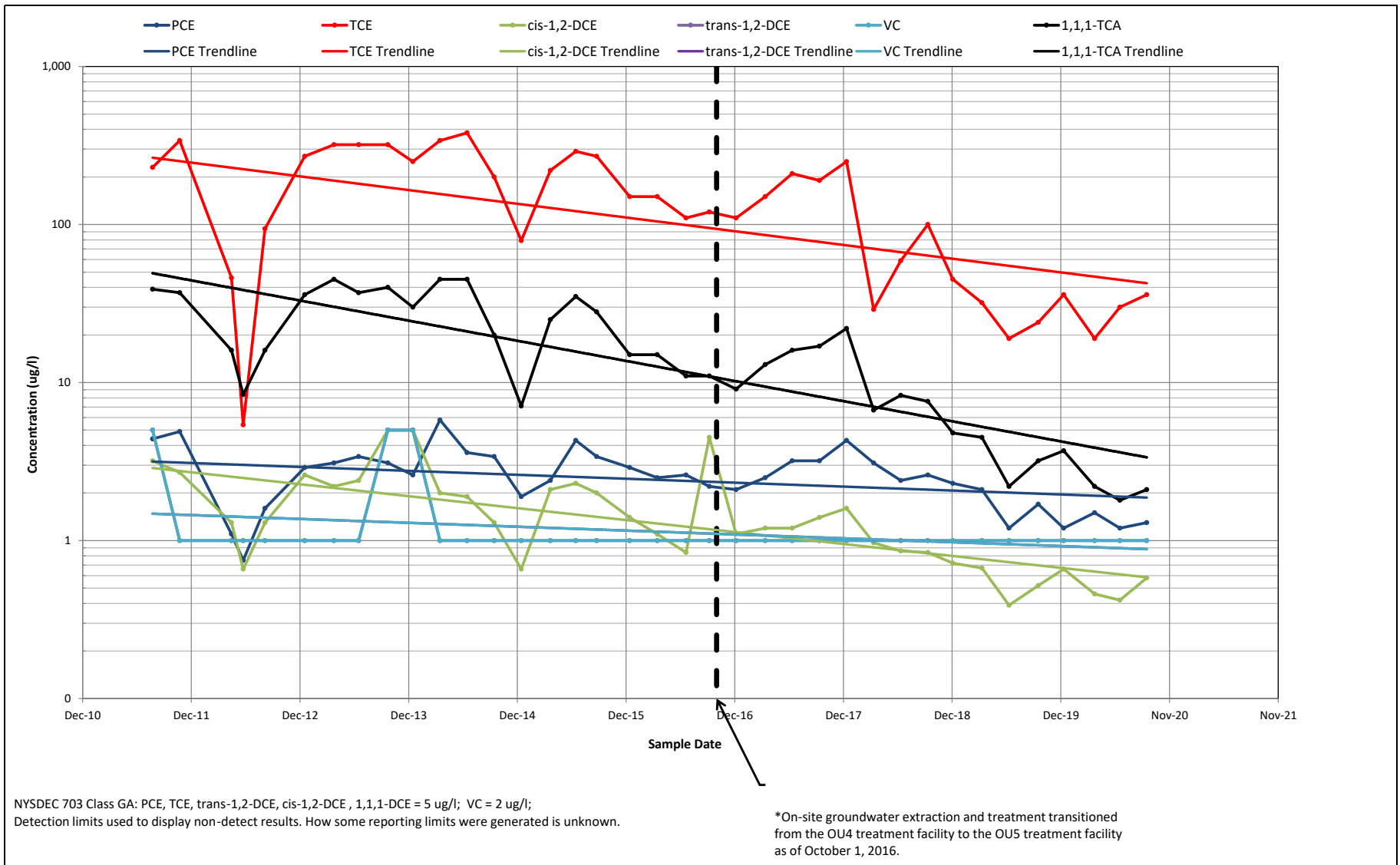








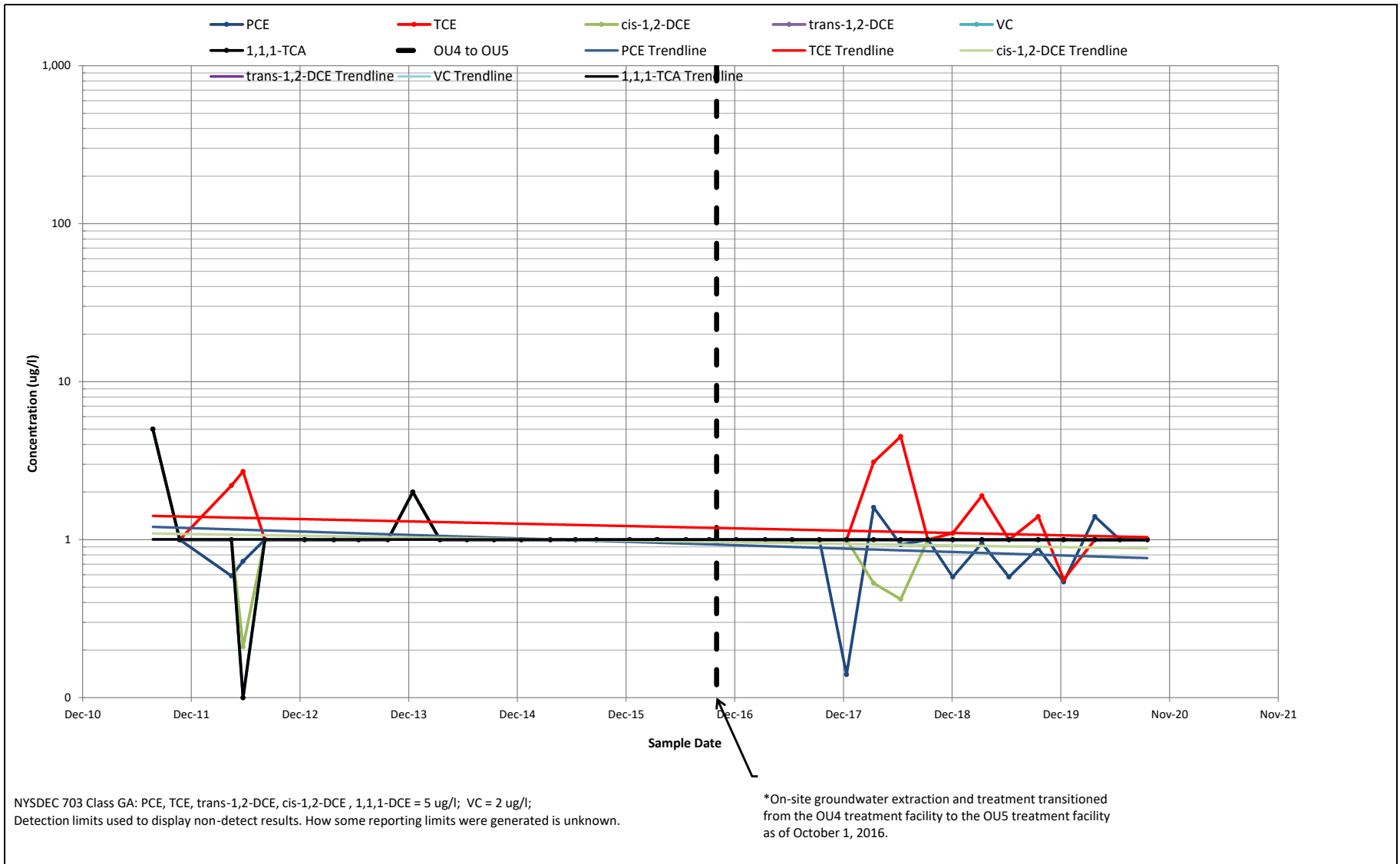


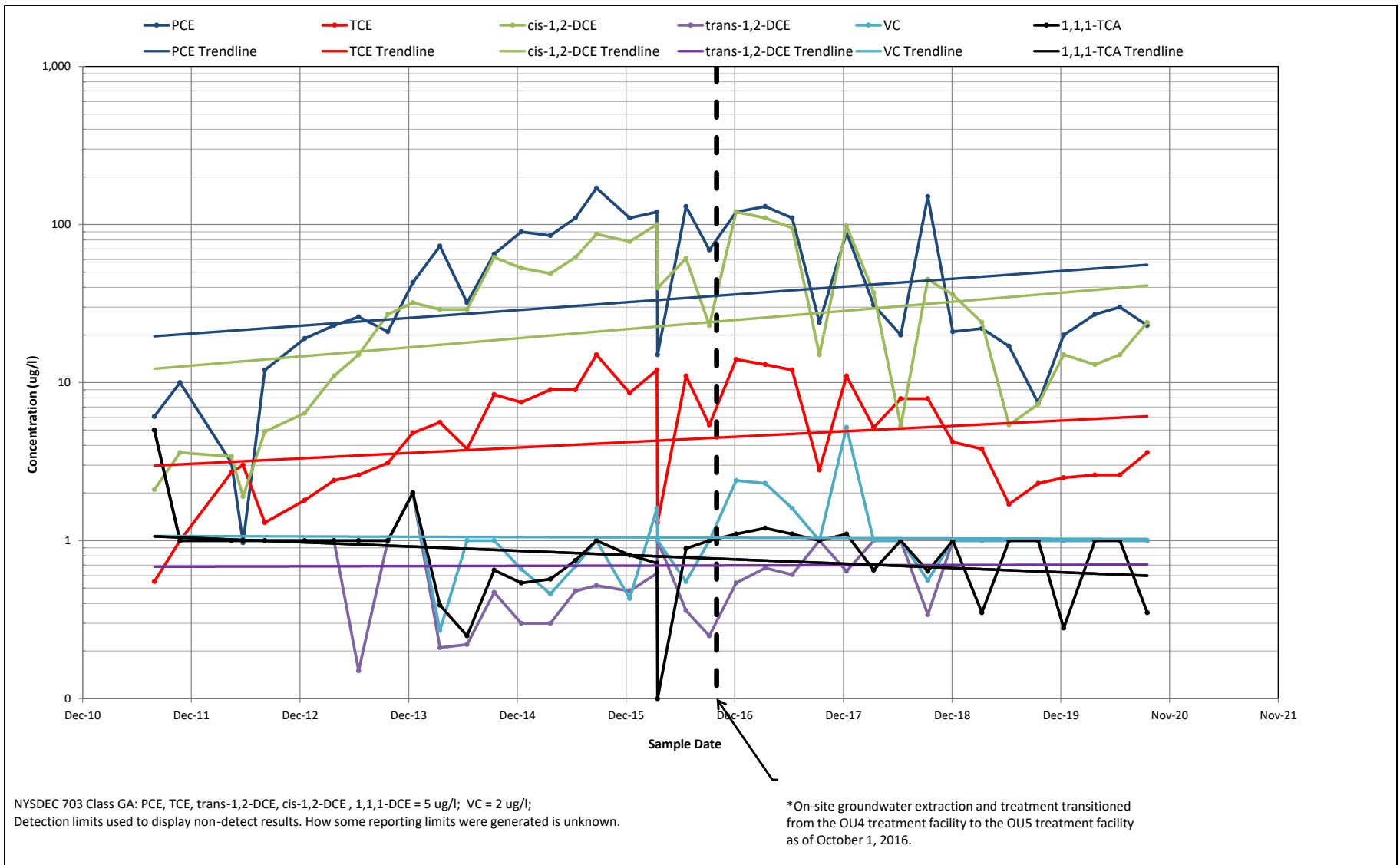


**CHLORINATED VOC CONCENTRATIONS**  
**WELL EW-14D**  
**CLAREMONT POLYCHEMICAL CORPORATION OPERABLE UNIT 5**  
**NYSDEC SITE #130015**

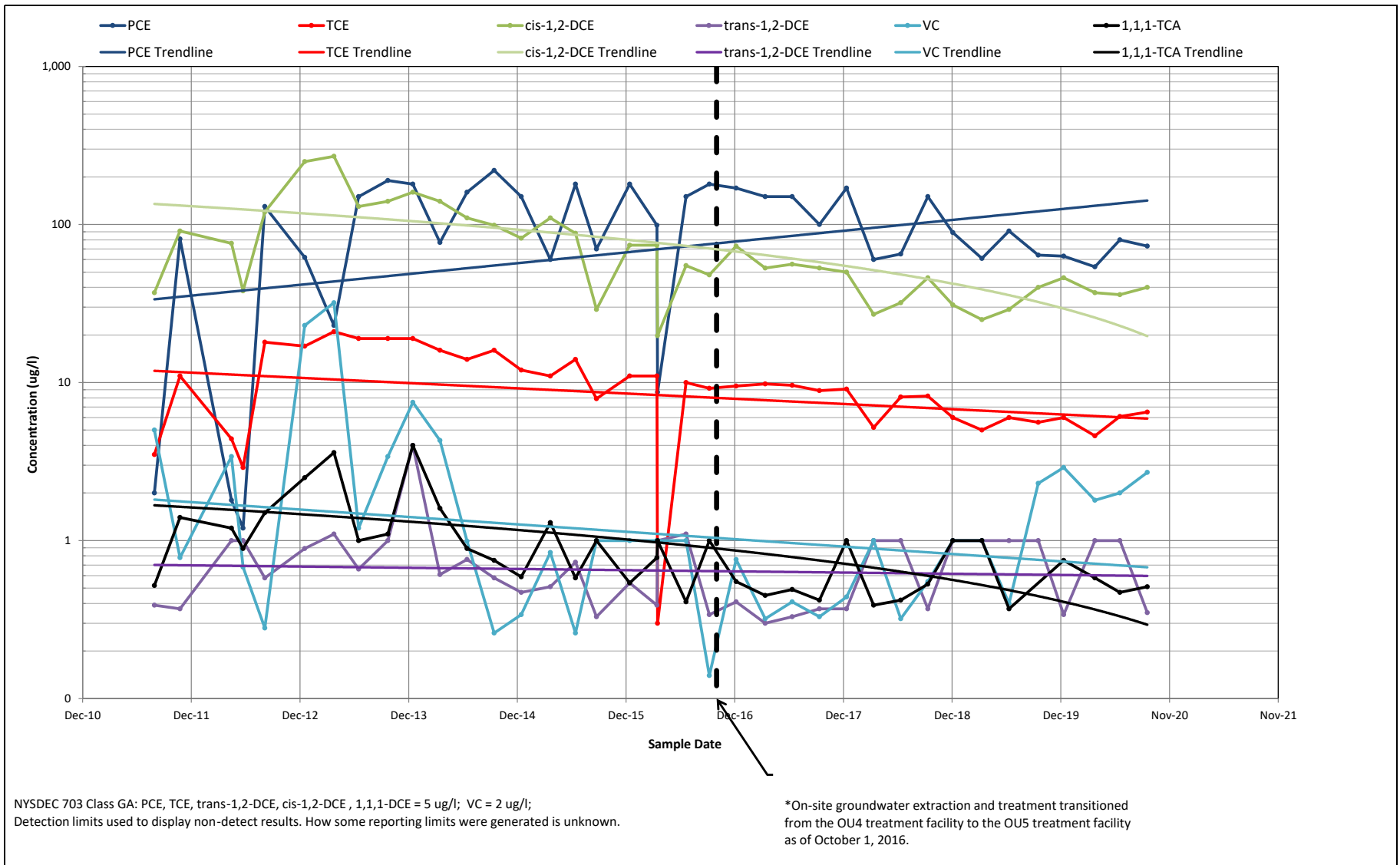
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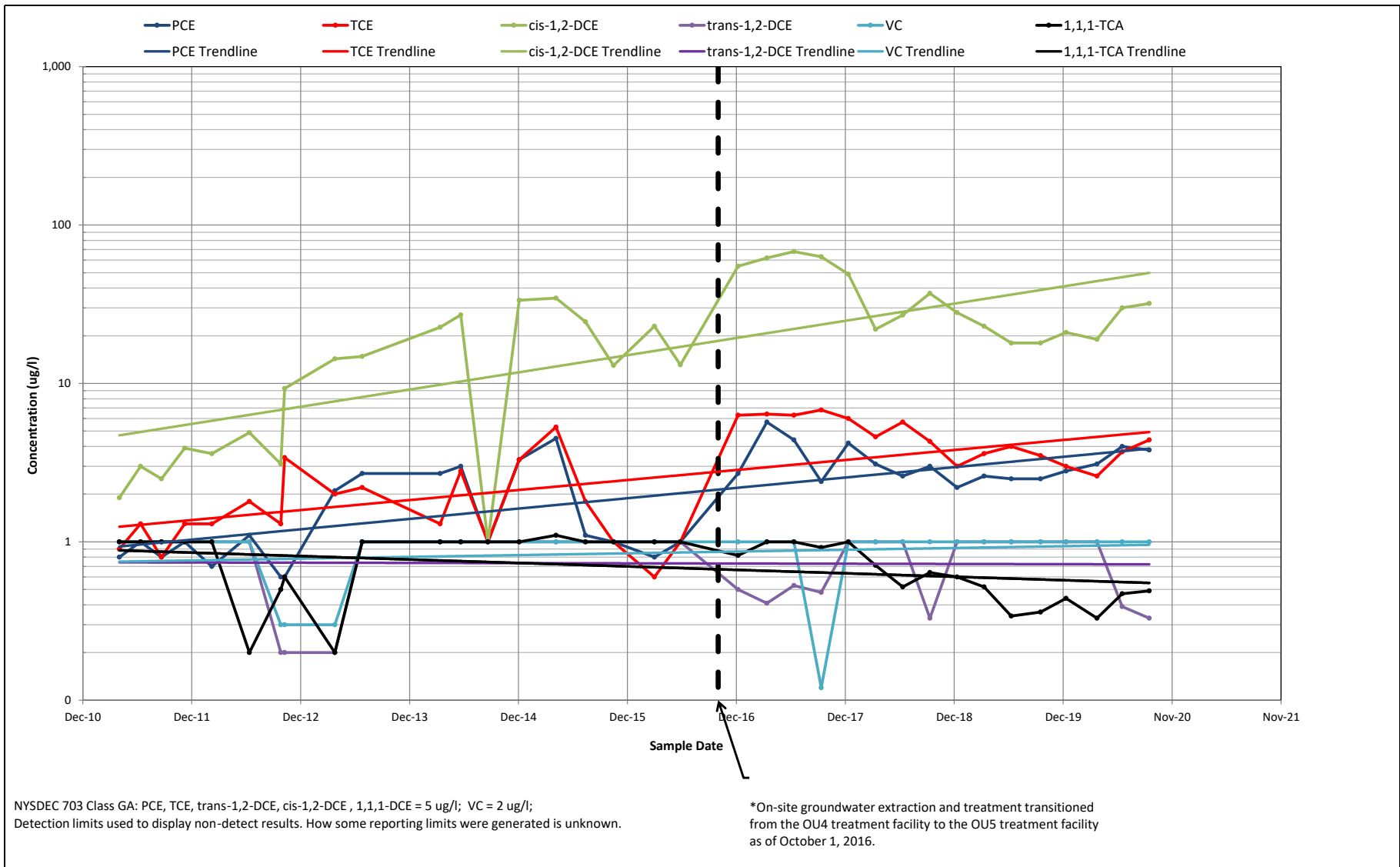
**FIGURE**

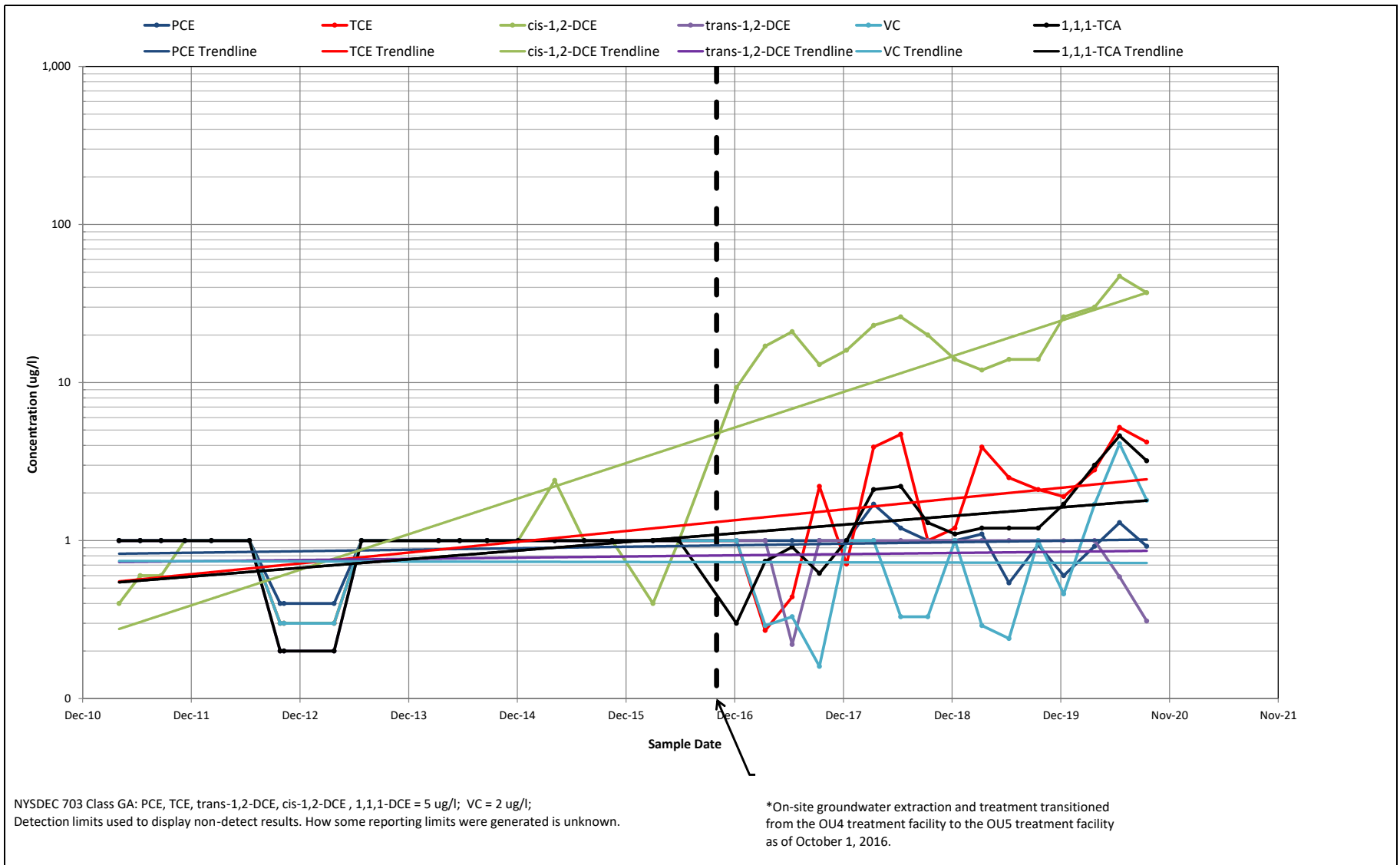








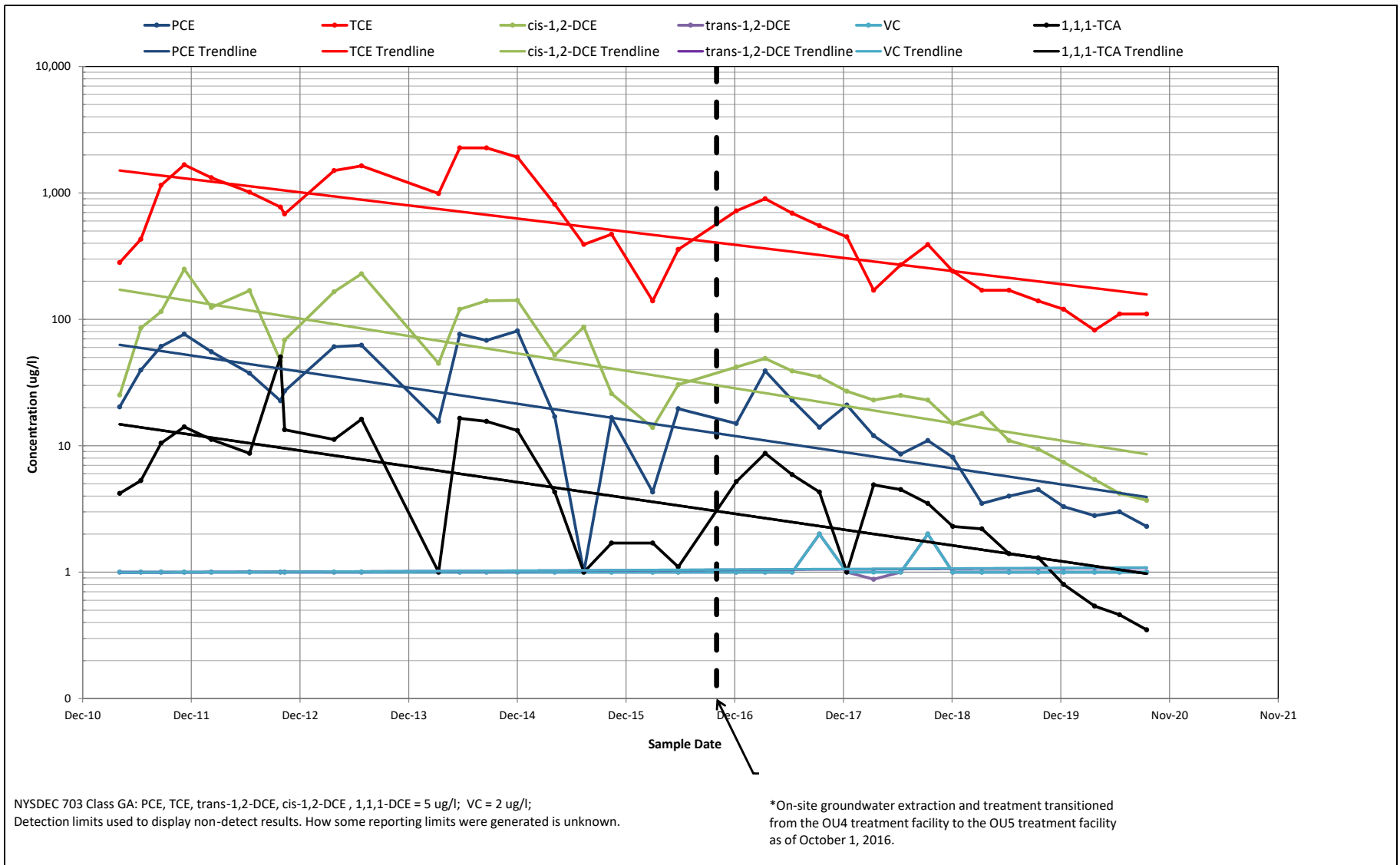




**CHLORINATED VOC CONCENTRATIONS**  
**WELL MW-11B**  
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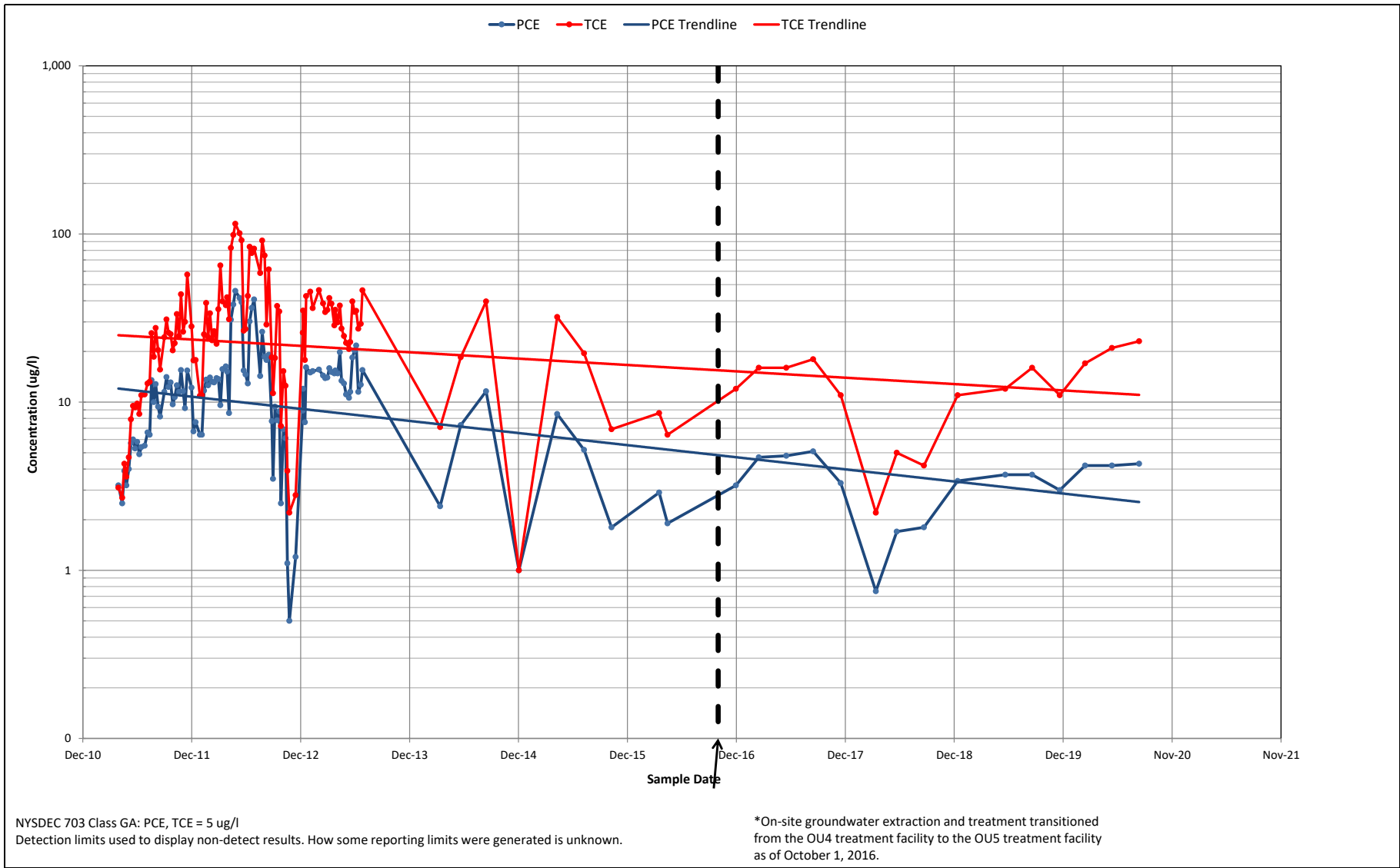
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**FIGURE**



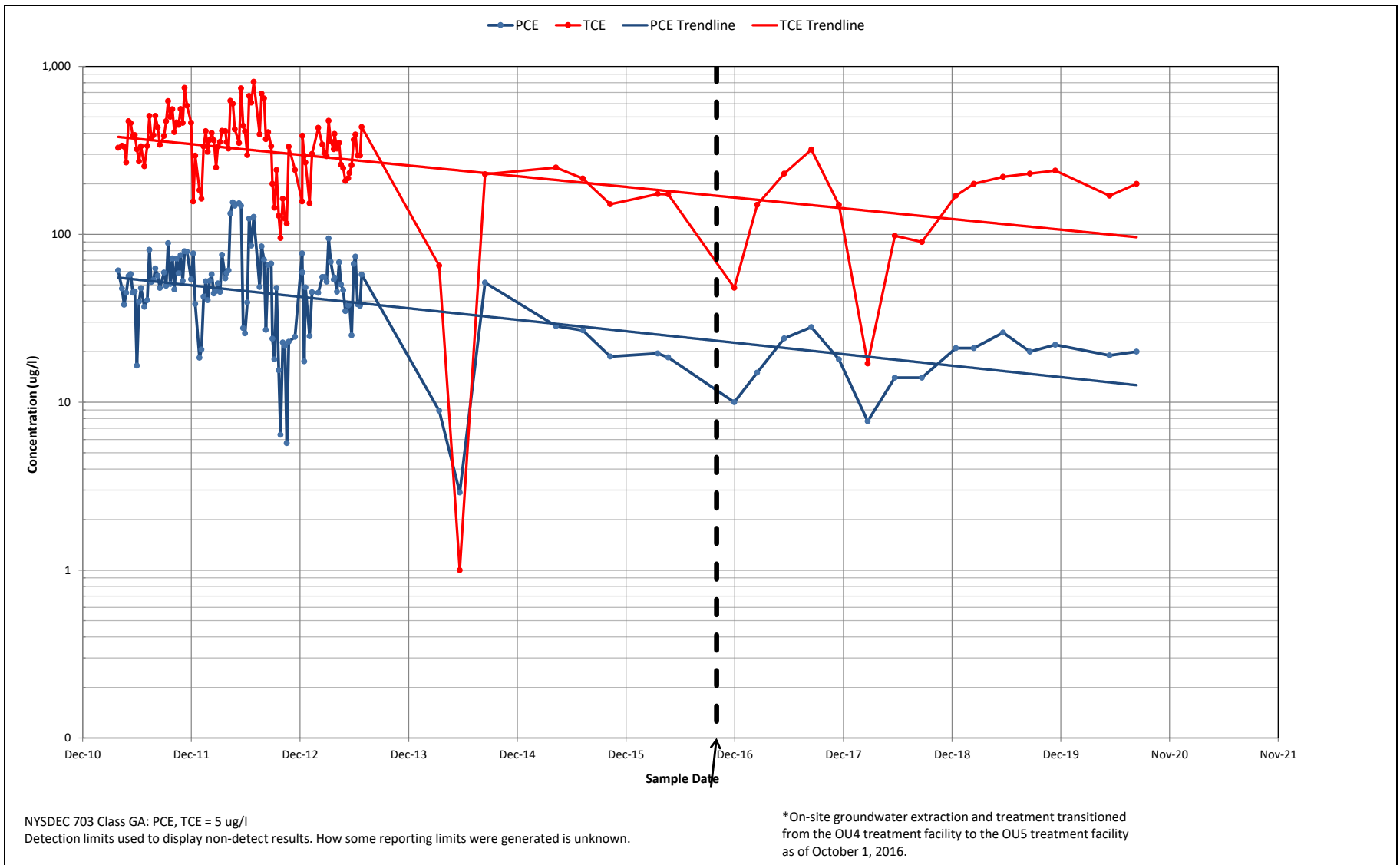
**CHLORINATED VOC CONCENTRATIONS**  
**WELL MW-7B-R**  
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**DATE**  
 SEPTEMBER 2020  
**FIGURE**  
 25



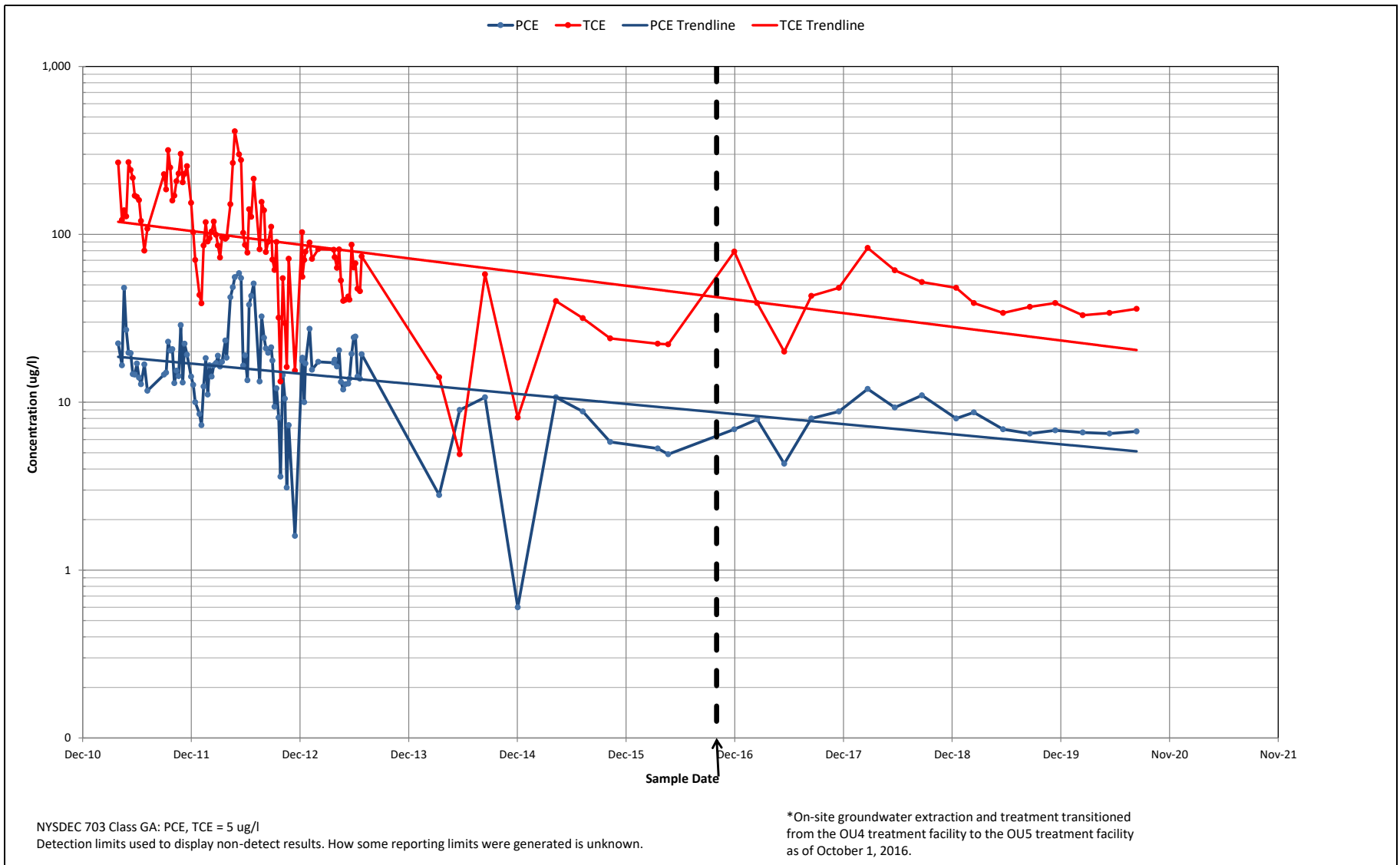
**PCE AND TCE CONCENTRATIONS**  
**WELL RW-3**  
**CLAREMONT POLYCHEMICAL CORPORATION OPERABLE UNIT 5**  
**NYSDEC SITE #130015**

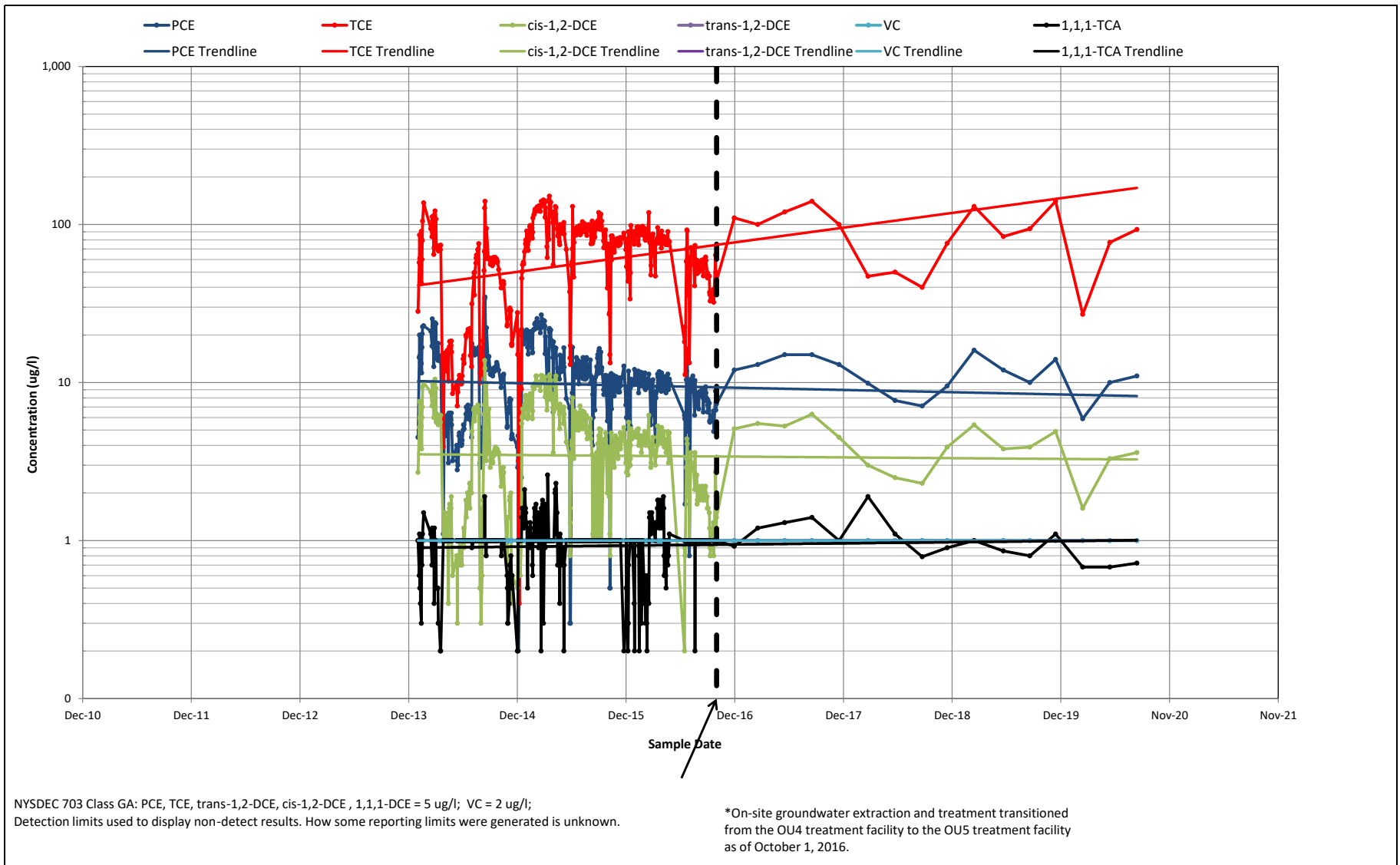
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**FIGURE**  
 26



**PCE AND TCE CONCENTRATIONS**  
**WELL RW-4**  
**CLAREMONT POLYCHEMICAL CORPORATION OPERABLE UNIT 5**  
**NYSDEC SITE #130015**

**DATE**  
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**FIGURE**  
 27



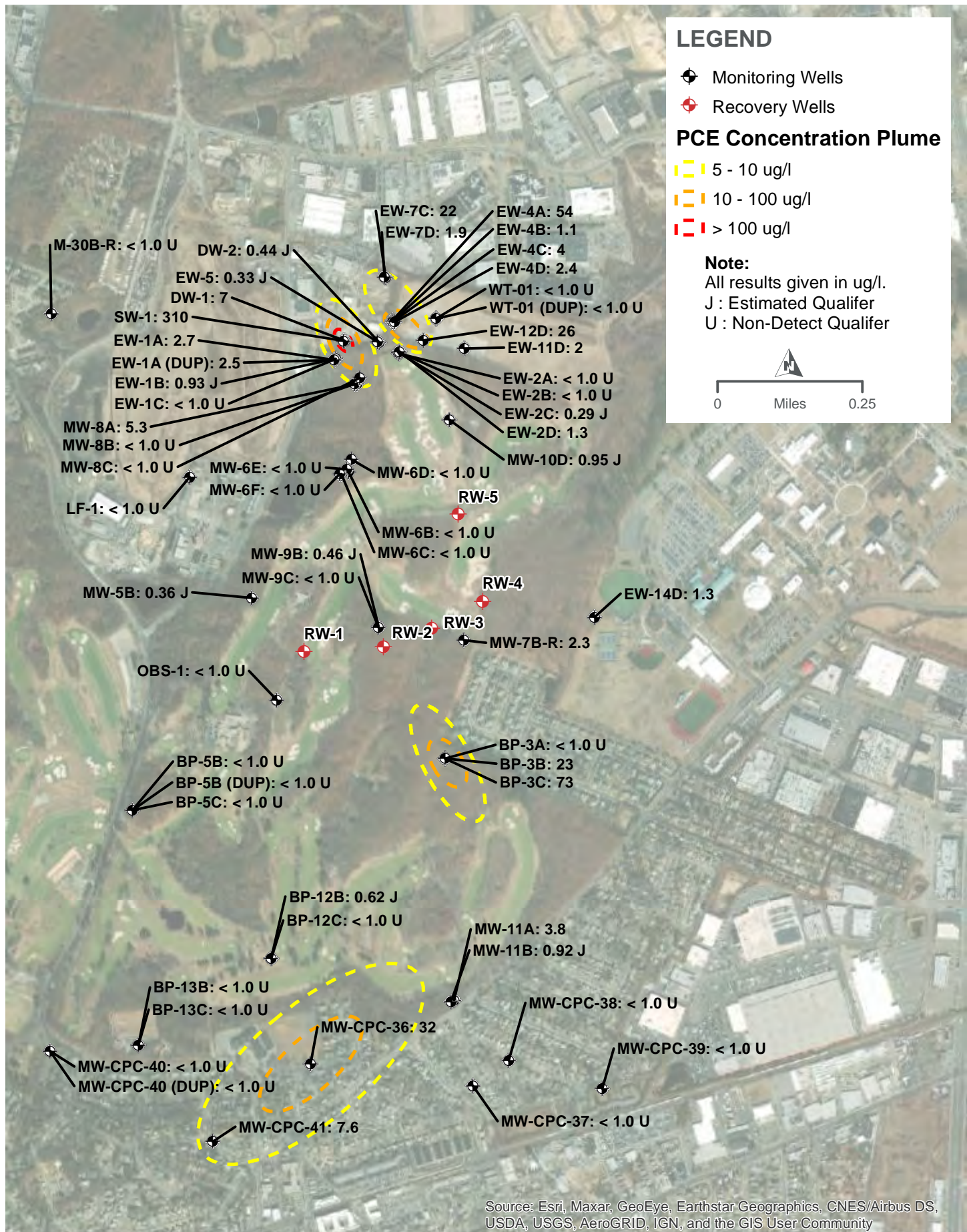


**CHLORINATED VOC CONCENTRATIONS**  
**WELL OU5 Influent**  
**CLAREMONT POLYCHEMICAL CORPORATION OPERABLE UNIT 5**  
**NYSDEC SITE #130015**

**DATE**  
 SEPTEMBER 2020

**FIGURE**





Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**SEPTEMBER 2020 TETRACHLOROETHENE (PCE) PLUME  
 CLAREMONT POLYCHEMICAL CORPORATION**

**FIGURE 30**



# LEGEND

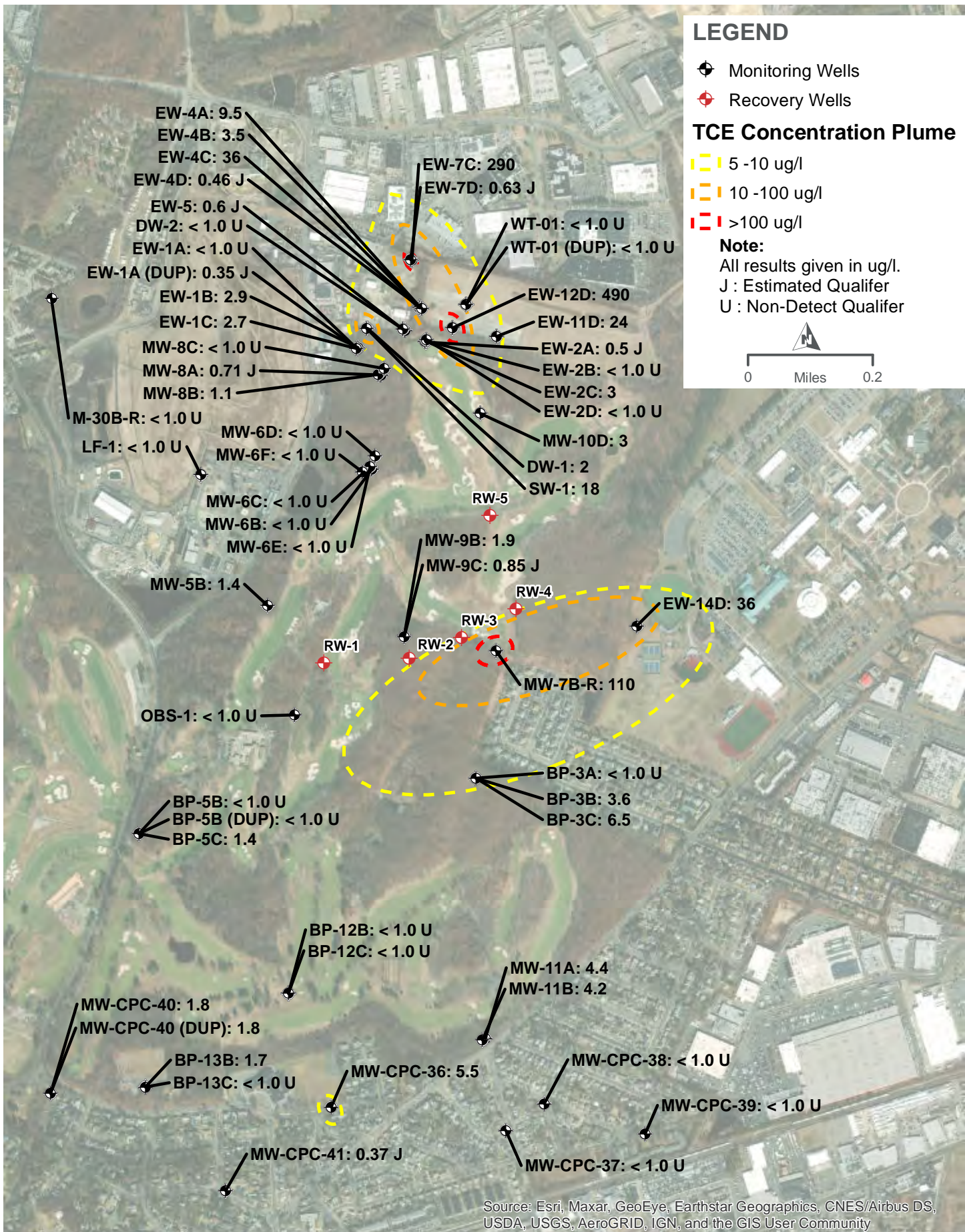
- Monitoring Wells
- Recovery Wells

# TCE Concentration Plume

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

**Note:**

All results given in ug/l.  
 J : Estimated Qualifier  
 U : Non-Detect Qualifier

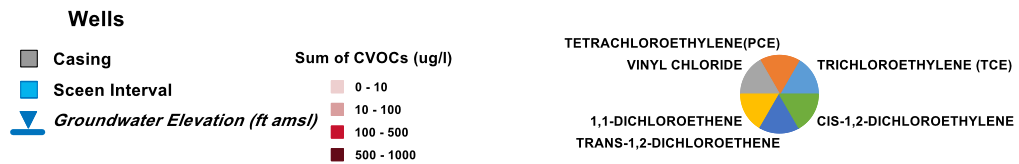
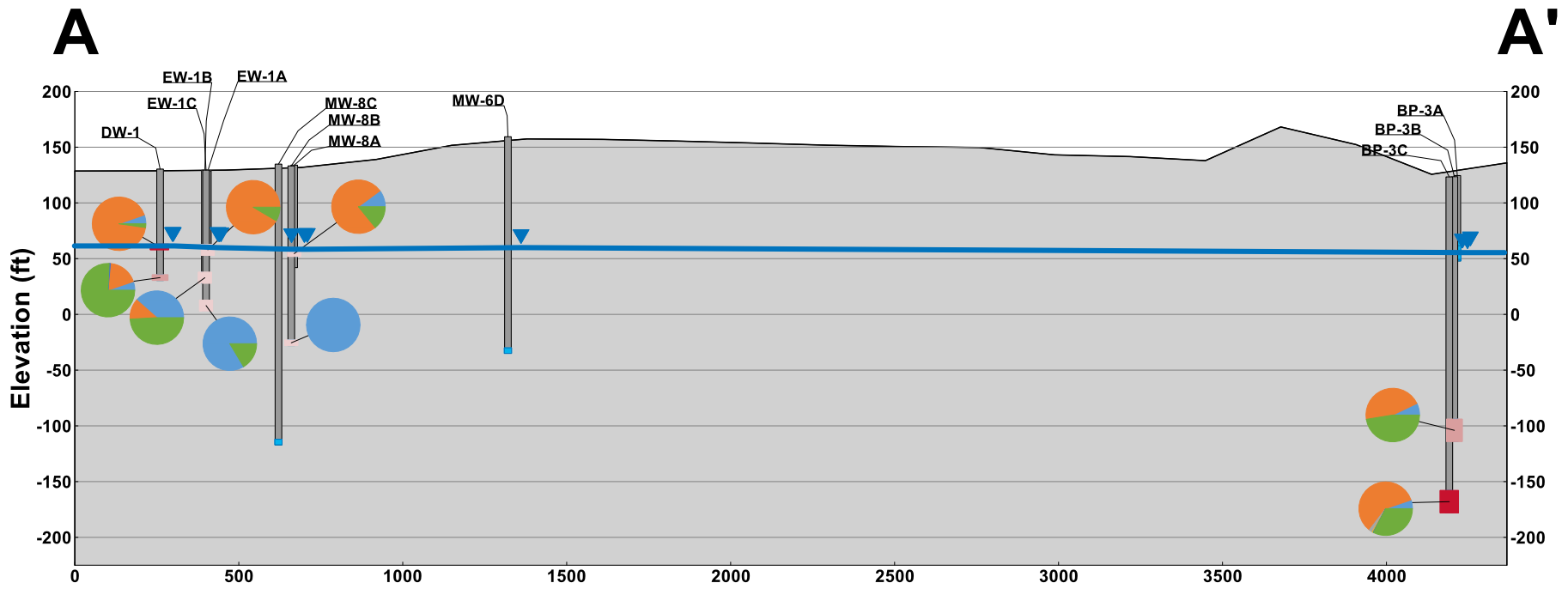


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



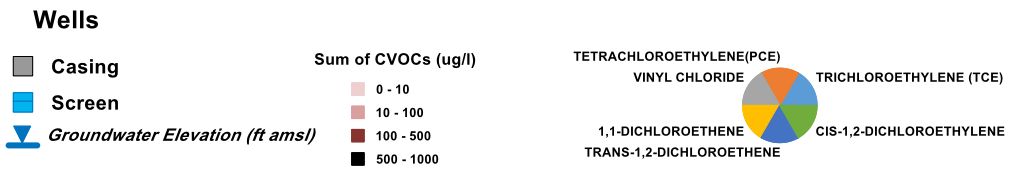
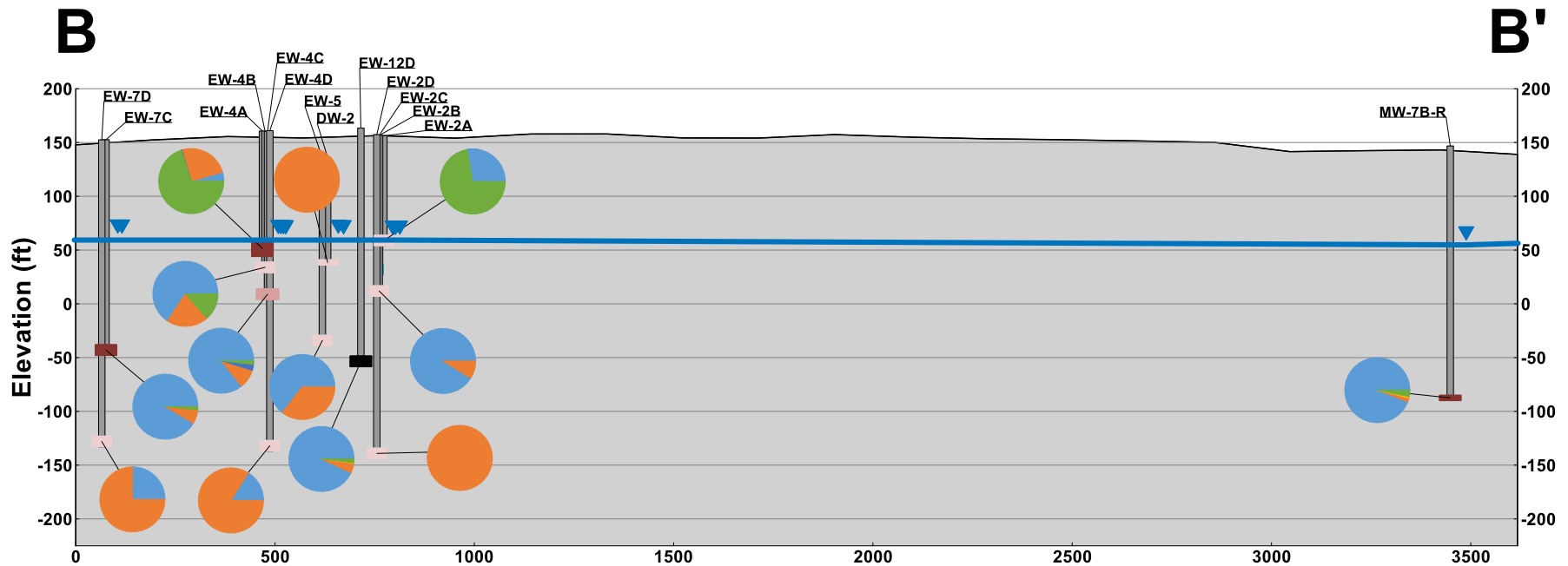
## SEPTEMBER 2020 TRICHLOROETHENE (TCE) PLUME CLAREMONT POLYCHEMICAL CORPORATION

FIGURE 31



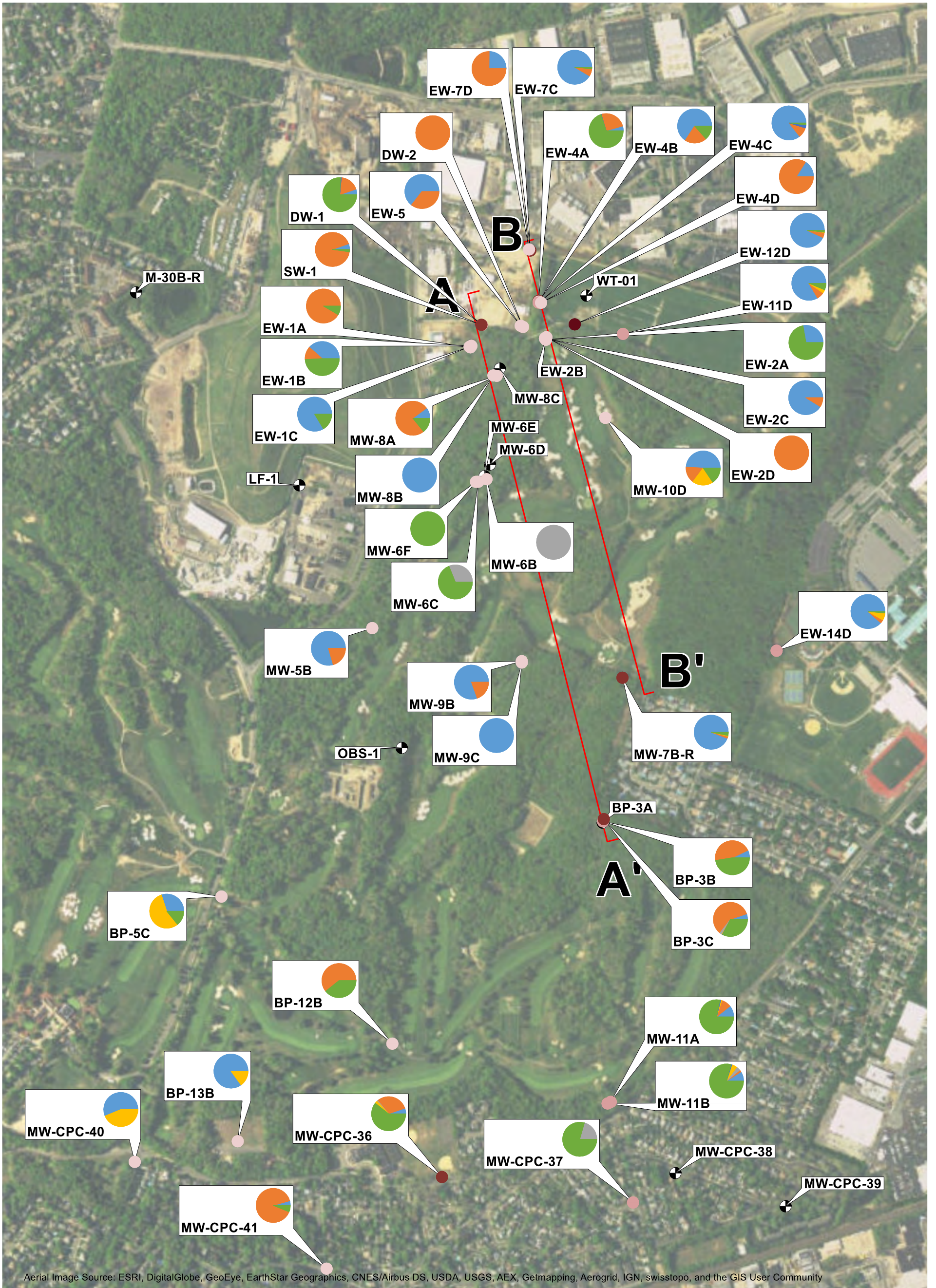
**NOTES:**

- Capture distance to transect line is 250 feet.
- Pie Charts shown are for samples with results from the selected constituents that were above the detection limit.
- Wells without a Pie Chart did not have reported results above the detection limit for the selected constituents.

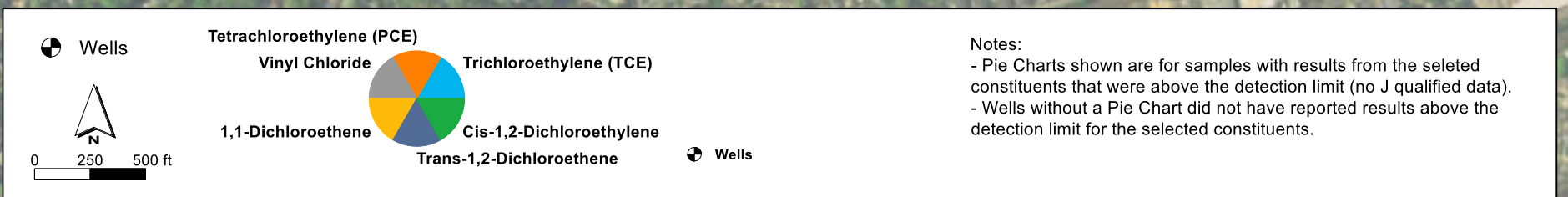


**NOTES:**

- Capture distance to transect line is 250 feet.
- Pie Charts shown are for samples with results from the selected constituents that were above the detection limit.
- Wells without a Pie Chart did not have reported results above the detection limit for the selected constituents.



Aerial Image Source: ESRI, DigitalGlobe, GeoEye, EarthStar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, swisstopo, and the GIS User Community



DETECTED CHLORINATED BREAKDOWN PRODUCTS  
CLAREMONT POLYCHEMICAL CORPORATION

FIGURE 34



MW-CPC-40	
3/25/2020	1.6
6/18/2020	2.1
9/17/2020	2.6
9/17/2020 (FD)	1.9

MW-CPC-36	
11/7/2018	2.9
11/7/2018 (FD)	2.5
3/12/2019	4.2
3/26/2020	3
3/26/2020 (FD)	2.6
6/17/2020	4.3
6/17/2020 (FD)	4.4
9/21/2020	4.7

MW-CPC-37	
10/11/2018	4
10/11/2018 (FD)	4
3/13/2019	4.3 J
3/13/2019 (FD)	7.3 J
3/27/2020	8.6
6/19/2020	6.4
9/18/2020	13

MW-CPC-38	
11/9/2018	2
3/13/2019	0.26 J
3/27/2020	0.57
6/19/2020	6.7
9/18/2020	0.2

MW-CPC-39	
11/8/2018	ND (0.21 U)
3/14/2019	ND (0.4 U)
3/26/2020	ND (0.2 U)
6/18/2020	ND (0.2 U)
9/16/2020	ND (0.2 U)

MW-CPC-41	
3/25/2020	1.5
6/17/2020	2.6
9/17/2020	2.6

- Monitoring Wells
- Public Water Supply Wells

Monitoring Well Results Notes:

- 1,4-Dioxane was compared to the NYSDOH Maximum Contaminant Level (MCL) issued August 26, 2020. Criteria shown on table below.
- Exceedance of relevant criteria indicated by yellow highlighting in the data box on the map.
- ND indicates non-detect at the detection limit shown.
- Final, validated data presented on figure with the following exceptions: June 2020.
- All results presented in ug/L.

Standards / Criteria:	
	ug/L
1,4-Dioxane	1

**1,4-DIOXANE EXCEEDANCES  
IN SENTINEL WELLS  
CLAREMONT POLYCHEMICAL  
CORPORATION**

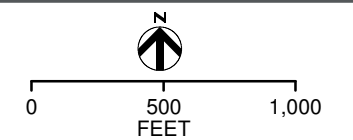


FIGURE 35

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

MW-CPC-36	PFNA	PFOS	PFOA	PFOS + PFOA	Total PFAS
11/7/2018	472	191	134	325	1219.71
11/7/2018 (FD)	455	180	133	313	1182.67
3/12/2019	373	167	145 J	312	1009.42
3/26/2020	333	158	126	284	908.47
3/26/2020 (FD)	338	152	134	286	912.35
6/17/2020	321	154	139	293	946.72
6/17/2020 (FD)	366	151	134	285	980.86
9/21/2020	348	158	133	291	927.98

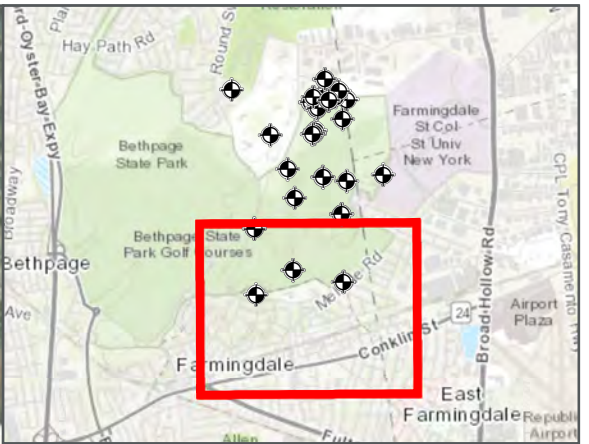
MW-CPC-37	PFOS	PFOA	PFOS + PFOA	Total PFAS
10/11/2018	10.4	29.1	39.5	81.41
10/11/2018 (FD)	10.8	32.1	42.9	83.82
3/13/2019	11.8	30.3	42.1	76.75
3/13/2019 (FD)	10.5	28.5	39	69.3
3/27/2020	17.1	40.3	57.4	98.92
6/19/2020	11	28.2	39.2	77.34
9/18/2020	19.9	43.2	63.1	110.97

MW-CPC-38	PFOS	PFOS + PFOA	Total PFAS
11/9/2018	ND	0.76	18.92
3/13/2019	ND	0.72	38.92
3/27/2020	ND	ND	0.76
6/19/2020	0.72 J	0.72	65.61
9/18/2020	20.2	20.2	49.59

MW-CPC-40	PFOS + PFOA	Total PFAS
3/25/2020	ND	ND
6/18/2020	ND	117.59
9/17/2020	ND	13.4
9/17/2020 (FD)	ND	15.58

MW-CPC-39	PFOS + PFOA	Total PFAS
11/8/2018	0.4	1.31
3/14/2019	ND	ND
3/26/2020	ND	ND
6/18/2020	ND	6.55
6/18/2020	ND	ND

MW-CPC-41	PFOS	PFOA	PFOS + PFOA	Total PFAS
3/25/2020	21.7	29.8	51.5	199.24
6/17/2020	22.2	30.5	52.7	284.59
9/17/2020	22.6	29.8	52.4	205.52



- Monitoring Wells
- Public Water Supply Wells

**Monitoring Well Results Notes:**

- Individual PFAS compound results and Sum of PFAS (Total) results compared to NYSDEC Part 375 Guidelines for Sampling and Analysis of PFAS (October 2020). The sum of PFOS and PFOA compared to USEPA Fact Sheet PFOA and PFOS Drinking Water Health Advisory (November, 2016).
- Only compounds with exceedances are shown. If the compound is not shown it was not detected above the criteria.
- Criteria for compounds shown on this figure are presented in the table below.
- Exceedance of relevant criteria indicated by yellow highlighting in the data box on the map.
- ND indicates constituents of total are non-detect.
- Final, validated data presented on figure with the following exceptions: June 2020.
- All results presented in ng/L.

**Standards / Criteria:**

	ng/L
Perfluorononanoic acid (PFNA)	100
Perfluorooctanesulfonic acid (PFOS)	10
Perfluorooctanoic acid (PFOA)	10
Total PFOA & PFOS	70
Total PFAS	500

**PFAS EXCEEDANCES  
IN SENTINEL WELLS  
CLAREMONT POLYCHEMICAL  
CORPORATION**

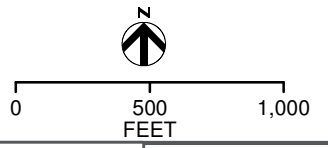


FIGURE 36

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

MW-CPC-36	1,2-DCA	Benzene	cis-1,2-DCE	PCE	TCE
11/7/2018	2	53	37	66	8
11/7/2018 (FD)	1.8	52	37	65	7.8
3/12/2019	ND (1 U)	70 T	39	67	7.8
3/26/2020	2.9 J+	36 J+	55 J+	60 J+	7.3 J+
3/26/2020 (FD)	3	34	53	56	6.8
6/17/2020	2.3	34	65	29	4.2
6/17/2020 (FD)	3	35	64	31	4.4
9/21/2020	2.8	38	63	32	5.5

MW-CPC-40	1,1-DCA	Benzene
3/25/2020	6.2	1
6/18/2020	5.7	2.9
9/17/2020	5.3	ND (1 U)
9/17/2020 (FD)	5.2	ND (1 U)

MW-CPC-37	cis-1,2-DCE	VC
10/11/2018	4	0.51 J
10/11/2018 (FD)	4	0.64 J
3/13/2019	5.1	0.62 J
3/13/2019 (FD)	4.8	0.79 J
3/27/2020	6.7	1.6
6/19/2020	1 U	1 U
9/18/2020	8.5	2.2 J+

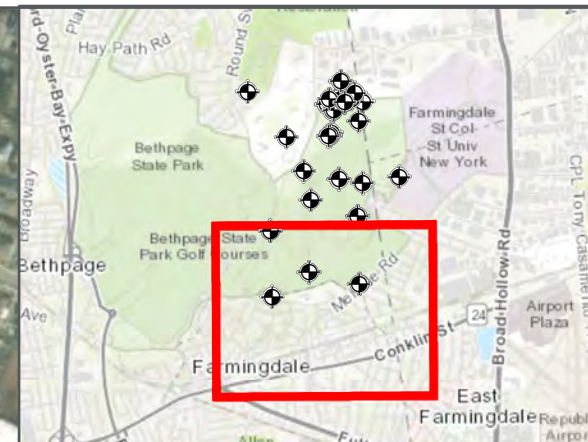
MW-CPC-38	Benzene
11/9/2018	ND (1 U)
3/13/2019	ND (1 UT)
3/27/2020	ND (1 U)
6/19/2020	1.6
9/18/2020	ND (1 U)

MW-CPC-39	VOCs
11/8/2018	NE
3/14/2019	NE
3/26/2020	NE
6/18/2020	NE
9/16/2020	NE

MW-CPC-41	PCE
3/25/2020	7.4
6/17/2020	7.9
9/17/2020	7.6

N-11004    N-06644

N-07852



- Monitoring Wells
- Public Water Supply Wells

**Monitoring Well Results Notes:**

1. Groundwater Quality Standards and Guidance Values: NYSDEC TOGS 1.1.1 (includes 6 NYCRR Part 703) Class GA, June 1998 and subsequent addenda.
2. Only compounds with exceedances are shown. If the compound is not shown it was not detected above the criteria.
3. Criteria for compounds shown on this figure are presented in the table below.
4. Exceedance of relevant criteria indicated by yellow highlighting in the data box on the map.
5. NE indicates no exceedances. ND indicates non-detected at the detection limit shown.
6. Final, validated data presented on figure with the following exceptions: June 2020.
7. All results presented in ug/L.

**Standards / Criteria:**

	ug/L
1,1-Dichloroethane (1,1-DCA)	5
1,2-Dichloroethane (1,2-DCA)	0.6
Benzene	1
cis-1,2-Dichloroethylene (cis-1,2-DCE)	5
Tetrachloroethylene (PCE)	5
Trichloroethylene (TCE)	5
Vinyl Chloride (VC)	2

**VOC EXCEEDANCES  
IN SENTINEL WELLS  
CLAREMONT POLYCHEMICAL  
CORPORATION**

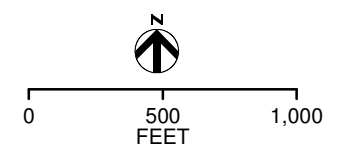


FIGURE 37



**ATTACHMENT A**

**Summary of Analytical Results – Third Quarter 2020 Groundwater Samples**



Attachment A  
 Summary of Analytical Results  
 September 2020 (3Q20) Sampling Event  
 Claremont Polychemical Superfund Site OU5  
 Old Bethpage, NY

CAS RN:	127-18-4	79-01-6	156-59-2	156-60-5	75-35-4	75-01-4	79-34-5	71-55-6	79-00-5	107-06-2	75-34-3	76-13-1	87-61-6	120-82-1	96-12-8	106-93-4	95-50-1	78-87-5	541-73-1	542-75-6	106-46-7	123-91-1	591-78-6		
Unit:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		
NYSDEC TOGS 1.1.1 Class GA (a):	5	5	5	5	5	2	5	5	1	0.6	5	6	5	5	0.04	0.0006	3	1	3	0.4	3	1	50		
Sample Description	Date Collected	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	Cis-1,2-Dichloroethylene	Trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,2-Dichloroethane	1,1-Dichloroethane	1,1,2-Trichloro-1,2,2-Trifluoroethane	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane (Ethylene Dibromide)	1,2-Dichlorobenzene	1,2-Dichloropropane	1,3-Dichlorobenzene	1,3-Dichloropropene (Sum of cis & trans)	1,4-Dichlorobenzene	1,4-Dioxane (P-Dioxane) (EPA 8260 Method; See Attachment A1 for 8270 SIM)	2-Hexanone	
MW-06D	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.73 J	< 1.0 U	< 1.0 U	< 1.0 U	1.5	< 50 U	< 5.0 U	
MW-06E	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.80 J	< 1.0 U	< 1.0 U	< 1.0 U	3.1	< 50 U	< 5.0 U	
MW-06F	9/15/2020	< 1.0 U	< 1.0 U	0.33 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.67 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-7B-R	9/14/2020	2.3	110	3.7	< 1.0 U	0.75 J	< 1.0 U	< 1.0 U	0.35 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-08A	9/15/2020	5.3	0.71 J	0.99 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-08B	9/15/2020	< 1.0 U	1.1	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-08C	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-09B	9/14/2020	0.46 J	1.9	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-09C	9/14/2020	< 1.0 U	0.85 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-10D	9/15/2020	0.95 J	3.0	0.95 J	< 1.0 U	1.2	< 1.0 U	< 1.0 U	0.32 J	< 1.0 U	0.71 J	0.29 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-11A	9/14/2020	3.8	4.4	32	0.33 J	0.43 J	< 1.0 U	< 1.0 U	0.49 J	< 1.0 U	< 1.0 U	2.7	0.59 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
MW-11B	9/14/2020	0.92 J	4.2	37	0.31 J	2.4	1.8	< 1.0 U	3.2	0.25 J	0.69 J	14	1.7	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
OBS-1	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.50 J	< 50 U	< 5.0 U
SW-1	9/15/2020	310	18	7.7	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
WT-01	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	
WT-01 DUP	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 50 U	< 5.0 U	

Note: U = not detected; J = estimated value; T = quality control parameter exceeded laboratory limits (LCS/LCSD failed recovery criteria)  
 Values in shaded cells exceed TOGS 1.1.1 Class GA standard or guidance value.



Attachment A  
 Summary of Analytical Results  
 September 2020 (3Q20) Sampling Event  
 Claremont Polychemical Superfund Site OU5  
 Old Bethpage, NY

CAS RN:	67-64-1	71-43-2	74-97-5	75-27-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	75-00-3	67-66-3	74-87-3	10061-01-5	110-82-7	124-48-1	75-71-8	100-41-4	98-82-8	179601-23-1	79-20-9	78-93-3	108-10-1	108-87-2	
Unit:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
NYSDEC TOGS 1.1.1 Class GA (a):	50	1	5	50	50	5	60	5	5	5	7	5	See sum.	NS	50	5	5	5	5**	NS	50	NS	NS	
Sample Description	Date Collected	Acetone	Benzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,3-Dichloropropene	Cyclohexane	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene (Cumene)	m,p-Xylene	Methyl Acetate	Methyl Ethyl Ketone (2-Butanone)	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	Methylcyclohexane
MW-06D	9/15/2020	17 B	0.51 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	1.7	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.67 J	< 1.0 U	< 1.0 U	< 1.0 U	1.9	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-06E	9/15/2020	20 B	0.39 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	6.4	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.39 J	< 1.0 U	< 1.0 U	< 1.0 U	0.48 J	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-06F	9/15/2020	21 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.78 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-7B-R	9/14/2020	18 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.47 J	< 1.0 U	< 1.0 U	0.63 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-08A	9/15/2020	13 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.38 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-08B	9/15/2020	24 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.65 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-08C	9/15/2020	18 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.43 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-09B	9/14/2020	23 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-09C	9/14/2020	15 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-10D	9/15/2020	12 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.37 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-11A	9/14/2020	24 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.39 J	< 1.0 U	1.9	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
MW-11B	9/14/2020	18 B	0.47 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.71 J	< 1.0 U	< 1.0 U	< 1.0 U	0.54 J	< 1.0 U	4.2	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
OBS-1	9/14/2020	20 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.68 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.47 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
SW-1	9/15/2020	7.0 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
WT-01	9/14/2020	13 B	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U
WT-01 DUP	9/14/2020	12	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 1.0 U

Note: U = not detected; J = estimated value; T = quality control parameter exceeded laboratory limits (LCS/LCSD failed recovery criteria)  
 Values in shaded cells exceed TOGS 1.1.1 Class GA standard or guidance value.

Attachment A  
 Summary of Analytical Results  
 September 2020 (3Q20) Sampling Event  
 Claremont Polychemical Superfund Site OU5  
 Old Bethpage, NY

CAS RN:	75-09-2	95-47-6	100-42-5	75-65-0	1634-04-4	108-88-3	10061-02-6	75-69-4	1330-20-7	
Unit:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
NYSDEC TOGS 1.1.1 Class GA (a):	5	5	5	NS	10	5	See sum.	5	5**	
Sample Description	Date Collected	Methylene Chloride	O-Xylene (1,2-Dimethylbenzene)	Styrene	Tert-Butyl Alcohol	Tert-Butyl Methyl Ether	Toluene	Trans-1,3-Dichloropropene	Trichlorofluoromethane	Xylenes (Total)
MW-CPC-36	9/21/2020	< 1.0 U	NA	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
MW-CPC-37	9/18/2020	< 1.0 U	NA	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
MW-CPC-38	9/18/2020	< 1.0 U	NA	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
MW-CPC-39	9/16/2020	< 1.0 U	NA	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
MW-CPC-40	9/17/2020	< 1.0 U	NA	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
MW-CPC-40 DUP	9/17/2020	< 1.0 U	NA	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
MW-CPC-41	9/17/2020	< 1.0 U	NA	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
BP-3A	9/16/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-3B	9/16/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-3C	9/16/2020	1.1	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-5B	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-5B DUP	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-5C	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-12B	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-12C	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-13B	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
BP-13C	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
DW-1	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
DW-2	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-01A	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-01A DUP	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-01B	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-01C	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-02A	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-02B	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-02C	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-02D	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-04A	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-04B	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-04C	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-04D	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-05	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-07C	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	0.72 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-07D	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-11D	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-12D	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	1.0	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
EW-14D	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
LF-1	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
M-30B-R	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
MW-05B	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
MW-06B	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	0.65 J	< 1.0 U	< 1.0 U	< 1.0 U	0.34 J
MW-06C	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	0.72 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Note: U = not detected; J = estimated value; T = quality control parameter exceeded laboratory limits (LCS/LCSD failed recovery criteria)  
 Values in shaded cells exceed TOGS 1.1.1 Class GA standard or guidance value.

Attachment A  
 Summary of Analytical Results  
 September 2020 (3Q20) Sampling Event  
 Claremont Polychemical Superfund Site OU5  
 Old Bethpage, NY

Sample Description	Date Collected	CAS RN:	75-09-2	95-47-6	100-42-5	75-65-0	1634-04-4	108-88-3	10061-02-6	75-69-4	1330-20-7
		Unit:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
NYSDEC TOGS 1.1.1 Class GA (a):		5	5	5	NS	10	5	See sum.	5	5**	
		Methylene Chloride	O-Xylene (1,2-Dimethylbenzene)	Styrene	Tert-Butyl Alcohol	Tert-Butyl Methyl Ether	Toluene	Trans-1,3-Dichloropropene	Trichlorofluoromethane	Xylenes (Total)	
MW-06D	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-06E	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-06F	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	0.40 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-7B-R	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-08A	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-08B	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-08C	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-09B	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-09C	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-10D	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
MW-11A	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	1.1	< 1.0 U	
MW-11B	9/14/2020	2.1	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	1.1	< 1.0 U	
OBS-1	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
SW-1	9/15/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
WT-01	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
WT-01 DUP	9/14/2020	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	

Note: U = not detected; J = estimated value; T = quality control parameter exceeded laboratory limits (LCS/LCSD failed recovery criteria)  
 Values in shaded cells exceed TOGS 1.1.1 Class GA standard or guidance value.



Qualifiers	Definitions
J	Indicates an estimated value.
T	Indicates one or more laboratory control limit was exceeded.
U	Indicates result was not detected. Reporting detection limit is listed instead.

Matrix	Applicable Criteria	Defintions
Groundwater	NYS Groundwater Class GA NYSDEC Part 375 PFAS PFOA & PFOS Sum NYSDOH Title 10 Part 5	New York State Part 703.5 Criteria, Class GA (a) NYSDEC Part 375 (b) EPA PFOA & PFOS HAL (c) NYSDOH (d)

1,4-Dioxane - Method 8270 SIM (Attachment A1) provides lower detection limits and is used for evaluating the presence of the contaminant. Method 8260 is provided for reference only.

**References:**

(a) New York State Department of Environmental Conservation Division of Water *Technical and Operational Guidance Series (TOGS) 1.1.1 - Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations* (June 1998 and subsequent addenda). Table 1 [Class GA].

<https://www.dec.ny.gov/regulations/2384.html>

(b) Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs, October 2020

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/pfassampanaly.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/pfassampanaly.pdf)

(c) US Environmental Protection Agency Fact Sheet PFOA & PFOS Drinking Water Health Advisories, November 2016

[https://www.epa.gov/sites/production/files/2016-06/documents/drinkingwaterhealthadvisories\\_pfoa\\_pfos\\_updated\\_5.31.16.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/drinkingwaterhealthadvisories_pfoa_pfos_updated_5.31.16.pdf)

(d) New York State Department of Health (NYSDOH) Drinking Water Program Maximum Contaminant Level (MCL), effective August 26, 2020 as indicated in the New York State Register and NYSDOH Title 10 Part 5-1.52 Table 3.

[https://www.health.ny.gov/regulations/nycrr/title\\_10/part\\_5/docs/subpart\\_5-1\\_tables.pdf](https://www.health.ny.gov/regulations/nycrr/title_10/part_5/docs/subpart_5-1_tables.pdf)

<https://www.dos.ny.gov/info/register.htm>

**Notes:**

Totalled fields include the total of all detected results of constituents. If all results are non-detect, the total is equal to the maximum result detection limit.

NA indicates constituent was not analyzed for, due to variations in requested lab methods.

\*\* Standards are given for individual xylene isomers. For mixtures (e.g. m&p or total xylenes) the criteria is provided for reference only.

NS - No standard or guidance value provided.



**ATTACHMENT A1**

**Summary of Emerging Contaminant Results – Third Quarter 2020 Groundwater Samples**

Attachment A1  
Summary of Emerging Contaminant Results  
September 2020 (3Q20) Sampling Event  
Claremont Polychemical Superfund Site OU5  
Old Bethpage, NY

CAS RN:	2058-94-8	2706-90-3	307-24-4	307-55-1	335-76-2	335-77-3	355-46-4	375-22-4	375-73-5	375-85-9	375-92-8	375-95-1	376-06-7	39108-34-4	72629-94-8	754-91-6	2355-31-9	27619-97-2	2991-50-6	1763-23-1	335-67-1			123-91-1	
Unit:	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ug/l	
Criteria:	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	10	10	70	500	1	
Criteria Reference	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(c)	(b)	(d)		
Sample Description																									
Date Collected																									
Perfluoroundecanoic Acid (PFUnA)																									
Perfluoropentanoic Acid (PFPeA)																									
Perfluorohexanoic acid (PFHxA)																									
Perfluorododecanoic acid (PFDoA)																									
Perfluorodecanoic acid (PFDA)																									
Perfluorodecane Sulfonic Acid (PFDS)																									
Perfluorohexanesulfonic acid (PFHxS)																									
Perfluorobutanoic Acid (PFBA)																									
Perfluorobutanesulfonic acid (PFBS)																									
Perfluoroheptanoic acid (PFHpA)																									
Perfluoroheptane Sulfonate (PFHPS)																									
Perfluorononanoic acid (PFNA)																									
Perfluorotetradecanoic acid (PFTA)																									
1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)																									
Perfluorotridecanoic Acid (PFTriA)																									
Perfluorooctane Sulfonamide (FOSA)																									
2-(N-methyl perfluorooctanesulfonamido) acetic acid																									
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)																									
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine																									
Perfluorooctanesulfonic acid (PFOS)																									
Perfluorooctanoic acid (PFOA)																									
Total PFOA & PFOS																									
Total PFAS (see reference (c))																									
1,4-Dioxane (P-Dioxane) (EPA Method 8270 SIM)																									
MW-CPC-36	9/21/2020	3.89	54.9	53.3	< 1.75 U	2.97	< 1.75 U	38.6	26.1	14.4	20.4	2.92	348	< 1.75 U	18.6	< 1.75 U	< 1.75 U	< 4.36 U	52.9	< 4.36 U	158	133	291	927.98	4.7
MW-CPC-37	9/18/2020	< 1.72 U	4.68	9.89	< 1.72 U	< 1.72 U	< 1.72 U	5.29	13.5	3.56	4.89	0.74 J	< 1.72 U	< 1.72 U	< 1.72 U	< 1.72 U	< 4.29 U	5.32	< 4.29 U	19.9	43.2	63.1	110.97	13	
MW-CPC-38	9/18/2020	< 1.80 U	< 1.80 U	0.92 J	< 1.80 U	< 1.80 U	< 1.80 U	1.17 J	< 4.50 U	< 1.80 U	< 1.80 U	< 1.80 U	< 1.80 U	< 1.80 U	< 1.80 U	< 1.80 U	< 4.50 U	27.3	< 4.50 U	20.2	< 1.80 U	20.2	49.59	0.2	
MW-CPC-39	9/16/2020	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 4.36 U	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 1.75 U	< 4.36 U	< 4.36 U	< 4.36 U	< 1.75 U	< 1.75 U	< 1.75 U	< 4.36 U	< 0.20 U	
MW-CPC-40	9/17/2020	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 4.22 U	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 1.69 U	< 4.22 U	13.4	< 4.22 U	< 1.69 U	< 1.69 U	< 1.69 U	13.4	2.6	
MW-CPC-40 DUP	9/17/2020	< 1.71 U	< 1.71 U	< 1.71 U	< 1.71 U	< 1.71 U	< 1.71 U	0.58 J	< 4.28 U	< 1.71 U	< 1.71 U	< 1.71 U	< 1.71 U	< 1.71 U	< 1.71 U	< 1.71 U	< 4.28 U	15	< 4.28 U	< 1.71 U	< 1.71 U	< 1.71 U	15.58	1.9	
MW-CPC-41	9/17/2020	< 1.65 U	27.8	21.2	< 1.65 U	< 1.65 U	< 1.65 U	7.94	12.4	3.39	10.8	0.62 J	65.1	< 1.65 U	< 1.65 U	< 1.65 U	< 4.12 U	3.87 J	< 4.12 U	22.6	29.8	52.4	205.52	2.6	

Note: U = not detected; J = estimated value  
Values in shaded cells exceed criteria. See notes page for references.  
(b) NYSDOH Guidelines for Sampling and Analysis of PFAS Under Part 375 (October 2020)  
(c) USEPA Fact Sheet PFOA and PFOS Drinking Water Health Advisory (November 2016)  
(d) NYSDOH Drinking Water Program 1,4-Dioxane MCL (August 2020)

**ATTACHMENT B**  
**Synoptic Water Level Data**

**Water Level Data Sheet**

Claremont GWTF OU5

Old Bethpage, New York

Date of Recording:	<b>18-Sep-20</b>	Data Recorded By:	pet, jbr
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Well ID	06-10-20 DTW Reading	Time	DTW	Riser Elevation	Water Elevation	Comments/Notes
BP-3A	61.88	9:56	62.97	124.16	<b>61.19</b>	
BP-3B	64.31	9:59	65.65	123.19	<b>57.54</b>	
BP-3C	64.09	9:57	65.88	123.91	<b>58.03</b>	
BP-5B	35.18	9:27	36.92	96.48	<b>59.56</b>	
BP-5C	35.30	9:25	36.98	96.28	<b>59.30</b>	
BP-12B	19.52	13:15	21.16	78.24	<b>57.08</b>	
BP-12C	21.23	13:16	22.82	78.56	<b>55.74</b>	
BP-13B	76.29	11:11	77.62	133.37	<b>55.75</b>	
BP-13C	77.71	11:12	78.85	133.67	<b>54.82</b>	
DW-1	64.39	12:55	66.11	130.13	<b>64.02</b>	
DW-2	70.26	13:10	71.96	135.52	<b>63.56</b>	
EW-1A	62.98	11:30	64.7	128.75	<b>64.05</b>	
EW-1B	63.77	11:32	65.27	129.31	<b>64.04</b>	
EW-1C	63.83	11:33	65.52	129.16	<b>63.64</b>	
EW-2A	91.22	8:39	93.01	156.09	<b>63.08</b>	
EW-2B	91.63	8:34	94.56	156.50	<b>61.94</b>	
EW-2C	91.64	8:36	93.31	156.50	<b>63.19</b>	
EW-2D	92.47	8:32	94.12	157.12	<b>63.00</b>	
EW-3A	95.67	8:58	97.65	157.88	<b>60.23</b>	
EW-3B	95.85	8:50	97.51	157.99	<b>60.48</b>	
EW-3C	95.72	8:52	97.37	157.87	<b>60.50</b>	
EW-4A	95.22	11:53	96.92	160.58	<b>63.66</b>	
EW-4B	95.24	11:55	97.00	160.59	<b>63.59</b>	
EW-4C	95.03	11:57	96.56	160.33	<b>63.77</b>	
EW-4D	95.24	11:59	97.27	160.62	<b>63.35</b>	
EW-5	69.93	13:05	71.64	135.05	<b>63.41</b>	
EW-6A	62.44	13:25	64.2	128.92	<b>64.72</b>	
EW-6C	62.99	13:20	65.01	129.02	<b>64.01</b>	
EW-7C	86.71	13:35	88.36	152.45	<b>64.09</b>	
EW-7D	86.61	13:40	88.29	152.35	<b>64.06</b>	
EW-8D	NR	NR	NR	130.21	<b>NA</b>	Inaccessible
EW-9D	70.42	13:30	72.14	136.20	<b>64.06</b>	
EW-10C	94.05	12:07	95.76	159.80	<b>64.04</b>	
EW-11D	100.09	11:46	101.78	164.17	<b>62.39</b>	
EW-12D	98.91	11:48	100.41	163.34	<b>62.93</b>	
EW-13D	98.91	12:09	100.49	163.61	<b>63.12</b>	
EW-14D	40.69	10:21	42.41	100.58	<b>58.17</b>	
LF-1	44.11	8:14	45.8	109.83	<b>64.03</b>	
LF-02	51.73	13:48	53.51	117.18	<b>63.67</b>	
M-30BR	85.17	13:58	87.23	153.07	<b>65.84</b>	
MW-5B	72.28	8:24	73.69	136.99	<b>63.30</b>	
MW-6A	94.75	12:24	96.49	158.83	<b>62.34</b>	
MW-6B	94.97	12:26	96.64	159.02	<b>62.38</b>	
MW-6C	94.31	12:28	95.95	158.65	<b>62.70</b>	

**Water Level Data Sheet**

Claremont GWTF OU5

Old Bethpage, New York

Date of Recording:	<b>18-Sep-20</b>	Data Recorded By:	pet, jbr
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Well ID	06-10-20 DTW Reading	Time	DTW	Riser Elevation	Water Elevation	Comments/Notes
MW-6D	95.03	12:30	96.72	159.01	<b>62.29</b>	
MW-6E	95.59	12:23	97.34	159.54	<b>62.20</b>	
MW-6F	95.22	12:34	96.87	158.71	<b>61.84</b>	
MW-7BR	87.09	9:05	88.65	146.27	<b>57.62</b>	
MW-8A	68.58	12:40	70.34	133.52	<b>63.18</b>	
MW-8B	68.12	12:45	69.82	132.84	<b>63.02</b>	
MW-8C	69.74	12:50	71.37	134.27	<b>62.90</b>	
MW-9B	90.60	9:12	92.22	151.78	<b>59.56</b>	
MW-9C	91.34	9:10	92.89	151.97	<b>59.08</b>	
MW-10B	96.73	8:45	98.35	159.90	<b>61.55</b>	
MW-10C	95.75	11:39	97.46	158.89	<b>61.43</b>	
MW-10D	96.74	11:40	98.5	159.67	<b>61.17</b>	
MW-11A	22.47	10:30	23.97	78.71	<b>54.74</b>	
MW-11B	22.29	10:35	23.79	78.43	<b>54.64</b>	
MW-CPC-36	20.11	10:57	21.7	75.93	<b>54.23</b>	
MW-CPC-37	25.68	10:50	28.15	77.87	<b>49.72</b>	
MW-CPC-38	26.61	10:47	29.02	78.91	<b>49.89</b>	
MW-CPC-39	24.00	10:40	26.44	75.25	<b>48.81</b>	
MW-CPC-40	55.41	11:16	56.82	110.00	<b>53.18</b>	
MW-CPC-41	18.06	11:00	19.56	72.60	<b>53.04</b>	
OBS-1	47.76	9:19	49.38	109.03	<b>59.65</b>	
SW-1	64.55	13:00	66.27	130.24	<b>63.97</b>	
WT-01	98.23	12:15	99.89	163.28	<b>63.39</b>	

**67 WELLS**

**ATTACHMENT C**

**Full Laboratory Data Deliverable available on Claremont OU4 Sharepoint Site**

**ATTACHMENT C**

**Full Laboratory Data Deliverable available on Claremont OU4 Sharepoint Site**

**ATTACHMENT D**  
**Field Documentation**



### Chain of Custody Record

<b>Client Information</b> Client Contact: Jennifer Rhee		Sampler: Mathew Papula		Lab PM: Julie Gilmore		Carrier Tracking No(s):		COC No:	
Company: HDR		Due Date Requested: Standard TAT		E-Mail: Julie.Gilmore@Eurofinset.com		Job #: 46026810		Page: Page 1 of 1	
Address: 1 International Blvd, 10th Floor, Suite 1000		TAT Requested (days):  10 Day		PO #: Callout ID 138032		Analysis Requested		Preservation Codes:	
City: Mahwah		Project Name: WA#43 Claremont Polychemical RI/FS		WO #: 150 Winding Road, Old Bethpage		 460-218646 Chain of Custody		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - Na2S2O3 R - Na2S2O8 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
State, Zip: New Jersey 07945		SSOW#:		Project #: 10109218					
Phone: 845-821-1801		Project #: 10109218		SSOW#:					
Email: patricia.parvis@hdrinc.com		Site: Old Bethpage, NY							

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TCL VOCs 8260C + TICs	1,4 Dioxane 8270D, SIM, aqueous	PCBs - Modified Method 537 (list of 21 analytes)	Total Number	Special Instructions/Note:
MW-CPC-39-R6-GW-374-20200916-0	9/16/20	1715	G	W	N	X	X	X		8	
TB-20200916	9/16/20		C	W	N	X				6	
										8	
										2	

<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<b>Sample Disposal</b> ( A fee may be assessed if samples are retained longer than 1 month ) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Store For _____ Months		
Deliverable Requested: I, II, III, IV, Other (specify) NY Cat B NYSDEC EDD Format & Excel			Special Instructions/QC Requirements: Callout ID 138032 Send invoices to jennifer.rhee@hdrinc.com		
Empty Kit Relinquished by: _____ Date: _____		Time: _____		Method of Shipment: _____	


Relinquished by: <u>IANACH</u> Date/Time: <u>9/17 1246</u> Company: <u>HDR</u>	Received by: <u>[Signature]</u> Date/Time: <u>9/17/20 1246</u> Company: <u>HDR</u>
Relinquished by: <u>[Signature]</u> Date/Time: <u>9/17 1530</u> Company: <u>HDR</u>	Received by: <u>[Signature]</u> Date/Time: <u>9/17/20 1830</u> Company: <u>HDR</u>
Relinquished by: <u>[Signature]</u> Date/Time: <u>9/17/20 1830</u> Company: <u>HDR</u>	Received by: <u>[Signature]</u> Date/Time: <u>9/17/20 1830</u> Company: <u>HDR</u>

Custody Seals Intact:  Yes  No

Cooler Temperature(s) °C and Other Remarks:

3 of 20 11

# Chain of Custody Record

<b>Client Information</b>		<b>Sampler:</b> Mathew Papula		<b>Lab PM:</b> Julie Gilmore		<b>Carrier Tracking No(s):</b> <i>NFC</i>		<b>COC No.:</b> <i>46026810</i>	
<b>Client Contact:</b> Jennifer Rhee		<b>Phone:</b> 845-263-0241		<b>E-Mail:</b> Julie.Gilmore@Eurolinsat.com		<b>Page:</b> 1 of 1		<b>Job#:</b> <i>2878669</i>	
<b>Company:</b> HDR		<b>Address:</b> 1 International Blvd, 10th Floor, Suite 1000		<b>Due Date Requested:</b> Standard TAT		<b>Analysis Requested:</b>		<b>Preservation Codes:</b>	
<b>City:</b> Mahwah		<b>State, Zip:</b> New Jersey 07945		<b>TAT Requested (days):</b> 10 Day		<b>Perform MS/MSD (Yes or No)</b> <input checked="" type="checkbox"/>		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
<b>Phone:</b> 845-821-1801		<b>PO #:</b> HDR1000100031776		<b>WO #:</b> 501 Winding Road, Old Bethpage		<b>Field Filtered Sample (Yes or No)</b> <input checked="" type="checkbox"/>			
<b>Email:</b> Jennifer.Rhee@hdrinc.com		<b>Project #:</b>		<b>SSOW#:</b>		<b>Field VOCs 8260C + TICs</b> <input checked="" type="checkbox"/>		<b>460-218669 Chain of Custody</b>	
<b>Project Name:</b> WA#43 Claremont Polychemical R1/FS		<b>Site:</b> Old Bethpage, NY				<b>1,4 Dioxane 8270D, SIM, aqueous</b> <input checked="" type="checkbox"/>			
<b>Sample Identification</b>		<b>Sample Date</b>		<b>Sample Time</b>		<b>Sample Type (C=comp, G=grab)</b>		<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</b>	
MW-GPC-40-F6-GW-312-20200917-0		9/17/20		1020		G		W	
MW-GPC-40-F6-GW-312-20200917-1		9/17/20		1020		G		W	
MW-GPC-41-F6-GW-258-20200917-0		9/17/20		1320		G		W	
MW-GPC-37-F6-GW-445-20200907-2		9/17/20		1320		G		W	
1B-20200917		9/17/20				C		W	
<b>Possible Hazard Identification</b>		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Poison B	
<b>Deliverable Requested:</b> 1, II, III, IV, Other (specify)		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological		<input type="checkbox"/> NY Cat B		<input type="checkbox"/> NYSECD EDD Format & Excel	
<b>Empty Kit Relinquished by:</b> <i>INX</i>		<b>Date:</b> 9/18		<b>Company:</b> HDR		<b>Received by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1134	
<b>Relinquished by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1545		<b>Company:</b> HDR		<b>Received by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1600	
<b>Relinquished by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1800		<b>Company:</b> HDR		<b>Received by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1800	
<b>Custody Seals Intact:</b> <input checked="" type="checkbox"/>		<b>Custody Seal No.:</b>		<b>Method of Shipment:</b>		<b>Special Instructions/OC Requirements:</b> Callout ID 138032		<b>Send invoices to:</b> jennifer.rhee@hdrinc.com	
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>		<input type="checkbox"/> Return To Client		<input type="checkbox"/> Disposal By Lab		<input type="checkbox"/> Live For		<input type="checkbox"/> Months	
<b>Relinquished by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1134		<b>Company:</b> HDR		<b>Received by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1134	
<b>Relinquished by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1545		<b>Company:</b> HDR		<b>Received by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1545	
<b>Relinquished by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1800		<b>Company:</b> HDR		<b>Received by:</b> <i>OS</i>		<b>Date/Time:</b> 9/18/20 1800	
<b>Cooler Temperature(s) °C and Other Remarks:</b>									

*3.7 = R11*

# Chain of Custody Record

777 New Durham Road  
Edison, NJ 08817  
Phone (732) 549-3900 Fax (732) 549-3679

Sampler: HDR Inc.  
Phone: 516-777-7242

Lab PM: Julie Gilmore  
E-Mail: julie.gilmore@testamericainc.com

Carrier Tracking No(s):  
COC No: CPC GW COC 091720  
Page: 1 of 5  
Job #: 298768

**Client Information**  
Client Contact: Caroline Jalanti  
Company: New York State D.E.C.  
Address: 625 Broadway 12th Floor  
City: Albany  
State, Zip: NY, 12233-7017  
Phone: [Redacted]  
Email: Caroline.jalanti@dec.ny.gov  
Project Name: DEC Claremont Treatment Plant, 130015  
Site: Claremont Polychemical GWTF OUS

**Analysis Requested**

8260C - Routine SOW VOC List+TBA	8270D - Routine SOW SVOC List	8010D - Metals - As, Ba, Cd, Cr, Fe, Mn, Pb, Sb, Se	7470A - Mercury	2570D - TDS	2540D - TSS	7196A - Hexavalent Chromium	351.2 - TKN	9060A - TOC	300.0 - Cl, F, SO4	9012B - Total Cyanide
----------------------------------	-------------------------------	---	-----------------	-------------	-------------	-----------------------------	-------------	-------------	--------------------	-----------------------

Due Date Requested: 10 days  
TAT Requested (days): 10 days  
PO #: CallOut: 138032; Site: 130015  
WO #: 150 Winding Road, Old Bethpage  
Project #: 46008579  
SSOW#: [Redacted]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Viewwater, S-solids, Onwastewater, BT-Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	A	N	D	D	N	S	S	N	B	Special Instructions/Note:
BP3A-CP-00-091620	9/16/20	9:55	G	W		N	N	3									field sample 1
BP3B-CP-00-091620	9/16/20	9:50	G	W		N	N	3									field sample 2
BP3C-CP-00-091620	9/16/20	9:45	G	W		N	N	3									field sample 3
BP5B-CP-00-091420	9/14/20	10:10	G	W		N	N	3									field sample 4
BP5B-CP-01-091420	9/14/20	10:10	G	W		N	N	3									field duplicate sample 5
BP5C-CP-00-091420	9/14/20	10:15	G	W		N	N	3									field sample 6
BP12B-CP-00-091420	9/14/20	10:35	G	W		N	N	3									field sample 7
BP12C-CP-00-091420	9/14/20	10:40	G	W		N	N	3									field sample 8
BP13B-CP-00-091420	9/14/20	11:14	G	W		N	N	3									field sample 9
BP13C-CP-00-091420	9/14/20	11:00	G	W		N	N	3									field sample 10
DW1-CP-00-091520	9/15/20	11:25	G	W		N	N	3									field sample 11
DW2-CP-00-091520	9/15/20	11:40	G	W		N	N	3									field sample 12

Barcode: 460-218768 Chain of Custody

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, IV, Other (specify) NY Cat B

**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/OC Requirements:  
 Method of Shipment: \_\_\_\_\_  
 Time: \_\_\_\_\_ Date: \_\_\_\_\_

Received by: [Signature] Company: [Redacted]  
 Received by: [Signature] Company: [Redacted]  
 Received by: [Signature] Company: [Redacted]

Cooler Temperature(s) °C and Other Remarks: 38 F, 26 C

**Chain of Custody Record**

<b>Client Information</b>		Sampler: <b>HDR Inc.</b>	Lab PM: <b>Julie Gilmore</b>	Carrier Tracking No(s): <b>CPC GW COC 091720</b>
Client Contact: <b>Caroline Jalanti</b>		Phone: <b>516-777-7242</b>	E-Mail: <b>julie.gilmore@testamericainc.com</b>	Page: 2 of 5
Company: <b>New York State D.E.C.</b>		Job #: <b>218768</b>		
Address: <b>625 Broadway 12th Floor</b>		Preservation Codes: M - Hexane N - None O - Ash/NaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Ice V - Acetone W - NCAAA X - EDTA Y - PH 4-5 Z - other (specify)		
City: <b>Albany</b>		Other:		
State, Zip: <b>NY, 12233-7017</b>		Total Number of Containers:		
Phone:		Analysis Requested:		
Email: <b>Caroline.jalanti@dec.ny.gov</b>		<input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> 8260C - Routine SOW VOC List+TBA <input checked="" type="checkbox"/> 8270D - Routine SOW SVOC List <input checked="" type="checkbox"/> 6010D - Metals - As,Ba,Cd,Cr,Fe,Mn,Pb,Sb,Se <input checked="" type="checkbox"/> 7470A - Mercury <input checked="" type="checkbox"/> 2570D - TDS <input checked="" type="checkbox"/> 2540D - TSS <input checked="" type="checkbox"/> 7196A - Hexavalent Chromium <input checked="" type="checkbox"/> 351.2 - TKN <input checked="" type="checkbox"/> 9060A - TOC <input checked="" type="checkbox"/> 300.0 - Cl, F, SO4 <input checked="" type="checkbox"/> 9012B - Total Cyanide		
Due Date Requested: <b>10 days</b>		Special Instructions/Note: field sample field duplicate sample field sample field sample field sample field sample field sample field sample field sample field sample field sample		
TAT Requested (days):		Perform MS/MSD (Yes or No)		
PO #:		Field Filtered Sample (Yes or No)		
WO #:		<input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> 8260C - Routine SOW VOC List+TBA <input checked="" type="checkbox"/> 8270D - Routine SOW SVOC List <input checked="" type="checkbox"/> 6010D - Metals - As,Ba,Cd,Cr,Fe,Mn,Pb,Sb,Se <input checked="" type="checkbox"/> 7470A - Mercury <input checked="" type="checkbox"/> 2570D - TDS <input checked="" type="checkbox"/> 2540D - TSS <input checked="" type="checkbox"/> 7196A - Hexavalent Chromium <input checked="" type="checkbox"/> 351.2 - TKN <input checked="" type="checkbox"/> 9060A - TOC <input checked="" type="checkbox"/> 300.0 - Cl, F, SO4 <input checked="" type="checkbox"/> 9012B - Total Cyanide		
CallOut: 138032; Site: 130015		Special Instructions/Note:		
Project #:		<input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> 8260C - Routine SOW VOC List+TBA <input checked="" type="checkbox"/> 8270D - Routine SOW SVOC List <input checked="" type="checkbox"/> 6010D - Metals - As,Ba,Cd,Cr,Fe,Mn,Pb,Sb,Se <input checked="" type="checkbox"/> 7470A - Mercury <input checked="" type="checkbox"/> 2570D - TDS <input checked="" type="checkbox"/> 2540D - TSS <input checked="" type="checkbox"/> 7196A - Hexavalent Chromium <input checked="" type="checkbox"/> 351.2 - TKN <input checked="" type="checkbox"/> 9060A - TOC <input checked="" type="checkbox"/> 300.0 - Cl, F, SO4 <input checked="" type="checkbox"/> 9012B - Total Cyanide		
SSOW#:		<input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> 8260C - Routine SOW VOC List+TBA <input checked="" type="checkbox"/> 8270D - Routine SOW SVOC List <input checked="" type="checkbox"/> 6010D - Metals - As,Ba,Cd,Cr,Fe,Mn,Pb,Sb,Se <input checked="" type="checkbox"/> 7470A - Mercury <input checked="" type="checkbox"/> 2570D - TDS <input checked="" type="checkbox"/> 2540D - TSS <input checked="" type="checkbox"/> 7196A - Hexavalent Chromium <input checked="" type="checkbox"/> 351.2 - TKN <input checked="" type="checkbox"/> 9060A - TOC <input checked="" type="checkbox"/> 300.0 - Cl, F, SO4 <input checked="" type="checkbox"/> 9012B - Total Cyanide		
Sample Identification		<input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> 8260C - Routine SOW VOC List+TBA <input checked="" type="checkbox"/> 8270D - Routine SOW SVOC List <input checked="" type="checkbox"/> 6010D - Metals - As,Ba,Cd,Cr,Fe,Mn,Pb,Sb,Se <input checked="" type="checkbox"/> 7470A - Mercury <input checked="" type="checkbox"/> 2570D - TDS <input checked="" type="checkbox"/> 2540D - TSS <input checked="" type="checkbox"/> 7196A - Hexavalent Chromium <input checked="" type="checkbox"/> 351.2 - TKN <input checked="" type="checkbox"/> 9060A - TOC <input checked="" type="checkbox"/> 300.0 - Cl, F, SO4 <input checked="" type="checkbox"/> 9012B - Total Cyanide		
EW01A-CP-00-091520	Sample Date: 9/15/20	Sample Time: 8:50 G	Sample Type: W	Preservation Code: W
EW01A-CP-01-091520	Sample Date: 9/15/20	Sample Time: 8:50 G	Sample Type: W	Preservation Code: W
EW01B-CP-00-091520	Sample Date: 9/15/20	Sample Time: 8:55 G	Sample Type: W	Preservation Code: W
EW01C-CP-00-091520	Sample Date: 9/15/20	Sample Time: 9:00 G	Sample Type: W	Preservation Code: W
EW02A-CP-00-091420	Sample Date: 9/14/20	Sample Time: 8:45 G	Sample Type: W	Preservation Code: W
EW02B-CP-00-091420	Sample Date: 9/14/20	Sample Time: 8:50 G	Sample Type: W	Preservation Code: W
EW02C-CP-00-091420	Sample Date: 9/14/20	Sample Time: 8:55 G	Sample Type: W	Preservation Code: W
EW02D-CP-00-091420	Sample Date: 9/14/20	Sample Time: 9:00 G	Sample Type: W	Preservation Code: W
EW04A-CP-00-091520	Sample Date: 9/15/20	Sample Time: 9:20 G	Sample Type: W	Preservation Code: W
EW04B-CP-00-091520	Sample Date: 9/15/20	Sample Time: 9:25 G	Sample Type: W	Preservation Code: W
EW04C-CP-00-091520	Sample Date: 9/15/20	Sample Time: 9:30 G	Sample Type: W	Preservation Code: W
EW04D-CP-00-091520	Sample Date: 9/15/20	Sample Time: 9:35 G	Sample Type: W	Preservation Code: W
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) NY Cat B				
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Special Instructions/QC Requirements:				
Empty Kit Relinquished by: Relinquished by: <i>P. Pataki</i> Date: 9/17/20 Relinquished by: <i>[Signature]</i> Date: 9/17/20 Relinquished by: <i>[Signature]</i> Date: 9/17/20 Cusotdy Seal No.: <i>387811</i>				
Received by: <i>[Signature]</i> Date/Time: 9/17/20/1246 Received by: <i>[Signature]</i> Date/Time: 9/17/20/1601 Received by: <i>[Signature]</i> Date/Time: 9/17/20/1830 Cooler Temperature(s) °C and Other Remarks:				

# Chain of Custody Record

777 New Durham Road  
Edison, NJ 08817  
Phone (732) 549-3900 Fax (732) 549-3679

<b>Client Information</b>		Sampler: HDR Inc.		Lab PM: Julie Gilmore		Carrier Tracking No(s): CPC GW CQC 091720	
Client Contact: Caroline Jalanti		Phone: 516-777-7242		E-Mail: julie.gilmore@testamericainc.com		Page 3 of 5	
Company: New York State D.E.C.		Due Date Requested:		Analysis Requested		Job #: 218768	
Address: 625 Broadway 12th Floor		TAT Requested (days): 10 days		8260C - Routine SOW VOC List+TBA		Preservation Codes:	
City: Albany		PO #: CallOut: 138032; Site: 130015		8270D - Routine SOW SVOC List		A - HCl	
State, Zip: NY, 12233-7017		WO #: 150 Winding Road, Old Bethpage		6010D - Metals - As, Ba, Cd, Cr, Fe, Mn, Pb, Sb, Se		B - NaOH	
Phone:		Project #: 46008579		7470A - Mercury		C - Zn Acetate	
Email: Caroline.jalanti@dec.ny.gov		SSOV#:		2540D - TSS		D - Nitric Acid	
Project Name: DEC Claremont Treatment Plant, 130015		Sample Date		2570D - TDS		E - Hydrochloric Acid	
Site: Claremont Polychemical GWTF OU5		Sample Time		7196A - Hexavalent Chromium		F - Molybdenum	
Matrix (W=water, S=solid, O=wastewater, BT=tissue, AS=air)		Sample Date		351.2 - TKN		G - Molybdenum	
Sample Type (C=Comp, G=grab)		Sample Time		300.0 - Cl, Fl, SO4		H - Hexane	
Preservation Code:		Sample Date		9060A - TOC		I - None	
Sample Identification		Sample Time		351.2 - TKN		O - ASNaO2	
EW05-CP-00-091520		9/15/20 11:35 G		7196A - Hexavalent Chromium		P - Na2O4S	
EW07C-CP-00-091520		9/15/20 11:55 G		2540D - TSS		Q - Na2SO3	
EW07D-CP-00-091520		9/15/20 12:00 G		2570D - TDS		R - Na2SO3	
EW11D-CP-00-091420		9/14/20 13:00 G		7470A - Mercury		S - H2SO4	
EW12D-CP-00-091420		9/14/20 13:10 G		6010D - Metals - As, Ba, Cd, Cr, Fe, Mn, Pb, Sb, Se		T - TSP Dodecahydrate	
EW14D-CP-00-091420		9/14/20 12:50 G		8270D - Routine SOW SVOC List		U - Acetone	
LF1-CP-00-091420		9/14/20 8:20 G		8260C - Routine SOW VOC List+TBA		V - MCAA	
M30BR-CP-00-091520		9/15/20 12:30 G		Field Filtered Sample (Yes or No)		W - pH 4-5	
MW05B-CP-00-091420		9/14/20 8:30 G		Perform (MS/MSD) (Yes or No)		L - EDA	
MW06B-CP-00-091520		9/15/20 10:20 G		Field Filtered Sample (Yes or No)		Other:	
MW06C-CP-00-091520		9/15/20 10:25 G		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
MW06D-CP-00-091520		9/15/20 10:30 G		Field Filtered Sample (Yes or No)		field sample 25	
field sample 24						field sample 27	
field sample 28						field sample 29	
field sample 30						field sample 31	
field sample 32						field sample 33	
field sample 34						field sample 35	
field sample 36						field sample 37	

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:

Received by: [Signature] Date/Time: 9/17/20 15:30 Company: HDR  
 Received by: [Signature] Date/Time: 9/17/20 16:00 Company: [Signature]  
 Received by: [Signature] Date/Time: 9/17/20 18:30 Company: [Signature]

Cooler Temperature(s) °C and Other Remarks: 38 IR (1)

**Chain of Custody Record**



<b>Client Information</b> Client Contact: HDR Inc. Phone: 516-777-7242 E-Mail: julie.gilmore@testamericainc.com Company: New York State D.E.C.		Lab PM: Julie Gilmore E-Mail: julie.gilmore@testamericainc.com		Carrier (Tracking No.): CPC GW 091720 Page: 4 of 5 Job #: 222 218768	
Address: 625 Broadway 12th Floor City: Albany State, Zip: NY, 12233-7017 Phone: Email: Caroline.jalanti@dec.ny.gov Project Name: DEC Claremont Treatment Plant, 130015 Site: Claremont Polychemical GWTF OUS		Due Date Requested: TAT Requested (days): 10 days FO #: CallOut: 138032, Site: 130015 WO#: 150 Winding Road, Old Bethpage Project #: 46008579 SSOW#:		Analysis Requested 8260C - Routine SOW VOC List+TBA 8270D - Routine SOW SVOC List 6010D - Metals - As, Ba, Cd, Cr, Fe, Mn, Pb, Sb, Se 7470A - Mercury 2570D - TDS 2540D - TSS 7196A - Hexavalent Chromium 3512 - TKN 9060A - TOC 300.0 - Cl, F, SO4 9012B - Total Cyanide	
Sample Identification MW06E-CP-00-091520 MW06F-CP-00-091520 MW07BR-CP-00-091420 MW08A-CP-00-091520 MW08B-CP-00-091520 MW08C-CP-00-091520 MW09B-CP-00-091420 MW09C-CP-00-091420 MW10D-CP-00-091520 MW11A-CP-00-091420 MW11B-CP-00-091420 OBS1-CP-00-091420		Sample Date 9/15/20 9/15/20 9/14/20 9/15/20 9/15/20 9/15/20 9/14/20 9/14/20 9/14/20 9/14/20		Sample Time 10:10 G 10:15 G 9:15 G 10:50 G 10:55 G 11:00 G 9:30 G 9:35 G 9:50 G 12:15 G 12:10 G 9:55 G	
Sample Type (C=Comp, G=grab) G G G G G G G G G G G		Preservation Code: W W W W W W W W W W W		Field Filtered Sample (Yes or No) N N N N N N N N N N N N	
Perform MS/MSD (Yes or No) N N N N N N N N N N N		Total Number of Containers 37 38 39 40 41 42 43 44 45 46 47 48		Special Instructions/Note: field sample field sample field sample field sample field sample field sample field sample field duplicate sample field sample field sample field sample field sample	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) NY Cat B					
Empty Kit Relinquished by: P. DEAN Relinquished by: [Signature] Relinquished by: [Signature]		Date: 9/17/17, 9/17/17, 9/17/17 Company: [Signature], [Signature], [Signature]		Date of Shipment: 9/17/17, 9/17/17, 9/17/17 Company: [Signature], [Signature], [Signature]	
Custody Seal No.: Yes No Cooler Temperature(s) °C and Other Remarks:					

382811

**Chain of Custody Record**

**Client Information**  
 Company: New York State D.E.C.  
 Address: 625 Broadway 12th Floor  
 City: Albany  
 State/Zip: NY, 12233-7017  
 Phone: [Blank]  
 Email: [Blank]  
 Project Name: DEC Claremont Treatment Plant: 130015  
 Site: Claremont Polychemical GWTF OU5

**Sampler:** HDR Inc.  
**Lab PM:** Julie Gilmore  
**Phone:** 516-777-7242  
**E-Mail:** julie.gilmore@testamericainc.com

**Carrier Tracking No(s):** CPC GW COC 091720  
**Page:** 5 of 5  
**Job #:** NY 02118768

**Due Date Requested:** 10 days  
**TAT Requested (days):** 10 days  
**Call/Out:** 138032, Site: 130015  
**WO #:** 150 Winding Road, Old Bethpage  
**Project #:** 46008579  
**SSOW#:** [Blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Analysis Requested		Special Instructions/Note:
					A	N	A	N	Code	Code	
SW1-CP-00-091520	9/15/20	11:15 G	W	W	X	X	X	X	7470A - Mercury	7196A - Hexavalent Chromium	field sample 49
WT01-CP-00-091420	9/14/20	13:20 G	W	W	X	X	X	X	351.2 - TKN	300.0 - Cl, Fl, SO4	field sample 50
WT01-CP-01-091420	9/14/20	13:20 G	W	W	X	X	X	X	2540D - TSS	9080A - TOC	field duplicate sample 51
xTB1-CP-QC-091520	9/15/20	13:40 G	W	W	X	X	X	X	8270D - Routine SOW SVOC List	8260C - Routine SOW VOC List+TBA	trip blank 52

**Preservation Code:**  
 A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2SO4, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, X - other (specify)

**Other:** [Blank]

**Analysis Requested:**  
 7196A - Hexavalent Chromium, 2540D - TSS, 2570D - TDS, 7470A - Mercury, 6010D - Metals - As, Ba, Cd, Cr, Fe, Mn, Pb, Sb, Se, 8270D - Routine SOW SVOC List, 8260C - Routine SOW VOC List+TBA

**Special Instructions/Note:**  
 Total Number of Containers: 4

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month):**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Possible Hazard Identification:**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify) NY Cat B

**Empty Kit Relinquished by:** [Blank] **Date:** [Blank]

**Relinquished by:** P. AKAGI, Date/Time: 9/17/20 15:16  
 Relinquished by: [Signature], Date/Time: 9/17/20 15:30  
 Relinquished by: [Signature], Date/Time: 9/17/20 15:30

**Relinquished by:** [Signature], Date/Time: 9/17/20 15:30

**Custody Seals Intact:** A Yes Δ No  
**Custody Seal No.:** 38IR11

**Received by:** [Signature], Date/Time: 9/17/20 15:16  
**Received by:** [Signature], Date/Time: 9/17/20 16:00  
**Received by:** [Signature], Date/Time: 9/17/20 18:30

**Method of Shipment:** [Blank]  
**Company:** NDR Company, [Signature]  
**Company:** [Signature], [Signature]  
**Company:** [Signature], [Signature]

**Cooler Temperature(s) °C and Other Remarks:**  
 [Blank]

Chain of Custody Record



<b>Client Information</b>	Client Contact: Jennifer Rhee	Sampler: Mathew Papula Phone: 845-263-0241	Lab PM: Julie Gilmore E-Mail: Julie.Gilmore@EuroInsel.com	Carrier Tracking No(s):	COC No: 46026810	Page: 1 of 1
Company: HDR	Address: 1 International Blvd, 10th Floor, Suite 1000 City: Mahwah State, Zip: New Jersey 07945	Due Date Requested: Standard TAT TAT Requested (days): 10 Day	PO #: HDR1000100031776	Analysis Requested	Job #: 218818	
Phone: 845-821-1801	Email: Jennifer.Rhee@hdrinc.com	WO #: 501 Winding Road, Old Bethpage	Project #: WAA#43 Claremont Polychemical RI/FS	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDTA M - Hexane N - None O - AsAcO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylpyrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	Other:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=swatch, B1-Tissue, A=AA)	Field Filtered Sample (Yes or No)	Perform MSMSD (Yes or No)	TCL VOCs 8260C + TICs	1,4 Dioxane 8270D_SIM, aqueous	PFCs - Modified Method 537 (list of 21 analytes)	Total Number of containers	Special Instructions/Note:
GW-CPC-37-R6-GW-445-20200918-0	9/18/20	1020	G	W	X	X	A	1	2	7	1
GW-CPC-38-R6-GW-391-20200918-0	9/18/20	1020	G	W	X	X	3	2	2	7	2
IB-20200918	9/18/20		G	W	X	X	2	-	-	2	3
GW-CPC-36-R6-GW-251-20200921-0	9/21/20	1005	G	W	X	X	3	2	2	7	4



SUB WORK

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Corrosive  Irritant  Toxic  Volatile  Other (specify) \_\_\_\_\_

Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_

NY Cat B  
NYSDEC EDD Formal & Excel

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Ship For \_\_\_\_\_ Months

Special Instructions/OC Requirements: Callout 138032  
Send invoices to: jennifer.rhee@hdrinc.com

Relinquished by: Jennifer Rhee	Date/Time: 9/21/20 12:30	Company: HDR	Received by: [Signature]	Date/Time: 9/21/20 12:30	Company: HDR
Relinquished by: [Signature]	Date/Time: 9/21/20 18:30	Company: HDR	Received by: [Signature]	Date/Time: 9/21/20 18:30	Company: HDR

Custody Seats Intact:  Yes  No

Custody Seal No.: 3-8 ER 11

Ver: 08/04/2016



## PFCs Sampling Checklist

Date: 9/16/2020

Weather (temp./precipitation): 62°F, UNW 30PM Site Name: Clearmont  
Clear

### **Field Clothing and PPE:**

- No clothing or boots containing Gore-Tex™
- All safety boots made from polyurethane and PVC
- No materials containing Tyvek®
- Field crew has not used fabric softener on clothing
- Field crew has not used cosmetics, moisturizers, hand cream, or other related products this morning
- Field crew has not applied unauthorized sunscreen or insect repellent

### **Field Equipment:**

- No Teflon® or LDPE containing materials on-site
- All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- No waterproof field books on-site
- No plastic clipboards, binders, or spiral hard cover notebooks on-site
- No adhesives (Post-It Notes) on-site

- Coolers filled with regular ice only. No chemical (blue) ice packs in possession

### **Sample Containers:**

- All sample containers made of HDPE or polypropylene
- Caps are unlined and made of HDPE or polypropylene

### **Wet Weather (as applicable):**

- Wet weather gear made of polyurethane and PVC only

### **Equipment Decontamination:**

- "PFC-free" water on-site for decontamination of sample equipment. No other water sources to be used.
- Alconox and Liquinox to be used as decontamination materials

### **Food Considerations:**

- No food or drink on-site with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Lead shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the site or removal of worker offsite until in compliance.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

\_\_\_\_\_

\_\_\_\_\_

Field Lead Name: Matthew T. Poppele

Field Lead Signature: \_\_\_\_\_ Time: 0800



# Daily Tailgate Safety Meeting Form

Project Name: Claremont RIFS
Client: NYSDEC WA#43 Claremont Polychemical
HDR Project Number: 10109218 task 204

Project Manager: Jennifer Rhee
Completed by: <i>Matthew T. Papad</i>
Date: <i>09 / 16 / 20</i>

### Potential Hazards at Site:

<i>Slips/Trips/Falls</i>	<i>Traffic</i>	<i>Biological</i>
<i>Cold stress</i>	<i>Sharp edges/Cuts</i>	<i>Organic chemicals in groundwater</i>
<i>Heat stress</i>		

### Safety Topic(s) Discussed

PPE – Level D including hard hats, steel toed boots, high-visibility vests, hearing and eye protection
Biological – Loose pets, animals in residential areas
Heat/cold stress – Drink plenty of fluids. Check yourself and others for warning signs. Wear warm layers.
Slip/Trip/Fall – Slip/trip hazards in sidewalked and grassy areas. Trip hazards in work zone – pick up/move items.
Chemicals – Soil and groundwater impacted with volatile organic compounds.
Traffic – Active urban roads with vehicular traffic. Observe surroundings while traversing on foot and driving to drilling locations.

### Tailgate Meeting Attendees:

Name	Signature	Company
<i>Matthew T. Papad</i>	<i>[Signature]</i>	<i>HDR</i>
<i>Matthew T. Keaveney</i>	<i>[Signature]</i>	<i>HDR</i>

Check Box if additional information included on the back of this sheet



# Daily Tailgate Safety Meeting Form

Project Name: Claremont RIFS
Client: NYSDEC WA#43 Claremont Polychemical
HDR Project Number: 10109218 task 204

Project Manager: Jennifer Rhee
Completed by:
Date: 9/17/20

### Potential Hazards at Site:

Slips/Trips/Falls	Traffic	Biological
Cold stress	Sharp edges/Cuts	Organic chemicals in groundwater

### Safety Topic(s) Discussed

PPE – Level D including hard hats, steel toed boots, high-visibility vests, hearing and eye protection
Biological – Loose pets, animals in residential areas
Heat/cold stress – Drink plenty of fluids. Check yourself and others for warning signs. Wear warm layers.
Slip/Trip/Fall – Slip/trip hazards in sidewalked and grassy areas. Trip hazards in work zone – pick up/move items.
Chemicals – Soil and groundwater impacted with volatile organic compounds.
Traffic – Active urban roads with vehicular traffic. Observe surroundings while traversing on foot and driving to drilling locations.

### Tailgate Meeting Attendees:

Name	Signature	Company
Matthew T. Papale		HDR
Matthew T. Keaveney		HDR

Check Box if additional information included on the back of this sheet



# Daily Tailgate Safety Meeting Form

Project Name: Claremont RIFS
Client: NYSDEC WA#43 Claremont Polychemical
HDR Project Number: 10109218 task 204

Project Manager: Jennifer Rhee
Completed by:
Date: 09 / 18 / 20

## Potential Hazards at Site:

Slips/Trips/Falls	Traffic	Biological
Cold stress	Sharp edges/Cuts	Organic chemicals in groundwater

## Safety Topic(s) Discussed

PPE – Level D including hard hats, steel toed boots, high-visibility vests, hearing and eye protection
Biological – Loose pets, animals in residential areas
Heat/cold stress – Drink plenty of fluids. Check yourself and others for warning signs. Wear warm layers.
Slip/Trip/Fall – Slip/trip hazards in sidewalked and grassy areas. Trip hazards in work zone – pick up/move items.
Chemicals – Soil and groundwater impacted with volatile organic compounds.
Traffic – Active urban roads with vehicular traffic. Observe surroundings while traversing on foot and driving to drilling locations.

## Tailgate Meeting Attendees:

Name	Signature	Company
Matthew T. Popula		HDR
Matthew T. Keane		HDR

Check Box if additional information included on the back of this sheet



# Daily Tailgate Safety Meeting Form

Project Name: Claremont RIFS
Client: NYSDEC WA#43 Claremont Polychemical
HDR Project Number: 10109218 task 204

Project Manager: Jennifer Rhee
Completed by: <i>M. Papule</i>
Date: <i>9 / 21 / 20</i>

### Potential Hazards at Site:

<i>Slips/Trips/Falls</i>	<i>Traffic</i>	<i>Biological</i>
<i>Cold stress</i>	<i>Sharp edges/Cuts</i>	<i>Organic chemicals in groundwater</i>

### Safety Topic(s) Discussed

PPE – Level D including hard hats, steel toed boots, high-visibility vests, hearing and eye protection
Biological – Loose pets, animals in residential areas
Heat/cold stress – Drink plenty of fluids. Check yourself and others for warning signs. Wear warm layers.
Slip/Trip/Fall – Slip/trip hazards in sidewalked and grassy areas. Trip hazards in work zone – pick up/move items.
Chemicals – Soil and groundwater impacted with volatile organic compounds.
Traffic – Active urban roads with vehicular traffic. Observe surroundings while traversing on foot and driving to drilling locations.

### Tailgate Meeting Attendees:

Name	Signature	Company
<i>Matthew T. Papule</i>	<i>[Signature]</i>	<i>HDR</i>
<i>Jennifer Rhee</i>	<i>[Signature]</i>	<i>HDR</i>

Check Box if additional information included on the back of this sheet

## PFCs Sampling Checklist

Date: 9/17/2020

Weather (temp./precipitation): 64°F; overcast, 0MPH Site Name: Clairmont OUS

### **Field Clothing and PPE:**

- No clothing or boots containing Gore-Tex™
- All safety boots made from polyurethane and PVC
- No materials containing Tyvek®
- Field crew has not used fabric softener on clothing
- Field crew has not used cosmetics, moisturizers, hand cream, or other related products this morning
- Field crew has not applied unauthorized sunscreen or insect repellent

### **Field Equipment:**

- No Teflon® or LDPE containing materials on-site
- All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- No waterproof field books on-site
- No plastic clipboards, binders, or spiral hard cover notebooks on-site
- No adhesives (Post-It Notes) on-site

- Coolers filled with regular ice only. No chemical (blue) ice packs in possession

### **Sample Containers:**

- All sample containers made of HDPE or polypropylene
- Caps are unlined and made of HDPE or polypropylene

### **Wet Weather (as applicable):**

- Wet weather gear made of polyurethane and PVC only

### **Equipment Decontamination:**

- "PFC-free" water on-site for decontamination of sample equipment. No other water sources to be used.
- Alconox and Liquinox to be used as decontamination materials

### **Food Considerations:**

- No food or drink on-site with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Lead shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the site or removal of worker offsite until in compliance.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

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Field Lead Name: Matthew T. Papula

Field Lead Signature: \_\_\_\_\_

Time: 9/17/2020

# PFCs Sampling Checklist

Date: 9/18/2020

Weather (temp./precipitation): 73°F, overcast, 1/16" rain Site Name: Clairmont 04-5

## **Field Clothing and PPE:**

- No clothing or boots containing Gore-Tex™
- All safety boots made from polyurethane and PVC
- No materials containing Tyvek®
- Field crew has not used fabric softener on clothing
- Field crew has not used cosmetics, moisturizers, hand cream, or other related products this morning
- Field crew has not applied unauthorized sunscreen or insect repellent

## **Field Equipment:**

- No Teflon® or LDPE containing materials on-site
- All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- No waterproof field books on-site
- No plastic clipboards, binders, or spiral hard cover notebooks on-site
- No adhesives (Post-It Notes) on-site

- Coolers filled with regular ice only. No chemical (blue) ice packs in possession

## **Sample Containers:**

- All sample containers made of HDPE or polypropylene
- Caps are unlined and made of HDPE or polypropylene

## **Wet Weather (as applicable):**

- Wet weather gear made of polyurethane and PVC only

## **Equipment Decontamination:**

- "PFC-free" water on-site for decontamination of sample equipment. No other water sources to be used.
- Alconox and Liquinox to be used as decontamination materials

## **Food Considerations:**

- No food or drink on-site with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Lead shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the site or removal of worker offsite until in compliance.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

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Field Lead Name: Matthew T. Papula

Field Lead Signature: [Signature] Time: 0720

## PFCs Sampling Checklist

Date:

9/21/2020

Weather (temp./precipitation):

65°F; clear,

Site Name:

Clairmont 04-5

### **Field Clothing and PPE:**

- No clothing or boots containing Gore-Tex™
- All safety boots made from polyurethane and PVC
- No materials containing Tyvek®
- Field crew has not used fabric softener on clothing
- Field crew has not used cosmetics, moisturizers, hand cream, or other related products this morning
- Field crew has not applied unauthorized sunscreen or insect repellent

### **Field Equipment:**

- No Teflon® or LDPE containing materials on-site
- All sample materials made from stainless steel, HDPE, acetate, silicon, or polypropylene
- No waterproof field books on-site
- No plastic clipboards, binders, or spiral hard cover notebooks on-site
- No adhesives (Post-It Notes) on-site

- Coolers filled with regular ice only. No chemical (blue) ice packs in possession

### **Sample Containers:**

- All sample containers made of HDPE or polypropylene
- Caps are unlined and made of HDPE or polypropylene

### **Wet Weather (as applicable):**

- Wet weather gear made of polyurethane and PVC only

### **Equipment Decontamination:**

- "PFC-free" water on-site for decontamination of sample equipment. No other water sources to be used.
- Alconox and Liquinox to be used as decontamination materials

### **Food Considerations:**

- No food or drink on-site with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area

If any applicable boxes cannot be checked, the Field Lead shall describe the noncompliance issues below and work with field personnel to address noncompliance issues prior to commencement of that day's work. Corrective action shall include removal of noncompliance items from the site or removal of worker offsite until in compliance.

Describe the noncompliance issues (include personnel not in compliance) and action/outcome of noncompliance:

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Field Lead Name:

Matthew T. Papale

Field Lead Signature:



Time:

0750





# Well Sampling Log

# Well ID No.: MW-CPC-36

Well Casing Type: 2.5" Sch 80 PVC

Start SWL: 21.89

Project: WA#43 Claremont Polychemical Quarterly Sampling

Well Depth\*\*\*: 256

Water Column Ht.: 234.11

Date: 9/21/2020

Screened Interval: 246 - 255.7

Well Volume (gallons): 60

Crew: MTP, JR

Well Elevation\*\*\*: 75.93

SWL During Sampling: 24.3

Pump Intake (ft) 251

Well Diameter (in.) 2.5

Sample Time: 1005

Meters Used: YSI Dss Pro, Hach 2100Q

Well Condition: Good

Sample Method: Pump

PID Head Space (ppm): 0

Weather Conditions: 56°F, Clear,NNE 10-15MPH

Sample Analyses: VOC, PFCs, 1,4-Dioxane

Sample ID: MW-CPC-36-R6-GW-251-20200921-0

Comments: Hach 2100Q was not reading correctly and no calibration standards were supplied. Used YSI turbidity meter.

Notes: \* - Measurement taken from top of well casing

Time	Est. Liters Purged	Purge Rate (Lpm)	Temp. (C°)	Cond. (ms/cm)	ORP (mV)	D.O. (mg/L)	pH	TDS (g/L)	Salinity (ppth)	Turbidity (NTU)	Depth to Water*	Comments
0900	0	0.27	13.7	0.471	-18	0.98	6.1	0.306	0.23	14.29	21.89	
0905	1.35	0.27	13.6	0.468	-46	0.73	6.1	0.304	0.23	17.47	21.98	
0910	2.7	0.27	13.7	0.462	-54	0.63	6.1	0.3	0.22	19.65	21.99	
0915	4.05	0.27	13.7	0.45	-53	0.59	6.1	0.292	0.22	17.45	21.99	
0920	5.4	0.27	13.7	0.432	-46	0.56	5.9	0.279	0.21	17.24	21.99	
0925	6.75	0.27	13.6	0.412	-35	0.54	5.8	0.267	0.2	17.45	21.99	
0930	8.1	0.27	13.6	0.405	-30	0.53	5.8	0.263	0.2	13.28	21.99	
0935	9.45	0.27	13.7	0.397	-23	0.52	5.7	0.258	0.19	17.22	21.99	
0940	10.8	0.27	13.7	0.39	-17	0.5	5.7	0.253	0.19	26	21.99	
0945	12.15	0.27	13.7	0.386	14	0.49	5.6	0.251	0.19	17.76	21.99	
0950	13.5	0.27	13.7	0.386	-11	0.49	5.6	0.251	0.19	18	21.99	
0955	14.85	0.27	13.7	0.386	-10	0.48	5.6	0.251	0.19	19.7	21.99	
1000	16.2	0.27	13.7	0.386	-8	0.48	5.6	0.251	0.19	17.3	21.99	stable Turbidity below 20 (Hach final reading 8.85 NTU)
												Sample Collected
1005	Collecting Sample											

Comments: None.



# Well Sampling Log

**Well ID No.:** MW-CPC-37

**Well Casing Type:** 2.5" Sch 80 PVC

**Start SWL:** 26.91

**Project:** WA#43 Claremont Polychemical Quarterly Sampling

**Well Depth:\*\*:** 450

**Water Column Ht.:** 423.09

**Date:** 9/18/2020

**Screened Interval:** 440 - 450

**Well Volume (gallons):** 108

**Crew:** MTP, MTK

**Well Elevation:\*\*:** 77.87

**SWL During Sampling:** 27.62

**Pump Intake (ft)** 445

**Well Diameter (in.)** 2.5

**Sample Time:** 1000

**Meters Used:** YSI Dss Pro, Hach 2100Q

**Well Condition:** Good

**Sample Method:** Pump

**PID Head Space (ppm):** 0

**Weather Conditions:** 63°F, Overcast,NNE 10-15MPH

**Sample Analyses:** VOC, PFCs, 1,4-Dioxane

**Sample ID:** MW-CPC-37-R6-GW-445-20200918-0

**Comments:** None.

Notes: \* - Measurement taken from top of well casing

Time	Est. Liters Purged	Purge Rate (Lpm)	Temp. (C°)	Cond. (ms/cm)	ORP (mV)	D.O. (mg/L)	pH	TDS (g/L)	Salinity (ppth)	Turbidity (NTU)	Depth to Water*	Comments
0850	0	0.35	15.1	0.215	-32	1.27	6.5	0.141	0.1	3.65	26.90	
0855	1.75	0.35	14.6	0.218	-75	0.88	6.4	0.142	0.1	5.55	26.90	
0900	3.5	0.35	14.5	0.24	-33	0.8	5.7	0.157	0.12	10.46	26.85	
0905	5.25	0.35	14.4	0.265	11	0.71	5.2	0.173	0.13	14.77	26.83	
0910	7	0.35	14.30	0.285	58	0.61	4.8	0.186	0.14	15.2	26.83	
0915	8.75	0.35	14.20	0.295	82	0.61	4.6	0.192	0.14	9.1	26.83	
0920	10.5	0.35	14.20	0.311	112	0.59	4.6	0.203	0.15	2.97	26.83	
0925	12.25	0.35	14.2	0.324	134	0.58	4.5	0.211	0.16	1.87	27.23	
0930	14	0.35	14.2	0.331	150	0.58	4.4	0.216	0.16	1.98	27.24	
0935	15.75	0.35	14.2	0.334	158	0.55	4.3	0.218	0.16	2	27.33	
0940	17.5	0.35	14.2	0.336	169	0.53	4.3	0.219	0.16	2.52	27.41	
0945	19.25	0.35	14.2	0.335	176	0.56	4.3	0.218	0.16	2.36	27.53	
0950	21	0.35	14.1	0.336	182	0.54	4.3	0.218	0.16	2.06	27.58	
0955	22.75	0.35	14.2	0.336	185	0.53	4.3	0.218	0.16	2.43	27.62	
1000	Collecting Sample											
Comments: GeoTech 7/10												



# Well Sampling Log

# Well ID No.: MW-CPC-38

Well Casing Type: 2.5" Sch 80 PVC

Start SWL: 29.05

Project: WA#43 Claremont Polychemical Quarterly Sampling

Well Depth: 394.5

Water Column Ht: 365.95

Date: 9/18/2020

Screened Interval: 384 - 395

Well Volume (gallons): 93

Crew: MTP, MTK

Well Elevation: 78.91

SWL During Sampling: 28.13

Pump Intake (ft) 391

Well Diameter (in.) 2.5

Sample Time: 1420

Meters Used: YSI Dss Pro, Hach 2100Q

Well Condition: Good

Sample Method: Pump

PID Head Space (ppm): 0

Weather Conditions: 68°F, Overcast, NNE 10-15MPH

Sample Analyses: VOC, PFCs, 1,4-Dioxane

Sample ID: MW-CPC-38-R6-GW-391-20200918-0

Comments:

Notes: \* - Measurement taken from top of well casing

Time	Est. Liters Purged	Purge Rate (Lpm)	Temp. (C°)	Cond. (ms/cm)	ORP (mV)	D.O. (mg/L)	pH	TDS (g/L)	Salinity (ppth)	Turbidity (NTU)	Depth to Water*	Comments
11:50	0	0.36	18.6	0.077	-6	3.91	6.6	0.05	0.04	94.5	29.23	
11:55	1.8	0.36	15.4	0.076	-41	3.45	6.5	0.049	0.03	51.7	29.29	
12:00	3.6	0.36	14.9	0.076	-66	0.87	6.5	0.049	0.04	55.85	29.31	
12:05	5.4	0.36	14.8	0.076	-73	0.77	6.5	0.049	0.03	60.77	29.40	
12:10	7.2	0.36	14.8	0.075	-77	0.72	6.5	0.049	0.03	66.67	29.40	
12:15	9	0.36	14.7	0.075	-84	0.61	6.4	0.049	0.03	95.21	29.43	
12:20	10.8	0.3	16.2	0.075	-94	0.54	6.4	0.049	0.03	80.52	29.24	
12:25	12.3	0.3	16.5	0.075	-99	0.54	6.5	0.049	0.03	89.88	29.19	
12:30	13.8	0.3	16.7	0.075	-106	0.51	6.5	0.049	0.03	84.16	29.11	
12:35	15.3	0.3	16.7	0.075	-109	0.52	6.5	0.049	0.03	85.03	29.06	
12:40	16.8	0.3	16.4	0.074	-109	0.54	6.5	0.048	0.03	85.27	29.12	
12:45	18.3	0.3	16.3	0.073	-105	0.55	6.5	0.047	0.03	89.86	28.73	
12:50	19.8	0.3	16	0.072	-106	0.55	6.5	0.047	0.03	89.55	28.62	
12:55	21.3	0.3	15.8	0.07	-104	0.56	6.5	0.045	0.03	74.93	28.58	
13:00	22.8	0.3	15.7	0.069	-102	0.55	6.5	0.045	0.03	70.06	28.50	
13:05	24.3	0.3	15.5	0.067	-99	0.55	6.4	0.043	0.03	71.6	28.48	
13:10	25.8	0.3	15.5	0.066	-97	0.55	6.4	0.043	0.03	68.26	28.46	
13:15	27.3	0.3	15.4	0.066	-98	0.53	6.4	0.043	0.03	66.25	28.40	
13:20	28.8	0.3	15.5	0.066	-99	0.51	6.4	0.043	0.03	57.28	28.33	
13:25	30.3	0.3	15.5	0.065	-96	0.5	6.3	0.042	0.03	53.24	28.33	
13:30	31.8	0.3	15.3	0.065	-99	0.49	6.3	0.042	0.03	57.01	28.26	
13:35	33.3	0.3	15.2	0.064	-98	0.48	6.3	0.042	0.03	52	28.30	
13:40	34.8	0.3	15.1	0.064	-98	0.47	6.3	0.041	0.03	70.22	28.20	
13:45	36.3	0.3	15.1	0.063	-97	0.48	6.3	0.041	0.03	54.77	28.15	
13:50	37.8	0.3	15	0.063	-97	0.46	6.3	0.041	0.03	53	28.10	
13:55	39.3	0.3	14.9	0.062	-97	0.46	6.2	0.04	0.03	46.47	28.13	
14:00	40.8	0.3	14.9	0.062	-96	0.46	6.2	0.04	0.03	45.67	28.13	
14:05	42.3	0.3	14.9	0.062	-96	0.45	6.2	0.04	0.03	47.84	28.13	
14:10	43.8	0.3	14.7	0.062	-95	0.45	6.2	0.04	0.03	47.75	28.13	
14:15	45.3	0.3	14.7	0.061	-95	0.44	6.2	0.04	0.03	48.72	28.13	
14:20	Collecting Sample											

Comments: None.



# Well Sampling Log

# Well ID No.: MW-CPC-39

Well Casing Type: 2.5" Sch 80 PVC

Start SWL: 26.38

Project: WA#43 Claremont Polychemical Quarterly Sampling

Well Depth\*\*\*: 390

Water Column Ht.: 363.62

Date: 9/16/2020

Screened Interval: 370.6 - 390

Well Volume (gallons): 92

Crew: MTP, MTK

Well Elevation\*\*\*: 75.25

SWL During Sampling: 25.1

Pump Intake (ft) 374

Well Diameter (in.) 2.5

Sample Time: 1715

Meters Used: YSI Dss Pro, Hach 2100Q

Well Condition: Good

Sample Method: Pump

PID Head Space (ppm): 0

Weather Conditions: 70°F, Cloudy, 13 MPH SSW

Sample Analyses: VOC, PFCs, 1,4-Dioxane

Sample ID: MW-CPC-39-R6-GW-374-20200916-0

Comments: Turbidity was high the hole time. Went to four hours then sampled.

Notes: \* - Measurement taken from top of well casing

Time	Est. Liters Purged	Purge Rate (Lpm)	Temp. (C°)	Cond. (ms/cm)	ORP (mV)	D.O. (mg/L)	pH	TDS (g/L)	Salinity (ppt)	Turbidity (NTU)	Depth to Water*	Comments
13:10	0	0.25	15.3	0.055	-34	1.04	6.23	0.035	0.02	47	25.60	
13:15	1.25	0.236	15.1	0.051	-52	0.71	5.95	0.033	0.02	150	25.60	
13:20	2.43	0.26	15	0.05	-51	0.67	5.89	0.033	0.02	170	25.60	
13:25	3.73	0.28	14.9	0.049	-52	0.6	5.8	0.033	0.02	188	25.54	
13:30	5.13	0.28	14.9	0.049	-53	0.59	5.79	0.032	0.02	250	25.51	
13:35	6.53	0.28	14.9	0.049	-53	0.59	5.79	0.032	0.02	274	25.43	
13:40	7.93	0.28	14.8	0.048	-53	0.57	5.77	0.031	0.02	237	25.43	
13:45	9.33	0.28	14.8	0.048	-53	0.56	5.76	0.031	0.02	238	25.73	
13:50	10.73	0.28	14.8	0.048	-54	0.55	5.75	0.031	0.02	232	25.72	
13:55	12.13	0.28	14.8	0.048	-56	0.53	5.75	0.031	0.02	237	25.74	
14:00	13.53	0.28	14.7	0.048	-57	0.53	5.75	0.031	0.02	240	25.76	
14:05	14.93	0.28	14.8	0.048	-57	0.53	5.74	0.031	0.02	242	25.81	
14:10	16.33	0.28	14.7	0.048	-59	0.52	5.74	0.032	0.02	253	25.79	
14:15	17.73	0.28	14.7	0.049	-61	0.51	5.74	0.032	0.02	265	25.68	
14:20	19.13	0.28	14.6	0.049	-63	0.5	5.73	0.032	0.02	281	25.69	
14:25	20.53	0.28	14.6	0.048	-64	0.49	5.74	0.032	0.02	274	25.70	
14:30	21.93	0.28	14.7	0.049	-64	0.49	5.75	0.032	0.02	275	25.72	
14:35	23.33	0.28	14.6	0.048	-64	0.49	5.82	0.031	0.02	318		
14:40	24.73	0.28	14.5	0.048	-63	0.49	5.79	0.031	0.02	355		
14:45	26.13	0.28	14.6	0.047	-62	0.48	5.74	0.03	0.02	387		
14:50	27.53	0.25	14.6	0.047	-62	0.47	5.7	0.02	0.02	459	25.96	
14:55	28.93	0.26	14.5	0.045	-57	0.46	5.63	0.029	0.02	459	25.75	
15:00	30.33	0.26	14.5	0.045	-57	0.46	5.63	0.029	0.02	729	25.72	
15:05	31.73	0.26	14.4	0.044	-57	0.45	5.62	0.029	0.02	802	25.74	
15:10	33.13	0.27	14.6	0.044	-57	0.45	5.63	0.029	0.02	752	25.70	
15:15	34.53	0.26	14.5	0.044	-57	0.45	5.6	0.029	0.02	708	25.68	
15:20	35.93	0.27	14.4	0.044	-57	0.44	5.57	0.029	0.02	723	25.66	
15:25	37.33	0.27	14.5	0.044	-57	0.44	5.59	0.029	0.02	696		
15:30	38.73	0.27	14.7	0.044	-57	0.44	5.59	0.029	0.02	688		
15:35	40.13	0.27	14.7	0.044	-57	0.42	5.59	0.029	0.02	689		
15:40	41.53	0.27	14.6	0.044	-57	0.42	5.59	0.029	0.02	683		
15:45	42.93	0.27	14.6	0.044	-57	0.42	5.59	0.029	0.02	632		
15:50	44.33	0.27	14.6	0.044	-57	0.42	5.6	0.029	0.02	622		



# Well Sampling Log

## Well ID No.: MW-CPC-39

Well Casing Type: 2.5" Sch 80 PVC

Start SWL: 26.38

Project: WA#43 Claremont Polychemical Quarterly Sampling

Well Depth: 390

Water Column Ht.: 363.62

Date: 9/16/2020

Screened Interval: 370.6 - 390

Well Volume (gallons): 92

Crew: MTP, MTK

Well Elevation: 75.25

SWL During Sampling: 25.1

Pump Intake (ft) 374

Well Diameter (in.) 2.5

Sample Time: 1715

Meters Used: YSI Dss Pro, Hach 2100Q

Well Condition: Good

Sample Method: Pump

PID Head Space (ppm): 0

Weather Conditions: 70°F, Cloudy, 13 MPH SSW

Sample Analyses: VOC, PFCs, 1,4-Dioxane

Sample ID: MW-CPC-39-R6-GW-374-20200916-0

Comments: Turbidity was high the hole time. Went to four hours then sampled.

Notes: \* - Measurement taken from top of well casing

Time	Est. Liters Purged	Purge Rate (Lpm)	Temp. (C°)	Cond. (ms/cm)	ORP (mV)	D.O. (mg/L)	pH	TDS (g/L)	Salinity (ppt)	Turbidity (NTU)	Depth to Water*	Comments
15:55	44.78	0.27	14.7	0.044	-59	0.42	5.53	0.029	0.02	643	25.73	
16:00	46.13	0.27	14.7	0.044	-57	0.42	5.53	0.029	0.02	587	25.37	
16:05	47.48	0.27	14.6	0.044	-57	0.42	5.54	0.029	0.02	602	25.39	
16:10	48.83	0.27	14.7	0.044	-57	0.41	5.55	0.029	0.02	578		
16:15	50.18	0.27	14.8	0.044	-58	0.42	5.55	0.029	0.02	585	25.15	
16:20	51.53	0.28	14.3	0.044	-53	0.51	5.55	0.028	0.02	565		
16:25	52.93	0.27	14.3	0.044	-56	0.44	5.55	0.028	0.02	539	25.23	
16:30	54.28	0.28	14.4	0.044	-56	0.43	5.6	0.028	0.02	516	25.14	
16:35	55.68	0.28	14.3	0.044	-56	0.43	5.56	0.028	0.02	498		
16:40	57.08	0.28	14.3	0.044	-55	0.44	5.56	0.028	0.02	484		
16:45	58.48	0.28	14.2	0.044	-56	0.42	5.55	0.028	0.02	475		
16:50	59.88	0.28	14.2	0.043	-55	0.45	5.55	0.028	0.02	484		
16:55	61.28	0.28	14.3	0.044	-56	0.42	5.55	0.028	0.02	459		
17:00	62.68	0.28	14.2	0.043	-56	0.41	5.54	0.028	0.02	452		
17:05	64.08	0.28	14.2	0.043	-56	0.41	5.55	0.028	0.02	455		
17:10	65.48	0.28	14.2	0.043	-56	0.41	5.53	0.028	0.02	461	25.10	
17:15	Collecting sample											

Comments: GeoTech 15/15



# Well Sampling Log

Well ID No.: MW-CPC-40

Well Casing Type: 2.5" Sch 80 PVC

Start SWL: 57.52

Project: WA#43 Claremont Polychemical Quarterly Sampling

Well Depth: 317

Water Column Ht: 259.48

Date: 9/17/2020

Screened Interval: 307-317

Well Volume (gallons): 66

Crew: MTP/MTK

Well Elevation: 110

SWL During Sampling: 56.9

Pump Intake (ft) 312

Well Diameter (in.) 2.5

Sample Time: 1020

Meters Used: YSI Dss Pro, Hach 2100Q

Well Condition: Good

Sample Method: Bladder Pump

PID Head Space (ppm): 0

Weather Conditions: 68°F, Cloudy, W 5-10 MPH

Sample Analyses: VOC, PFCs, 1,4-Dioxane

Sample ID: MW-CPC-40-R6-GW-312-20200917-0

Comments: Field duplicate MW-CPC-40-R6-GW-312-20200917-1 collected at this location.

Notes: \* - Measurement taken from top of well casing

Time	Est. Liters Purged	Purge Rate (Lpm)	Temp. (C°)	Cond. (ms/cm)	ORP (mV)	D.O. (mg/L)	pH	TDS (g/L)	Salinity (ppth)	Turbidity (NTU)	Depth to Water*	Comments
0910	0	0.3	14.9	0.131	171	4.67	6.4	0.085	0.06	42.5	57.12	
0915	1.5	0.3	14.6	0.131	160	0.88	5.9	0.085	0.06	15.88	57.12	
0920	3	0.3	14.4	0.131	176	0.67	5.7	0.085	0.06	22.6	57.12	
0925	4.5	0.3	14.4	0.131	179	0.63	5.7	0.085	0.06	12.2	57.12	
0930	6	0.3	14.4	0.131	185	0.58	5.7	0.085	0.06	11.8	57.11	
0935	7.5	0.3	14.3	0.131	188	0.58	5.6	0.085	0.06	6.99	57.12	
0940	9	0.3	14.4	0.134	200	0.91	5.4	0.087	0.06	7.54	57.15	
0945	10.5	0.3	14.3	0.134	203	0.99	5.4	0.088	0.06	6.91	57.15	
0950	12	0.3	14.3	0.135	209	1.09	5.3	0.088	0.06	10.2	57.15	
0955	13.5	0.3	14.2	0.137	218	1.31	5.2	0.089	0.06	13.1	57.15	
1000	15	0.3	14.2	0.136	225	1.42	5.2	0.089	0.06	30	57.15	
1005	16.5	0.3	14.2	0.136	227	1.42	5.2	0.089	0.06	32.9	57.09	
1010	18	0.3	14.1	0.136	229	1.43	5.2	0.088	0.06	32.4	57.00	
1015	19.5	0.3	14.3	0.135	230	1.46	5.2	0.088	0.06	31.2	56.90	
1020	Collecting Sample											
Comments: GeoTech 20/10												



# Well Sampling Log

## Well ID No.: MW-CPC-41

Well Casing Type: 2.5" Sch 80 PVC

Start SWL: 19.57

Project: WA#43 Claremont Polychemical Quarterly Sampling

Well Depth: 263

Water Column Ht: 243.43

Date: 9/17/2020

Screened Interval: 253 - 263

Well Volume (gallons): 62

Crew: MTP/MTK

Well Elevation: 72.6

SWL During Sampling: 19.8

Pump Intake (ft) 258

Well Diameter (in.) 2.5

Sample Time: 1320

Meters Used: YSI Dss Pro, Hach 2100Q

Well Condition: Good

Sample Method: Bladder Pump

PID Head Space (ppm): 0

Weather Conditions: 75°F, Overcast, W 10-15MPH

Sample Analyses: VOC, PFCs, 1,4-Dioxane

Sample ID: MW-CPC-41-R6-GW-258-20200917-0

### Comments:

Notes: \* - Measurement taken from top of well casing

Time	Est. Liters Purged	Purge Rate (Lpm)	Temp. (C°)	Cond. (ms/cm)	ORP (mV)	D.O. (mg/L)	pH	TDS (g/L)	Salinity (ppth)	Turbidity (NTU)	Depth to Water*	Comments
12:10	0	0.1	21.1	0.159	171	2.94	6.7	0.104	0.07	3.5	19.70	
12:15	0.5	0.1	18.1	0.155	116	1.14	5.6	0.101	0.07	1.66	19.76	
12:20	1	0.1	17.3	0.154	121	0.91	5.3	0.1	0.07	8.54	19.86	
12:25	1.5	0.1	16.8	0.153	142	0.78	5.2	0.1	0.07	20	19.80	
12:30	2	0.1	16.4	0.153	152	0.7	5.1	0.1	0.07	38.4	19.80	
12:35	2.5	0.1	16.2	0.153	164	0.62	5.0	0.1	0.07	37.3	19.80	
12:40	3	0.1	16.1	0.153	173	0.6	5.0	0.1	0.07	29.4	19.80	
12:45	3.5	0.1	15.7	0.153	188	0.57	4.9	0.1	0.07	17.5	19.80	
12:50	4	0.1	15.6	0.153	199	0.58	4.8	0.1	0.07	14.6	19.80	
12:55	4.5	0.1	15.6	0.153	205	0.58	4.8	0.1	0.07	13.4	19.80	
13:00	5	0.1	15.6	0.151	211	1.16	4.8	0.098	0.07	10.2	19.80	
13:05	5.5	0.1	15.4	0.151	218	0.61	4.8	0.095	0.07	9.69	19.80	
13:10	6	0.1	15.4	0.15	220	0.57	4.8	0.098	0.07	10.3	19.80	
13:15	6.5	0.1	15.4	0.151	223	0.55	4.8	0.098	0.07	7.07	19.80	
13:20	Collecting Sample											
Comments: None.												