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Letter of Transmittal

Date: 7-17-18	Job No.: 451246.01000
Re: Comprehensive Groundwater Summary Report, Former Texaco Research Center Beacon (Glenham), New York	

TO:

Mr. William Bennett, P.E.
Environmental Engineer, Remedial Bureau C

Section B; Division of Environmental Remediation, New York State Department of Environmental Conservation

625 Broadway

Albany, NY 12233-7014

WE ARE SENDING YOU THE FOLLOWING ITEMS:

❑ Shop drawings ☒ Attached ❑Under separate cover via _____ the following items:

❑ Copy of Letter ❑ Prints ❑ Plans ❑ Samples ❑ Specifications

Dated: _____ ❑ Charge Order ❑ _____

COPIES	DESCRIPTION
1	***One electronic copy on disk of the Comprehensive Groundwater Summary Report, Former Texaco Research Center-Beacon, NY for your review, approval, and records***

THESE ARE TRANSMITED as checked below:

☒ For approval ❑ For checking ❑ Resubmit ____ copies for approval

☒ For your use ❑ Approved as submitted ❑ Design only, not for construction

❑ For review and comment ❑ Approved as noted ❑ Return _____ corrected prints

❑ For your action ❑ Returned for corrections ❑ _____

REMARKS: Mr. Bennett, Attached is the Comprehensive Groundwater Summary Report, for the Former Texaco Research Center-Beacon, NY facility for your review, approval, and records. Please do not hesitate to contact me at 315-263-6053, should there be any questions or if we can provide additional assistance with the enclosed report.

Thank You

COPY TO: Project File
K. Kulow, NYSDOH
E. Moore, NYSDEC Region 3
M. Hendrickson, Chevron EMC
Kammy Sra, Chevron ETC

SIGNED: Craig F Butler

Craig F. Butler, P.E. LEED AP

If enclosures are not as noted, please notify us at once.

P:\Chevron Beacon\2018\2018 Projects\Comprehensive GW Report\10.0 Reports\Trnsmtl Comprehensive Groundwater Summary Report.docx

COMPREHENSIVE GROUNDWATER SUMMARY REPORT
Former Texaco Research Center
Beacon (Glenham), New York

Site ID# 314004
NYSDEC ID #3-1330-48/16-0
EPA ID # 091894899

Prepared For:

Mr. Mark Hendrickson
Chevron Environmental Management Company
Mining and Specialty Portfolio Business Unit
1400 Smith Street
Room 33124
Houston, Texas 77002

Prepared By:

PARSONS

301 Plainfield Road, Suite 350
Syracuse, New York 13212
Phone: (315) 451-9560
Fax: (315) 451-9570

July 2018

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LIST OF APPENDICES

LIST OF ACRONYMS

AOI	Area of Impact
ASTs	Aboveground Storage Tanks
ASP	Analytical Services Protocol
bgs	Below Ground Surface
CB	Chlorobenzene
COC	Chain-of-Custody
CSIA	Compound Specific Isotope Analysis
DER	(NYSDEC) Division of Environmental Remediation
EIM™	Environmental Information Management
EMC	Environmental Management Company (Chevron)
ELAP	Environmental Laboratory Approval Program
HFDP	Hydroelectric Facility and Dam Parcel
GIS	Geographical Information System
IHWS	Inactive Hazardous Waste Site
LNAPL	Light Non-Aqueous Phase Liquid
Main Facility	Portion of the Site north of Fishkill Creek (a.k.a. “Main Campus”)
MS/MSD	Matrix Spike and Matrix Spike Duplicate
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OU	Operable Unit
P.E.	Professional Engineer
QA/QC	Quality Assurance and Quality Control
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCE	Trichloroethene (a.k.a Trichloroethylene)
TOGS	Technical and Operational Guidance Series
TRCB	Texaco Research Center Beacon

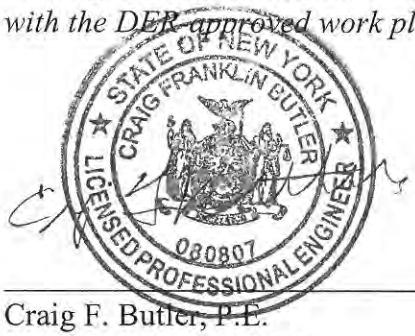
LIST OF ACRONYMS
(Continued)

USTs	Underground Storage Tanks
VC	Vinyl Chloride
VOCs	Volatile Organic Compounds
WATF	Washington Avenue Tank Farm

ENGINEER'S CERTIFICATION

CERTIFICATION OF COMPLETION

I, Craig F. Butler, certify that I am currently a New York State registered Professional Engineer (P.E.) and that the Comprehensive Groundwater Summary Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the New York State Department of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plans and any DER-approved modifications.



Craig F. Butler, P.E.
New York, No. 080807

07/16/18
Date

PARSONS

EXECUTIVE SUMMARY

The purpose of this report is to describe and document the conditions of groundwater at the Former Texaco Research Center Beacon (TRCB) facility located in Beacon, New York, based on the results of groundwater investigation activities performed throughout the facility and on adjacent properties. The groundwater investigations were performed to determine the analytical quality of the groundwater areas of impact (AOIs) and to determine if the AOIs appear to be expanding or shrinking, as well as migrating. A summary of results is provided below.

FORMER TRCB FACILITY

- Five (5) main groundwater AOIs exist at the facility within the shallow (overburden) and bedrock aquifers that exceed the New York State Department of Environmental Conservation (NYSDEC), Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA groundwater screening criteria. AOIs exist at the following locations: Building 51 Area, Building 45/55 Area, Building 36 Area, and Building 58/83 Area in the Operable Unit (OU) Number (No.) 1A (OU-1A) parcel and in the Former Washington Avenue Tank Farm (WATF) Area (OU-1C Parcel). The AOIs are composed of various Target Analyte List (TAL) Metals (e.g. aluminum, arsenic, iron, lead, etc.), volatile organic compounds (VOCs) (e.g. benzene, trichloroethylene (TCE), vinyl chloride (VC), chlorobenzene (CB), etc.), and semi-volatile organic compounds (SVOCs) (e.g. benzo(a)anthracene, benzo(b)fluoranthene, chrysene, indeno(1,2,3-cd) pyrene, etc.). The main contaminants of concern at the facility are benzene, TCE, VC, and CB.
- VOC concentrations were observed to fluctuate when compared to previous sampling events in individual wells, with no discernible trend. Concentrations in general did not increase or decrease significantly over time indicating that the groundwater AOIs are stabilized and/or stalling (groundwater AOIs not increasing or decreasing in dimension). Natural attenuation through biodegradation has been determined to be one of the contributing factors enabling natural reduction of groundwater contaminants to take place under both aerobic and anaerobic conditions. Compound Specific Isotope Analysis (CSIA) sampling results from 2015 and 2016 support this statement.
- Groundwater AOIs are not migrating off-site to adjacent properties and AOI boundaries either stayed the same or decreased slightly based on review of 2008 and 2016 groundwater analytical results from the ReCommunity Recycling Center groundwater investigation performed on an adjacent property located to the west of the Former TRCB facility. The groundwater analytical results showed no evidence of AOI migration beyond the facility's boundaries, while the groundwater analytical data from the adjacent property investigation did not indicate evidence of contaminants of concern at concentrations exceeding the NYSDEC groundwater criteria or the presence of Light Non-Aqueous Phase Liquid (LNAPL).

SECTION 1

INTRODUCTION

1.1 PROJECT OBJECTIVES

The purpose of this report is to describe and document the conditions of groundwater that exist at the Former Texaco Research Center Beacon (TRCB) facility (see Figure 1.1) located in Beacon, New York based on the results of groundwater investigation activities performed throughout the facility and on an adjacent property. The groundwater investigations were performed to determine the analytical quality of the groundwater areas of impact (AOIs) and to determine if the AOIs were expanding, decreasing, and/or migrating. Groundwater investigation activities were performed in Operable Unit (OU) Number 1A (OU-1A) (Main Facility Parcel), OU-1C (Former Washington Avenue Tank Farm Parcel (WATF)), OU-1E (Back 93 Acres Parcel), and OU-4 (Hydroelectric Facility and Dam Parcel (HFDP)) located on the Former TRCB Facility, while another groundwater investigation was performed on an adjacent property located to the west of the OU-1A refer to as the "ReCommunity Recycling Center Property (formerly known as the Westage Realty/Hudson Baylor Property).

1.2 GROUNDWATER INVESTIGATION PERFORMED

The facility is located on approximately 153 acres of land which is bisected by a creek (Fishkill Creek) and is divided into distinct OUs (Figure 1.2). As mentioned above, groundwater investigations were conducted throughout the years at the Former TRCB facility and at a property located adjacent to the facility. Groundwater investigation activities were conducted on the Former TRCB facility to provide additional data to compare against data collected from previous groundwater sampling events, to provide groundwater data from specific wells located at the facility in order to determine the degree of contaminant degradation taking place within the subsurface, examine effects of groundwater level on contaminant concentrations, assist in the refinement of a site conceptual model(s), and assist in identifying potential remedial alternatives for the site. Sampling activities took place from the mid 1980's to the present day. Only OUs in which groundwater investigation activities were performed are described below.

1.2.1 Main Facility Parcel (OU-1A Parcel)

The Main Facility Parcel, OU-1A, consists of 35.9 acres of land and was the location of textile mills. The mills were powered by water wheels and steam engines. Blacksmith and carpentry shops operated in support of the mills. More recently, this OU was used as an on-shore, non-production, non-transportation laboratory complex engaged in research, development, and technical services related to petroleum products and energy. This OU contained parking areas, offices and laboratory buildings, aboveground storage tanks (ASTs), underground storage tanks (USTs), roads, a wastewater treatment plant, and storage areas. Petroleum, coal products, and solvents have been used at OU-1A associated with research operations.

1.2.2 Former Washington Avenue Tank Farm Parcel (OU-1C Parcel)

The Former Washington Avenue Tank Farm (WATF) Parcel, OU-1C consists of 5.11 acres of land located south of Fishkill Creek. This OU was formerly the site of approximately thirty (30) ASTs and associated facilities.

1.2.3 Hydroelectric Dam and Facilities (OU-4 Parcel)

Hydroelectric Dam and Facilities, OU-4, is a 4.03-acre parcel that includes the Texaco Dam and associated facilities. The Texaco Dam (state identification number 212-5185 and federal identification number NY 14845) is a hydroelectric dam which spans Fishkill Creek between the powerhouse (Building 5) on the north bank to a level control structure on the south bank. The dam has been in place the entire time that the TRCB facility has been in operation by Chevron.

1.2.4 The Back 93 Acre Parcel (OU-1E Parcel) (Former known as the Recreation Area)

The Back 93 Acre Parcel, OU-1E, is a 93.66-acre undeveloped property located south of Washington Avenue and Fishkill Creek that consists primarily of unremarkable vegetated areas and variable terrain with elevation changes. The land parcel also includes a Class 4 Inactive Hazardous Waste Site (IHWS), as listed by the New York State Registry of Inactive Hazardous Waste Sites program, due to the former use of isolated portions of the parcel as a disposal site, a historic sludge lagoon, a "new" sludge lagoon permitted under RCRA Part B status (and now closed under permit), three (3) chemical burial sites, a disposal pit, and a container disposal site. Additionally, four (4) non-hazardous areas referred to as Trash Piles "A" through "D" were used for the disposal of non-hazardous materials. Materials disposed in these locations primarily consisted of wood and metal debris, grass clippings, old empty drums, and general trash.

1.2.5 Adjacent Property (ReCommunity Recycling Center) (Formerly known as the Westage Realty/Hudson Baylor Property) Groundwater Investigation

Groundwater investigation activities took place in 2010, 2013, 2015, and 2016 at a land parcel located to the west of the Former TRCB facility which is currently owned by ReCommunity Recycling. Investigation activities were conducted on the property to ascertain if groundwater impacts and evidence of light non-aqueous phase liquid (LNAPL), which was detected along the furthest western property of the Former TRCB facility, were migrating off-site. Refer to Figure 1.2 for the approximate location of the land parcel where investigation activities took place.

1.3 REPORT ORGANIZATION

This report has been organized into sections similar to those presented in previous reports.

Section 1 – "Introduction." This section presents report format, salient background information, and objectives.

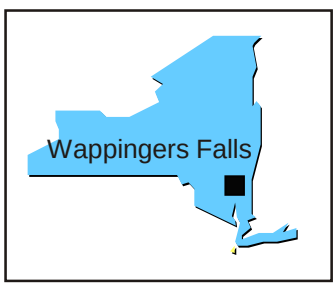
Section 2 – "Methodology." This section presents the field methodology used during field investigation activities.

Section 3 – "Previous Investigations." This section presents a brief description of the previous investigations performed for each investigation program.

Section 4 – "Comprehensive Groundwater Summary Results and Conclusions" This section presents subsurface and analytical summaries and current groundwater AOI conditions as related to each groundwater investigation program.

Section 5 – "References." This section presents documents that were reviewed during the preparation of this report.

FIGURE 1.1



New York Quadrangle

N

SOURCE: U.S.G.S. WAPPINGERS FALLS QUADRANGLE

Chevron Environmental Management Company (EMC)
Former Texaco Research Facility
Beacon, New York

SITE LOCATION MAP

PARSONS
301 PLAINFIELD ROAD * SUITE 350 * SYRACUSE, NY 13212 PHONE: (315) 451-9560

P:\Chevron Beacon\446068 - 2010 Site Demo Const Mgmt & ACM Ovrsght\15.0 CAMP Graphs and Data\Graphics\SITEMAP.PPTX

Former Washington Avenue Tank Farm Parcel
(OU-1C)

OU-2 Parcel

Residential Property Parcel
(OU-1D)

OU-1F

Main Facility Parcel
(OU-1A)

The Back 93 Acres Parcel
(OU-1E)

OU-4 Parcel

Residential Property Parcel
(OU-3)

Church Property Parcel
(OU-1B)

ReCommunity
Recycling Center
Property

N

0 250 500 1,000 1,500 Feet

Old Corresponding Area Designation

OU-1A: Northwest Area, Northeast Area, Building 51 Area, Building 45/55 Area, Building 36 Area, and Building 58/83 Area
OU-1B: Church Parcel Area
OU-1C: Former Washington Avenue Tank Farm Parcel
OU-1D: Rail Siding Area
OU-1E: Recreational Area
OU-1F: Fishkill Creek
OU-2: 0.233 acres to be dedicated to the Town of Fishkill.
OU-3: Residential Property Parcel
OU-4: Access Easement, Undeveloped Property and Former Mill Buildings.

Parcels

description, name

- OU-1A Main Facility Parcel
- OU-1B Church Property Parcel
- OU-1C Former Washington Avenue Tank Farm Parcel
- OU-1D Residential Property Parcel
- OU-1F Fishkill Creek
- OU-2 Road Parcel
- OU-3 Residential Property Parcel
- OU-4 Hydroelectric Facility & Dam Parcel
- OU-1E The Back 93 Acres Parcel

Figure 1.2

Overview of Operable Unit Boundaries
Former Texaco Research Center
Beacon New York

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J:\Chevron Beacon Risk Assessment\GIS\MXD\OperableUnitBoundaries.mxd

SECTION 2

METHODLOGY

2.1 INTRODUCTION

The purpose of this section is to describe the methods used during the field activities of the groundwater investigations. All groundwater sampling events conducted for the groundwater investigations were completed in accordance with the Generic Work Plan, Site Investigation Activities (Parsons, 2007b) and the revised project work plan (Parsons, Revised February 2015a) approved by the NYSDEC via electronic mail in the Spring of 2014.

2.2 SUMMARY OF WORK SCOPE FOR EACH GROUNDWATER INVESTIGATION PROGRAM

2.2.1 Former TRCB Facility Groundwater Investigations

The scope of work for this investigation program was the measurement of groundwater elevations and collection and analyses of groundwater samples from a minimum of forty-three (43) to a maximum of one-hundred fifty-eight - (158) groundwater monitoring wells in the OU-1A, OU-1C, OU-1E, and OU-4 parcels located at the Former TRCB facility. Wells sampled were installed in both overburden and bedrock groundwater aquifers. Sampling frequencies and the number of wells sampled varied depending on what groundwater investigation was being performed (i.e., sitewide groundwater sampling, natural attenuation groundwater sampling, or semi-annual compliance sampling). The locations of groundwater monitoring wells are shown on Figures 2.1 and 2.2.

2.2.2 ReCommunity Recycling Center Groundwater Investigation

The scope of work for this investigation program involved the measurement of groundwater elevations and collection and analyses of groundwater samples from five (5) bedrock groundwater monitoring wells at a property located to the west of the Former TRCB facility. The wells were sampled once each in 2010, 2013, 2015, and 2016. The locations of groundwater monitoring wells are shown on Figure 2.1 (SWMW-130(S), SWMW-130(D), SWMW-131, SWMW-132(S), and SWMW-132(D)).

2.3 QA/QC PROGRAM

2.3.1 Field Duplicate and MS/MSD Samples, Wash Blanks, Trip Blanks

Field duplicate, matrix spike and matrix spike duplicate (MS/MSD) samples and sample blanks were collected and analyzed in accordance with the Quality Assurance Project Plan (QAPP) included in the Generic Work Plan (Parsons, Revised February 2015a) during groundwater sampling activities.

2.3.2 Sample Custody and Custody Seals

Sample Chain-of-Custody (COC) logs and custody seals were used to ensure that sample integrity was not compromised subsequent to sample collection and during shipment to the laboratory. Shipment particulars, such as samples submitted, analyses requested, and sample custody were recorded on the COCs.

2.3.3 Laboratory Analyses

All analyses that were conducted during the groundwater investigation programs used the NYSDEC Analytical Services Protocol (ASP) dated September 1989 with revisions. The analytical work was performed by a laboratory approved by the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) for the categories of solid and hazardous waste. Chemical and physical analyses not covered by ASP procedures were conducted using procedures specified in the QAPP. Sample custody, laboratory procedures, and other Quality Assurance and Quality Control (QA/QC) requirements were performed in accordance with the specifications in the QAPP.

2.3.4 Data Validation

All samples were collected by Parsons and analyzed by Eurofins-Lancaster Laboratories, Lancaster, Pennsylvania following the procedures outlined in the revised Project QAPP (Parsons, Revised March 2015b).

The data submitted by the laboratory were reviewed and validated, following the guidelines outlined in the project QAPP.

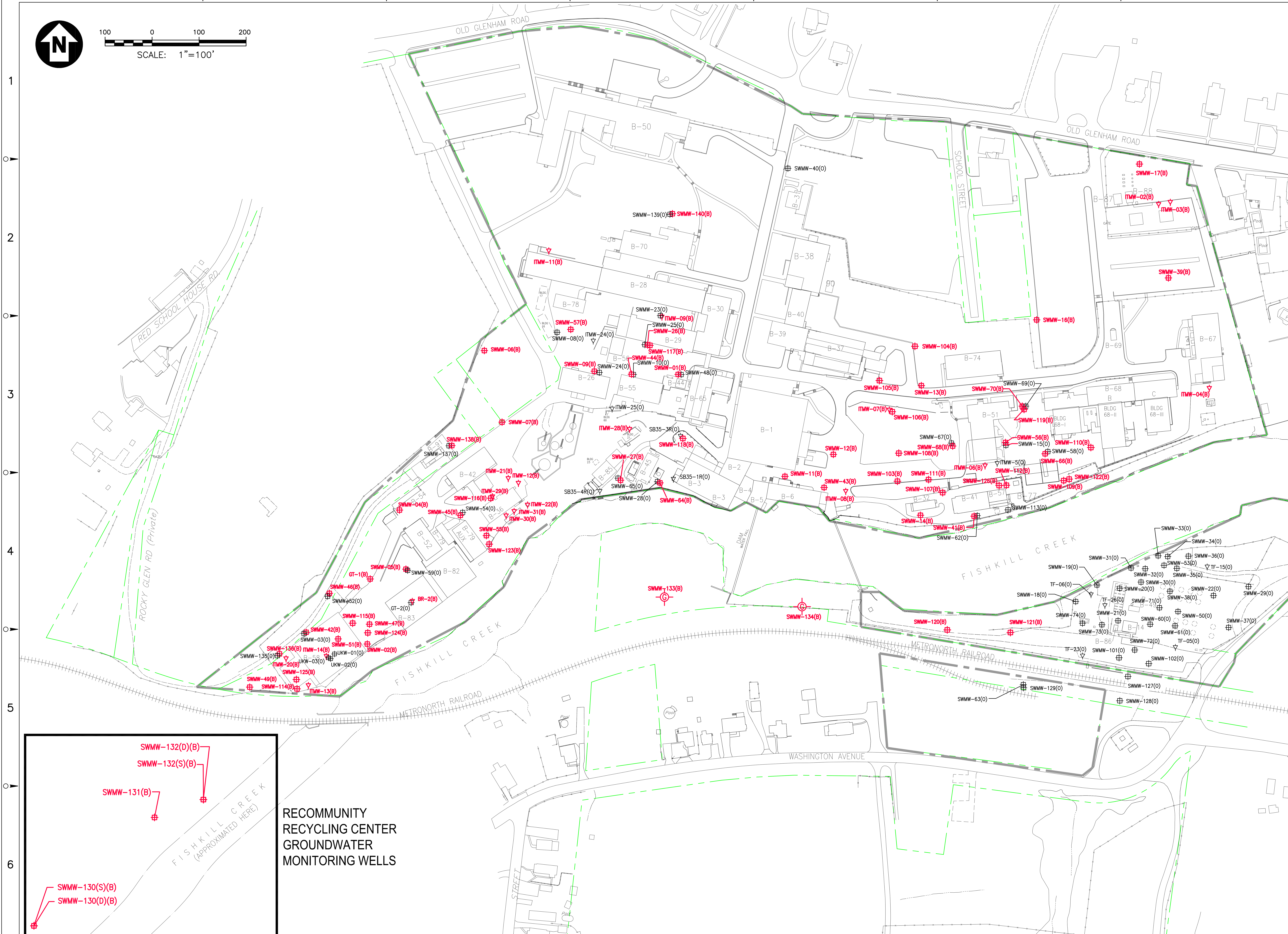
All the analytical data collected from the groundwater investigation programs were found to be acceptable in terms of deliverable completeness, accuracy, precision, representativeness, completeness and comparability.

2.4 DATABASE MANAGEMENT

Data generated during groundwater sampling activities were stored and managed using LocusFocus Environmental Information Management (Locus EIM™) database software (Chevron's national environmental lab data management program used on all Chevron projects). Following data validation, the Locus EIM™ database was updated to reflect any changes as a result of data validation. These changes included concentration changes, where appropriate, and removal, addition, and/or changes to data qualifiers. The data used in this report were taken from the updated master database to ensure that only current, validated analytical results were used.

2.5 SELECTION OF SCREENING CRITERIA

NYSDEC has issued guidance for the screening of groundwater analytical results. In 1998, NYSDEC issued Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Groundwater Quality Standards and Guidance Values and Groundwater Effluent Limitations (NYSDEC, 1998). This document provides a summary of water quality standards regulated under New York Codes, Rules and Regulations (NYCRR) 703.5 and proposes guidance values for compounds where regulatory standards do not exist. Standards and guidance values have been developed for the specific class of fresh groundwater. The water class assigned to fresh groundwater in New York State is Class GA. All groundwater analytical results generated during the groundwater investigation programs used the Class GA Standards and Guidance Values published in TOGS 1.1.1


SCALE: 1"=100'
100 0 100 200
OLD GLENHAM ROAD
RED SCHOOL HOUSE RD
ROCKY GLEN RD (Private)
SCHOOL STREET
FISHKILL CREEK
METRONORTH RAILROAD
WASHINGTON AVENUE
B-50
B-70
B-28
B-78
B-30
B-29
B-38
B-40
B-39
B-37
B-74
B-55
B-26
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B-51
B-68
B-69
B-67
B-42
B-82
B-83
B-2
B-3
B-5
B-6
B-41
SWMW-40(O)
SWMW-139(O)
SWMW-140(B)
SWMW-17(B)
ITMW-02(B)
ITMW-03(B)
ITMW-11(B)
SWMW-39(B)
SWMW-16(B)
SWMW-104(B)
SWMW-06(B)
SWMW-57(B)
SWMW-08(O)
SWMW-23(O)
ITMW-09(B)
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SWMW-26(B)
SWMW-117(B)
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ITMW-28(B)
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GT-2(O)
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SWMW-42(B)
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SWMW-03(O)
SWMW-51(B)
SWMW-02(B)
SWMW-135(O)
SWMW-136(B)
ITMW-14(B)
UKW-01(O)
UKW-03(O)
UKW-02(O)
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SWMW-125(B)
SWMW-49(B)
SWMW-114(B)
ITMW-13(B)
SWMW-133(B)
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SWMW-30(O)
TF-06(O)
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SWMW-29(O)
SWMW-18(O)
TF-26(O)
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SWMW-61(O)
SWMW-72(O)
TF-05(O)
TF-23(O)
SWMW-101(O)
SWMW-102(O)
SWMW-127(O)
SWMW-129(O)
SWMW-63(O)
SWMW-128(O)
SWMW-132(D)(B)
SWMW-132(S)(B)
SWMW-131(B)
FISHKILL CREEK (APPROXIMATED HERE)
SWMW-130(S)(B)
SWMW-130(D)(B)
RECOMMUNITY RECYCLING CENTER GROUNDWATER MONITORING WELLS
KEY PLAN

LEGEND:

- TAX PARCEL BOUNDARY LINE
- AREA BOUNDARY LINE
- SWMW-**(O) DENOTES OVERBURDEN GROUNDWATER WELL IDENTIFICATION
- SWMW-**(B) DENOTES BEDROCK GROUNDWATER WELL IDENTIFICATION

SWMW-**, GT-**, ITMW-**, SB35-**, BR-**, TF-**, UKW-** — GROUNDWATER MONITORING WELL LOCATIONS

ACRONYM DEFINITIONS:

SWMW	SITEWIDE MONITORING WELL
ITMW	IT CORPORATION MONITORING WELL
TF	TANK FARM MONITORING WELL
UKW	UNKNOWN MONITORING WELL

NOTES:

1. SCALE SHOWN IS FOR FULL SIZE DRAWING 22"x34".
2. THE ACRONYMS "GT", "SB35", AND "BR" ARE MONITORING WELL DESIGNATED LABELS AND DO NOT STAND FOR ANY PARTICULAR VERBIAGE.

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
A	–	1/12/15	JHG	EJA	EJA

DRAWN BY: JHG	DATE: 1/12/15
CHECKED BY: EJA	DATE: 1/12/15
APPROVED BY: EJA	DATE: 1/12/15
PROJECT MGR.: CFB	DATE: 1/12/15

SEAL

PARSONS
COMMERCIAL TECHNOLOGY GROUP

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560
JOB: 448291
WBS: 02000

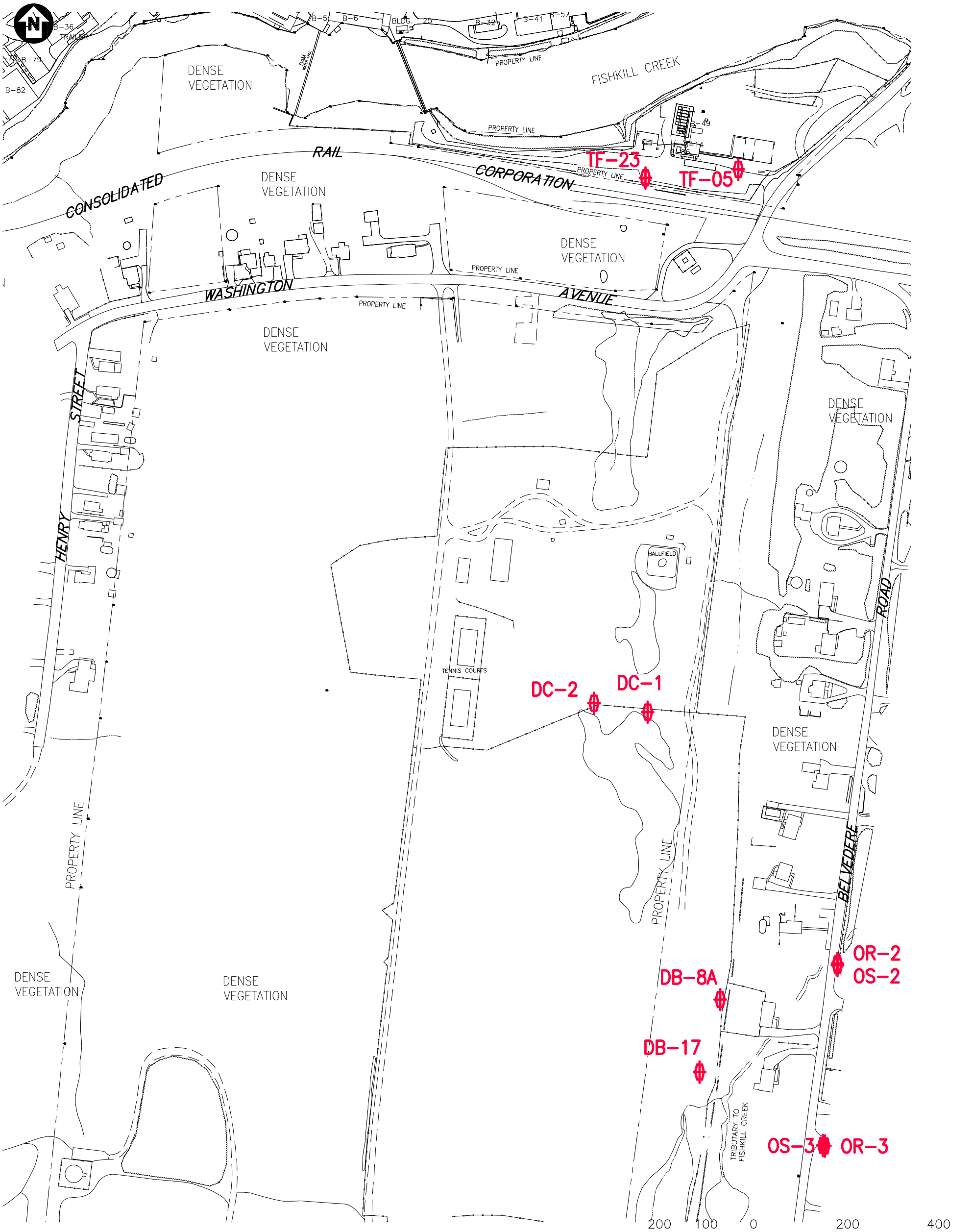
PROJECT TITLE: COMPREHENSIVE GROUNDWATER ANALYTICAL DATA SUMMARY REPORT
FORMER TEXACO RESEARCH CENTER
BEACON, NEW YORK

DRAWING TITLE: FORMER TRCB FACILITY AND RECOMMUNITY RECYCLING CENTER GROUNDWATER MONITORING WELLS LOCATION MAP

SCALE: 1" = 100'-0"

DRAWING NO.: FIGURE 2.1
REV.: A

FILE NAME: P:\CHEVRON BEACON\2014\CAD-DWGS\BEACON GW MAP.DWG
PLOT DATE: 7/16/2018 1:18 PM PLOTTED BY: RUSSO, JILL



SCALE: 1"=200'

LEGEND:

DC-2 MONITORING WELL LOCATION

SOURCE: BADEY & WATSON, SURVEYING & ENGINEERING, P.C.

THE MERIDIAN AND COORDINATE VALUES HEREON REFER TO THE NEW YORK STATE COORDINATE SYSTEM, EAST ZONE (NAD-1983) EXPRESSED IN FEET.

WELL AND BORING ELEVATIONS ARE REFERENCED TO A SITE VERTICAL DATUM ESTABLISHED BY TEXACO IN 1957, HEREINAFTER REFERRED TO AS THE TEXACO DATUM. THIS DATUM IS 1.07' BELOW NAVD 1988.

FILE NAME: P:\CHEVRON BEACON\444690-GW\ENGR\CAD\CIVIL\444690C009.DWG
PLOT DATE: 5/25/2018 9:21 AM PLOTTED BY: GOLDTHWAIT, JAMES

FIGURE 2.2

FORMER TEXACO RESEARCH CENTER BEACON, NEW YORK

FORMER RCRA WELL PERMIT/CONSENT ORDER GROUNDWATER MONITORING WELLS LOCATION MAP

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

SECTION 3

PREVIOUS INVESTIGATIONS

3.1 INTRODUCTION

The purpose of this section is to briefly summarize all the groundwater investigations performed at the Former TRCB facility and adjacent property. Each individual investigation had its own objectives that led to determining the current groundwater AOI conditions. Individual investigations performed are briefly described below.

3.2 PREVIOUS INVESTIGATIONS

3.2.1 Former TRCB Facility Investigations

3.2.1.1 Sitewide Soil Gas Survey and Groundwater Monitoring Well Installations Performed by Prior Chevron EMC Consultants (1980's to early 2000's)

Groundwater monitoring wells (both overburden and bedrock) were installed and soil gas surveys were conducted. Analytical data results concluded contaminants (i.e. volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) Metals, etc.) existed within the groundwater at various locations across the facility.

3.2.1.2 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) (2006 Through 2007)

Seventy-four (74) groundwater monitoring wells were installed in the overburden and bedrock aquifers. Groundwater analytical data results indicated the presence of VOCs, SVOCs, and TAL Metals at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria (Parsons, 2007a).

3.2.1.3 RCRA Supplemental RFI Facility Investigation (RFI) (2008 Through 2009)

Twenty-seven (27) groundwater monitoring wells were installed in both overburden and bedrock aquifers and analytical data results indicated the presence of VOCs, SVOCs, and TAL Metals at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria (Parsons, 2009a).

3.2.1.4 Undeveloped Property Investigation (2012)

Three (3) overburden wells and two (2) bedrock wells were installed to characterize subsurface conditions that existed at an undeveloped area located west of the Former Washington Avenue Tank Farm (WATF) (OU-1C Parcel) and groundwater analytical data results indicated TAL Metals at concentrations exceeding the NYSDEC groundwater criteria (Parsons, 2012).

3.2.1.5 Concrete Foundation Drilling and Groundwater Investigation (2012)

Fourteen (14) groundwater well points were installed through the concrete foundations of certain buildings and groundwater analytical data results indicated the presence of VOCs at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria under the concrete foundations at three building locations (Parsons, 2013).

3.2.1.6 Additional Well Installation Investigation (2013)

Six (6) groundwater monitoring wells in three (3) building areas located at the facility were installed. Three (3) wells were installed in the overburden aquifer and three (3) wells were installed in the bedrock aquifer. The wells were installed to provide additional data to validate existing Geographical Information System (GIS) AOI contours, complete delineation of the three VOC AOIs identified during the Concrete Foundation Drilling program that took place in the Fall of 2012, and delineate the AOI boundary north of Building 58 Area. No contaminants of concern at the Former TRCB facility were detected at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria (Parsons, 2014a).

3.2.1.7 Sitewide Groundwater Monitoring Well Sampling Investigation (2008, 2010, 2012, and 2013)

Between seventy-four (74) to one hundred forty- four (144) groundwater monitoring wells were sampled (Parsons, 2014b) at various frequencies over this five (5) year period. Groundwater analytical data results indicated the presence of VOCs, SVOCs, and TAL Metals at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria.

3.2.1.8 Fishkill Creek Sediment and Surface Water Investigation (2014)

Eleven surface water samples were collected along the Fishkill Creek, which is located south of the Former TRCB facility. Analytical data results indicated no contaminants of concern at concentrations exceeding the NYSDEC Class C Surface Water and Groundwater Quality Standards and Effluent Limitations (Parsons, 2015c).

3.2.1.9 Quarterly Natural Attenuation Groundwater Monitoring Well Sampling Investigation (2014 Through 2016)

Forty-three (43) groundwater monitoring wells were sampled on a quarterly basis (Parsons, 2017a) to determine the degree of contaminant degradation taking place within the subsurface by analyzing and reviewing natural attenuation parameters. Groundwater analytical data results indicated the presence of VOCs at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria.

Compound Specific Isotope Analysis (CSIA) was also performed on selected wells in 2015 and 2016. This sampling was performed to determine the degree of contaminant degradation taking place within the subsurface groundwater AOIs.

3.2.1.10 Former RCRA Well Permit/Consent Order Groundwater Investigation (1980's to Present Day)

Original groundwater monitoring well network consisted of over thirty (30) wells. Over the years, as wells consistently indicated contaminants of concern levels below regulatory limits, NYSDEC granted approvals for well closures. Currently, ten (10) groundwater monitoring wells are sampled on a semi-annual basis and groundwater analytical data results indicate the presence of VOCs at concentrations exceeding the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria (Parsons, 2017b).

The Chevron Environmental Management Company (EMC) signed a Consent Order with the NYSDEC to change the investigation program from a RCRA Permit sampling program to a Consent Order sampling program in 2013.

3.2.2 Adjacent Property Investigation (ReCommunity Recycling Center Groundwater Investigation Program) (2010 to Present Day)

Five (5) bedrock groundwater monitoring wells were installed on an adjacent property located to the west of the Former TRCB facility. The wells were installed to ascertain if groundwater impacts and evidence of LNAPL which was detected along the furthest western property of the Former TRCB facility, were migrating off site. Groundwater analytical data results indicated only TAL Metals (e.g. aluminum, iron, beryllium, cobalt, manganese, sodium, and thallium), but no contaminants of concern (benzene, trichloroethylene (TCE), vinyl chloride (VC), and chlorobenzene (CB)), at concentrations exceeding the NYSDEC groundwater criteria (Parsons, 2017c).

SECTION 4

COMPREHENSIVE GROUNDWATER SUMMARY RESULTS AND CONCLUSIONS

4.1 INTRODUCTION

The purpose of this section is to provide a summary of the analytical data, as well as the current groundwater AOI conditions that exist at the Former TRCB facility.

4.2 SUMMARY OF SUBSURFACE AND GROUNDWATER ANALYTICAL DATA AND STATUS OF CURRENT GROUNDWATER AOIs

4.2.1 Former TRCB Facility

Based on the groundwater investigations conducted at the Main Facility (OU-1A Parcel), Former WATF (OU-1C Parcel), Back 93 Acre Parcel (OU-1E Parcel), HFDP Parcel (OU-4 Parcel), and ReCommunity Recycling Center property, the following observations have been made regarding the groundwater AOIs located at the Former TRCB facility:

- Groundwater at the Former TRCB facility occurs in the shallow overburden and in the bedrock. Groundwater is present in the fill as well as the native deposits but is not found across the entirety of the facility. Overburden and bedrock groundwater flow is generally toward Fishkill Creek from either side of the creek. In most areas of the facility where overburden groundwater is present, there is no confining layer and bedrock and overburden groundwater are connected. Refer to Appendix A.1 for potentiometric groundwater surface contour maps for both the overburden and bedrock aquifers located at OU-1A and OU-1C parcels and Appendix B.1 for potentiometric groundwater surface contour maps from June and November 2017 for the OU-1E parcel.
- Bedrock groundwater is found in bedrock fractures of a limestone and granite formation.
- Groundwater velocity within the overburden ranges from approximately 0.24 to 3.25 feet/day, while groundwater velocity within the bedrock ranges from approximately 0.16 to 1.13 feet/day.
- Depth to groundwater in overburden aquifer AOIs range from 2.47 to 23.21 feet below ground surface (bgs), while depth to groundwater in bedrock aquifer AOIs range from 2.21 to 46.38 feet bgs.
- Five (5) main groundwater AOIs exist at the facility within the shallow (overburden) and bedrock aquifers that exceed the NYSDEC TOGS 1.1.1 Class GA groundwater screening criteria. AOIs exist at the following locations: Building 51 Area, Building 45/55 Area, Building 36 Area, and Building 58/83 Area in the OU-1A parcel and in the Former WATF Area (OU-1C Parcel) (overburden aquifer AOI only). The AOIs are composed of various TAL Metals (e.g. aluminum, arsenic, iron, lead, etc.), VOCs (e.g. benzene, trichloroethylene (TCE), vinyl chloride (VC), chlorobenzene (CB), etc.), and SVOCs (e.g. benzo(a)anthracene, benzo(b)fluoranthene, chrysene, indeno(1,2,3-cd) pyrene, etc.). The main contaminants of concern at the facility are benzene, TCE, VC, and CB. Refer to Appendix A.2 for the groundwater analytical data summary table from the last groundwater sampling event performed in 2016 and

Appendix A.4 for iso-concentration contour figures indicating groundwater AOI locations within the overburden and bedrock aquifers.

- VOC concentrations were observed to fluctuate when comparing sampling event results in individual wells, with no discernible trend. Concentrations in general did not increase or decrease significantly over time indicating that the groundwater AOIs are stabilized and/or stalling (groundwater AOIs not increasing or decreasing in dimension). Natural attenuation through biodegradation has been determined to be one of the contributing factors enabling natural reduction of groundwater contaminants to take place under both aerobic and anaerobic conditions. CSIA sampling results from 2015 and 2016 support this statement. Refer to Appendices A.3 and B.2 for trend analysis graphs of VOC and natural attenuation parameters and Appendix A.5 for CSIA data results from 2015 and 2016.
- Groundwater AOIs are not migrating off-site to adjacent properties and AOI boundaries either stayed the same or decreased slightly based on review of 2008 and 2016 iso-concentration contour figures (See Appendix A.4) and groundwater analytical results from the ReCommunity Recycling Center groundwater investigation performed on an adjacent property located to the west of the Former TRCB facility. The iso-concentration contour figures indicated no evidence of AOI migration beyond the facility's boundaries, while the groundwater analytical data from the adjacent property's investigation did not indicate evidence of contaminants of concern at concentrations exceeding the NYSDEC groundwater criteria or the presence of LNAPL. Refer to Appendix C.1 for chemical analytical data summary figures from 2010 and 2016 for the ReCommunity Recycling Center (adjacent property where the groundwater investigation was performed) and Appendix C.2 for analytical data summary tables from the same years.

SECTION 5

REFERENCES

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APPENDIX A

FORMER TRCB FACILITY GROUNDWATER INVESTIGATION SUPPORTING FIGURES, GRAPHS, AND GROUNDWATER ANALYTICAL DATA

APPENDIX A.1

POTENTIOMETRIC GROUNDWATER SURFACE CONTOUR MAPS FOR BOTH OVERBURDEN AND BEDROCK AQUIFERS

N

SWMW-139
PCFGW-016
PCFGW-112
SWMW-10
227.77
PCFGW-012
PCFGW-011
SWMW-24
229.17
PCFGW-010
ITMW-25
221.28
PCFGW-021
PCFGW-110
PCFGW-036
PCFGW-013
PCFGW-108
PCFGW-014
PCFGW-107
PGSB-40
PCFGW-099
PCFGW-015
SWMW-54
226.28
PCFGW-001
PCFGW-122
PCFGW-121
SWMW-137
PCFGW-002
MB-7
SWMW-59
213.97
SWMW-52
217.96
SWMW-3
216.27
SWMW-135
215.53
GT-2
212.76
PCFGW-123
SB35-4R
175.9
SWMW-65
177.4
SWMW-28
176.13
SB35-1R
176.46
SB35-3R
185.91
UDPSB-16
UDPSB-15
UDPSB-14
UDPSB-13
Unknown Well #1
211.65
Unknown Well #3
211.69
Unknown Well #2
211.52
SWMW-67
210.27
ITMW-5
207.78
SWMW-15
205.79
SWMW-69
205.2
PCFGW-074
PCFGW-072
PCFGW-075
PCFGW-085
PCFGW-056
PCFGW-090
SWMW-62
197.76
SWMW-58
205.97
PCFGW-053
PCFGW-054
PCFGW-092
PCFGW-055
PCFGW-057
PCFGW-089
SWMW-113
197.55
SWMW-19
197.21
SWMW-20
197.31
SWMW-18
197.17
TF-6
197.23
TF-26
198.1
SWMW-74
198.31
SWMW-73
199.69
SWMW-21
200.05
TF-23
200.78
SWMW-63
202.99
SWMW-129
203.39
SWMW-101
201.08
SWMW-31
197.35
SWMW-32
196.7
SWMW-33
197.19
SWMW-34
197.31
SWMW-53
197.24
SWMW-36
197.19
SWMW-35
197.31
TF-15
197.16
SWMW-30
200.05
SWMW-29
197.79
SWMW-22
198.56
SWMW-50
200.89
SWMW-3
197.44
SWMW-71
199.86
SWMW-37
201.51
TF-5
201.36
SWMW-61
201.08
SWMW-60
201.2
SWMW-102
201.37
SWMW-72
SWMW-127
201.24
SWMW-128
204.29

225 220 215 210 205 200 195 190 185 180

Overburden Groundwater Well
226.28 Groundwater Elevation (Texaco Datum - feet) June 2013
Groundwater Flow Direction
210 Groundwater Contour (ft msl)

Note:
Average elevation of the Creek is 197 Feet Texaco Datum up gradient of Dam and 173 Feet Texaco Datum down gradient of Dam. Elevations indicate creek is a gaining stream and hydraulically connected to groundwater flow regime at site.

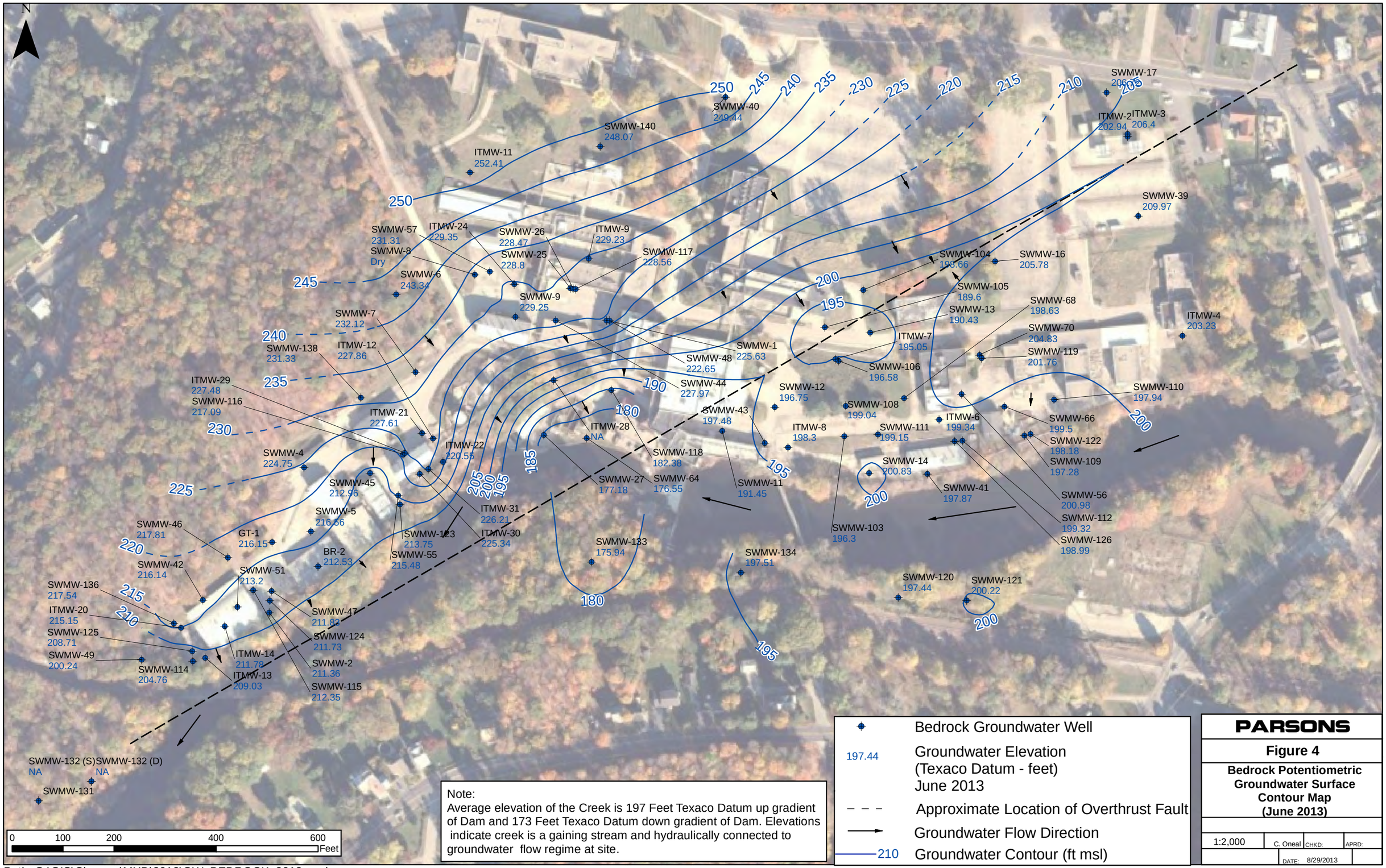
0 100 200 400 600 Feet

PARSONS

Overburden Potentiometric Groundwater Surface Contour Map (June 2013)

1:2,000 | C. Oneal | CHKD: | APRD: | DATE: 8/29/2013

Path: G:\GIS\Chevron\MXD\2013\GW_OVRBURDEN_2013.mxd



Path: G:\GIS\Chevron\MXD\2013\GW_BEDROCK_2013.mxd

APPENDIX A.2

GROUNDWATER ANALYTICAL DATA SUMMARY TABLE (2016)

Table 2
2016 Sitewide Groundwater Sampling Event
Analytical Summary Table
Former Texaco Research Center
Beacon, New York

				Location Group			Building 36 58 83		Building 36 58 83		Building 36 58 83		Building 36 58 83	
				Location ID			GT-2		ITMW-13		ITMW-14		ITMW-30	
				Field Sample ID			GT-2-W-4.00-160608		ITMW-13-W-10.00-160608		ITMW-14(2)-W-10.00-160608		ITMW-30-W-11.00	
				Date Sampled			06/08/2016		06/08/2016		06/08/2016		06/07/2016	
				SDG			1669977		1669977		1669977		1669538	
				Sample Matrix			WATER		WATER		WATER		WATER	
				Sample Purpose			REG		REG		REG		REG	
				Sample Type			GW		GW		GW		GW	
Analytical Method	**Parameter Name**	**Parameter Code**	**Filtered**	**Units**	**NYSDEC_TOGS[1]**									
EPA 300.0	**Chloride**	**16887-00-6**	**N**	**mg/L**	**250.0 mg/l**		133		387		51.7		13.8	
EPA 300.0	**Nitrogen, Nitrate as N**	**14797-55-8**	**N**	**ug/L**	**NS**		250	U	1100		250	U	250	U
EPA 300.0	**Sulfate (SO4)**	**18785-72-3**	**N**	**mg/L**	**250.0 mg/l**		1.5	U	26		1.5	U	18	
RSKSOP-175 modified	**Ethane**	**74-84-0**	**N**	**ug/L**	**NS**		2.6	J	1	U	2.1	J	1	U
RSKSOP-175 modified	**Ethene**	**74-85-1**	**N**	**ug/L**	**NS**		1	U	1	U	1	U	1	U
RSKSOP-175 modified	**Methane**	**74-82-8**	**N**	**ug/L**	**NS**		6500		7.2		1600		18	
SM 2320 B-1997	**Alkalinity, Total as CaCO3**	**ALK**	**N**	**ugCaCO3/L**	**NS**		185000		190000		118000		156000	
SM 3500-Fe B-1997	**Ferrous Iron**	**15438-31-0**	**N**	**ug/L**	**NS**		49900	J	710	J	5800	J	900	J
SM 4500-S2 D-2000	**Sulfide**	**18496-25-8**	**N**	**ug/L**	**NS**		30	U	30	U	30	U	30	U
SW-846 6010C	**Manganese**	**7439-96-5**	**N**	**mg/L**	**0.3 mg/l**		2.38		1.32		4.94		1.99	
SW-846 8260C	**Benzene**	**71-43-2**	**N**	**ug/L**	**1.0 ug/l**		97		0.5	U	0.5	U	0.5	U
SW-846 8260C	**Chlorobenzene**	**108-90-7**	**N**	**ug/L**	**5.0 ug/l**		370		4		44		2	
SW-846 8260C	**cis-1,2-Dichloroethene**	**156-59-2**	**N**	**ug/L**	**5.0 ug/l**		0.5	U	0.5	U	2		0.5	U
SW-846 8260C	**Trichloroethene (Trichloroethylene)**	**79-01-6**	**N**	**ug/L**	**5.0 ug/l**		0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	**Vinyl chloride (Chloroethene)**	**75-01-4**	**N**	**ug/L**	**2.0 ug/l**		0.5	U	0.5	U	0.6	J	0.5	U
SW8015D	**Carbon Dioxide**	**124-38-9**	**N**	**ug/L**	**NS**		110000		82000		72000		72000	

Table 2
2016 Sitewide Groundwater Sampling Event
Analytical Summary Table
Former Texaco Research Center
Beacon, New York

				Location Group		Building 36 58 83		Building 36 58 83		Building 36 58 83		Building 36 58 83	
				Location ID		ITMW-31		SWMW-114		SWMW-123		SWMW-125	
				Field Sample ID		ITMW-31-W-10.00		SWMW-114-W-40.00-160608		SWMW-123-W-50.00-160608		SWMW-125-W-29.00-160608	
				Date Sampled		06/07/2016		06/08/2016		06/08/2016		06/08/2016	
				SDG		1669538		1669977		1669977		1669977	
				Sample Matrix		WATER		WATER		WATER		WATER	
				Sample Purpose		REG		REG		REG		REG	
				Sample Type		GW		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]								
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	34.6		64.5		137		105	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	330	J	250	U	250	U
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	2.5	J	16.7		11.9		1.5	U
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	1	U	1	U	1	U	1.9	J
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U	1	U	1	U	1.6	J
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	4400		35		110		790	
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	181000		140000		282000		135000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	3000	J	25	J	210	J	2200	J
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	280		30	U	30	U	30	U
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	2.38		0.582		0.207		6.42	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	1		0.5	U	0.5	U	4	
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	1		17		23		400	
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	0.5	U	3		0.5	U	94	
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	0.5	U	240		0.5	U	280	
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	0.5	U	0.5	U	0.5	U	7	
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	75000		16000		34000		59000	

Table 2
2016 Sitewide Groundwater Sampling Event
Analytical Summary Table
Former Texaco Research Center
Beacon, New York

				Location Group		Building 36 58 83		Building 36 58 83		Building 36 58 83		Building 36 58 83		
				Location ID		SWMW-2		SWMW-45		SWMW-55		Unknown Well 1		
				Field Sample ID		SWMW-2-W-13.00-160608		SWMW-45-W-17.00		SWMW-55-W-10.00		UNK-1-W-0.00-160608		
				Date Sampled		06/08/2016		06/07/2016		06/07/2016		06/08/2016		
				SDG		1669977		1669538		1669538		1669977		
				Sample Matrix		WATER		WATER		WATER		WATER		
				Sample Purpose		REG		REG		REG		REG		
				Sample Type		GW		GW		GW		GW		
Analytical Method	**Parameter Name**	**Parameter Code**	**Filtered**	**Units**	**NYSDEC_TOGS[1]**									
EPA 300.0	**Chloride**	**16887-00-6**	**N**	**mg/L**	**250.0 mg/l**	556		510		133		42.7		
EPA 300.0	**Nitrogen, Nitrate as N**	**14797-55-8**	**N**	**ug/L**	**NS**	250	U	250	U	250	U	250	U	
EPA 300.0	**Sulfate (SO4)**	**18785-72-3**	**N**	**mg/L**	**250.0 mg/l**	11.1		1.5	U	3.7	J	1.5	U	
RSKSOP-175 modified	**Ethane**	**74-84-0**	**N**	**ug/L**	**NS**	1	U	1	U	1	U	1	U	
RSKSOP-175 modified	**Ethene**	**74-85-1**	**N**	**ug/L**	**NS**	1	U	1	U	1	U	1	U	
RSKSOP-175 modified	**Methane**	**74-82-8**	**N**	**ug/L**	**NS**	120		870		350		240		
SM 2320 B-1997	**Alkalinity, Total as CaCO3**	**ALK**	**N**	**ugCaCO3/L**	**NS**	290000		296000		247000		109000		
SM 3500-Fe B-1997	**Ferrous Iron**	**15438-31-0**	**N**	**ug/L**	**NS**	3800	J	6700	J	2300	J	9900	J	
SM 4500-S2 D-2000	**Sulfide**	**18496-25-8**	**N**	**ug/L**	**NS**	30	U	30	U	66	J	30	U	
SW-846 6010C	**Manganese**	**7439-96-5**	**N**	**mg/L**	**0.3 mg/l**	1.74		5.1		3.53		2.97		
SW-846 8260C	**Benzene**	**71-43-2**	**N**	**ug/L**	**1.0 ug/l**	0.5	J	0.7	J	3		0.5	U	
SW-846 8260C	**Chlorobenzene**	**108-90-7**	**N**	**ug/L**	**5.0 ug/l**	78		100		570		78		
SW-846 8260C	**cis-1,2-Dichloroethene**	**156-59-2**	**N**	**ug/L**	**5.0 ug/l**	5		0.5	U	0.5	U	0.5	U	
SW-846 8260C	**Trichloroethene (Trichloroethylene)**	**79-01-6**	**N**	**ug/L**	**5.0 ug/l**	2		0.5	U	0.5	U	0.5	U	
SW-846 8260C	**Vinyl chloride (Chloroethene)**	**75-01-4**	**N**	**ug/L**	**2.0 ug/l**	3		0.5	U	0.5	U	0.5	U	
SW8015D	**Carbon Dioxide**	**124-38-9**	**N**	**ug/L**	**NS**	57000		86000		77000		68000		

Table 2
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				Location Group		Building 36 58 83		Building 36 58 83		Building 45/55 Area		Building 45/55 Area	
				Location ID		Unknown Well 2		Unknown Well 3		ITMW-24		ITMW-24	
				Field Sample ID		UNK-2-W-0.00-160608		UNK-3-W-0.00-160608		ITMW-124-WD-5.00		ITMW-24-W-5.00	
				Date Sampled		06/08/2016		06/08/2016		06/07/2016		06/07/2016	
				SDG		1669977		1669977		1669538		1669538	
				Sample Matrix		WATER		WATER		WATER		WATER	
				Sample Purpose		REG		REG		FD		REG	
				Sample Type		GW		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]								
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	75.9		122		190		188	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	250	U	250	U	250	U
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	1.5	U	1.5	U	200		204	
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	1	U	1	U	1	U	1	U
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U	1	U	1	U	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	71		360		97	J	150	J
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	106000		117000		233000		234000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	9800	J	10500	J	3000	J	3000	J
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	30	U	30	U	2400		2400	
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	1.69		2.27		0.178		0.179	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	19		13		5		5	
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	74000		74000		47000		42000	

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				Location Group		Building 45/55 Area		Building 45/55 Area		Building 45/55 Area		Building 45/55 Area	
				Location ID		ITMW-25		SWMW-10		SWMW-25		SWMW-28	
				Field Sample ID		ITMW-25-W-15.00		SWMW-10-W-4.00		SWMW-25-W-4.00		SWMW-28-W-4.00-160610	
				Date Sampled		06/07/2016		06/07/2016		06/07/2016		06/10/2016	
				SDG		1669538		1669538		1669538		1670992	
				Sample Matrix		WATER		WATER		WATER		WATER	
				Sample Purpose		REG		REG		REG		REG	
				Sample Type		GW		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]								
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	172		211		78.2		328	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	250	U	250	U	250	U
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	26.9		11		76.3		14.9	
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	1	U	8.9		1	U	1.5	J
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U	1	U	1	U	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	200		2500		6.1		1000	
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	251000		365000		194000		232000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	1100	J	1500	J	220	J	11100	J
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	30	U	190		30	U	30	U
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	2.06		0.56		1.02		1.72	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	570		1		0.5	U	2	
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	73		210		0.5	U	18	
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	28000		42000		19000		30000	

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						Location Group		Building 45/55 Area		Building 45/55 Area		Building 45/55 Area		Building 51 Area	
						Location ID		SWMW-44		SWMW-48		SWMW-65		ITMW-5	
						Field Sample ID		SWMW-44-W-15.00		SWMW-48-W-4.00		SWMW-65-W-7.00-160610		ITMW-5-W-10.00-160610	
						Date Sampled		06/07/2016		06/07/2016		06/10/2016		06/10/2016	
						SDG		1669538		1669538		1670992		1670992	
						Sample Matrix		WATER		WATER		WATER		WATER	
						Sample Purpose		REG		REG		REG		REG	
						Sample Type		GW		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]										
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	310		148		227		85.3			
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	250	U	250	U	250	U		
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	52.2		1.5	U	41.8		40.9			
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	5.5		1	U	1	U	1	U		
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	15		1	U	1	U	1	U		
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	970		3	U	3	U	91			
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	315000	J-	261000		216000		272000			
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	240	J	1800	J	10	UJ	1300	J		
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	2400		30	U	30	U	30	U		
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	0.71		0.429		5.34		0.508			
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	0.9	J	0.5	U	0.5	U	1			
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	200		3		1		0.9	J		
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	31		0.5	U	0.5	U	110			
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	150		0.5	U	0.5	U	66			
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	9		0.5	U	0.5	U	1			
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	30000		35000		24000		23000			

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				Location Group		Building 51 Area		Building 51 Area		Building 51 Area	
				Location ID		ITMW-6		SWMW-103		SWMW-111	
				Field Sample ID		ITMW-6-W-28.00-160610		SWMW-103-W-55.00-160610		SWMW-111-W-40.00-160610	
				Date Sampled		06/10/2016		06/10/2016		06/10/2016	
				SDG		1670992		1670992		1670992	
				Sample Matrix		WATER		WATER		WATER	
				Sample Purpose		REG		REG		REG	
				Sample Type		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]						
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	10		48.5		163	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	2100		940		2500	
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	39.2		38.6		112	
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	1	U	1	U	1	U
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U	1	U	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	3	U	3	U	3	U
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	260000		398000		282000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	11600	J	19	J	27	J
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	160	J	30	U	30	U
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	2.07		0.0315		0.02	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	0.5	U	0.5	U	6	
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	7		0.5	U	49	
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	0.5	U	0.5	U	0.5	U
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	54000		28000		40000	

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				Location Group		Building 51 Area		Building 51 Area		Building 51 Area	
				Location ID		SWMW-112		SWMW-113		SWMW-113	
				Field Sample ID		SWMW-112-W-55.00-160610		SWMW-113-W-20.00-160609		SWMW-113-WD-20.00-160609	
				Date Sampled		06/10/2016		06/09/2016		06/09/2016	
				SDG		1670992		1670544		1670544	
				Sample Matrix		WATER		WATER		WATER	
				Sample Purpose		REG		REG		FD	
				Sample Type		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]						
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	307		119		122	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	250	U	250	U
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	37.4		47.7		48.2	
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	1.7	J	1	U	1	U
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	5		1	U	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	170		10	J	3	UJ
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	248000		331000		329000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	91	J	10	J	15	J
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	30	U	30	U	30	U
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	0.124		0.801		0.83	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	1	J	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	1		3		3	
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	500		18		19	
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	180		8		9	
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	6		0.5	U	0.5	U
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	22000		37000		36000	

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				Location Group		Building 51 Area		Building 51 Area		Building 51 Area		Building 51 Area	
				Location ID		SWMW-126		SWMW-13		SWMW-14		SWMW-15	
				Field Sample ID		SWMW-126-W-40.00-160609		SWMW-13-W-46.00-160610		SWMW-14-W-26.00-160610		SWMW-15-W-5.00-160609	
				Date Sampled		06/09/2016		06/10/2016		06/10/2016		06/09/2016	
				SDG		1670544		1670992		1670992		1670544	
				Sample Matrix		WATER		WATER		WATER		WATER	
				Sample Purpose		REG		REG		REG		REG	
				Sample Type		GW		GW		GW		GW	
Analytical Method	**Parameter Name**	**Parameter Code**	**Filtered**	**Units**	**NYSDEC_TOGS[1]**								
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	145		157		126		27.9	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	17200		3800		250	U
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	35		987		67.9		62.4	
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	2	J	1	U	1	U	1	U
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U	1	U	1	U	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	130		3	U	3	U	3	U
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	287000		324000		306000		280000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	140	J	93	J	1200	J	5900	J
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	30	U	30	U	30	U	41	J
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	0.143		0.0113		0.959		4.02	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	2		0.5	U	0.5	U	3	
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	2		0.5	U	0.5	U	39	
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	150		0.5	U	1		3	
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	280		1		15		2	
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	8		0.5	U	0.5	U	0.5	U
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	27000		49000		27000		74000	

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				Location Group		Building 51 Area		Building 51 Area		Building 51 Area	
				Location ID		SWMW-41		SWMW-56		SWMW-58	
				Field Sample ID		SWMW-41-W-25.00-160610		SWMW-56-W-35.00-160609		SWMW-58-W-5.00-160609	
				Date Sampled		06/10/2016		06/09/2016		06/09/2016	
				SDG		1670992		1670544		1670544	
				Sample Matrix		WATER		WATER		WATER	
				Sample Purpose		REG		REG		REG	
				Sample Type		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]						
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	214		62.7		165	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	250	U	4100	
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	39.1		89.1		47.2	
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	1.9	J	1	U	1	U
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U	1.8	J	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	240		130		3	U
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	278000		287000		267000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	69	J	25	J	10	UJ
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	30	U	30	U	30	U
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	0.233		0.0746		0.493	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	14		1		0.5	U
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	1		0.9	J	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	230		160		30	
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	190		300		27	
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	16		2		0.5	U
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	27000		23000		42000	

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				Location Group		Building 51 Area		Building 51 Area		Building 51 Area		Building 51 Area	
				Location ID		SWMW-62		SWMW-66		SWMW-67		SWMW-68	
				Field Sample ID		SWMW-62-W-4.00-160610		SWMW-66-W-43.00-160609		SWMW-67-W-3.00-160609		SWMW-68-W-31.00-160609	
				Date Sampled		06/10/2016		06/09/2016		06/09/2016		06/09/2016	
				SDG		1670992		1670544		1670544		1670544	
				Sample Matrix		WATER		WATER		WATER		WATER	
				Sample Purpose		REG		REG		REG		REG	
				Sample Type		GW		GW		GW		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]								
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	37.8		1080		7.2		56.7	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U	2900	J-	1700		1400	
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	34.3		76.2		174		134	
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	1	U	1	U	1	U	1	U
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U	1	U	1	U	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	3	U	3	U	3	U	3	U
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	257000		232000	J-	364000		275000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	10	UJ	10	UJ	16	J	10	UJ
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	30	U	30	U	30	U	30	U
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	2.04		0.0472		0.473		0.012	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	1		300		0.6	J	42	
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	5		200		110		340	
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	0.5	U	5		0.5	U	2	
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	43000		32000		53000		24000	

Table 2
2016 Sitewide Groundwater Sampling Event
Analytical Summary Table
Former Texaco Research Center
Beacon, New York

				Location Group		WATF Area		WATF Area		WATF Area		WATF Area			
				Location ID		SWMW-21		SWMW-30		SWMW-30		SWMW-31			
				Field Sample ID		SWMW-21-W-3.00-160613		SWMW-30-W-3.00-160613		SWMW-30-WD-3.00-160613		SWMW-31-W-3.00-160613			
				Date Sampled		06/13/2016		06/13/2016		06/13/2016		06/13/2016			
				SDG		1671684		1671684		1671684		1671684			
				Sample Matrix		WATER		WATER		WATER		WATER			
				Sample Purpose		REG		REG		FD		REG			
				Sample Type		GW		GW		GW		GW			
Analytical Method	**Parameter Name**	**Parameter Code**	**Filtered**	**Units**	**NYSDEC_TOGS[1]**										
EPA 300.0	**Chloride**	**16887-00-6**	**N**	**mg/L**	**250.0 mg/l**	99.3		191		184		218			
EPA 300.0	**Nitrogen, Nitrate as N**	**14797-55-8**	**N**	**ug/L**	**NS**	250	U	250	U	250	U	250	U		
EPA 300.0	**Sulfate (SO4)**	**18785-72-3**	**N**	**mg/L**	**250.0 mg/l**	8.1		2.8	J	3	J	1.5	U		
RSKSOP-175 modified	**Ethane**	**74-84-0**	**N**	**ug/L**	**NS**	7.4		1.4	J	1.5	J	1.7	J		
RSKSOP-175 modified	**Ethene**	**74-85-1**	**N**	**ug/L**	**NS**	1	U	1	U	1	U	1	U		
RSKSOP-175 modified	**Methane**	**74-82-8**	**N**	**ug/L**	**NS**	7000		2200		2300		2600			
SM 2320 B-1997	**Alkalinity, Total as CaCO3**	**ALK**	**N**	**ugCaCO3/L**	**NS**	315000		286000		276000		339000	J-		
SM 3500-Fe B-1997	**Ferrous Iron**	**15438-31-0**	**N**	**ug/L**	**NS**	12400	J	21600	J	36400	J	27100	J		
SM 4500-S2 D-2000	**Sulfide**	**18496-25-8**	**N**	**ug/L**	**NS**	30	U	30	U	57	J	30	UJ		
SW-846 6010C	**Manganese**	**7439-96-5**	**N**	**mg/L**	**0.3 mg/l**	6.33		2.93		3.04		2.99			
SW-846 8260C	**Benzene**	**71-43-2**	**N**	**ug/L**	**1.0 ug/l**	260		5		5		21			
SW-846 8260C	**Chlorobenzene**	**108-90-7**	**N**	**ug/L**	**5.0 ug/l**	0.8	J	1		1		3			
SW-846 8260C	**cis-1,2-Dichloroethene**	**156-59-2**	**N**	**ug/L**	**5.0 ug/l**	0.7	J	0.5	U	0.5	U	0.5	U		
SW-846 8260C	**Trichloroethene (Trichloroethylene)**	**79-01-6**	**N**	**ug/L**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U		
SW-846 8260C	**Vinyl chloride (Chloroethene)**	**75-01-4**	**N**	**ug/L**	**2.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U		
SW8015D	**Carbon Dioxide**	**124-38-9**	**N**	**ug/L**	**NS**	94000		73000		75000		77000			

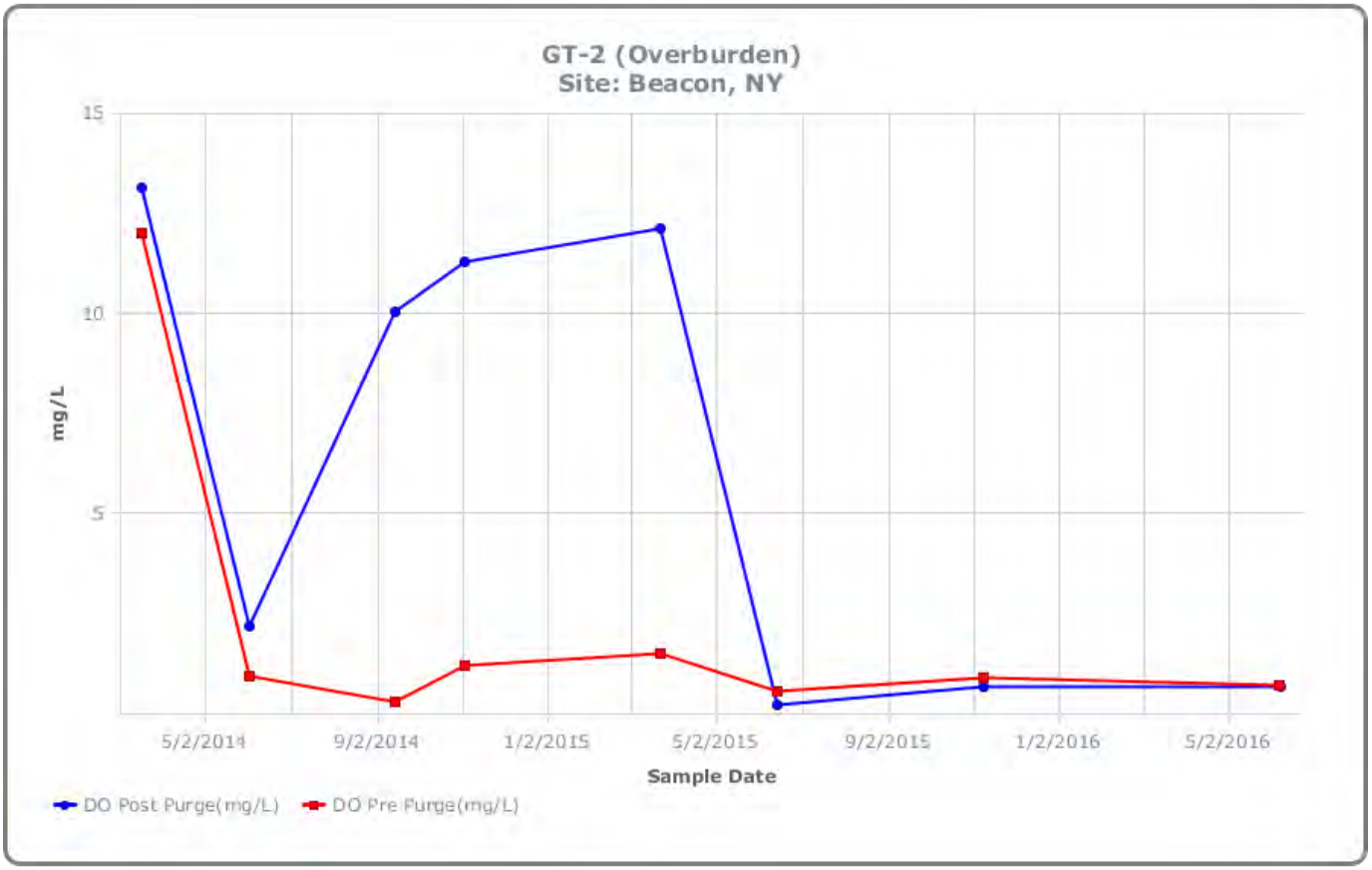
Table 2
2016 Sitewide Groundwater Sampling Event
Analytical Summary Table
Former Texaco Research Center
Beacon, New York

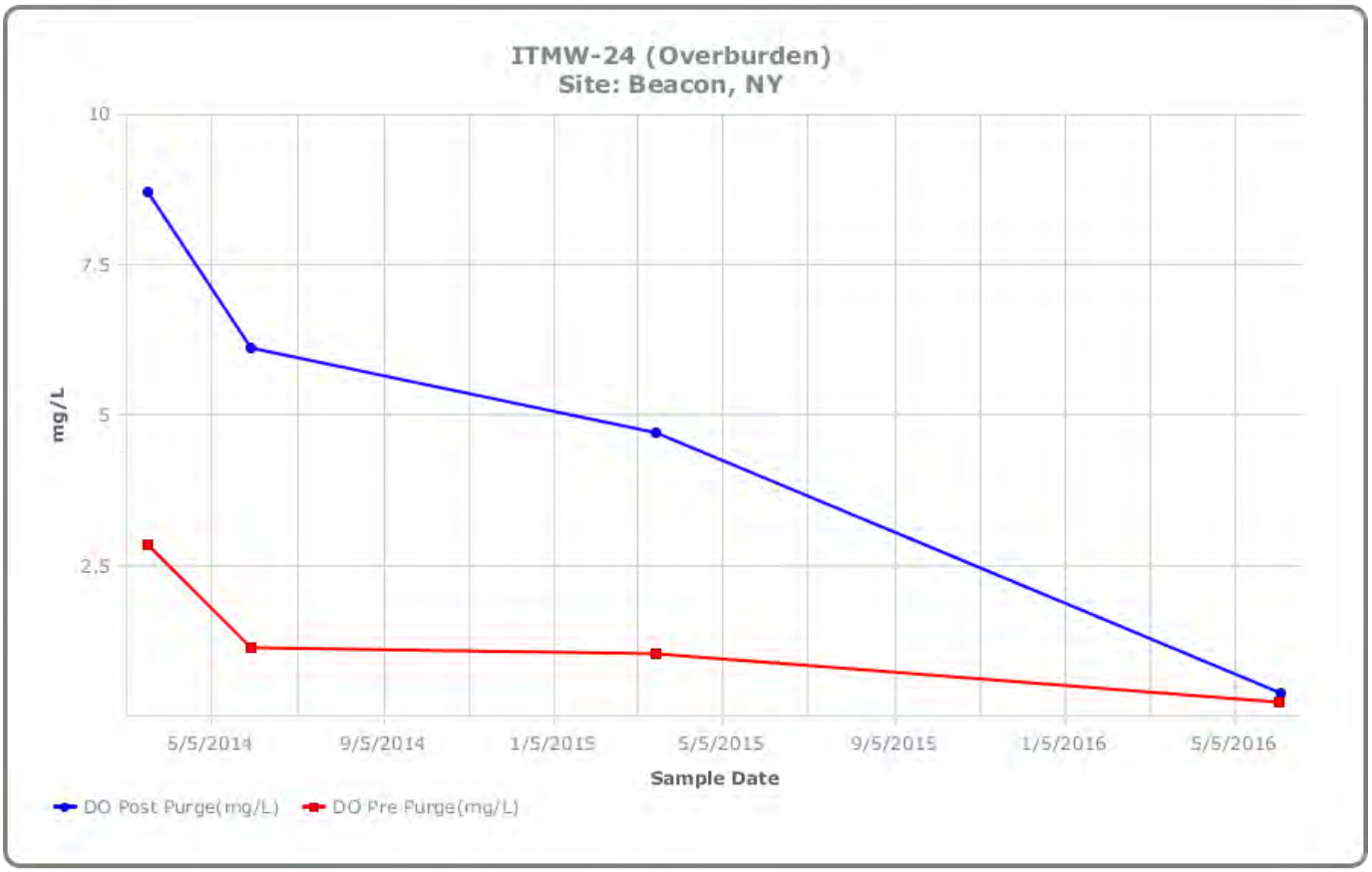
				Location Group		WATF Area	
				Location ID		SWMW-71	
				Field Sample ID		SWMW-71-W-3.00-160613	
				Date Sampled		06/13/2016	
				SDG		1671684	
				Sample Matrix		WATER	
				Sample Purpose		REG	
				Sample Type		GW	
Analytical Method	Parameter Name	Parameter Code	Filtered	Units	NYSDEC_TOGS[1]		
EPA 300.0	Chloride	16887-00-6	N	mg/L	250.0 mg/l	489	
EPA 300.0	Nitrogen, Nitrate as N	14797-55-8	N	ug/L	NS	250	U
EPA 300.0	Sulfate (SO4)	18785-72-3	N	mg/L	250.0 mg/l	4.2	J
RSKSOP-175 modified	Ethane	74-84-0	N	ug/L	NS	2.9	J
RSKSOP-175 modified	Ethene	74-85-1	N	ug/L	NS	1	U
RSKSOP-175 modified	Methane	74-82-8	N	ug/L	NS	3900	
SM 2320 B-1997	Alkalinity, Total as CaCO3	ALK	N	ugCaCO3/L	NS	329000	
SM 3500-Fe B-1997	Ferrous Iron	15438-31-0	N	ug/L	NS	32400	J
SM 4500-S2 D-2000	Sulfide	18496-25-8	N	ug/L	NS	49	J
SW-846 6010C	Manganese	7439-96-5	N	mg/L	0.3 mg/l	6.35	
SW-846 8260C	Benzene	71-43-2	N	ug/L	1.0 ug/l	7	
SW-846 8260C	Chlorobenzene	108-90-7	N	ug/L	5.0 ug/l	2	
SW-846 8260C	cis-1,2-Dichloroethene	156-59-2	N	ug/L	5.0 ug/l	0.5	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	79-01-6	N	ug/L	5.0 ug/l	0.5	U
SW-846 8260C	Vinyl chloride (Chloroethene)	75-01-4	N	ug/L	2.0 ug/l	0.5	U
SW8015D	Carbon Dioxide	124-38-9	N	ug/L	NS	110000	

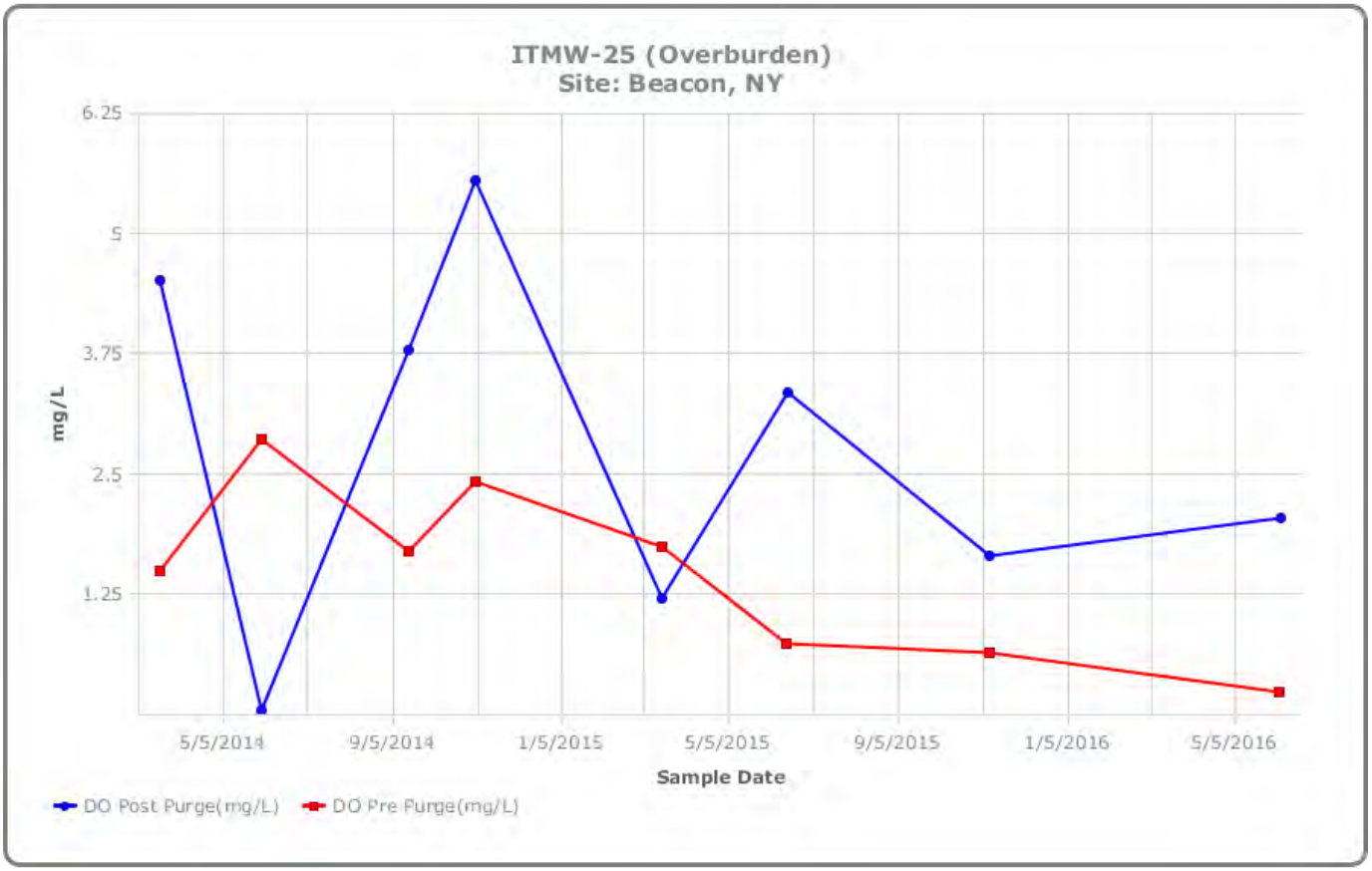
APPENDIX A.3

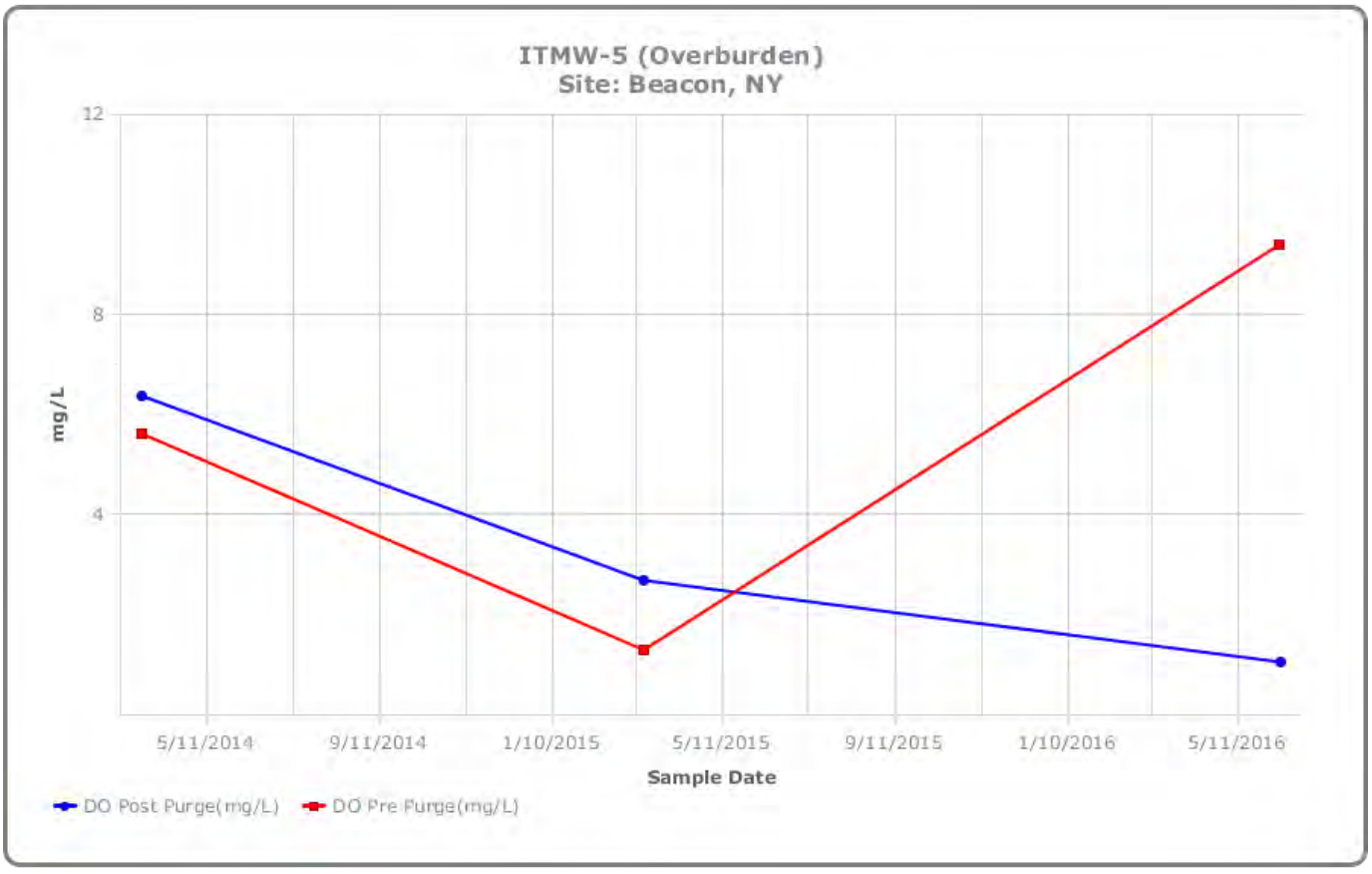
NATURAL ATTENUATION PARAMETERS CHEMICAL TREND ANALYSIS GRAPHS (2016)

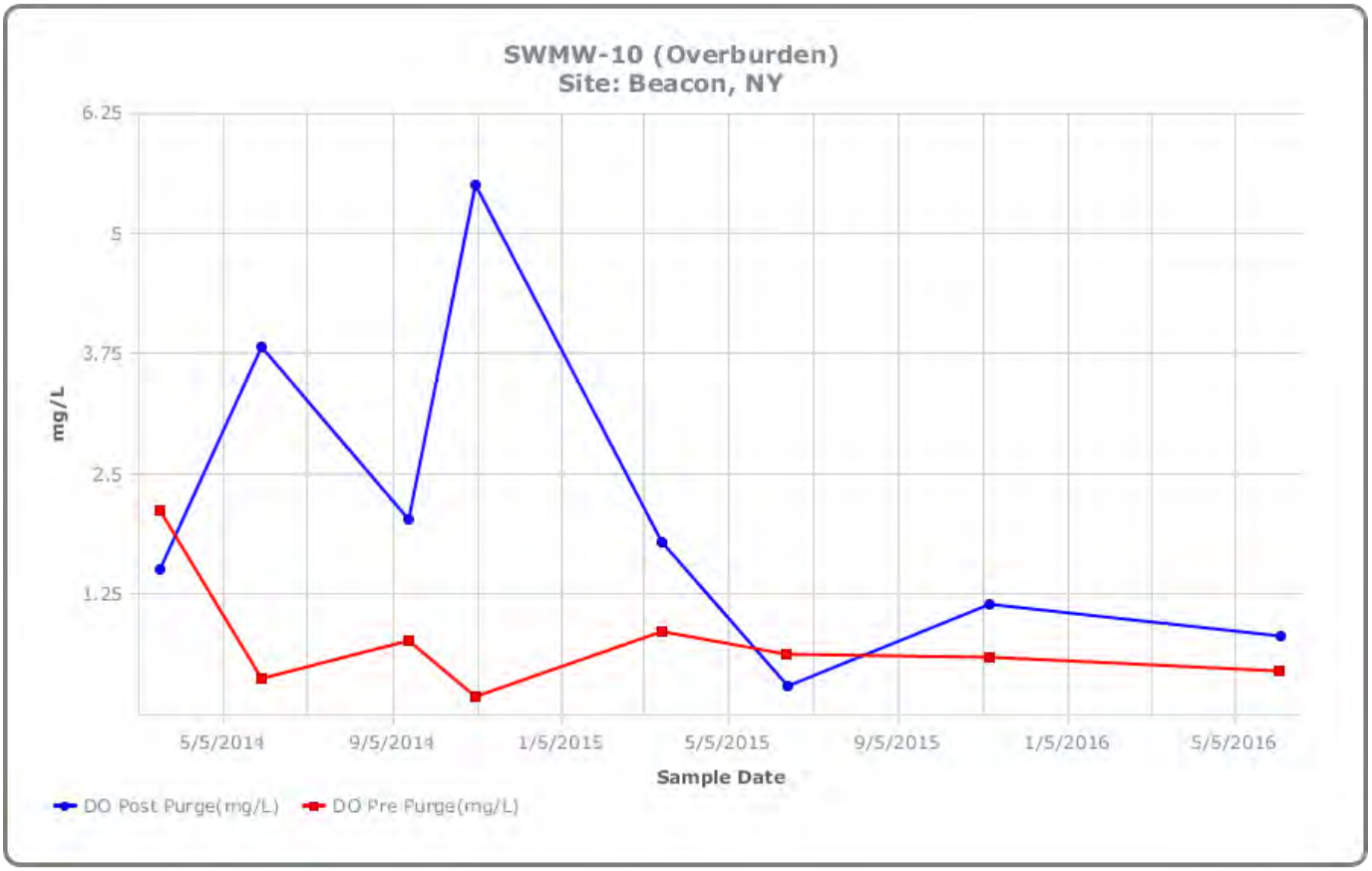
2014 THROUGH 2016 DO OVERBURDEN WELLS SUMMARY GRAPHS

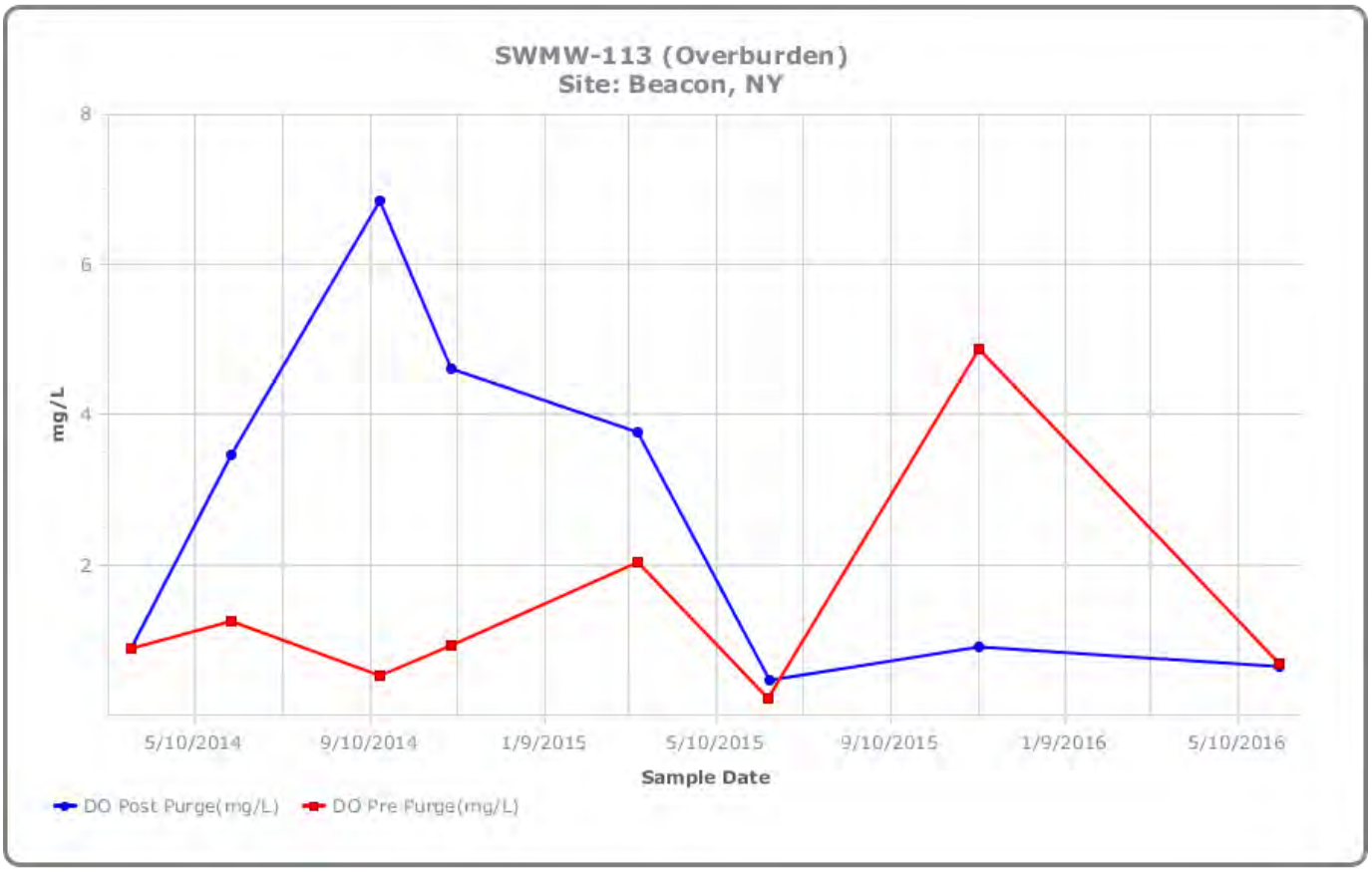

GT-2 (Overburden)
Site: Beacon, NY
15
10
5
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

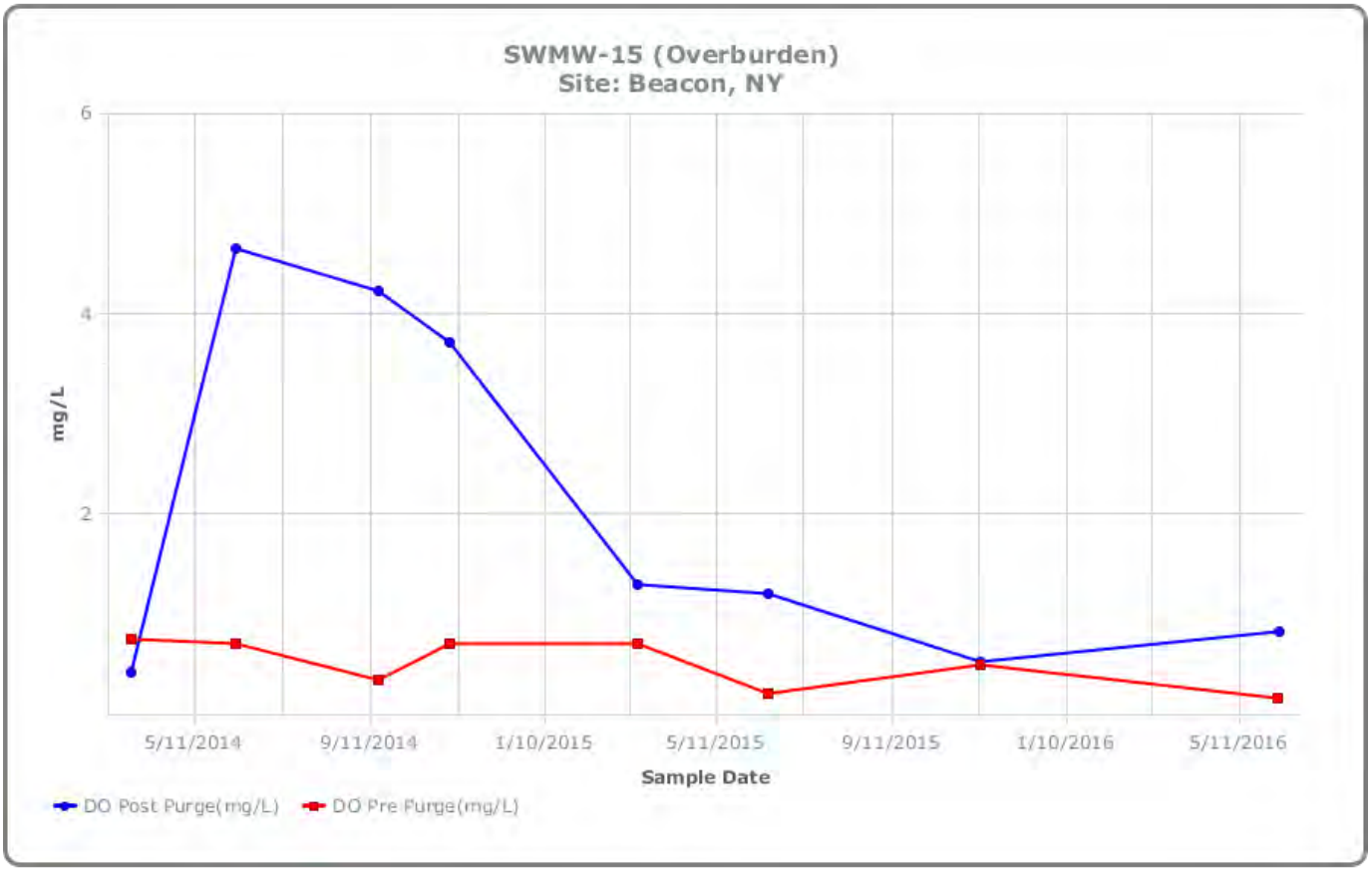

ITMW-24 (Overburden)
Site: Beacon, NY
10
7.5
5
2.5
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

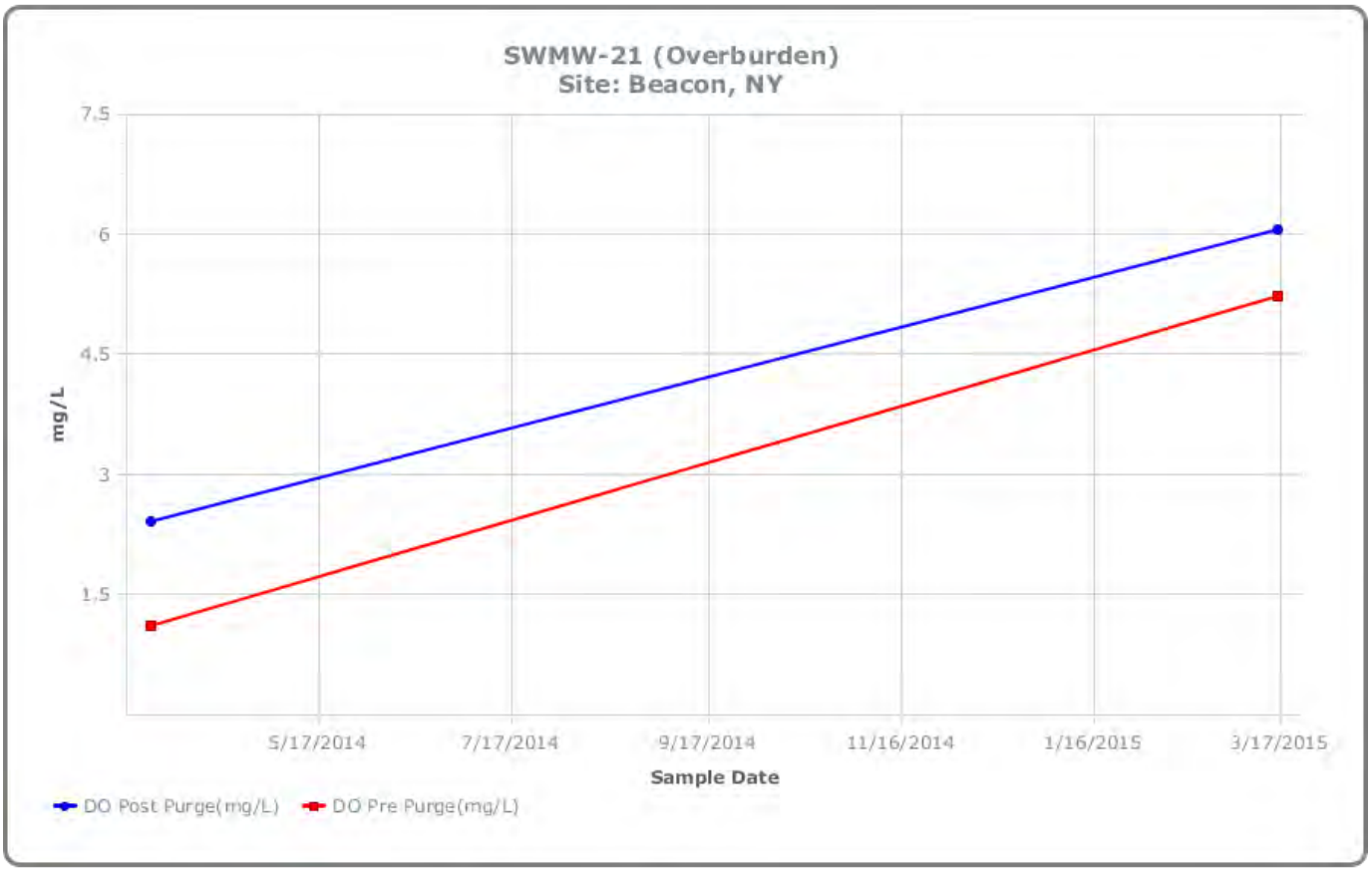

ITMW-25 (Overburden)
Site: Beacon, NY
6.25
5
3.75
2.5
1.25
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

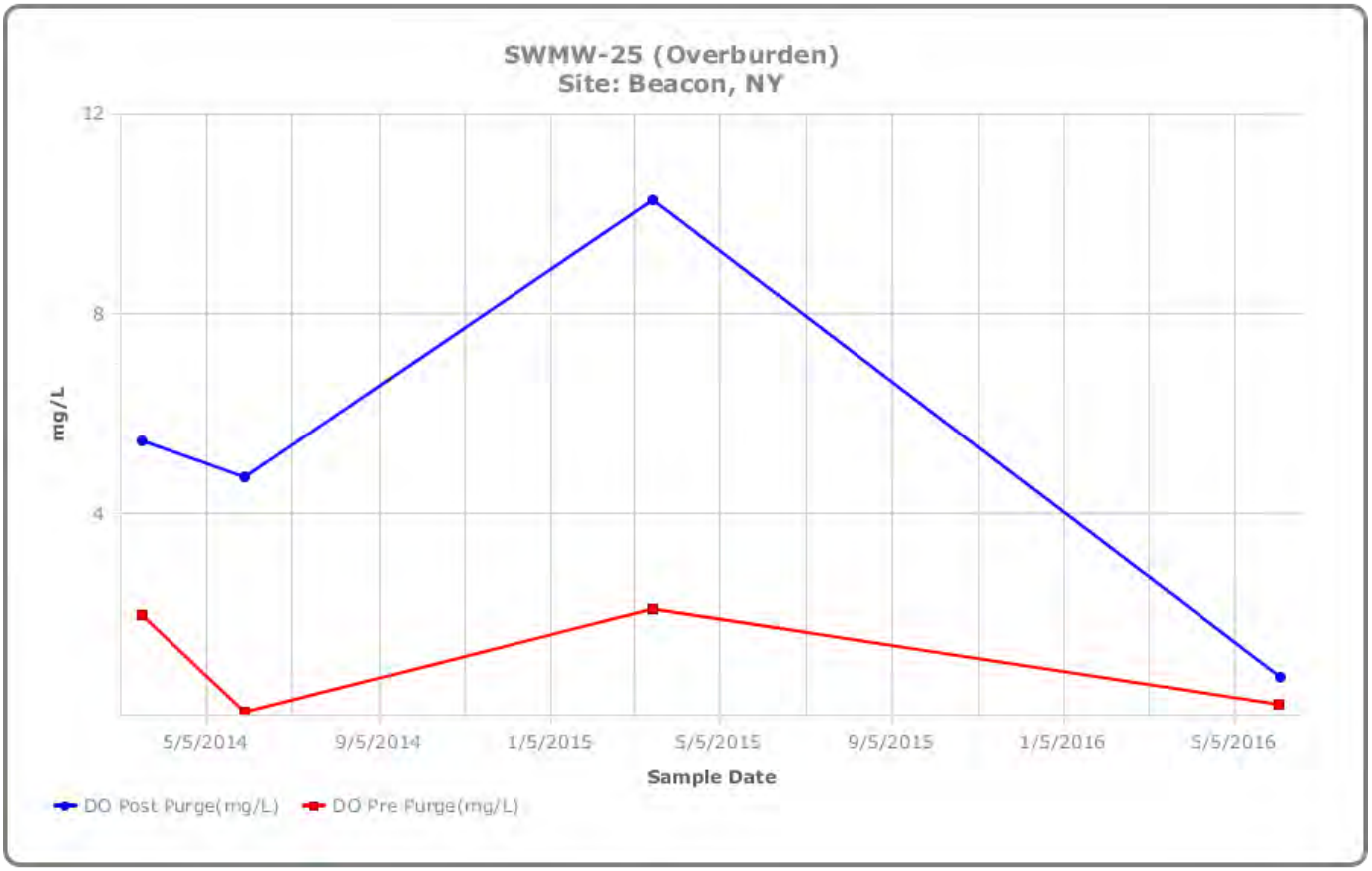

ITMW-5 (Overburden)
Site: Beacon, NY
12
8
4
mg/L
5/11/2014
9/11/2014
1/10/2015
5/11/2015
9/11/2015
1/10/2016
5/11/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

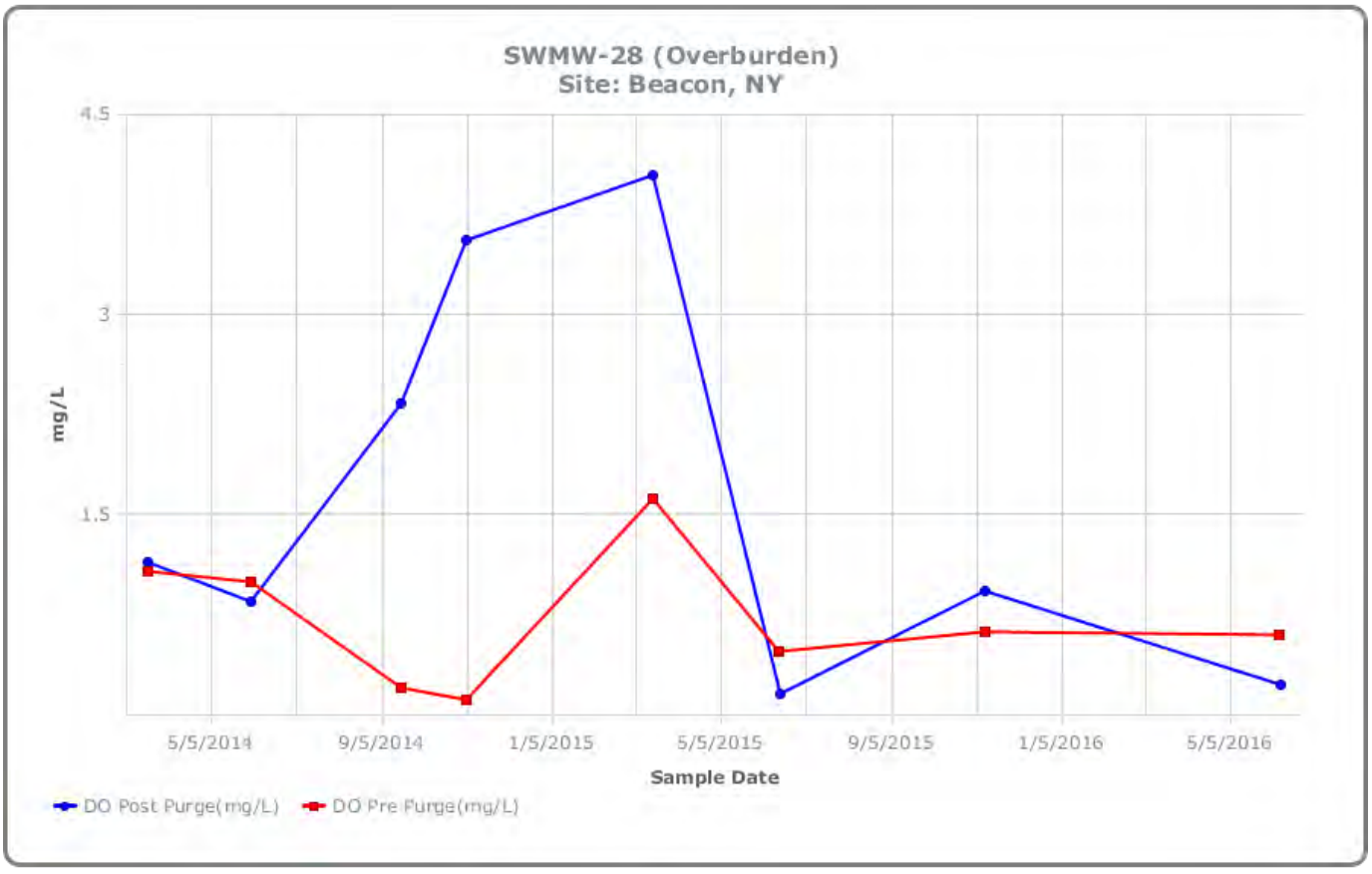

SWMW-10 (Overburden)
Site: Beacon, NY
6.25
5
3.75
2.5
1.25
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

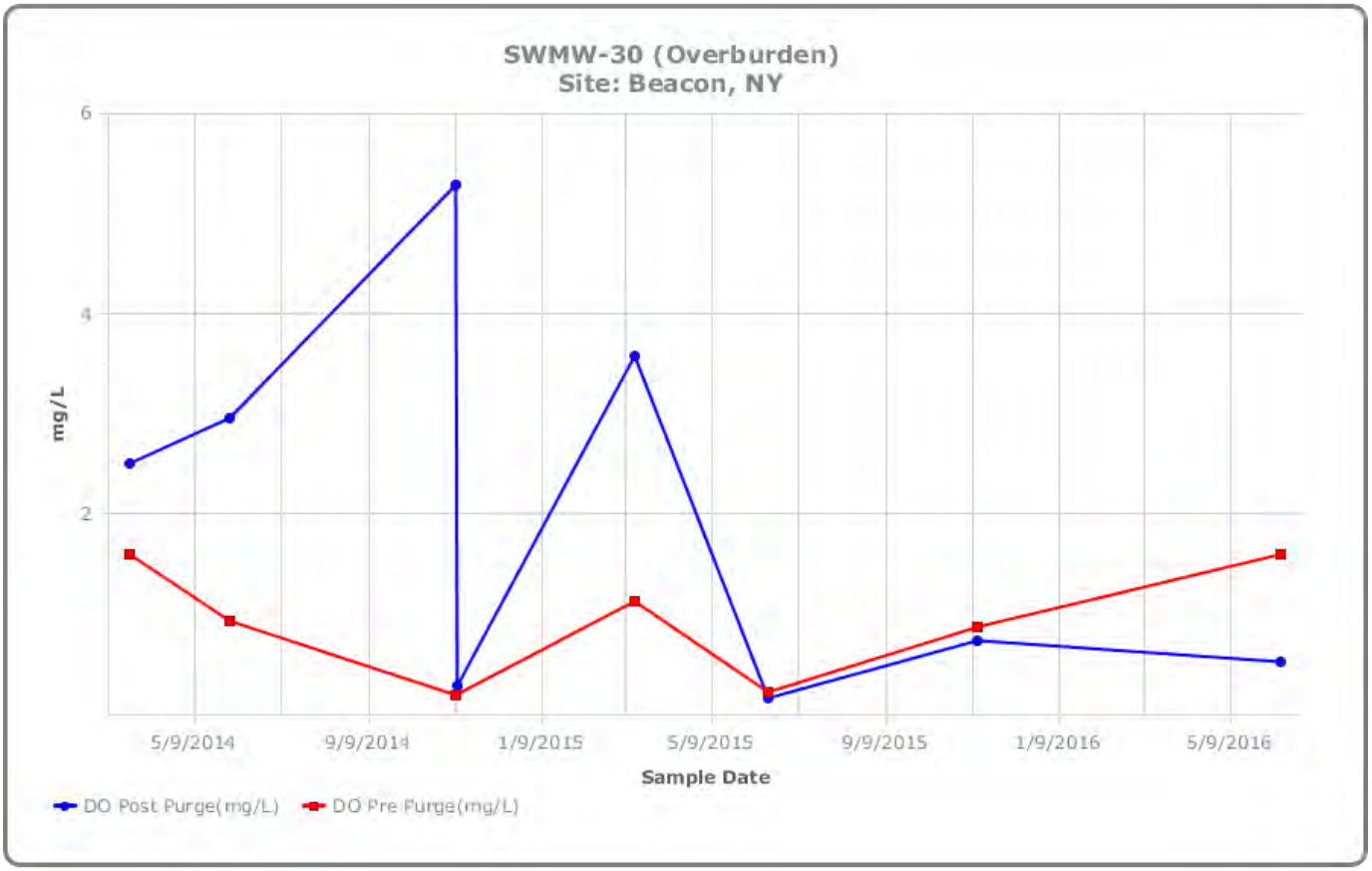

SWMW-113 (Overburden)
Site: Beacon, NY
8
6
4
2
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

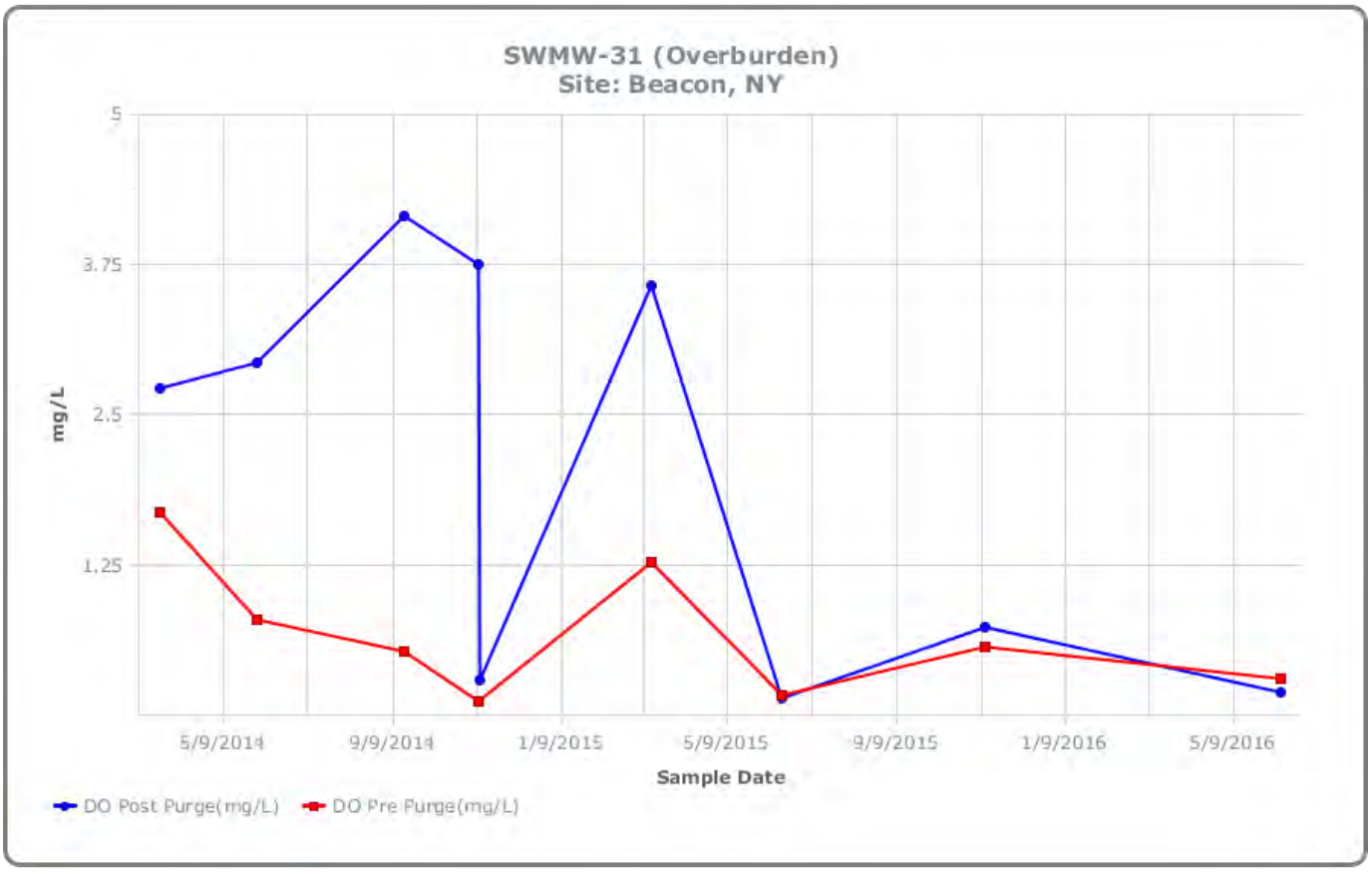

SWMW-15 (Overburden)
Site: Beacon, NY
6
4
2
mg/L
5/11/2014
9/11/2014
1/10/2015
5/11/2015
9/11/2015
1/10/2016
5/11/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

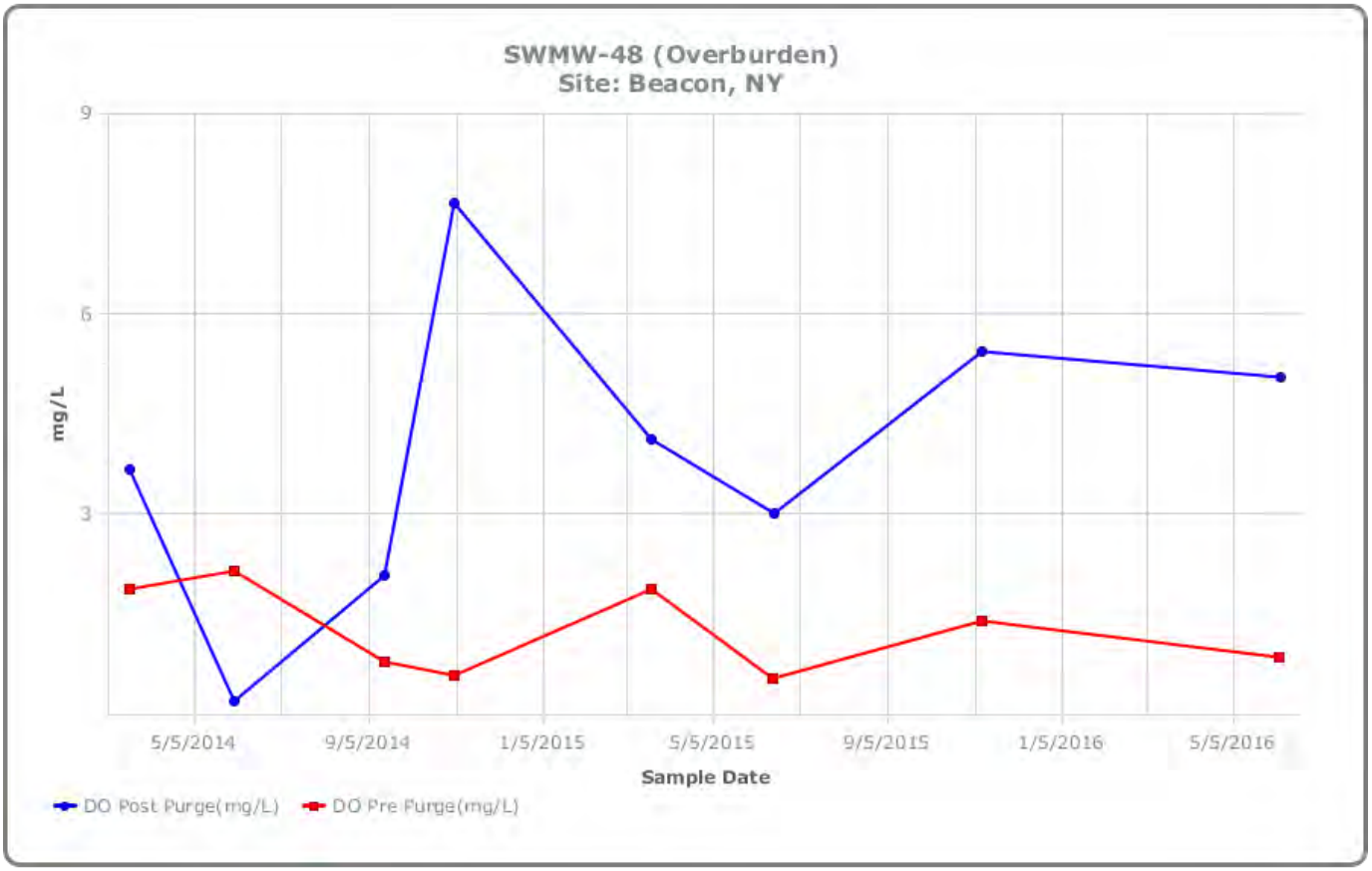

SWMW-21 (Overburden)
Site: Beacon, NY
7.5
6
4.5
3
1.5
mg/L
5/17/2014
7/17/2014
9/17/2014
11/16/2014
1/16/2015
3/17/2015
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

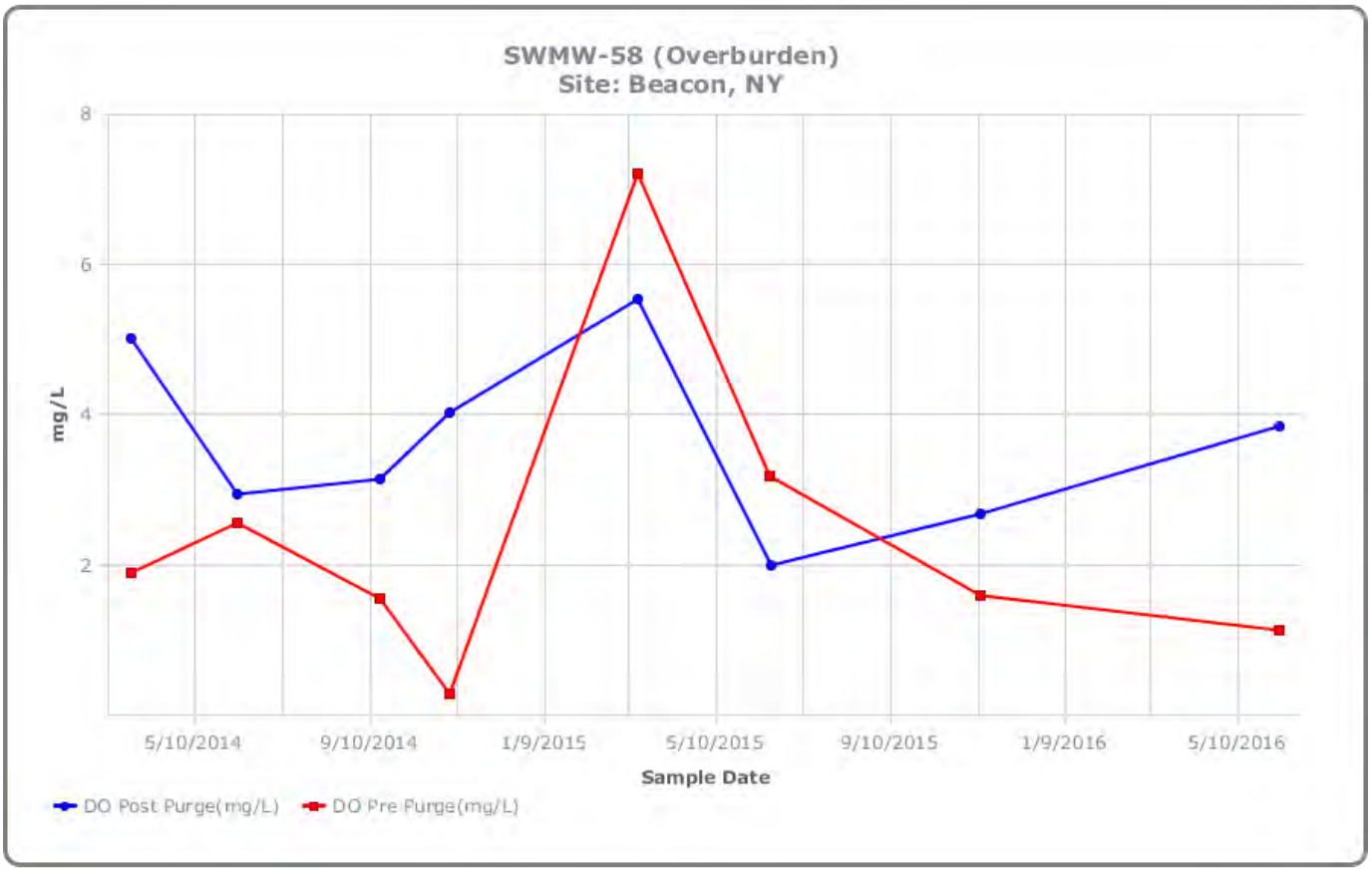

SWMW-25 (Overburden)
Site: Beacon, NY
12
8
4
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

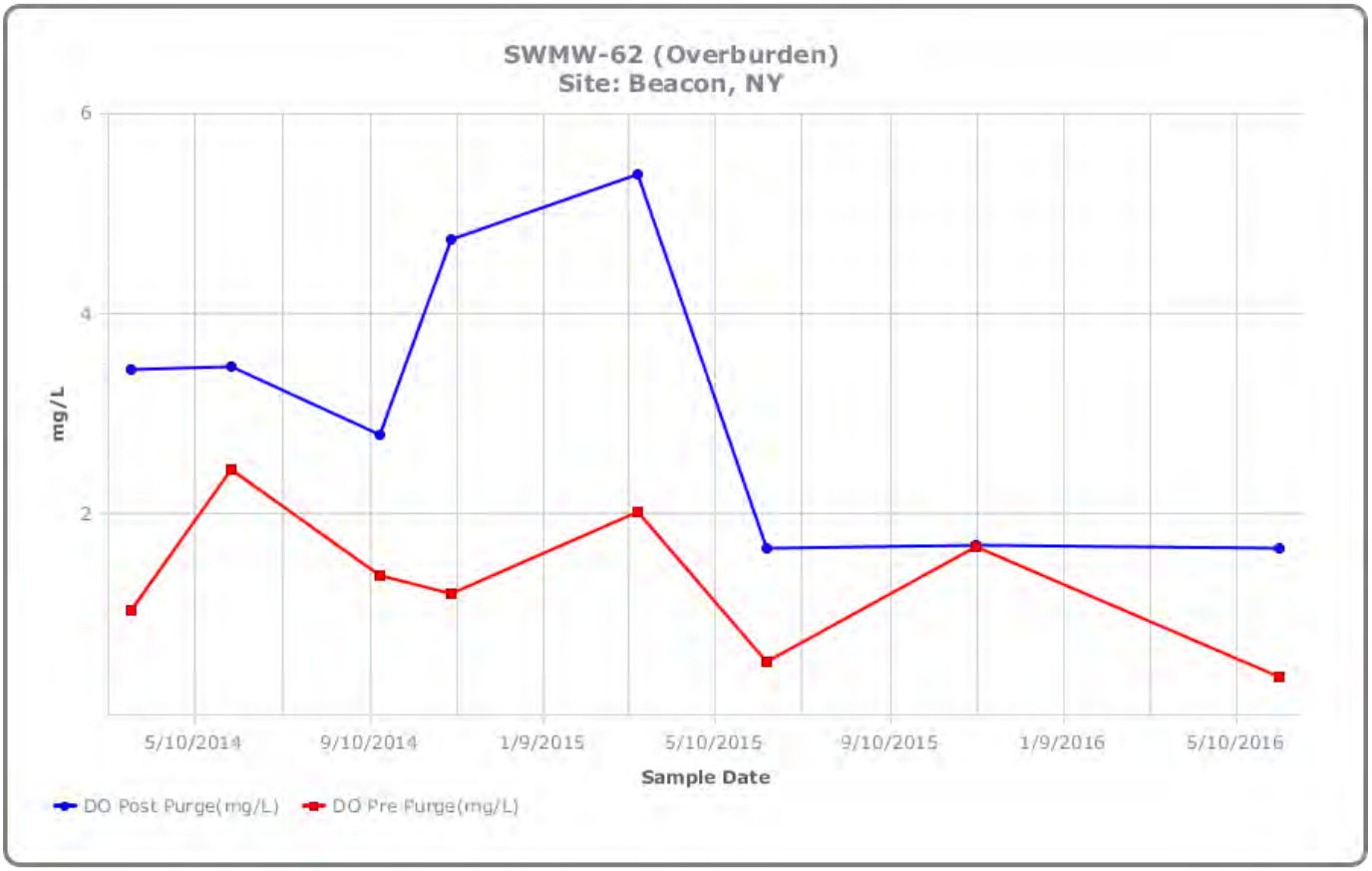

SWMW-28 (Overburden)
Site: Beacon, NY
4.5
3
1.5
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

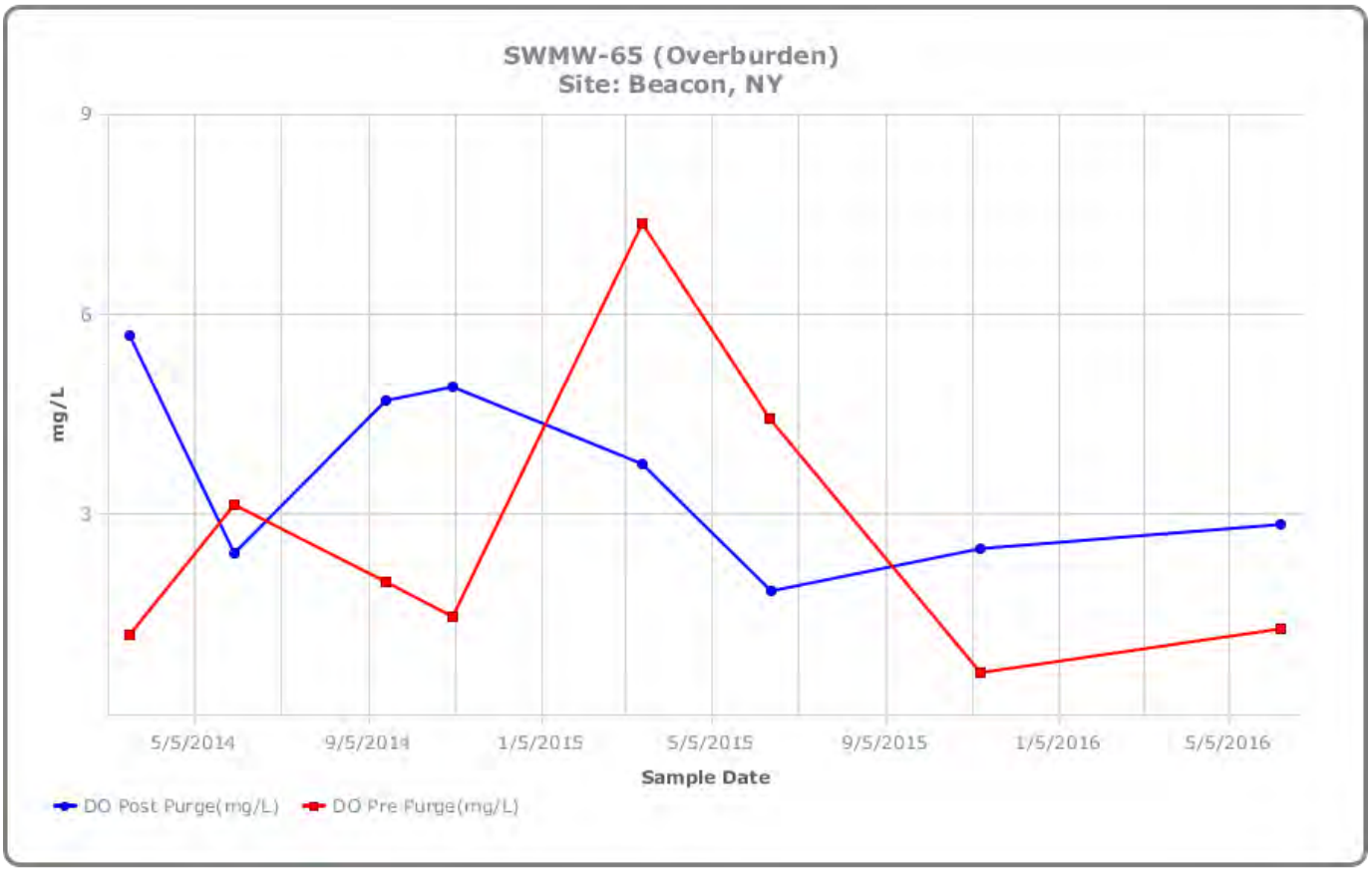

SWMW-30 (Overburden)
Site: Beacon, NY
6
4
2
mg/L
5/9/2014
9/9/2014
1/9/2015
5/9/2015
9/9/2015
1/9/2016
5/9/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

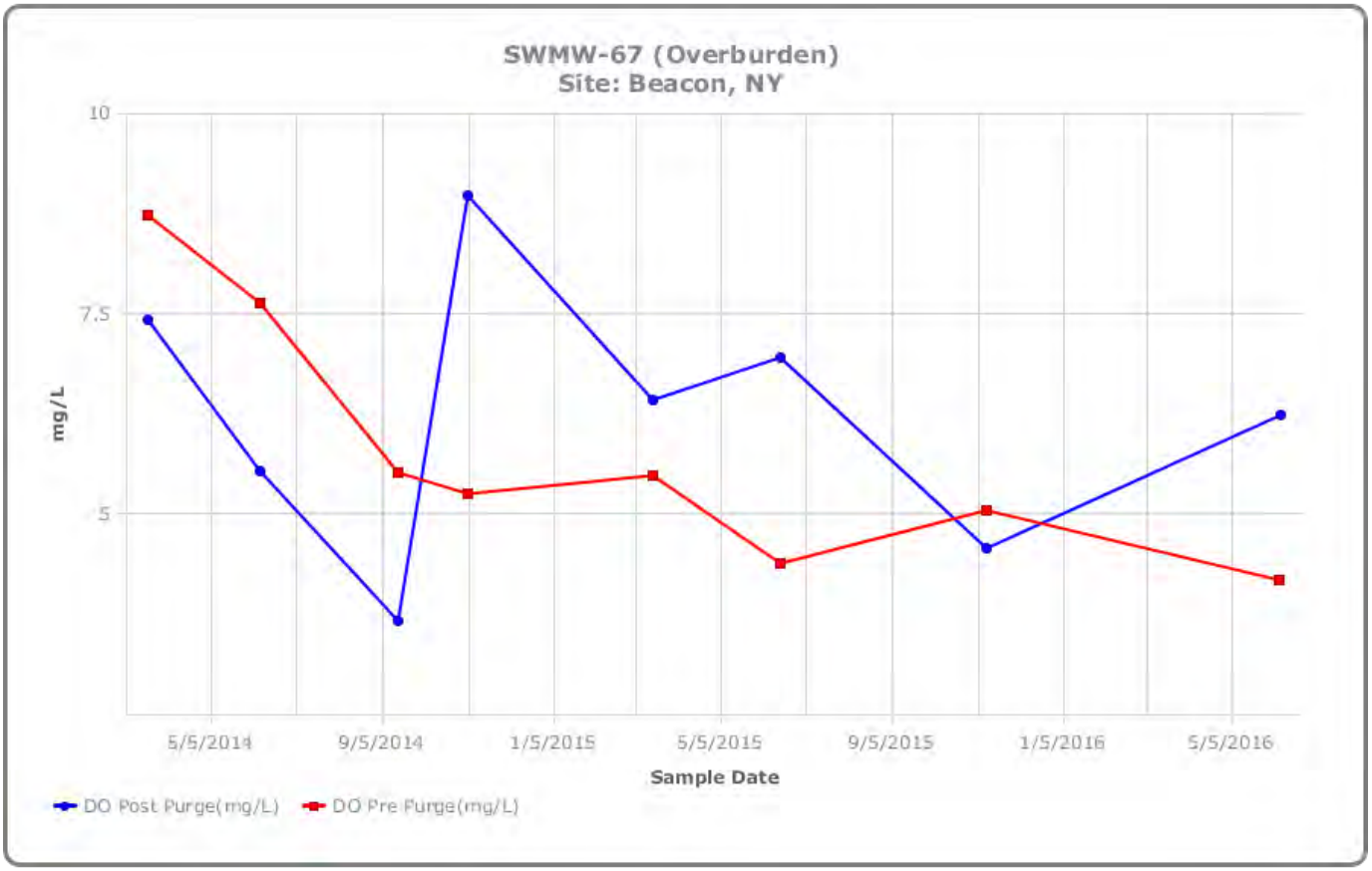

SWMW-31 (Overburden)
Site: Beacon, NY
5
3.75
2.5
1.25
mg/L
5/9/2014
9/9/2014
1/9/2015
5/9/2015
9/9/2015
1/9/2016
5/9/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

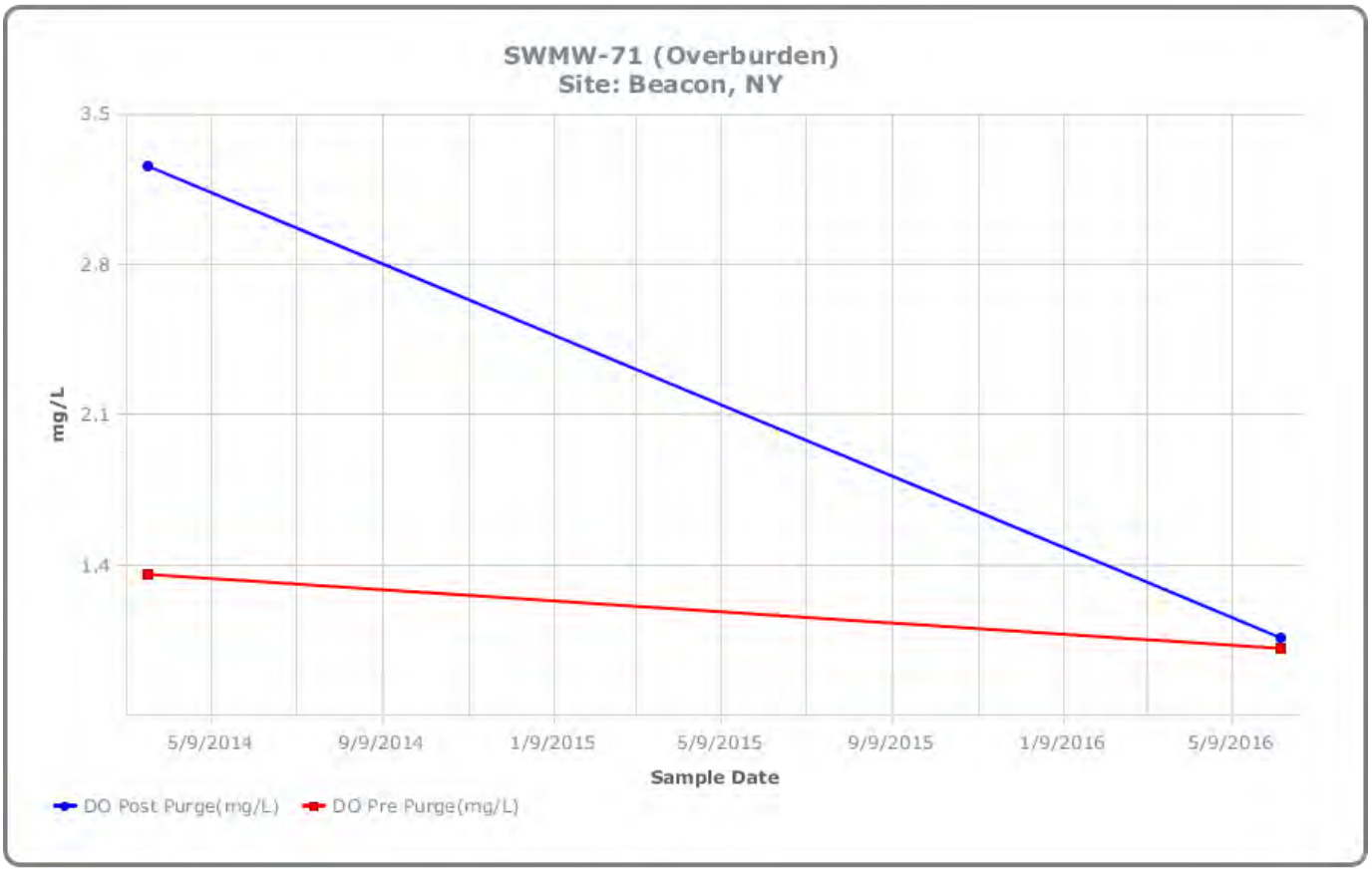

SWMW-48 (Overburden)
Site: Beacon, NY
9
6
3
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

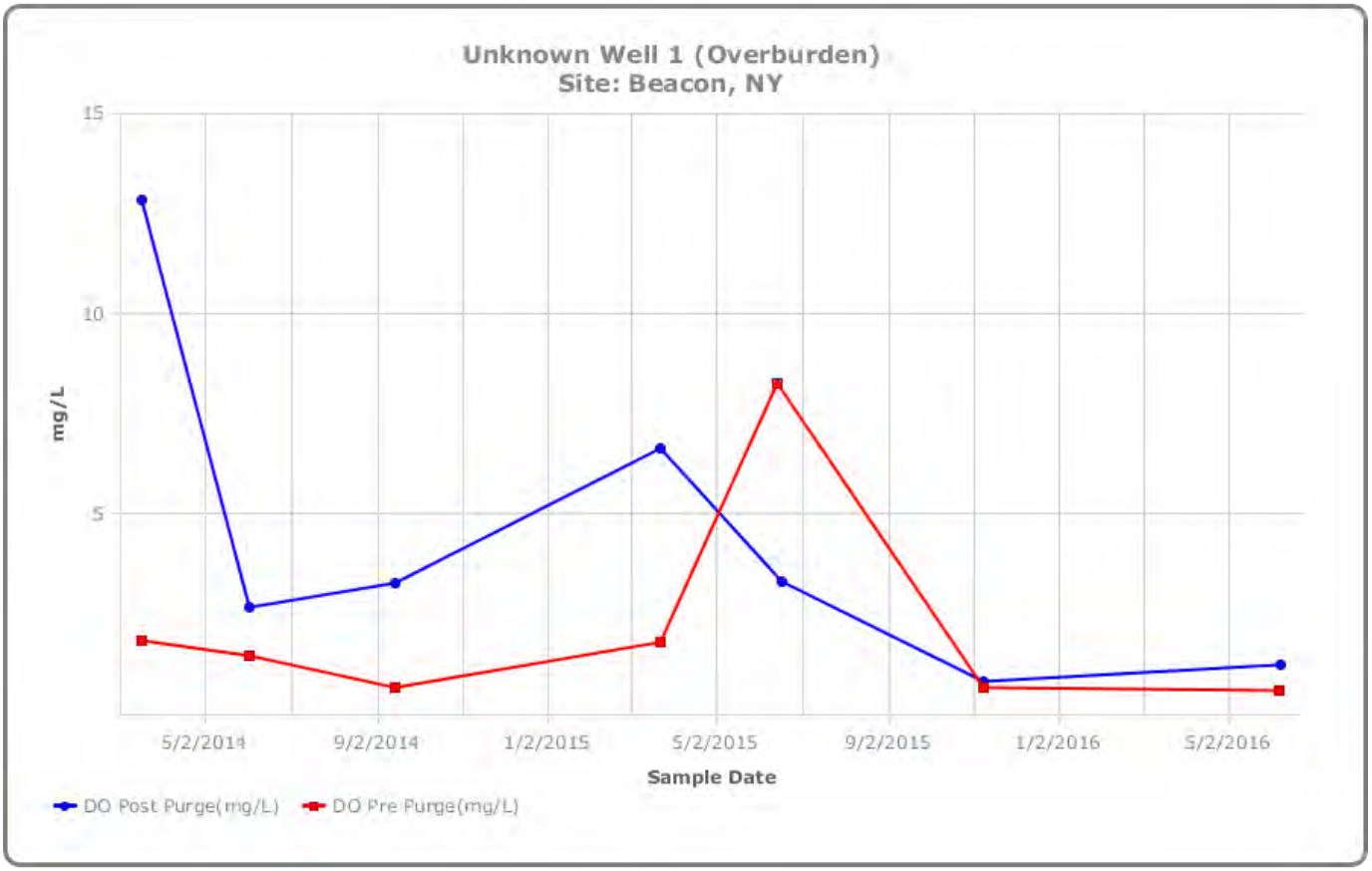

SWMW-58 (Overburden)
Site: Beacon, NY
8
6
4
2
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

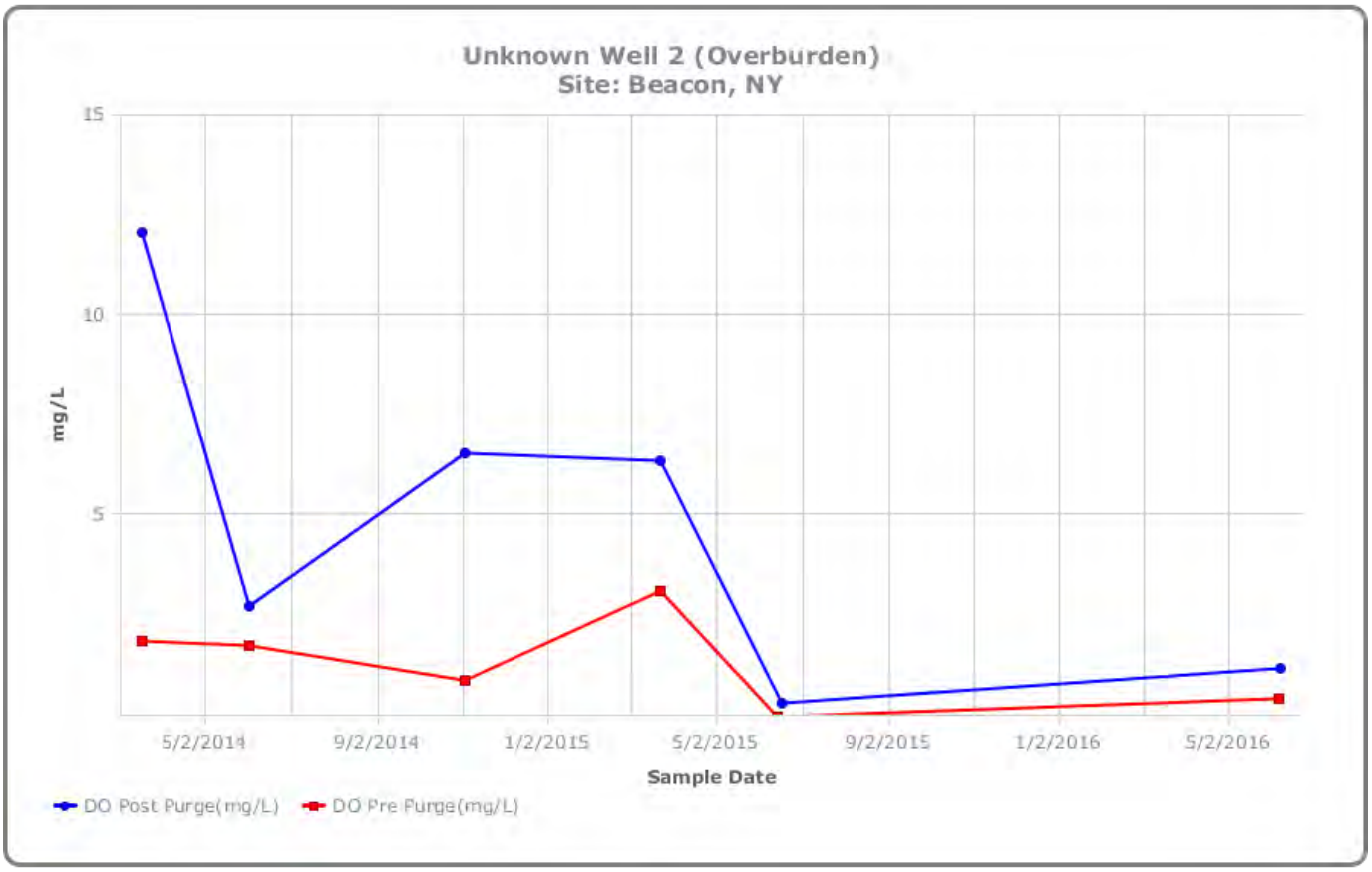

SWMW-62 (Overburden)
Site: Beacon, NY
6
4
2
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

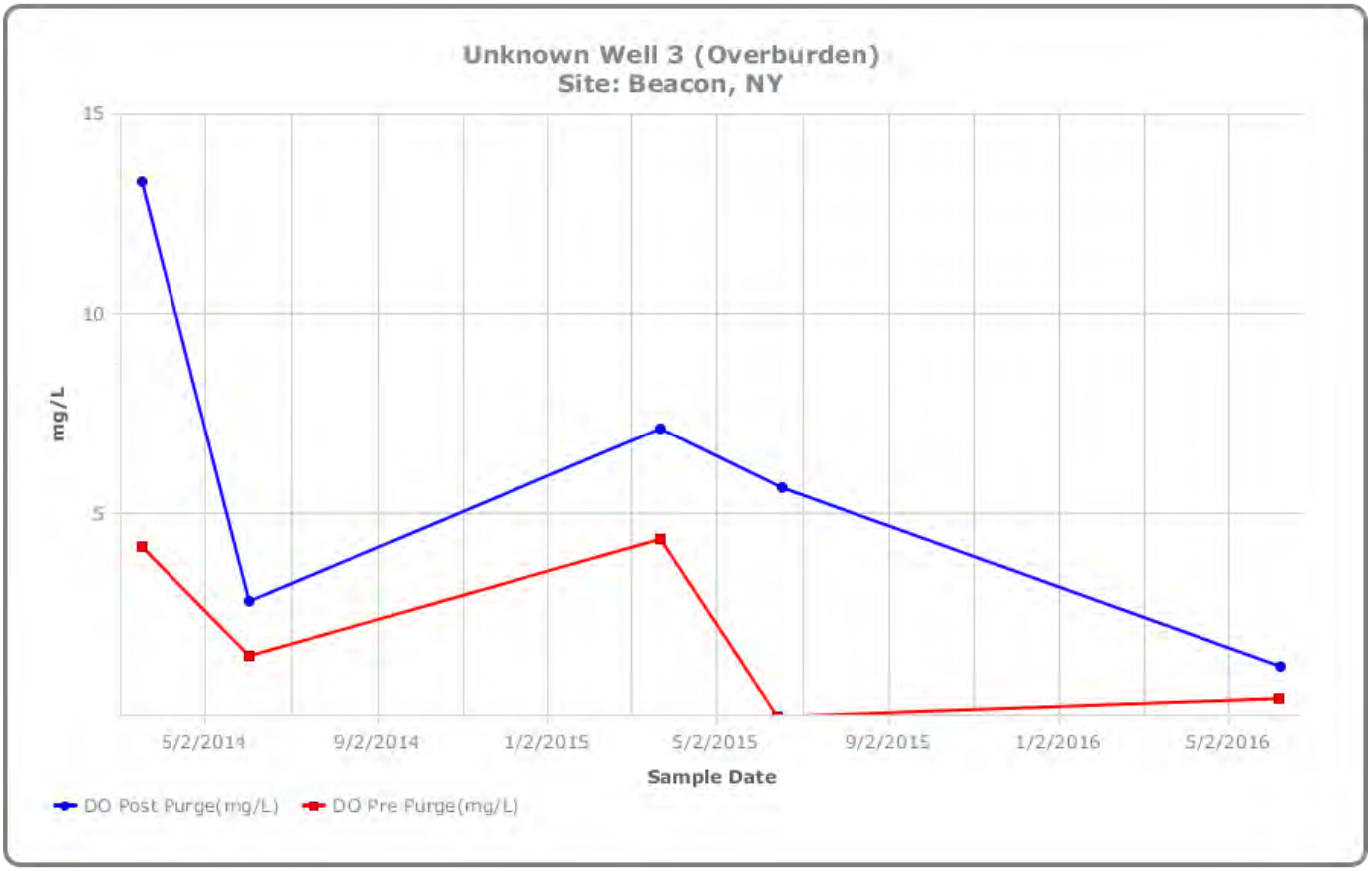

SWMW-65 (Overburden)
Site: Beacon, NY
9
6
3
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)


SWMW-67 (Overburden)
Site: Beacon, NY
10
7.5
5
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

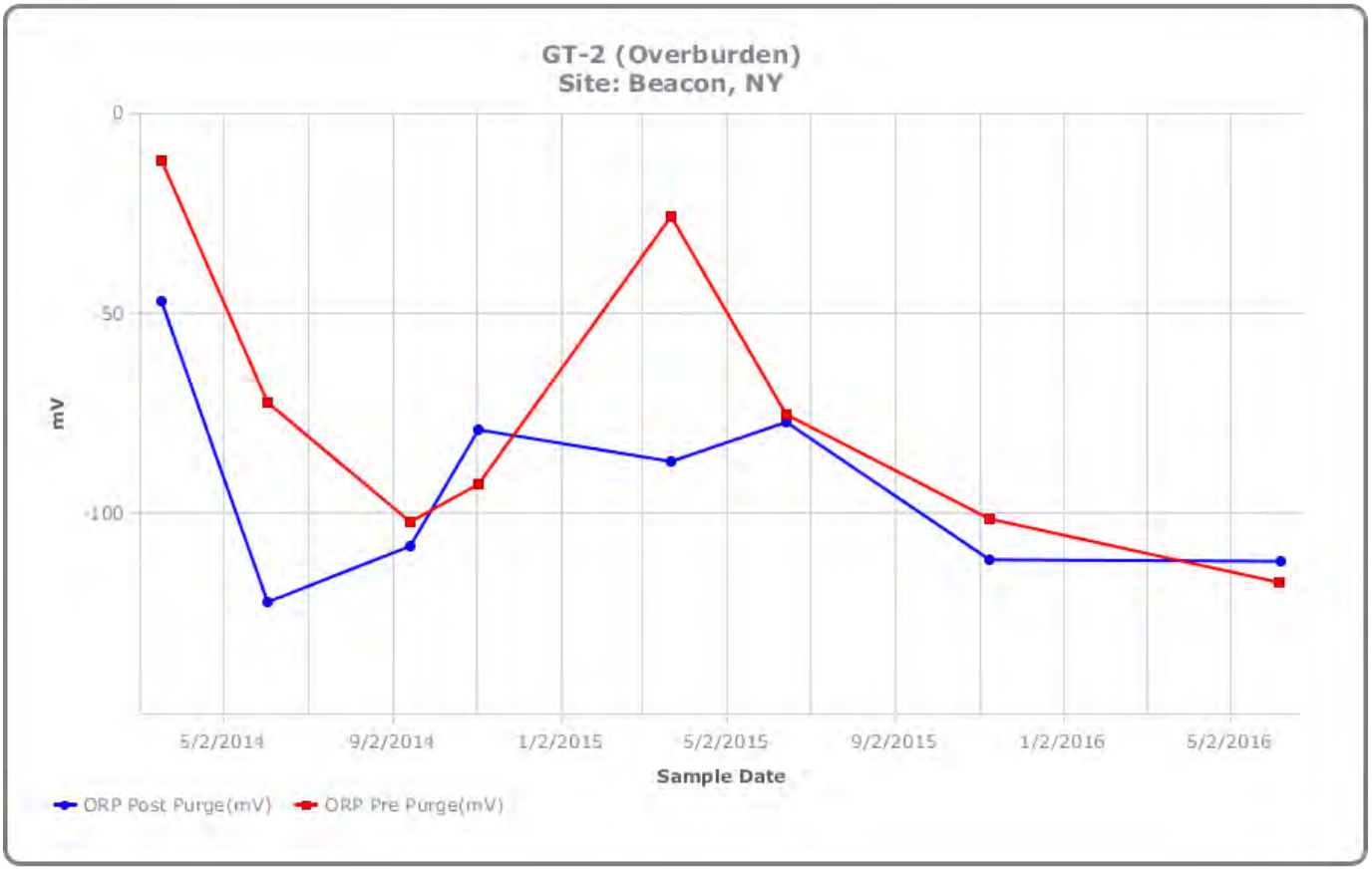

SWMW-71 (Overburden)
Site: Beacon, NY
3.5
2.8
2.1
1.4
mg/L
5/9/2014
9/9/2014
1/9/2015
5/9/2015
9/9/2015
1/9/2016
5/9/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

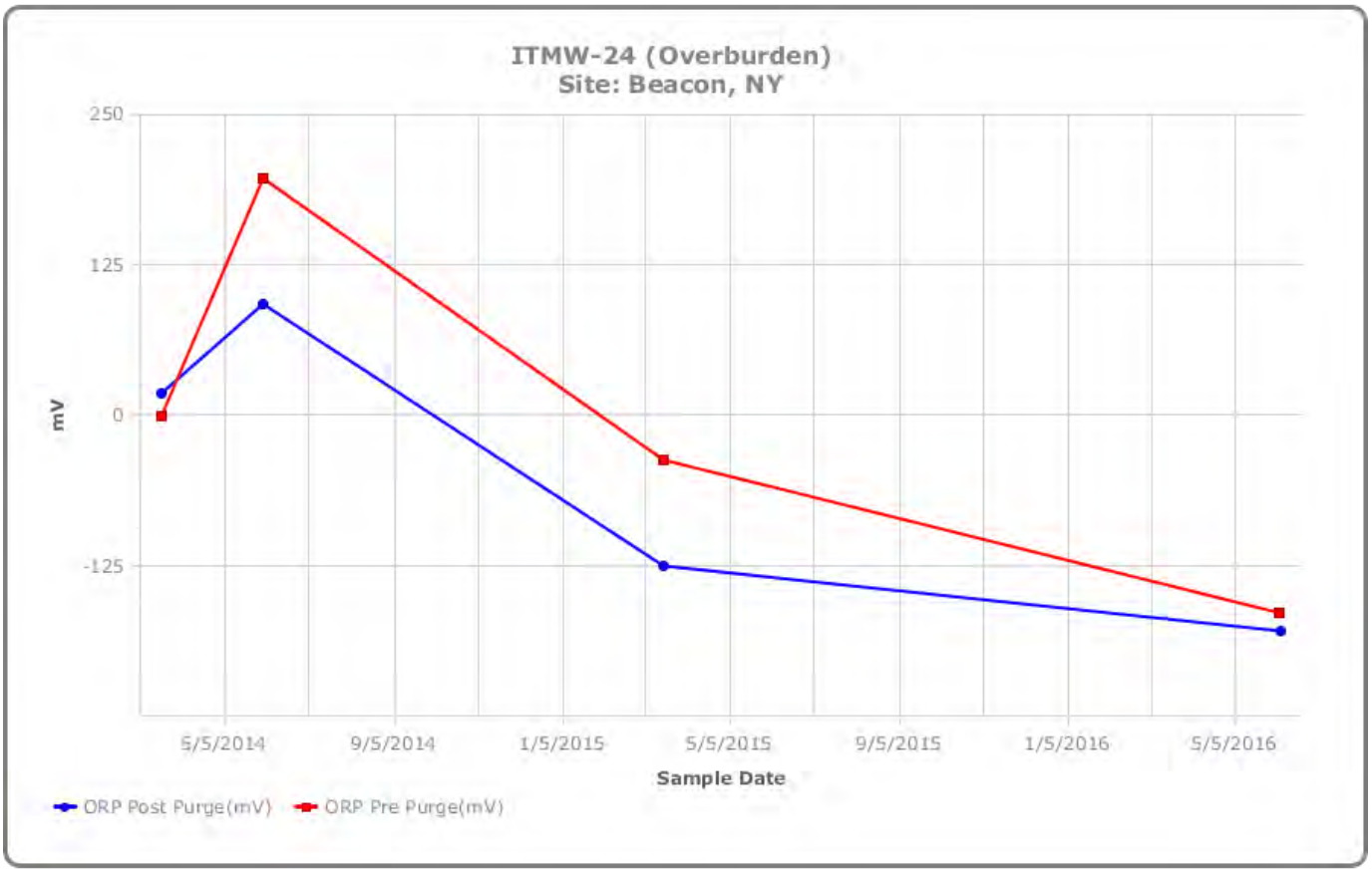

Unknown Well 1 (Overburden)
Site: Beacon, NY
15
10
5
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

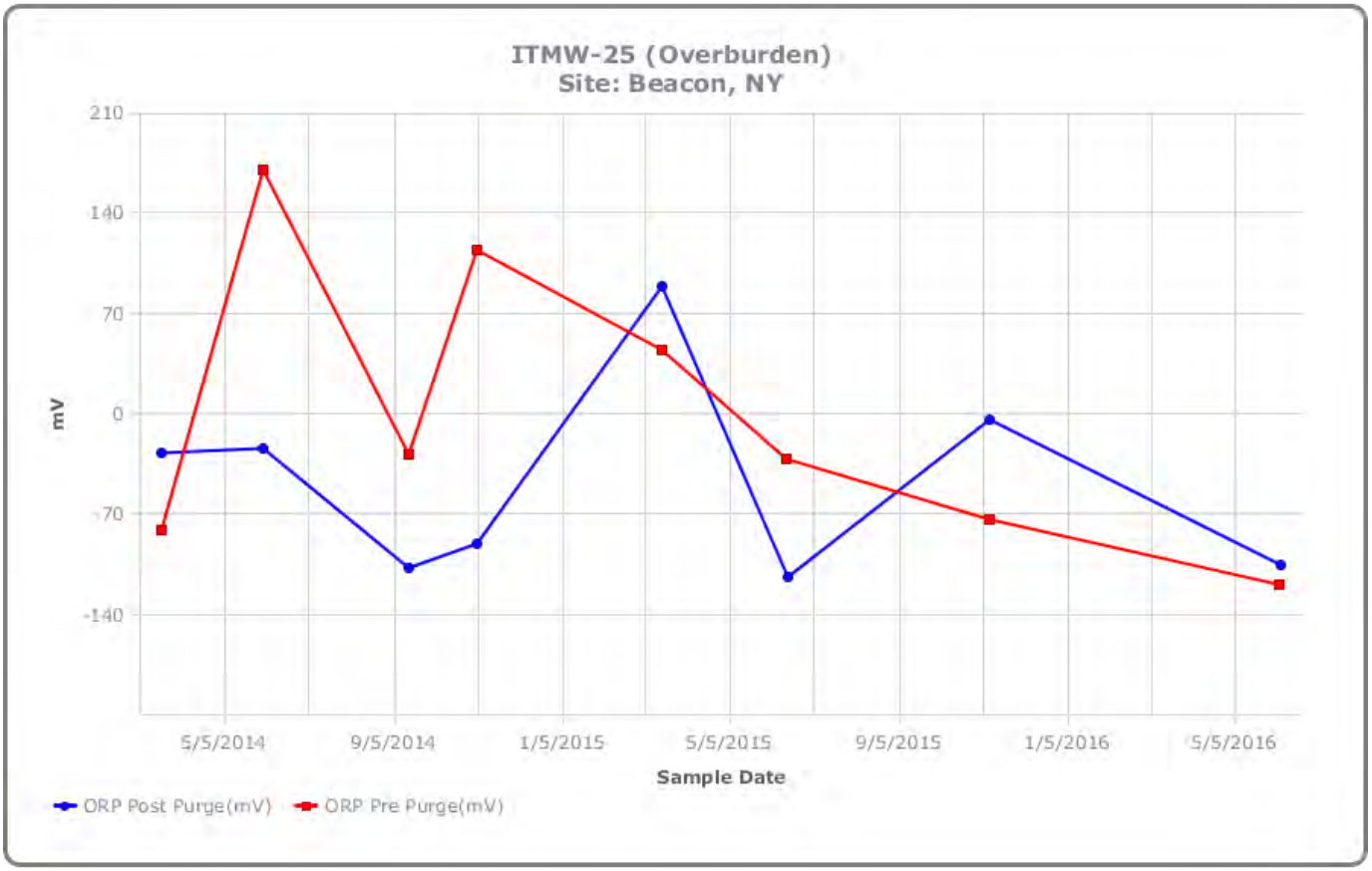

Unknown Well 2 (Overburden)
Site: Beacon, NY
15
10
5
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

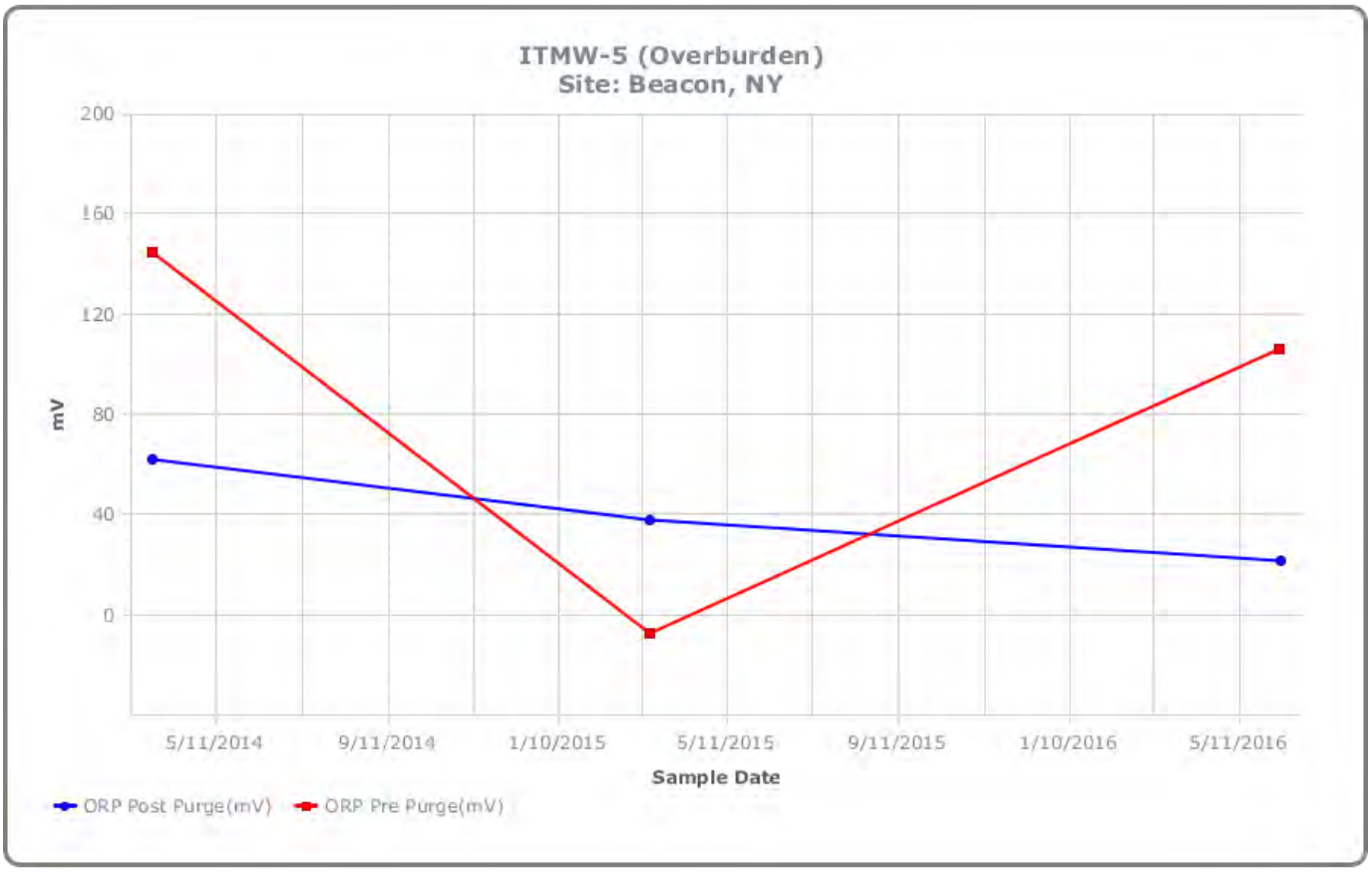

Unknown Well 3 (Overburden)
Site: Beacon, NY
15
10
5
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

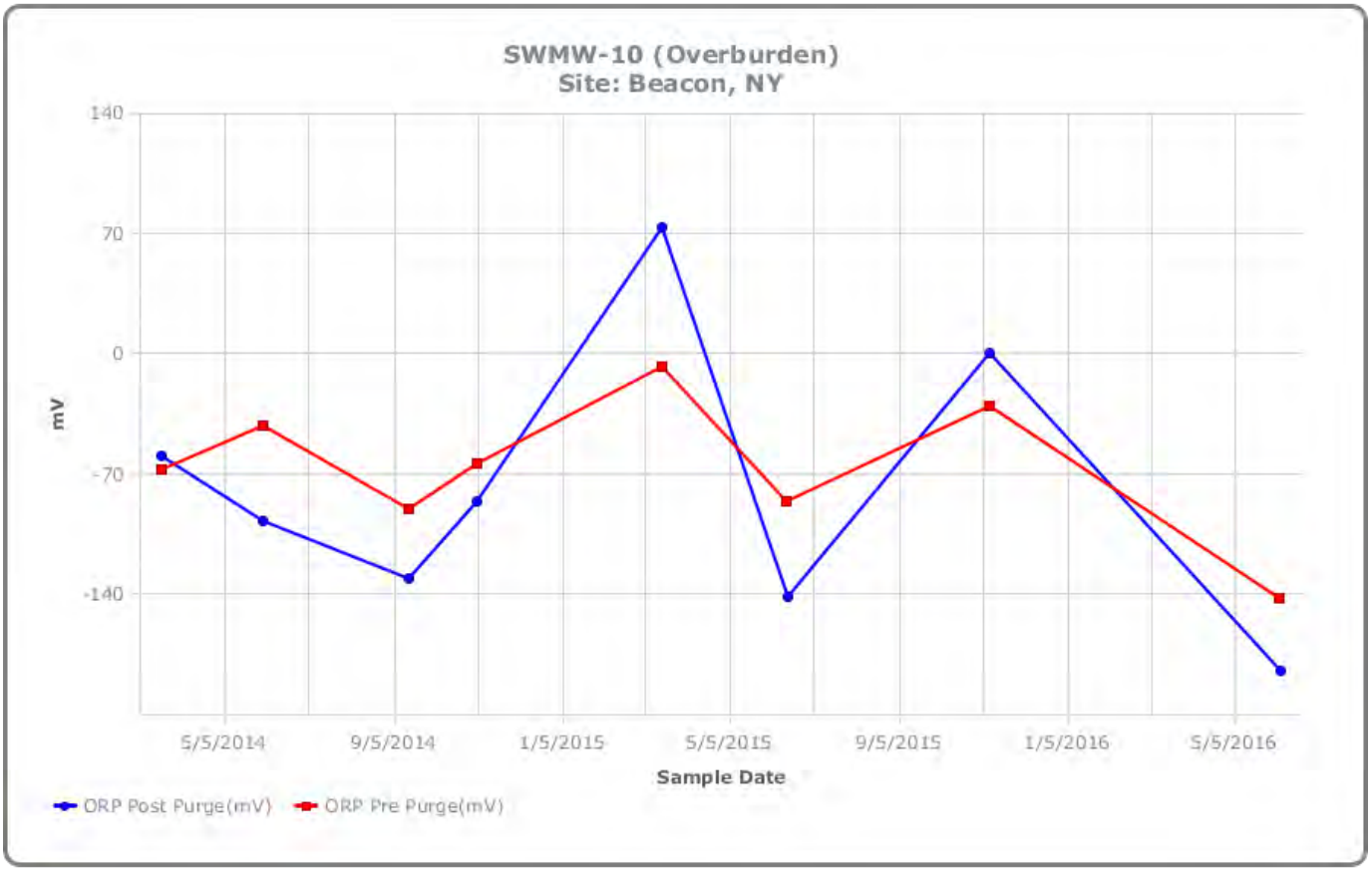
2014 THROUGH 2016 ORP OVERBURDEN WELLS SUMMARY GRAPHS

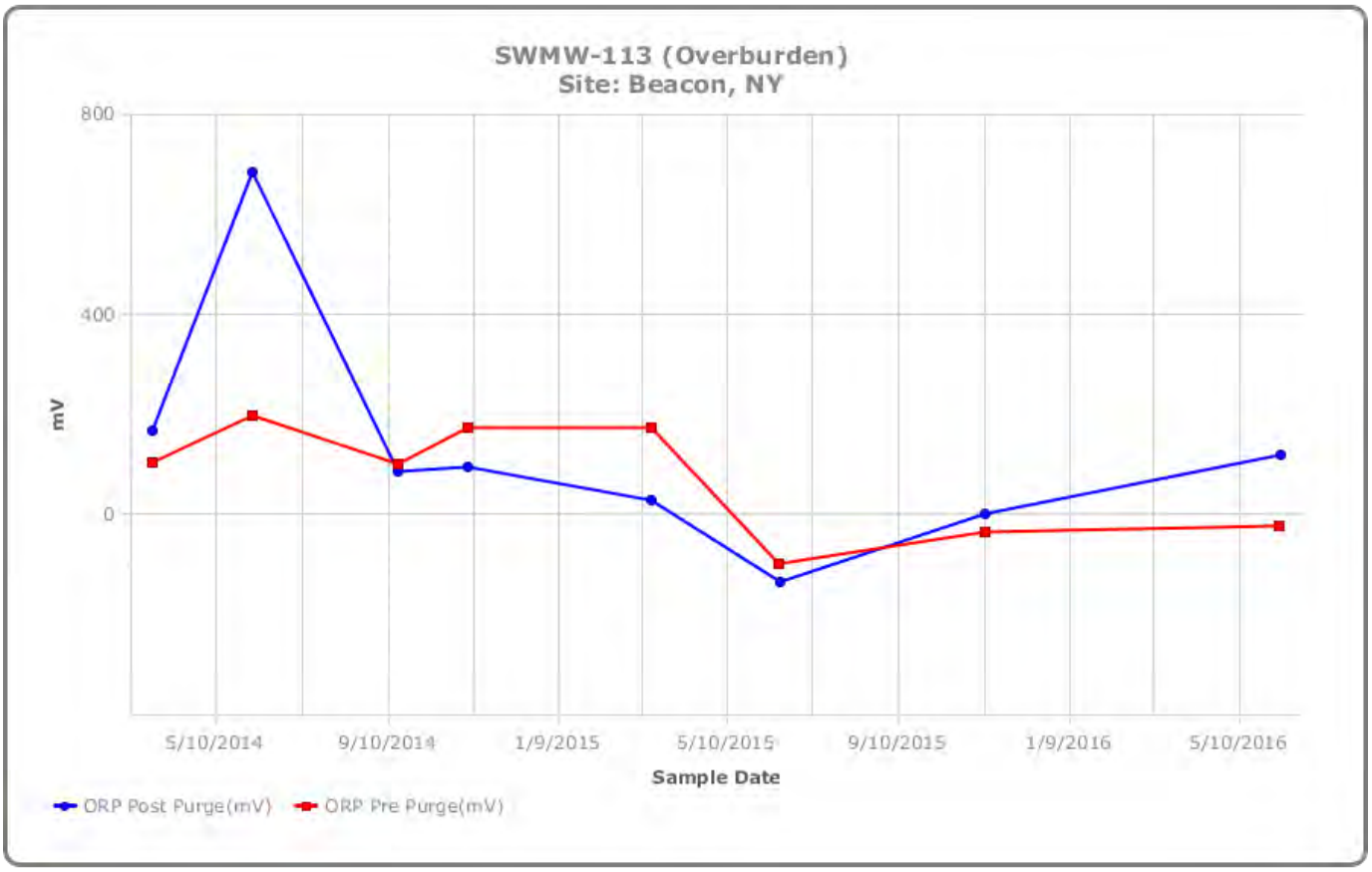

GT-2 (Overburden)
Site: Beacon, NY
0
-50
-100
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

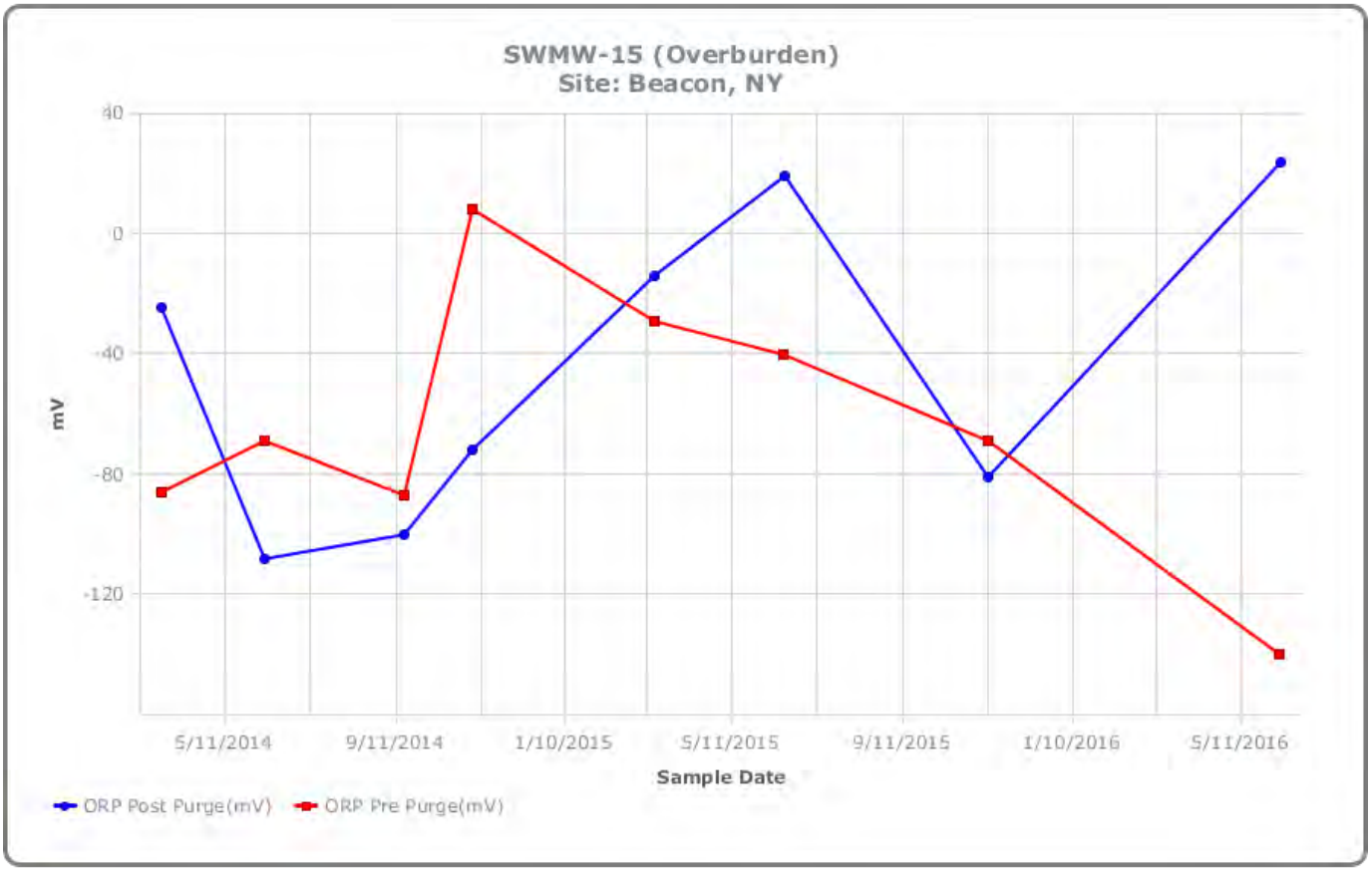

ITMW-24 (Overburden)
Site: Beacon, NY
250
125
0
-125
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

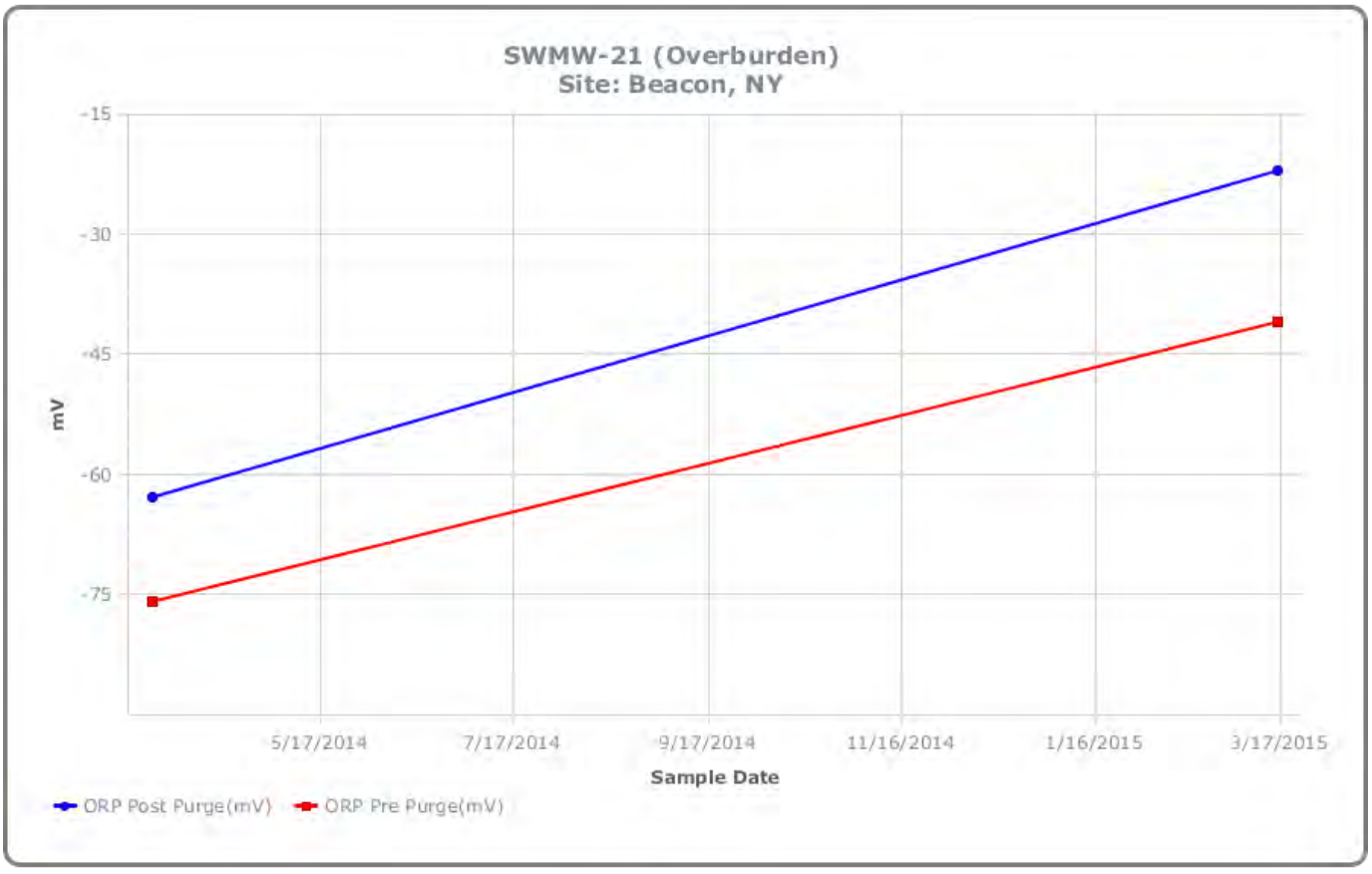

ITMW-25 (Overburden)
Site: Beacon, NY
210
140
70
0
-70
-140
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

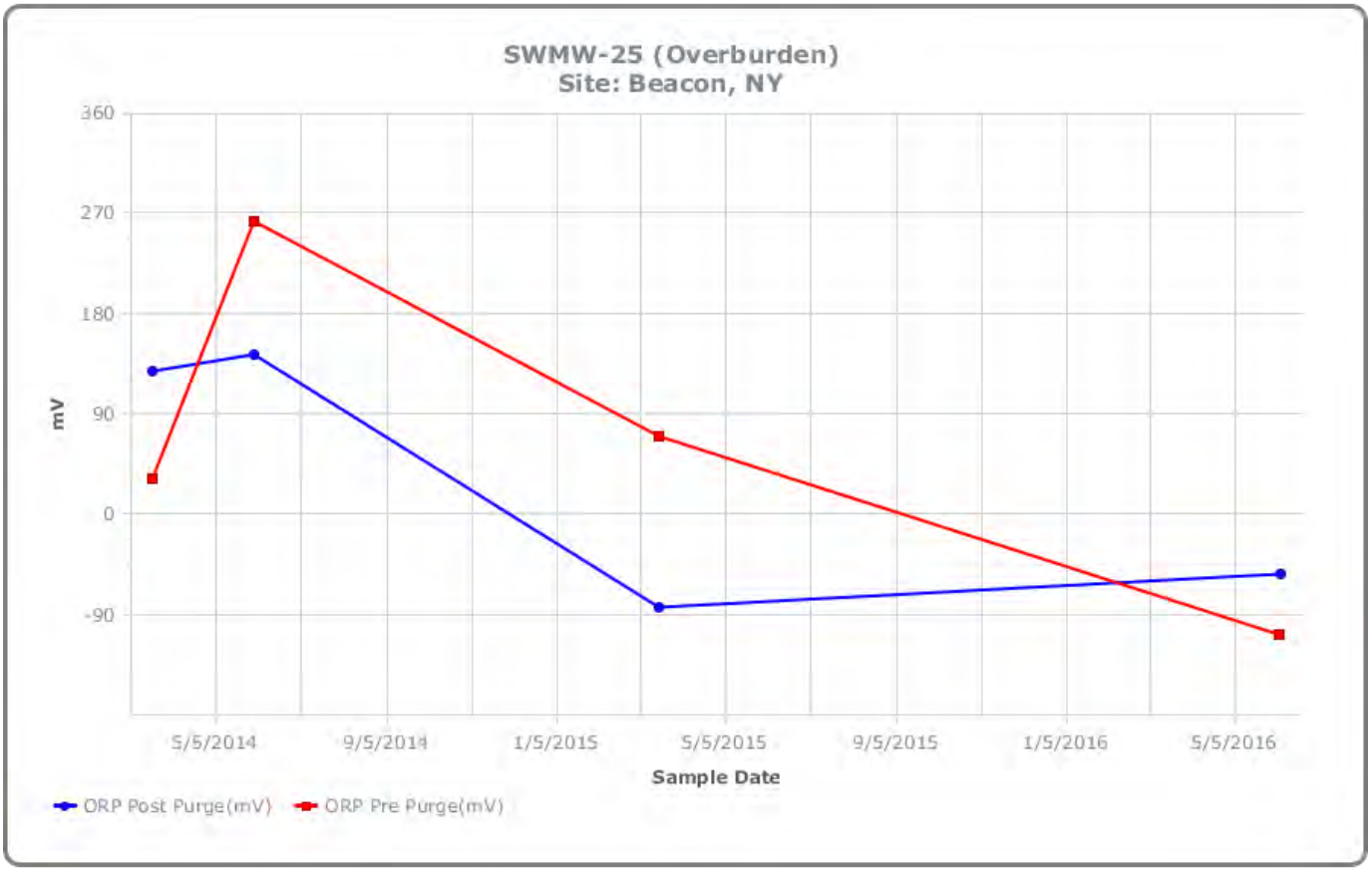

ITMW-5 (Overburden)
Site: Beacon, NY
200
160
120
80
40
0
mV
5/11/2014
9/11/2014
1/10/2015
5/11/2015
9/11/2015
1/10/2016
5/11/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

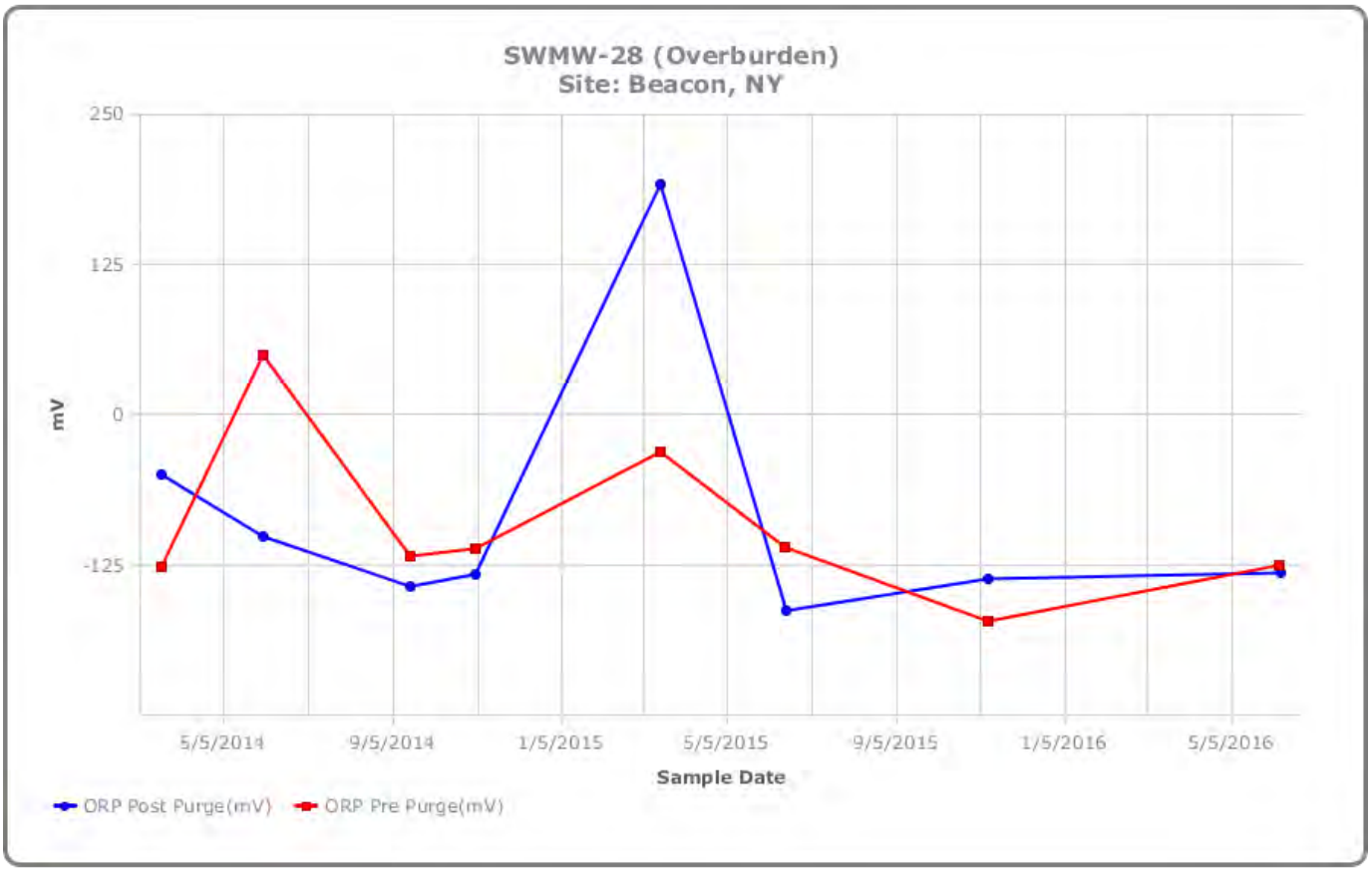

SWMW-10 (Overburden)
Site: Beacon, NY
140
70
0
-70
-140
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

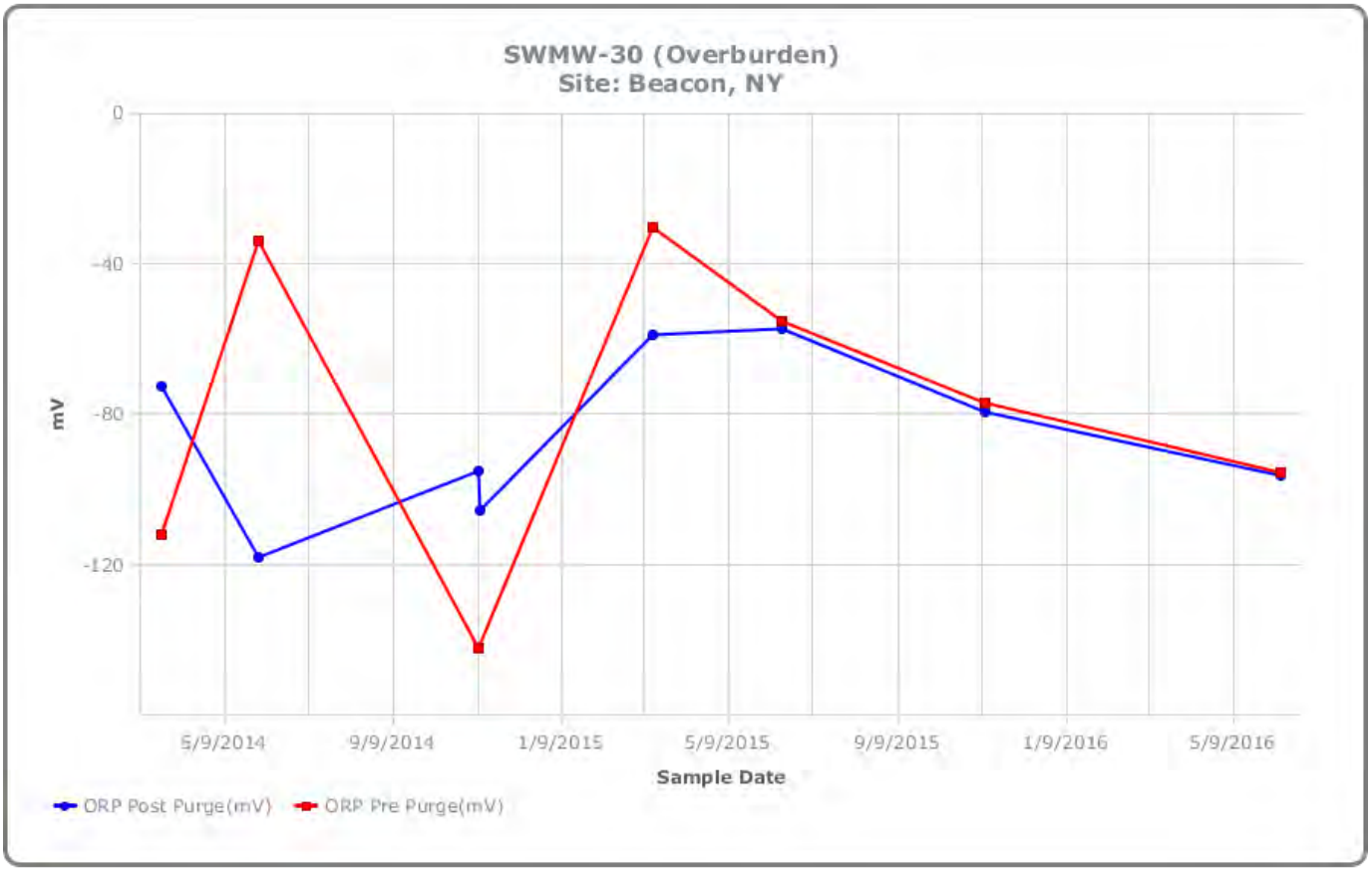

SWMW-113 (Overburden)
Site: Beacon, NY
800
400
0
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

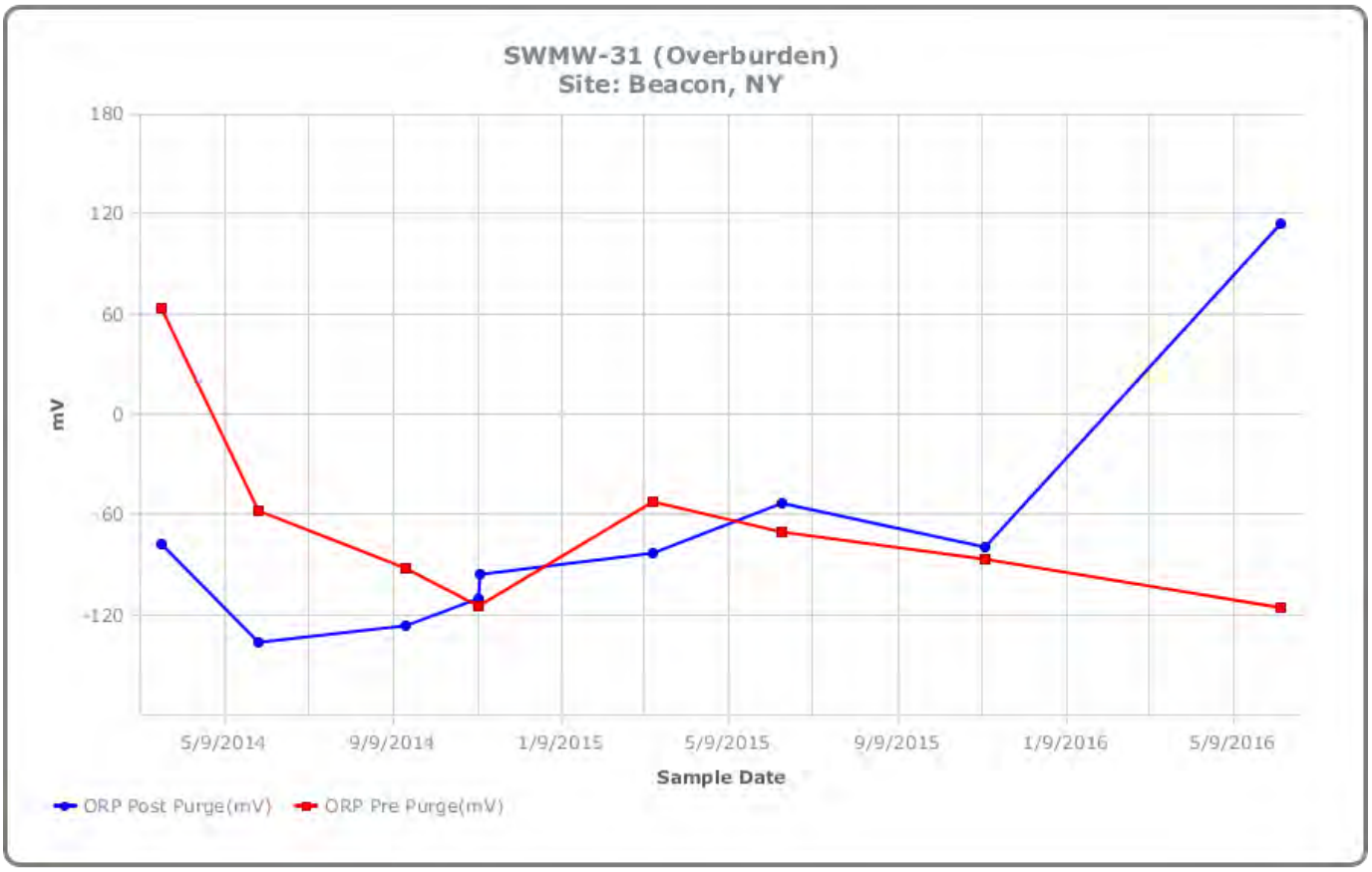

SWMW-15 (Overburden)
Site: Beacon, NY
40
0
-40
-80
-120
mV
5/11/2014
9/11/2014
1/10/2015
5/11/2015
9/11/2015
1/10/2016
5/11/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

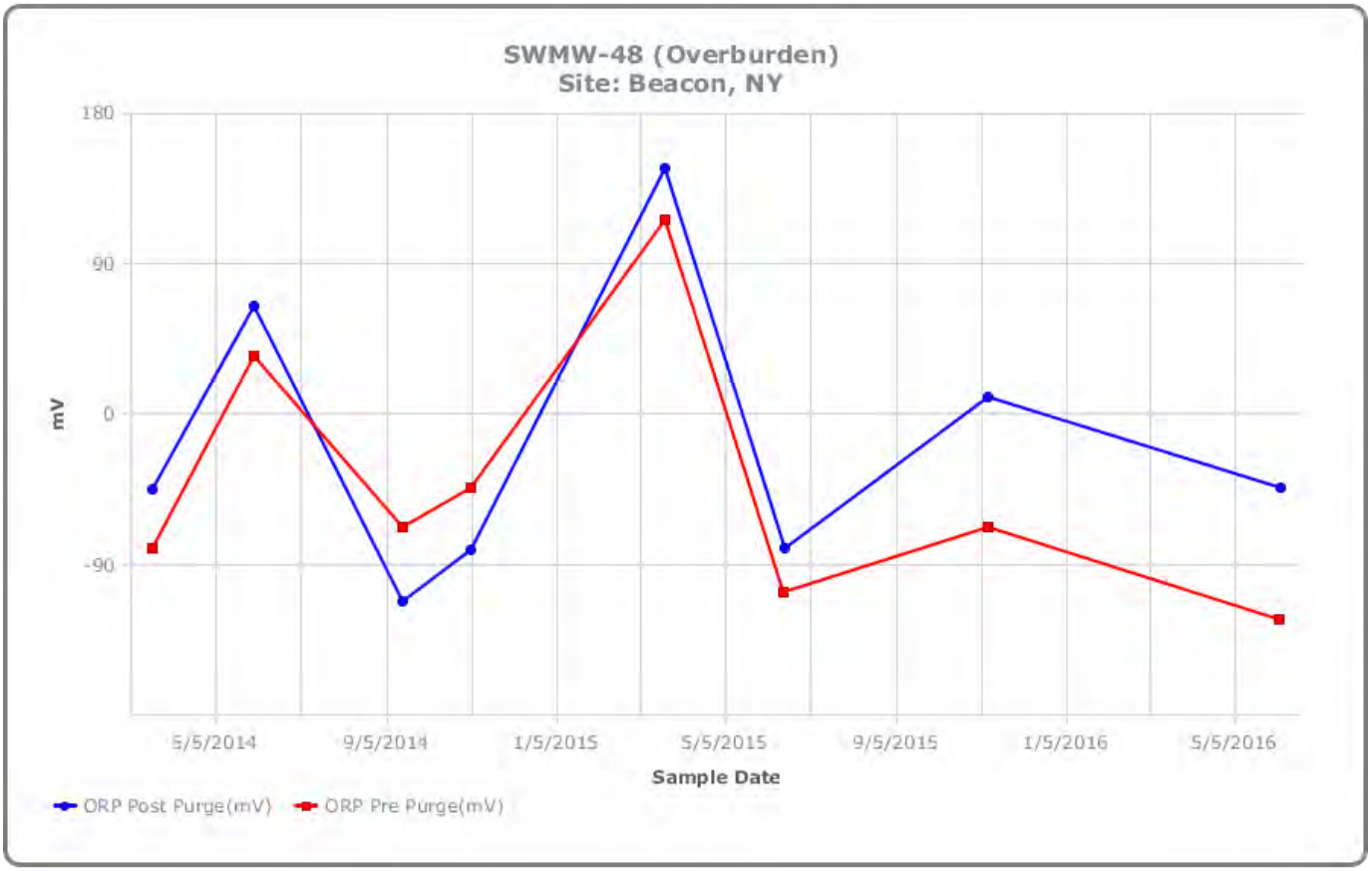

SWMW-21 (Overburden)
Site: Beacon, NY
-15
-30
-45
-60
-75
mV
5/17/2014
7/17/2014
9/17/2014
11/16/2014
1/16/2015
3/17/2015
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

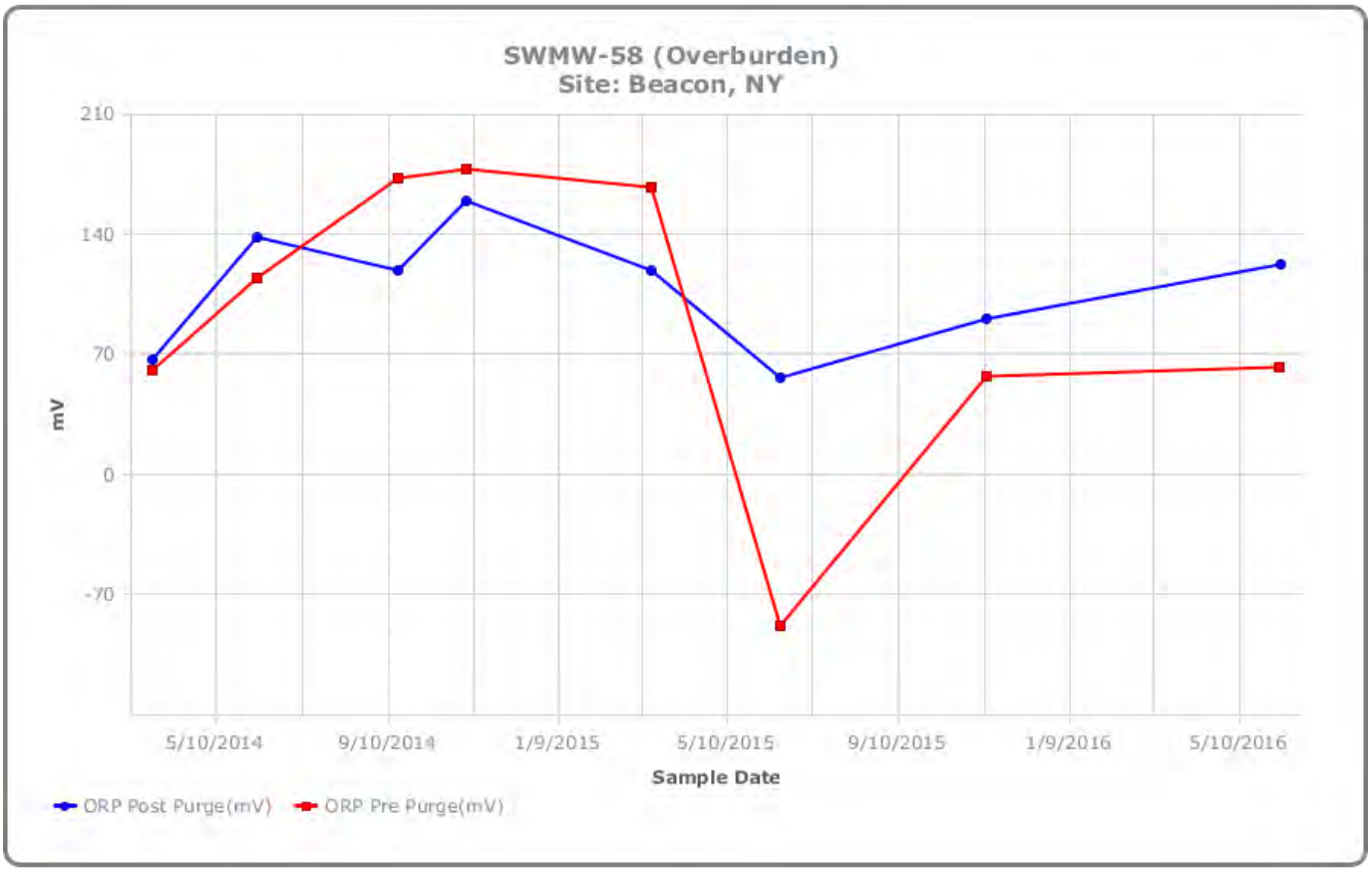

SWMW-25 (Overburden)
Site: Beacon, NY
360
270
180
90
0
-90
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

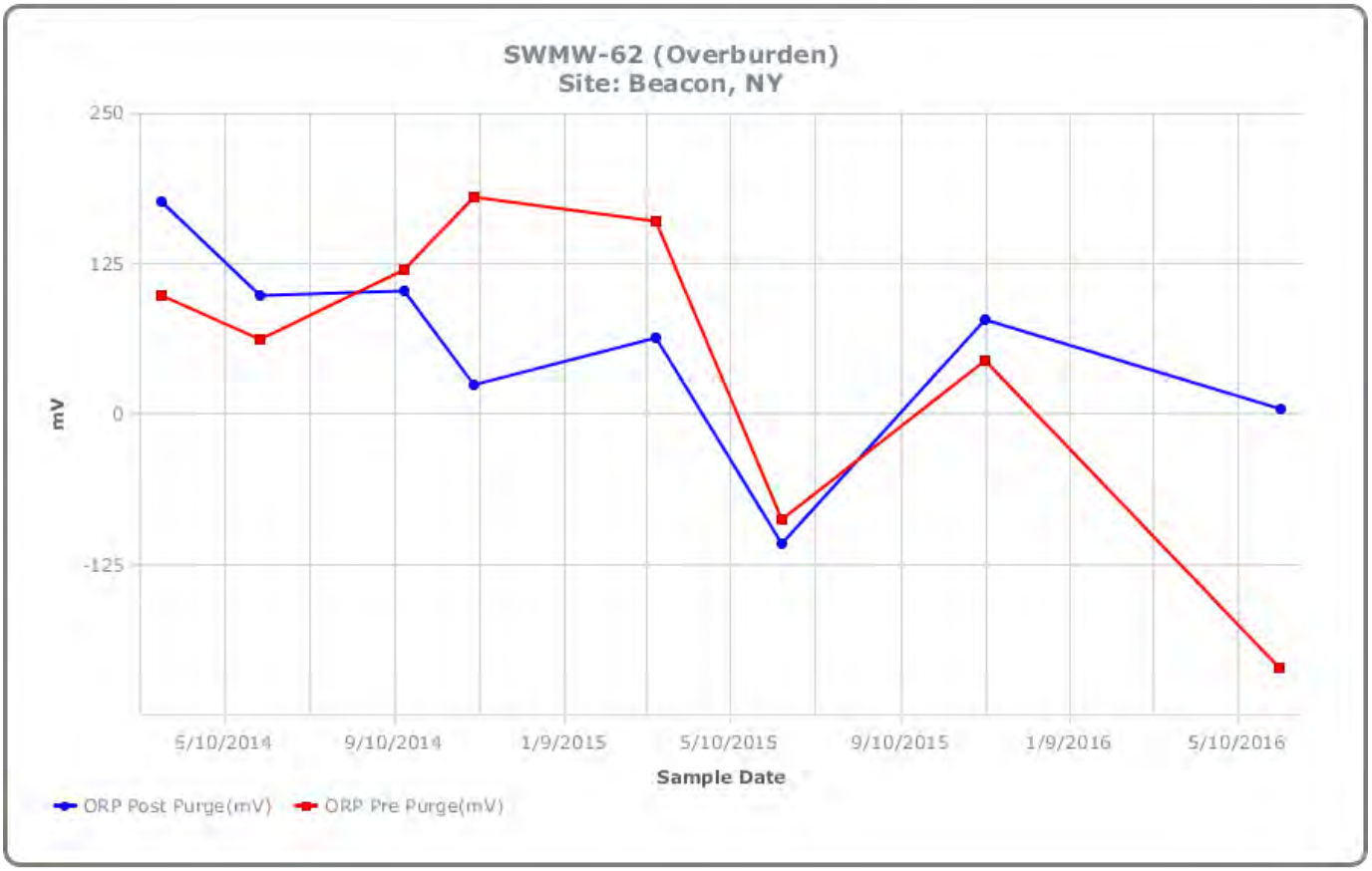

SWMW-28 (Overburden)
Site: Beacon, NY
250
125
0
-125
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

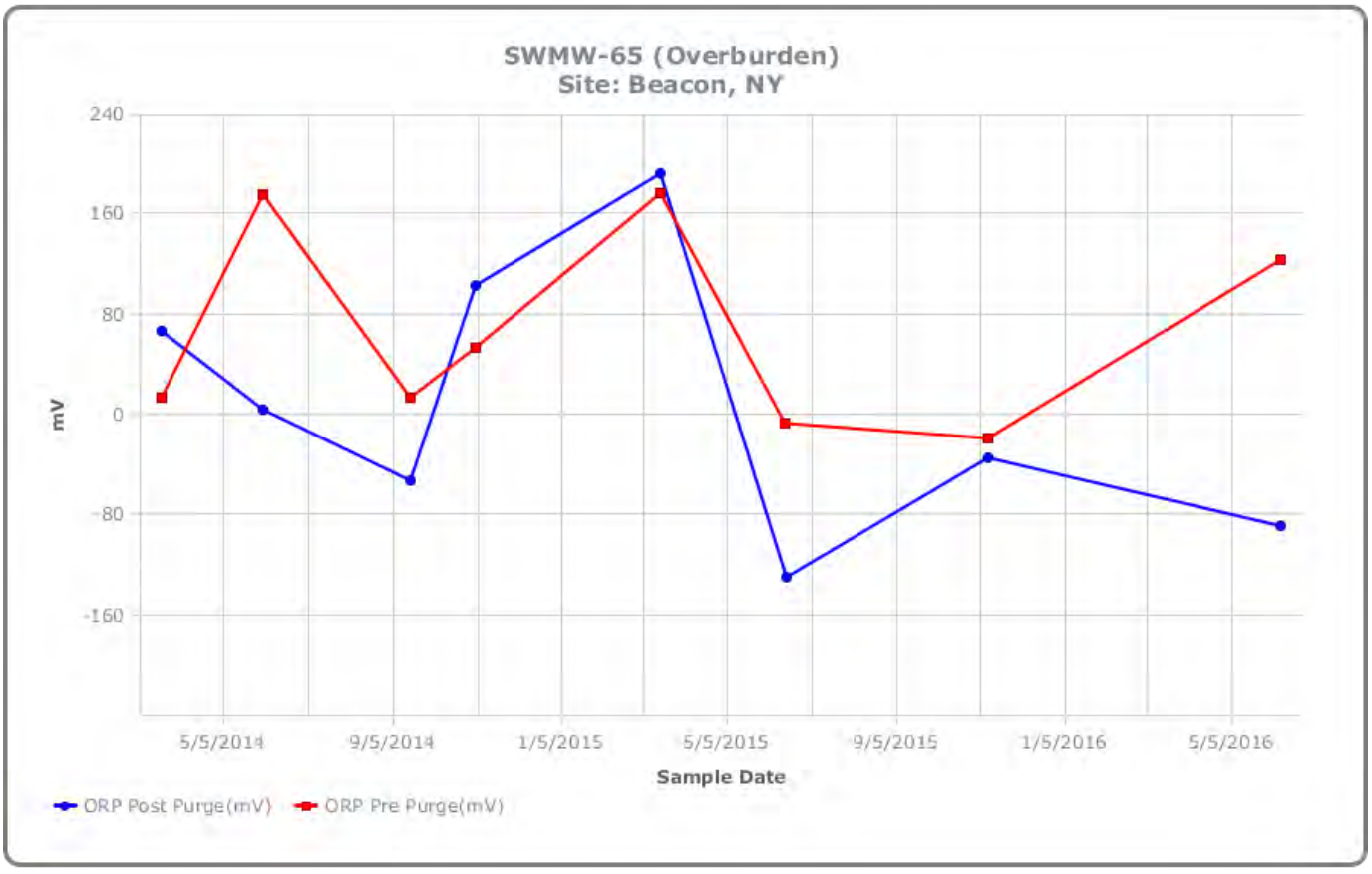

SWMW-30 (Overburden)
Site: Beacon, NY
0
-40
-80
-120
mV
5/9/2014
9/9/2014
1/9/2015
5/9/2015
9/9/2015
1/9/2016
5/9/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

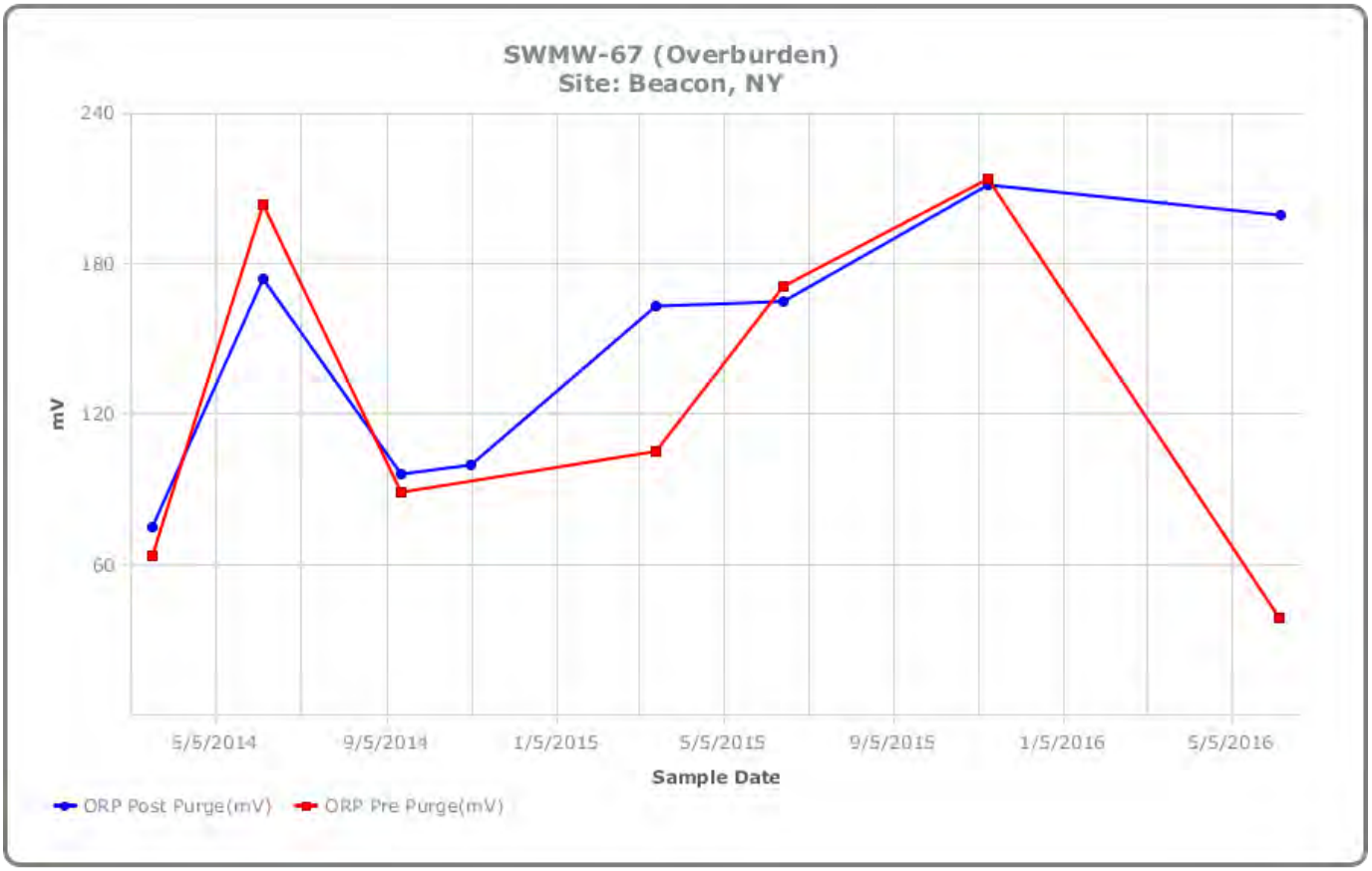

SWMW-31 (Overburden)
Site: Beacon, NY
180
120
60
0
-60
-120
mV
5/9/2014
9/9/2014
1/9/2015
5/9/2015
9/9/2015
1/9/2016
5/9/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

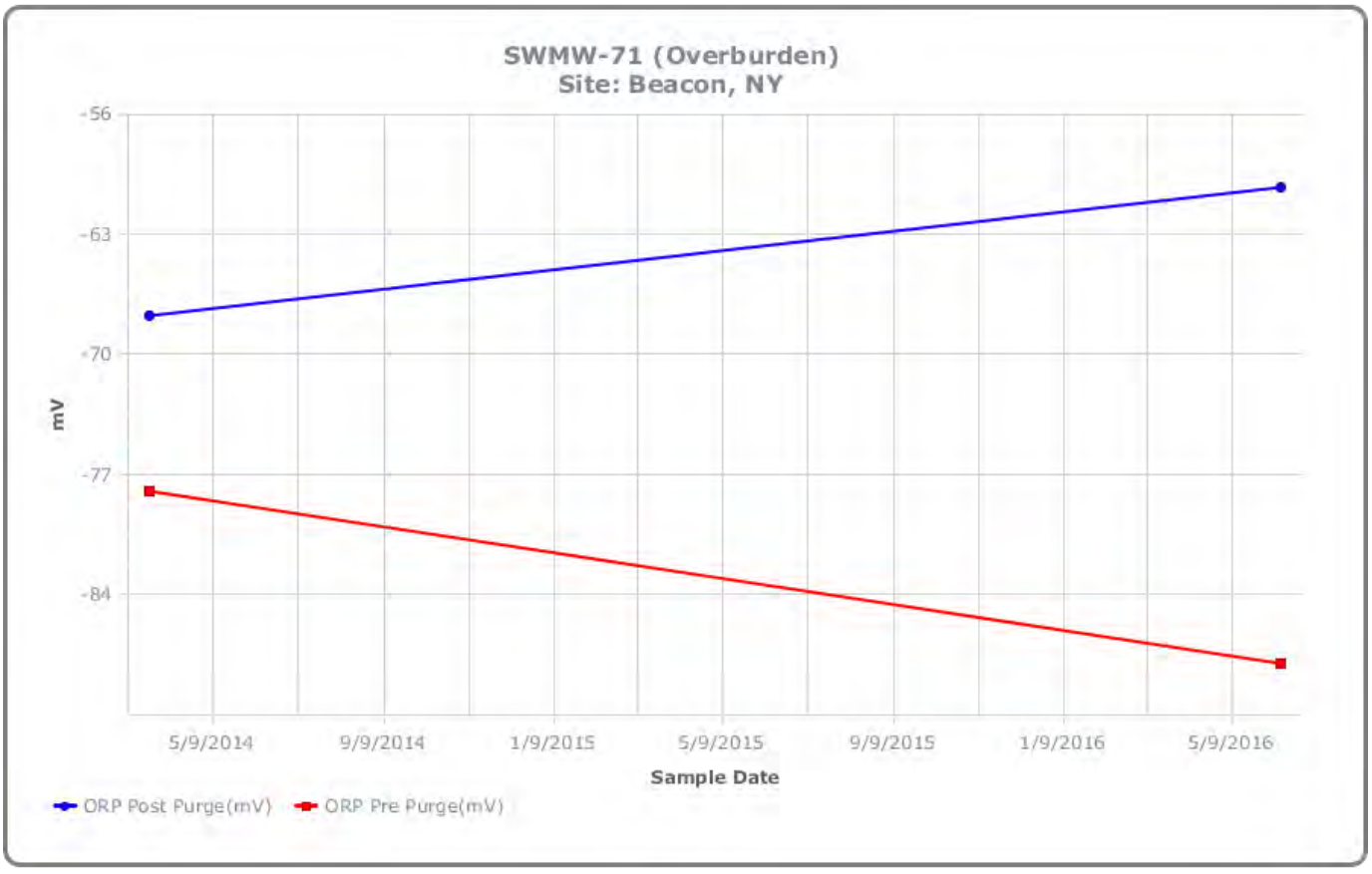

SWMW-48 (Overburden)
Site: Beacon, NY
180
90
0
-90
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

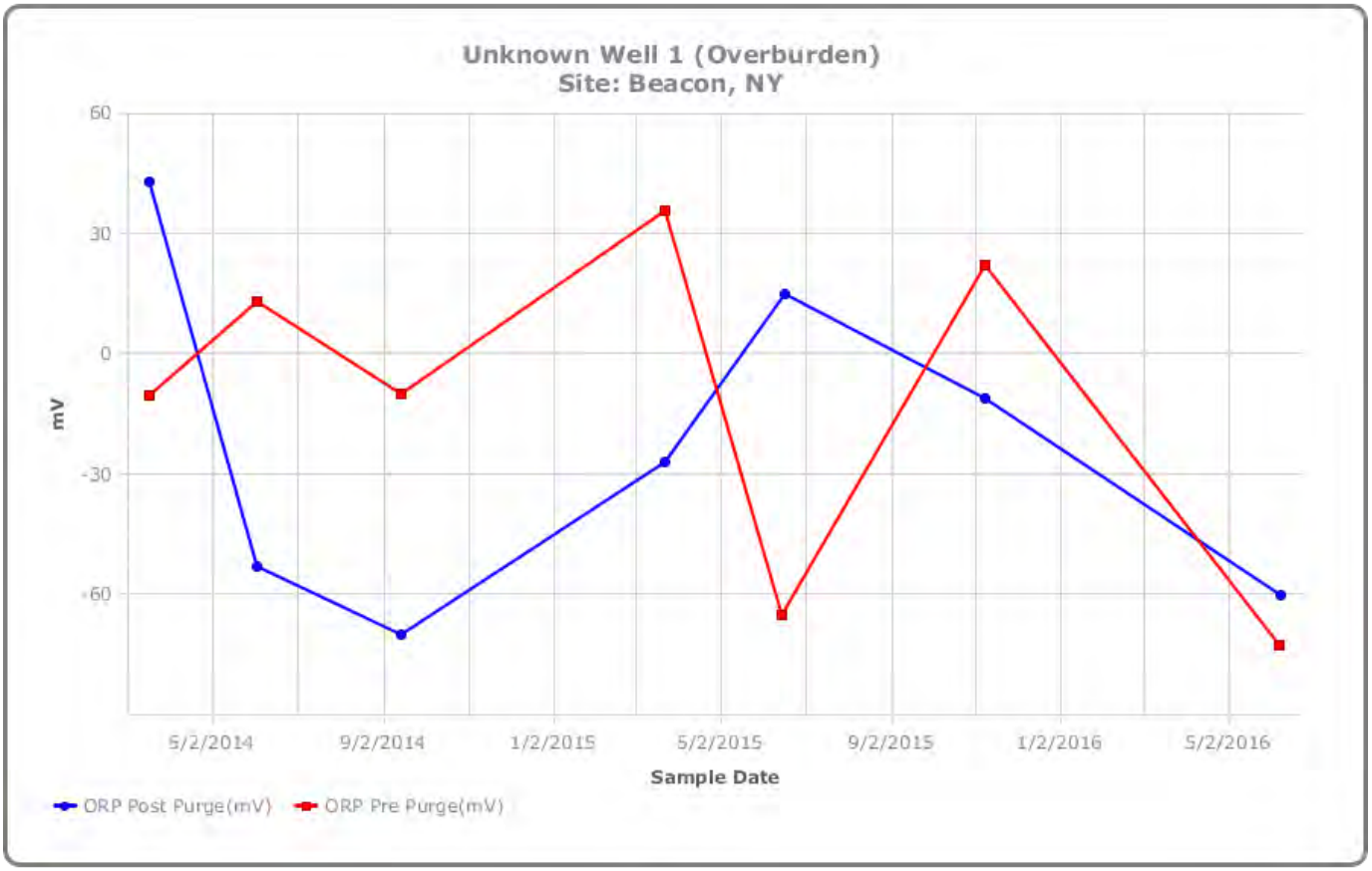

SWMW-58 (Overburden)
Site: Beacon, NY
210
140
70
0
-70
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

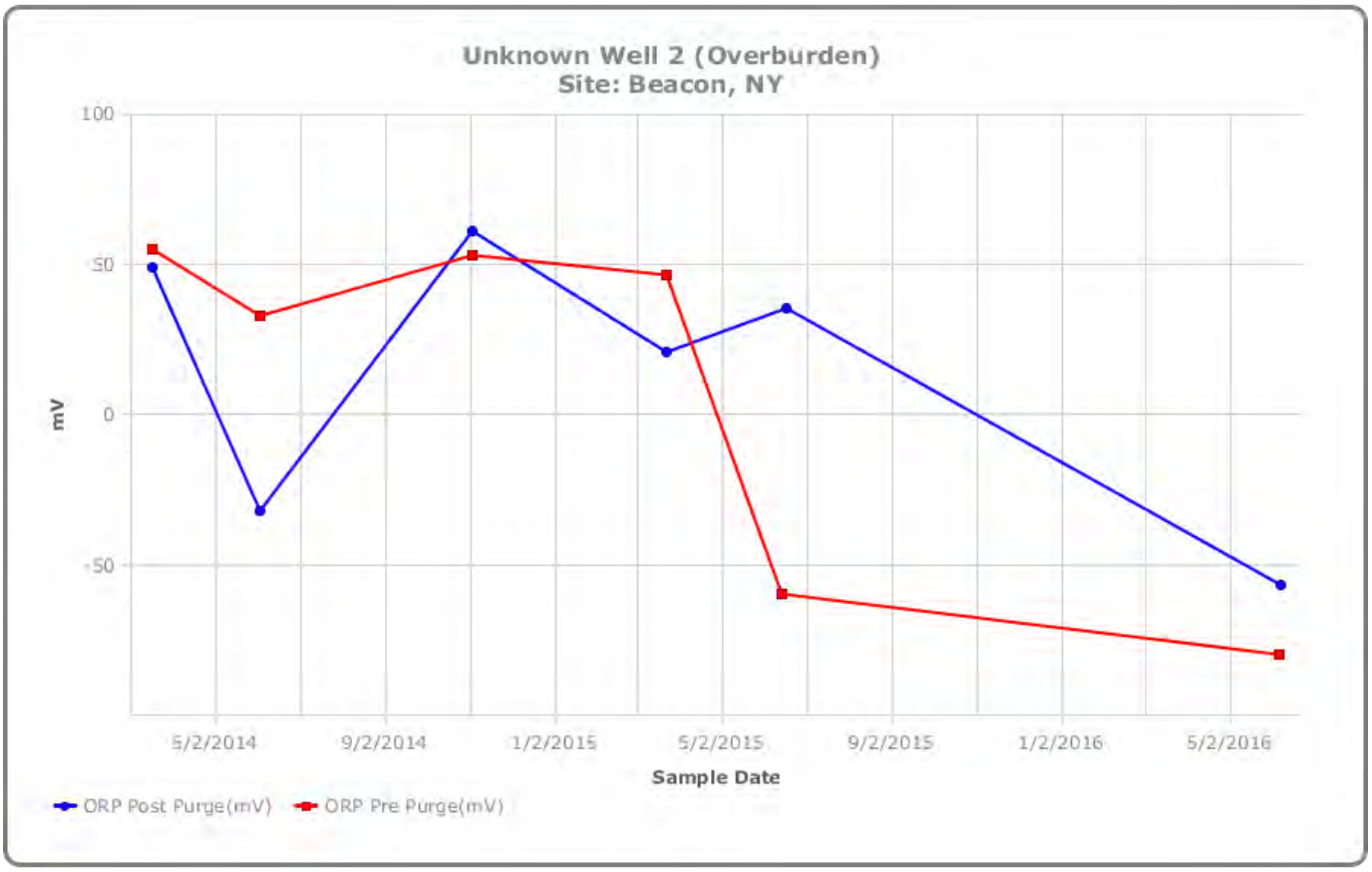

SWMW-62 (Overburden)
Site: Beacon, NY
250
125
0
-125
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

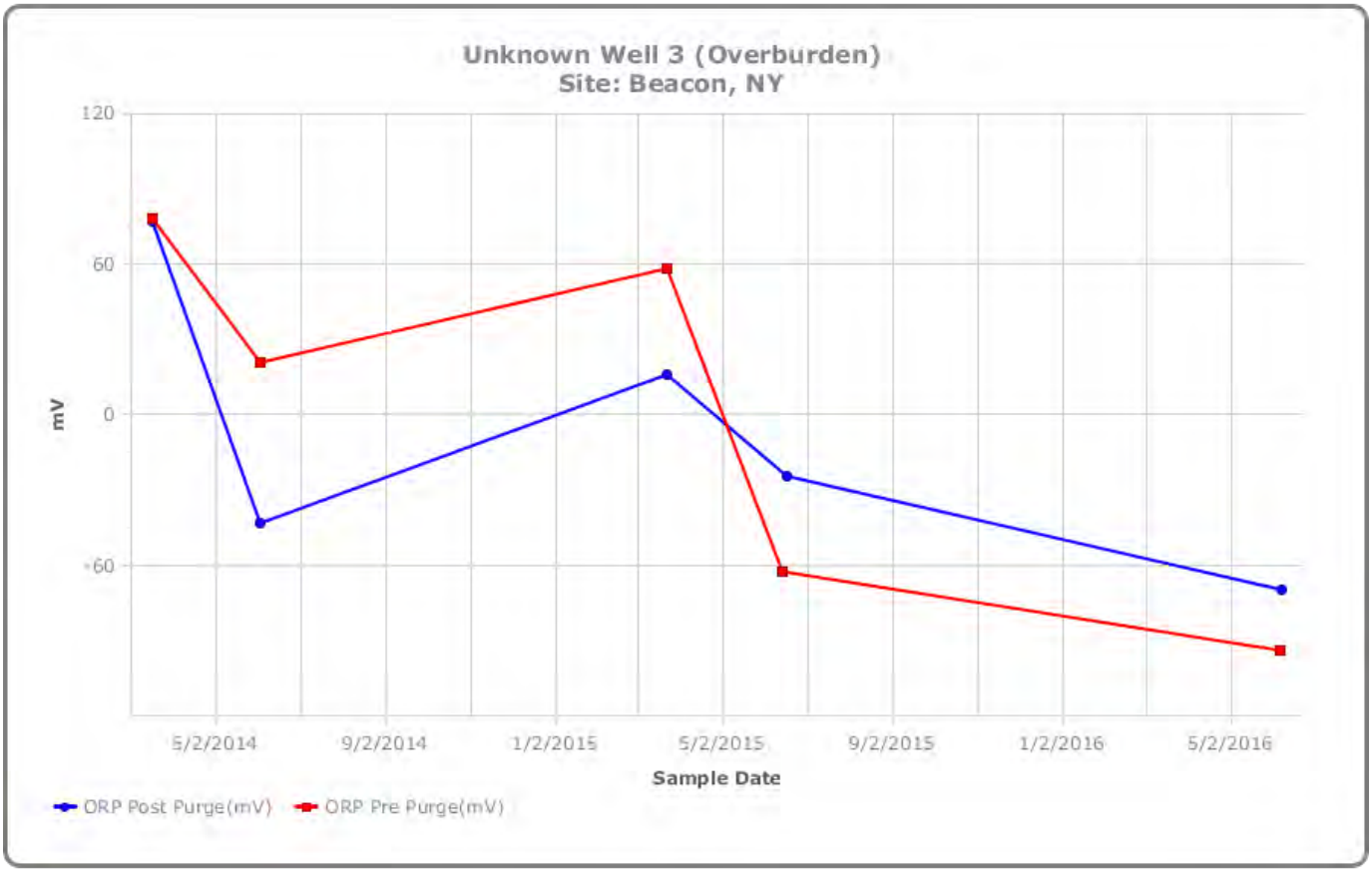

SWMW-65 (Overburden)
Site: Beacon, NY
240
160
80
0
-80
-160
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-67 (Overburden)
Site: Beacon, NY
240
180
120
60
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

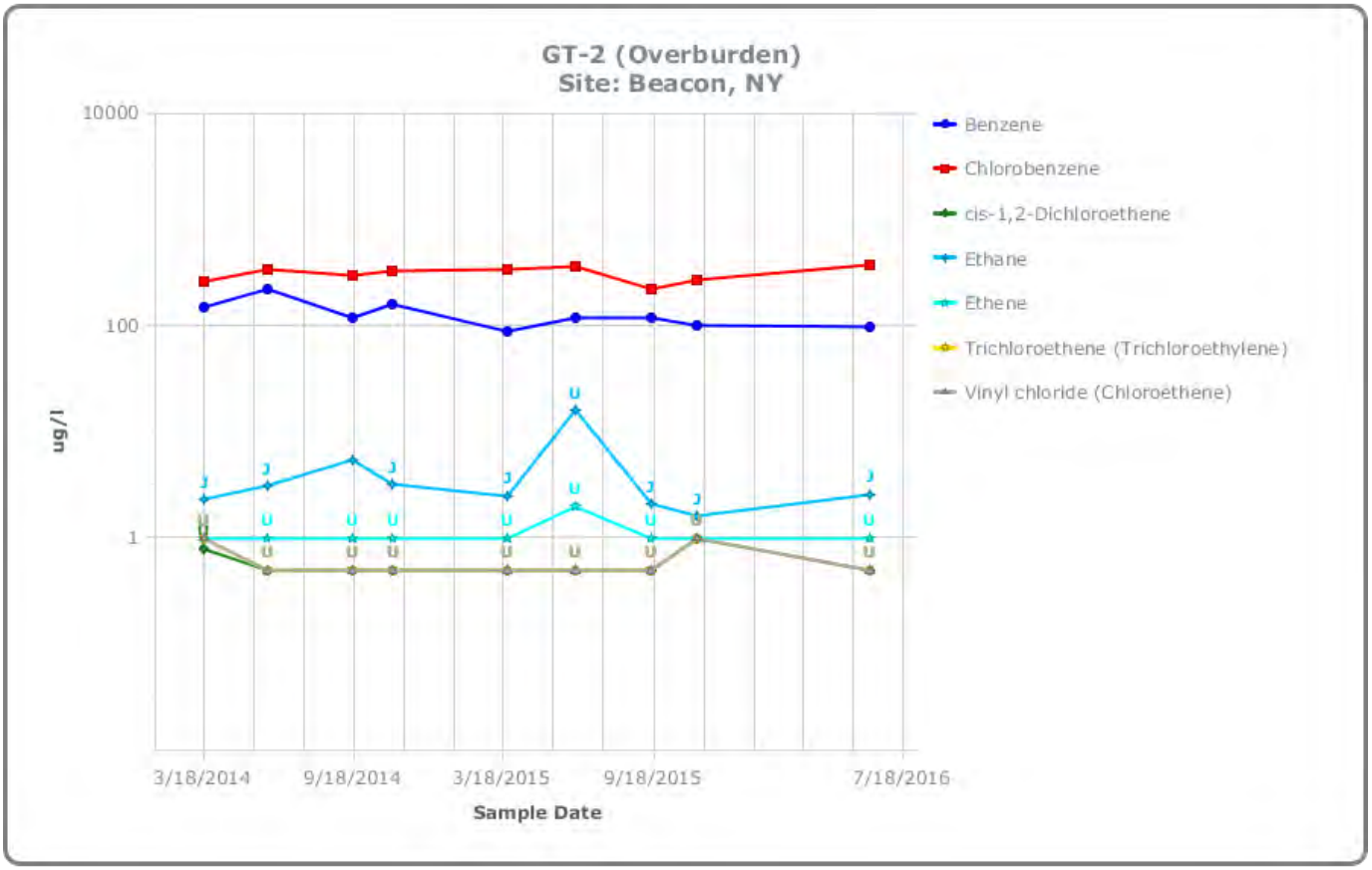

SWMW-71 (Overburden)
Site: Beacon, NY
-56
-63
-70
-77
-84
mV
5/9/2014
9/9/2014
1/9/2015
5/9/2015
9/9/2015
1/9/2016
5/9/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

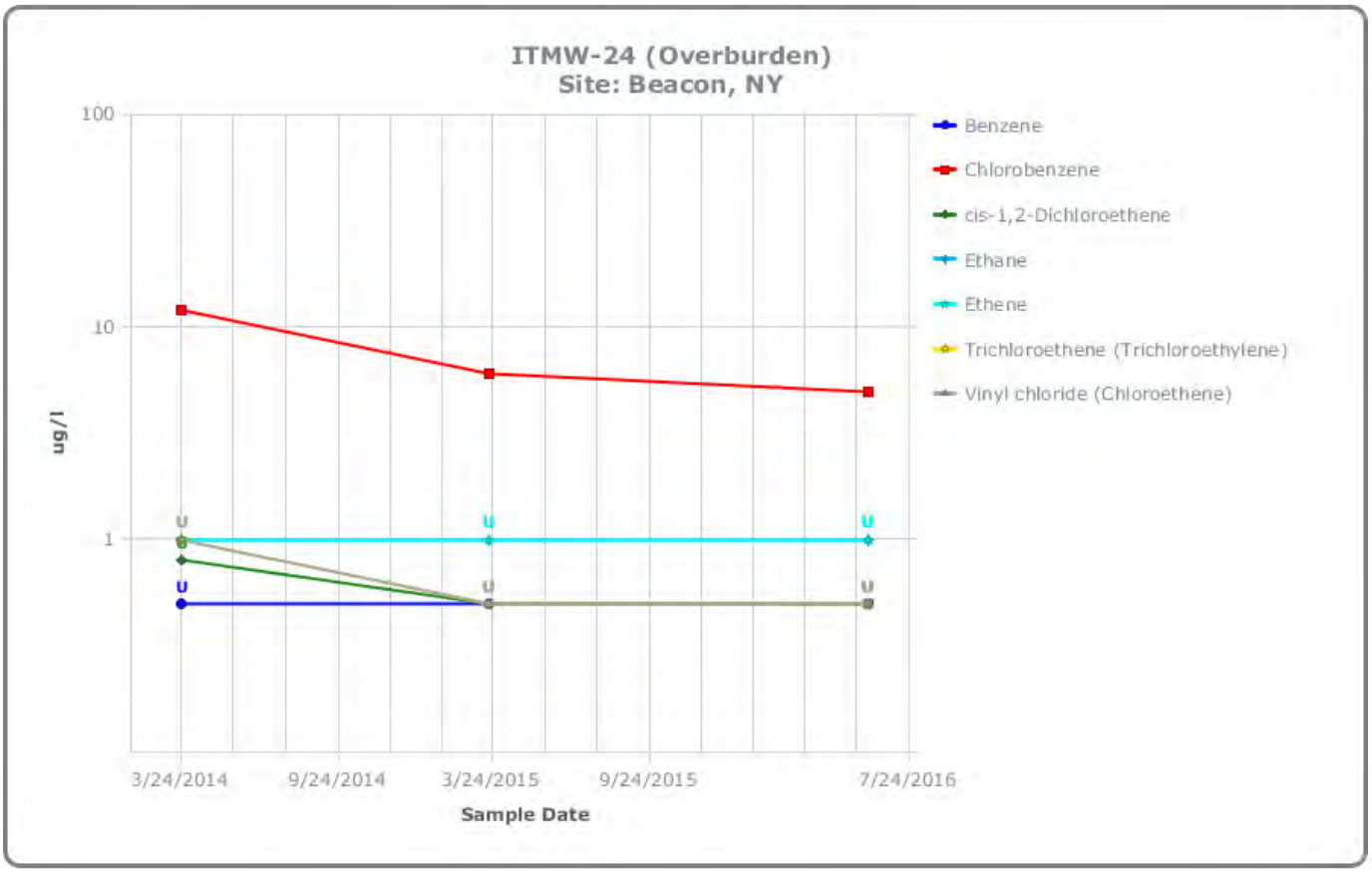

Unknown Well 1 (Overburden)
Site: Beacon, NY
60
30
0
-30
-60
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

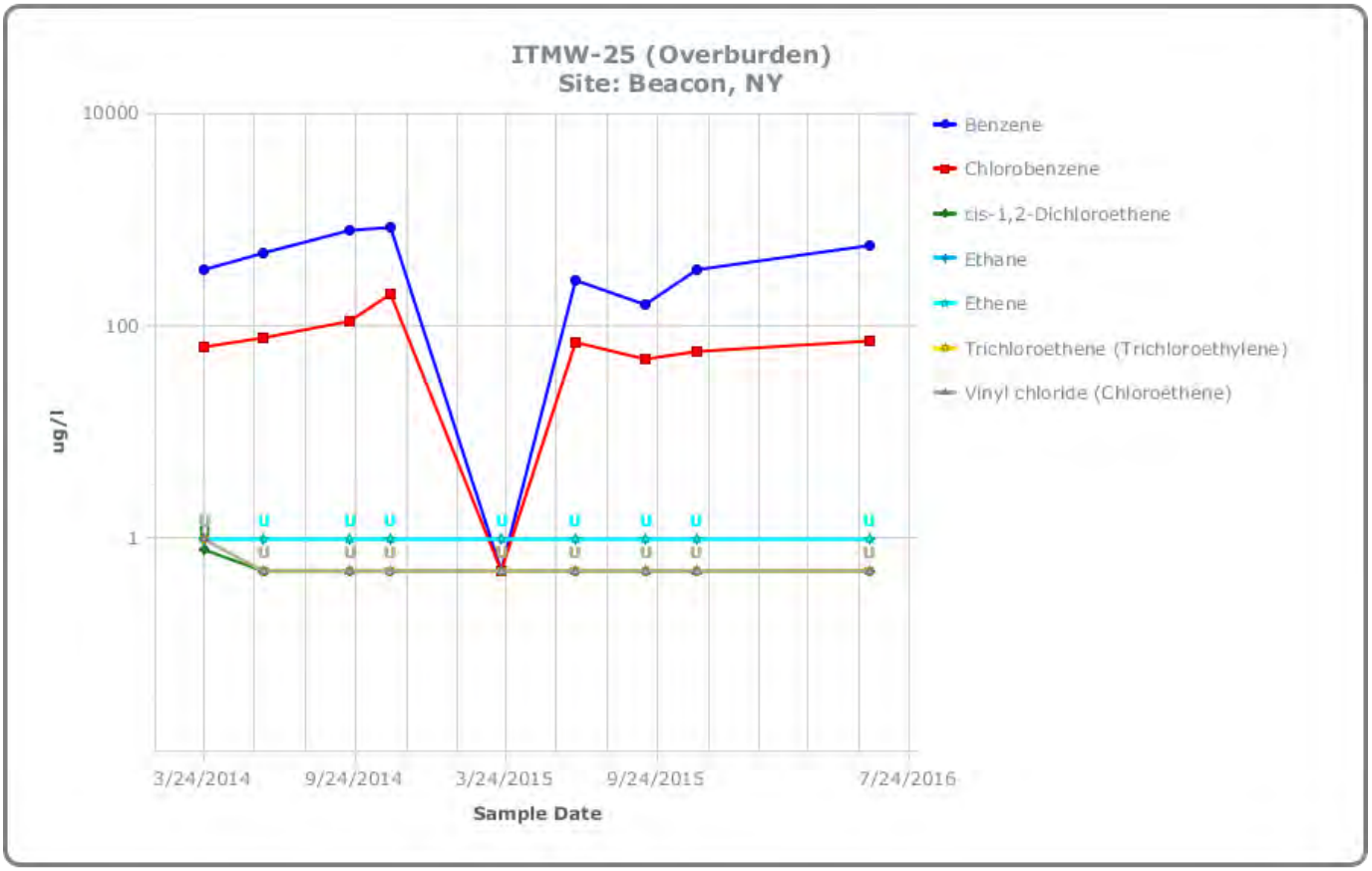

Unknown Well 2 (Overburden)
Site: Beacon, NY
100
50
0
-50
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


Unknown Well 3 (Overburden)
Site: Beacon, NY
120
60
0
-60
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

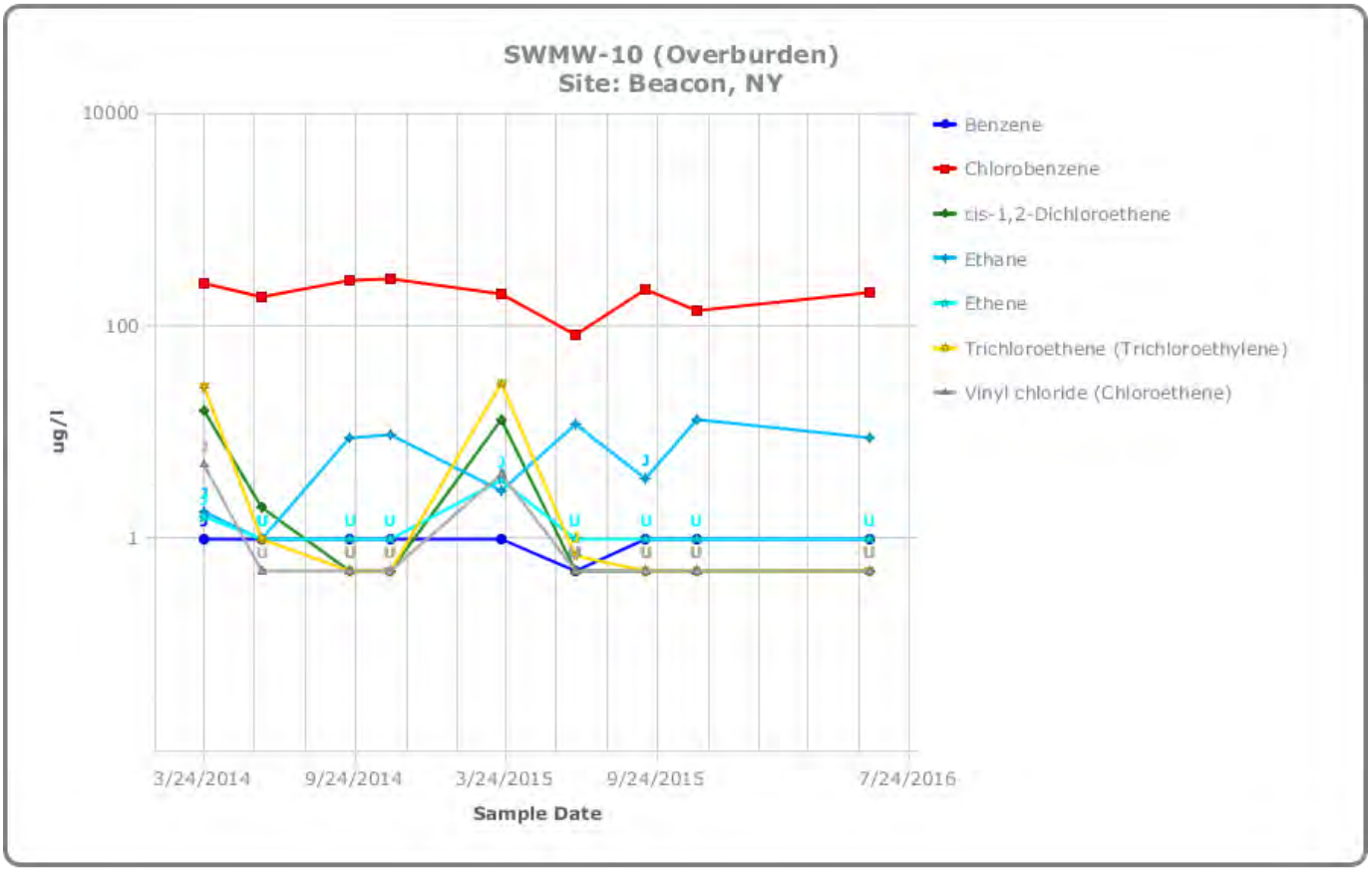
2014 THROUGH 2016 VOC OVERBURDEN WELLS SUMMARY GRAPHS

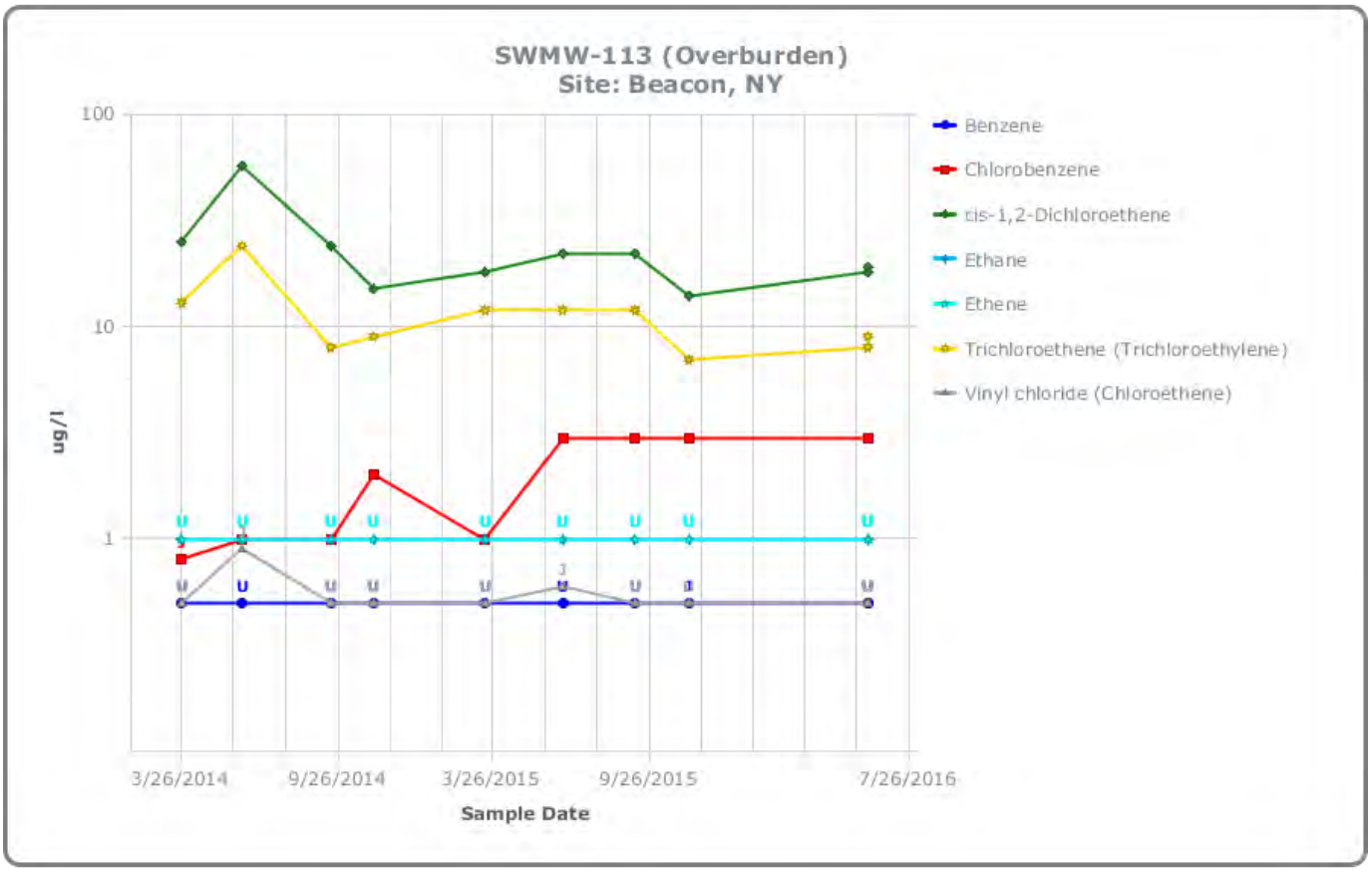

GT-2 (Overburden)
Site: Beacon, NY
10000
100
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date

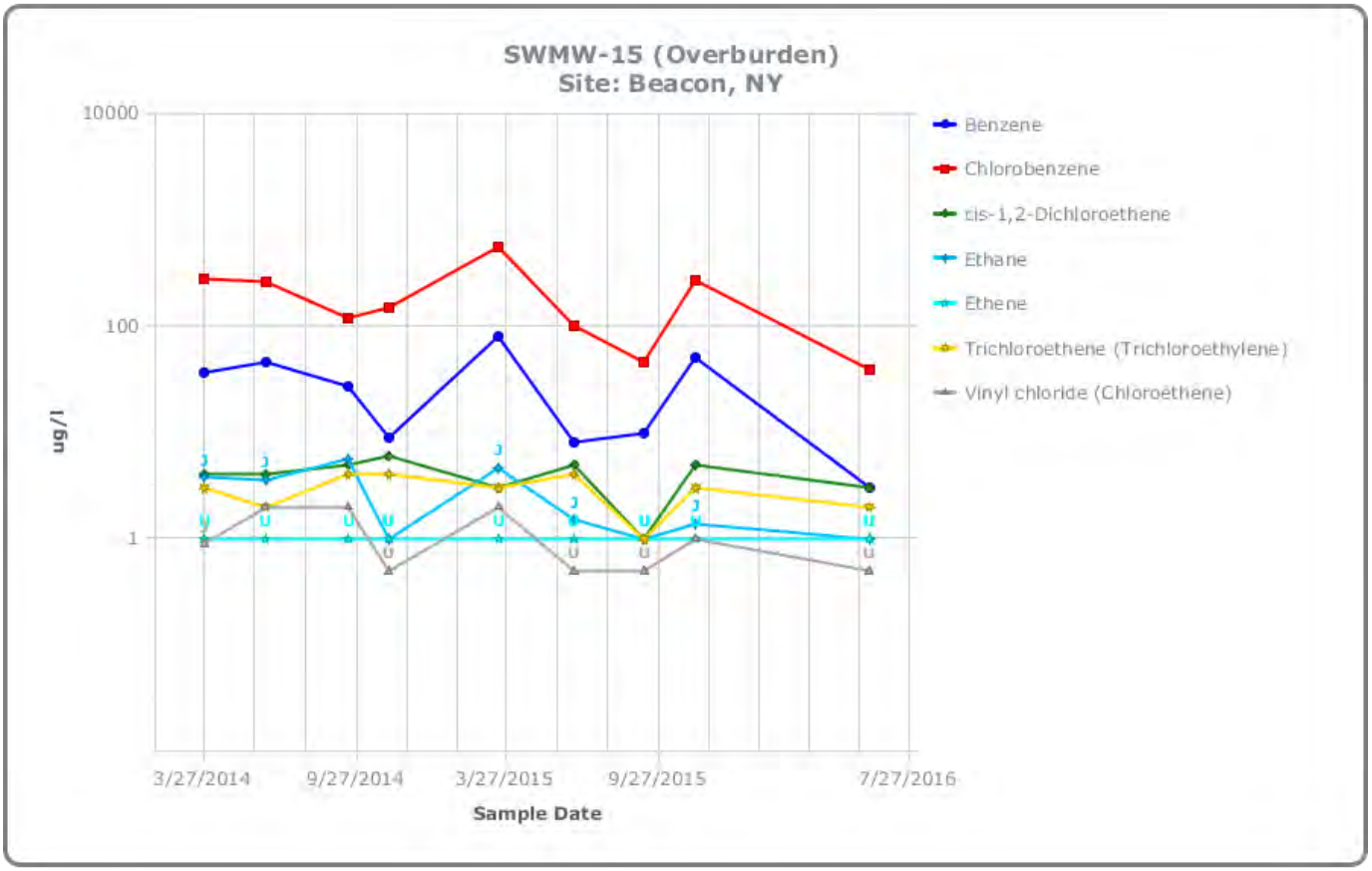

ITMW-24 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date

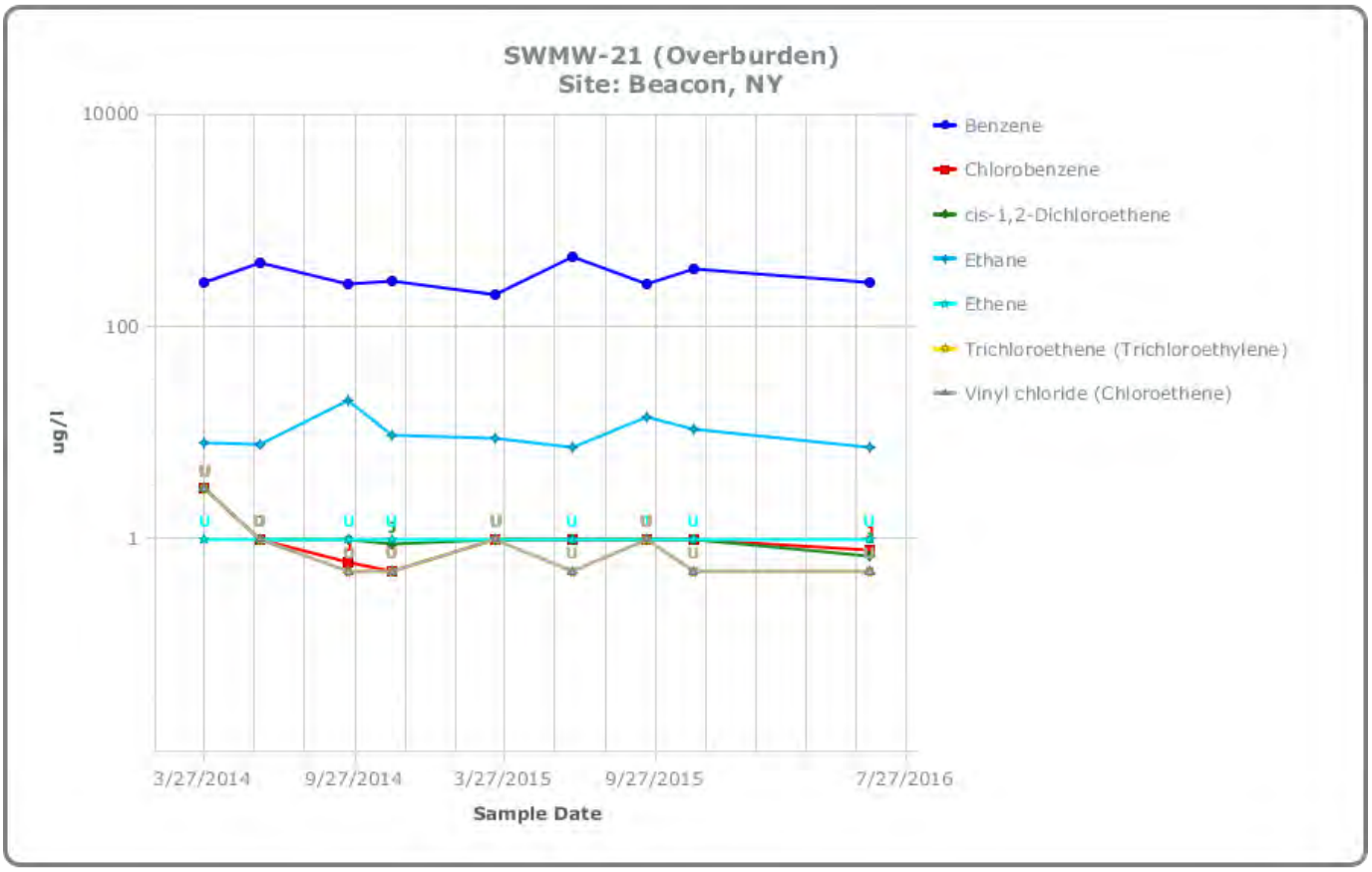

ITMW-25 (Overburden)
Site: Beacon, NY
10000
100
1
ug/l
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

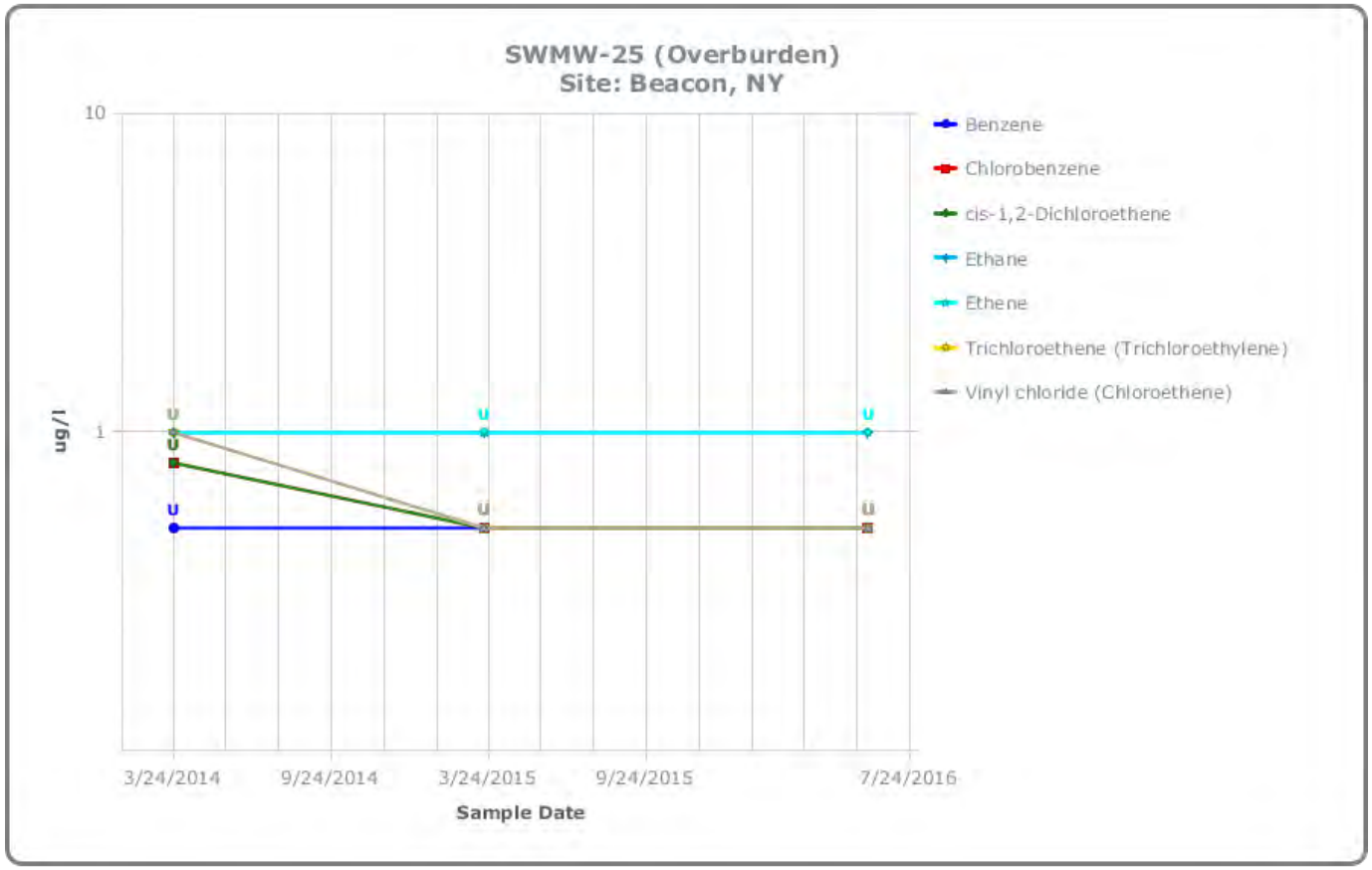

ITMW-5 (Overburden)
Site: Beacon, NY
1000
100
10
1
ug/l
3/27/2014
9/27/2014
3/27/2015
9/27/2015
7/27/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

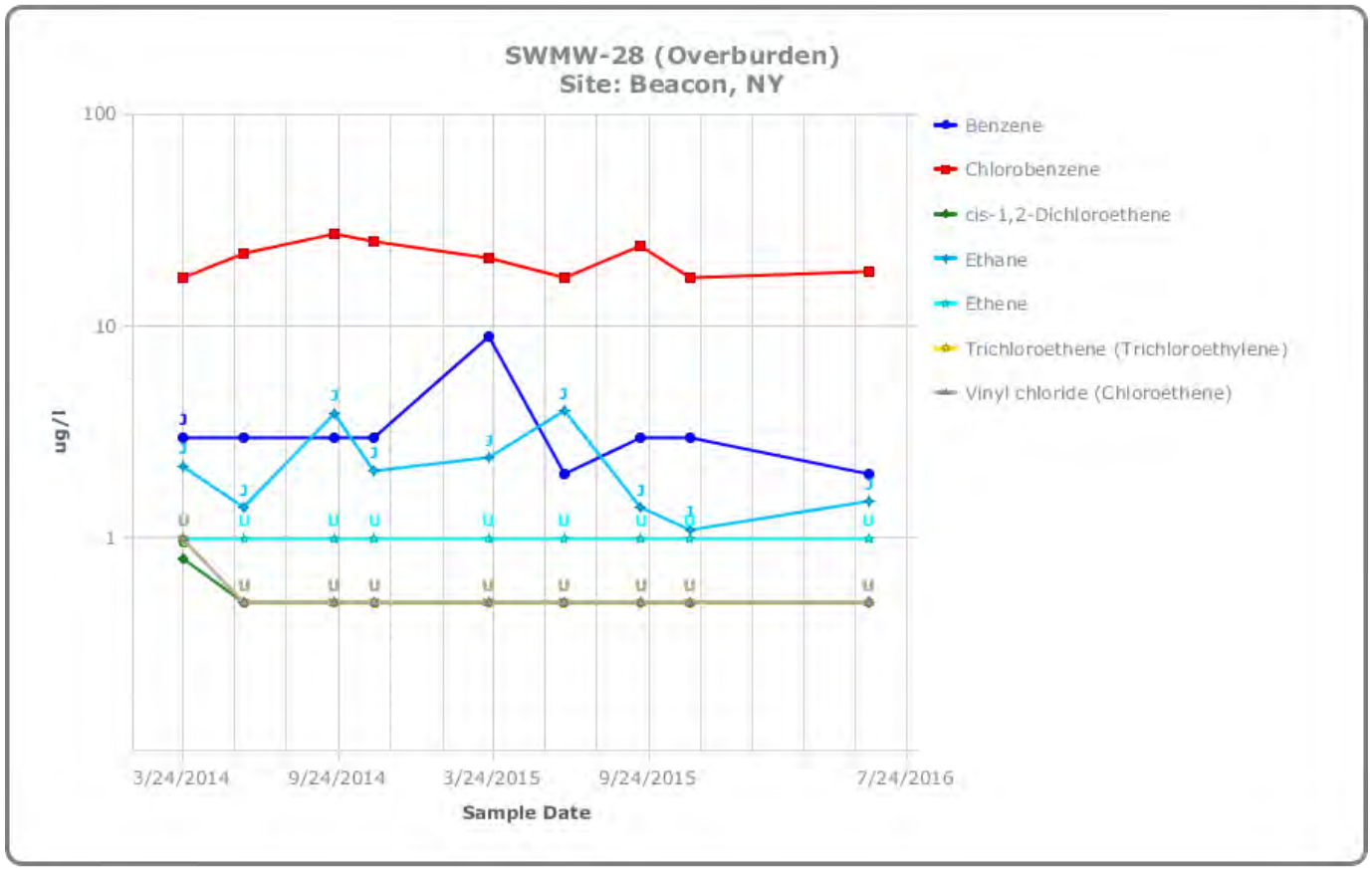

SWMW-10 (Overburden)
Site: Beacon, NY
10000
100
1
ug/l
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

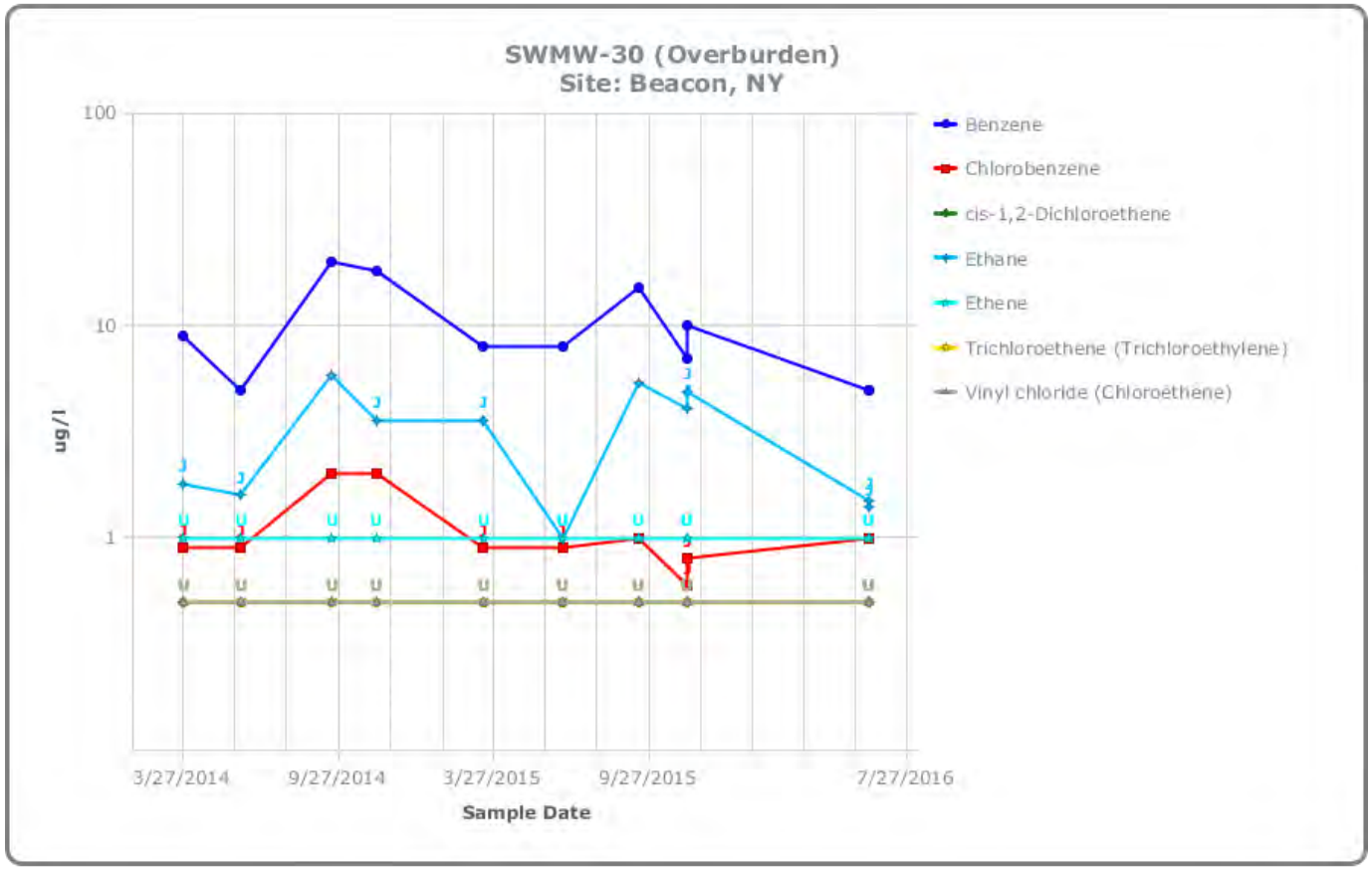

SWMW-113 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

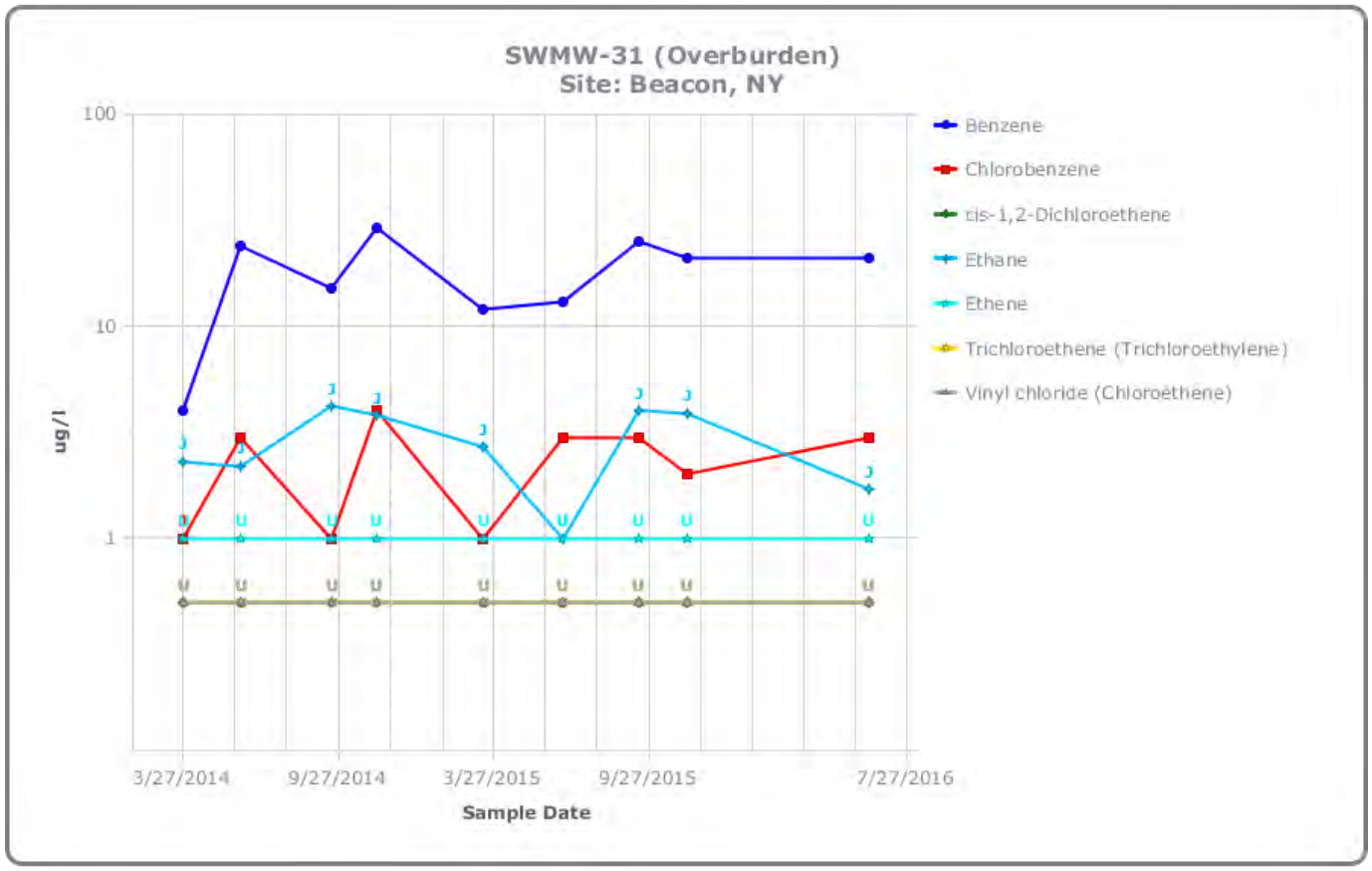

SWMW-15 (Overburden)
Site: Beacon, NY
10000
100
1
ug/l
3/27/2014
9/27/2014
3/27/2015
9/27/2015
7/27/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

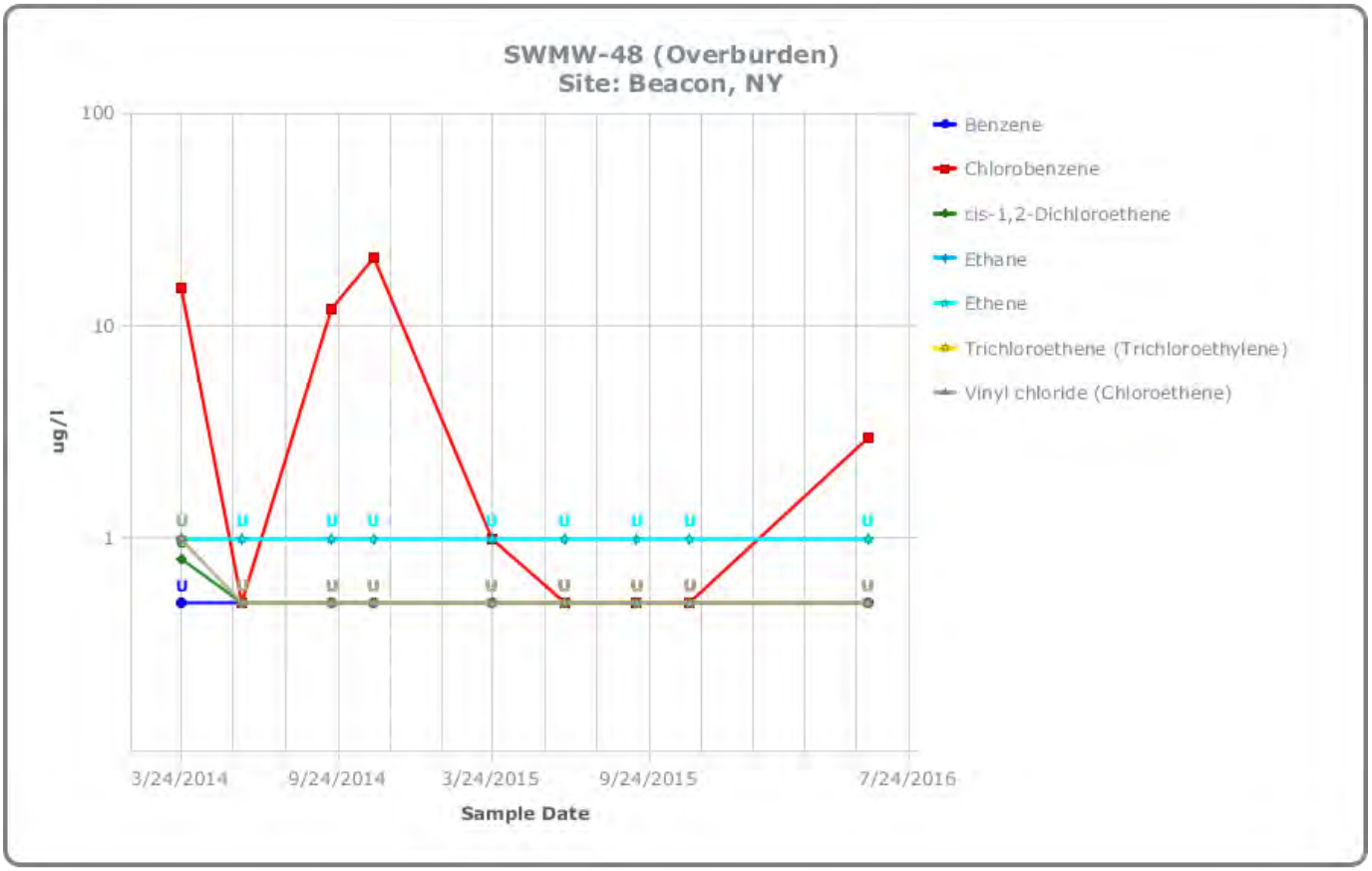

SWMW-21 (Overburden)
Site: Beacon, NY
10000
100
1
ug/l
3/27/2014
9/27/2014
3/27/2015
9/27/2015
7/27/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

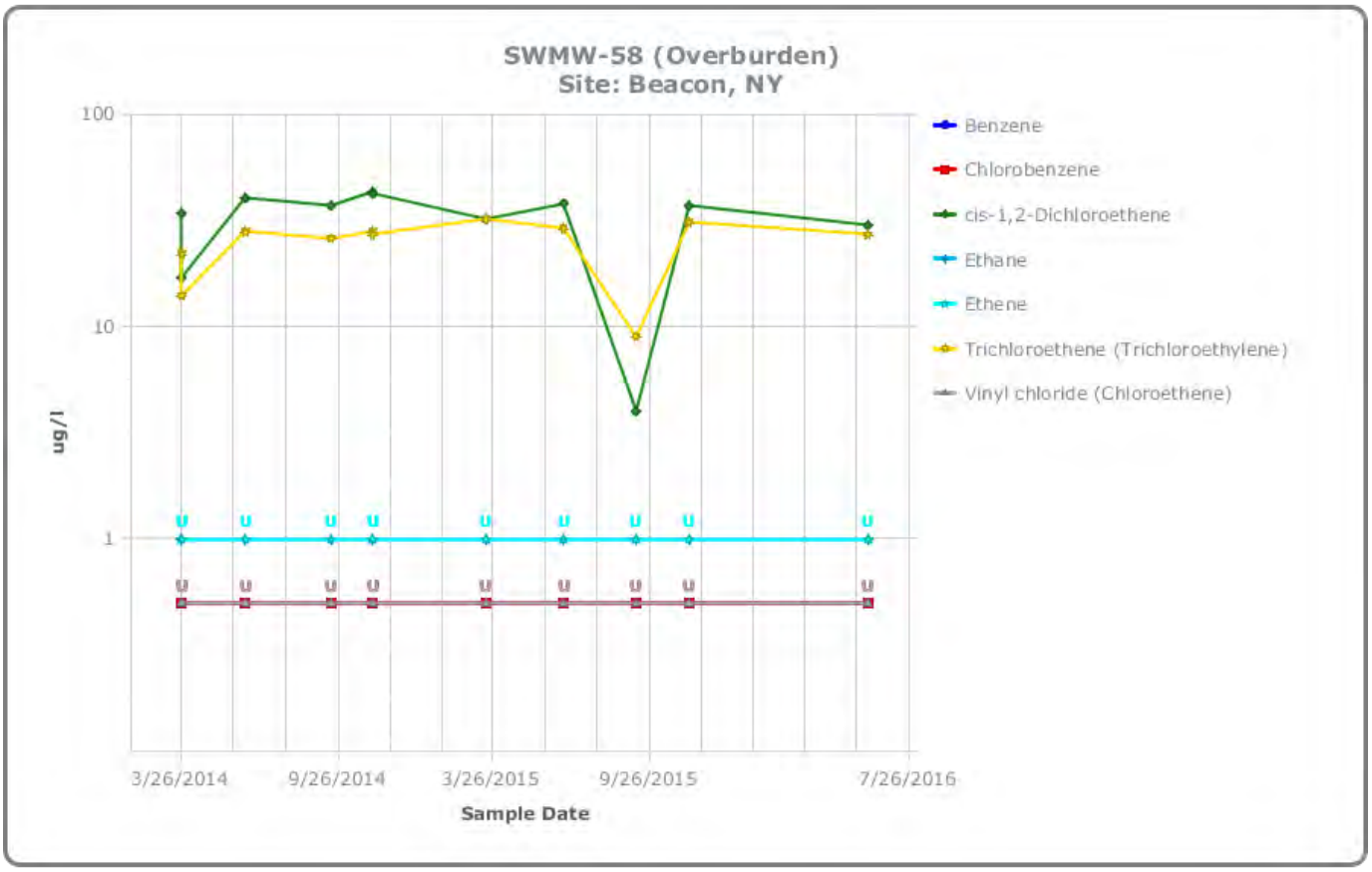

SWMW-25 (Overburden)
Site: Beacon, NY
10
1
ug/l
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

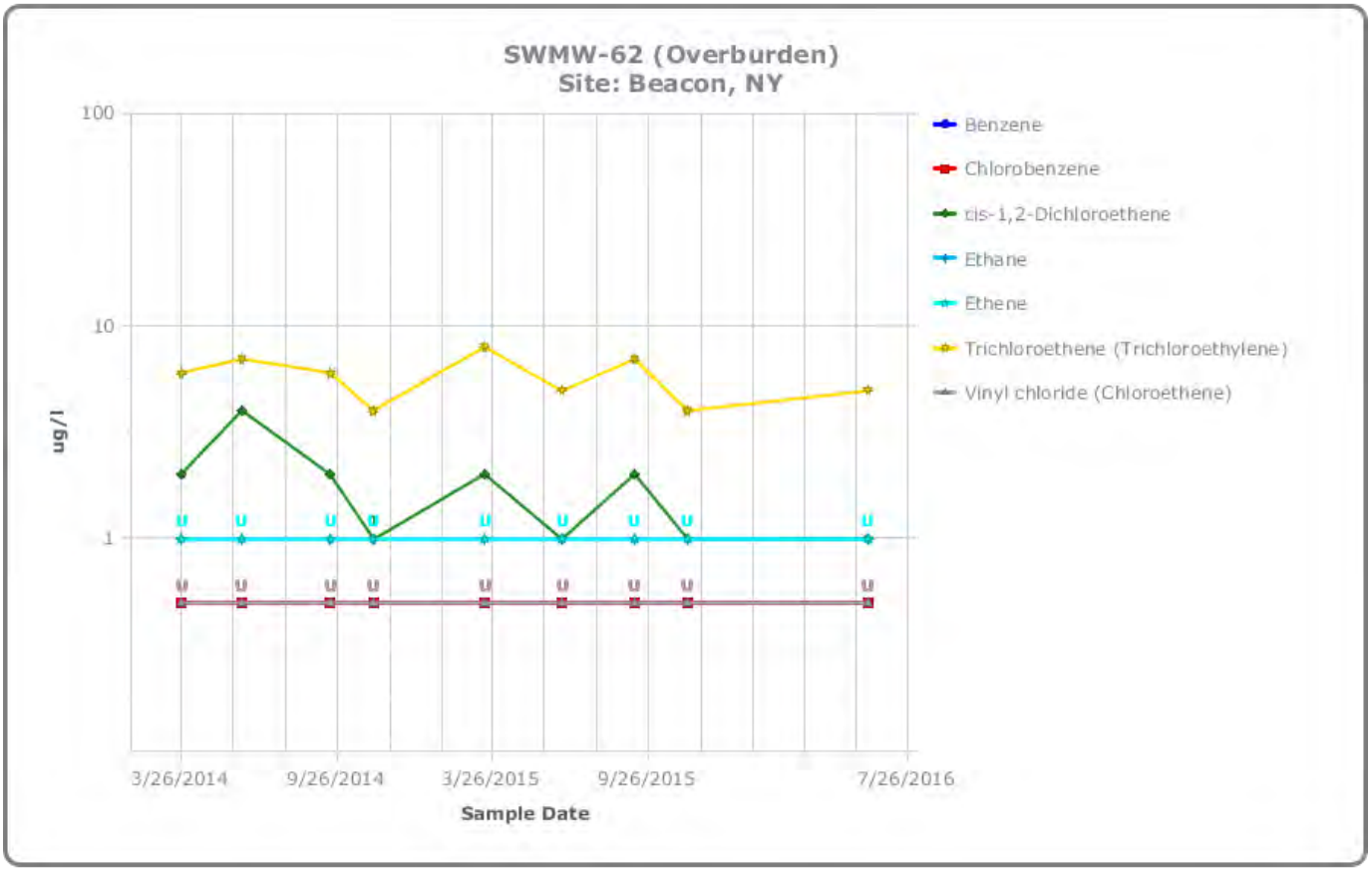

SWMW-28 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

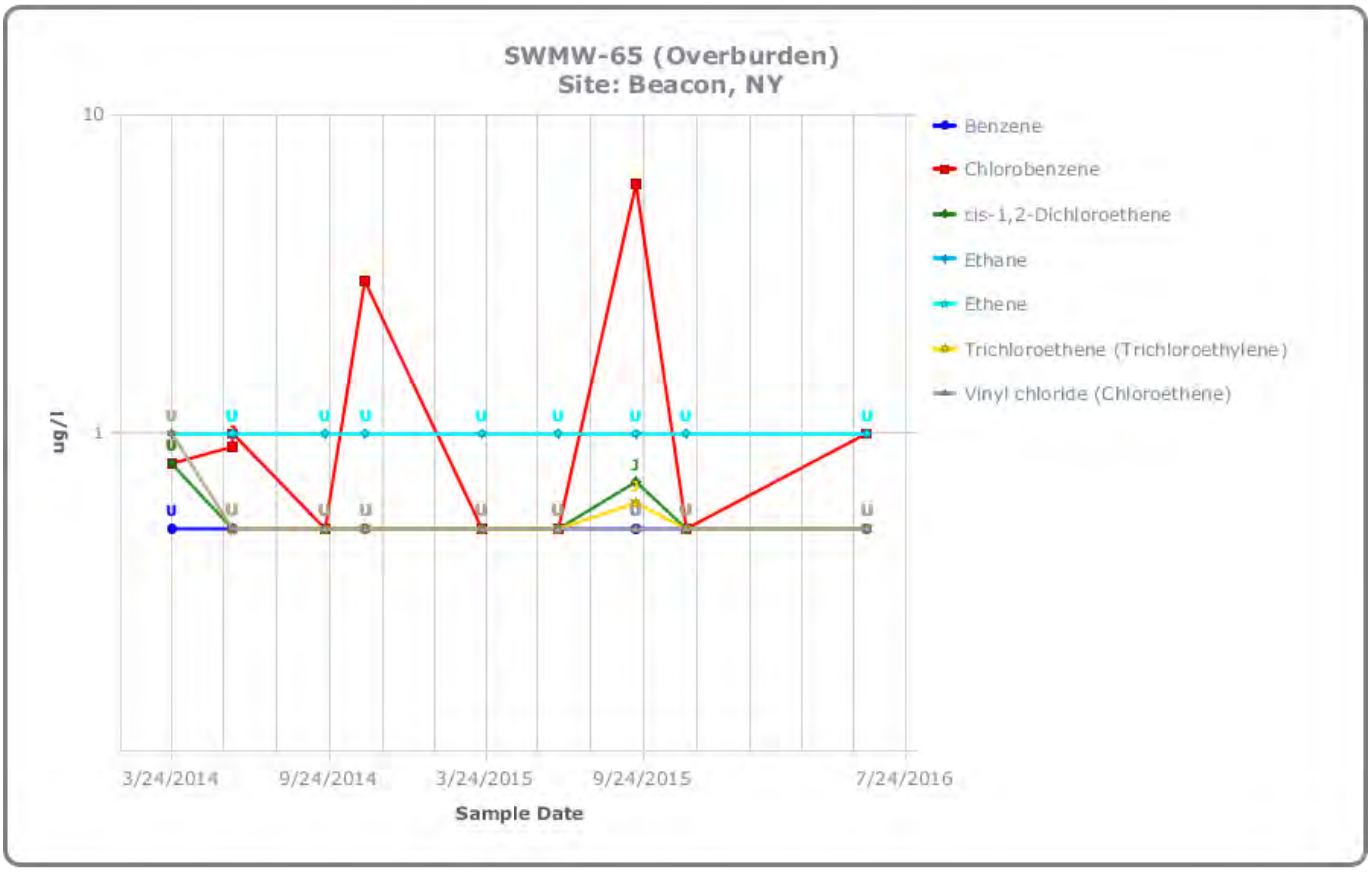

SWMW-30 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
3/27/2014
9/27/2014
3/27/2015
9/27/2015
7/27/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

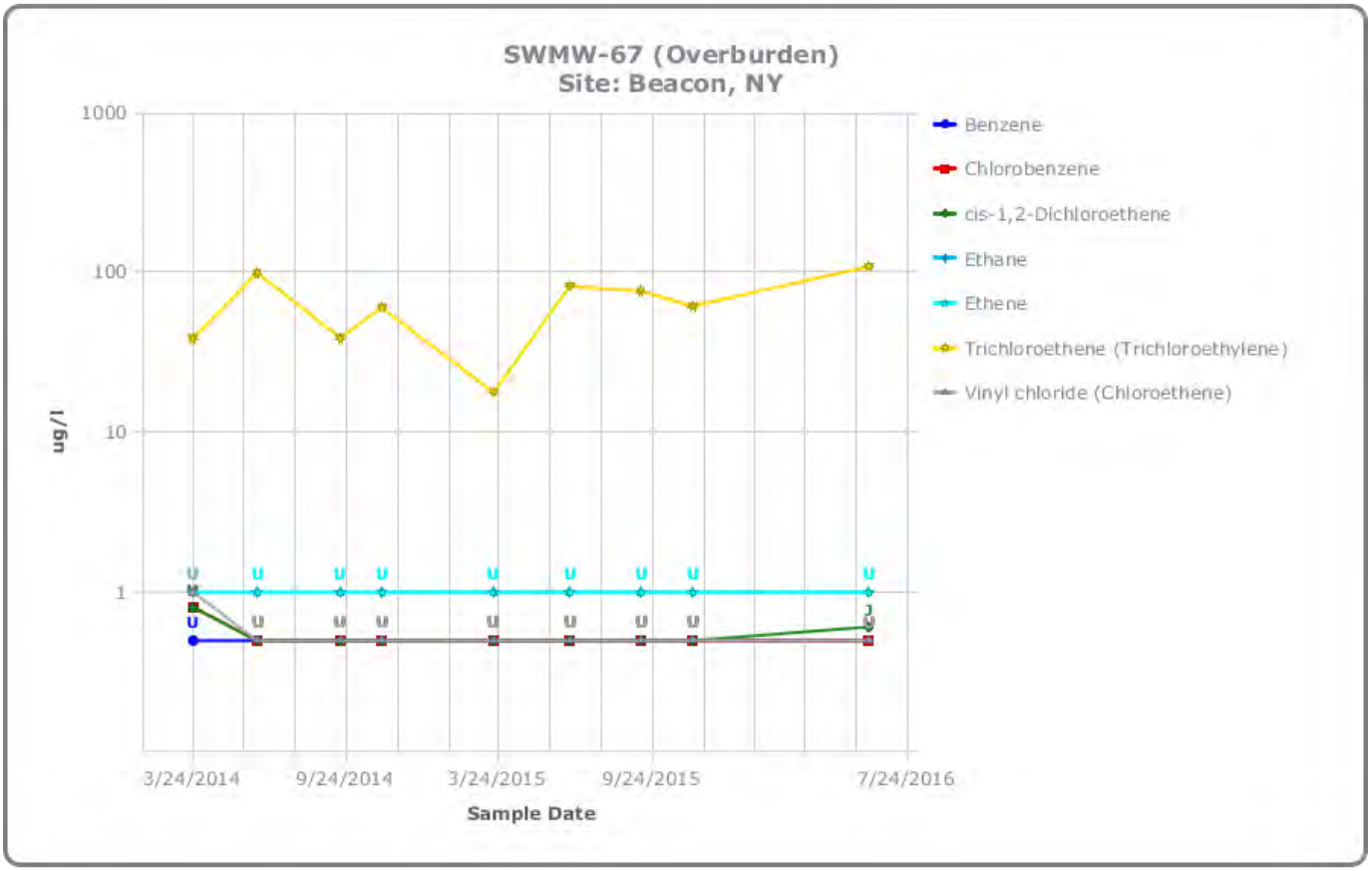

SWMW-31 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
3/27/2014
9/27/2014
3/27/2015
9/27/2015
7/27/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)


SWMW-48 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
U
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

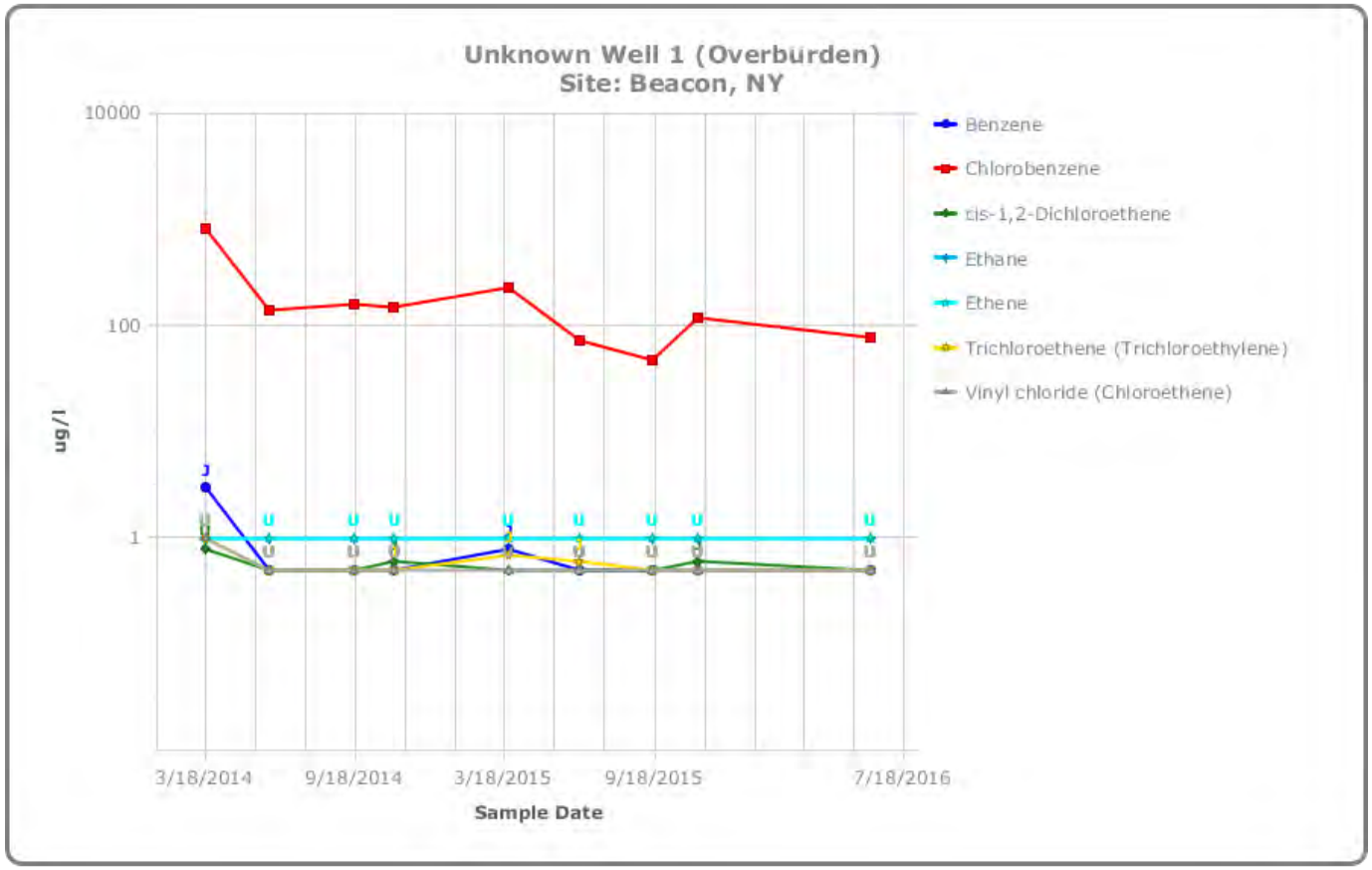

SWMW-58 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
U
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

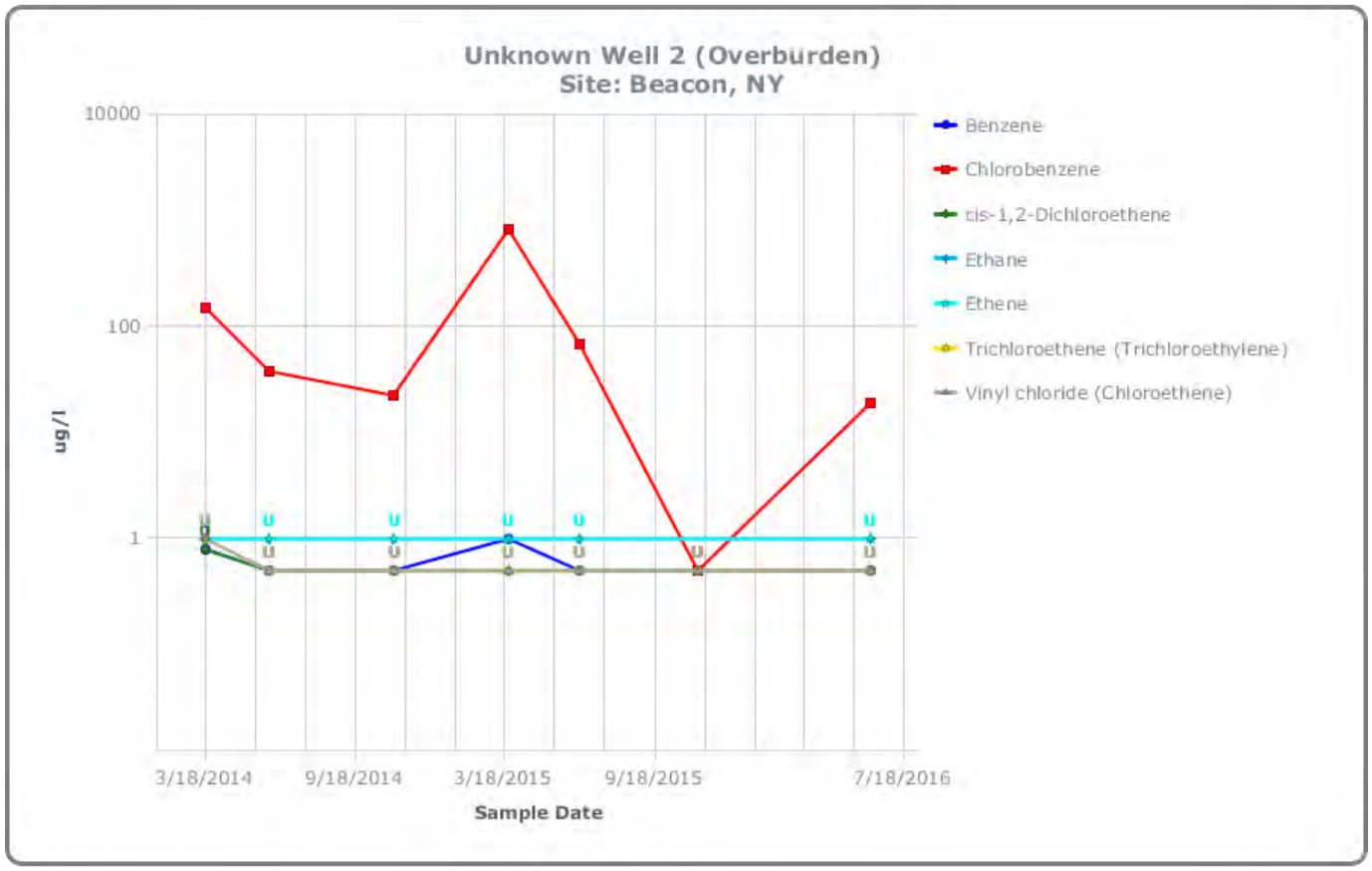

SWMW-62 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

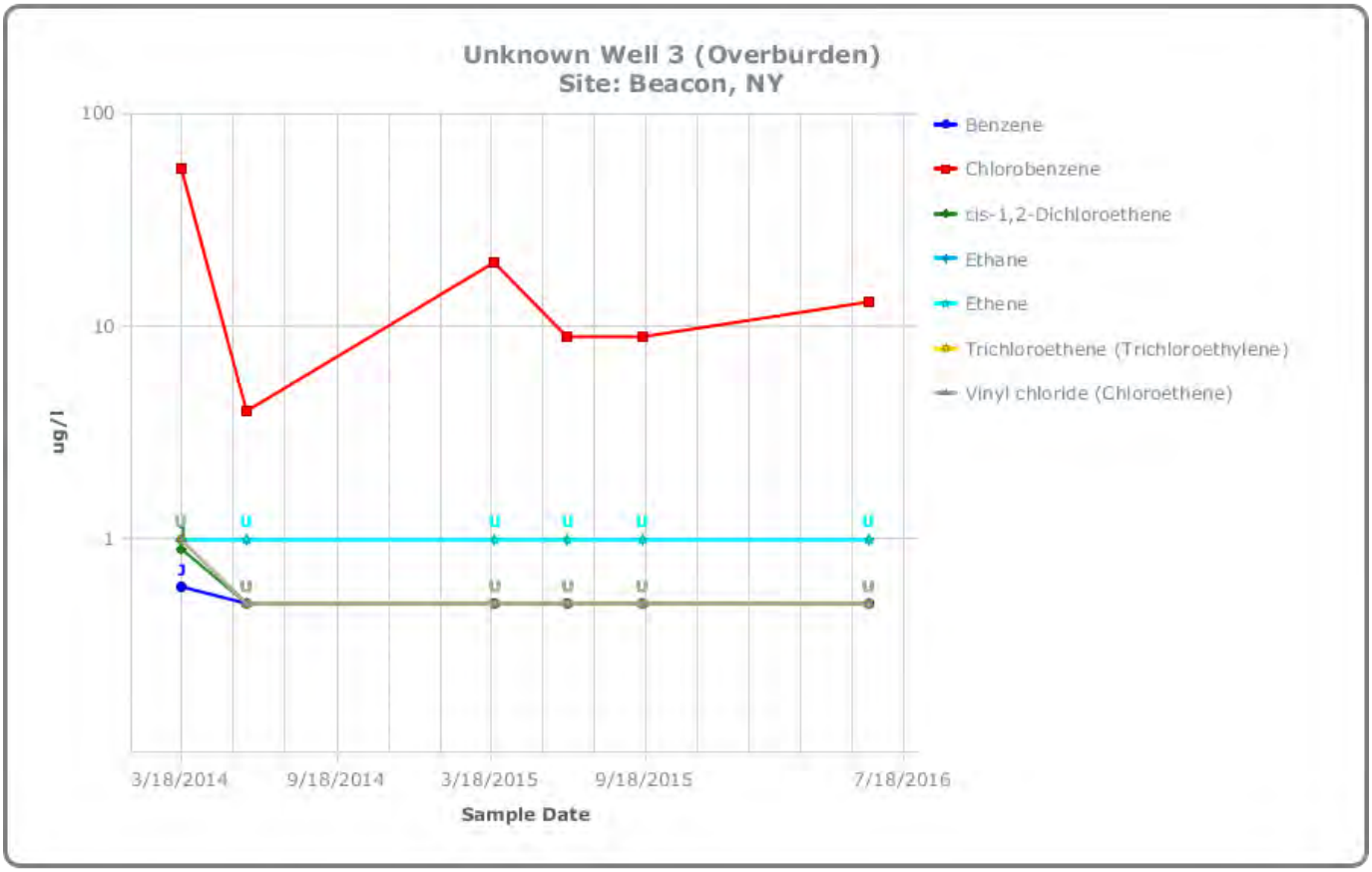

SWMW-65 (Overburden)
Site: Beacon, NY
10
1
ug/l
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)


SWMW-67 (Overburden)
Site: Beacon, NY
1000
100
10
1
ug/l
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)


SWMW-71 (Overburden)
Site: Beacon, NY
10
1
ug/l
3/27/2014
9/27/2014
3/27/2015
9/27/2015
7/27/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

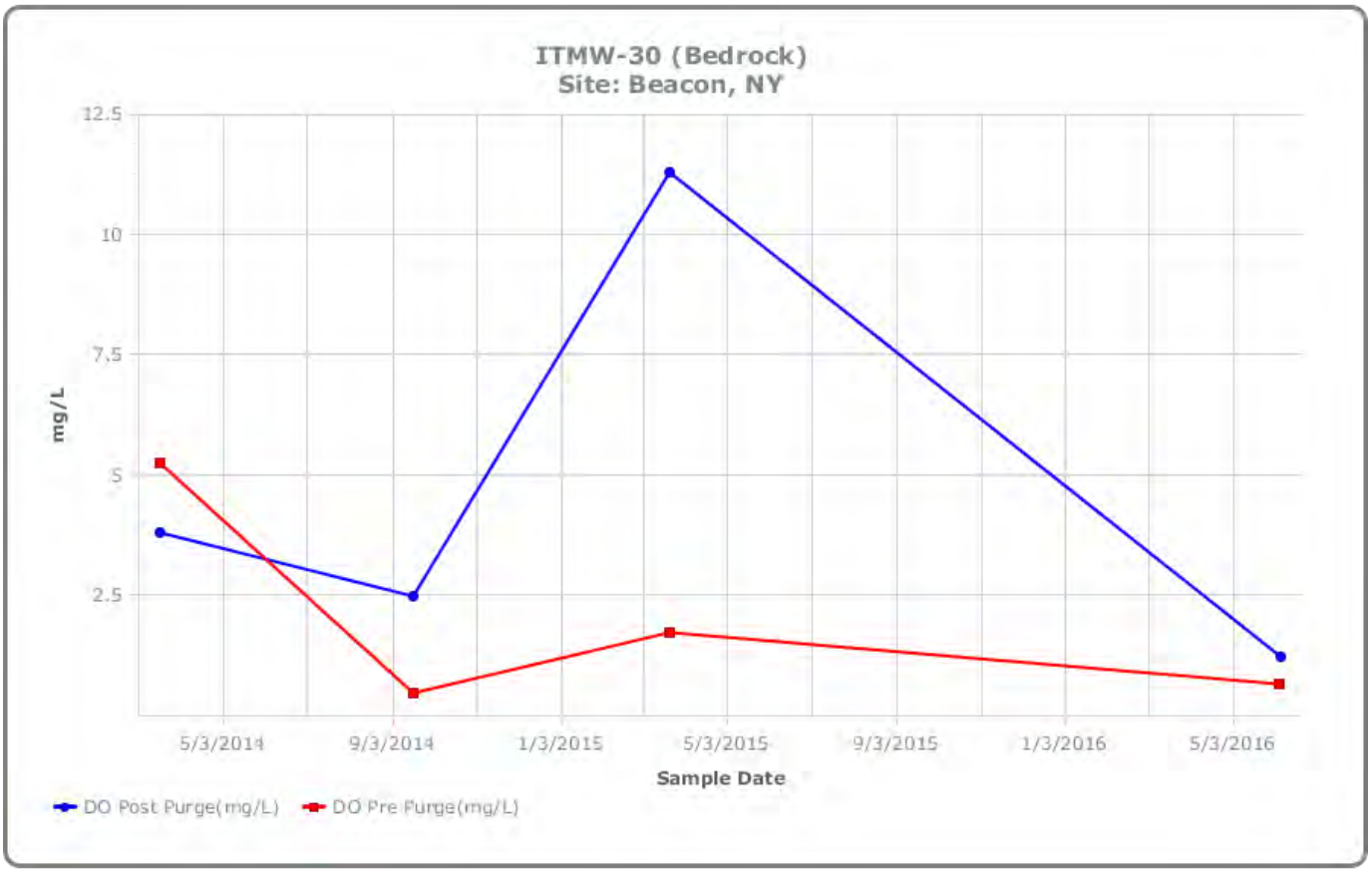

Unknown Well 1 (Overburden)
Site: Beacon, NY
10000
100
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date

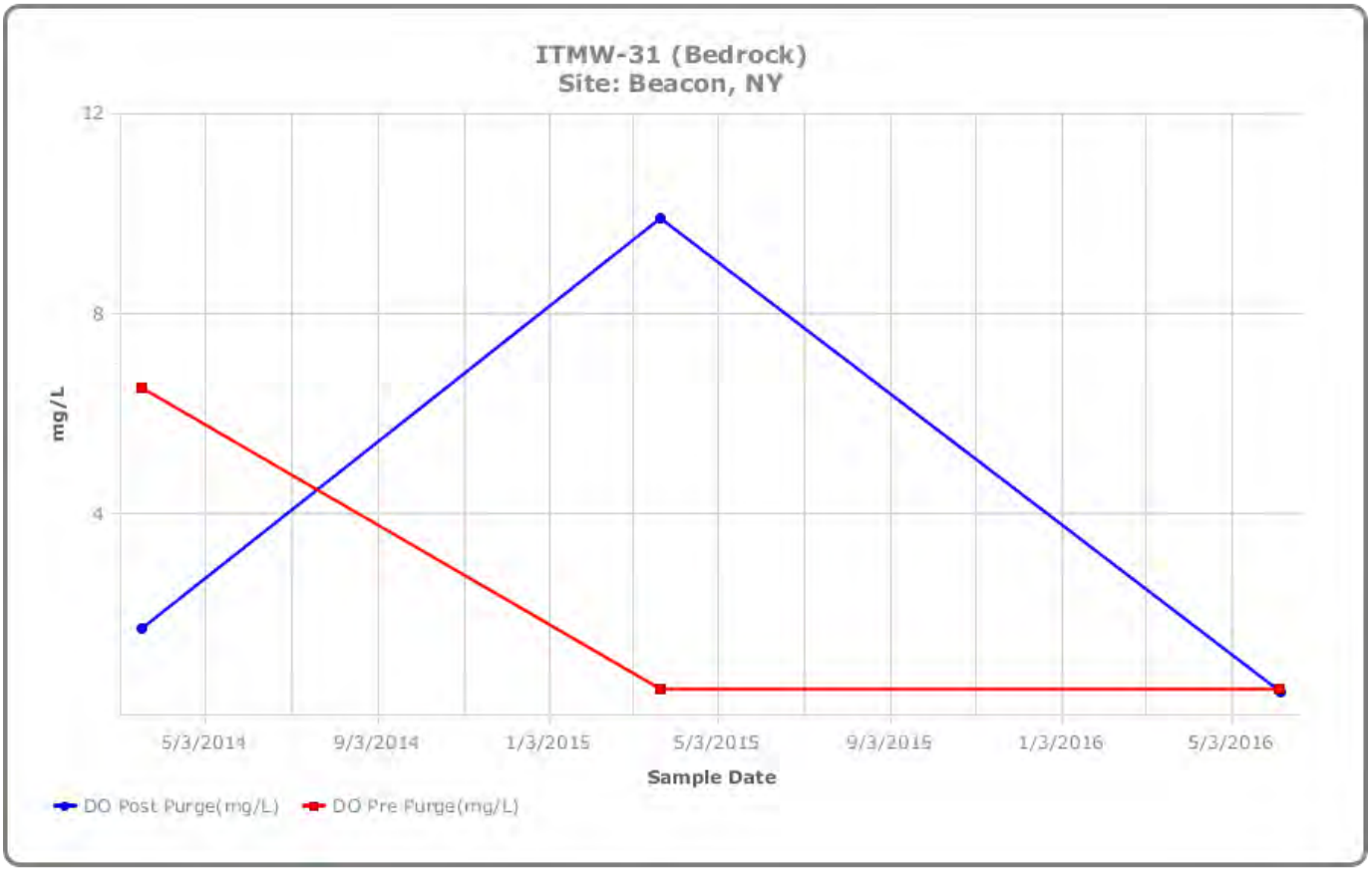

Unknown Well 2 (Overburden)
Site: Beacon, NY
10000
100
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date

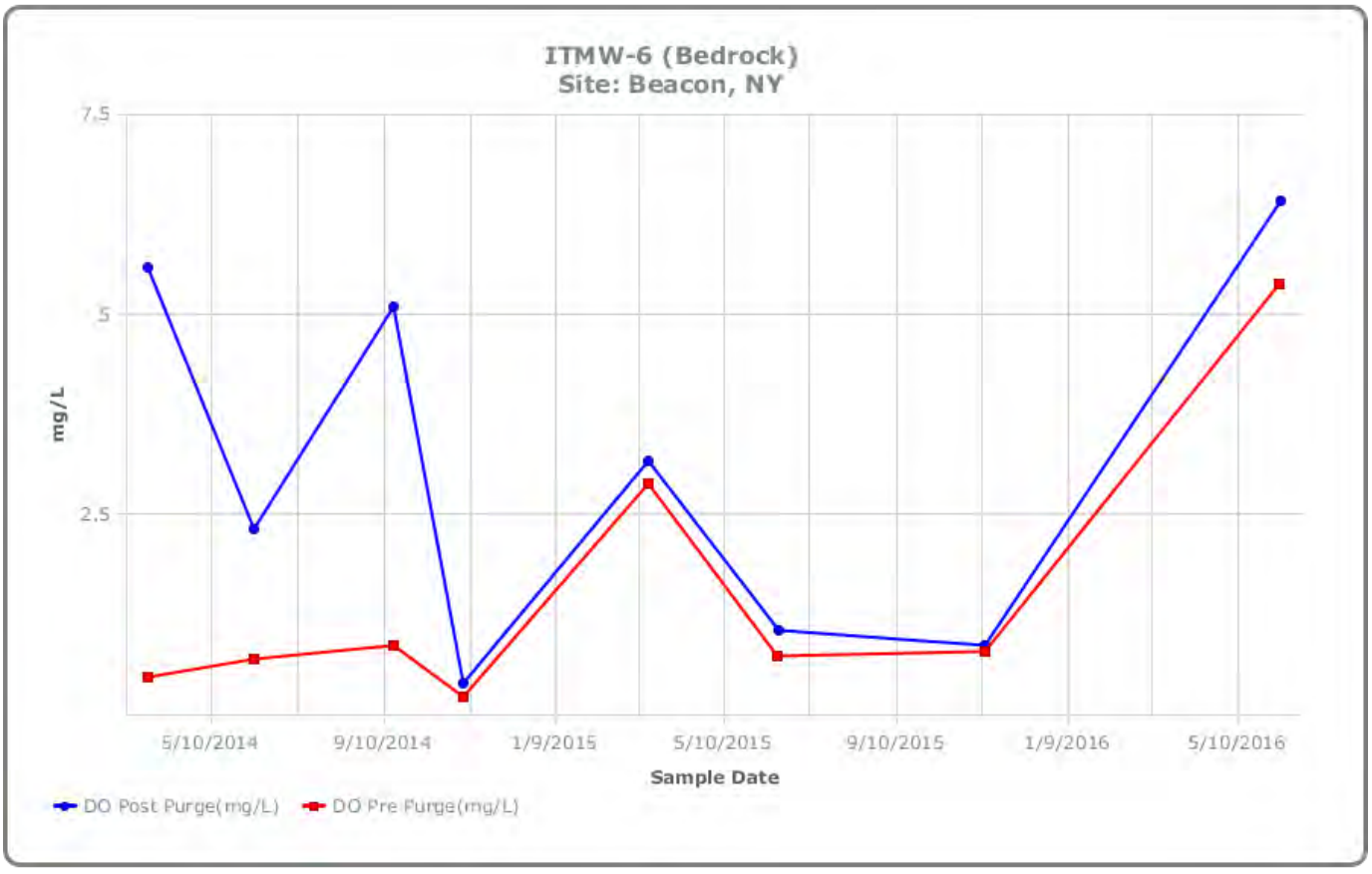

Unknown Well 3 (Overburden)
Site: Beacon, NY
100
10
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date

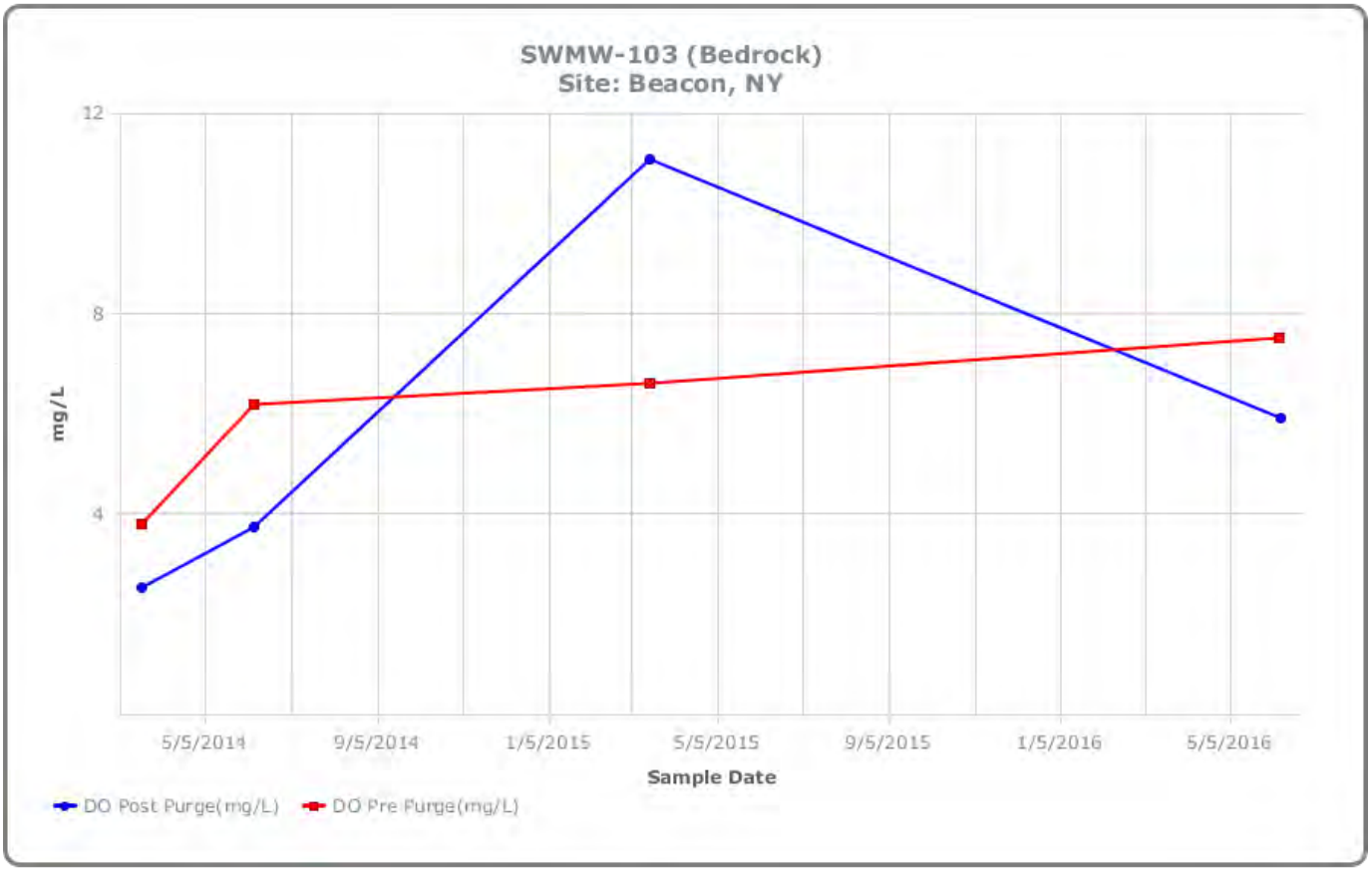
2014 THROUGH 2016 DO BEDROCK WELLS
SUMMARY GRAPHS


ITMW-13 (Bedrock)
Site: Beacon, NY
15
10
5
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

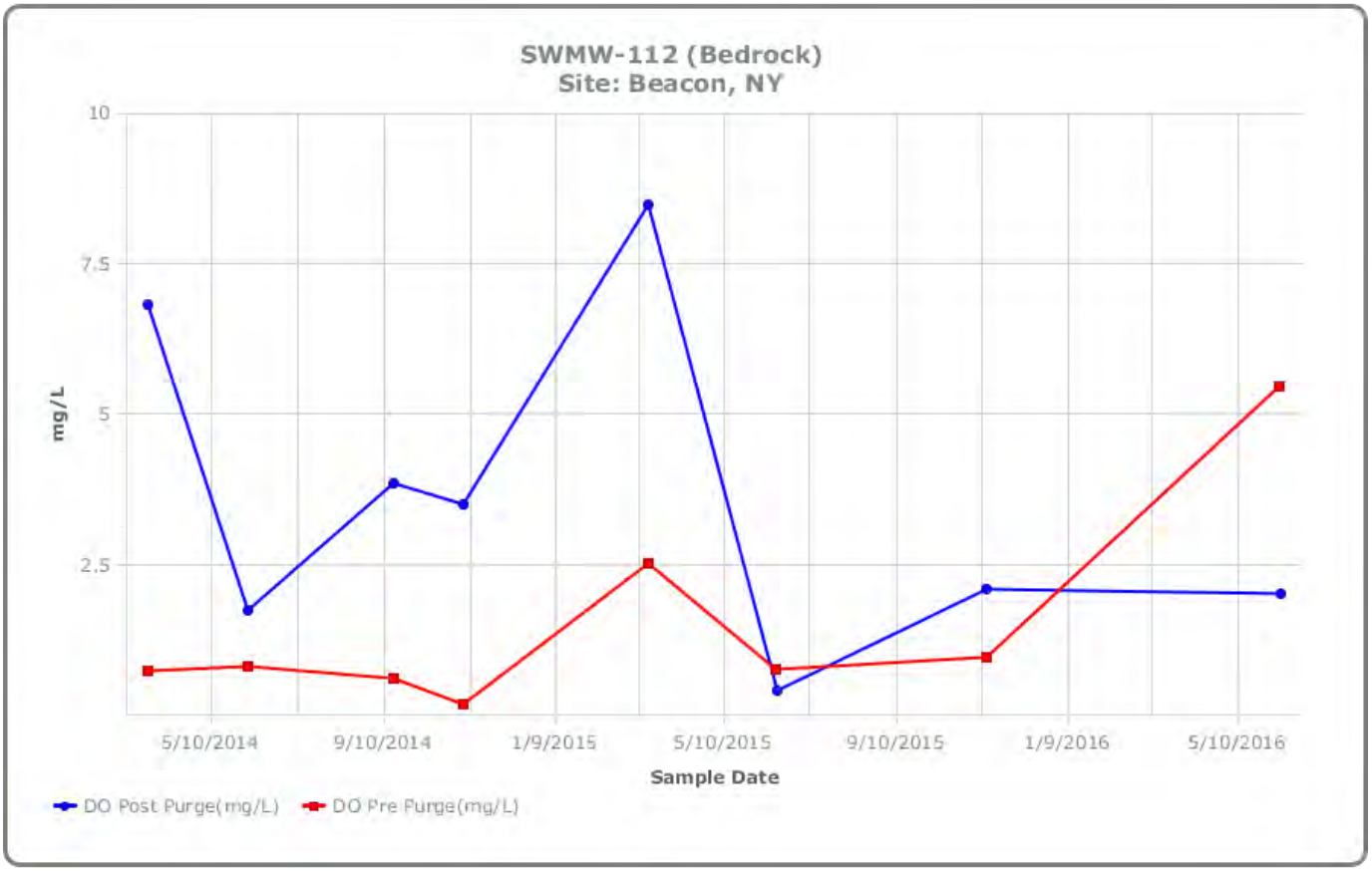

ITMW-30 (Bedrock)
Site: Beacon, NY
12.5
10
7.5
5
2.5
mg/L
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)


ITMW-31 (Bedrock)
Site: Beacon, NY
12
8
4
mg/L
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

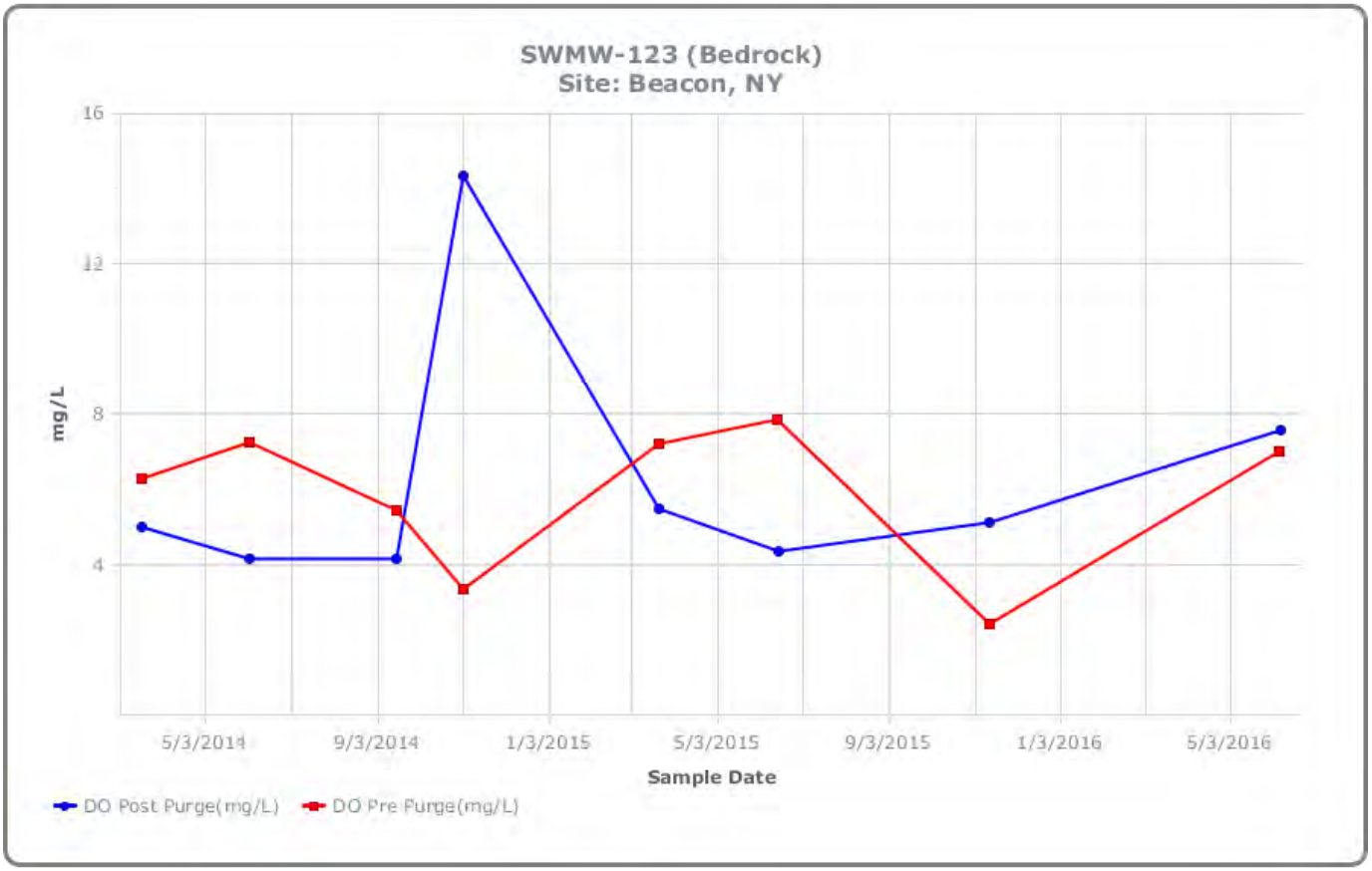

ITMW-6 (Bedrock)
Site: Beacon, NY
7.5
5
2.5
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

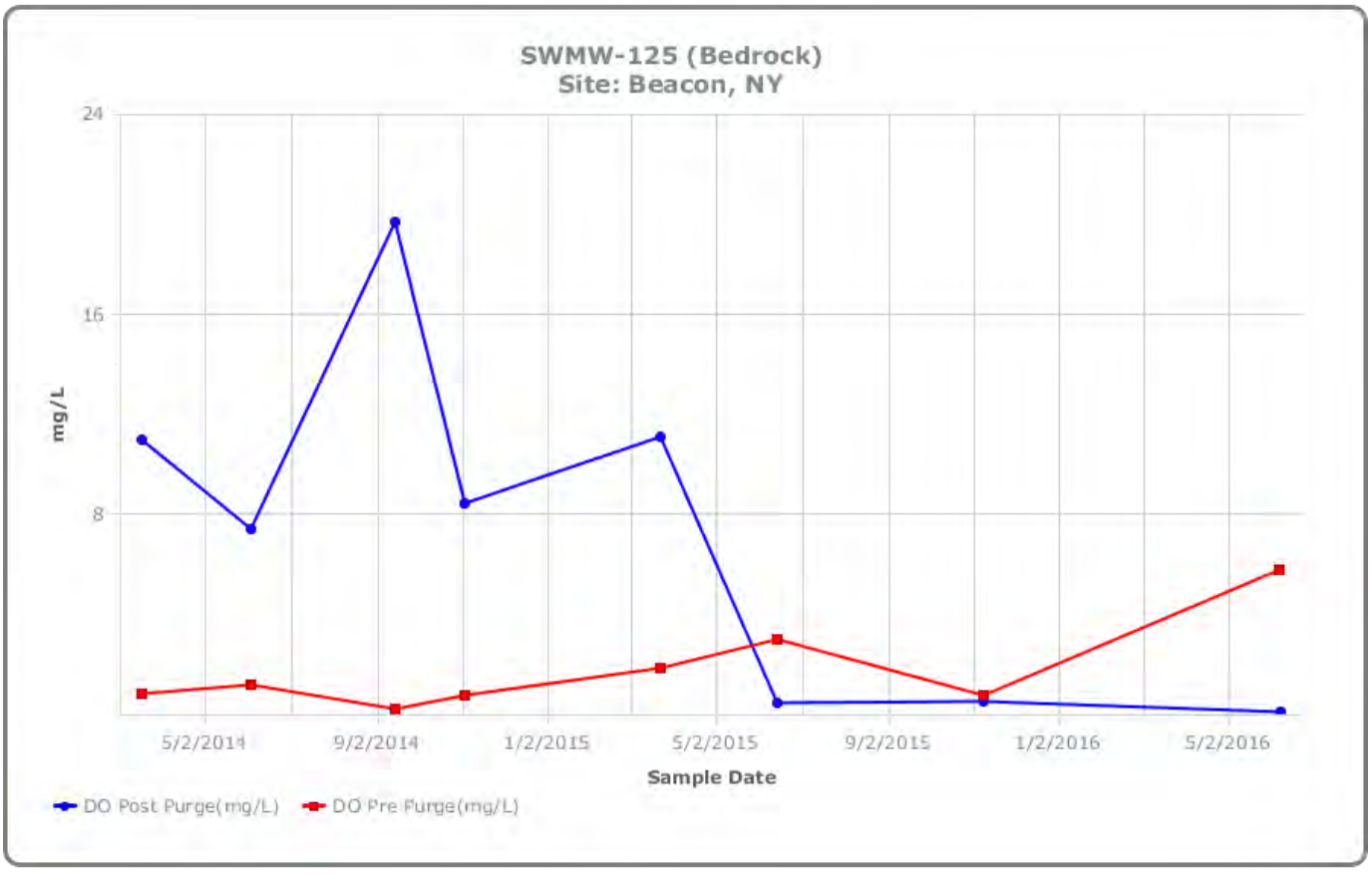

SWMW-103 (Bedrock)
Site: Beacon, NY
12
8
4
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

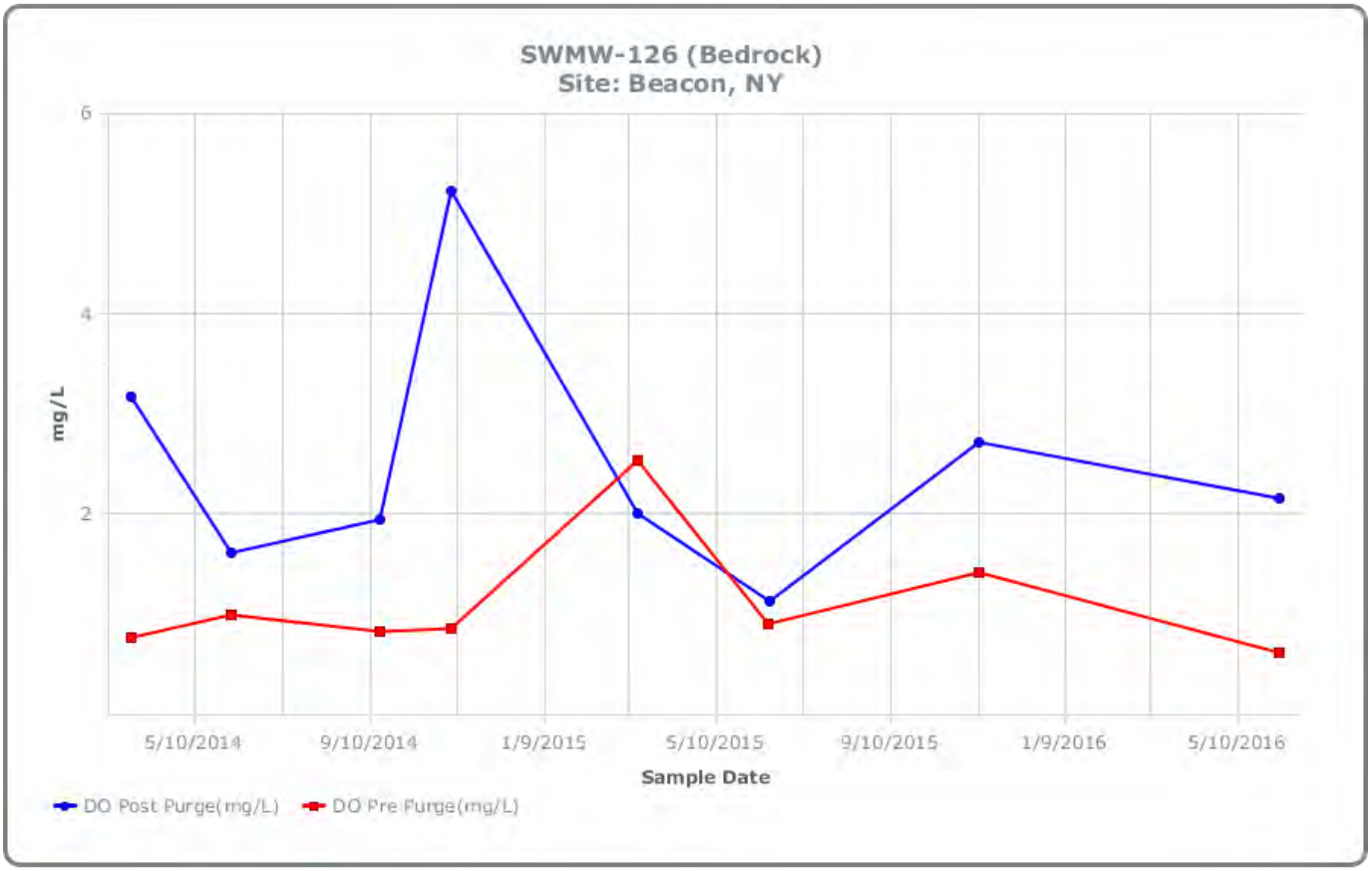

SWMW-111 (Bedrock)
Site: Beacon, NY
9
6
3
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)


SWMW-112 (Bedrock)
Site: Beacon, NY
10
7.5
5
2.5
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

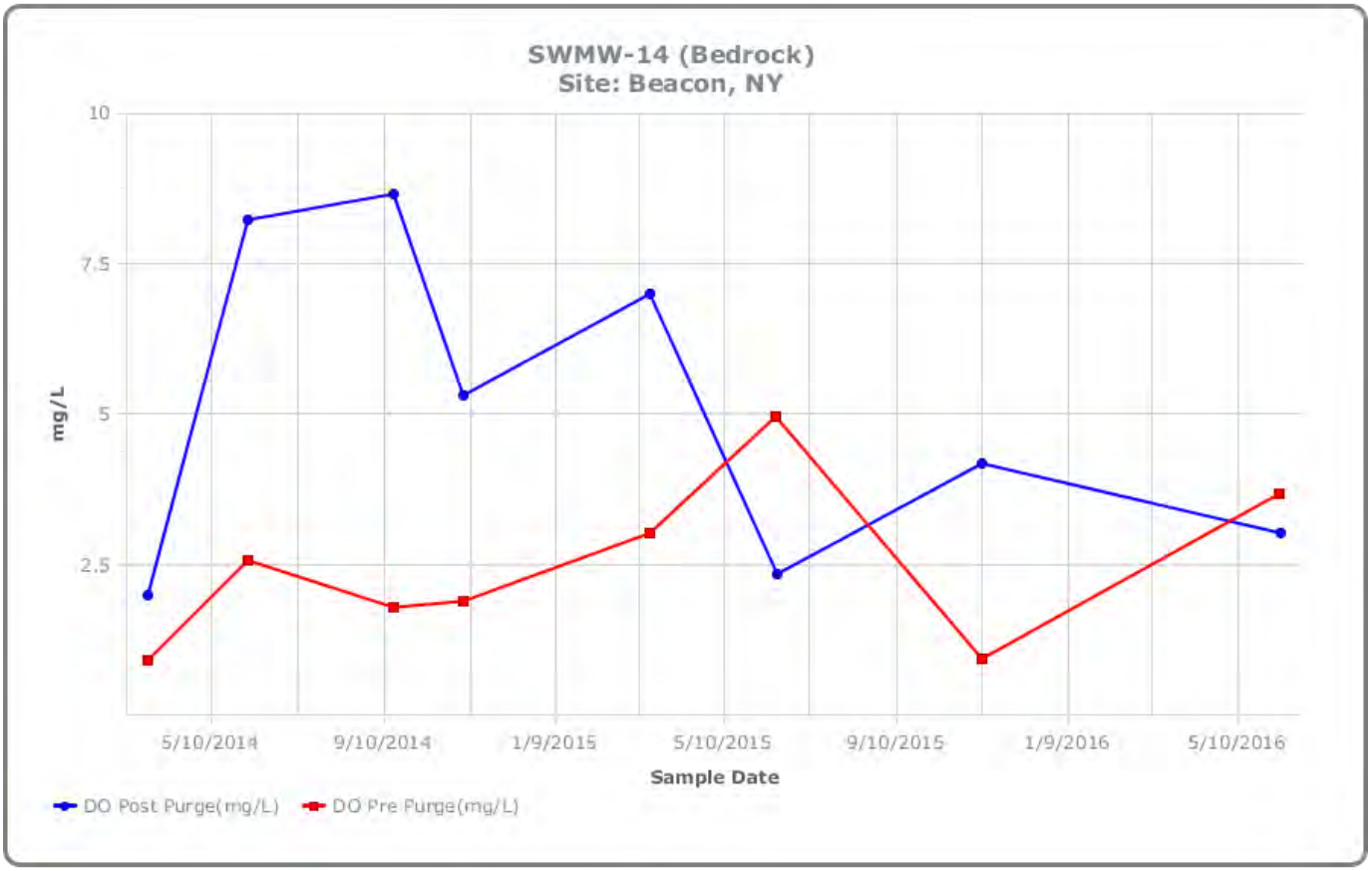

SWMW-114 (Bedrock)
Site: Beacon, NY
15
10
5
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)


SWMW-123 (Bedrock)
Site: Beacon, NY
16
12
8
4
mg/L
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

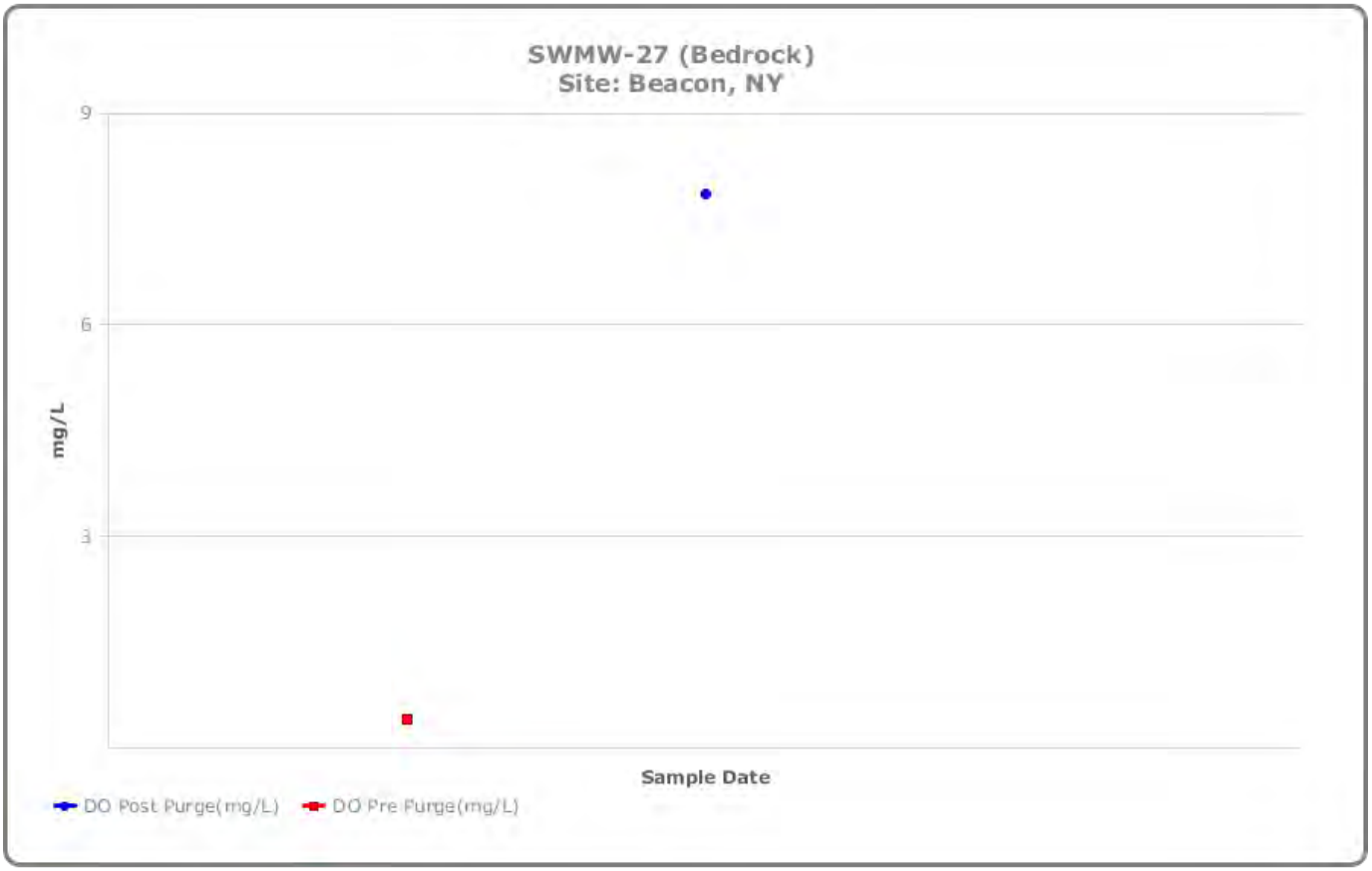

SWMW-125 (Bedrock)
Site: Beacon, NY
24
16
8
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

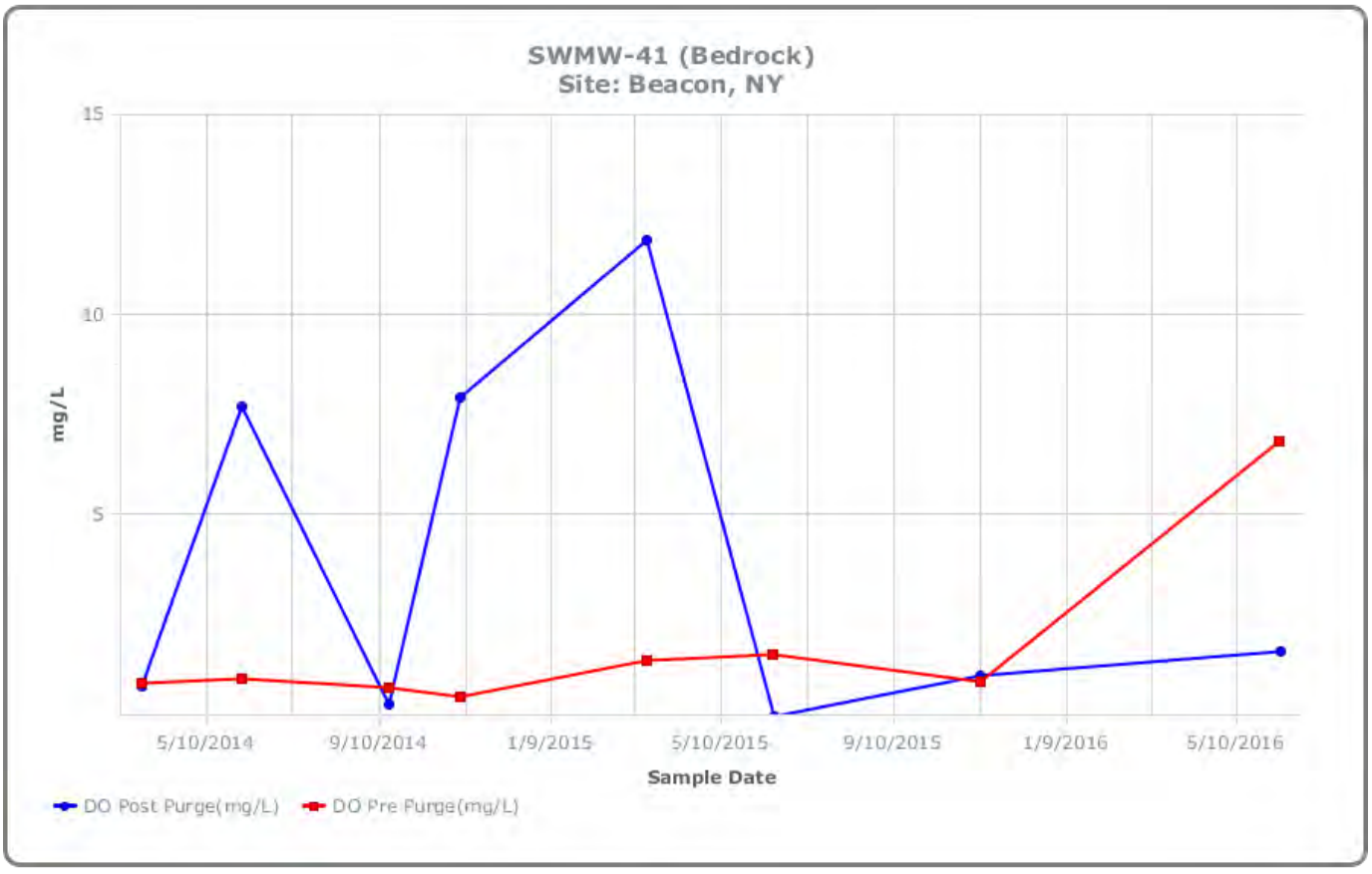

SWMW-126 (Bedrock)
Site: Beacon, NY
6
4
2
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

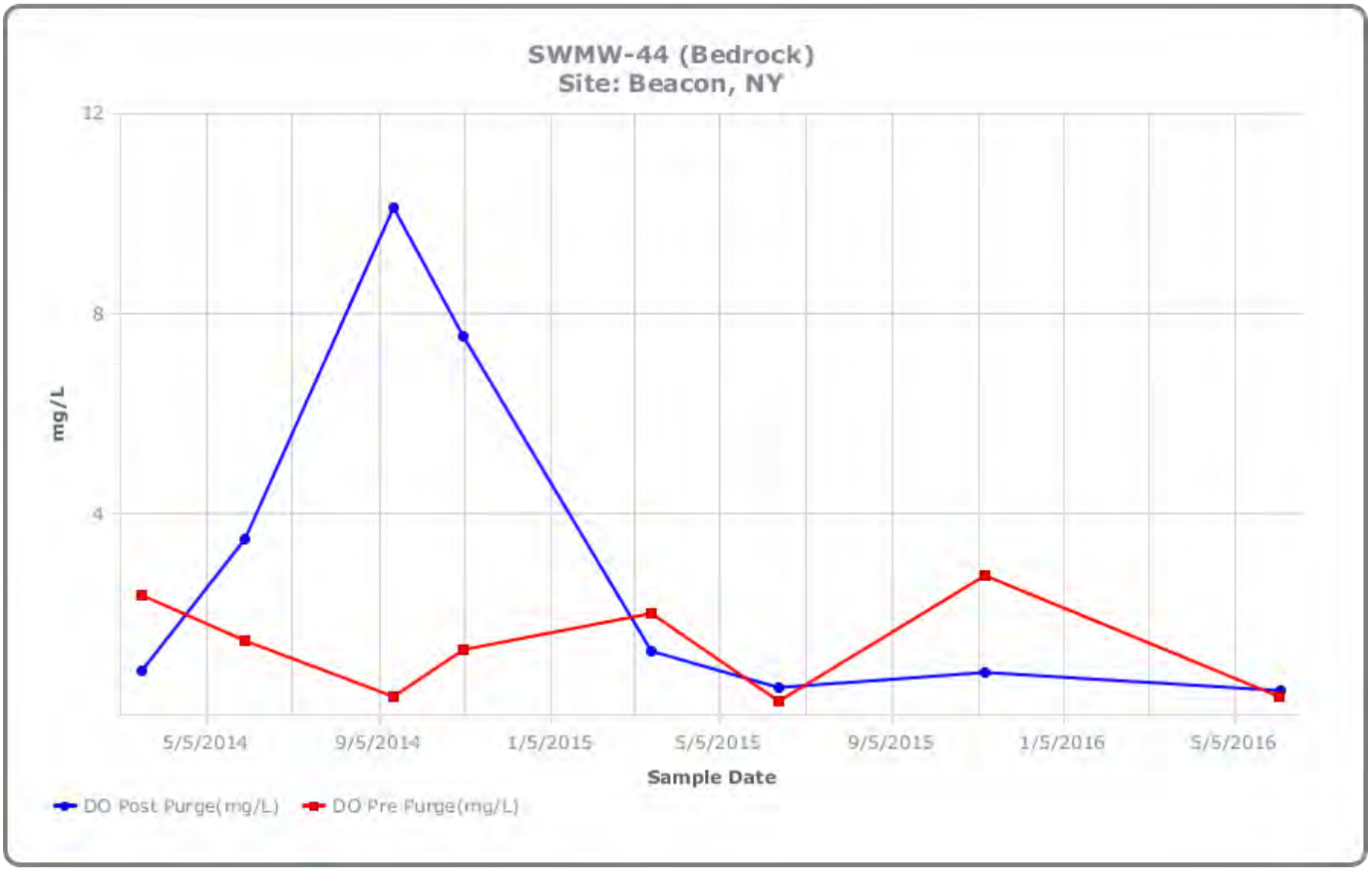

SWMW-13 (Bedrock)
Site: Beacon, NY
15
12.5
10
7.5
5
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

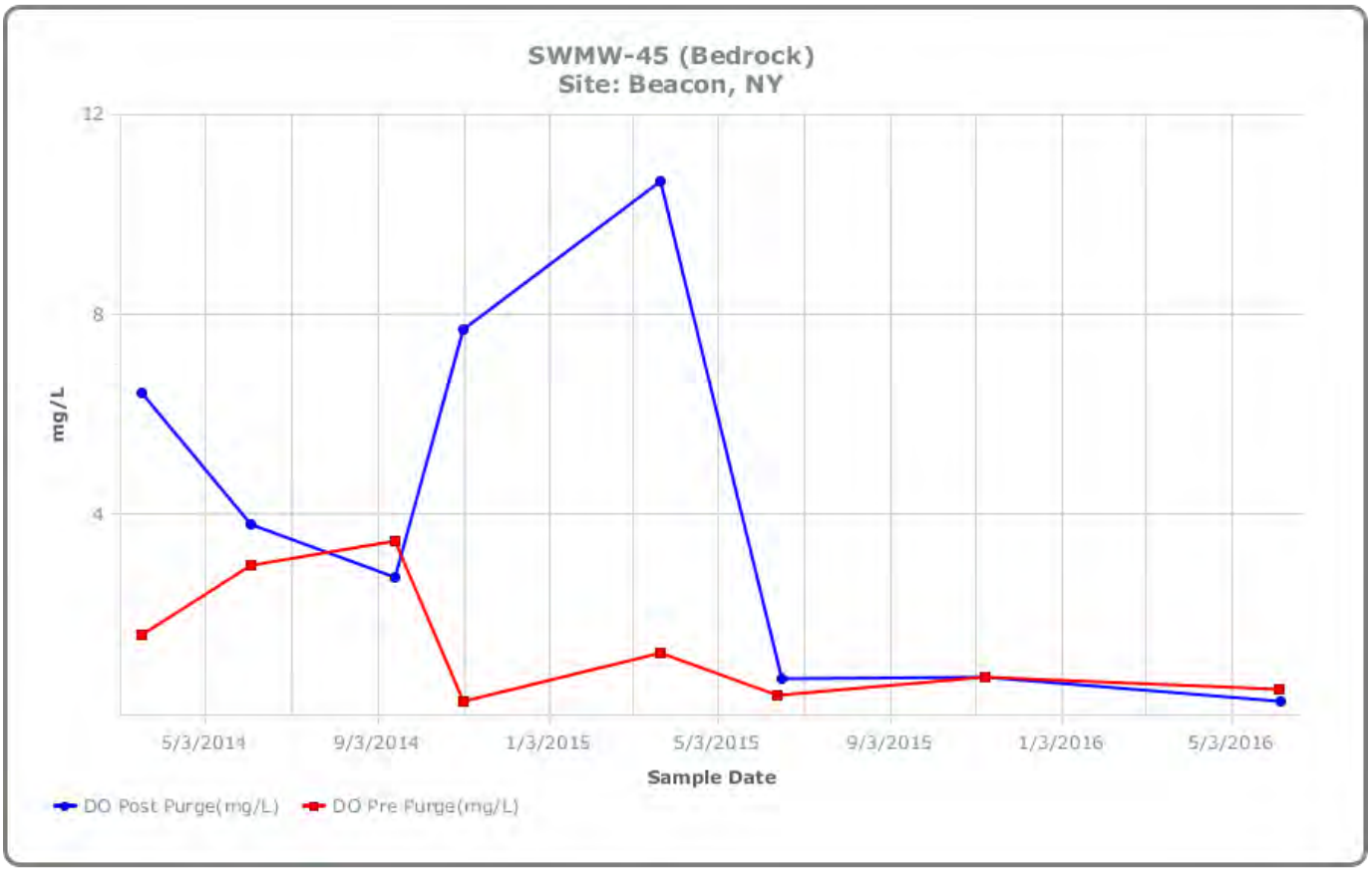

SWMW-14 (Bedrock)
Site: Beacon, NY
10
7.5
5
2.5
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

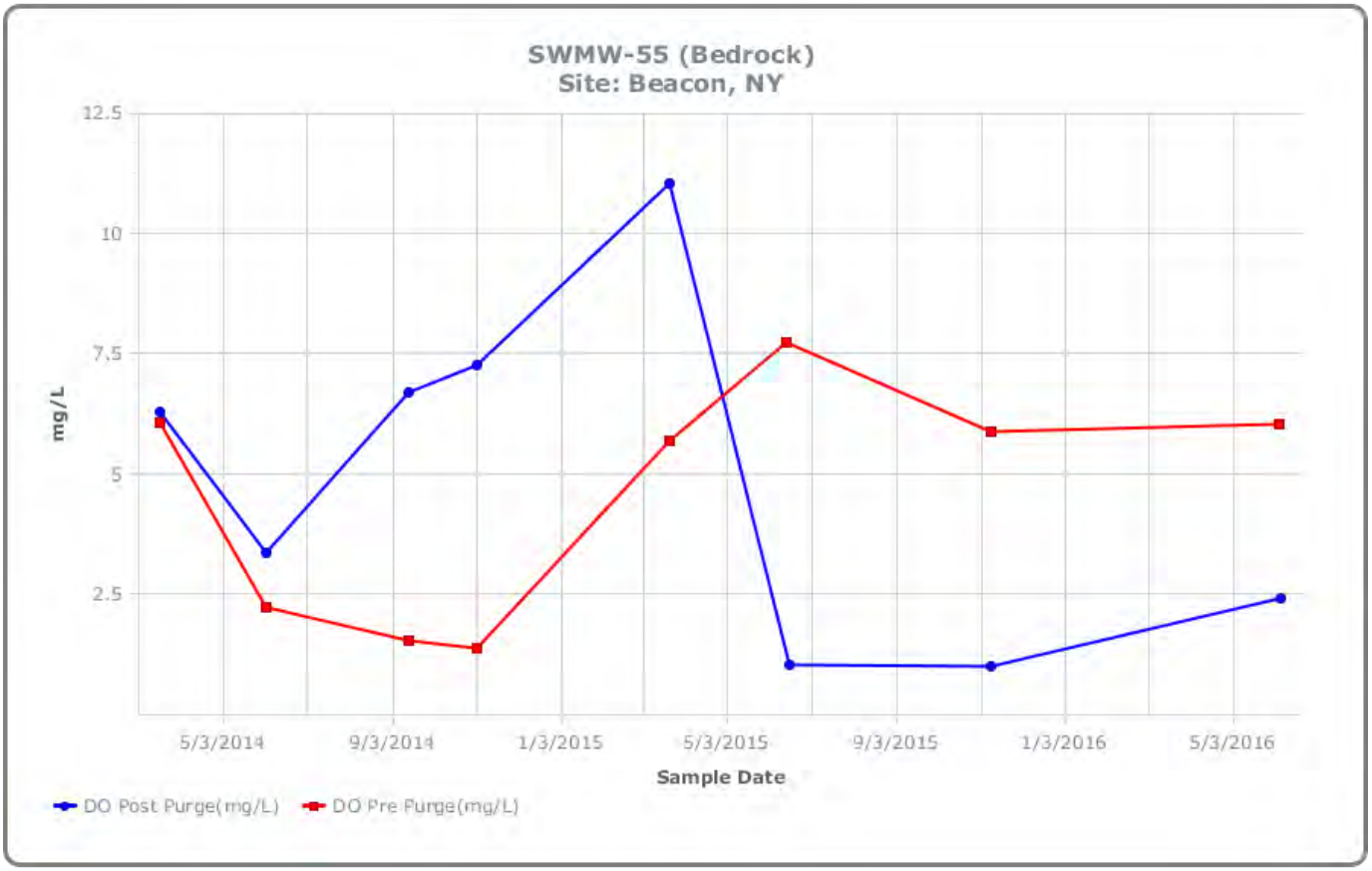

SWMW-2 (Bedrock)
Site: Beacon, NY
16
12
8
4
mg/L
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

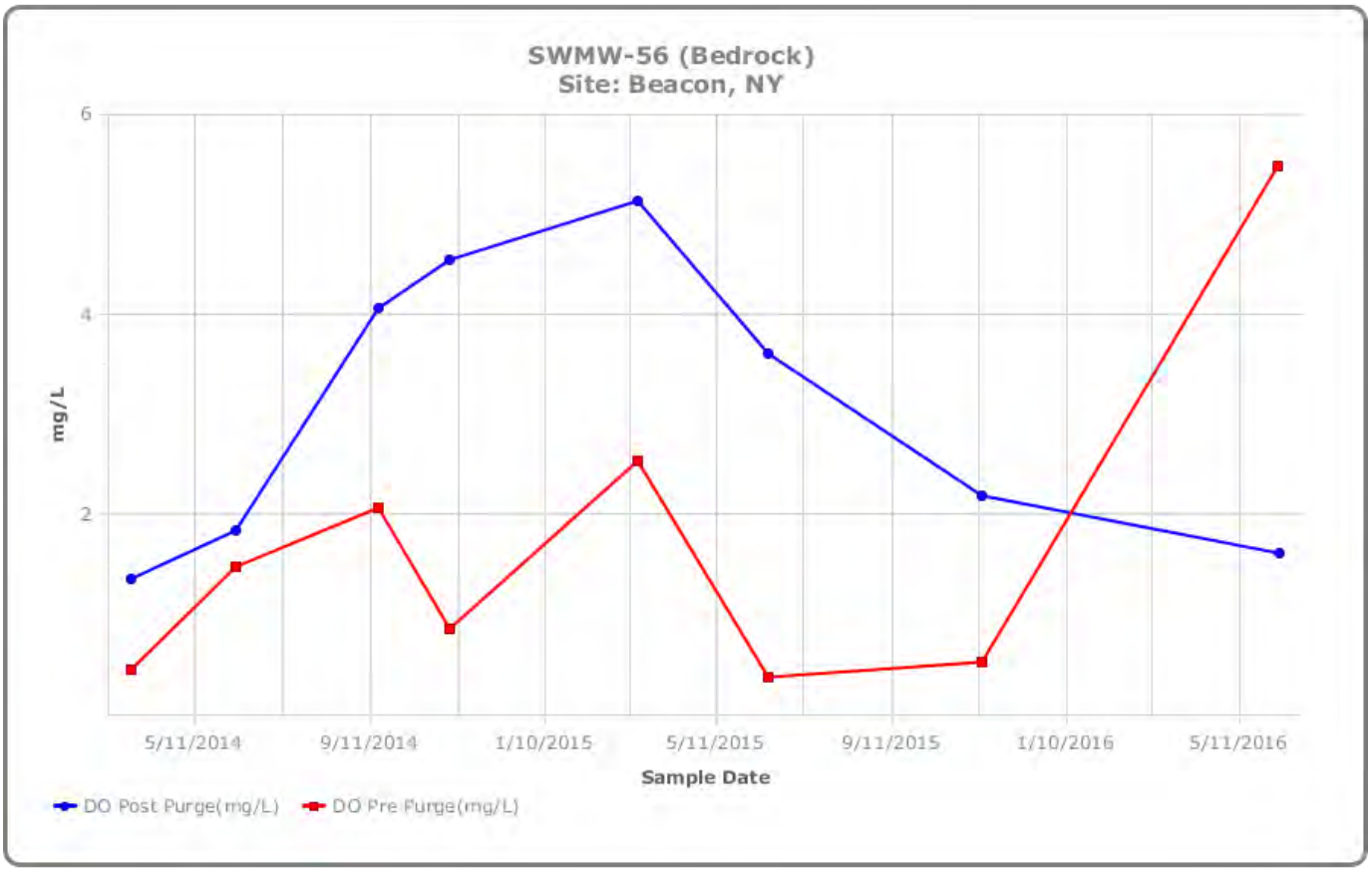

SWMW-27 (Bedrock)
Site: Beacon, NY
9
6
3
mg/L
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

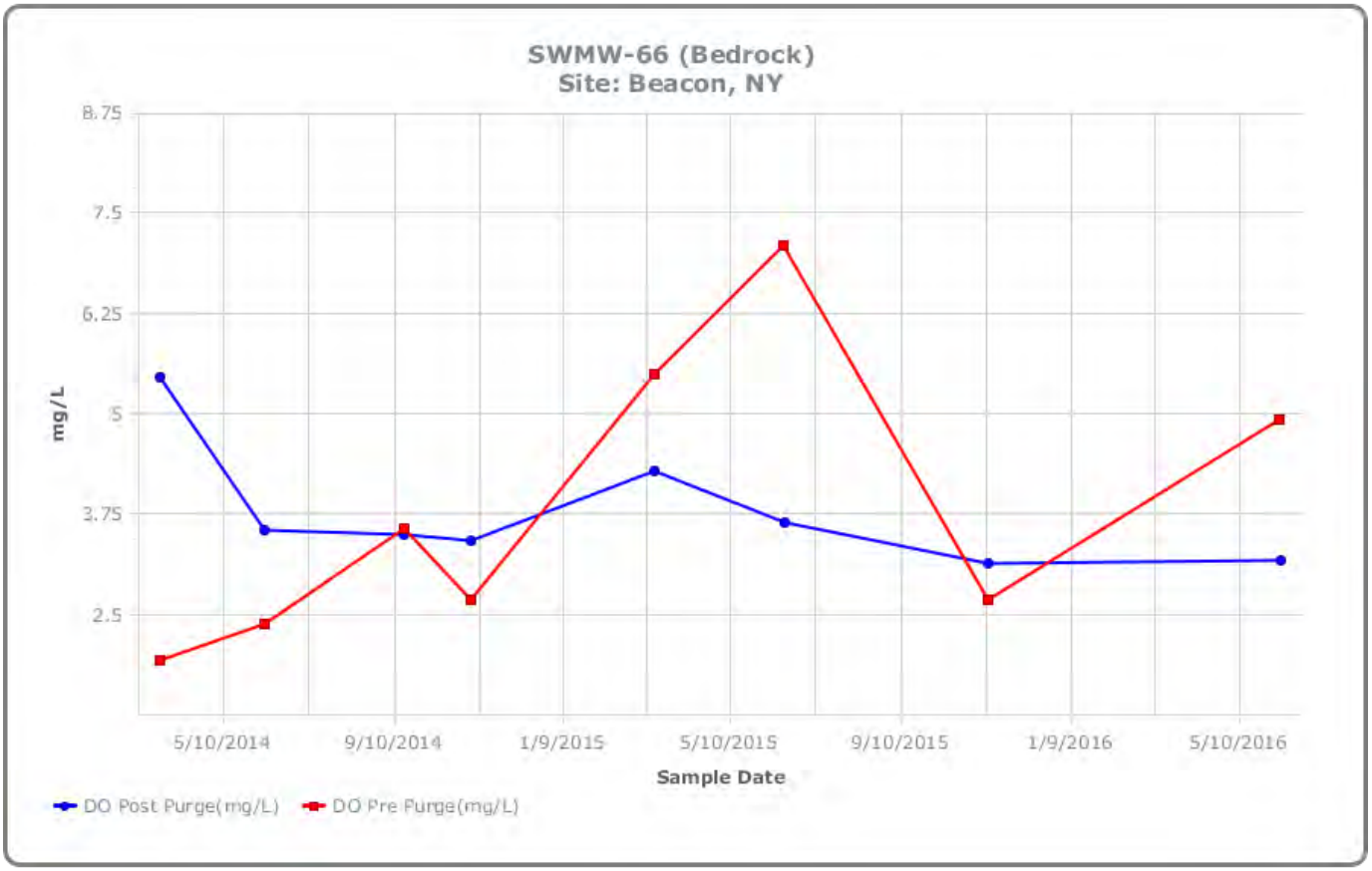

SWMW-41 (Bedrock)
Site: Beacon, NY
15
10
5
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)


SWMW-44 (Bedrock)
Site: Beacon, NY
12
8
4
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)


SWMW-45 (Bedrock)
Site: Beacon, NY
12
8
4
mg/L
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)


SWMW-55 (Bedrock)
Site: Beacon, NY
12.5
10
7.5
5
2.5
mg/L
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

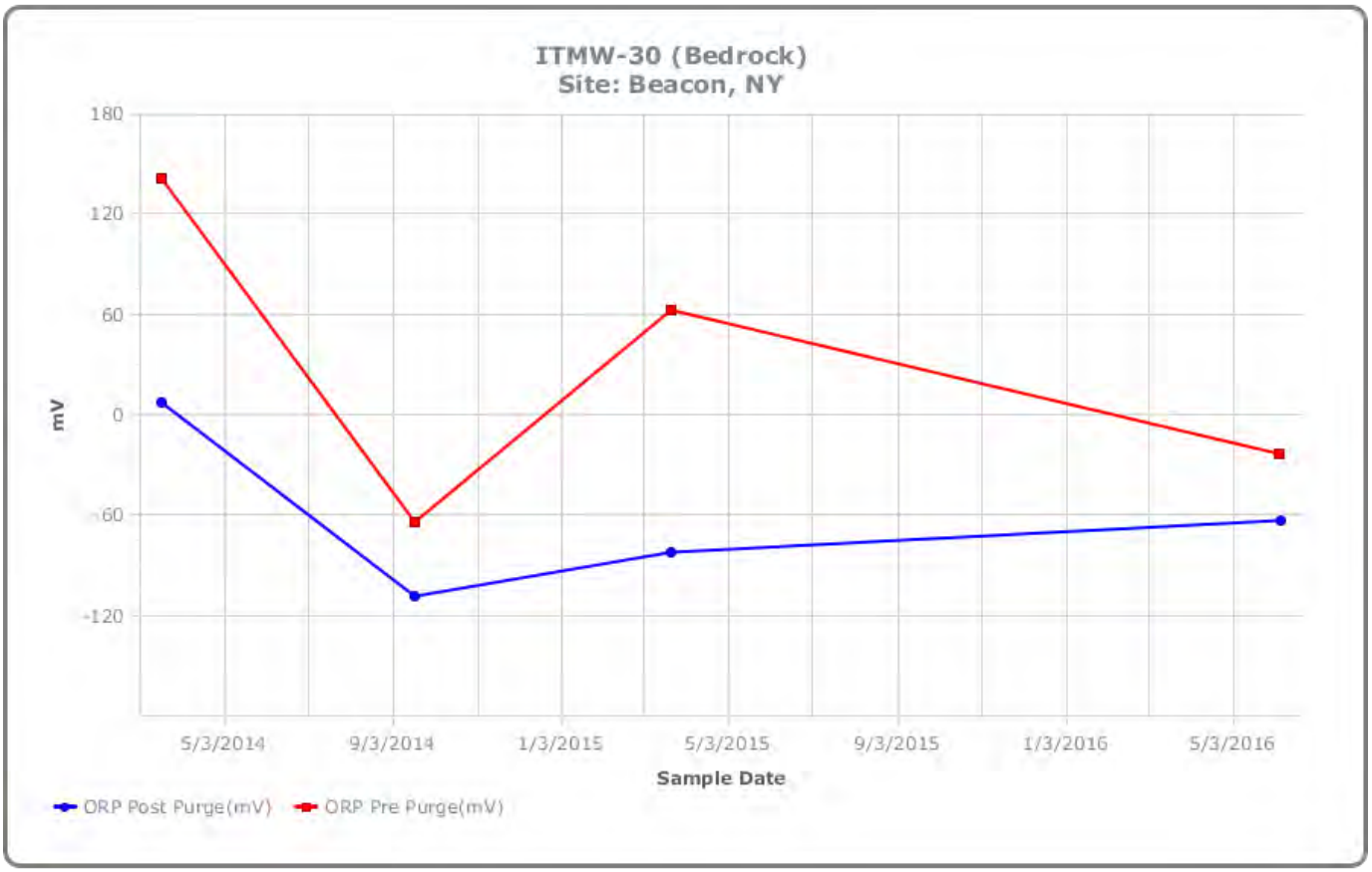

SWMW-56 (Bedrock)
Site: Beacon, NY
6
4
2
mg/L
5/11/2014
9/11/2014
1/10/2015
5/11/2015
9/11/2015
1/10/2016
5/11/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

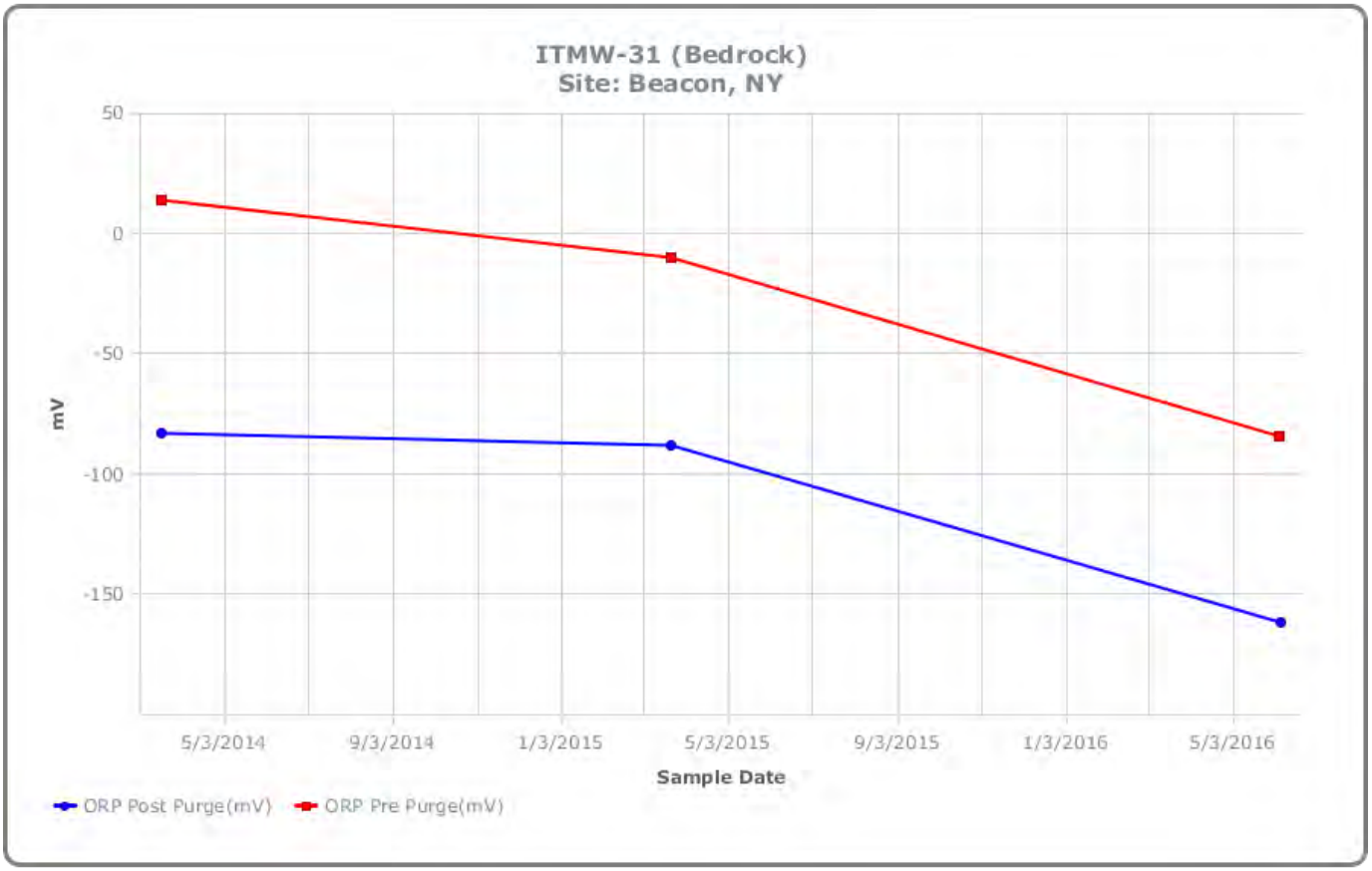

SWMW-66 (Bedrock)
Site: Beacon, NY
8.75
7.5
6.25
5
3.75
2.5
mg/L
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

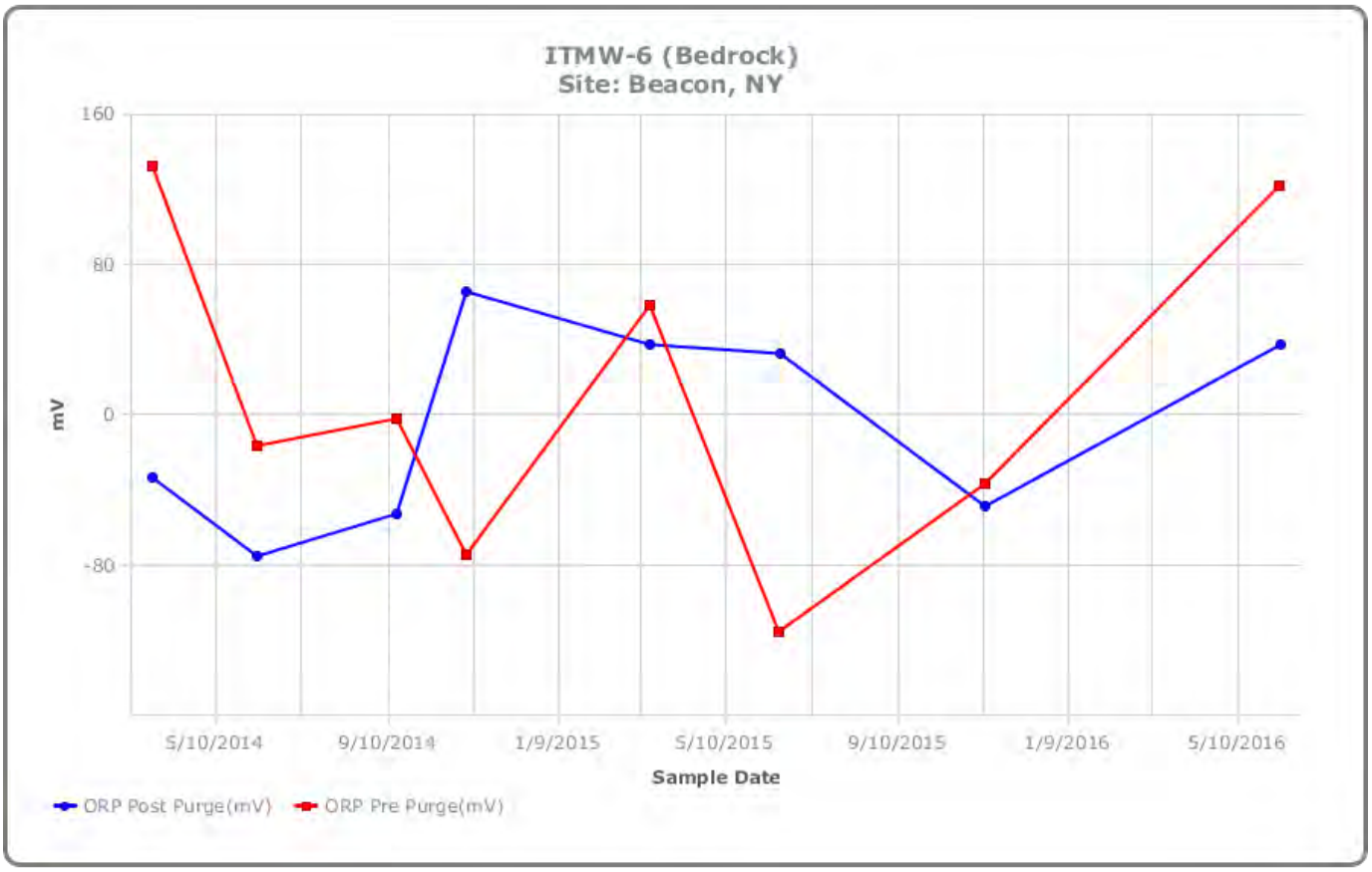

SWMW-68 (Bedrock)
Site: Beacon, NY
8
6
4
2
mg/L
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
DO Post Purge(mg/L)
DO Pre Purge(mg/L)

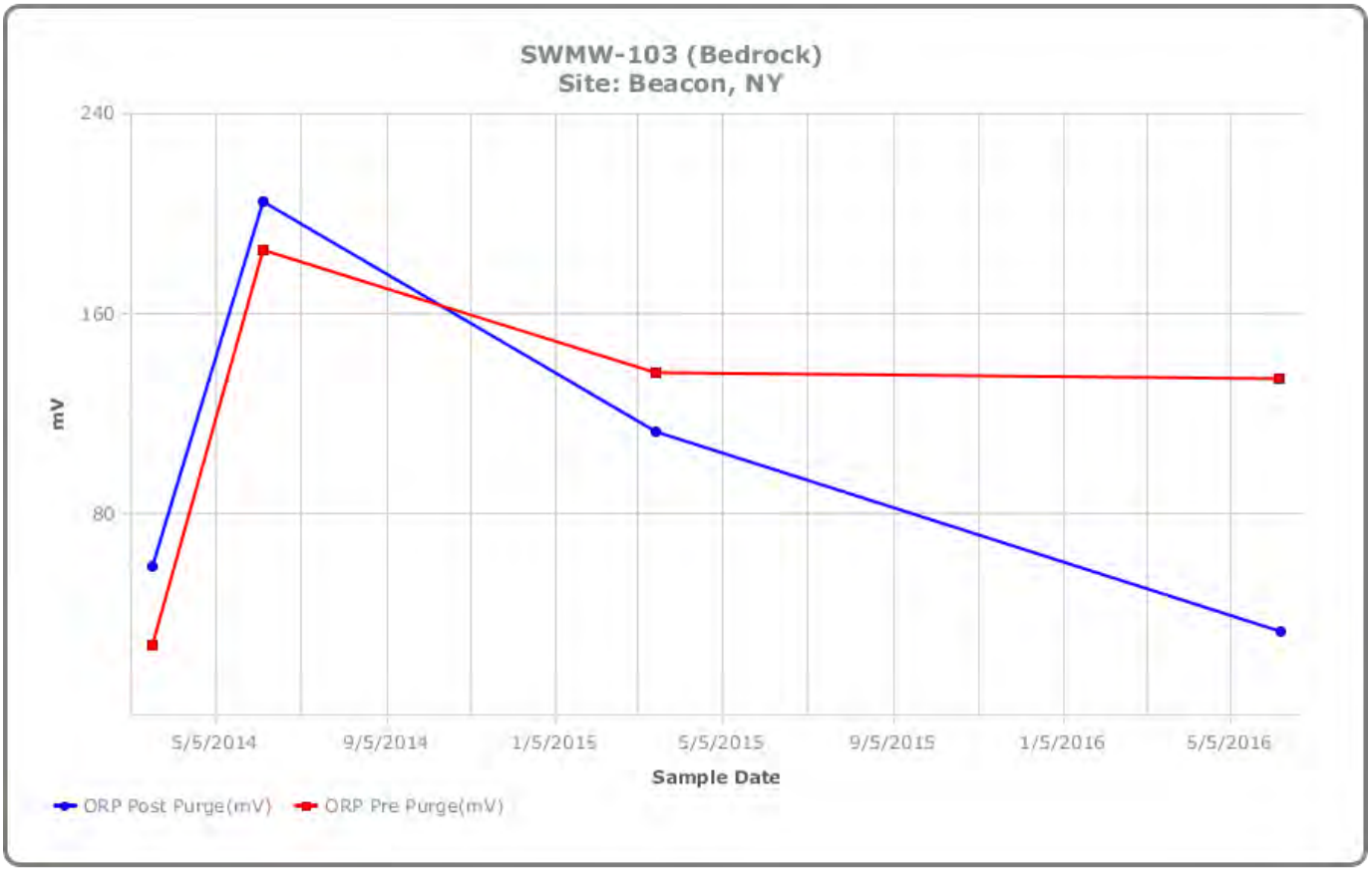
2014 THROUGH 2016 ORP BEDROCK WELLS SUMMARY GRAPHS


ITMW-13 (Bedrock)
Site: Beacon, NY
200
100
0
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


ITMW-30 (Bedrock)
Site: Beacon, NY
180
120
60
0
-60
-120
mV
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

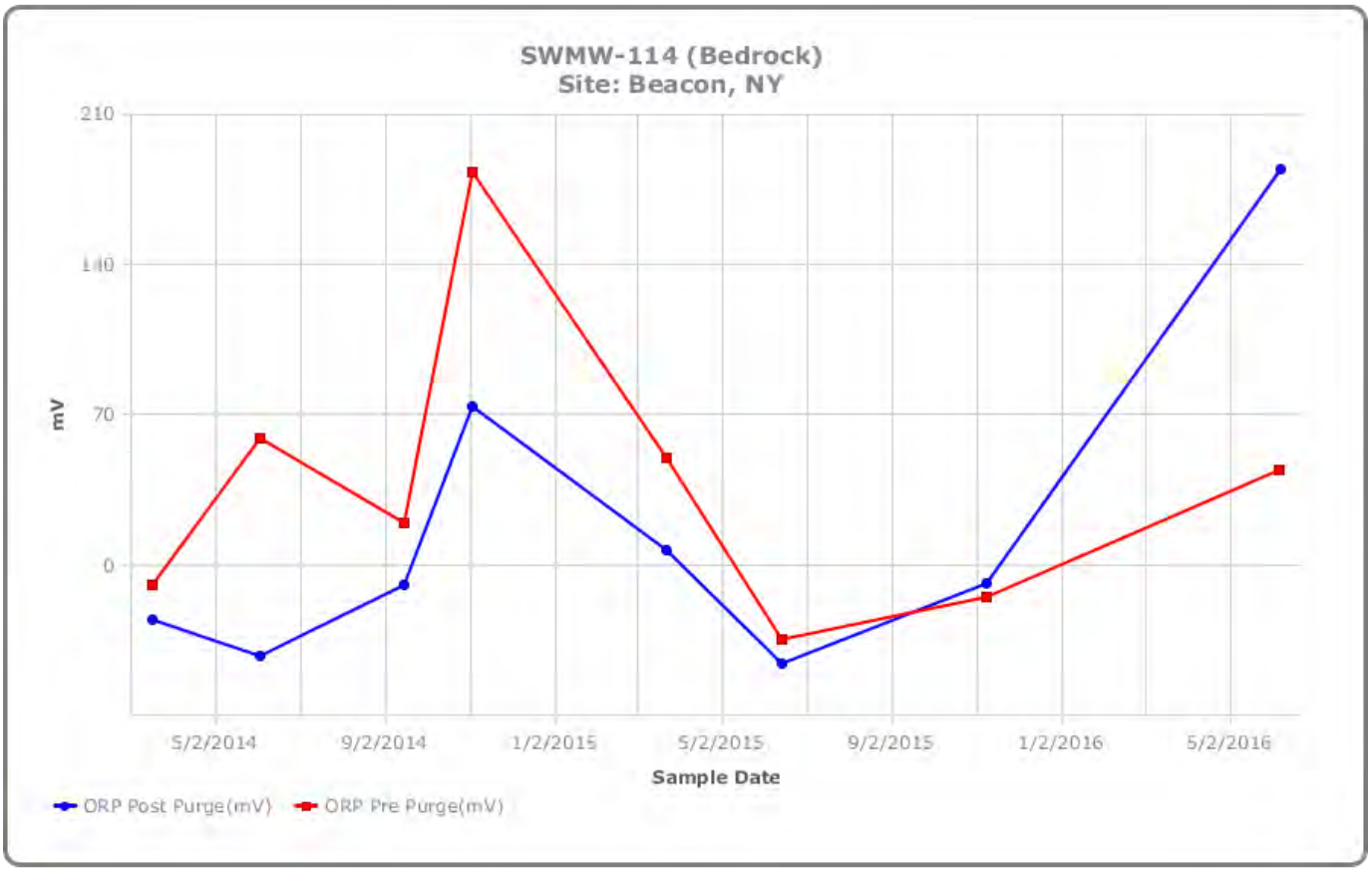

ITMW-31 (Bedrock)
Site: Beacon, NY
50
0
-50
-100
-150
mV
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

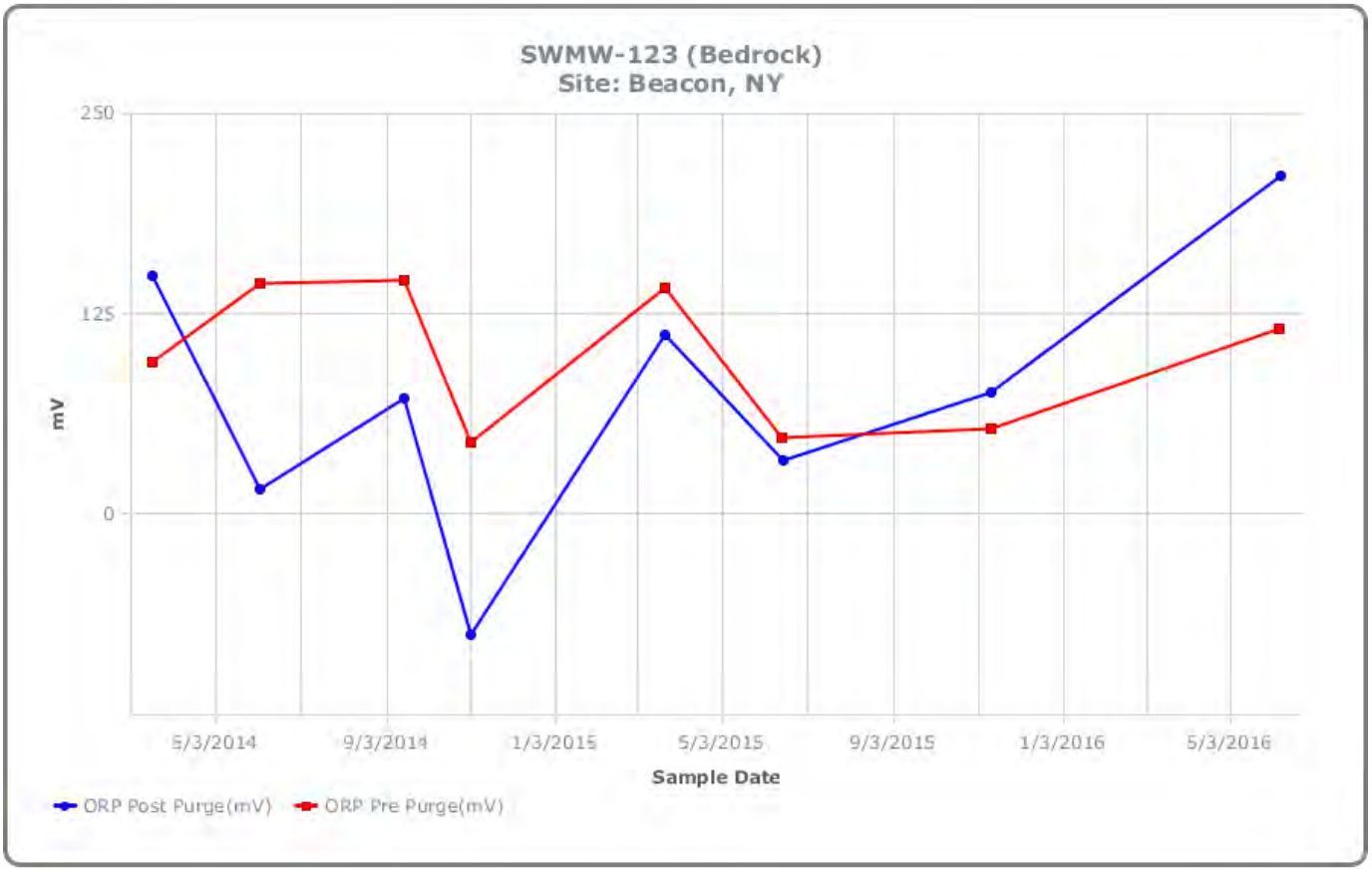

ITMW-6 (Bedrock)
Site: Beacon, NY
160
80
0
-80
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

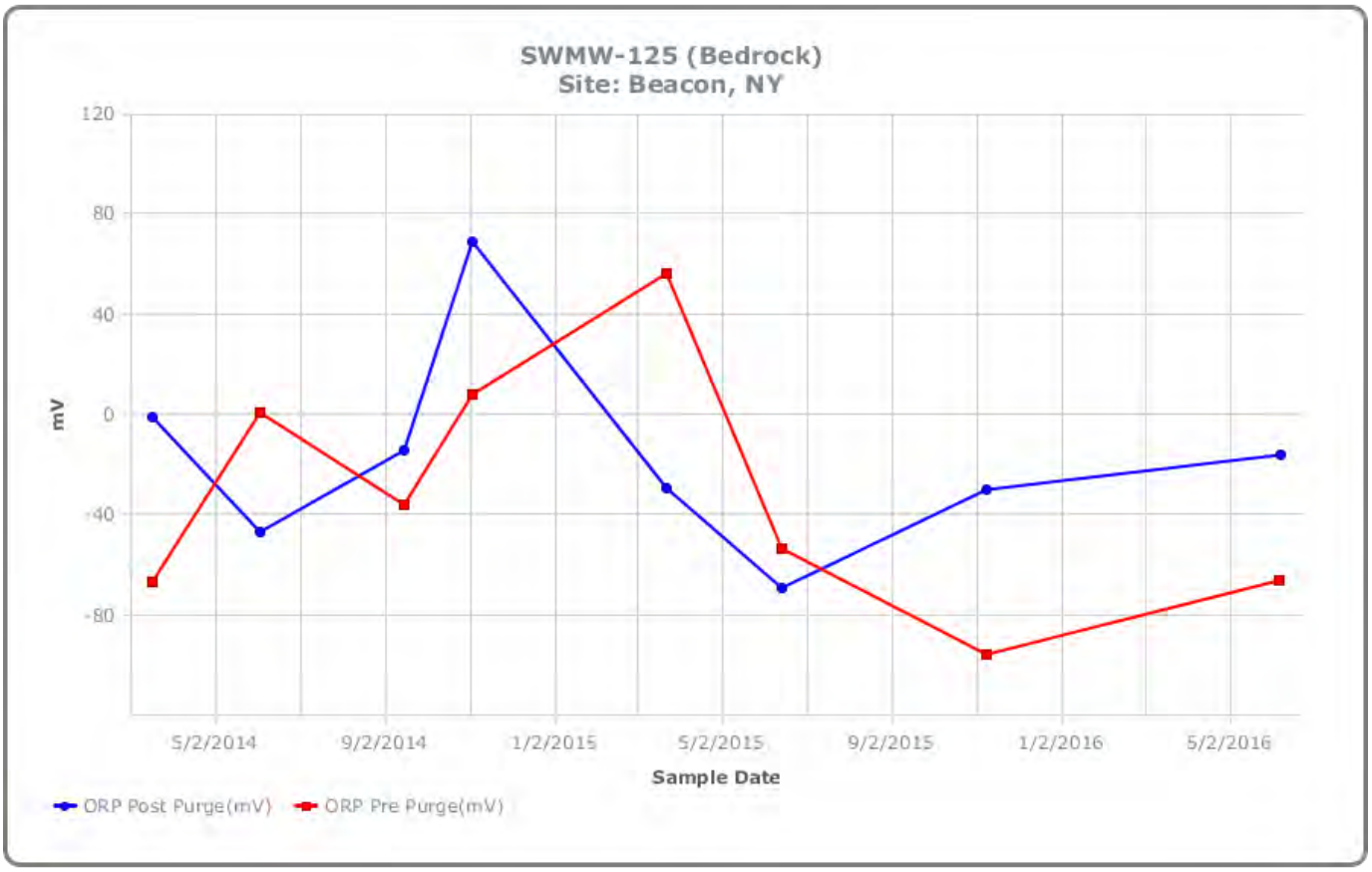

SWMW-103 (Bedrock)
Site: Beacon, NY
240
160
80
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-111 (Bedrock)
Site: Beacon, NY
210
140
70
0
-70
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-112 (Bedrock)
Site: Beacon, NY
270
180
90
0
-90
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

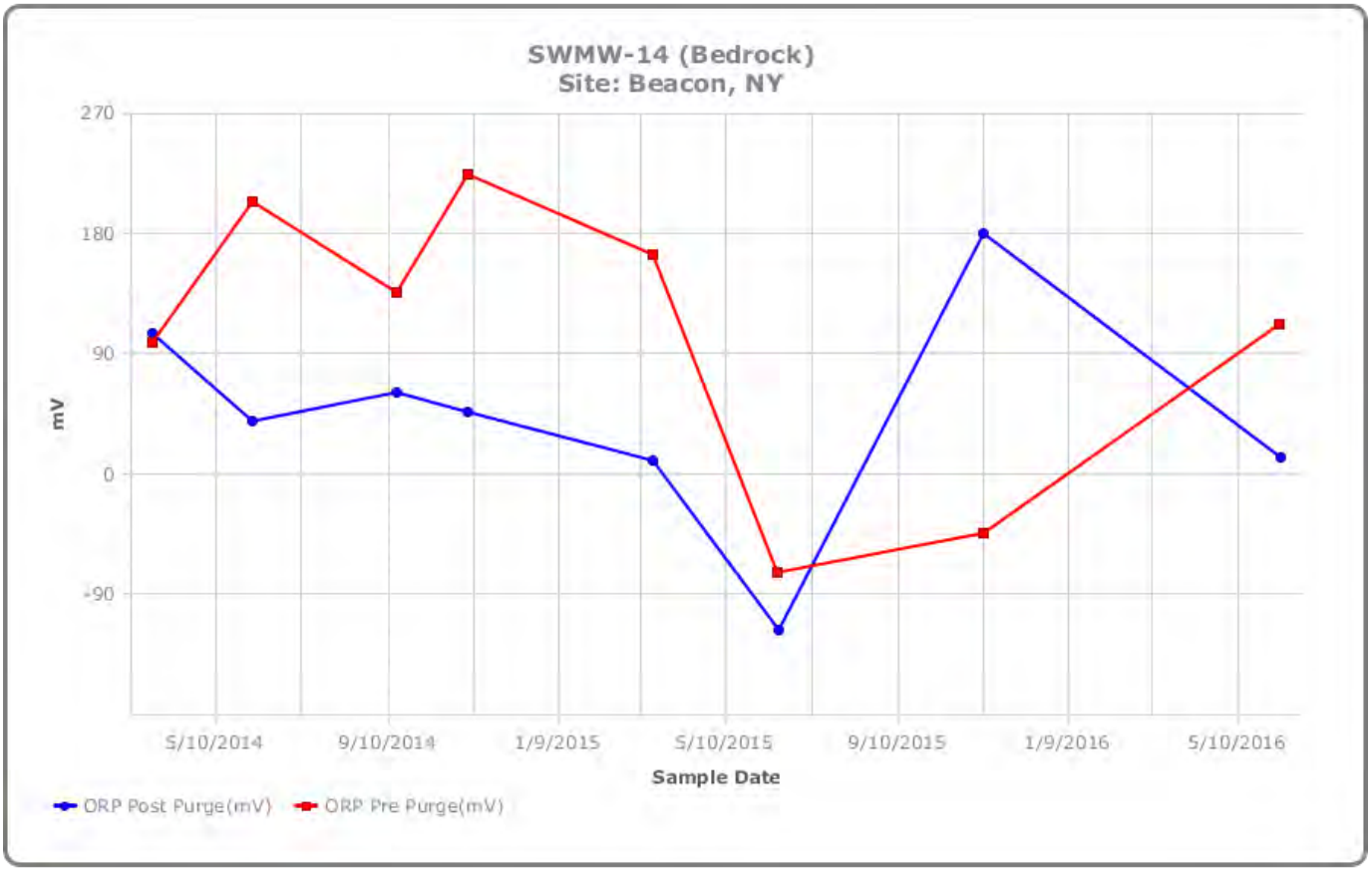

SWMW-114 (Bedrock)
Site: Beacon, NY
210
140
70
0
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-123 (Bedrock)
Site: Beacon, NY
250
125
0
mV
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

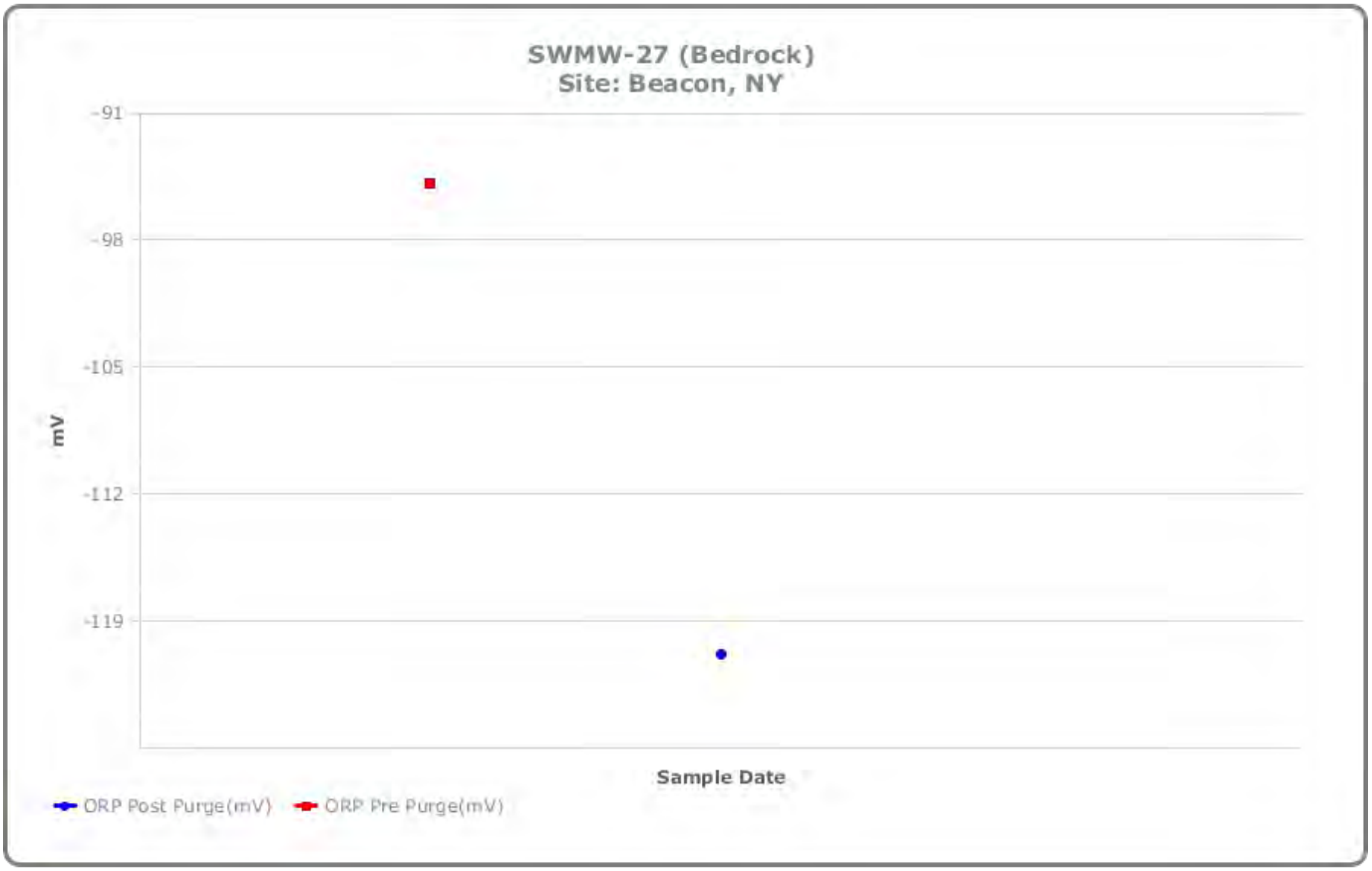

SWMW-125 (Bedrock)
Site: Beacon, NY
120
80
40
0
-40
-80
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

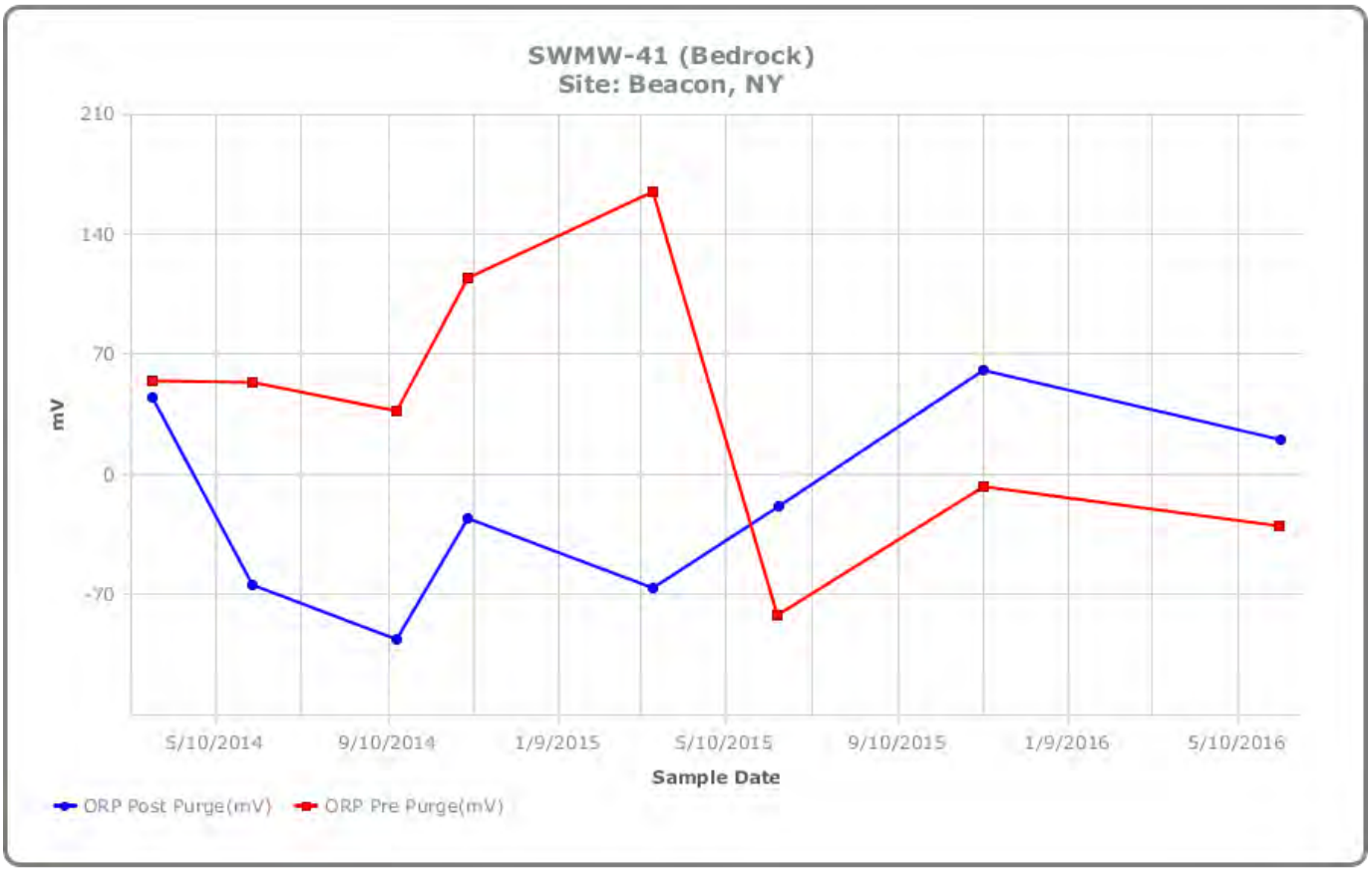

SWMW-126 (Bedrock)
Site: Beacon, NY
240
160
80
0
-80
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-13 (Bedrock)
Site: Beacon, NY
180
120
60
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

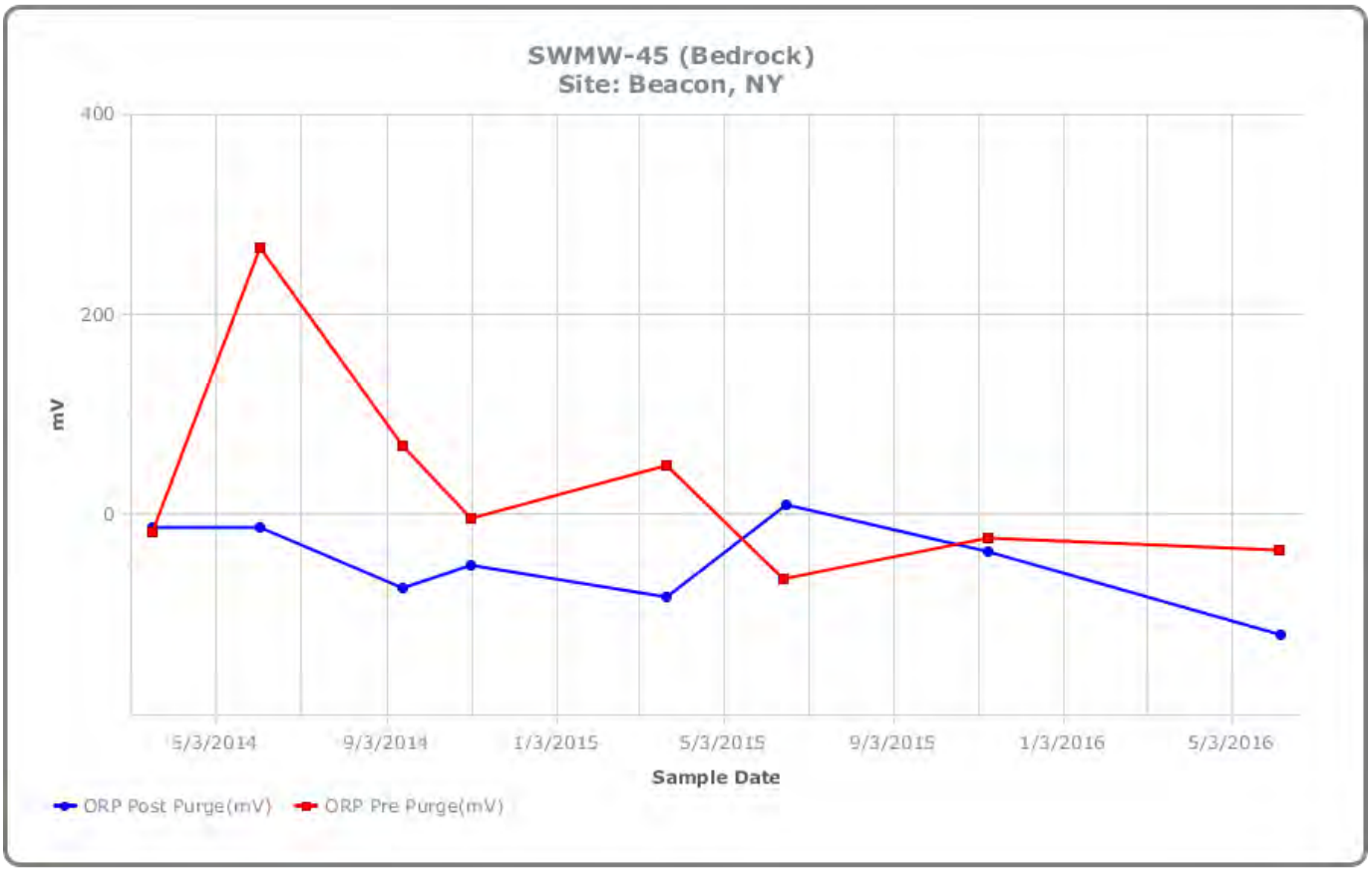

SWMW-14 (Bedrock)
Site: Beacon, NY
270
180
90
0
-90
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

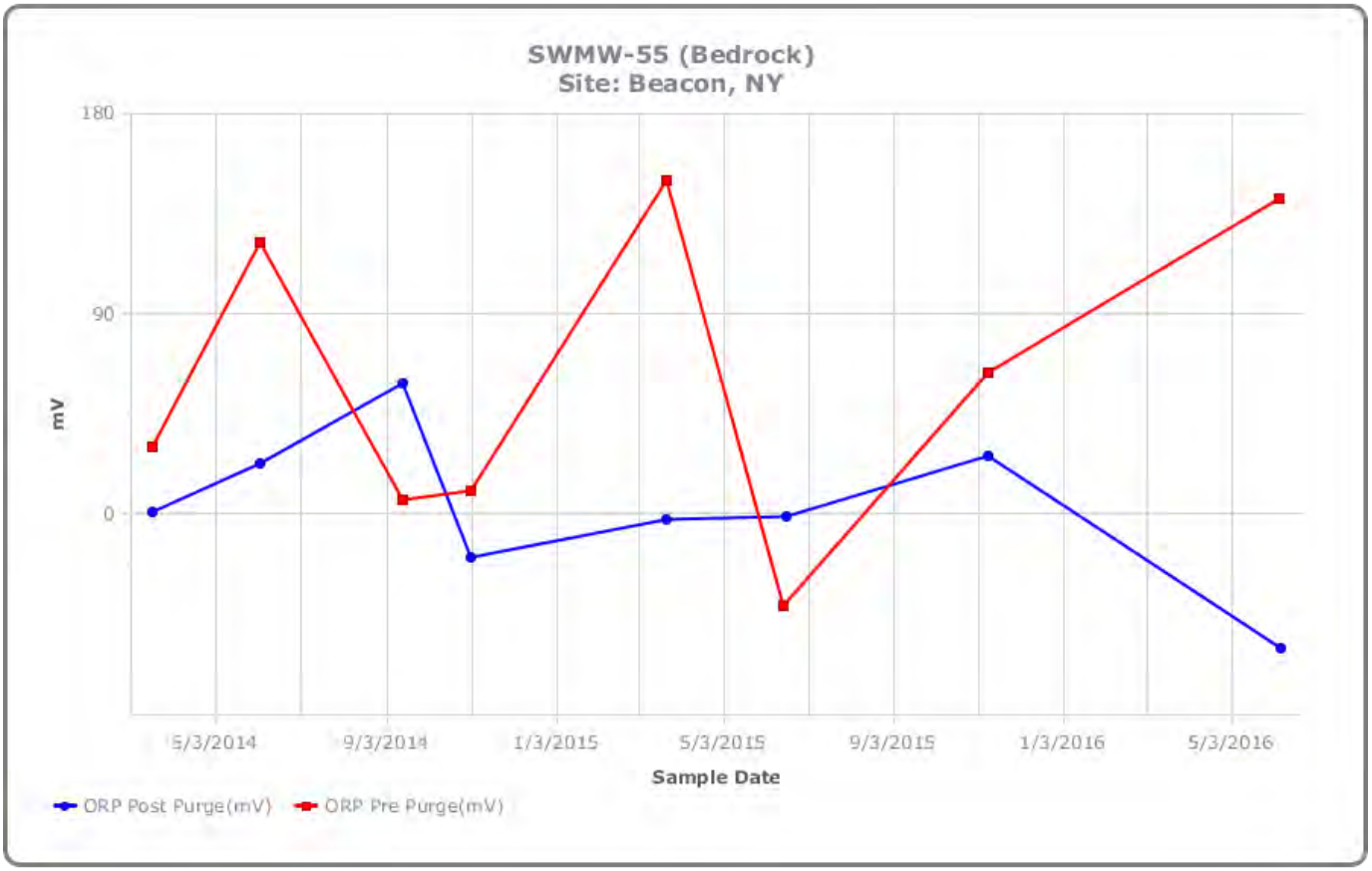

SWMW-2 (Bedrock)
Site: Beacon, NY
120
80
40
0
-40
-80
mV
5/2/2014
9/2/2014
1/2/2015
5/2/2015
9/2/2015
1/2/2016
5/2/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-27 (Bedrock)
Site: Beacon, NY
-91
-98
-105
-112
-119
mV
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

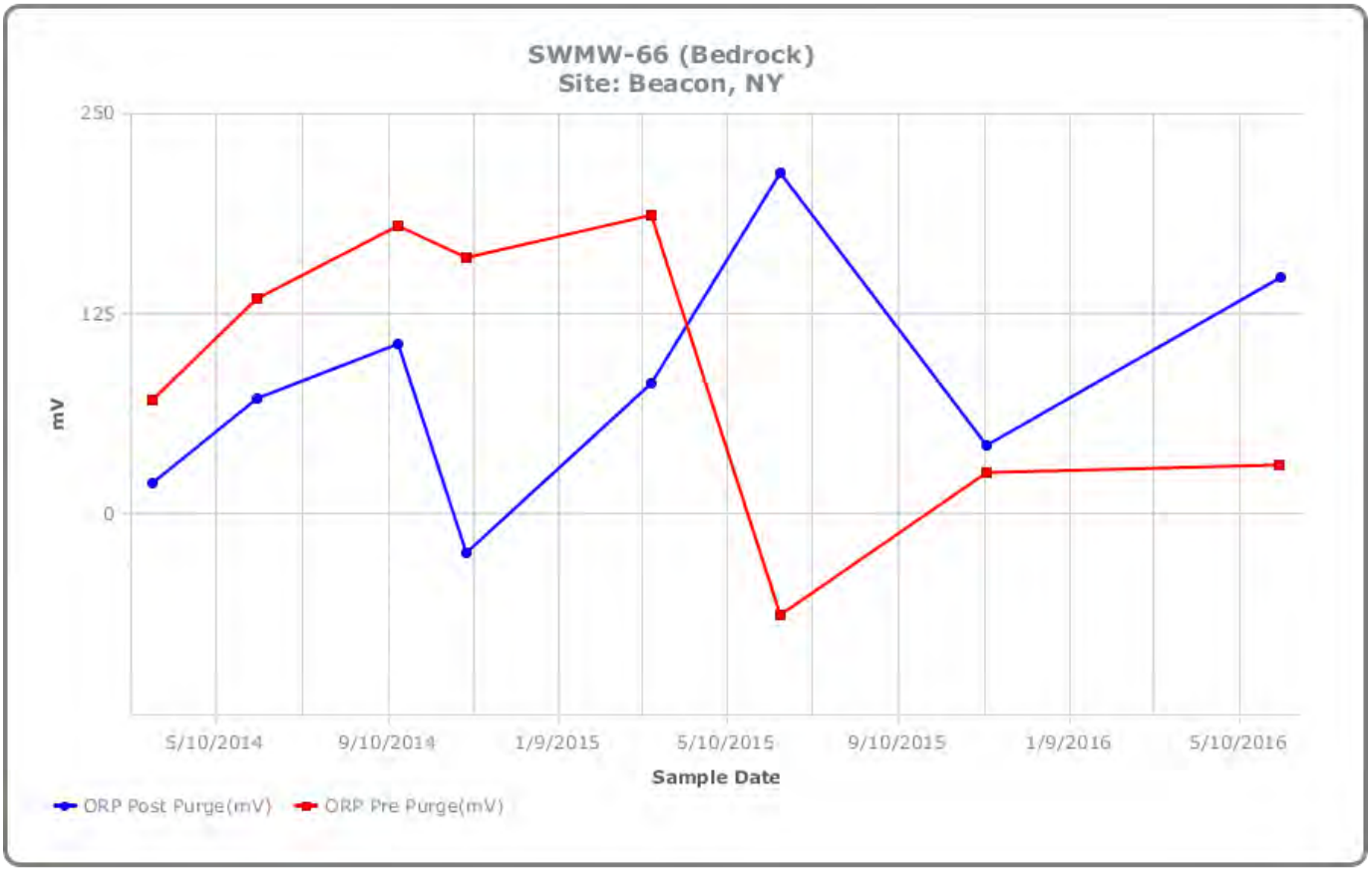

SWMW-41 (Bedrock)
Site: Beacon, NY
210
140
70
0
-70
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

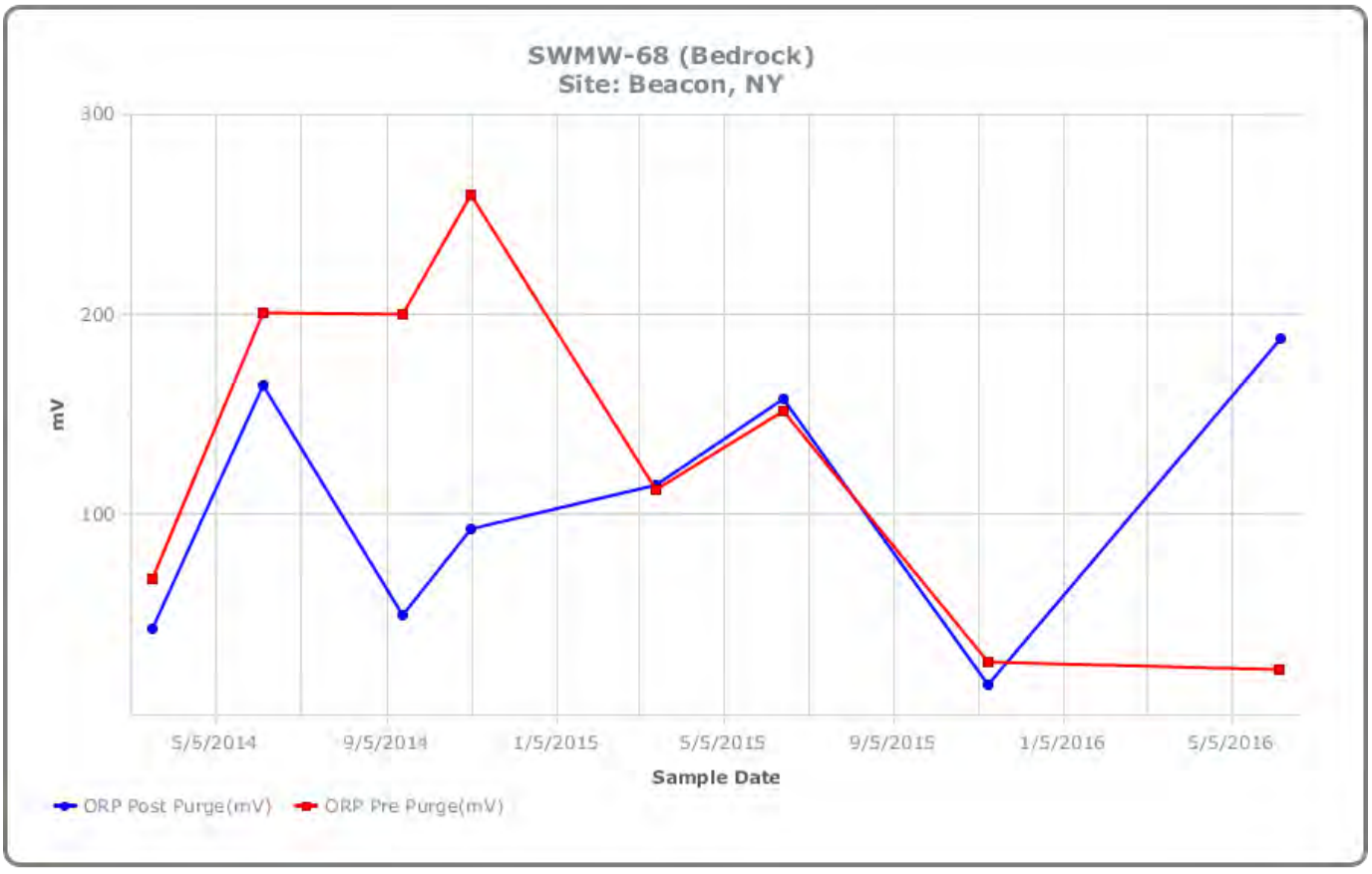

SWMW-44 (Bedrock)
Site: Beacon, NY
160
80
0
-80
-160
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-45 (Bedrock)
Site: Beacon, NY
400
200
0
mV
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

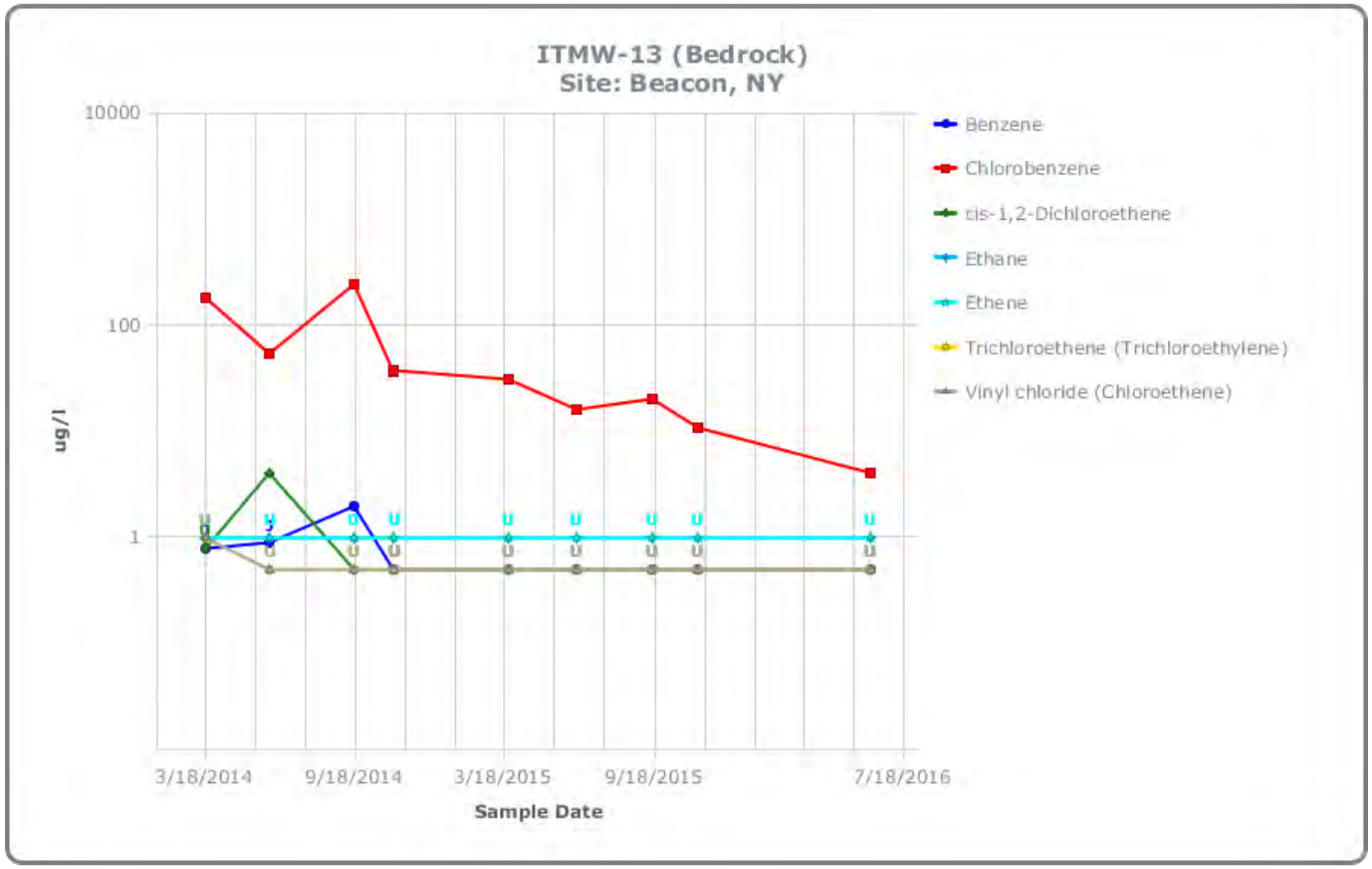

SWMW-55 (Bedrock)
Site: Beacon, NY
180
90
0
mV
5/3/2014
9/3/2014
1/3/2015
5/3/2015
9/3/2015
1/3/2016
5/3/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

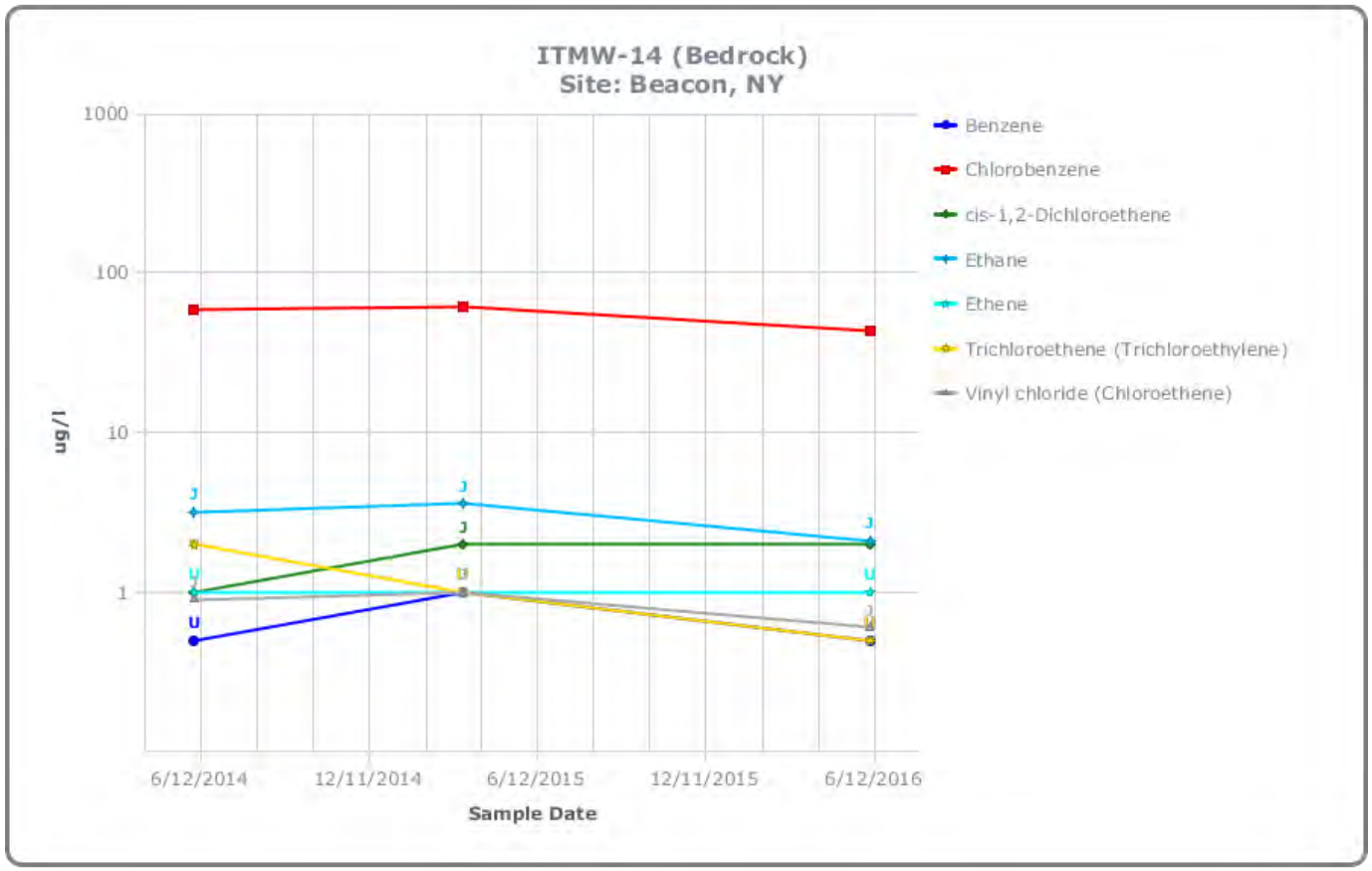

SWMW-56 (Bedrock)
Site: Beacon, NY
210
140
70
0
-70
mV
5/11/2014
9/11/2014
1/10/2015
5/11/2015
9/11/2015
1/10/2016
5/11/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-66 (Bedrock)
Site: Beacon, NY
250
125
0
mV
5/10/2014
9/10/2014
1/9/2015
5/10/2015
9/10/2015
1/9/2016
5/10/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)


SWMW-68 (Bedrock)
Site: Beacon, NY
300
200
100
mV
5/5/2014
9/5/2014
1/5/2015
5/5/2015
9/5/2015
1/5/2016
5/5/2016
Sample Date
ORP Post Purge(mV)
ORP Pre Purge(mV)

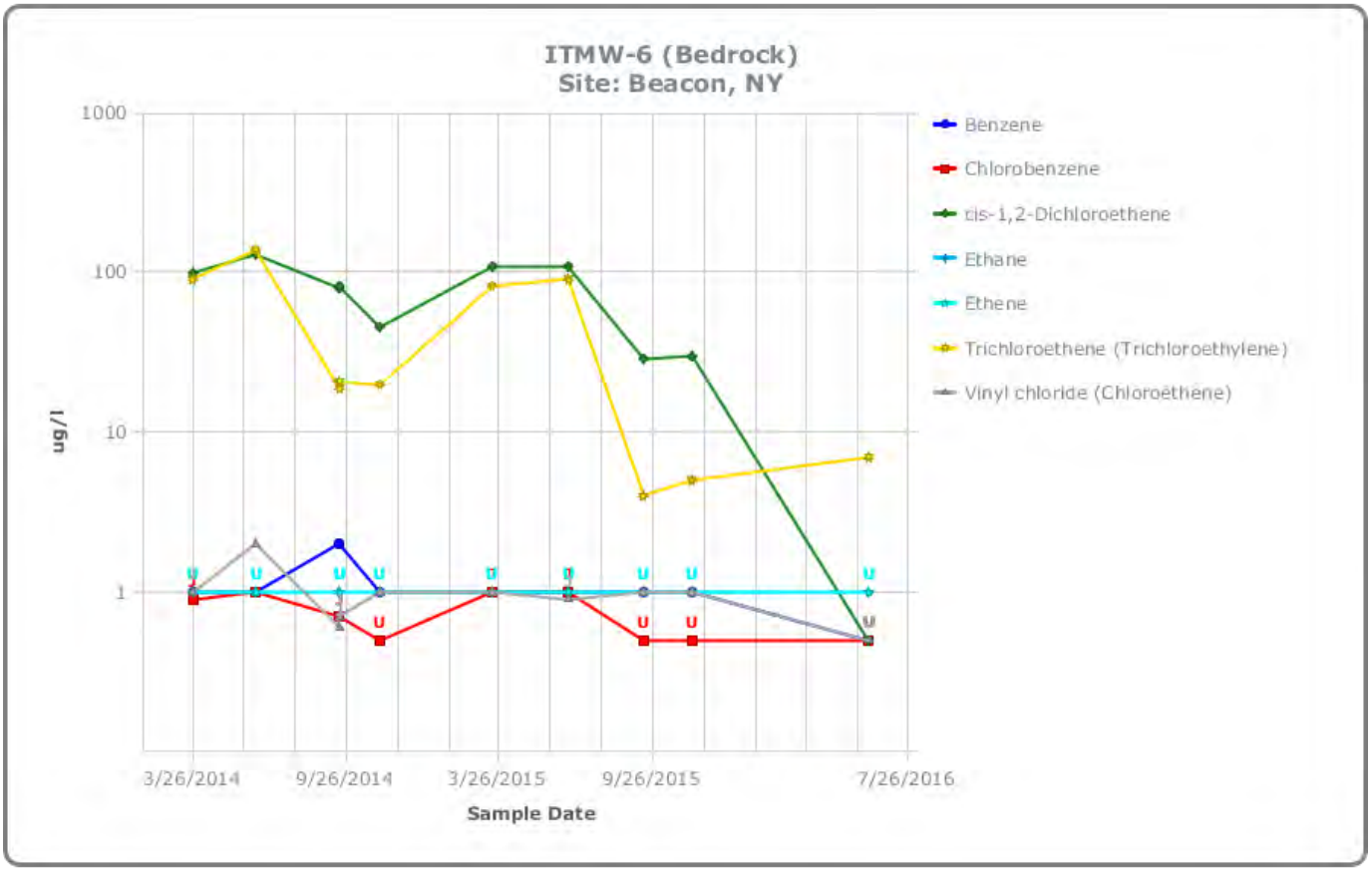
2014 THROUGH 2016 VOC BEDROCK WELLS SUMMARY GRAPHS

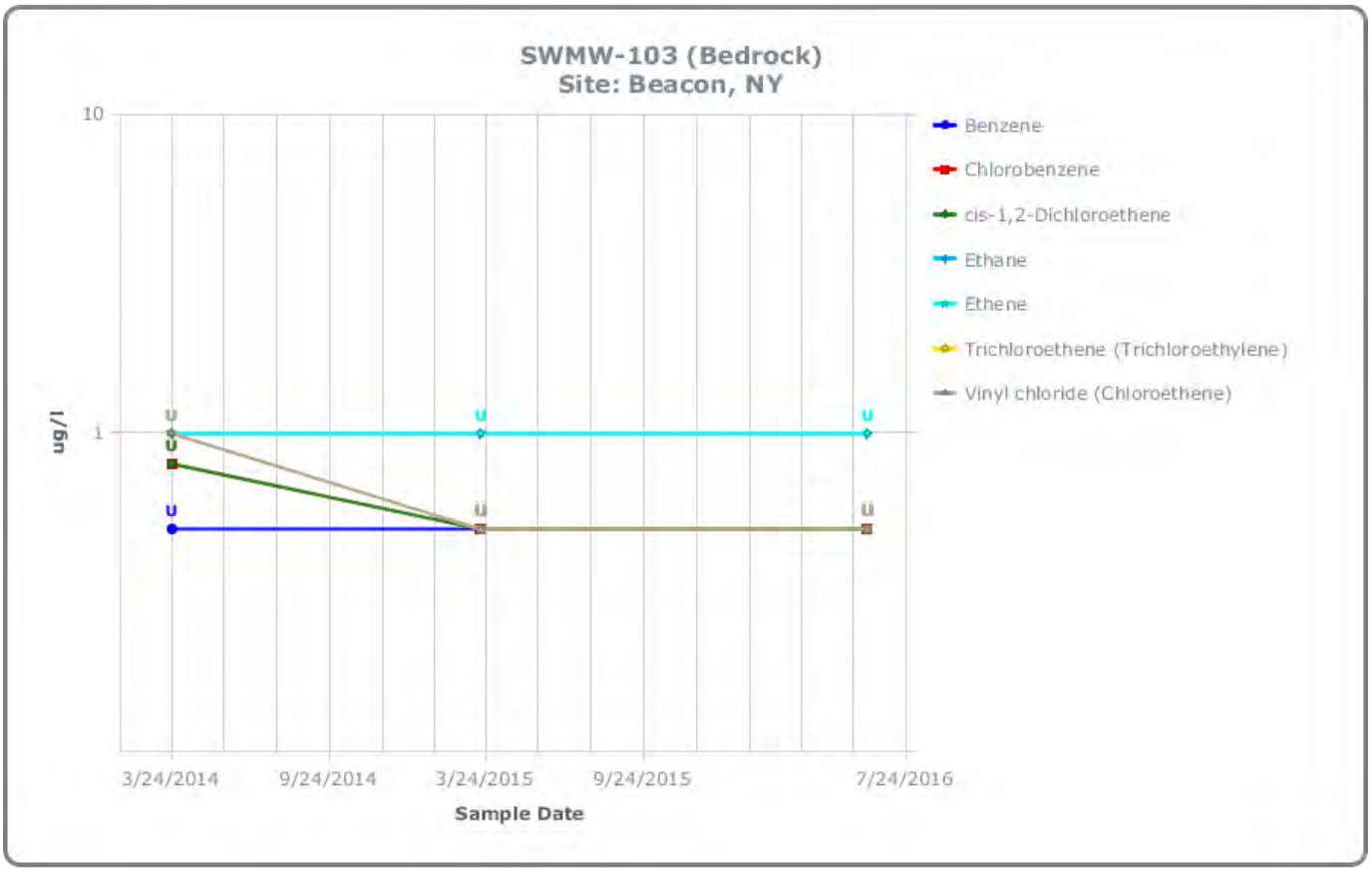

ITMW-13 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

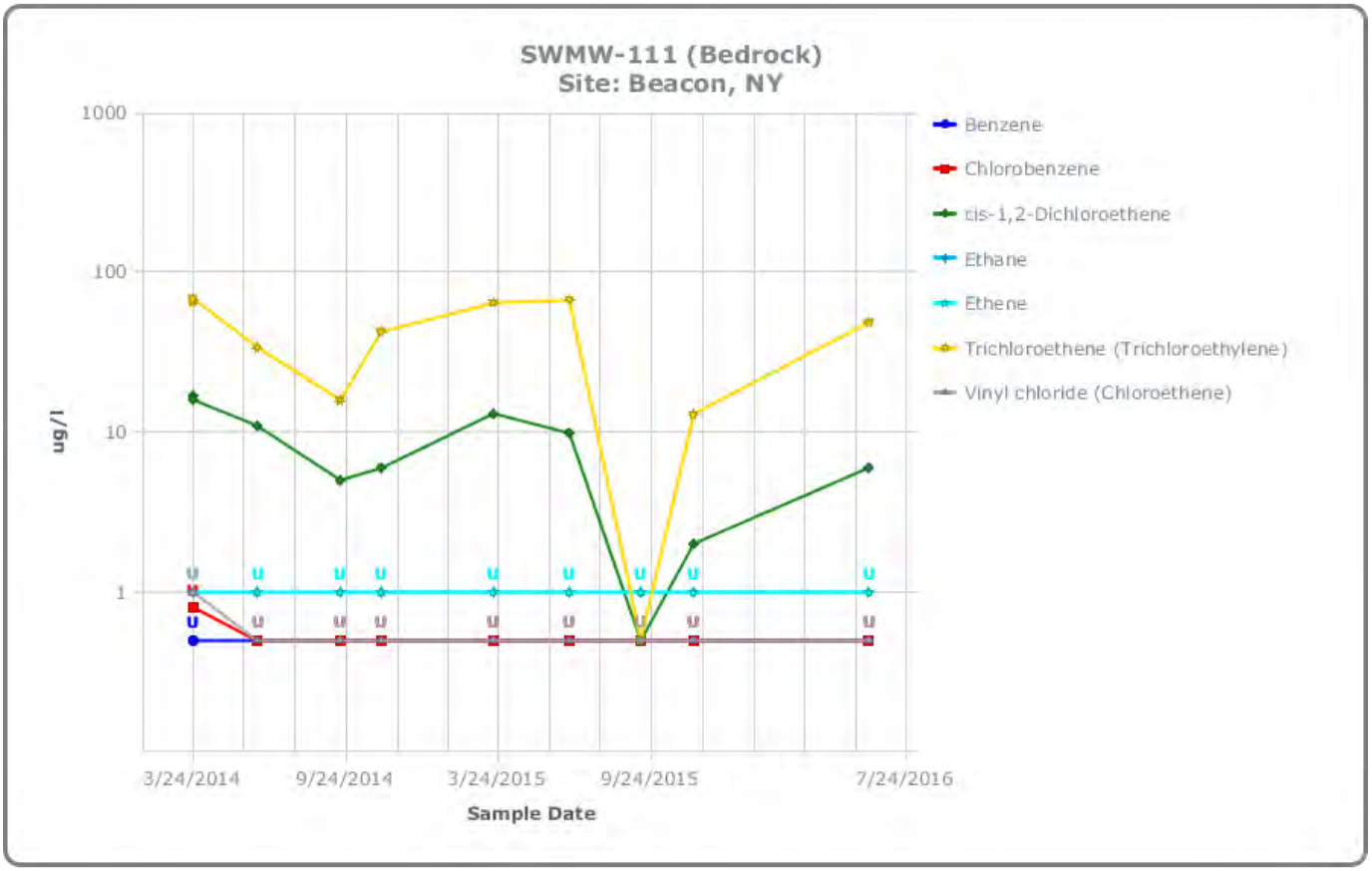

ITMW-14 (Bedrock)
Site: Beacon, NY
1000
100
10
1
ug/l
6/12/2014
12/11/2014
6/12/2015
12/11/2015
6/12/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

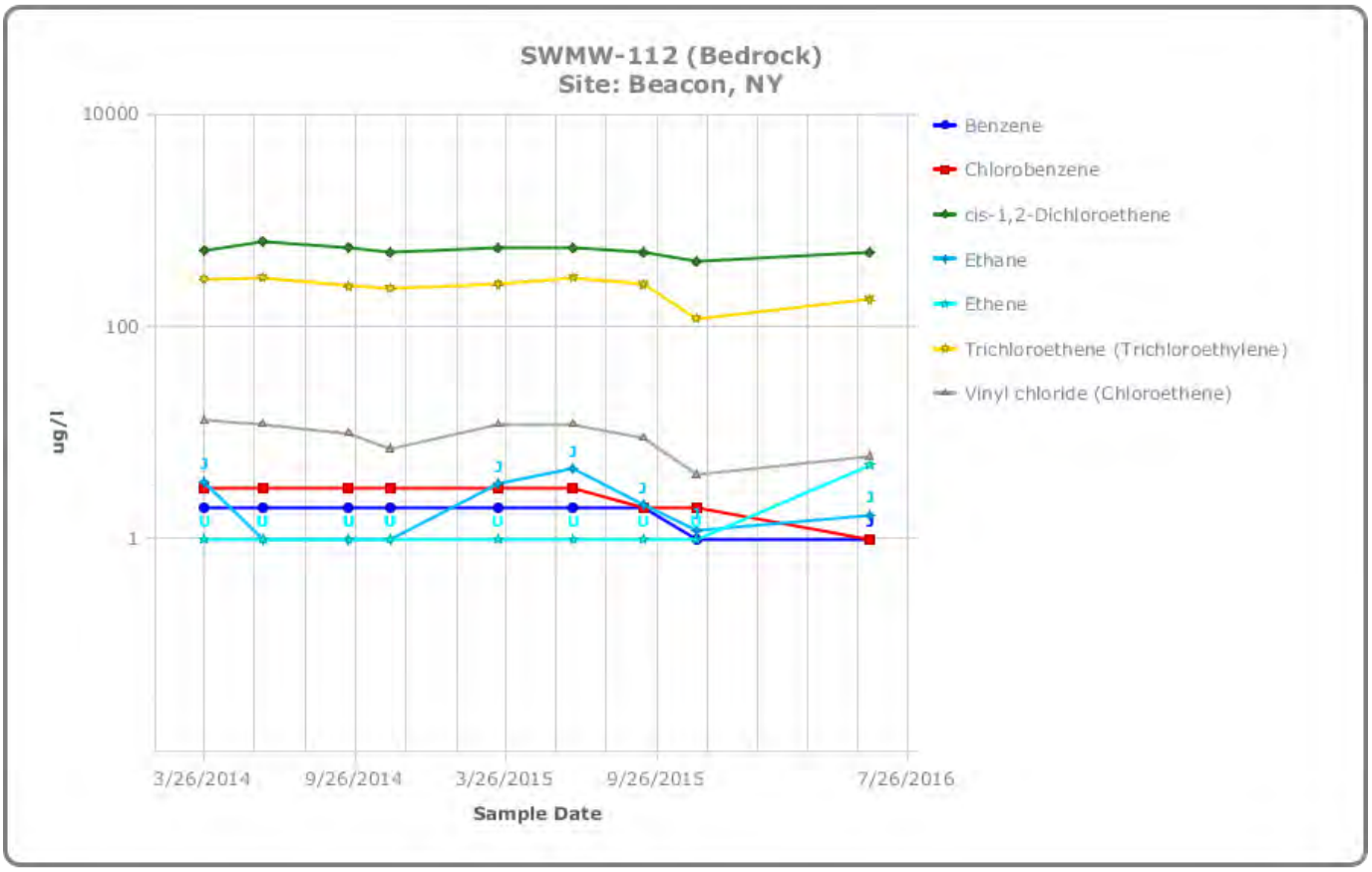

ITMW-30 (Bedrock)
Site: Beacon, NY
10
1
ug/l
J
U
U
U
U
U
U
3/19/2014
9/19/2014
3/19/2015
9/19/2015
7/19/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

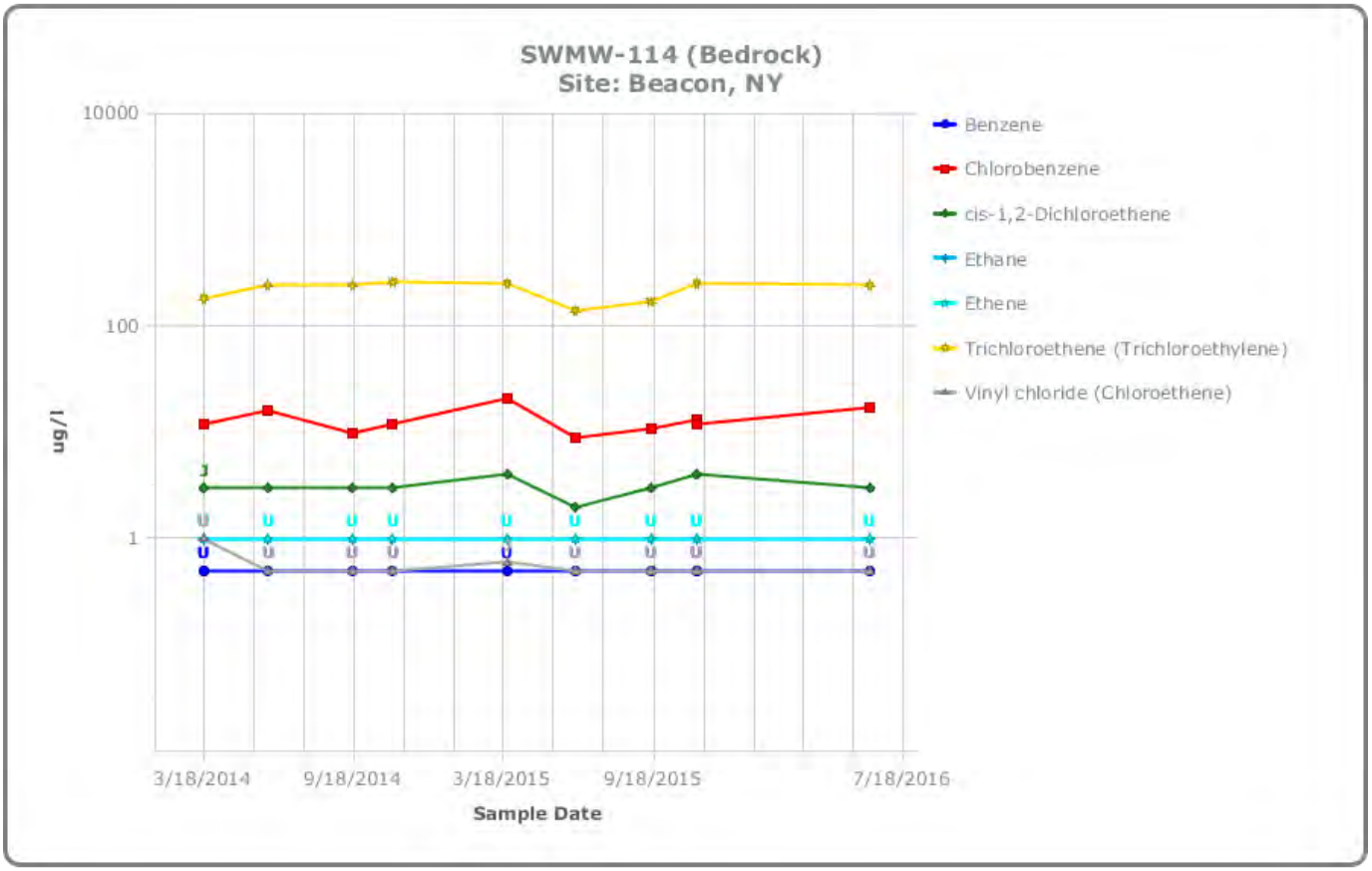

ITMW-31 (Bedrock)
Site: Beacon, NY
10
1
ug/l
J
U
U
U
U
U
U
3/19/2014
9/19/2014
3/19/2015
9/19/2015
7/19/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

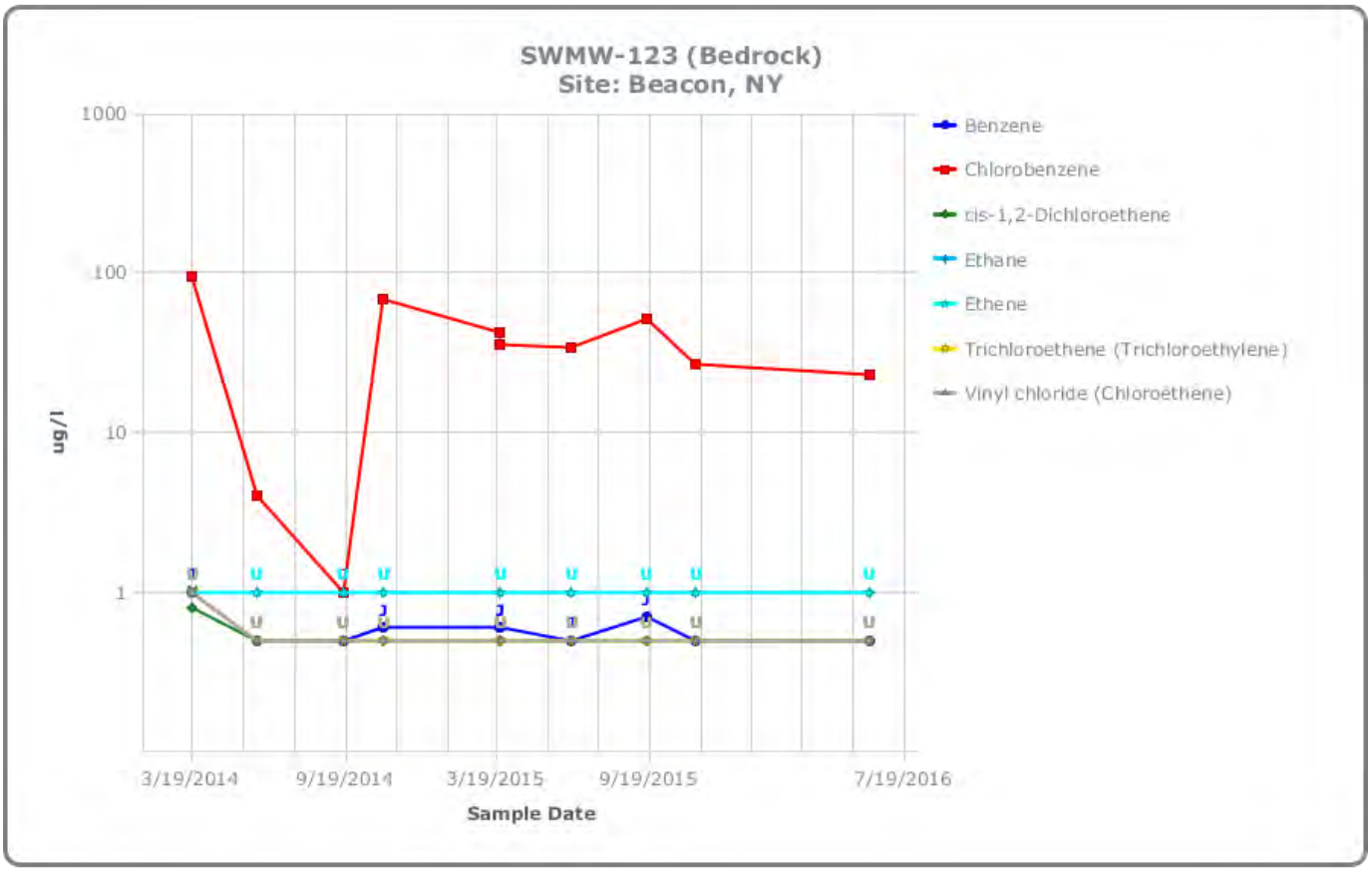

ITMW-6 (Bedrock)
Site: Beacon, NY
1000
100
10
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date

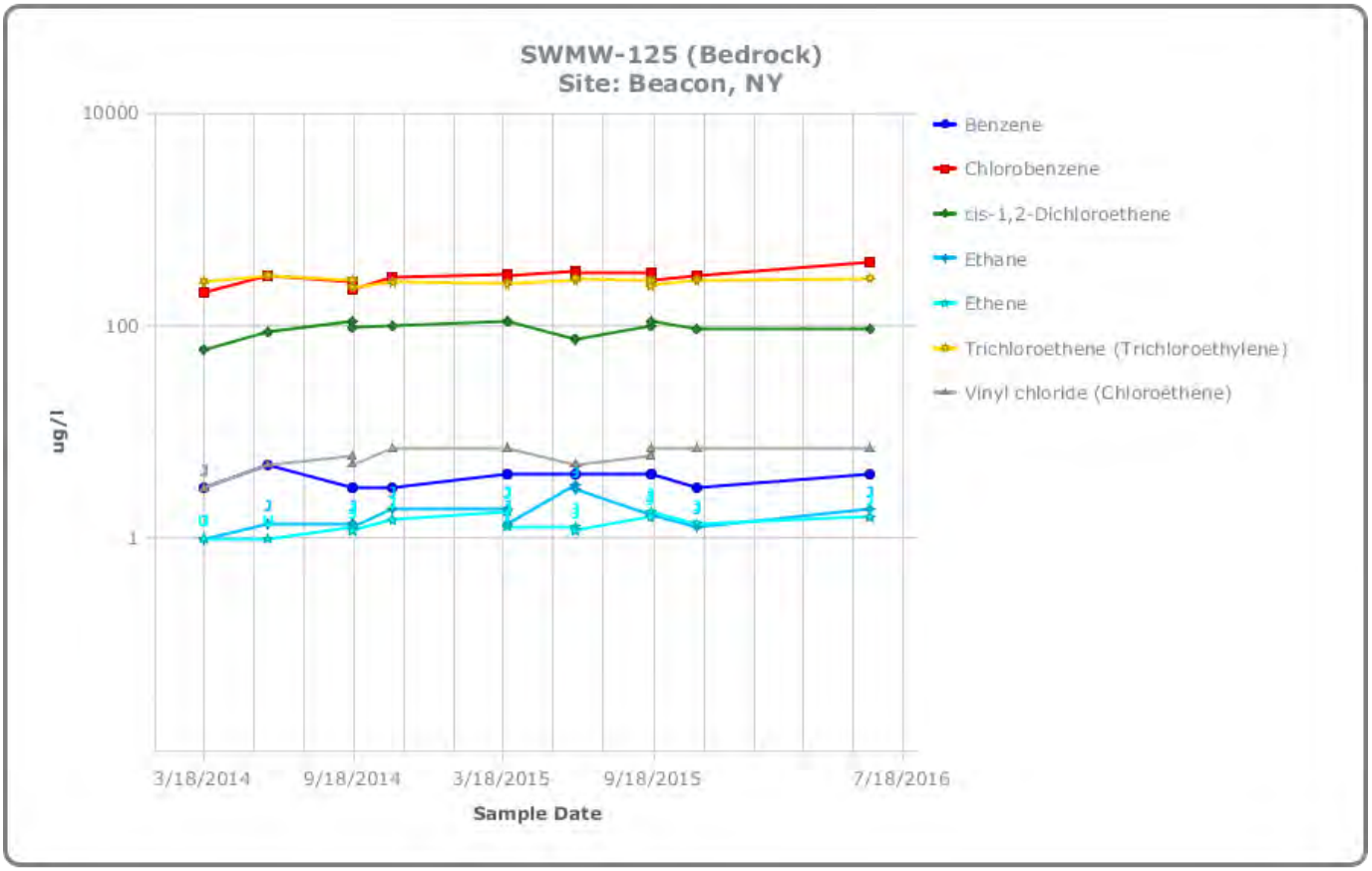

SWMW-103 (Bedrock)
Site: Beacon, NY
10
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date

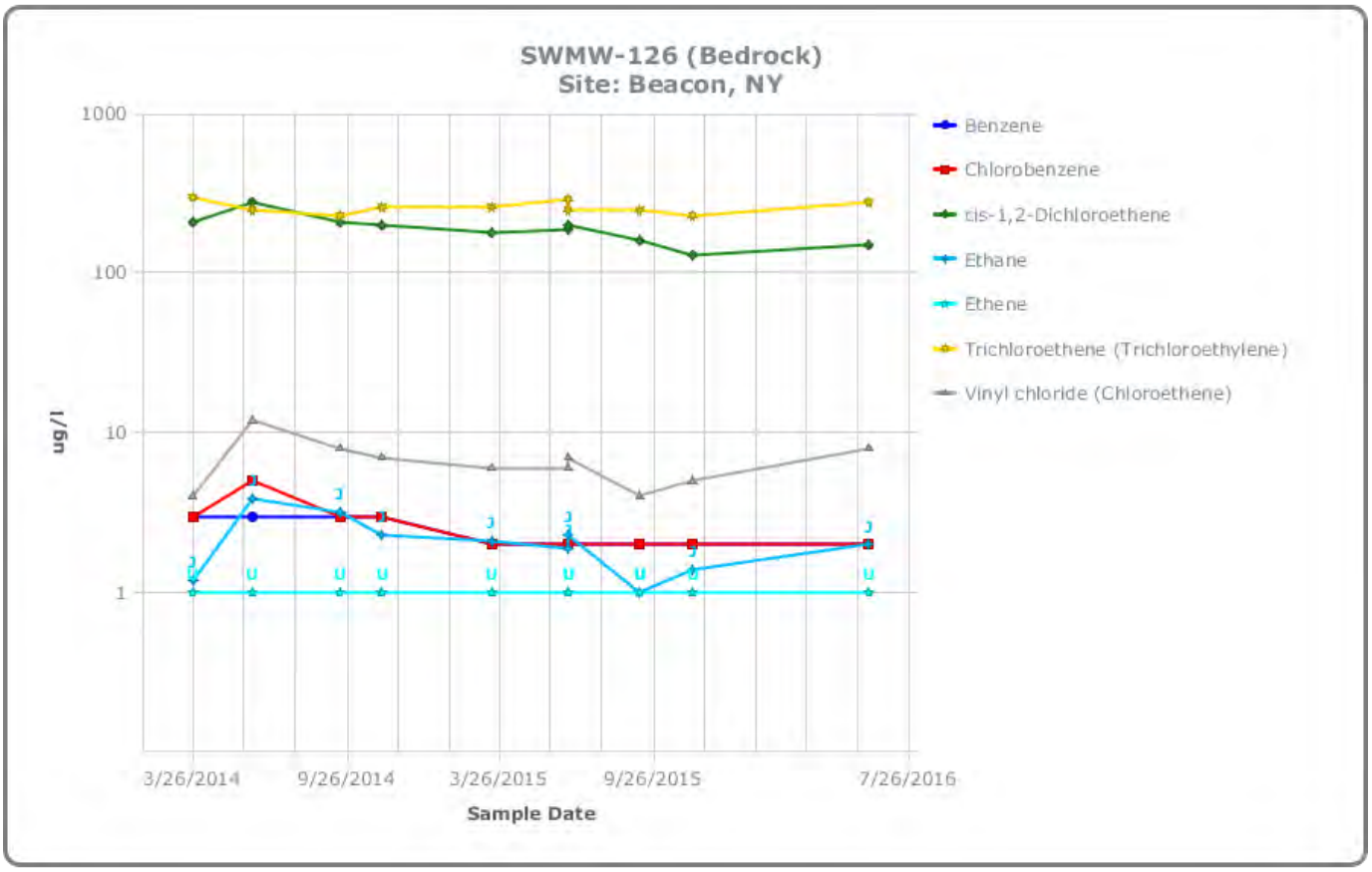

SWMW-111 (Bedrock)
Site: Beacon, NY
1000
100
10
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date


SWMW-112 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date

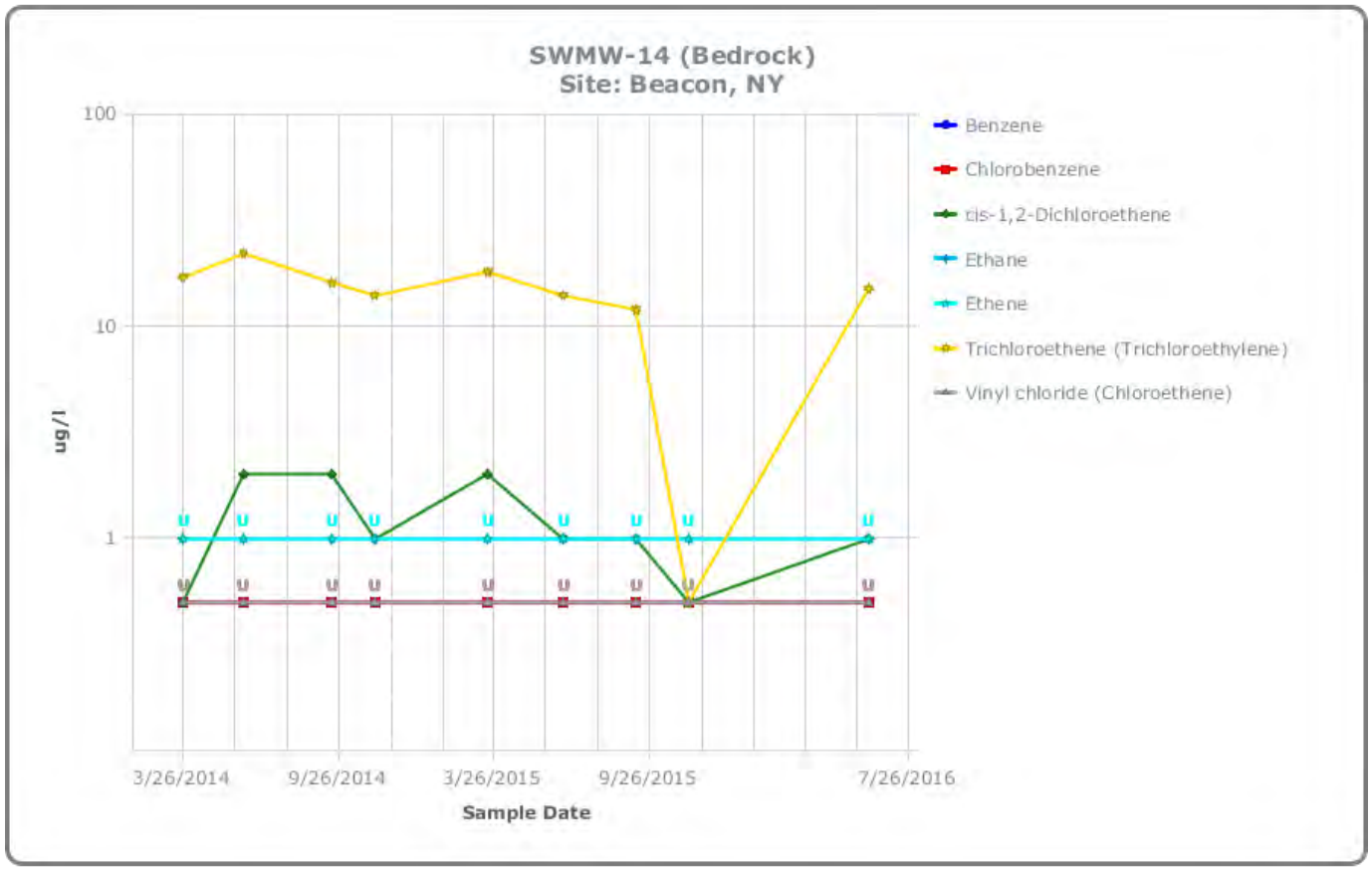

SWMW-114 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

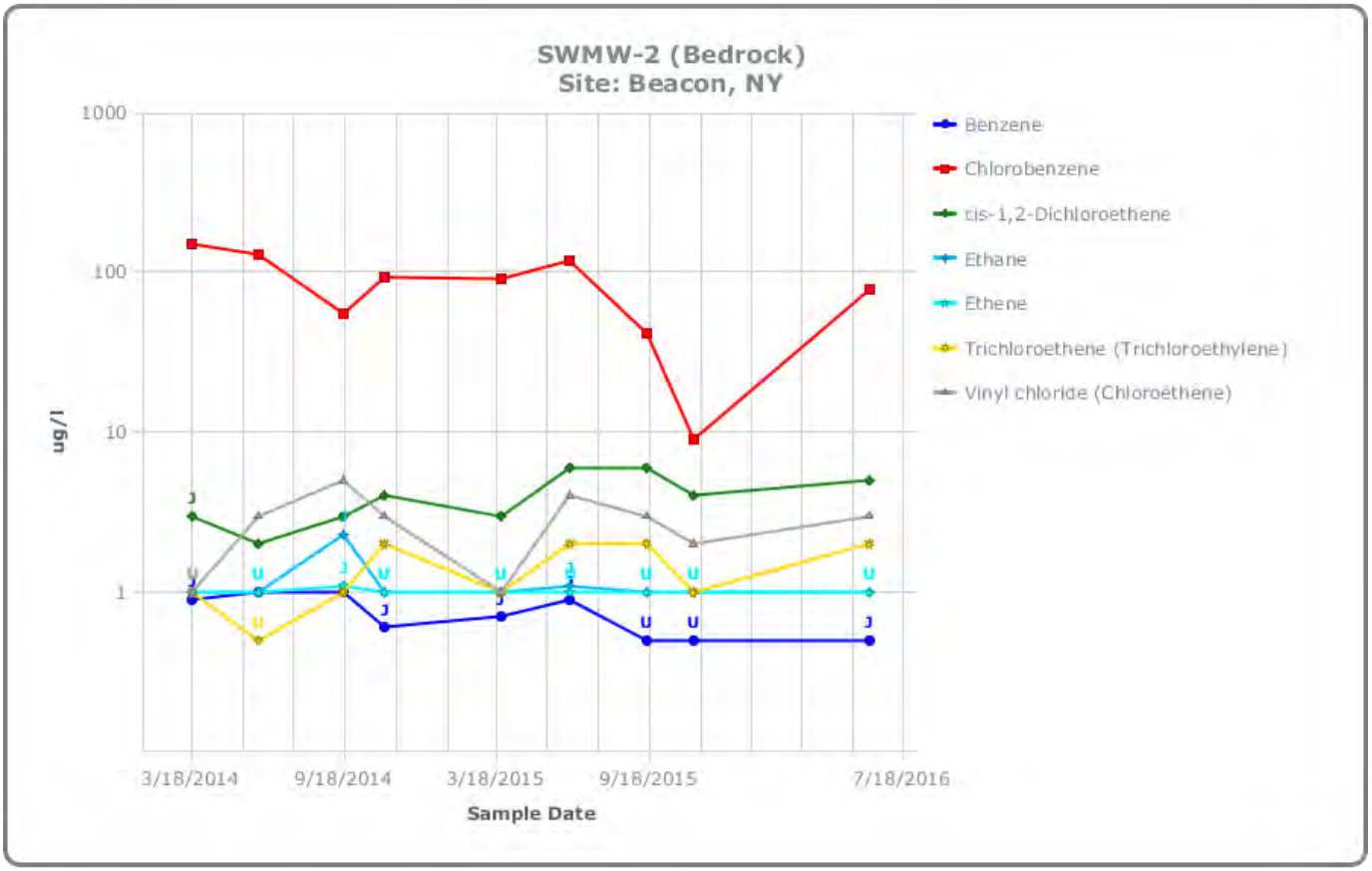

SWMW-123 (Bedrock)
Site: Beacon, NY
1000
100
10
1
ug/l
3/19/2014
9/19/2014
3/19/2015
9/19/2015
7/19/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

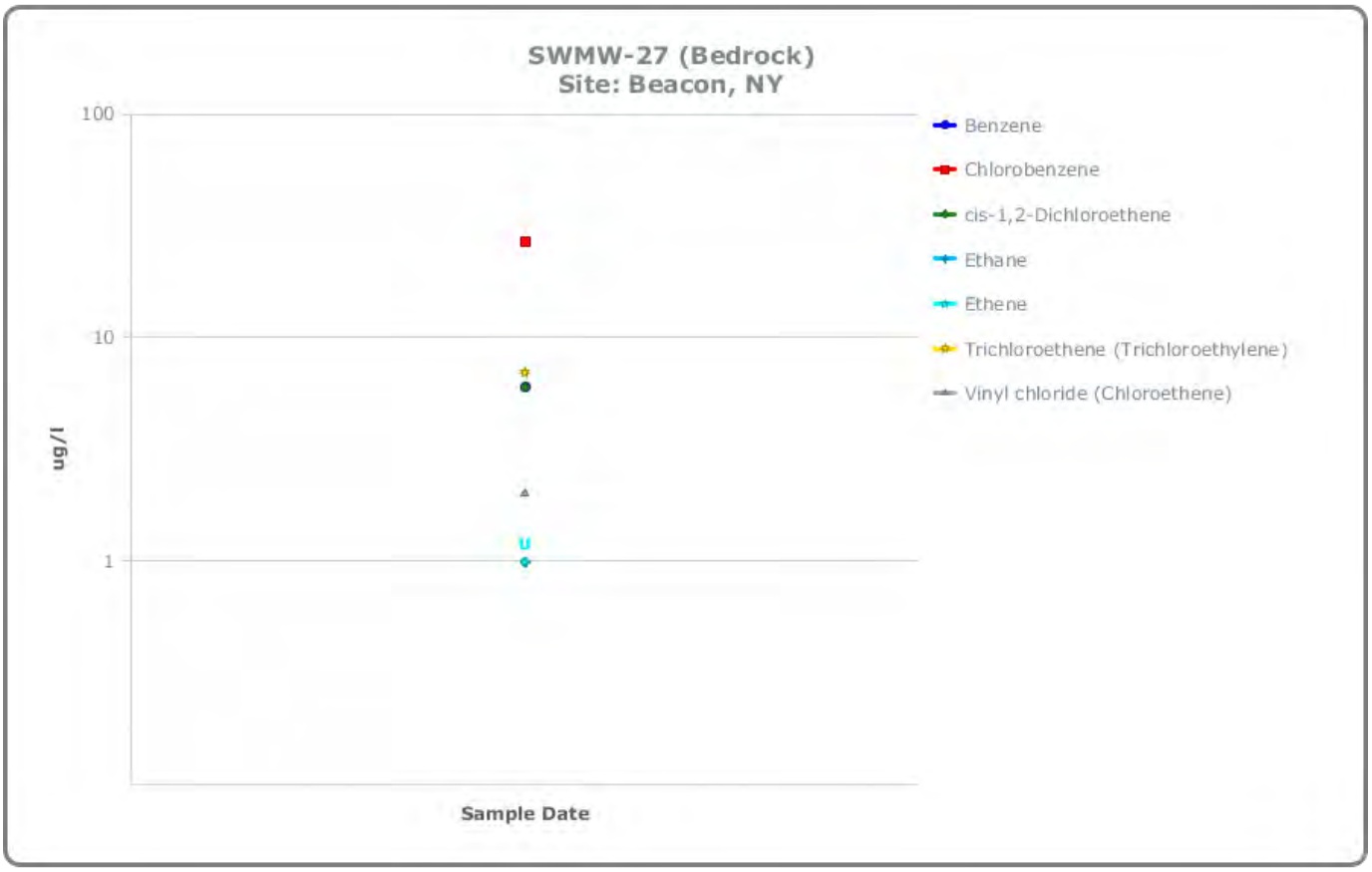

SWMW-125 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

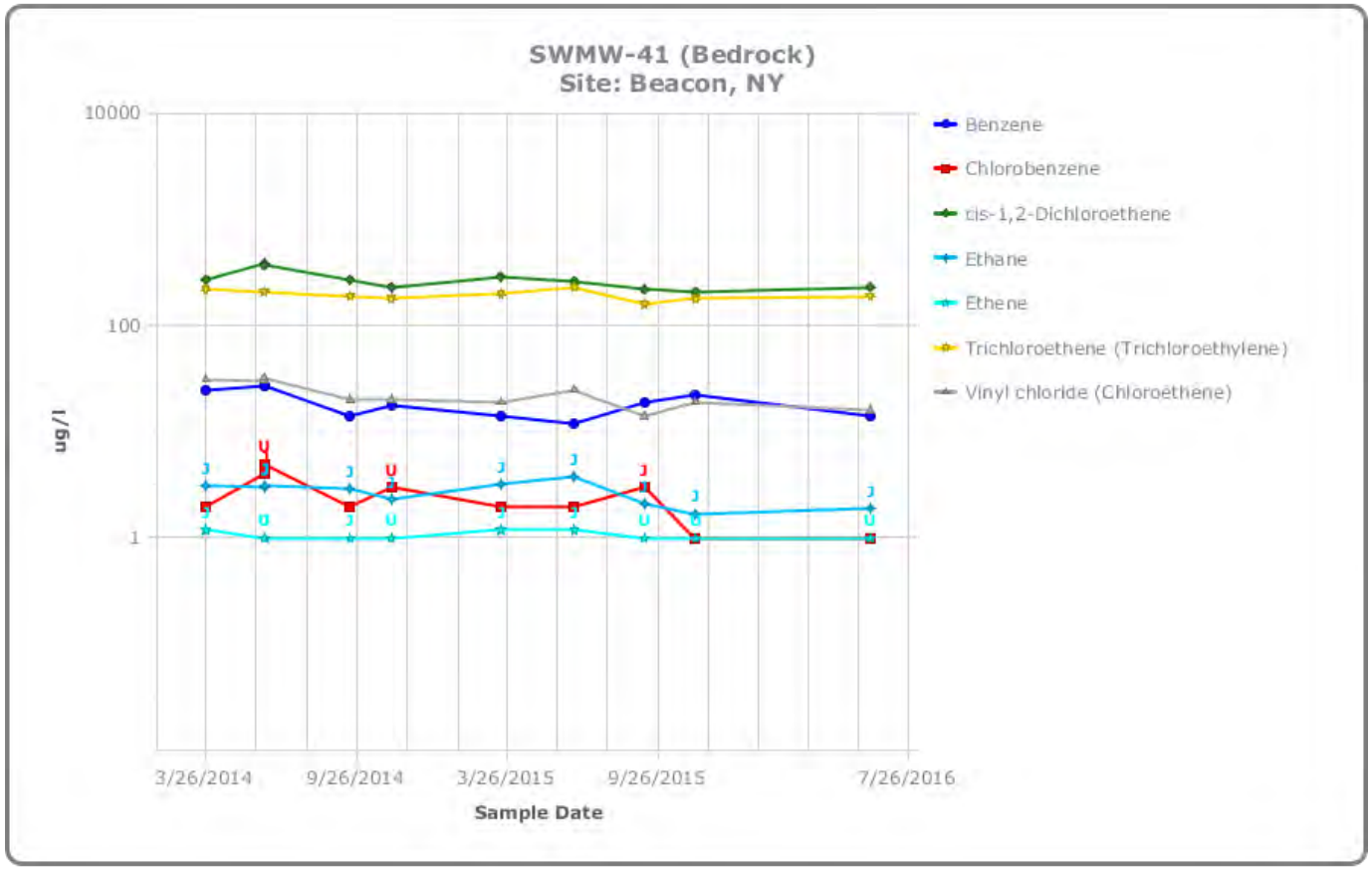

SWMW-126 (Bedrock)
Site: Beacon, NY
1000
100
10
1
ug/l
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

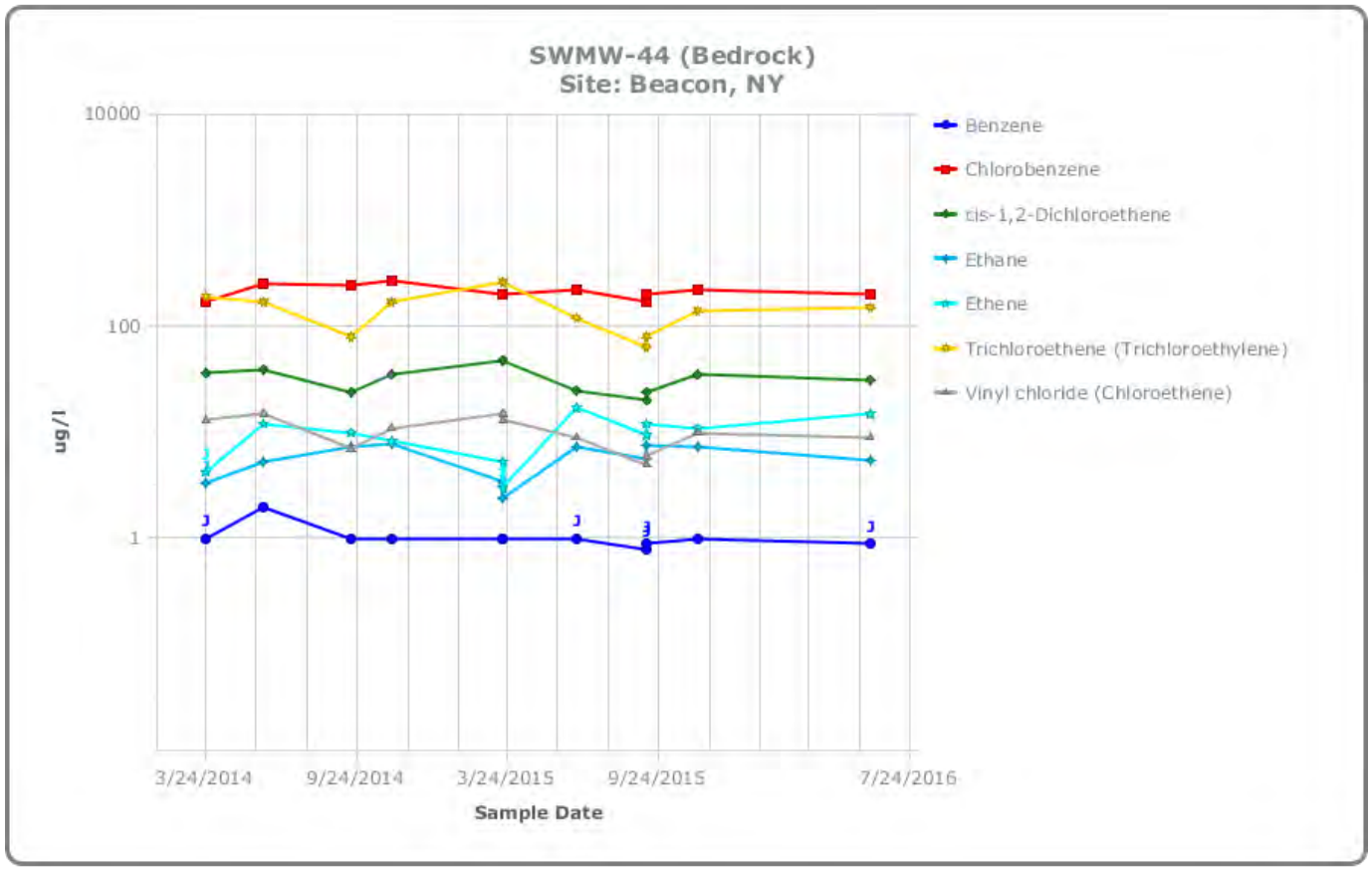

SWMW-13 (Bedrock)
Site: Beacon, NY
100
10
1
ug/l
J
U
U
U
U
U
U
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

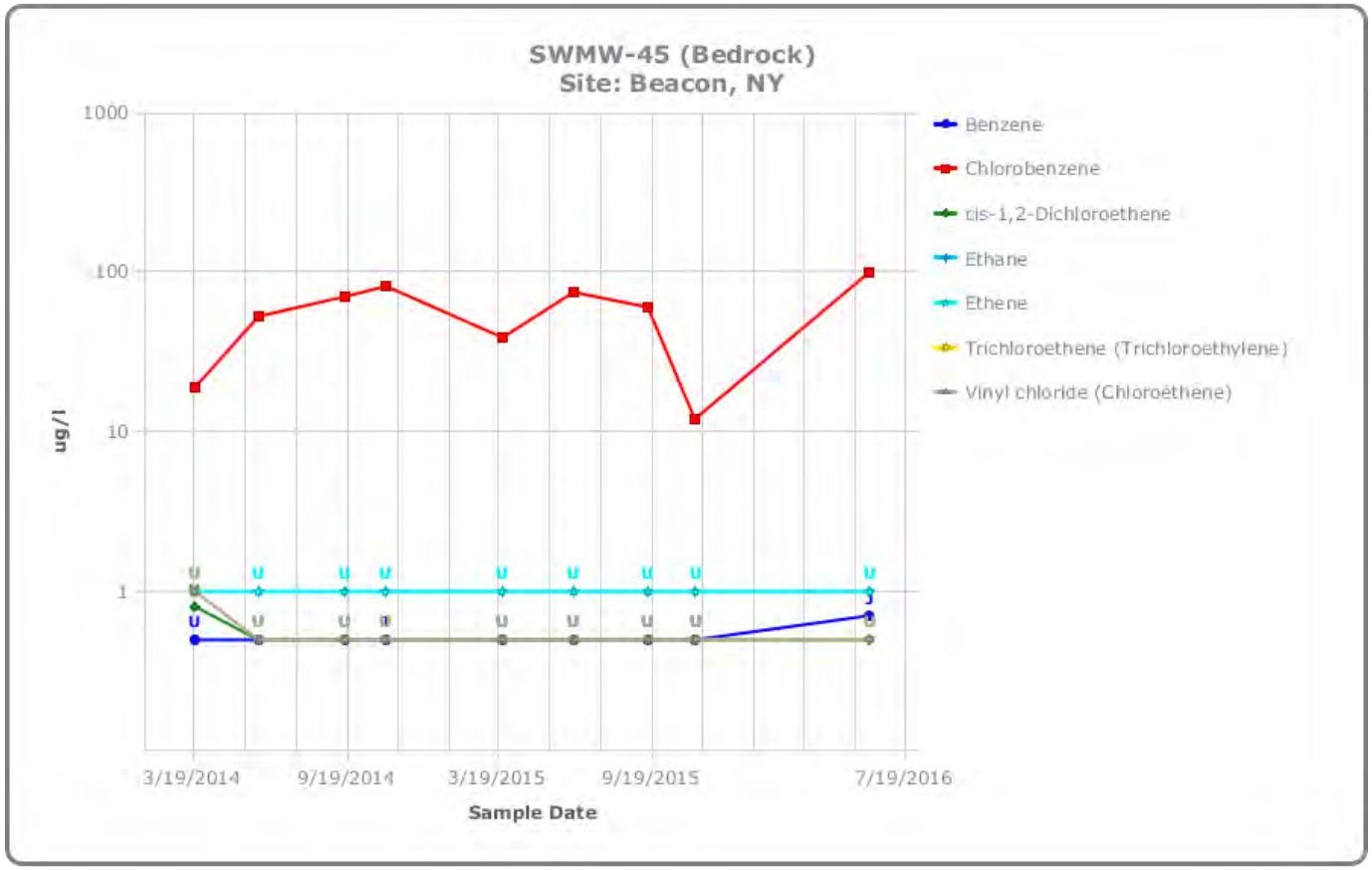

SWMW-14 (Bedrock)
Site: Beacon, NY
100
10
1
ug/l
U
U
U
U
U
U
U
U
U
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

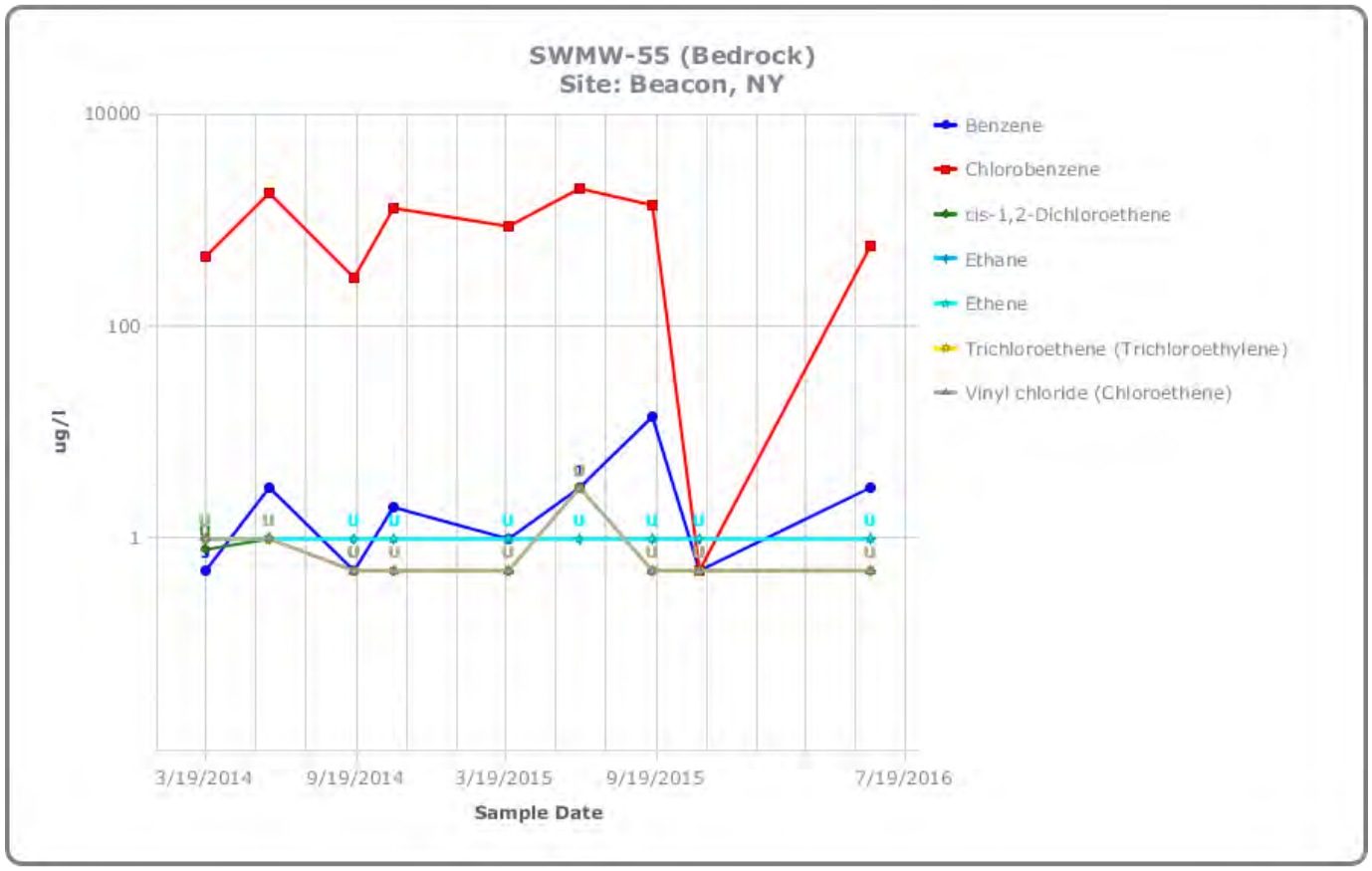

SWMW-2 (Bedrock)
Site: Beacon, NY
1000
100
10
1
ug/l
3/18/2014
9/18/2014
3/18/2015
9/18/2015
7/18/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

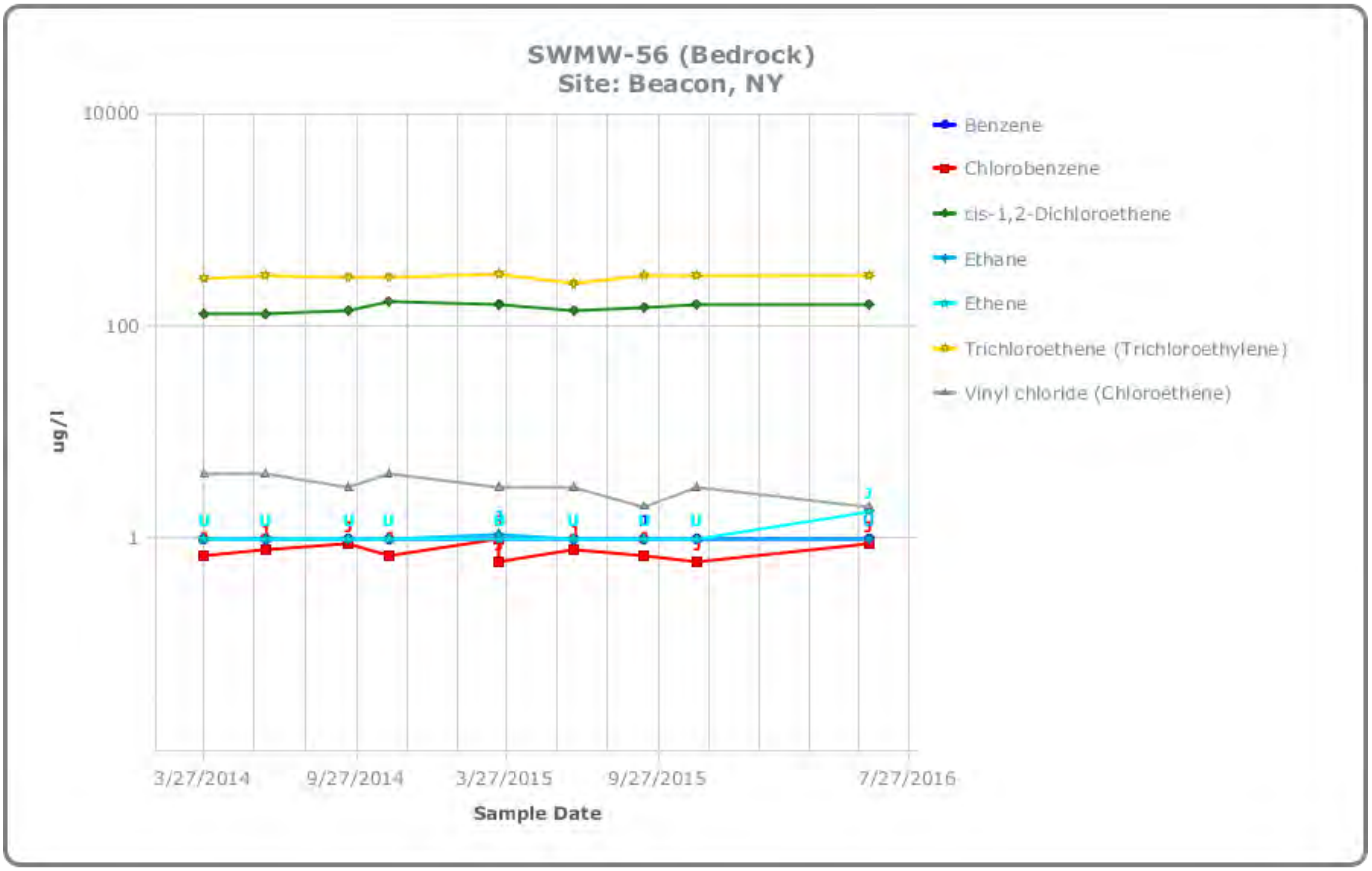

SWMW-27 (Bedrock)
Site: Beacon, NY
100
10
1
ug/l
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

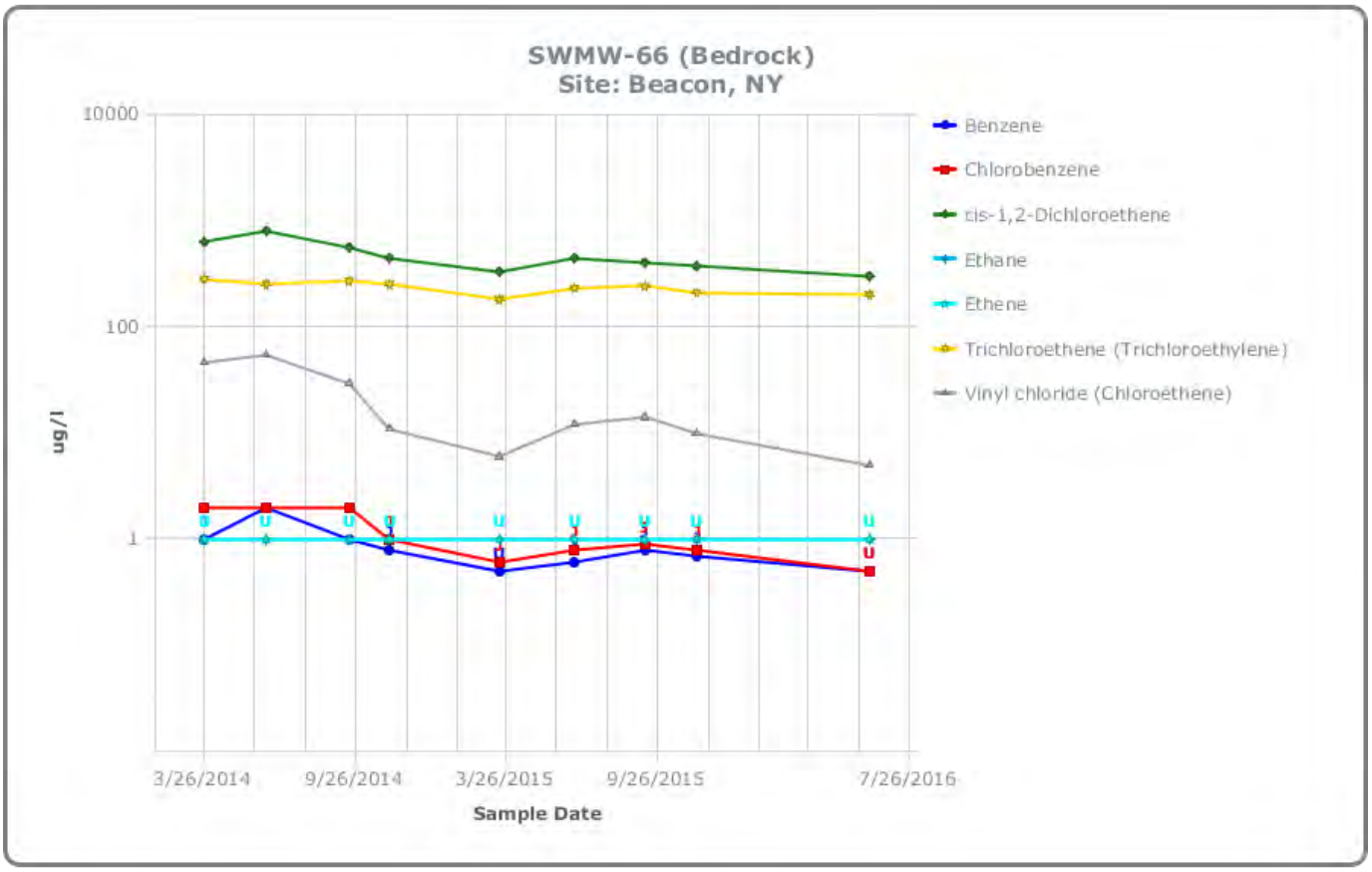

SWMW-41 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date


SWMW-44 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date


SWMW-45 (Bedrock)
Site: Beacon, NY
1000
100
10
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/19/2014
9/19/2014
3/19/2015
9/19/2015
7/19/2016
Sample Date


SWMW-55 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)
3/19/2014
9/19/2014
3/19/2015
9/19/2015
7/19/2016
Sample Date

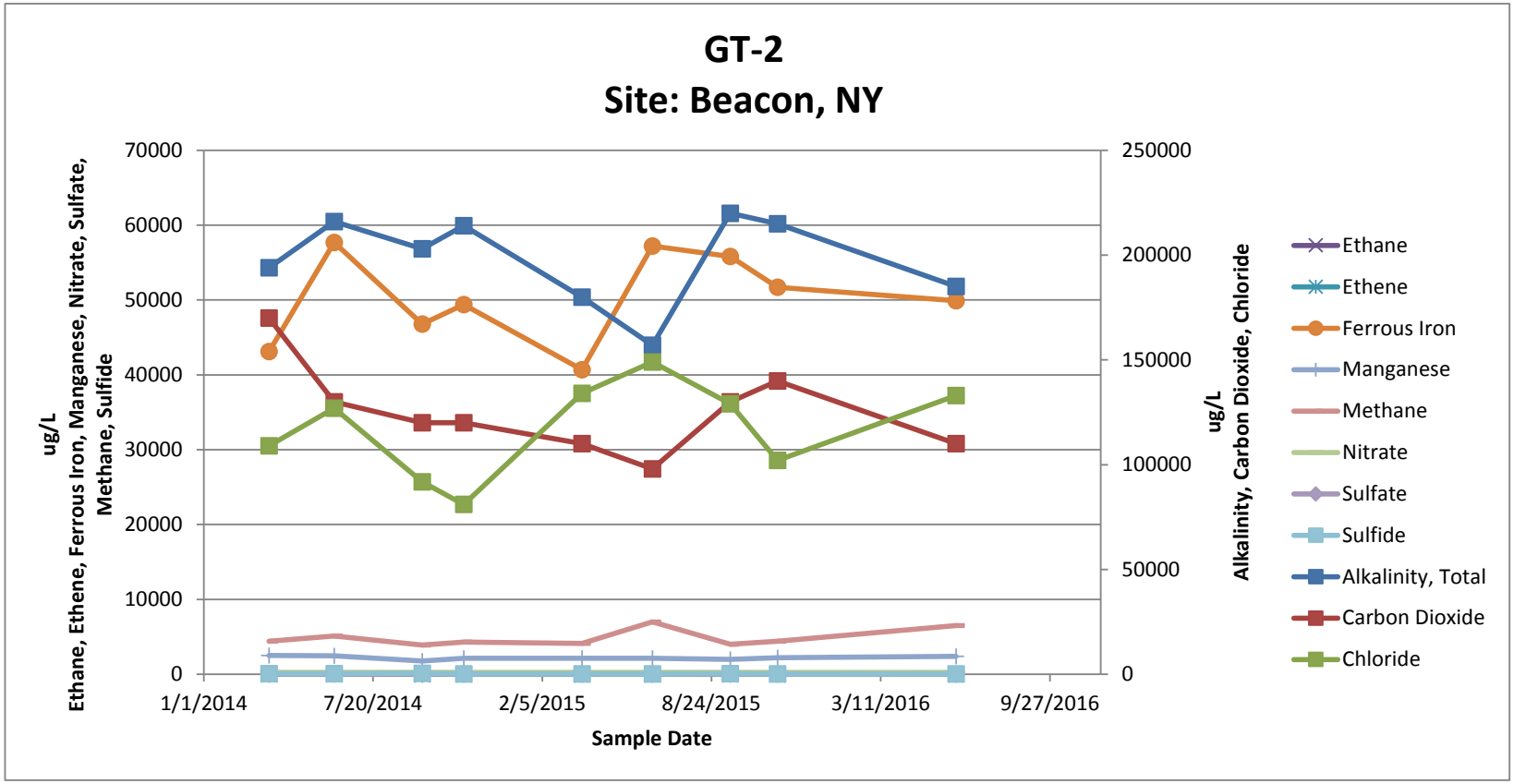

SWMW-56 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
3/27/2014
9/27/2014
3/27/2015
9/27/2015
7/27/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

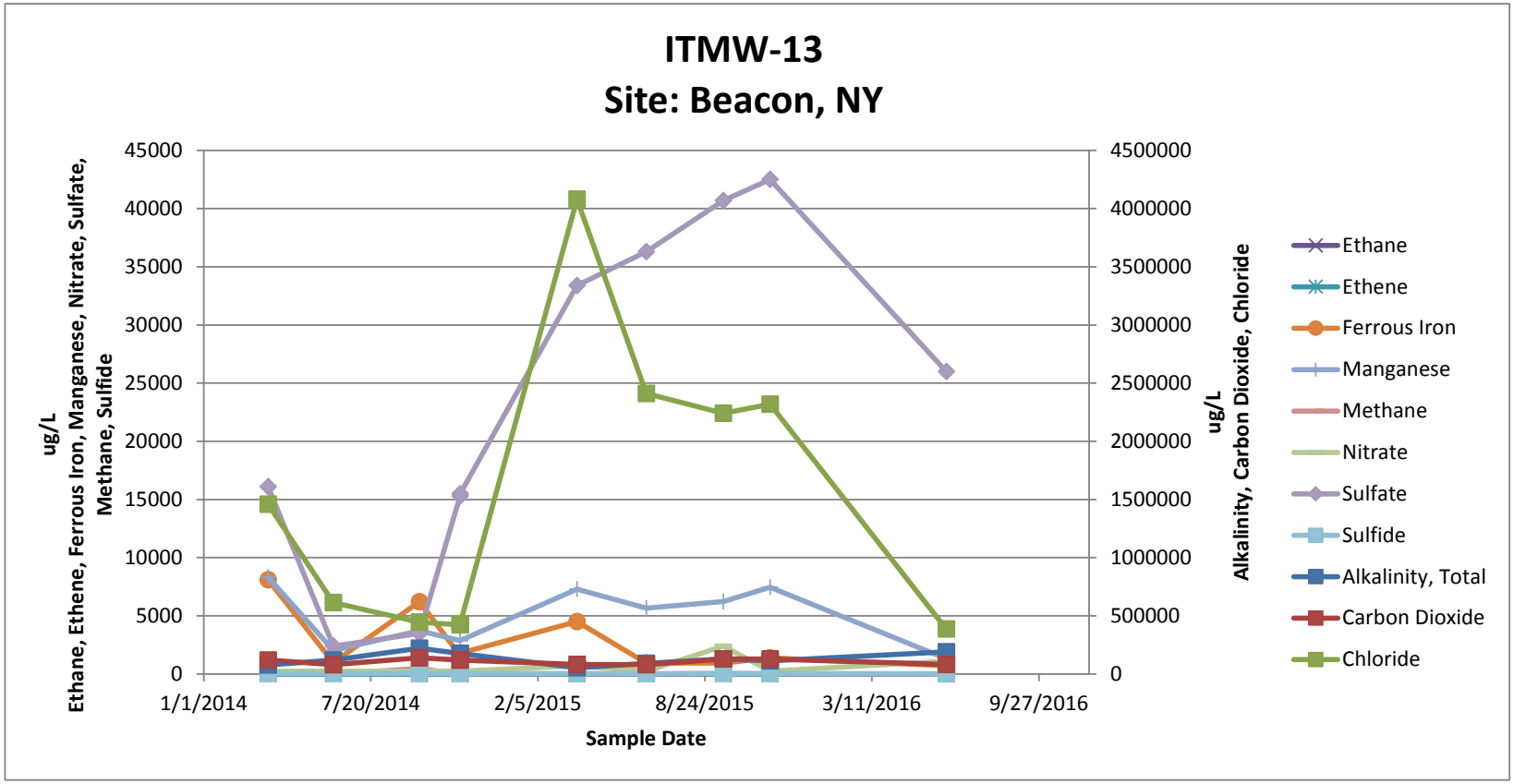

SWMW-66 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
3/26/2014
9/26/2014
3/26/2015
9/26/2015
7/26/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

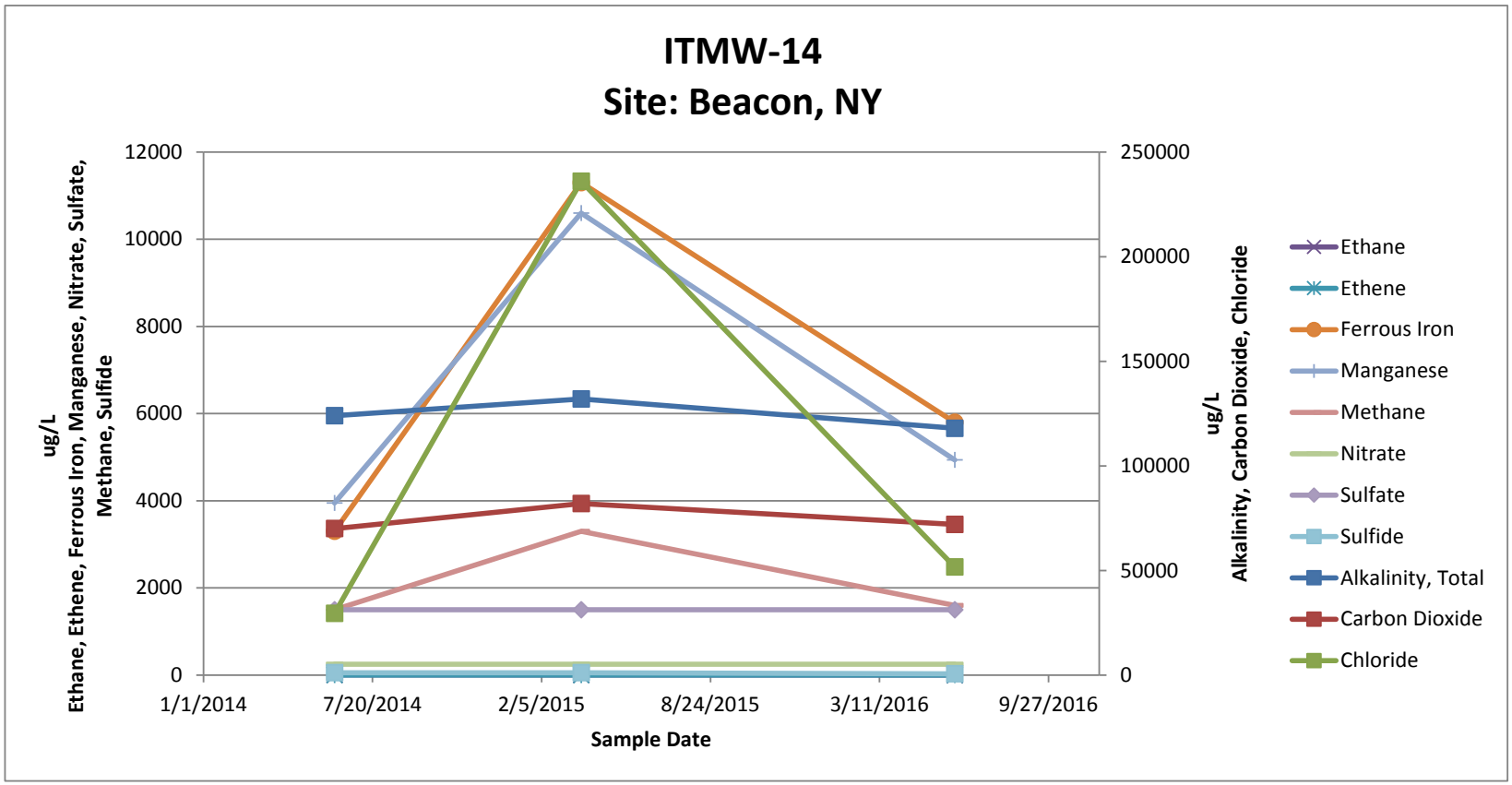

SWMW-68 (Bedrock)
Site: Beacon, NY
10000
100
1
ug/l
3/24/2014
9/24/2014
3/24/2015
9/24/2015
7/24/2016
Sample Date
Benzene
Chlorobenzene
cis-1,2-Dichloroethene
Ethane
Ethene
Trichloroethene (Trichloroethylene)
Vinyl chloride (Chloroethene)

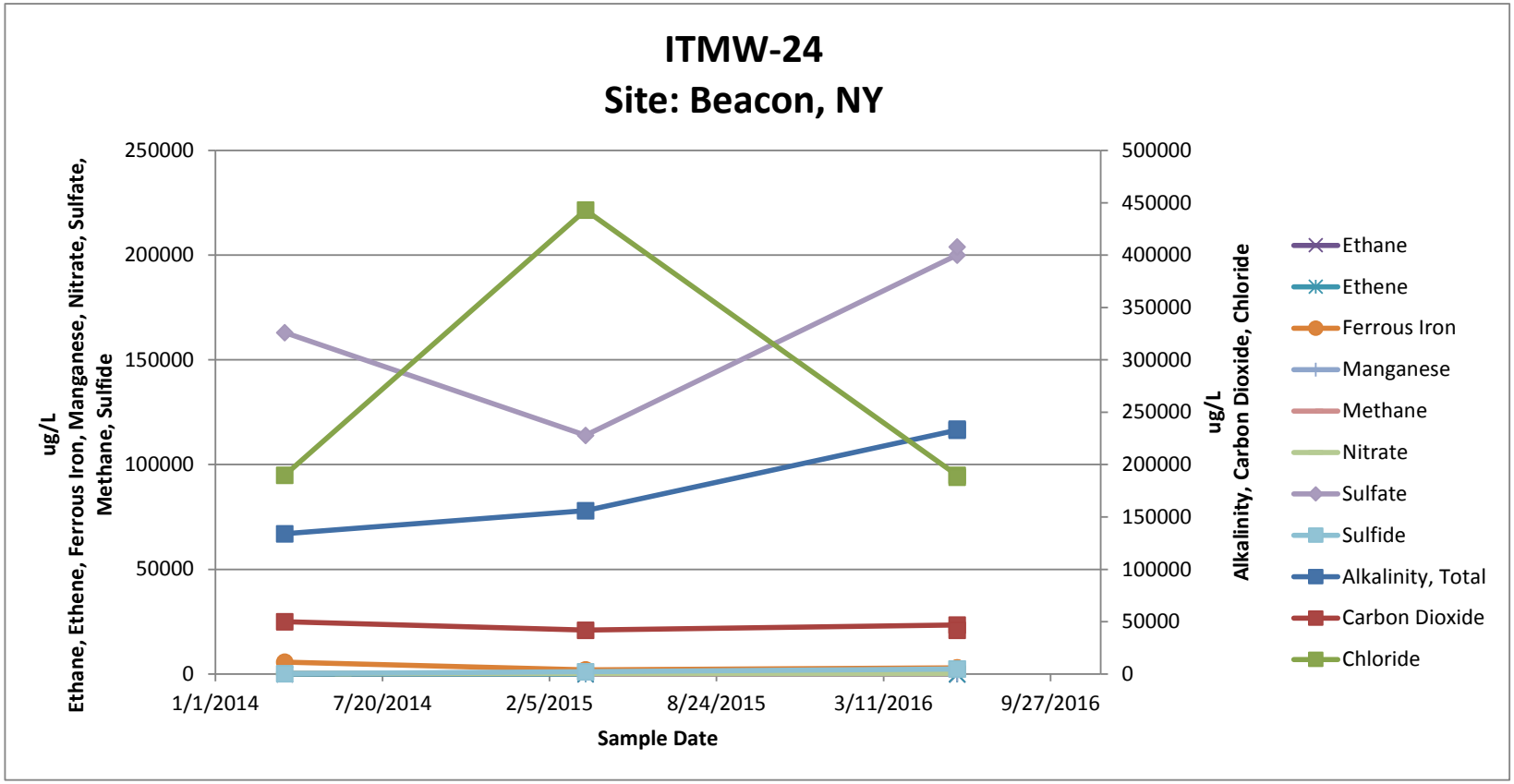
2014 THROUGH 2016 NATURAL ATTENUATION PARAMETERS SUMMARY GRAPHS

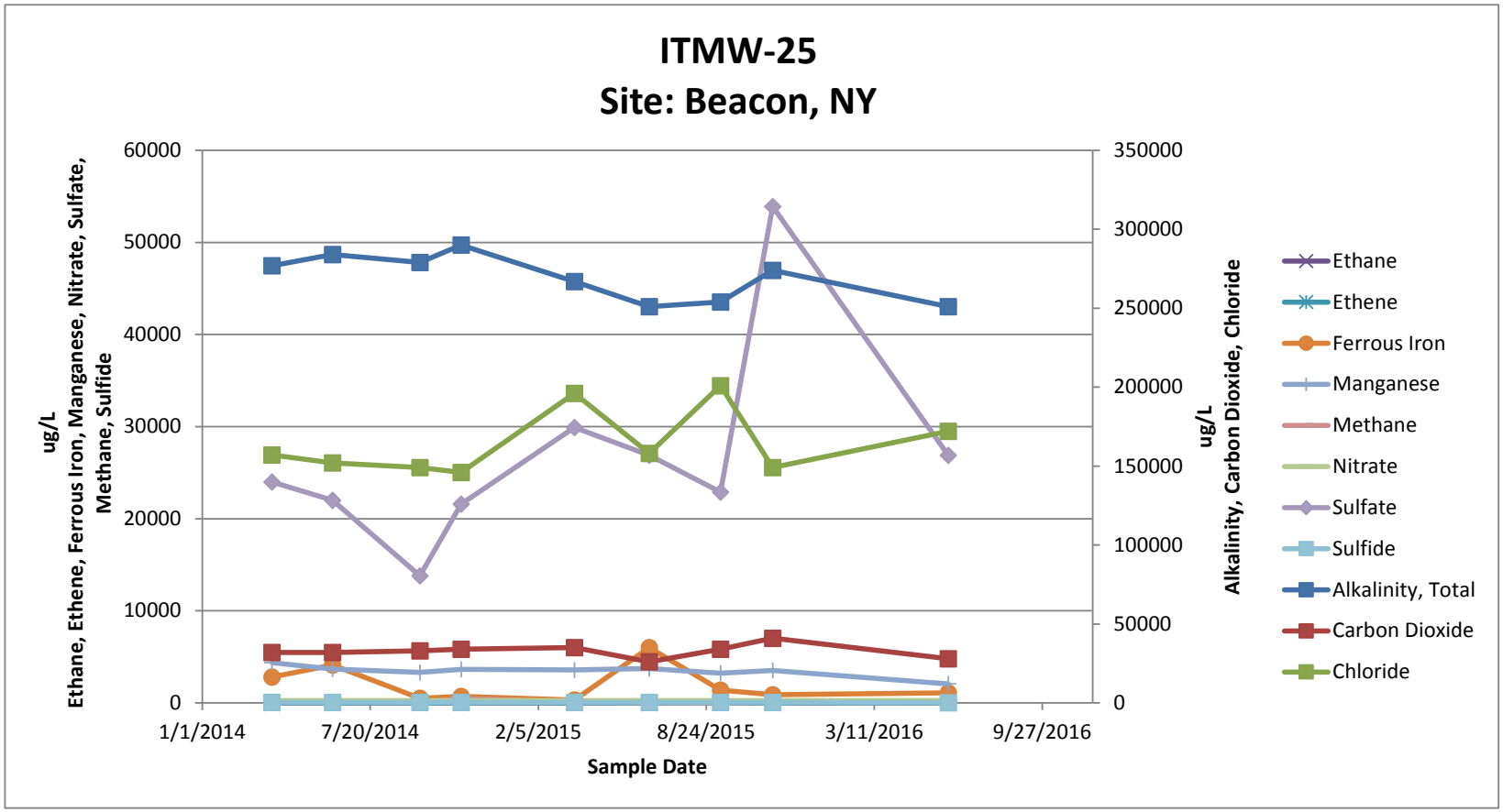
(OVERBURDEN AND BEDROCK WELLS)

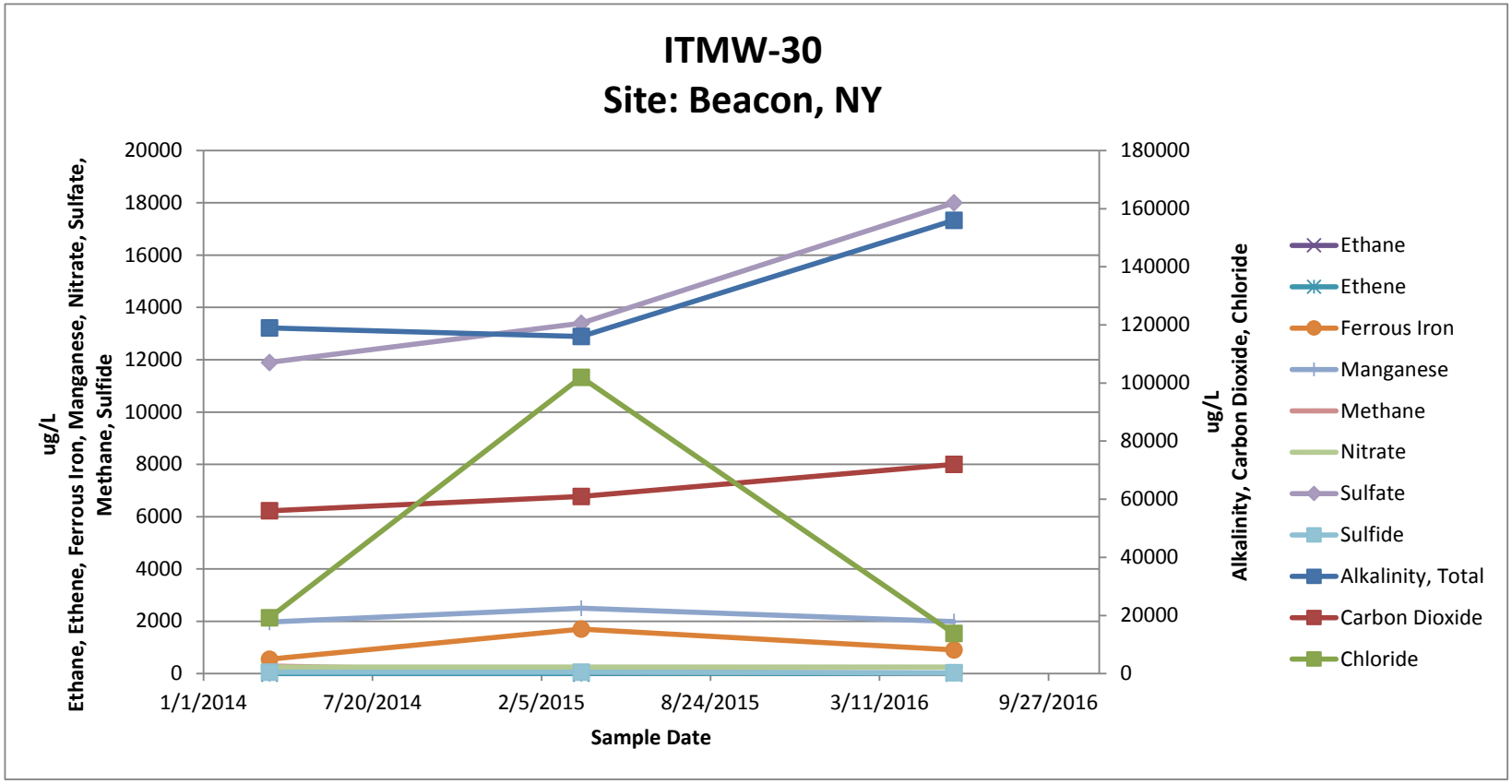

GT-2
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
70000
60000
50000
40000
30000
20000
10000
0
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

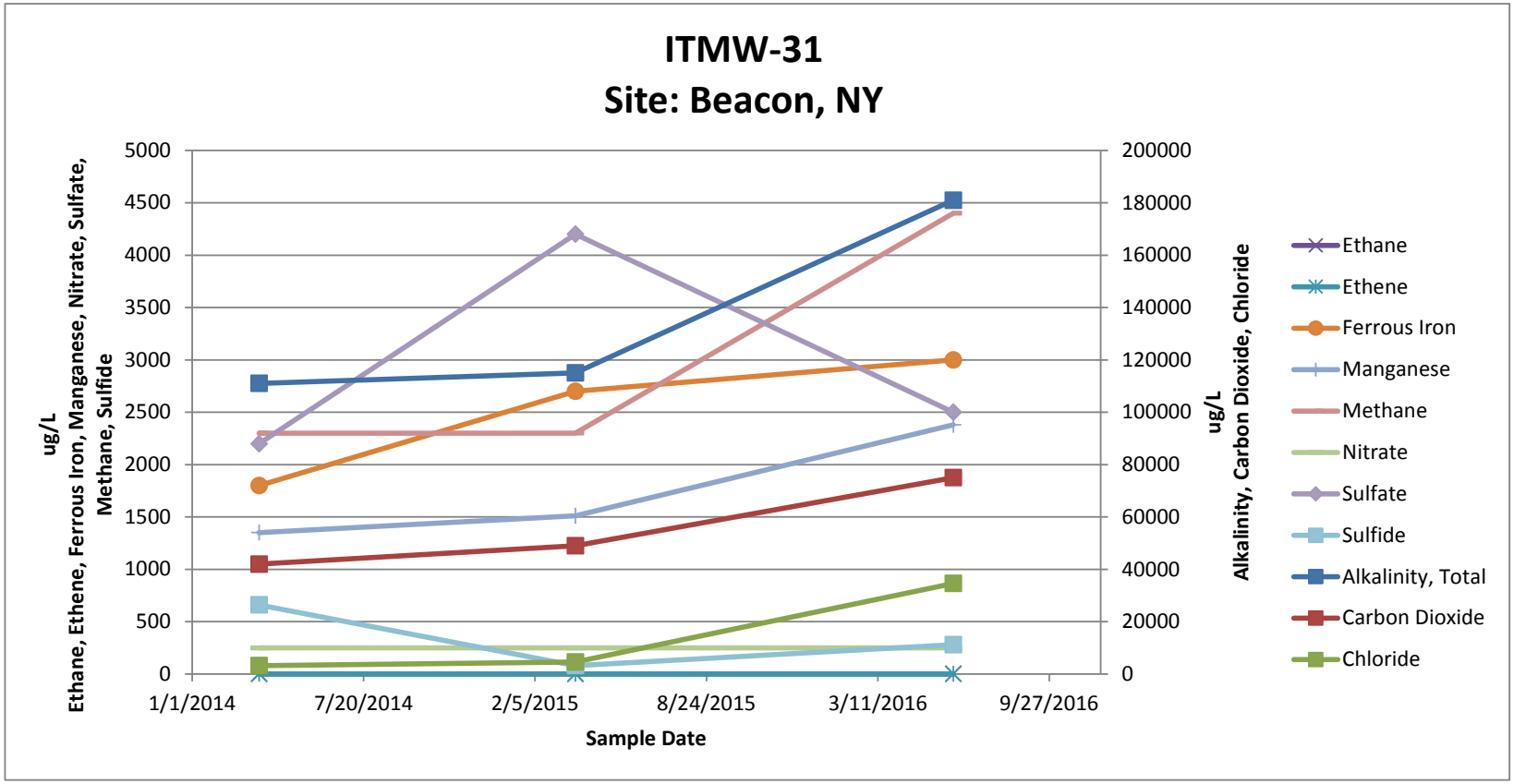

ITMW-13
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

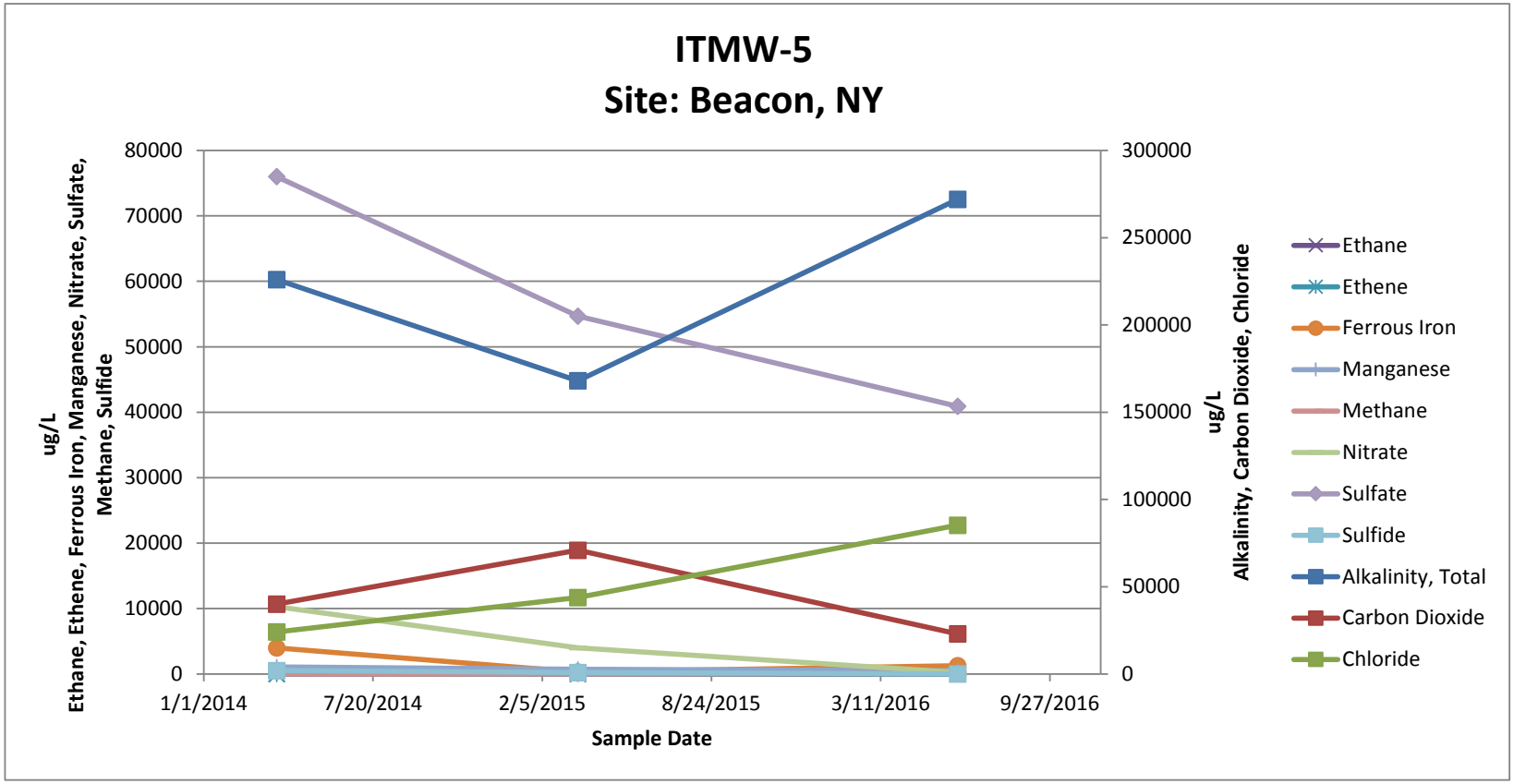

ITMW-14
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
12000
10000
8000
6000
4000
2000
0
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

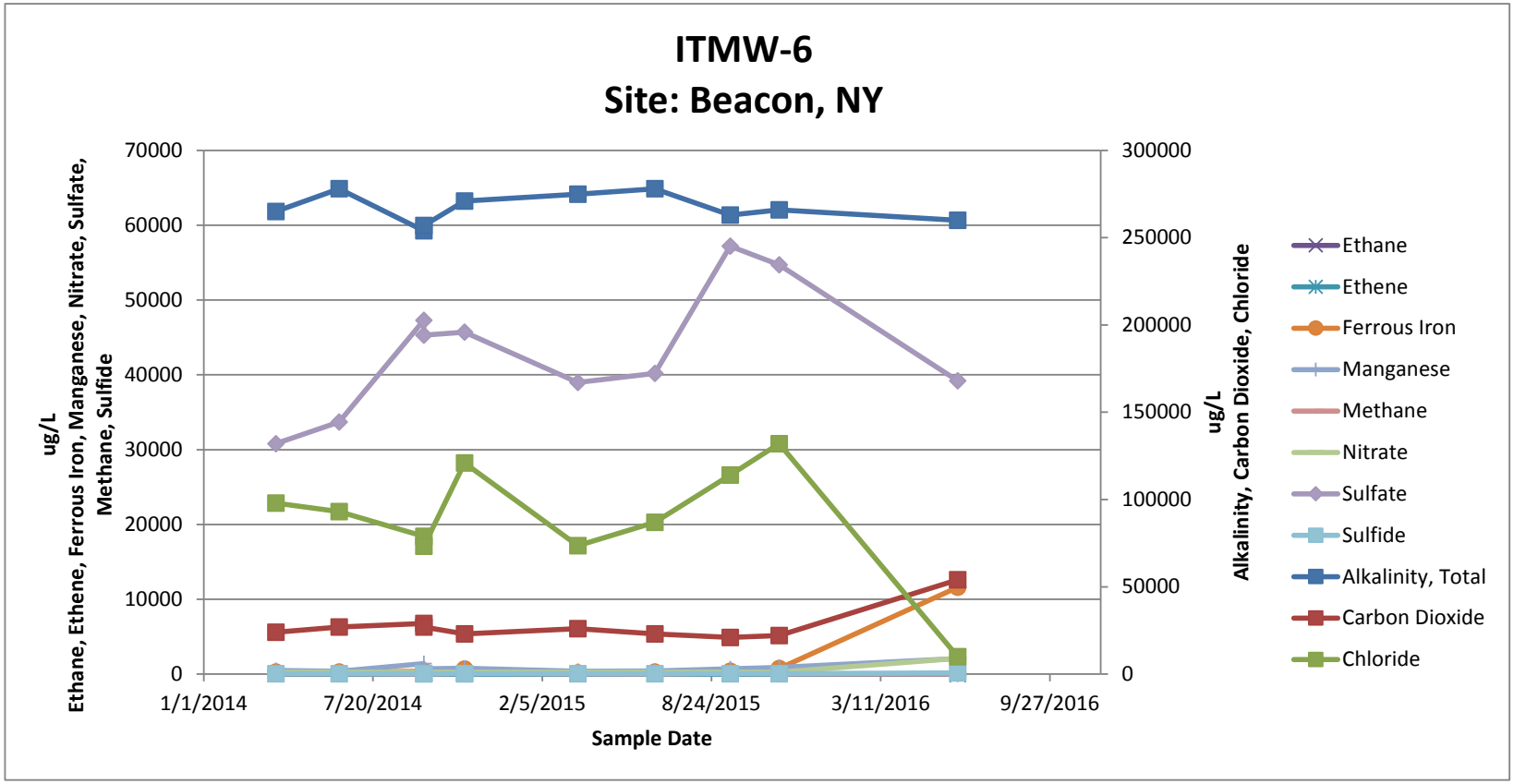

ITMW-24
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
250000
200000
150000
100000
50000
0
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

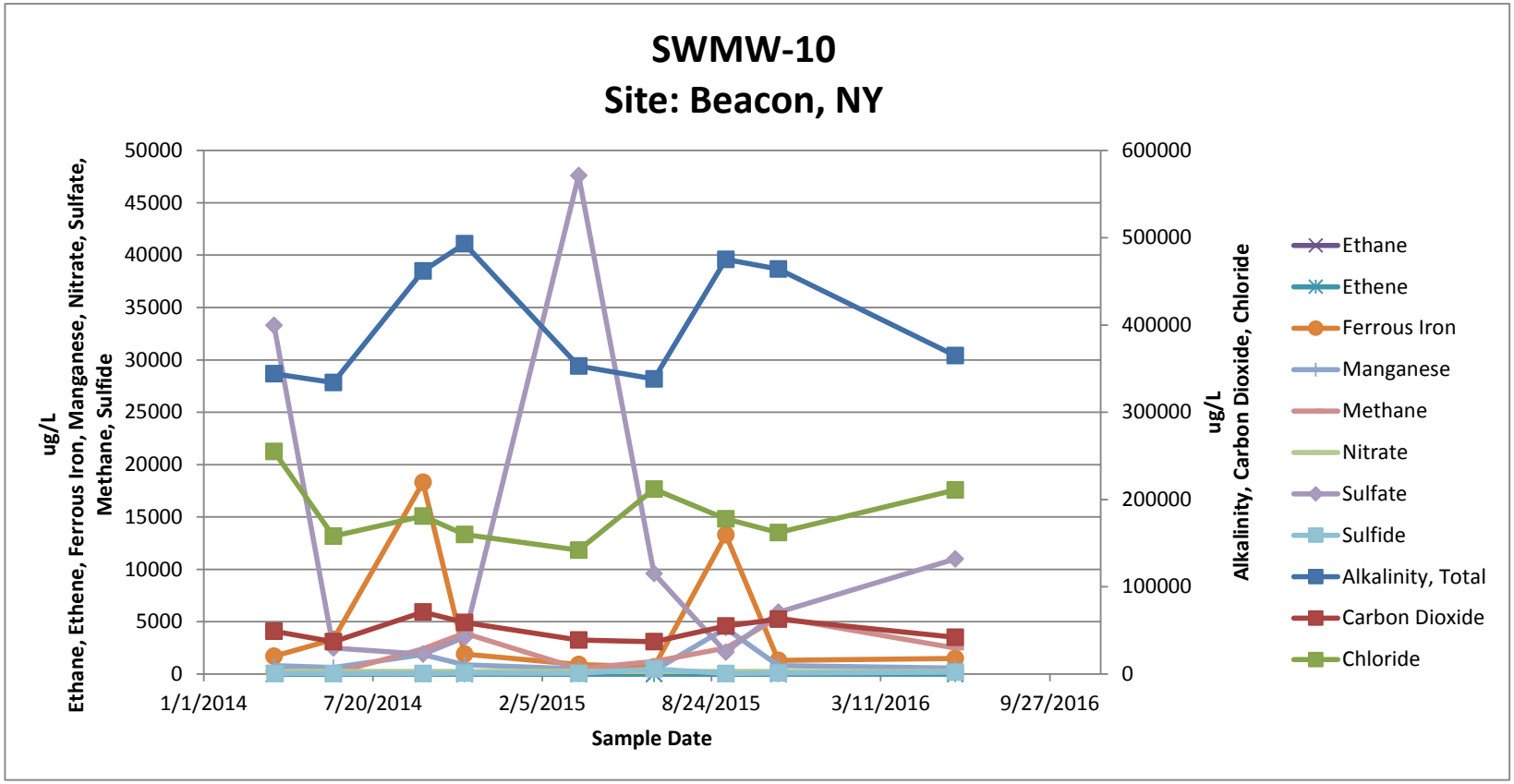

ITMW-25
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
60000
50000
40000
30000
20000
10000
0
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

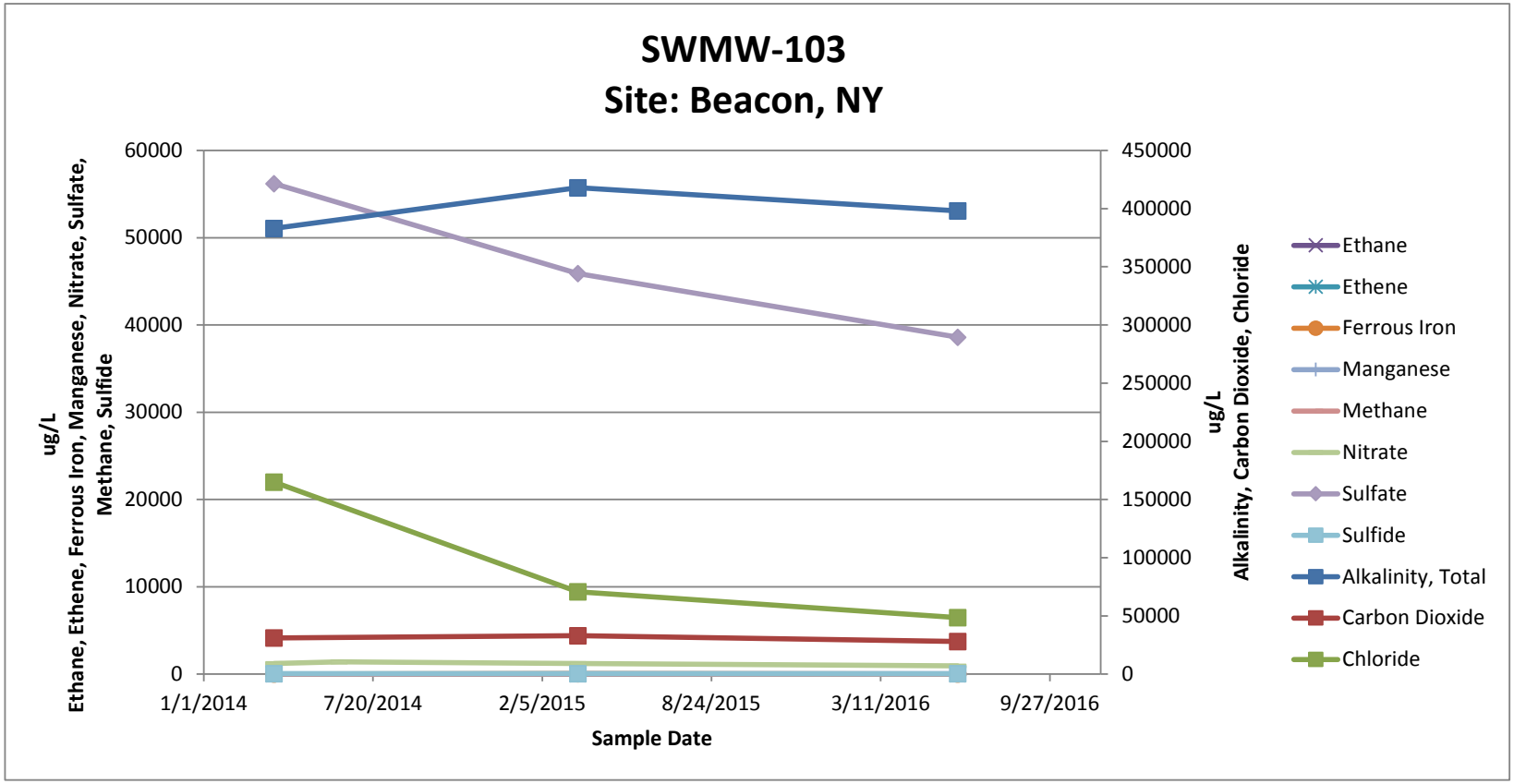

ITMW-30
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
Sample Date
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

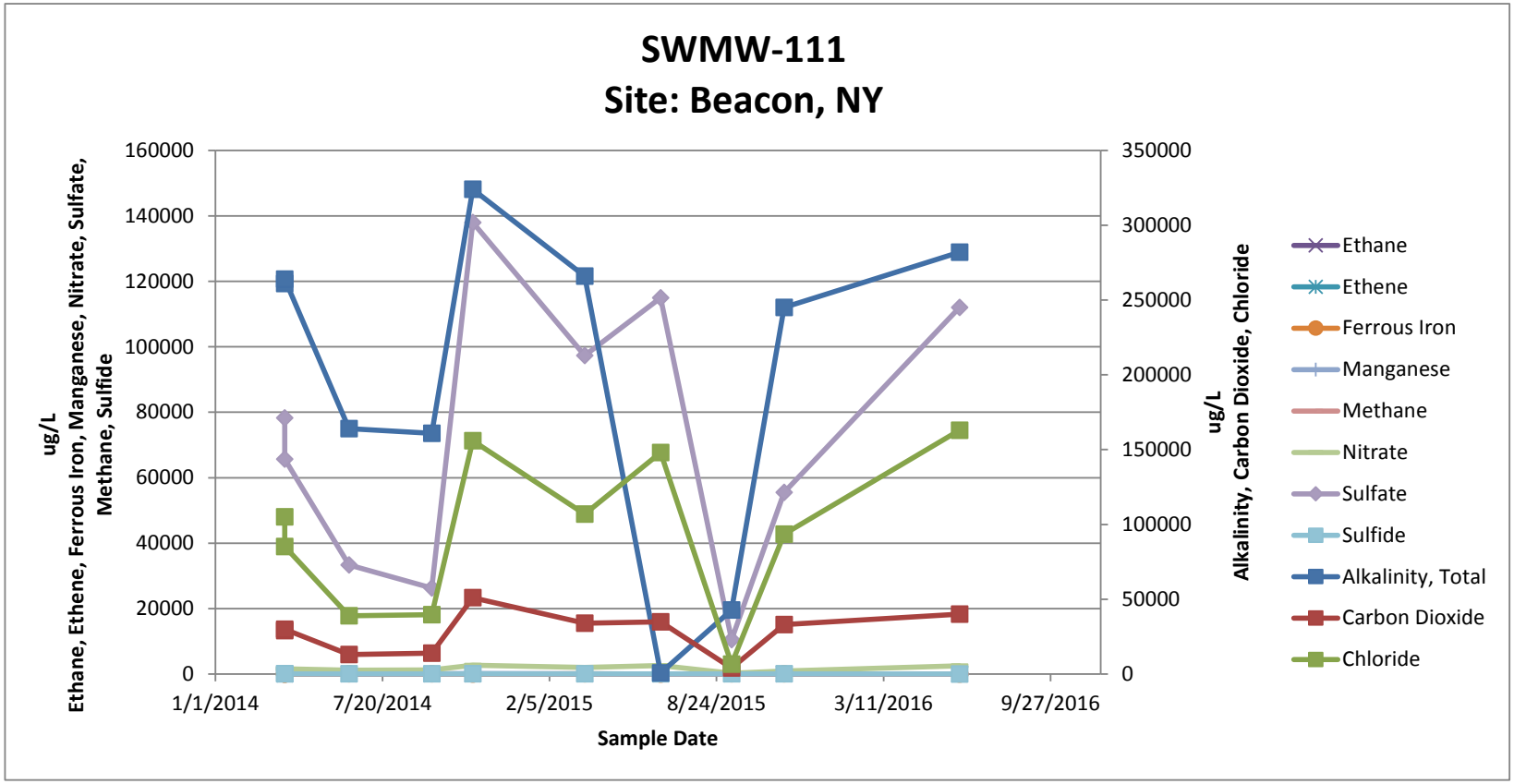

ITMW-31
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

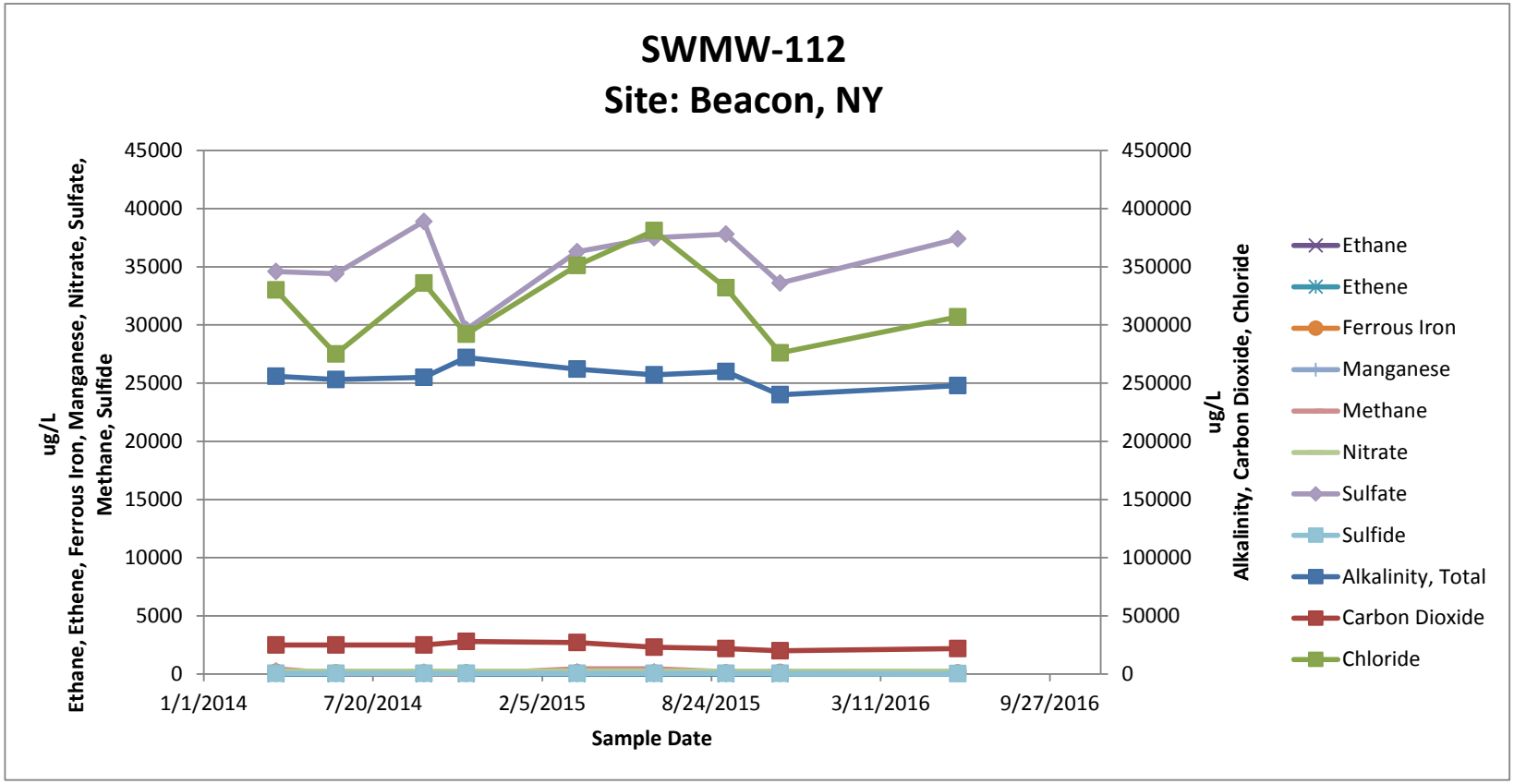

ITMW-5
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
80000
70000
60000
50000
40000
30000
20000
10000
0
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

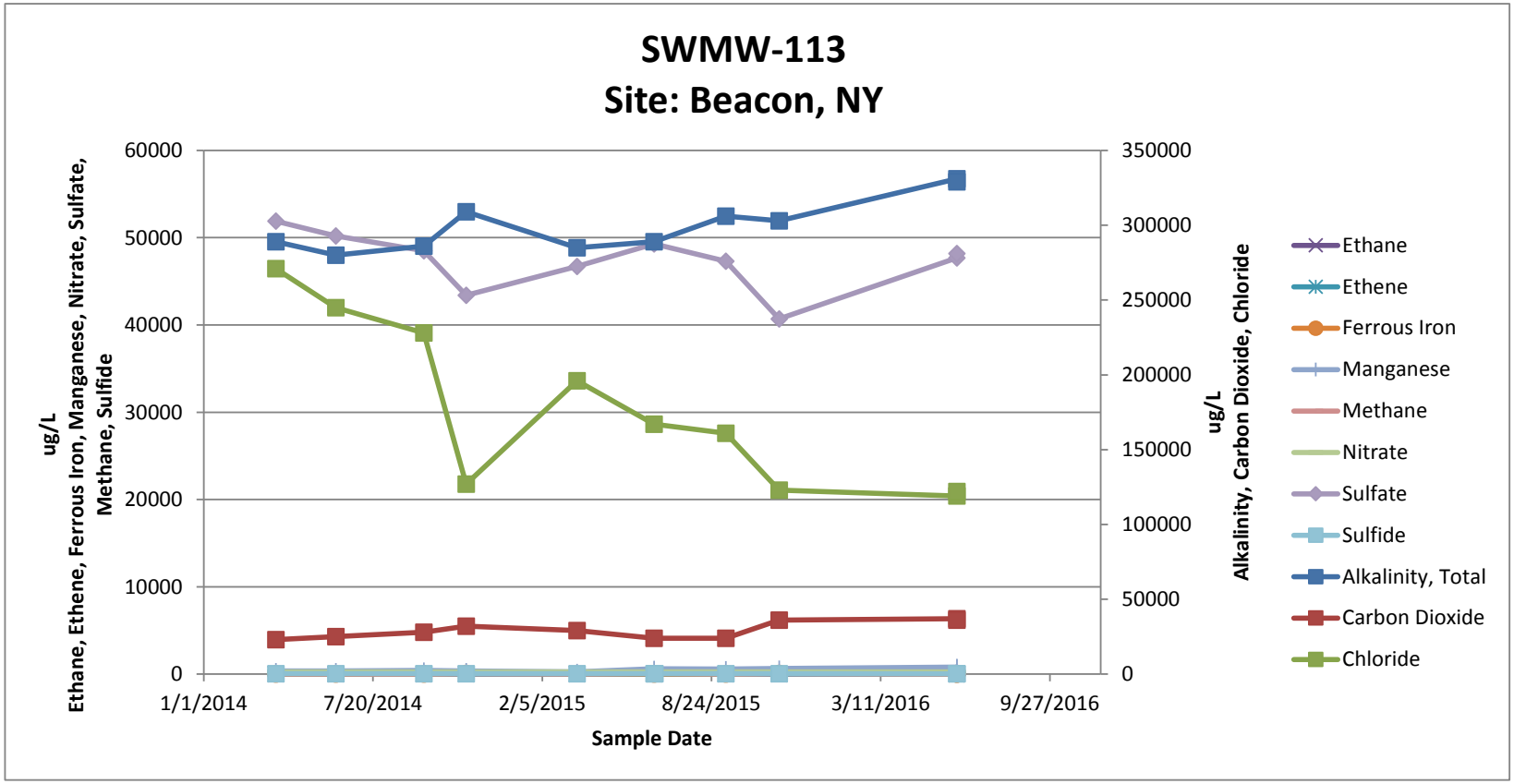

ITMW-6
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
70000
60000
50000
40000
30000
20000
10000
0
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

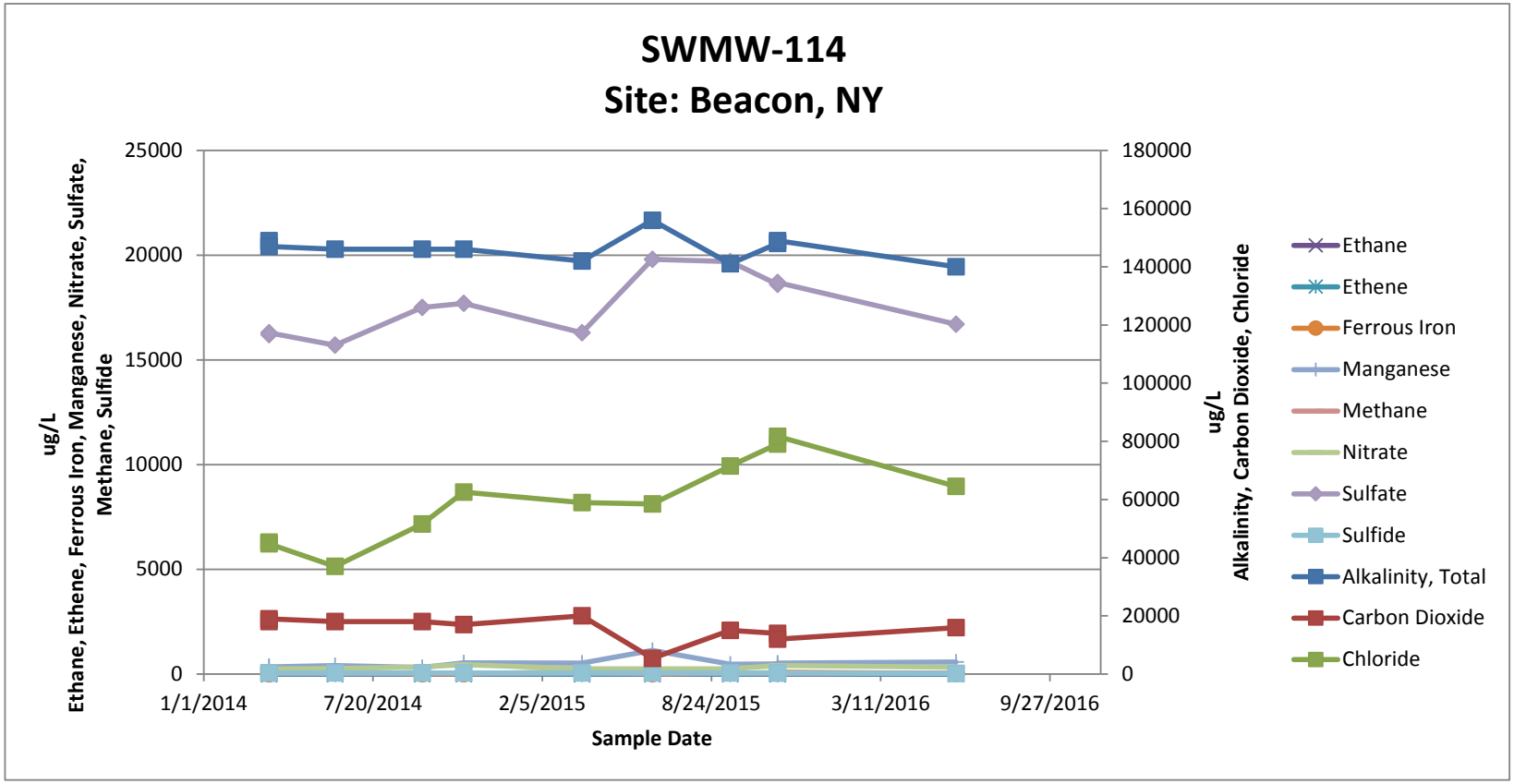

SWMW-10
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
600000
500000
400000
300000
200000
100000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

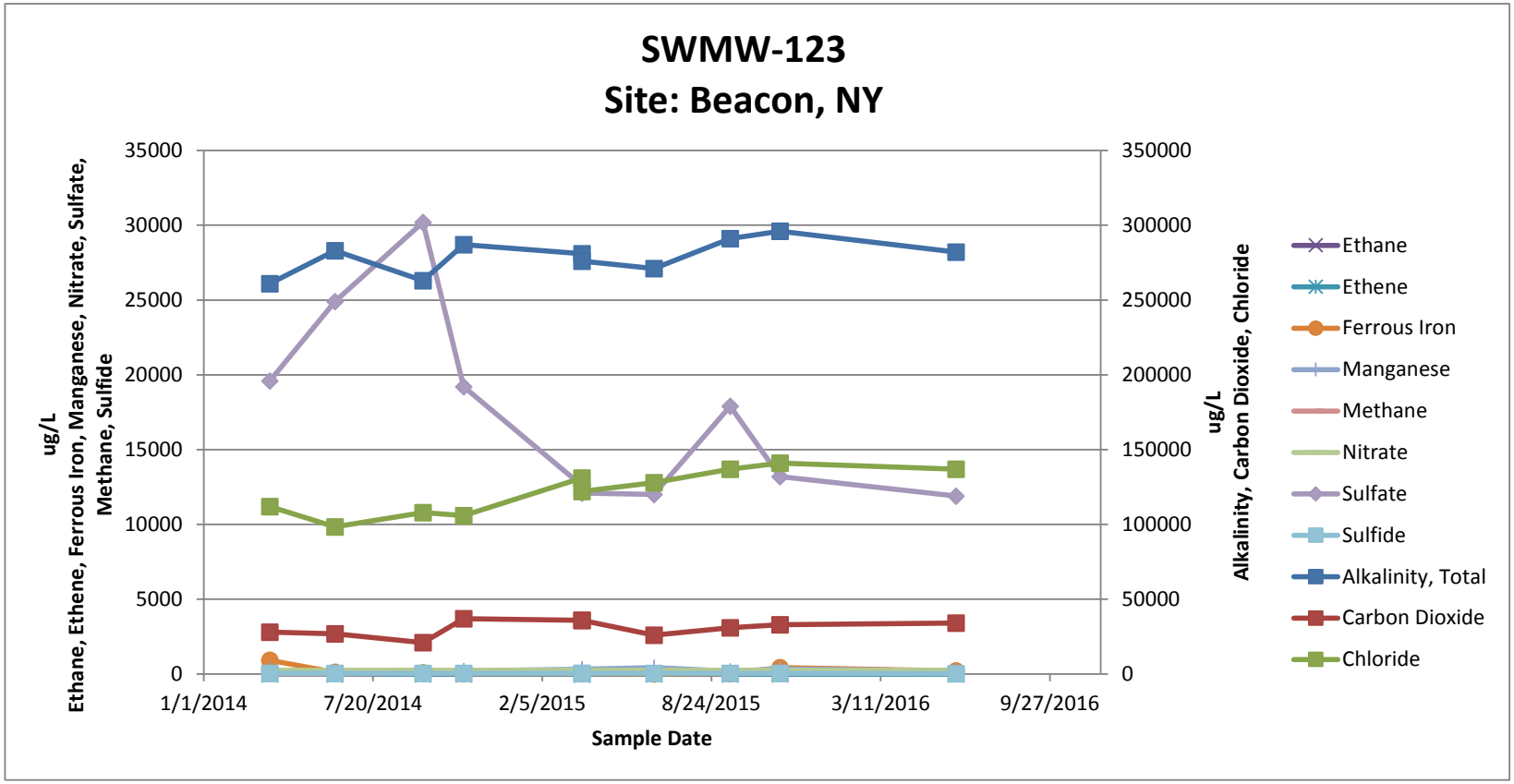

SWMW-103
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
60000
50000
40000
30000
20000
10000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

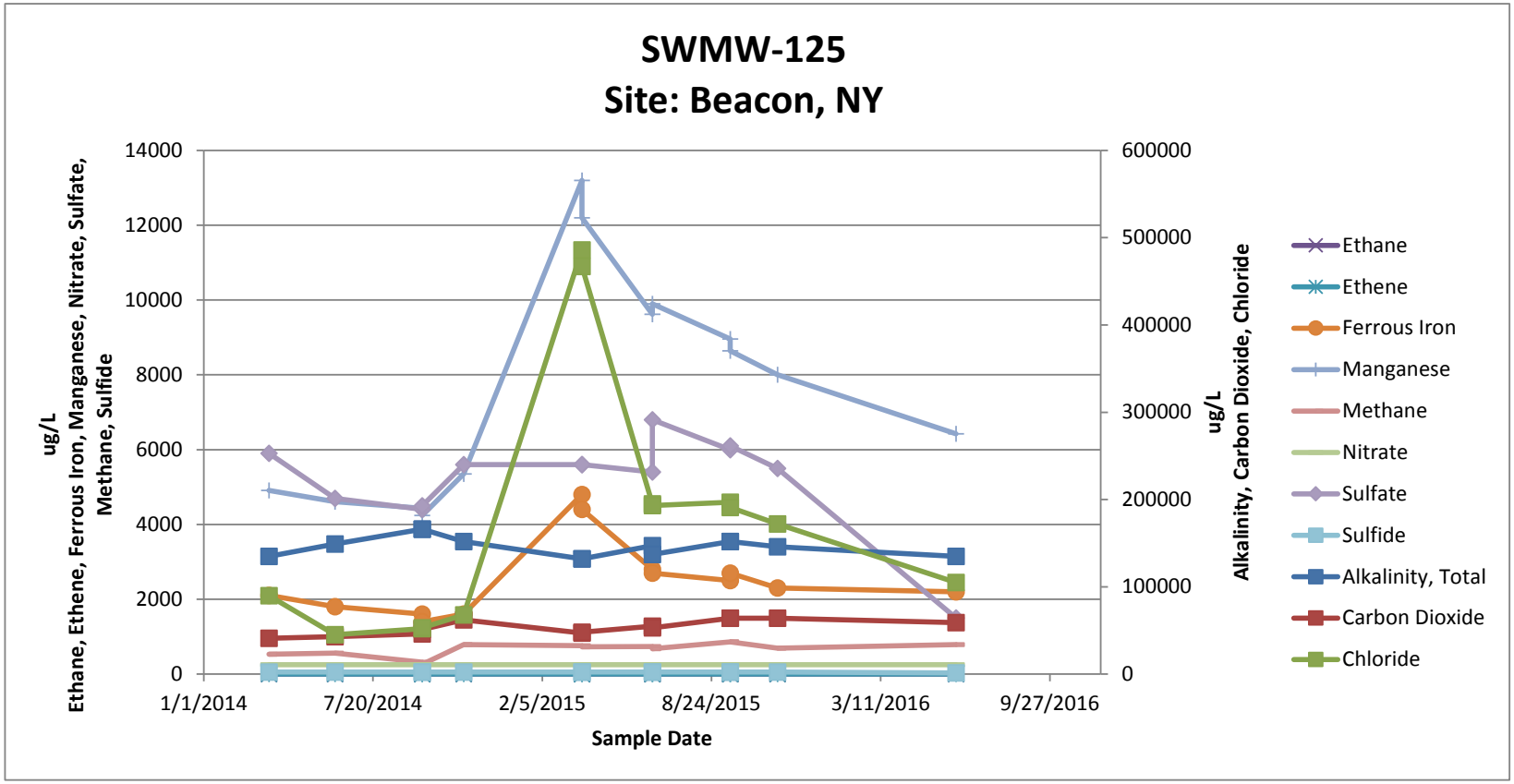

SWMW-111
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
160000
140000
120000
100000
80000
60000
40000
20000
0
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

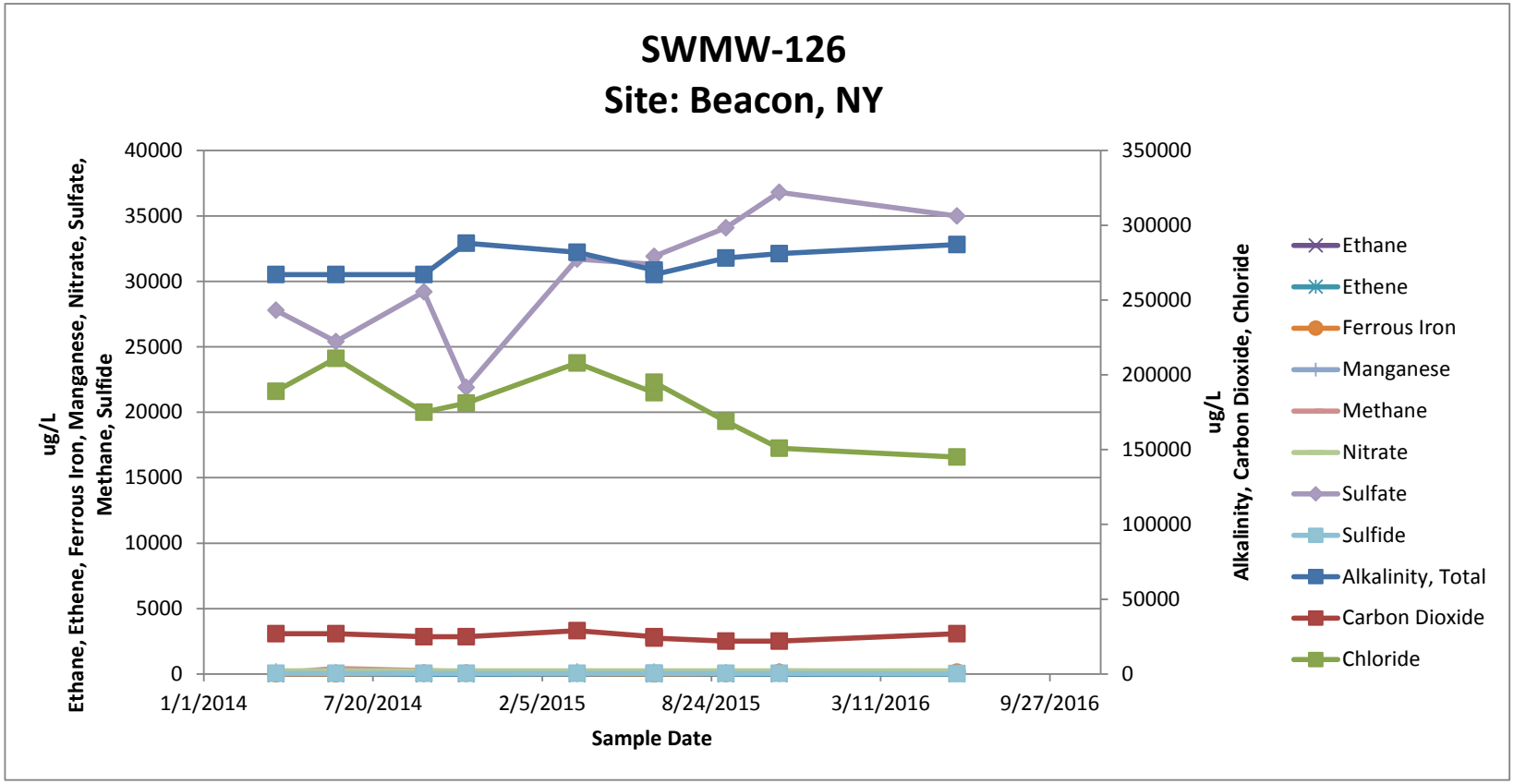

SWMW-112
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

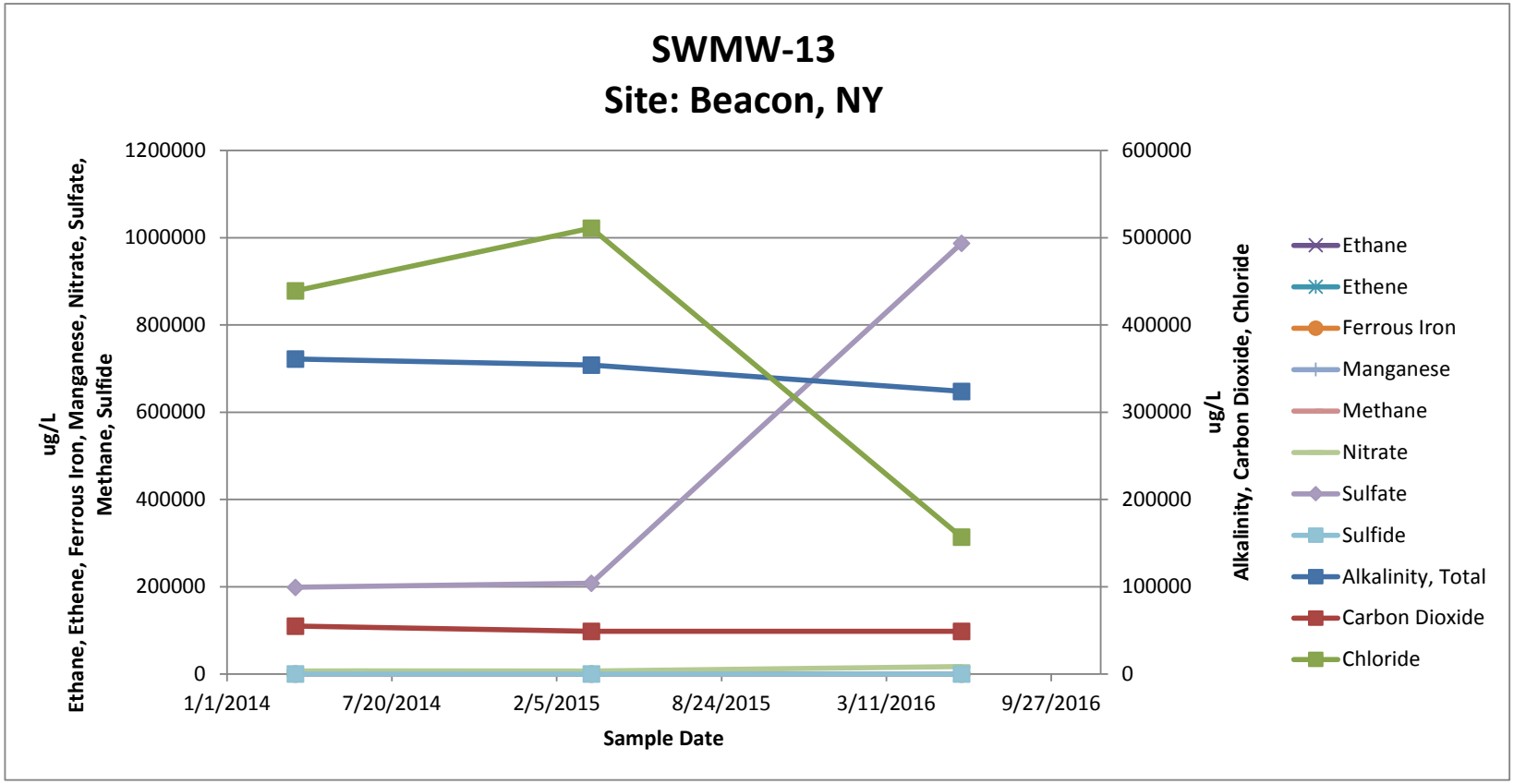

SWMW-113
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
60000
50000
40000
30000
20000
10000
0
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

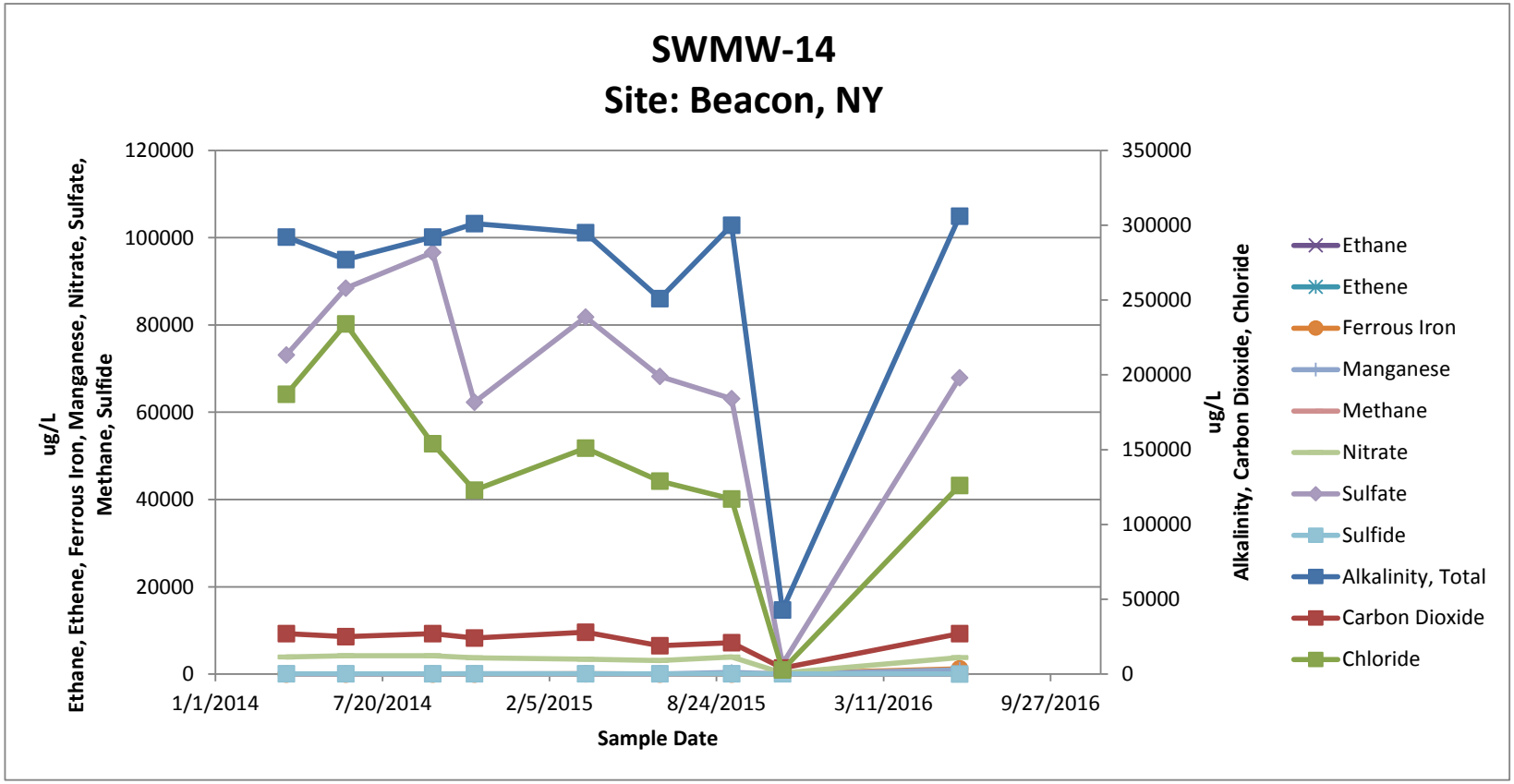

SWMW-114
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
25000
20000
15000
10000
5000
0
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

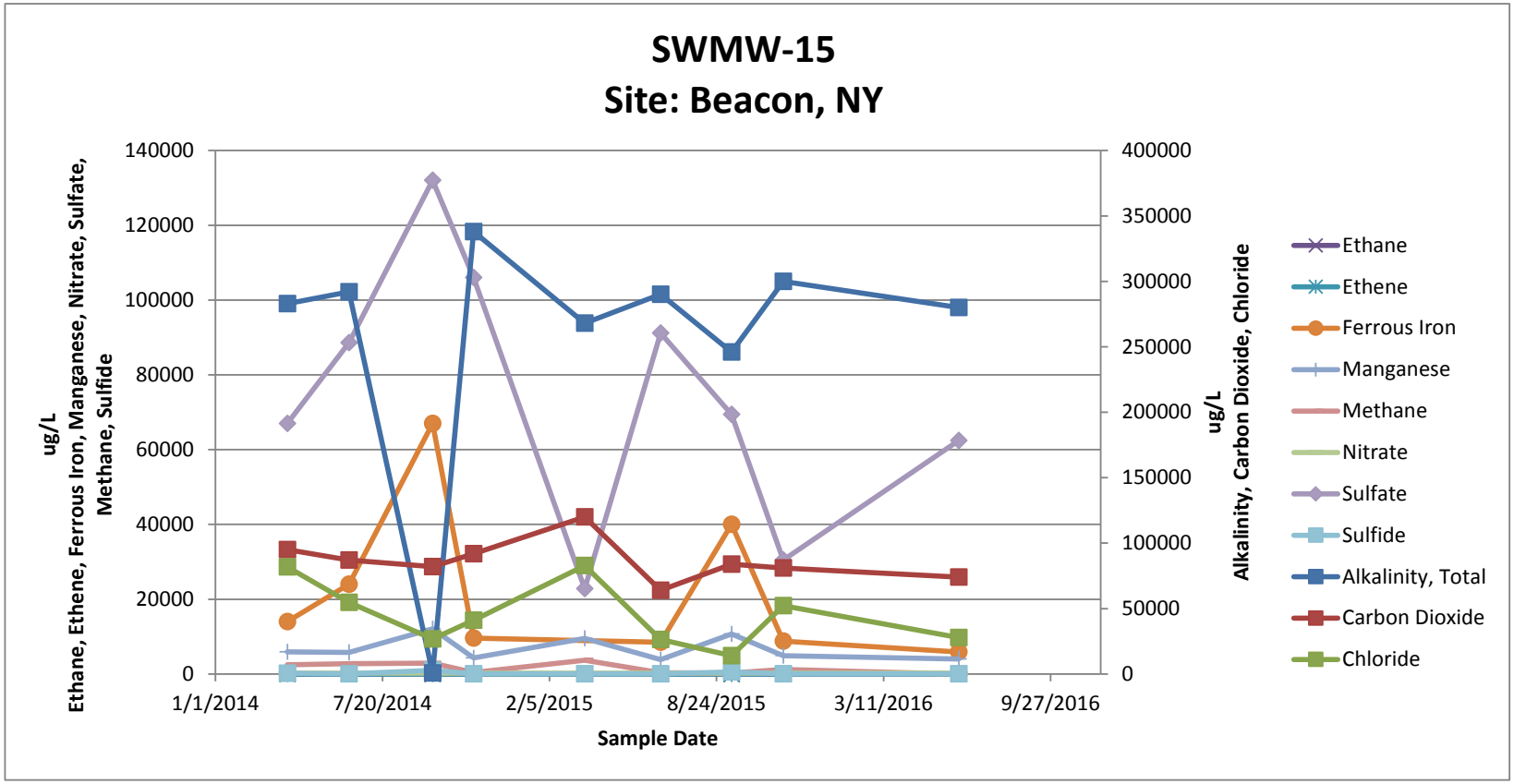

SWMW-123
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
35000
30000
25000
20000
15000
10000
5000
0
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

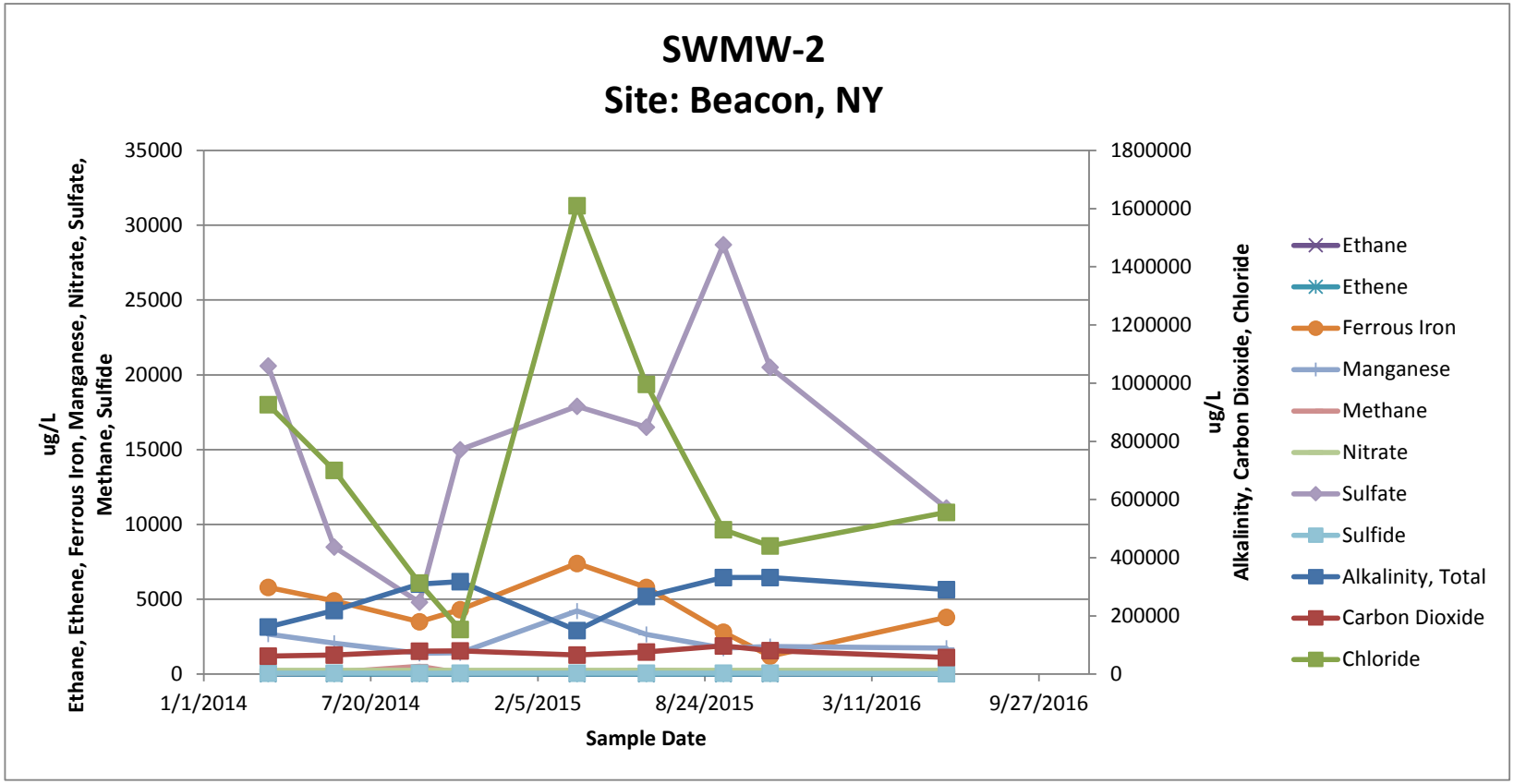

SWMW-125
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
14000
12000
10000
8000
6000
4000
2000
0
600000
500000
400000
300000
200000
100000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

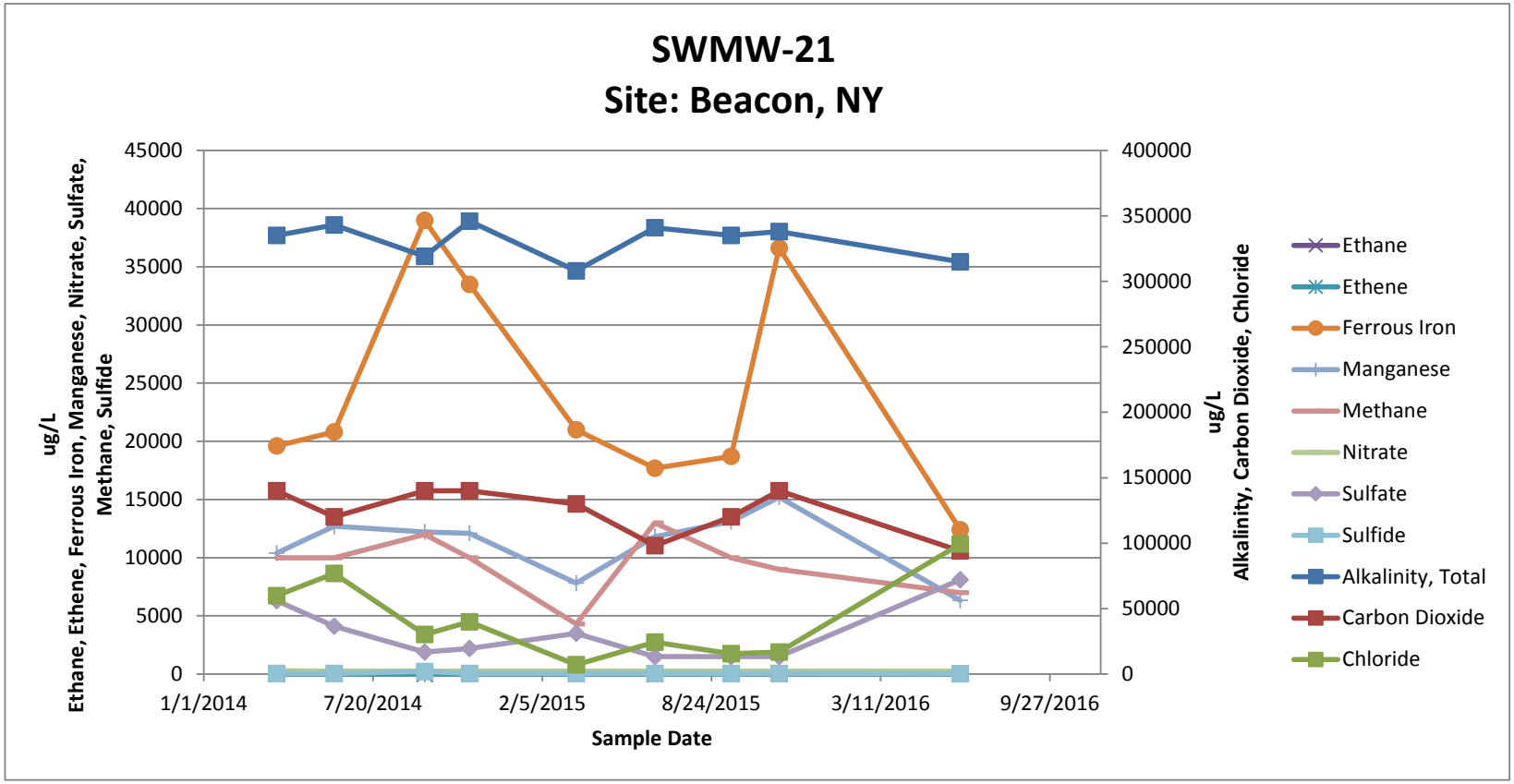

SWMW-126
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
40000
35000
30000
25000
20000
15000
10000
5000
0
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

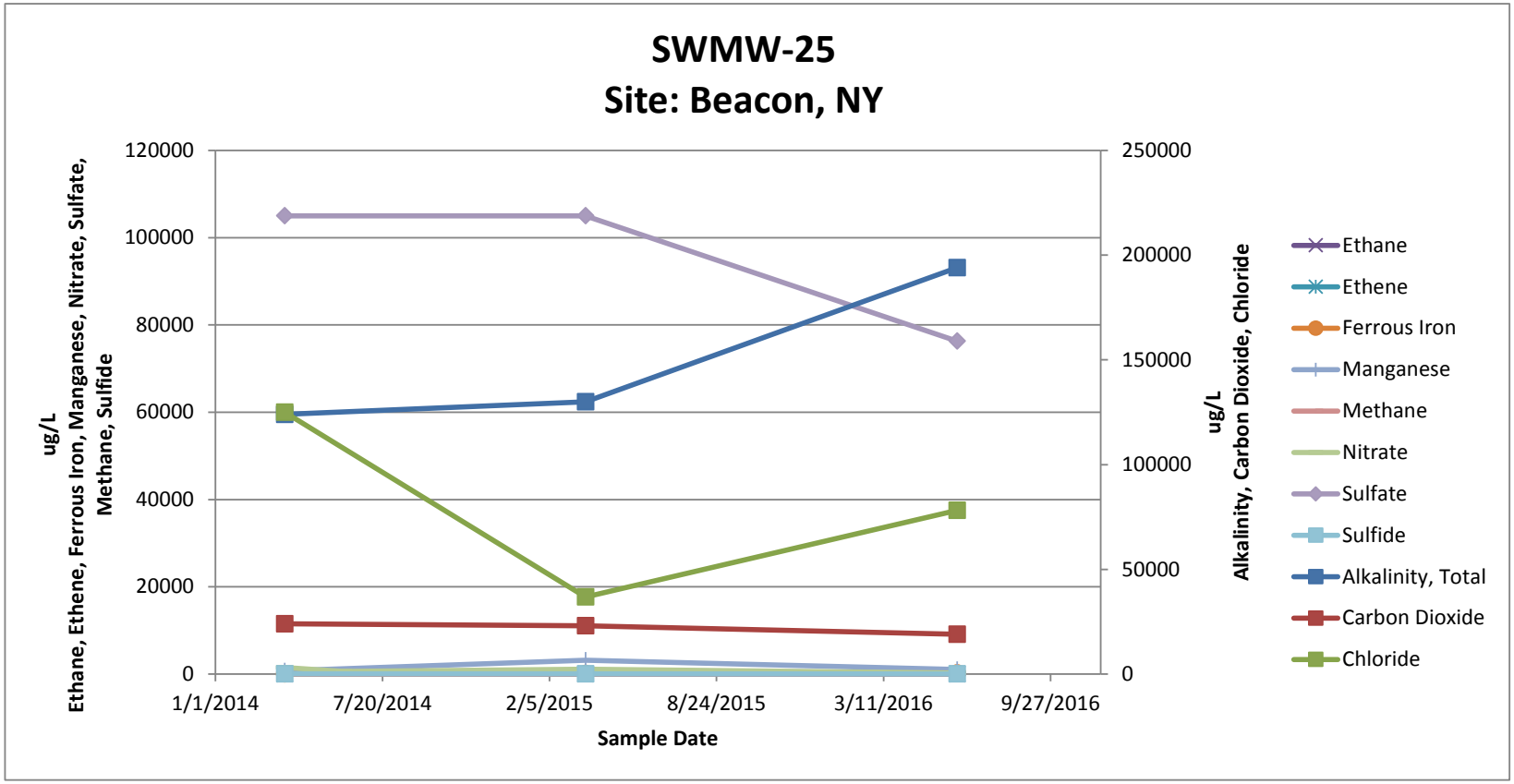

SWMW-13
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
1200000
1000000
800000
600000
400000
200000
0
600000
500000
400000
300000
200000
100000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

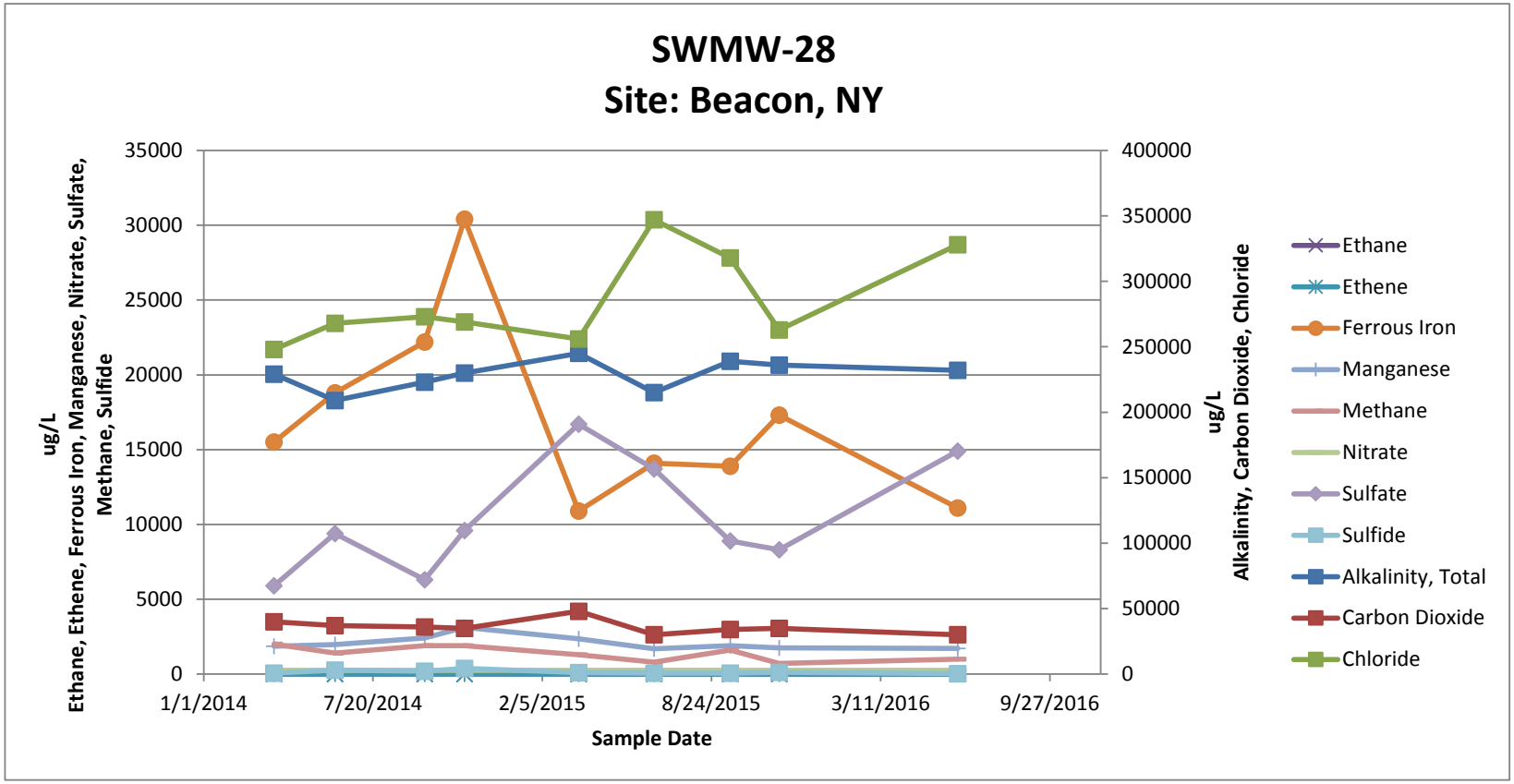

SWMW-14
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
120000
100000
80000
60000
40000
20000
0
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

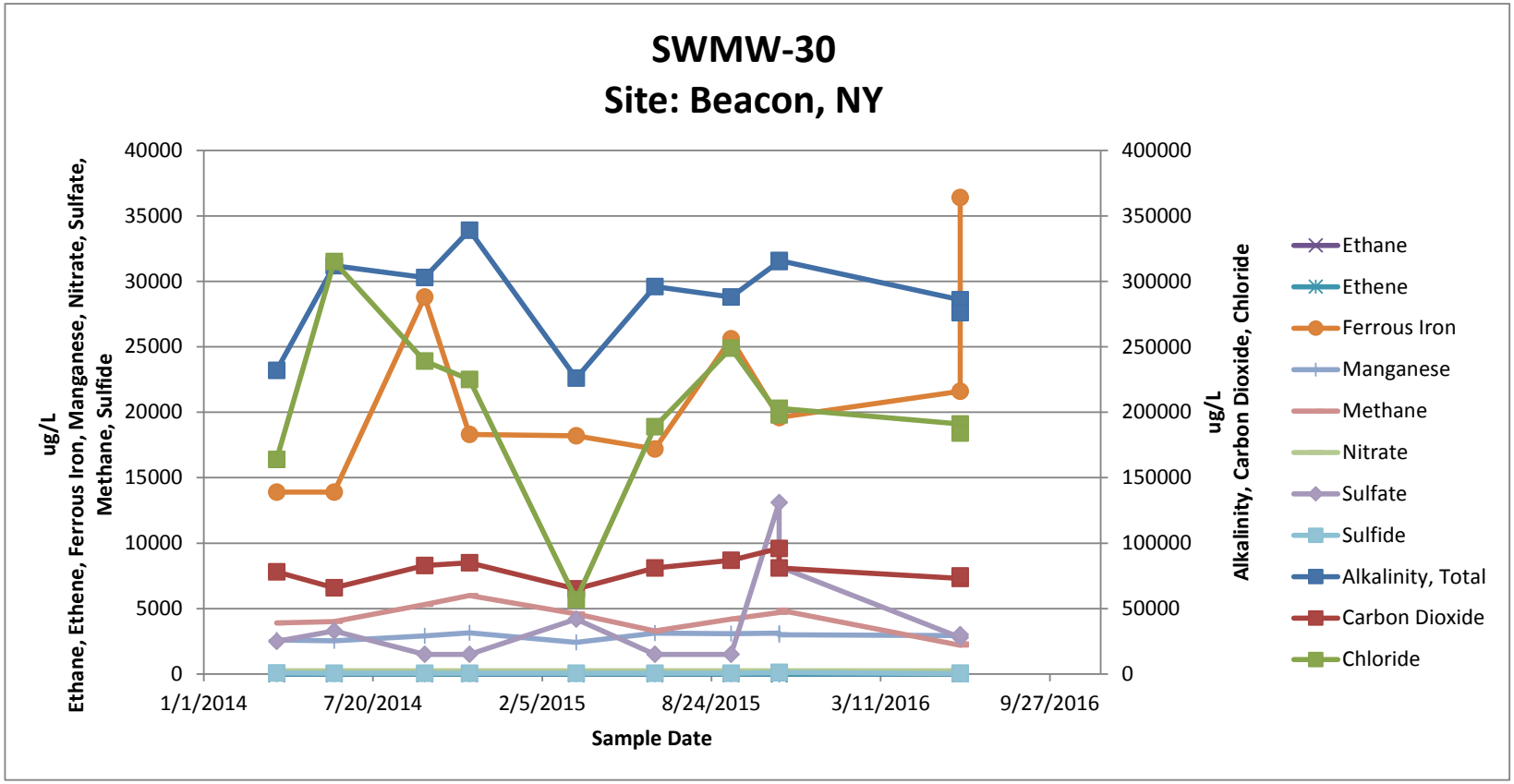

SWMW-15
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
140000
120000
100000
80000
60000
40000
20000
0
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

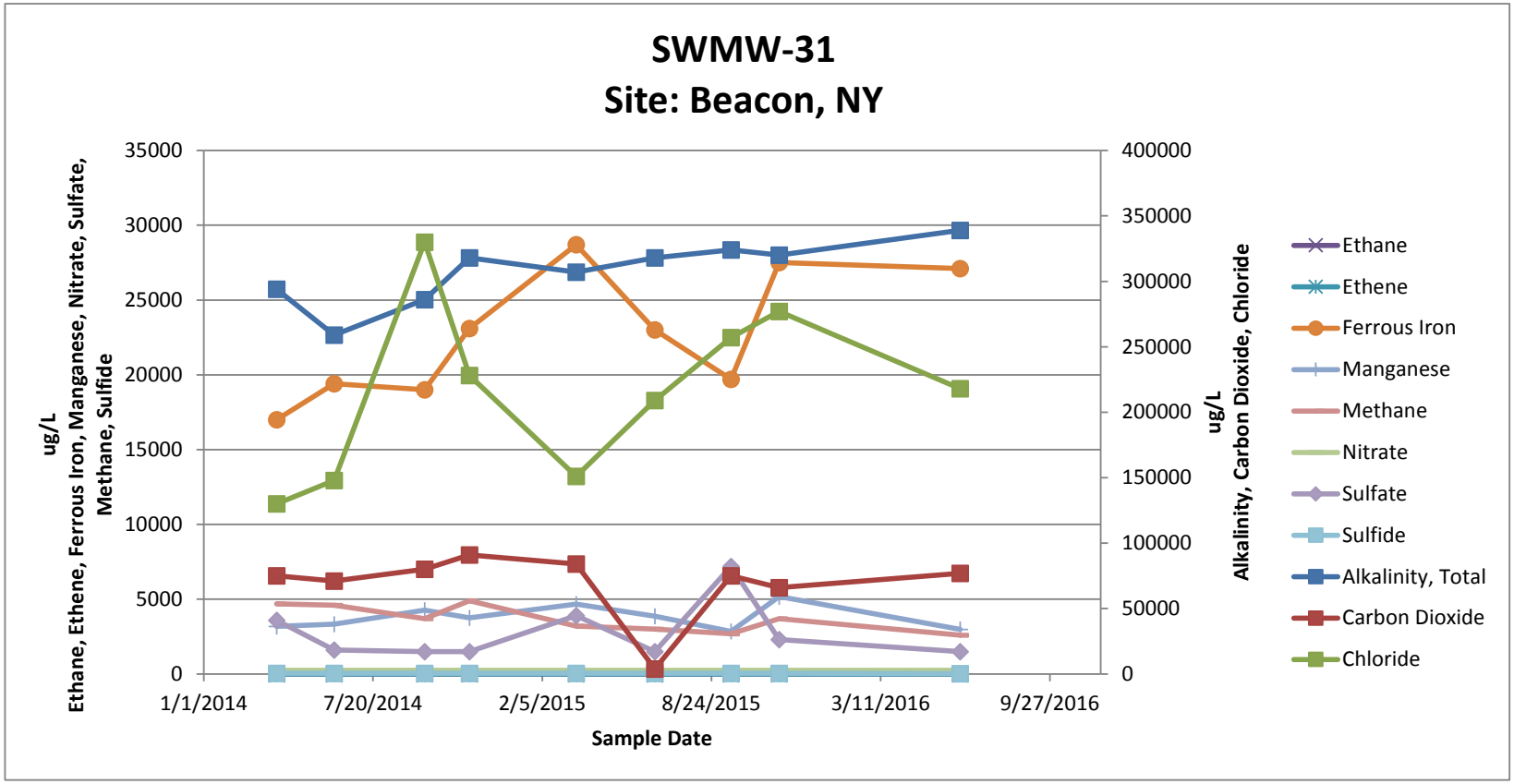

SWMW-2
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
35000
30000
25000
20000
15000
10000
5000
0
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

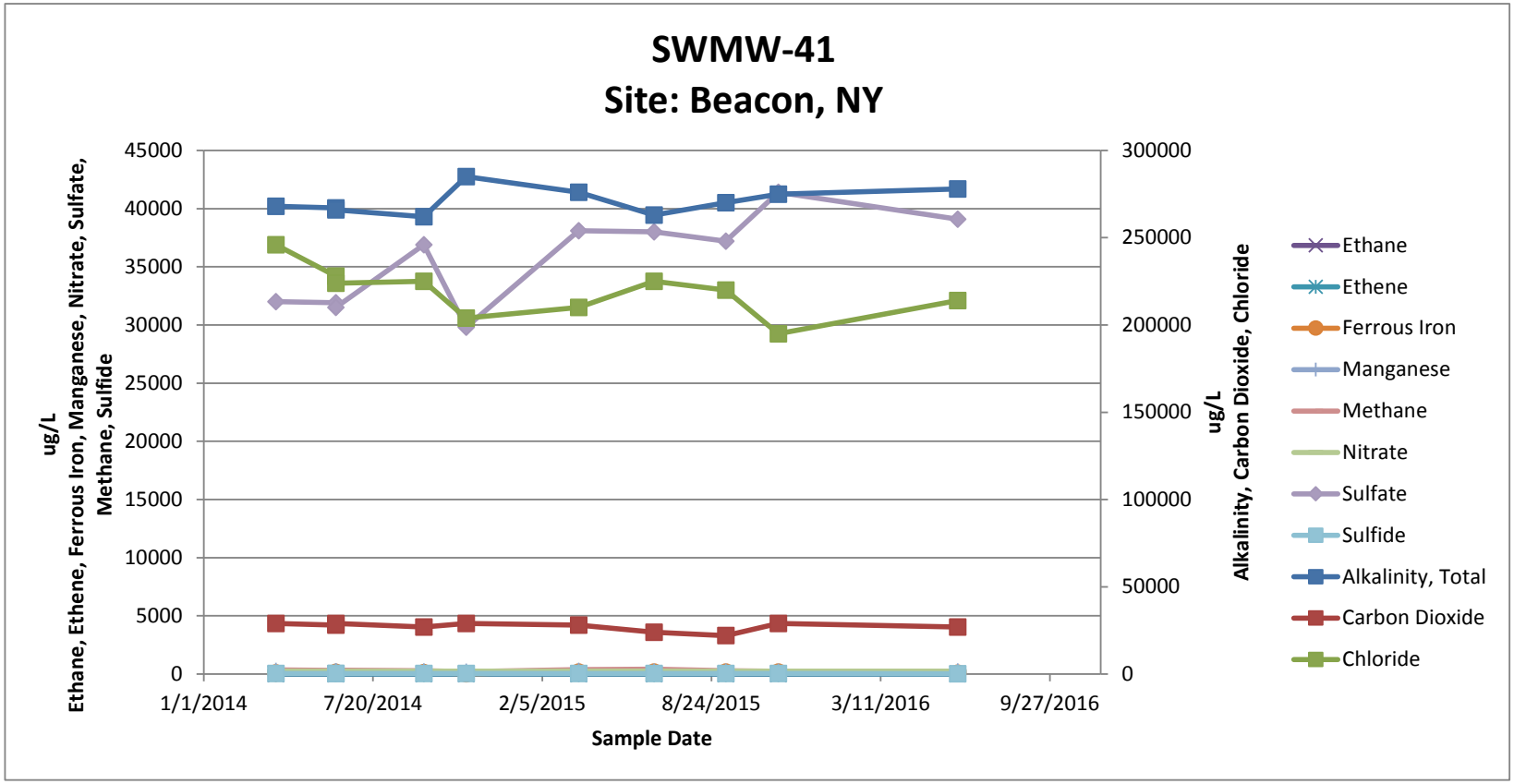

SWMW-21
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
400000
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

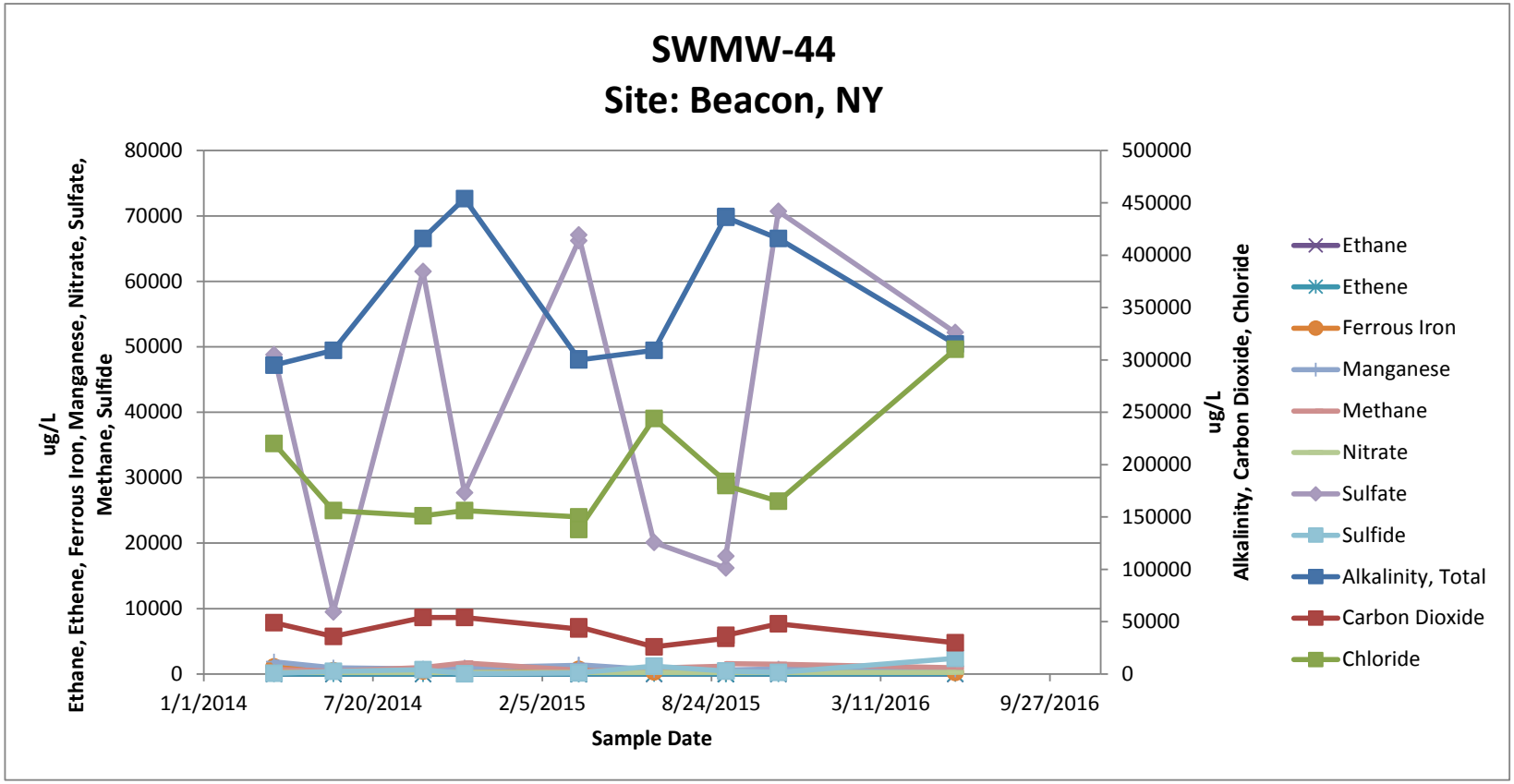

SWMW-25
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
120000
100000
80000
60000
40000
20000
0
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

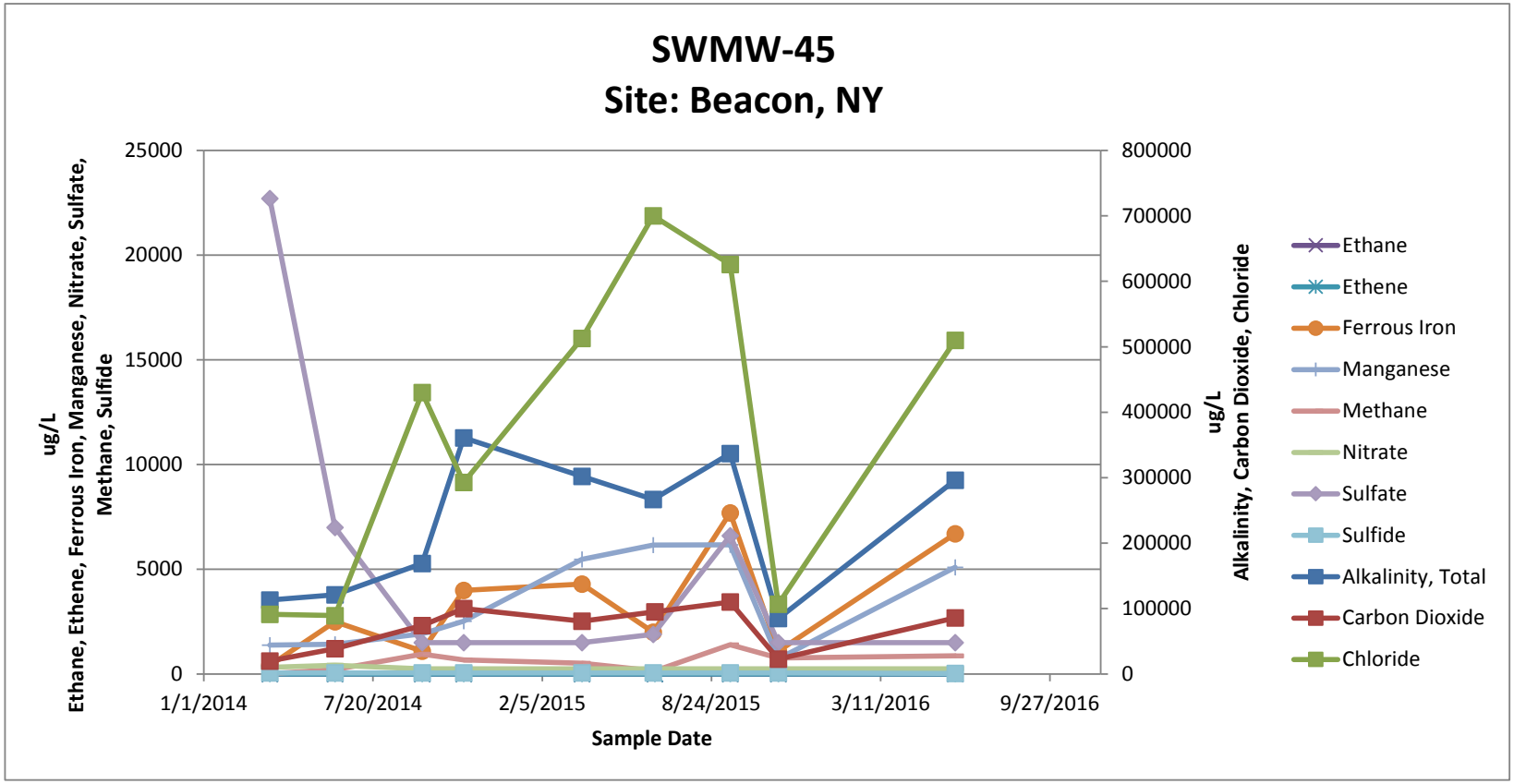

SWMW-28
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
35000
30000
25000
20000
15000
10000
5000
0
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

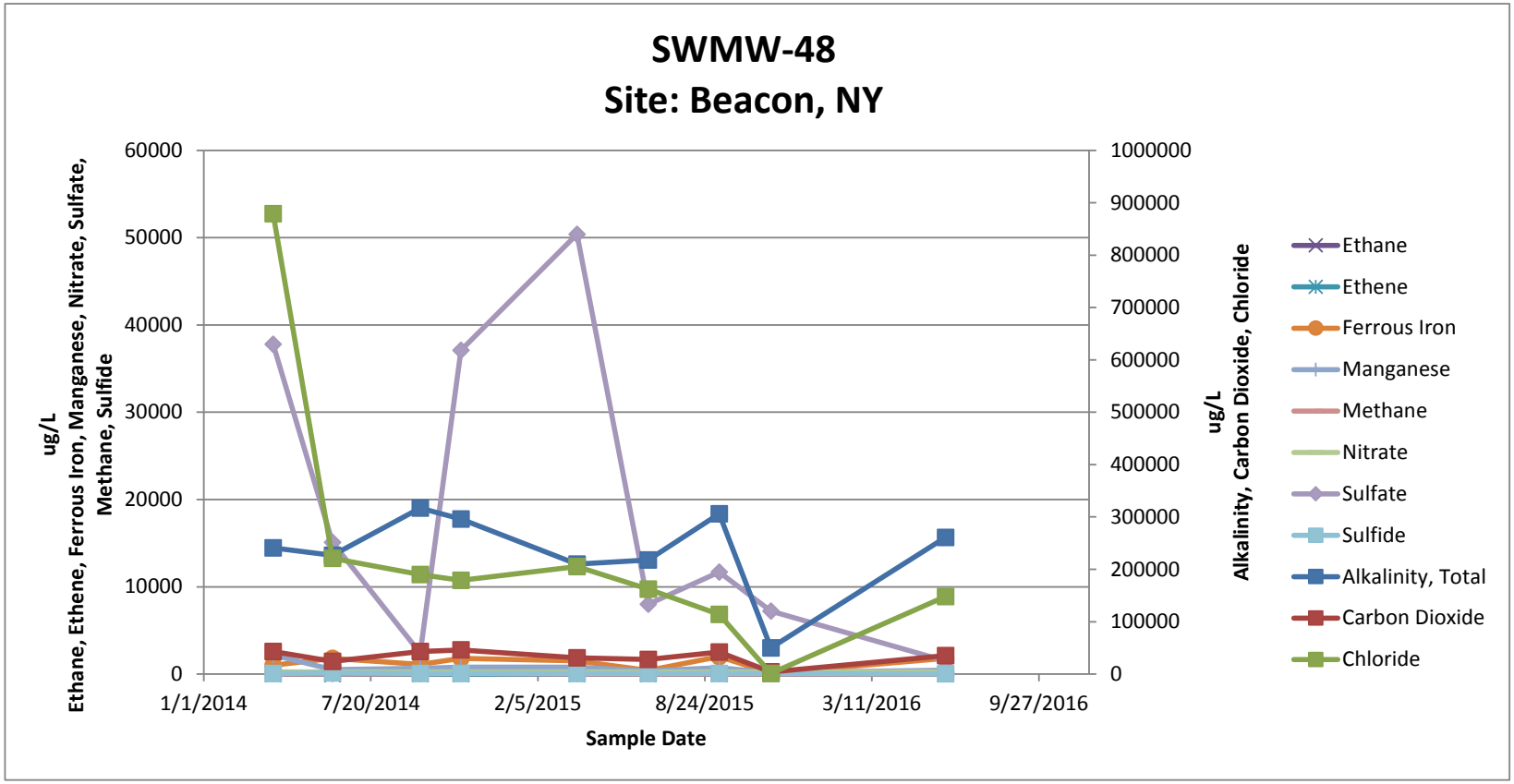

SWMW-30
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
40000
35000
30000
25000
20000
15000
10000
5000
0
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

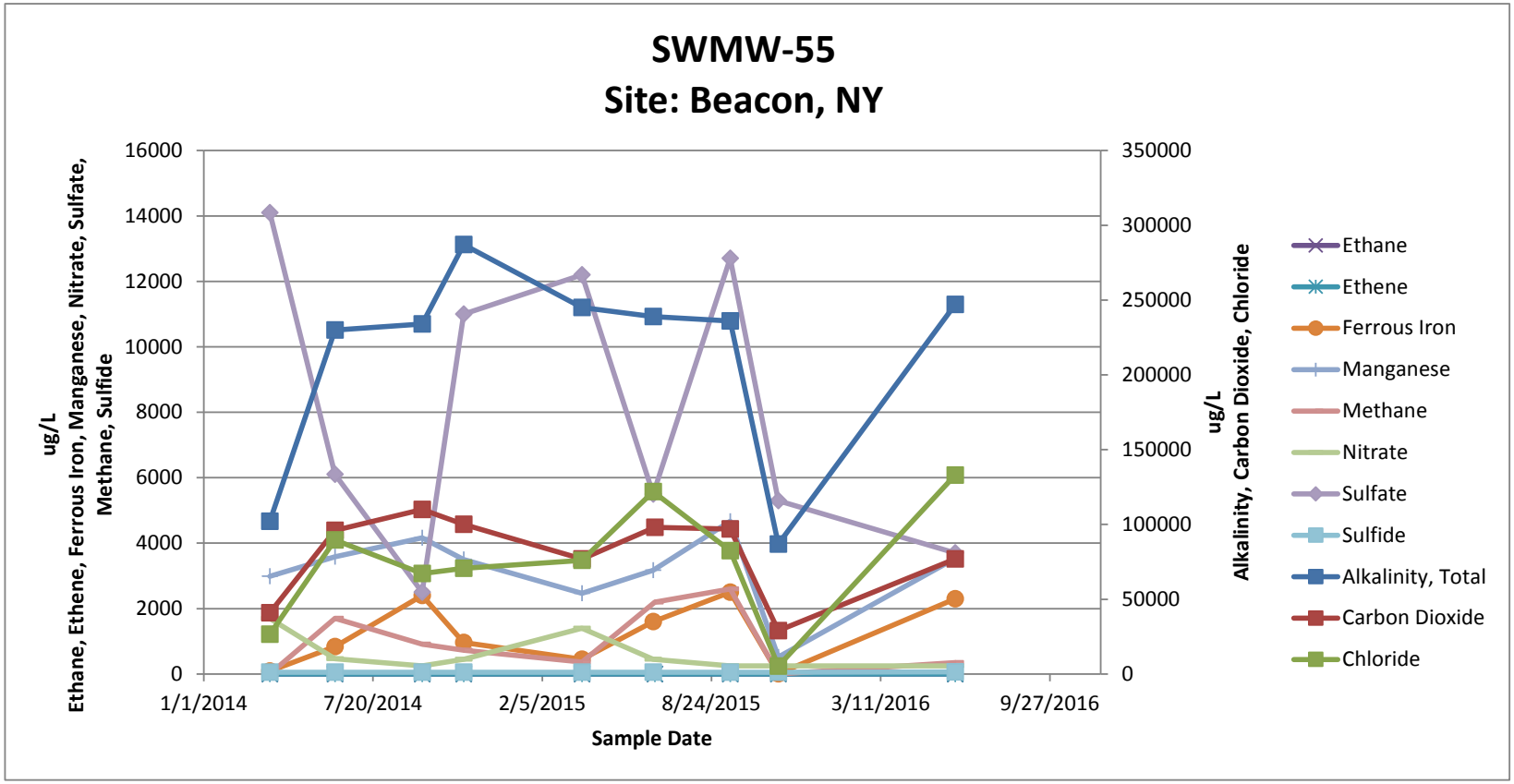

SWMW-31
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
35000
30000
25000
20000
15000
10000
5000
0
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

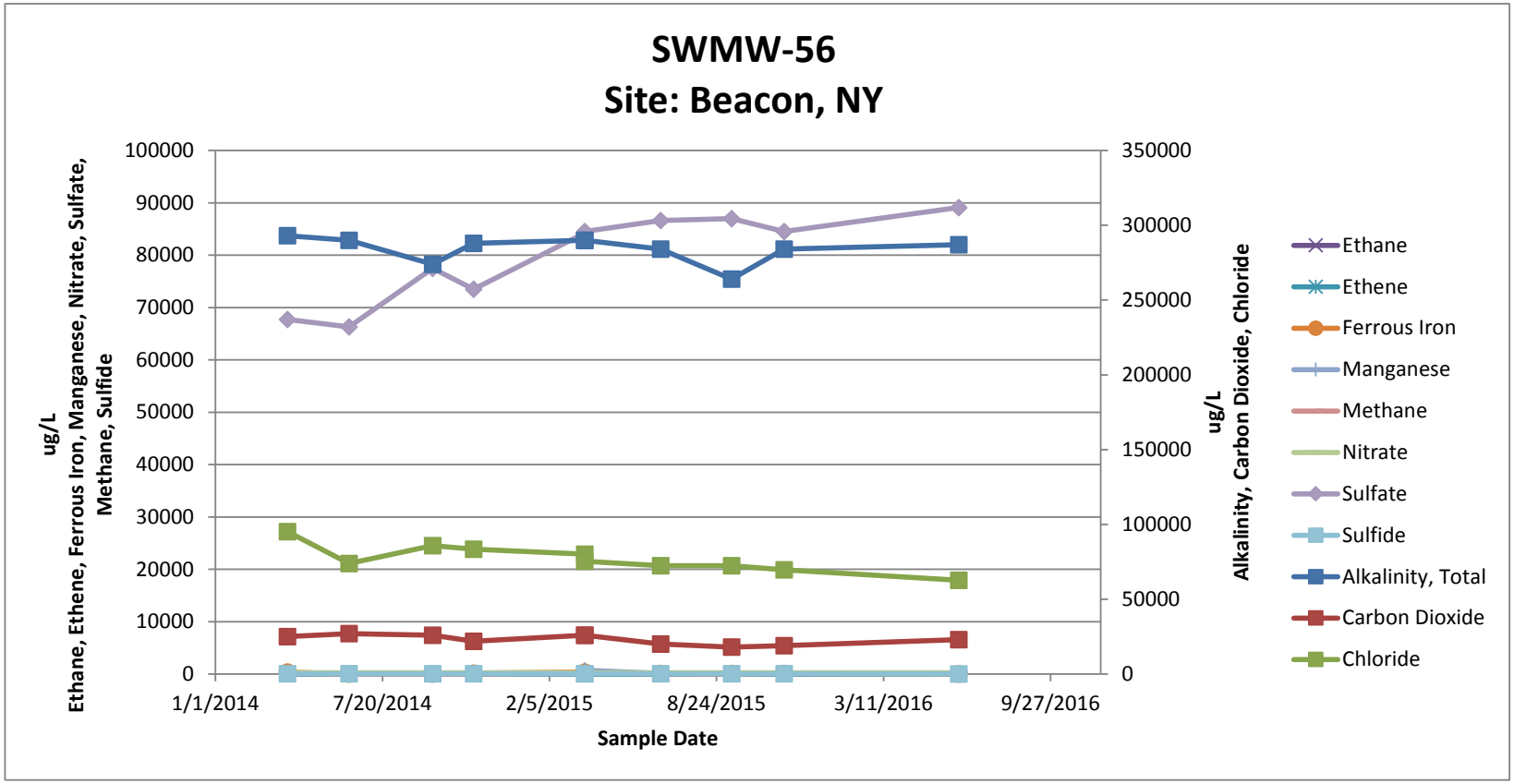

SWMW-41
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

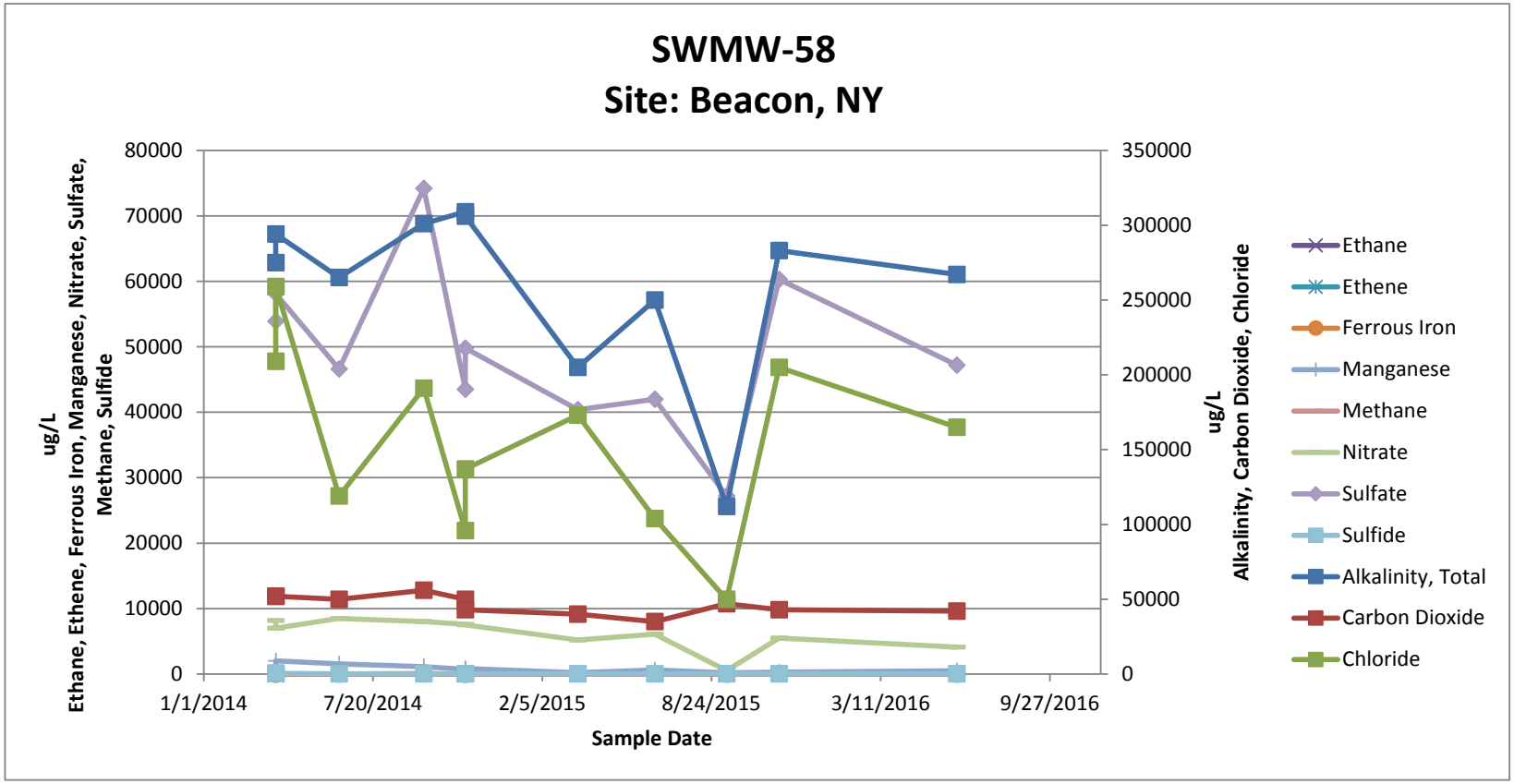

SWMW-44
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
80000
70000
60000
50000
40000
30000
20000
10000
0
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

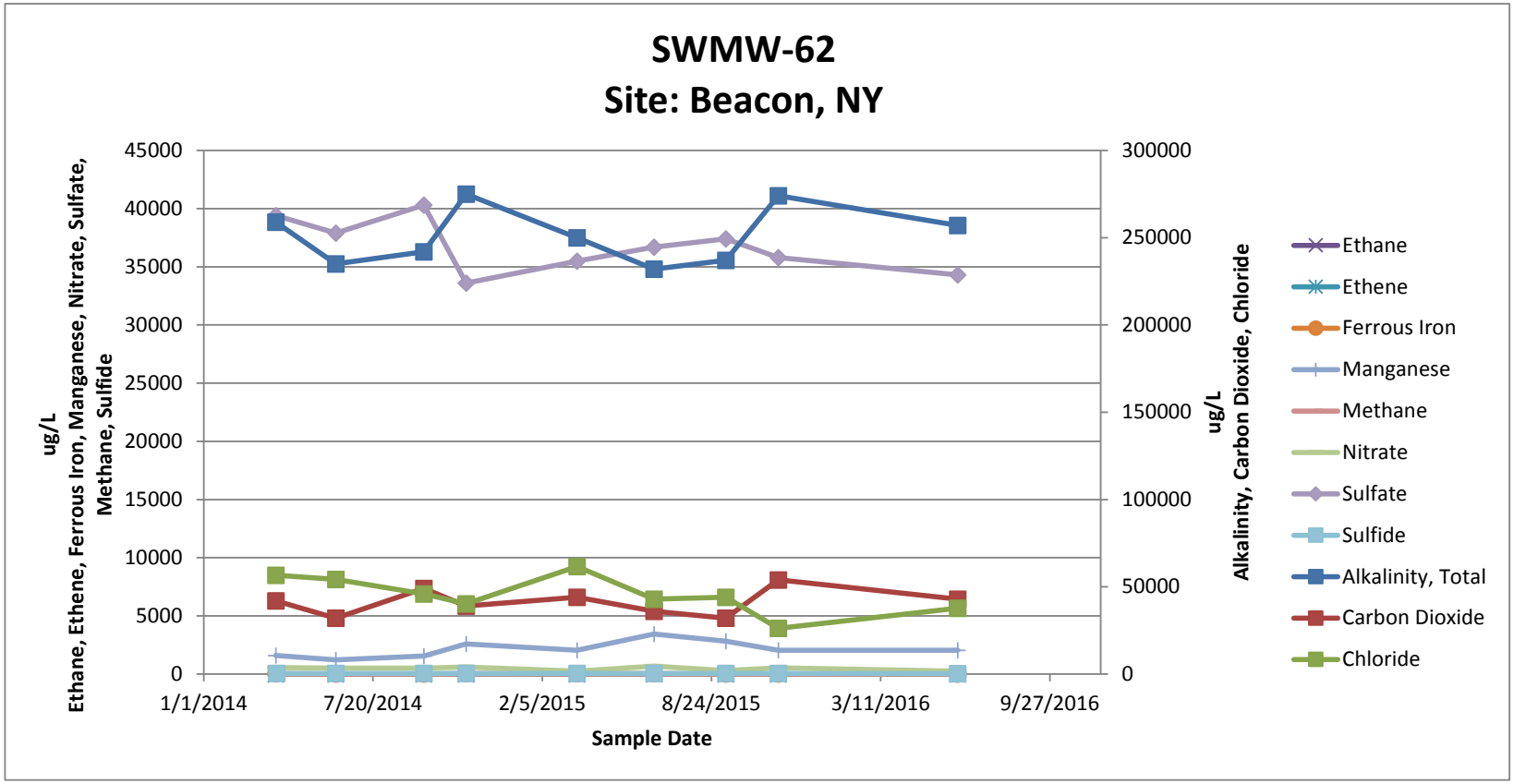

SWMW-45
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
25000
20000
15000
10000
5000
0
800000
700000
600000
500000
400000
300000
200000
100000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

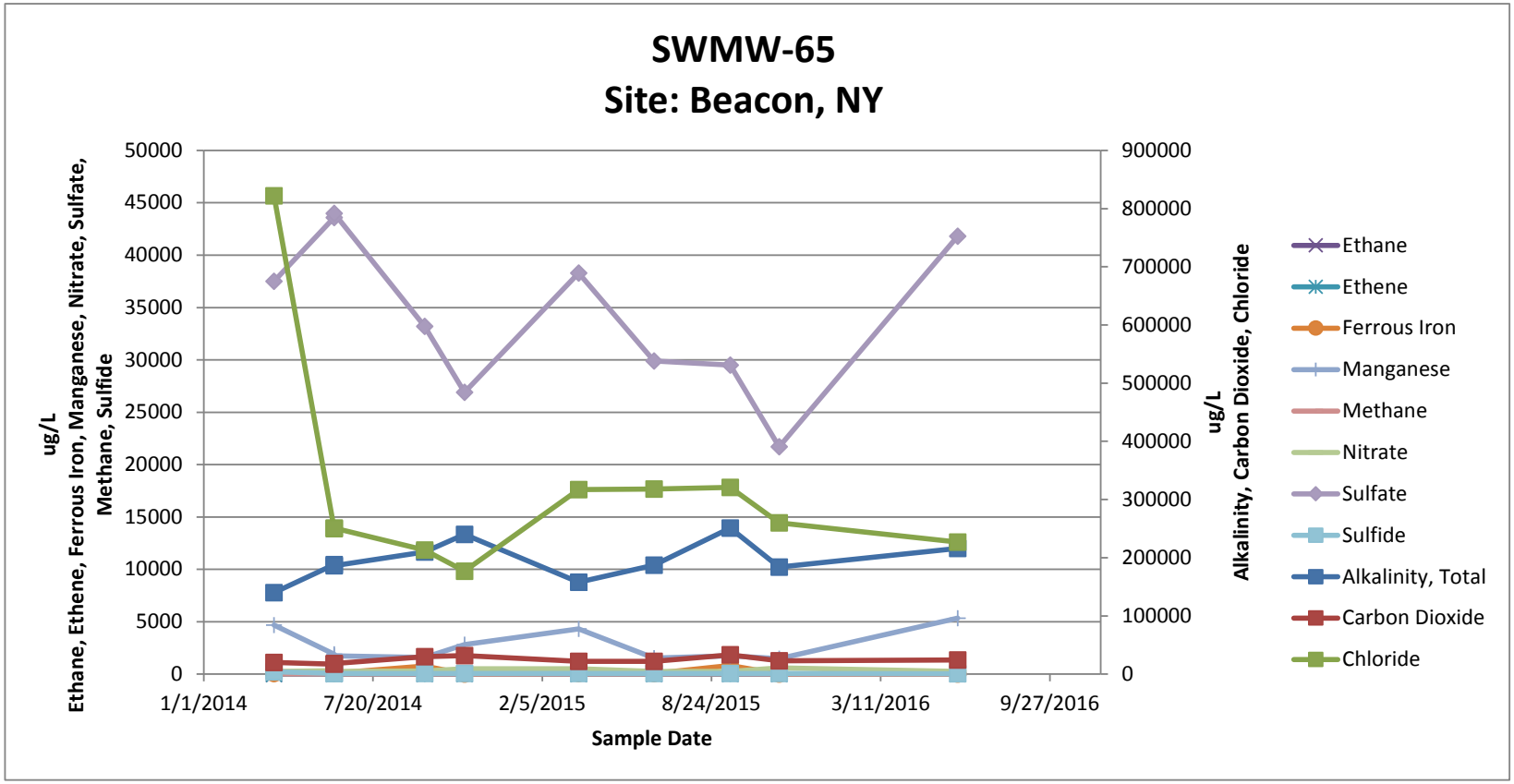

SWMW-48
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
60000
50000
40000
30000
20000
10000
0
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

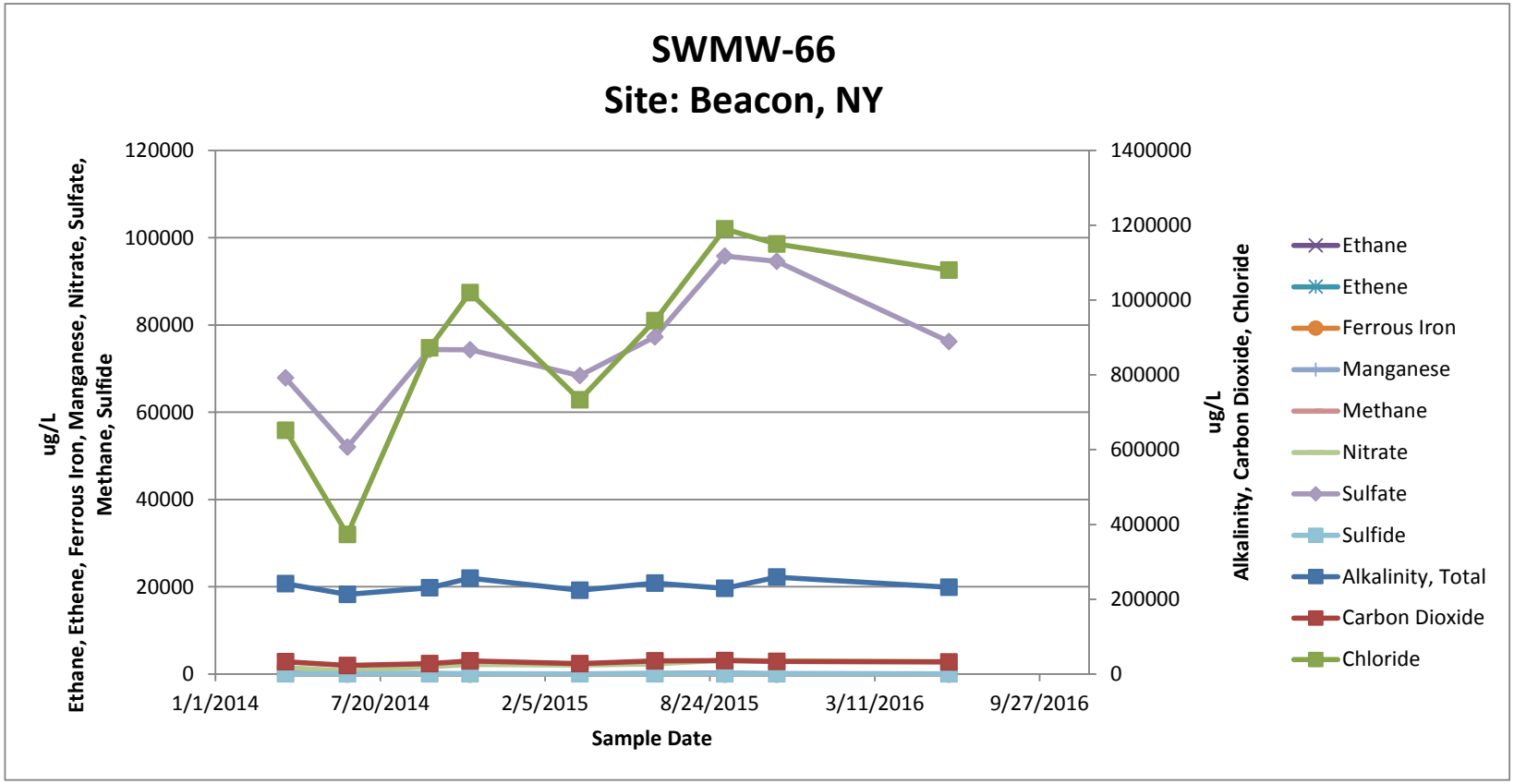

SWMW-55
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
16000
14000
12000
10000
8000
6000
4000
2000
0
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

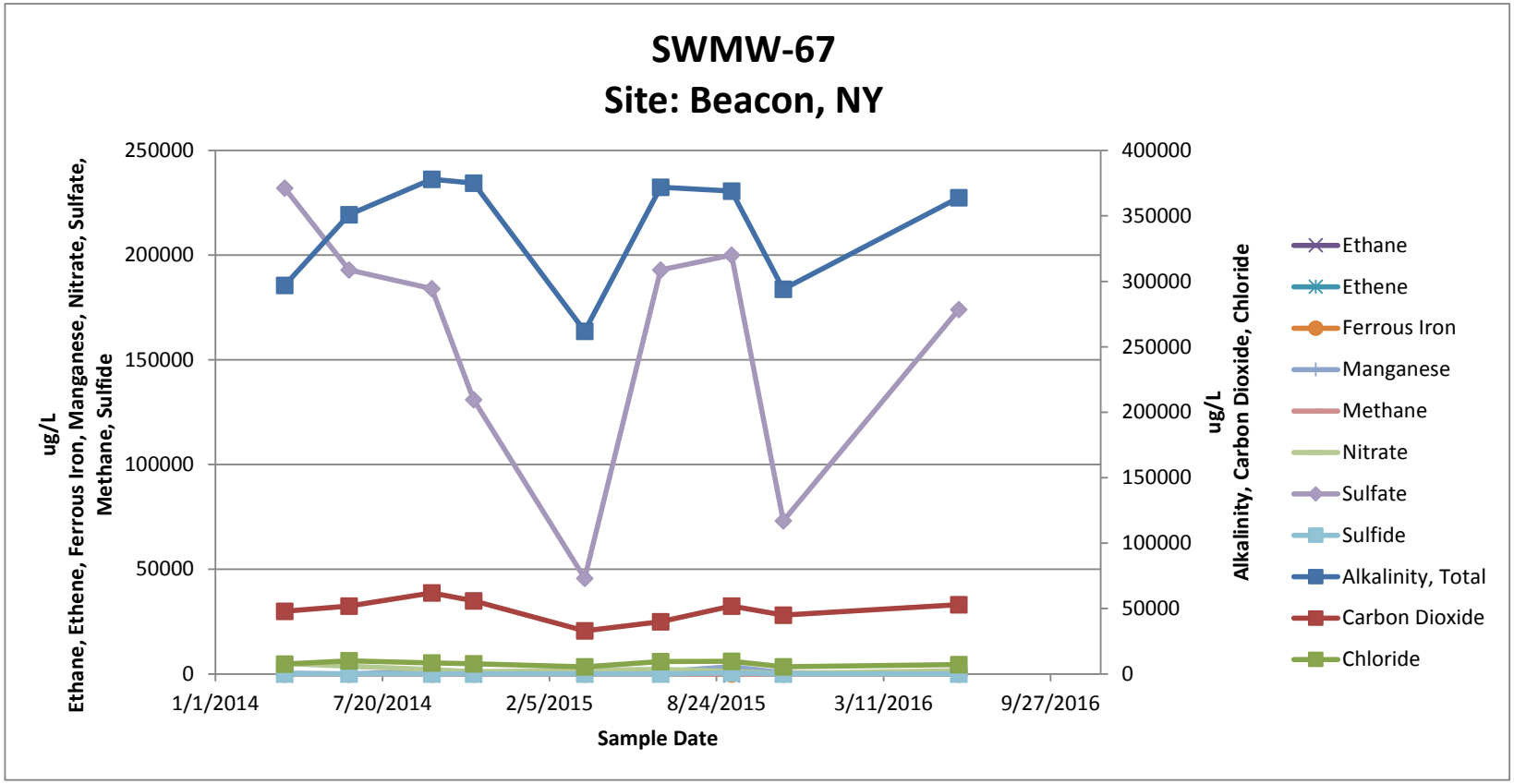

SWMW-56
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

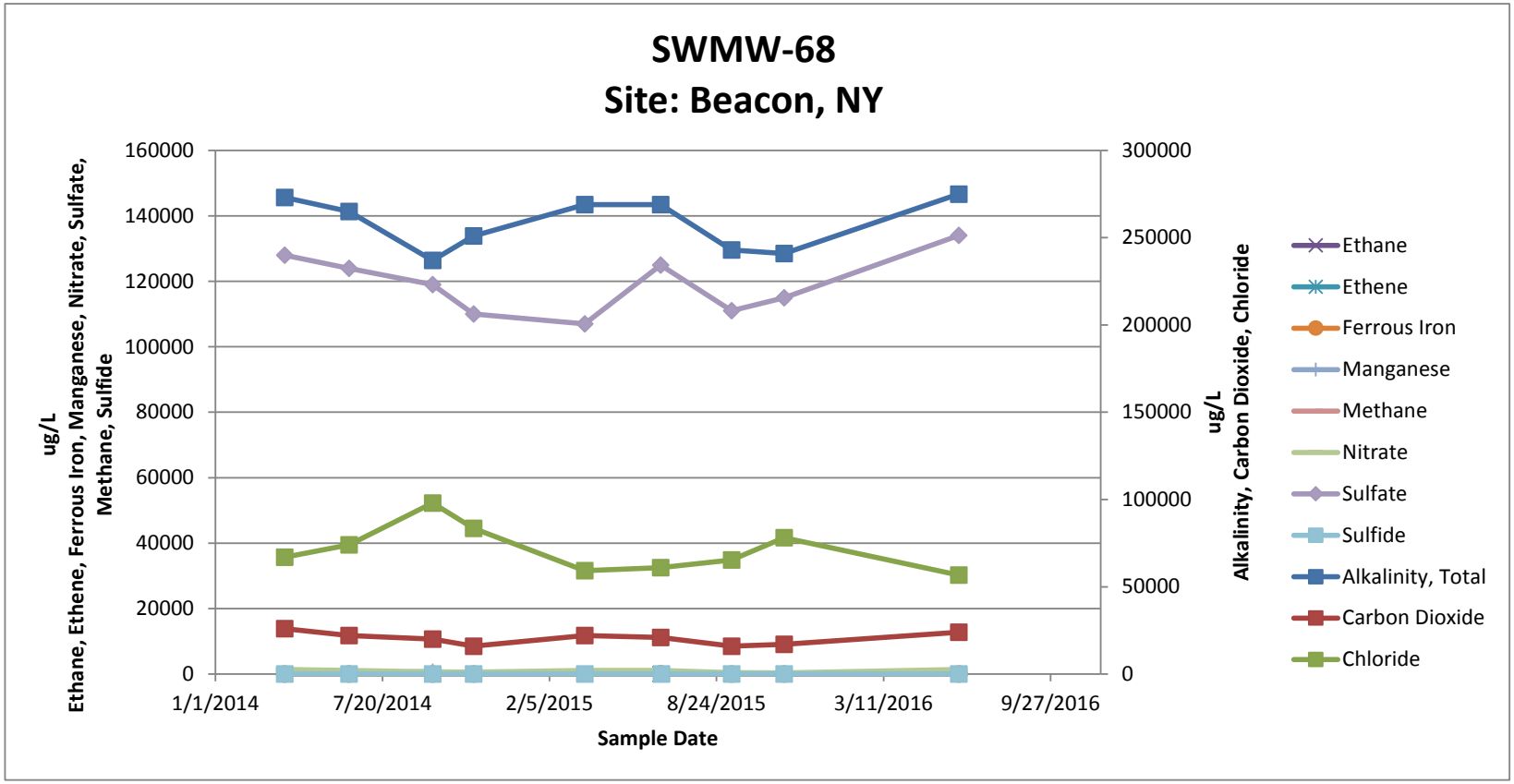

SWMW-58
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
80000
70000
60000
50000
40000
30000
20000
10000
0
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

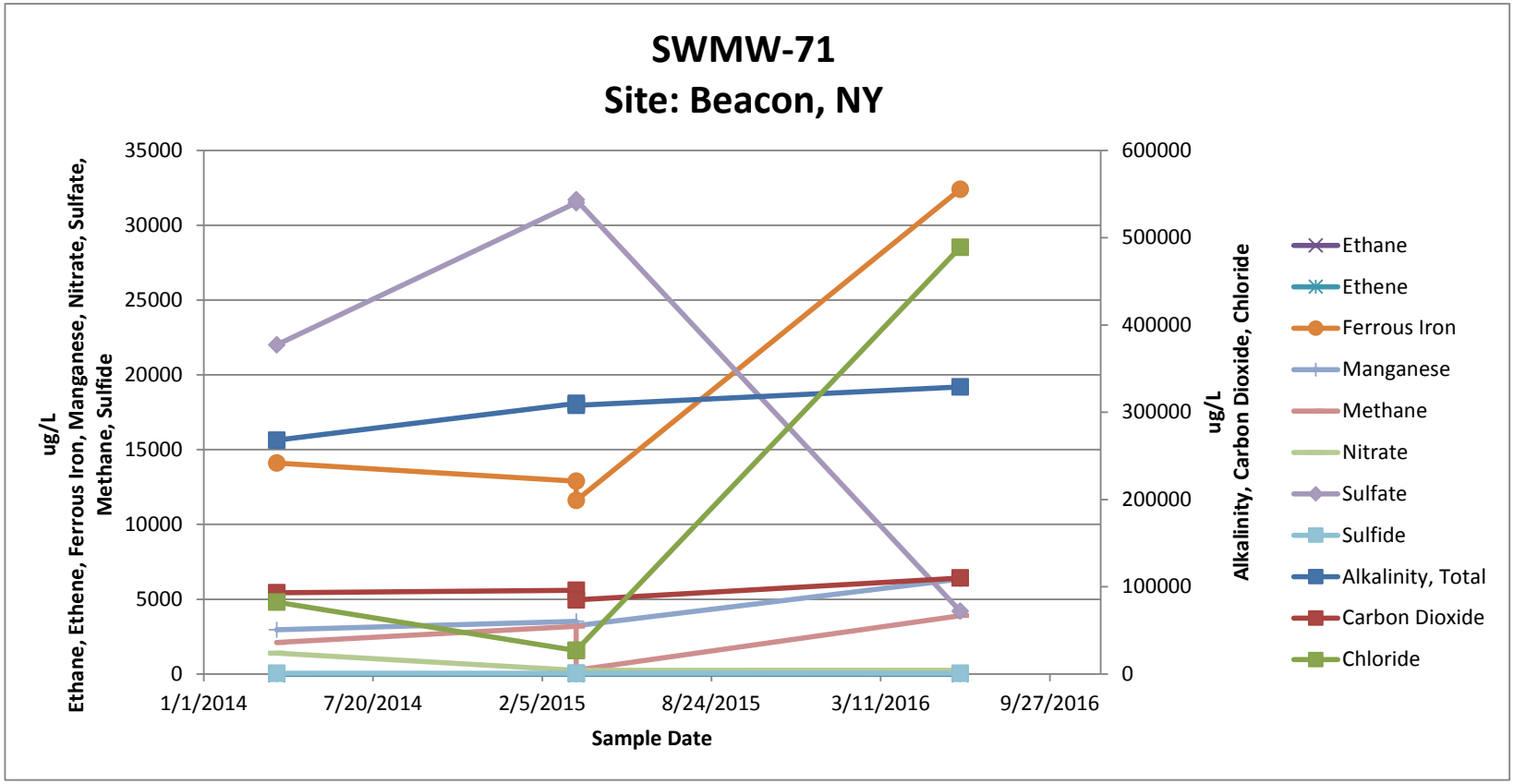

SWMW-62
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

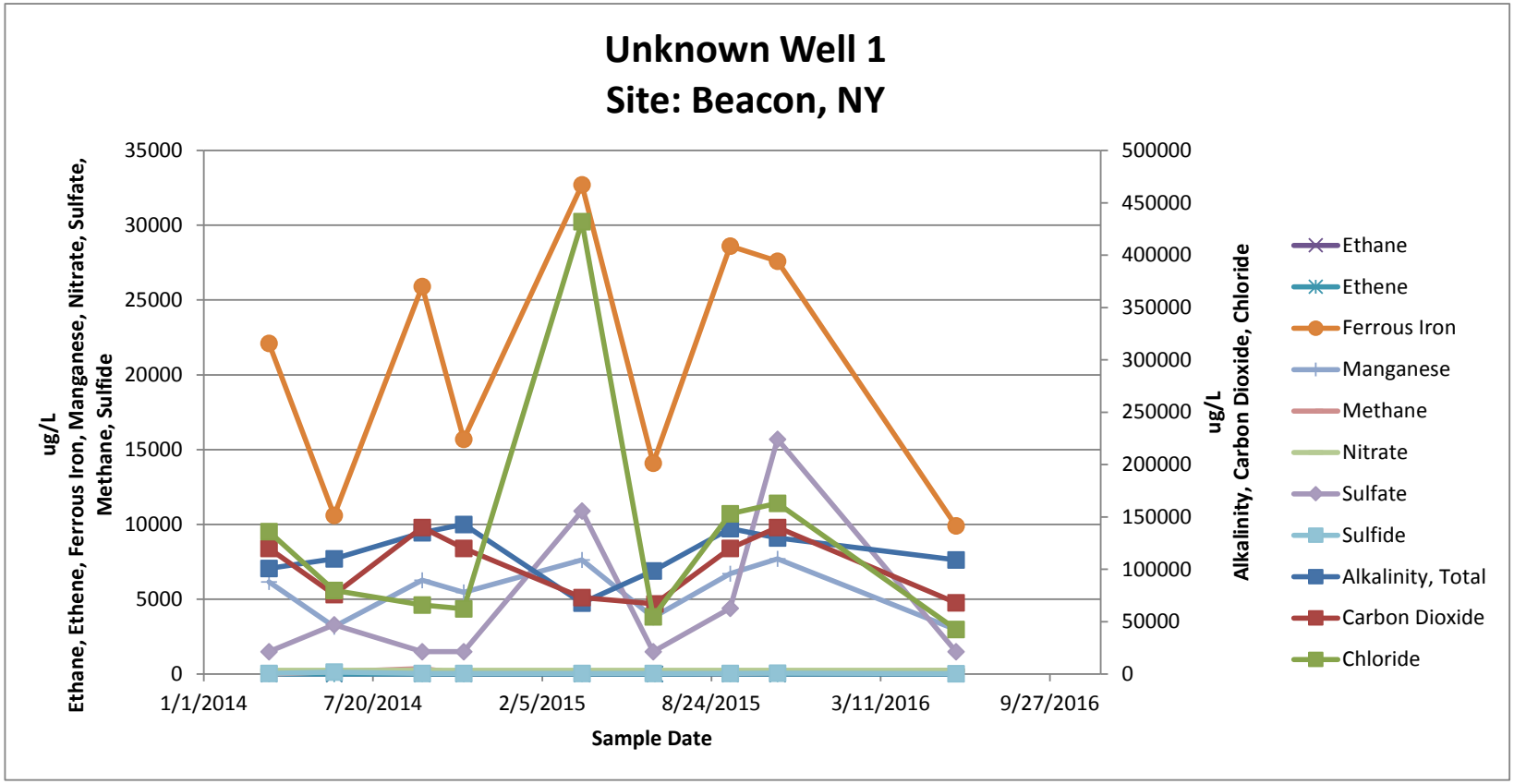

SWMW-65
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

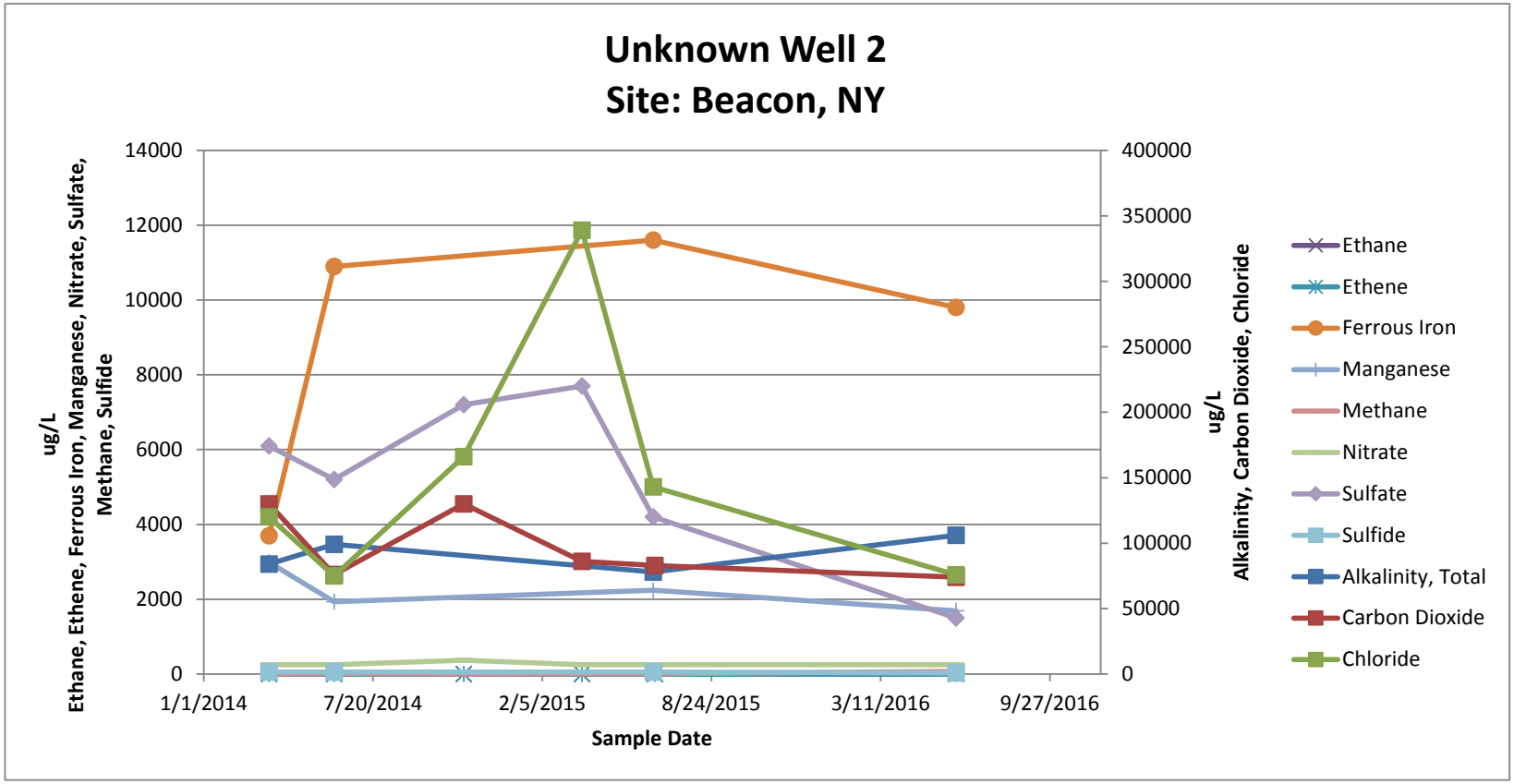

SWMW-66
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
120000
100000
80000
60000
40000
20000
0
1400000
1200000
1000000
800000
600000
400000
200000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

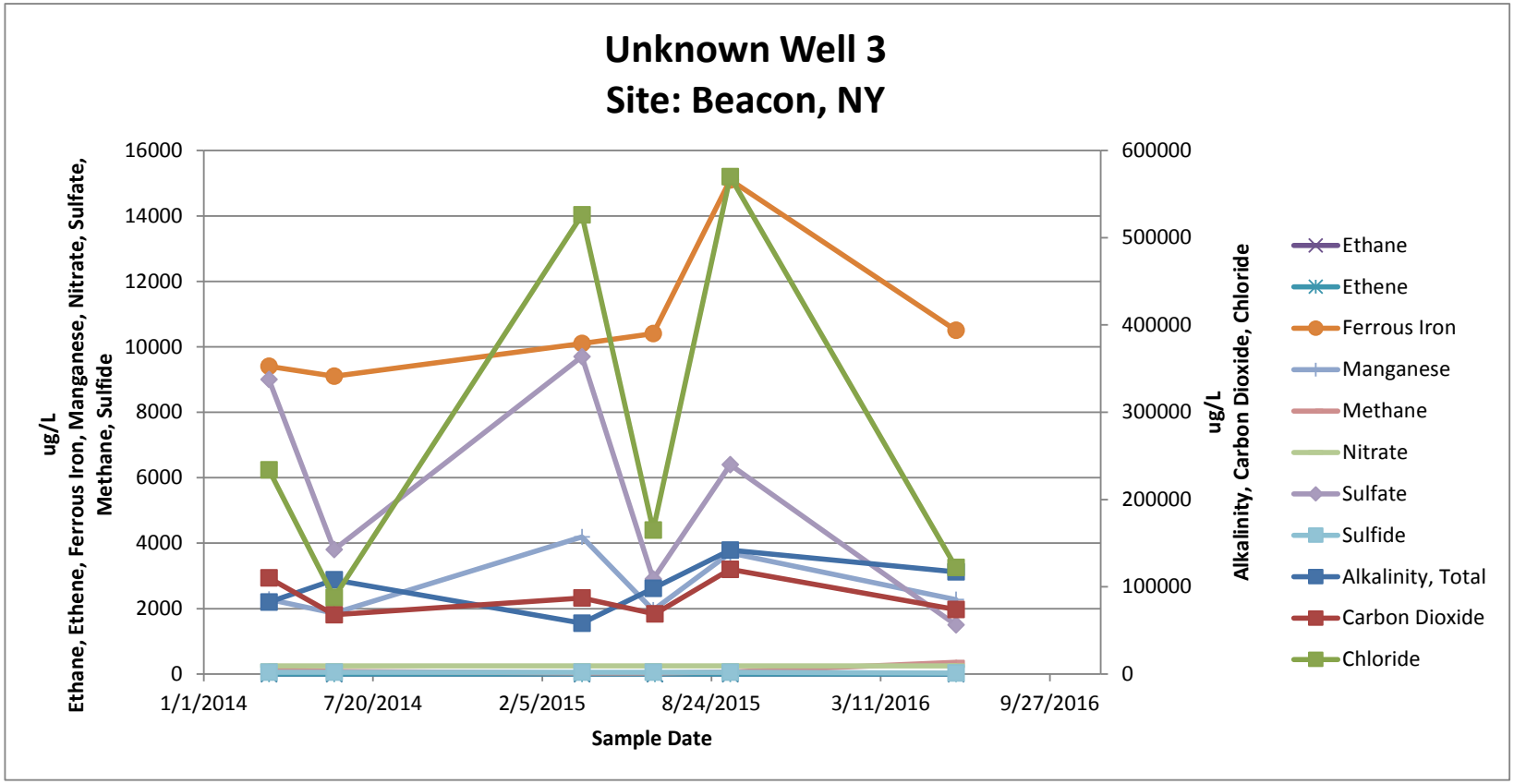

SWMW-67
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
250000
200000
150000
100000
50000
0
400000
350000
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride


SWMW-68
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
160000
140000
120000
100000
80000
60000
40000
20000
0
300000
250000
200000
150000
100000
50000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride


SWMW-71
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
35000
30000
25000
20000
15000
10000
5000
0
600000
500000
400000
300000
200000
100000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

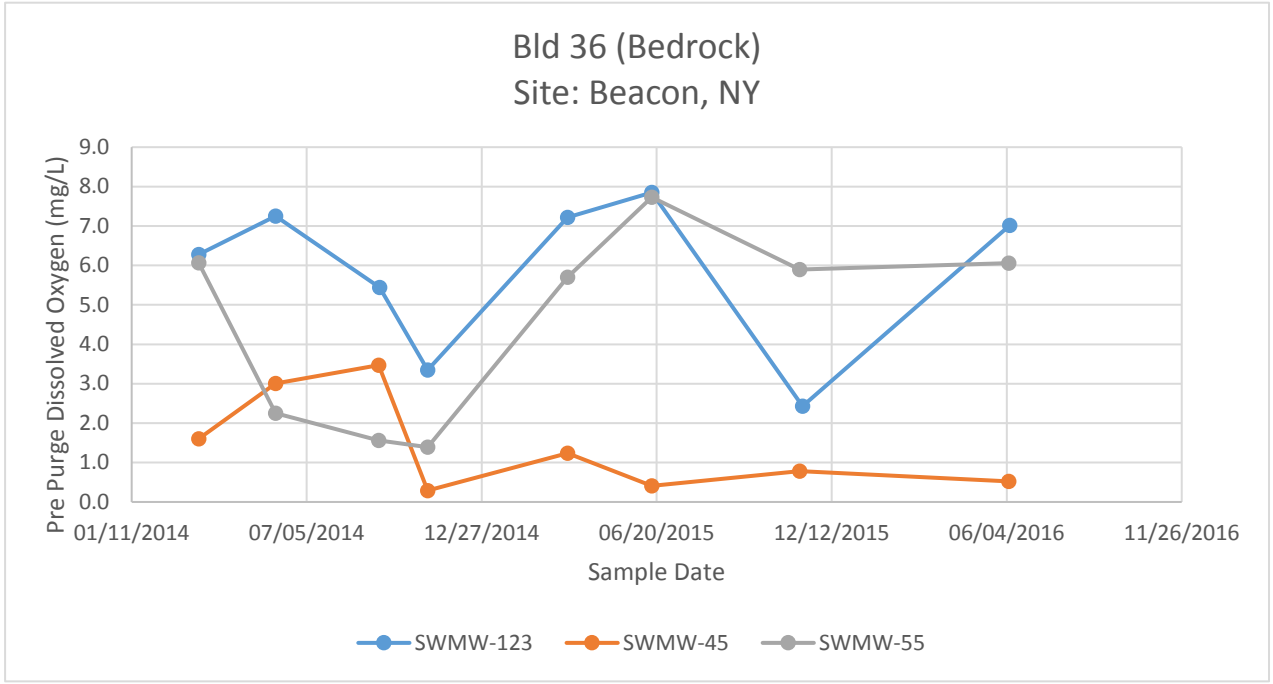

Unknown Well 1
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
35000
30000
25000
20000
15000
10000
5000
0
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

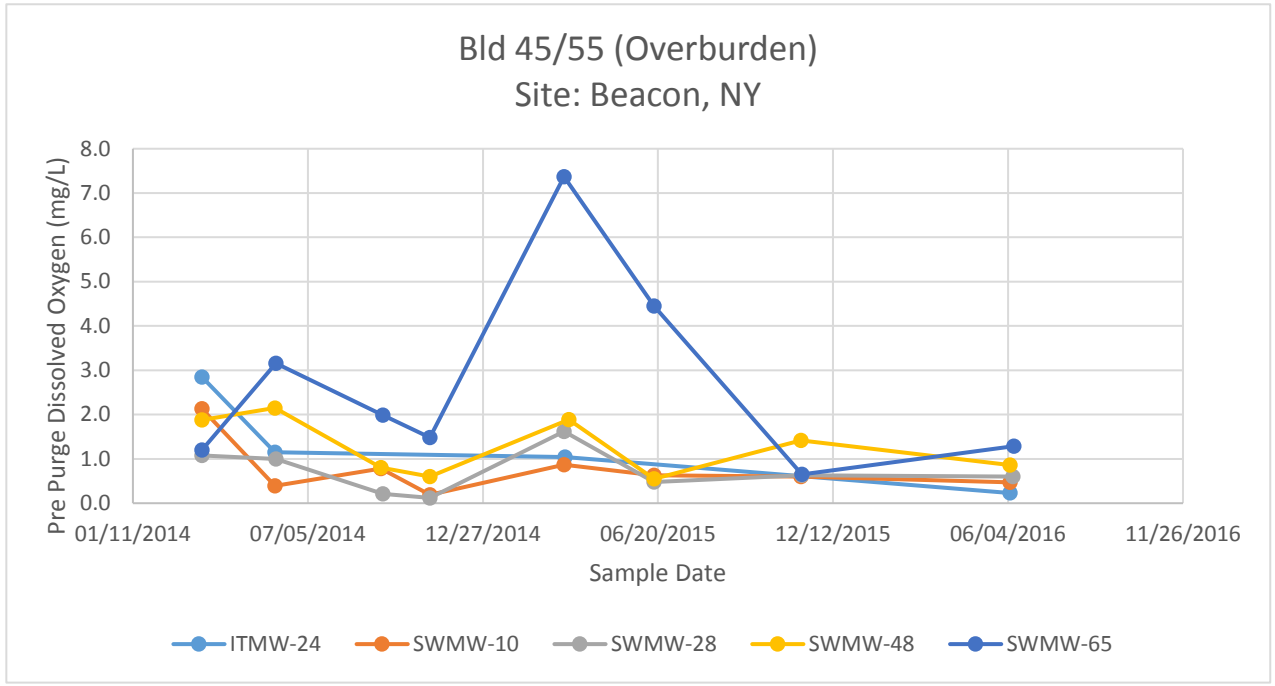

Unknown Well 2
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
ug/L
Alkalinity, Carbon Dioxide, Chloride
14000
12000
10000
8000
6000
4000
2000
0
400000
350000
300000
250000
200000
150000
100000
50000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

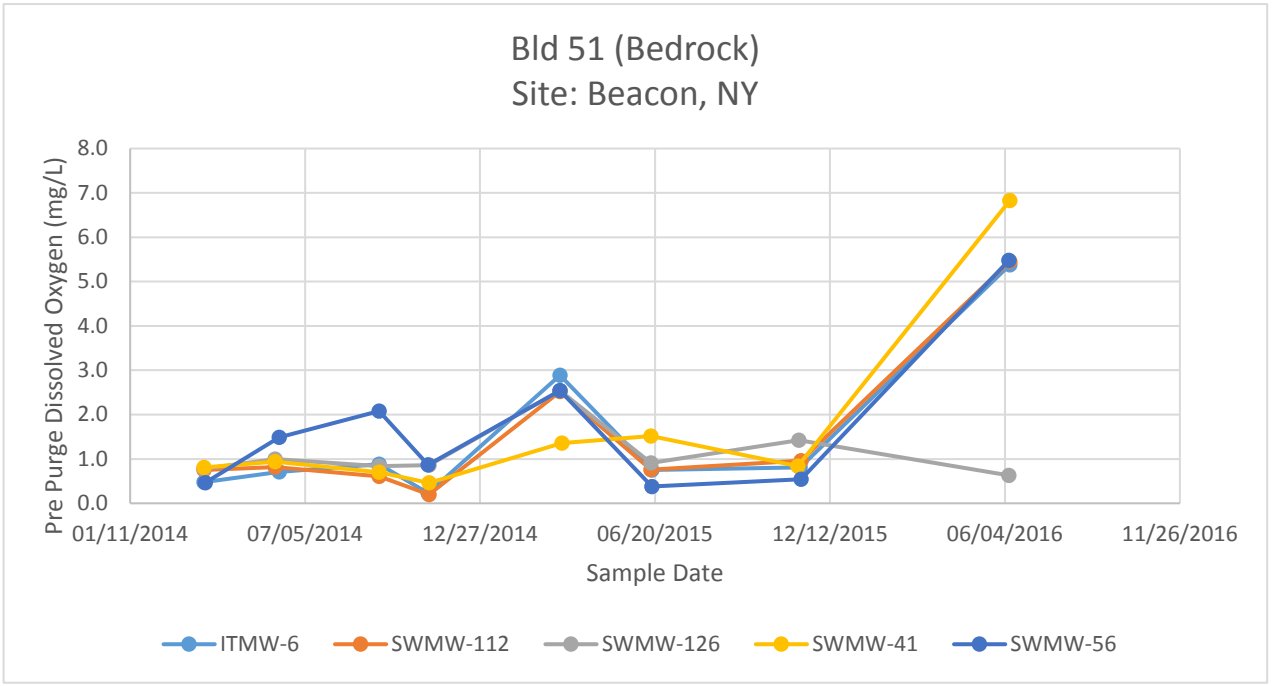

Unknown Well 3
Site: Beacon, NY
ug/L
Ethane, Ethene, Ferrous Iron, Manganese, Nitrate, Sulfate, Methane, Sulfide
16000
14000
12000
10000
8000
6000
4000
2000
0
ug/L
Alkalinity, Carbon Dioxide, Chloride
600000
500000
400000
300000
200000
100000
0
1/1/2014
7/20/2014
2/5/2015
8/24/2015
3/11/2016
9/27/2016
Sample Date
Ethane
Ethene
Ferrous Iron
Manganese
Methane
Nitrate
Sulfate
Sulfide
Alkalinity, Total
Carbon Dioxide
Chloride

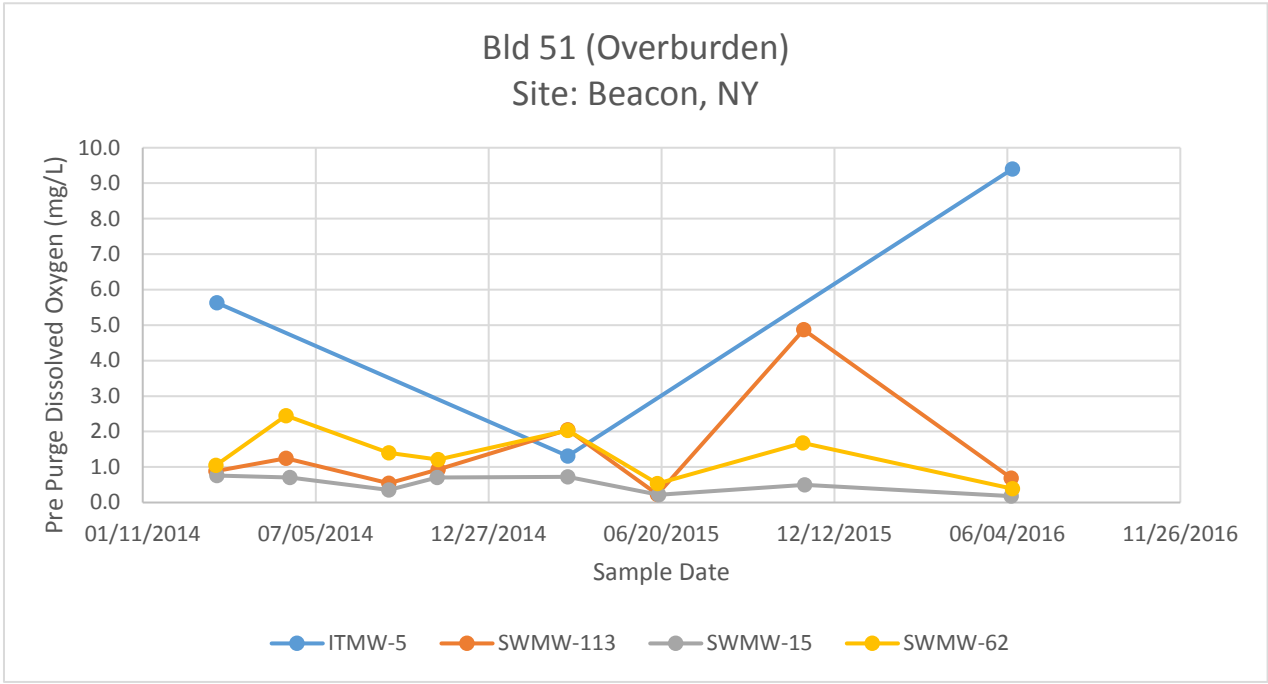
2014 THROUGH 2016 DO AND REDOX POTENTIAL SUMMARY GRAPHS WITH WELL GROUPINGS

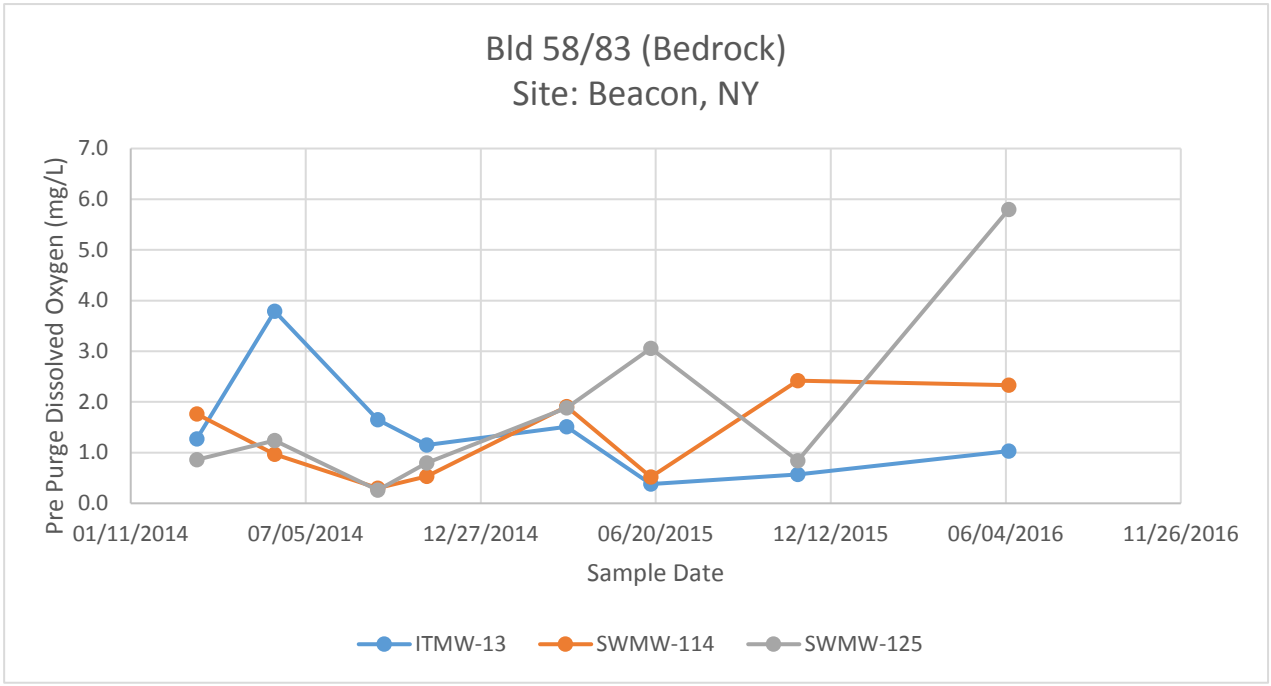
(OVERBURDEN AND BEDROCK WELLS)

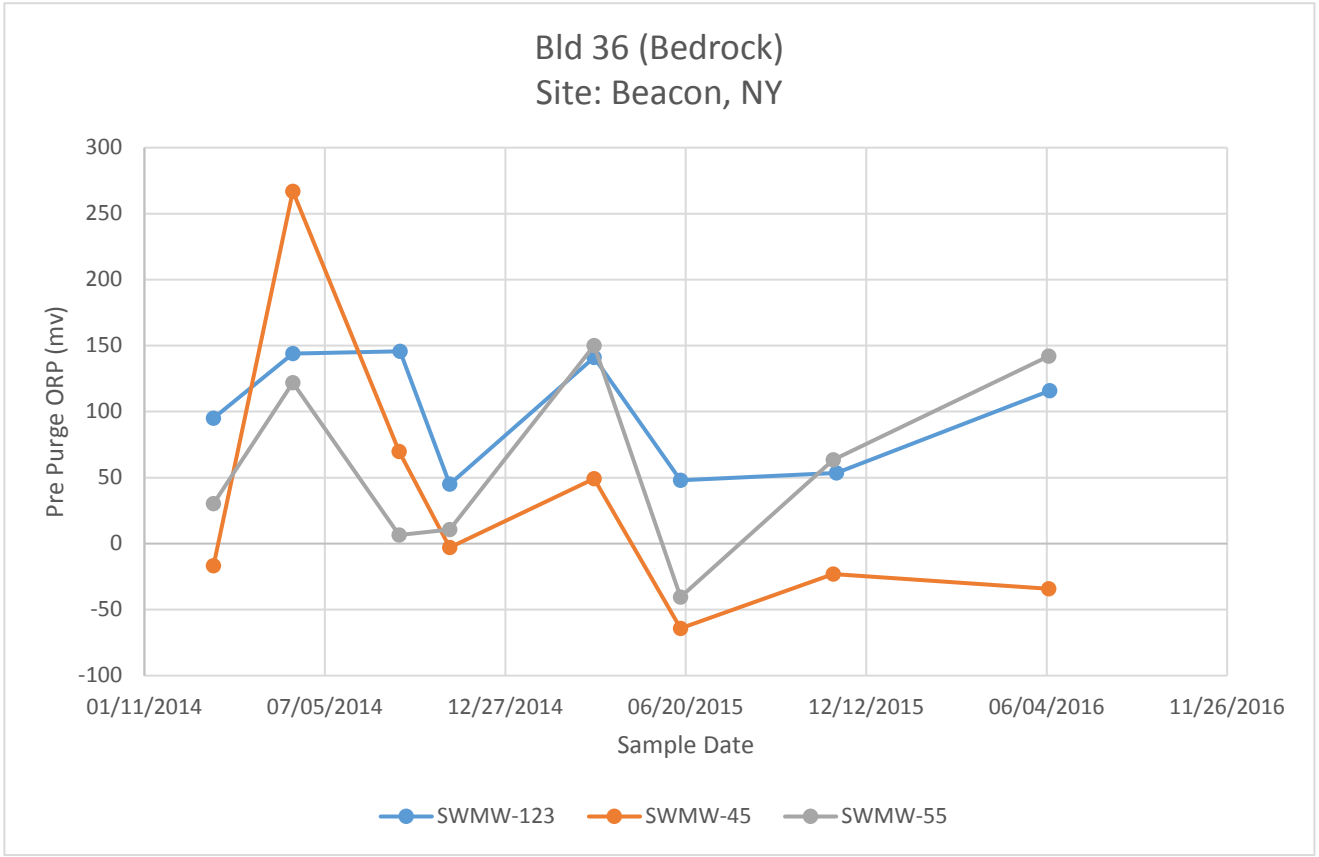

Bld 36 (Bedrock)
Site: Beacon, NY
Pre Purge Dissolved Oxygen (mg/L)
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
SWMW-123
SWMW-45
SWMW-55

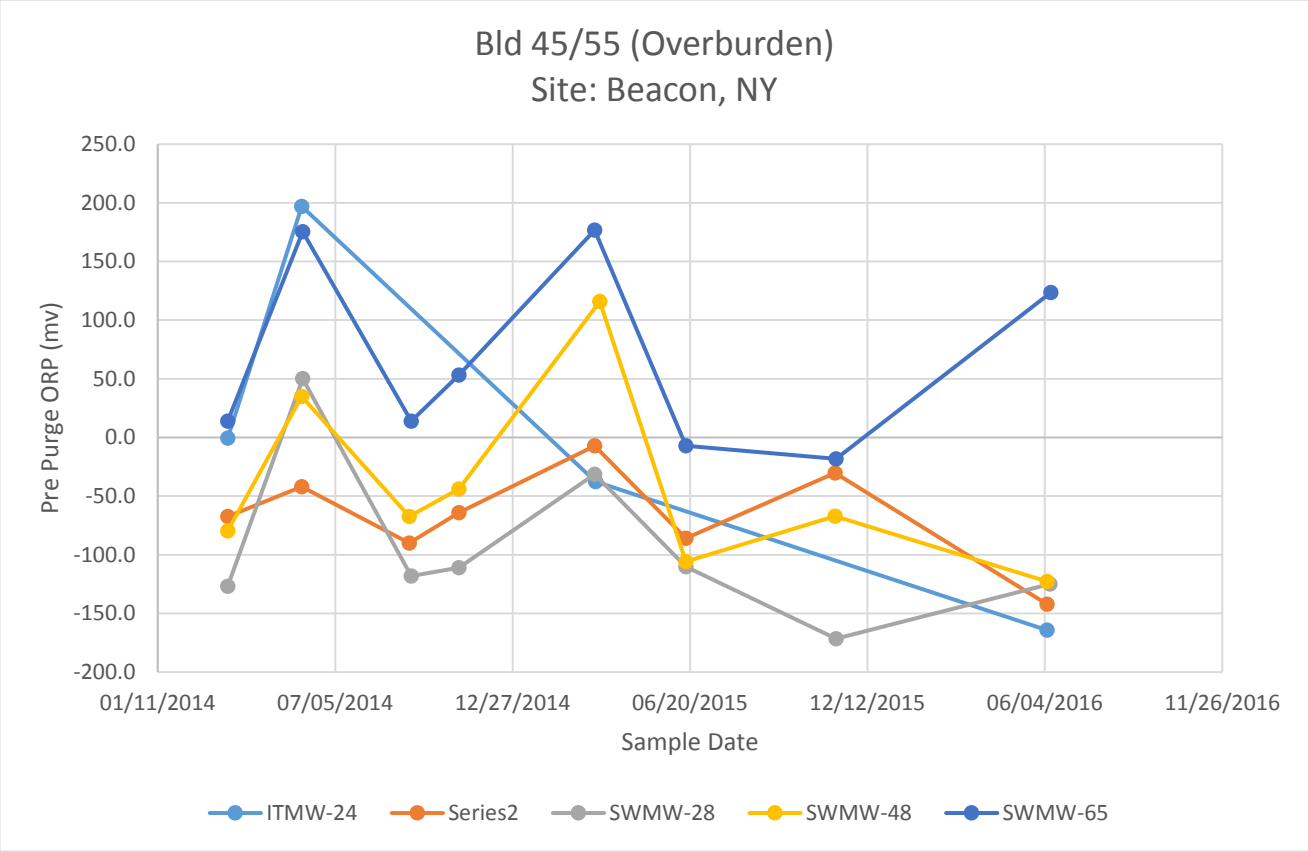

Bld 45/55 (Overburden)
Site: Beacon, NY
Pre Purge Dissolved Oxygen (mg/L)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-24
SWMW-10
SWMW-28
SWMW-48
SWMW-65

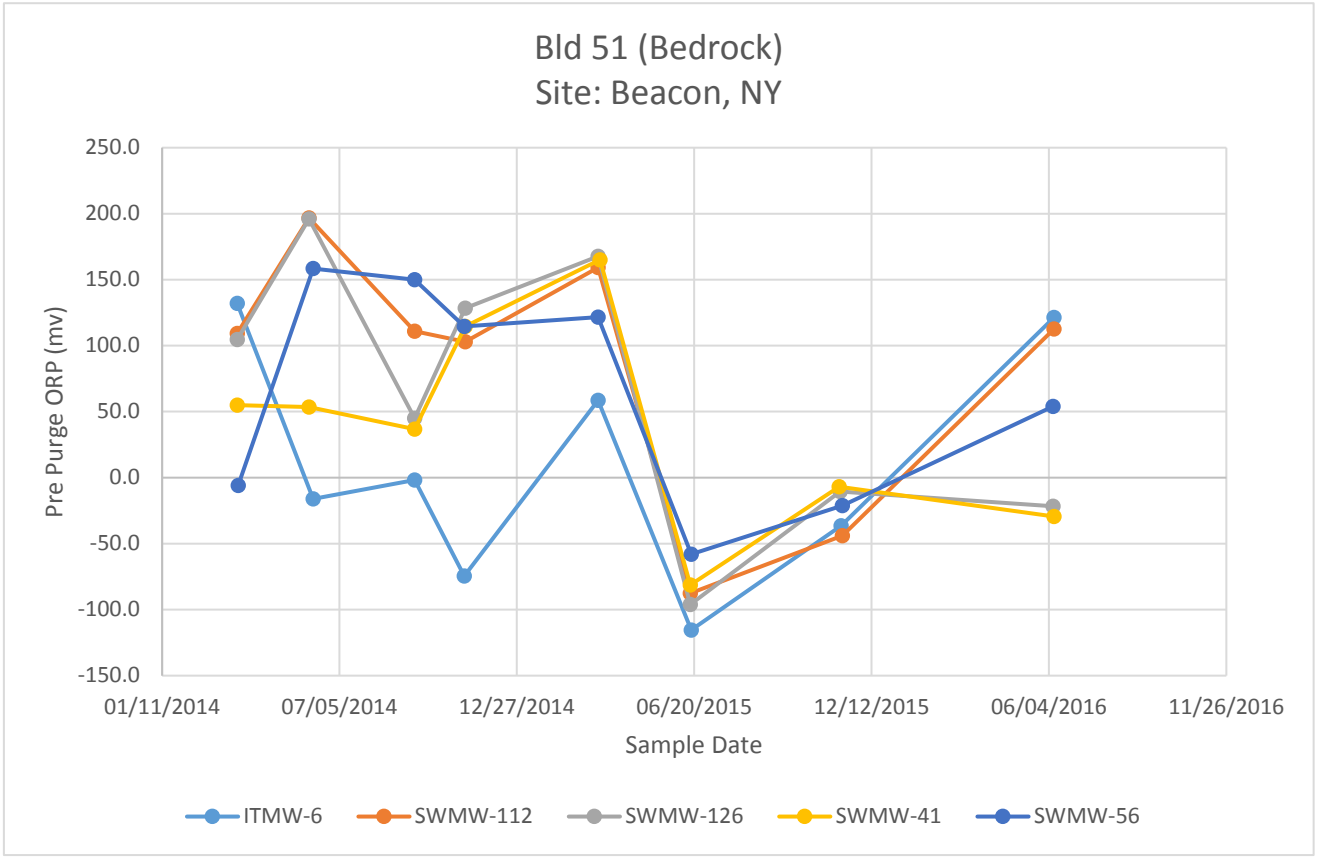

Bld 51 (Bedrock)
Site: Beacon, NY
Pre Purge Dissolved Oxygen (mg/L)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-6
SWMW-112
SWMW-126
SWMW-41
SWMW-56

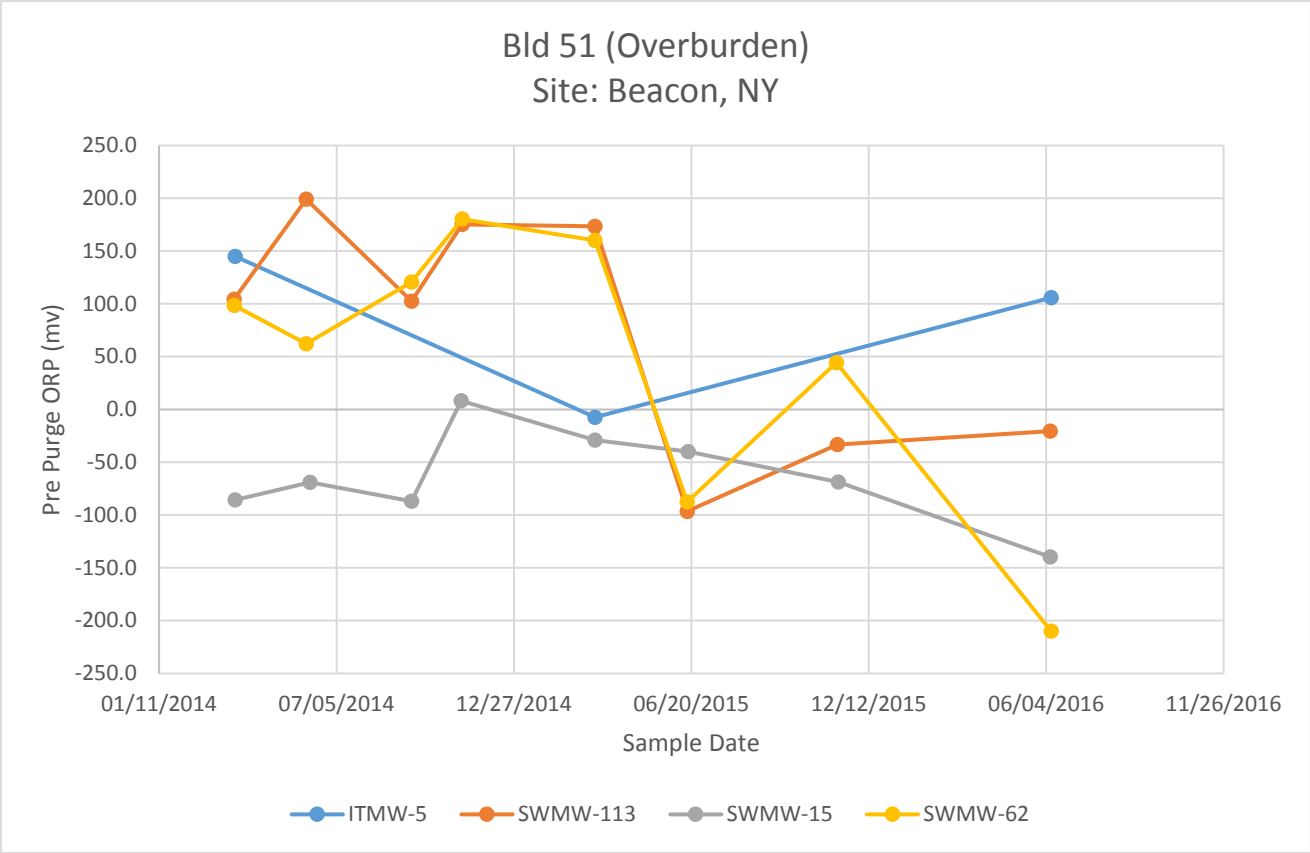

Bld 51 (Overburden)
Site: Beacon, NY
Pre Purge Dissolved Oxygen (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-5
SWMW-113
SWMW-15
SWMW-62

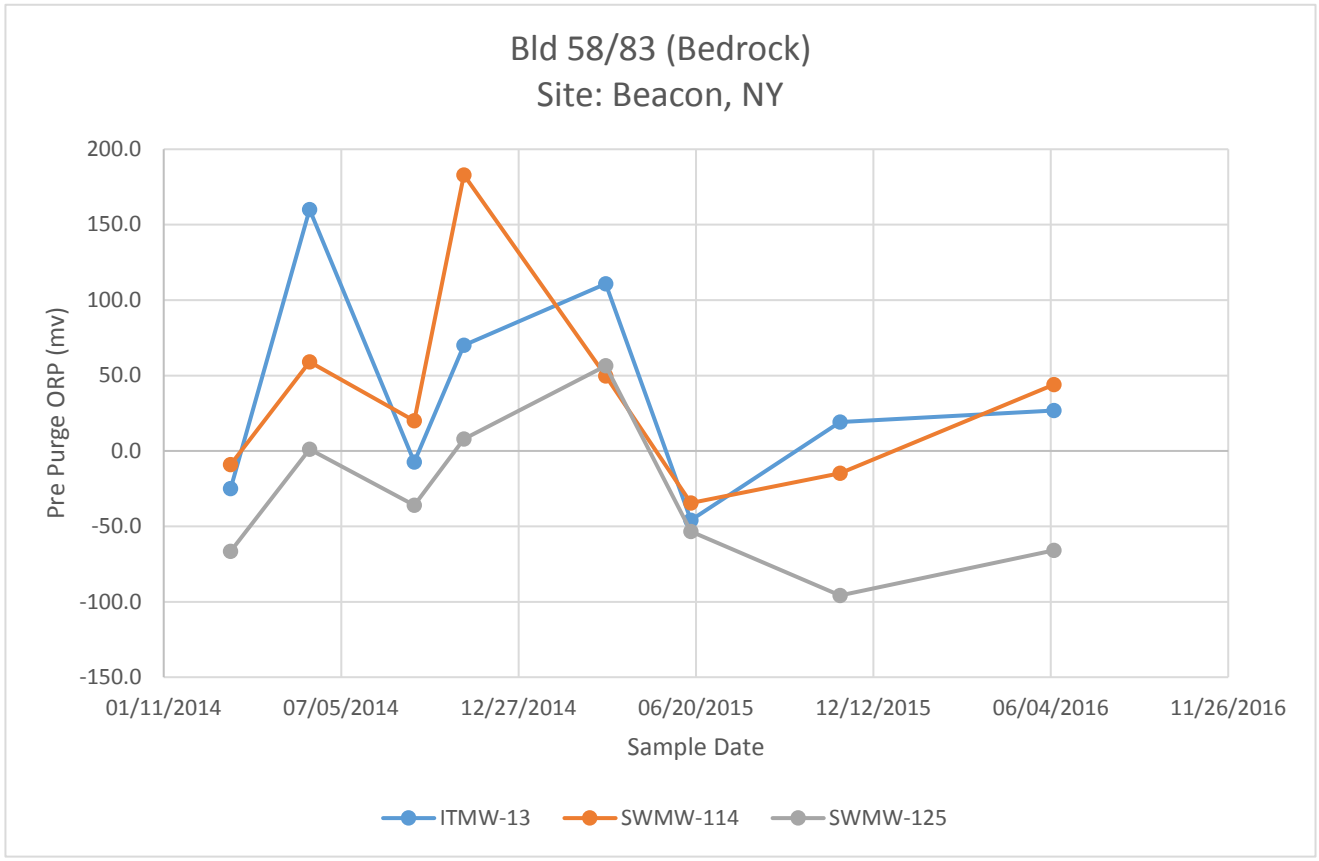

Bld 58/83 (Bedrock)
Site: Beacon, NY
Pre Purge Dissolved Oxygen (mg/L)
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-13
SWMW-114
SWMW-125


Bld 36 (Bedrock)
Site: Beacon, NY
Pre Purge ORP (mv)
300
250
200
150
100
50
0
-50
-100
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
SWMW-123
SWMW-45
SWMW-55


Bld 45/55 (Overburden)
Site: Beacon, NY
Pre Purge ORP (mv)
250.0
200.0
150.0
100.0
50.0
0.0
-50.0
-100.0
-150.0
-200.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-24
Series2
SWMW-28
SWMW-48
SWMW-65

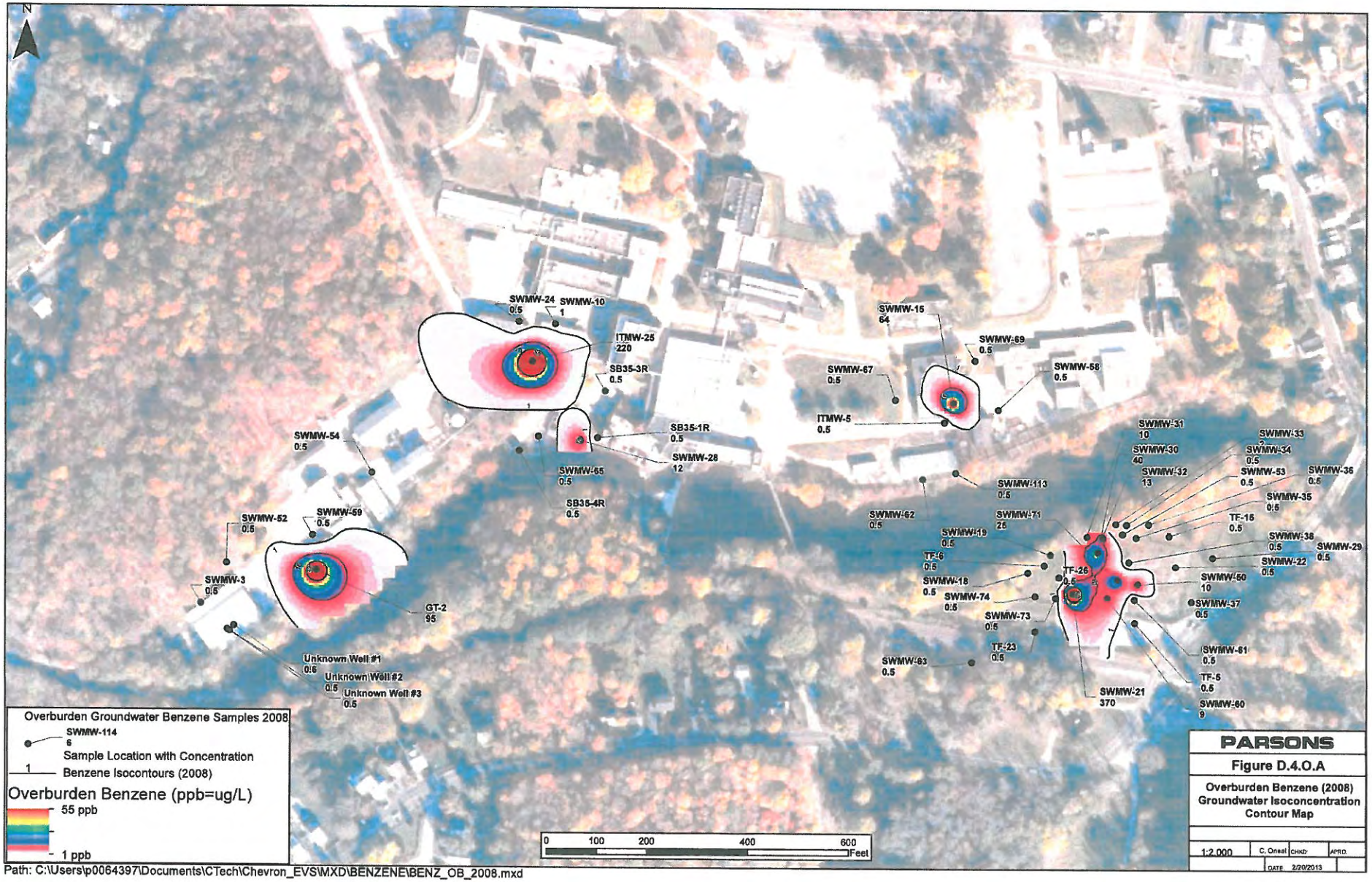

Bld 51 (Bedrock)
Site: Beacon, NY
Pre Purge ORP (mv)
250.0
200.0
150.0
100.0
50.0
0.0
-50.0
-100.0
-150.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-6
SWMW-112
SWMW-126
SWMW-41
SWMW-56


Bld 51 (Overburden)
Site: Beacon, NY
Pre Purge ORP (mv)
250.0
200.0
150.0
100.0
50.0
0.0
-50.0
-100.0
-150.0
-200.0
-250.0
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-5
SWMW-113
SWMW-15
SWMW-62

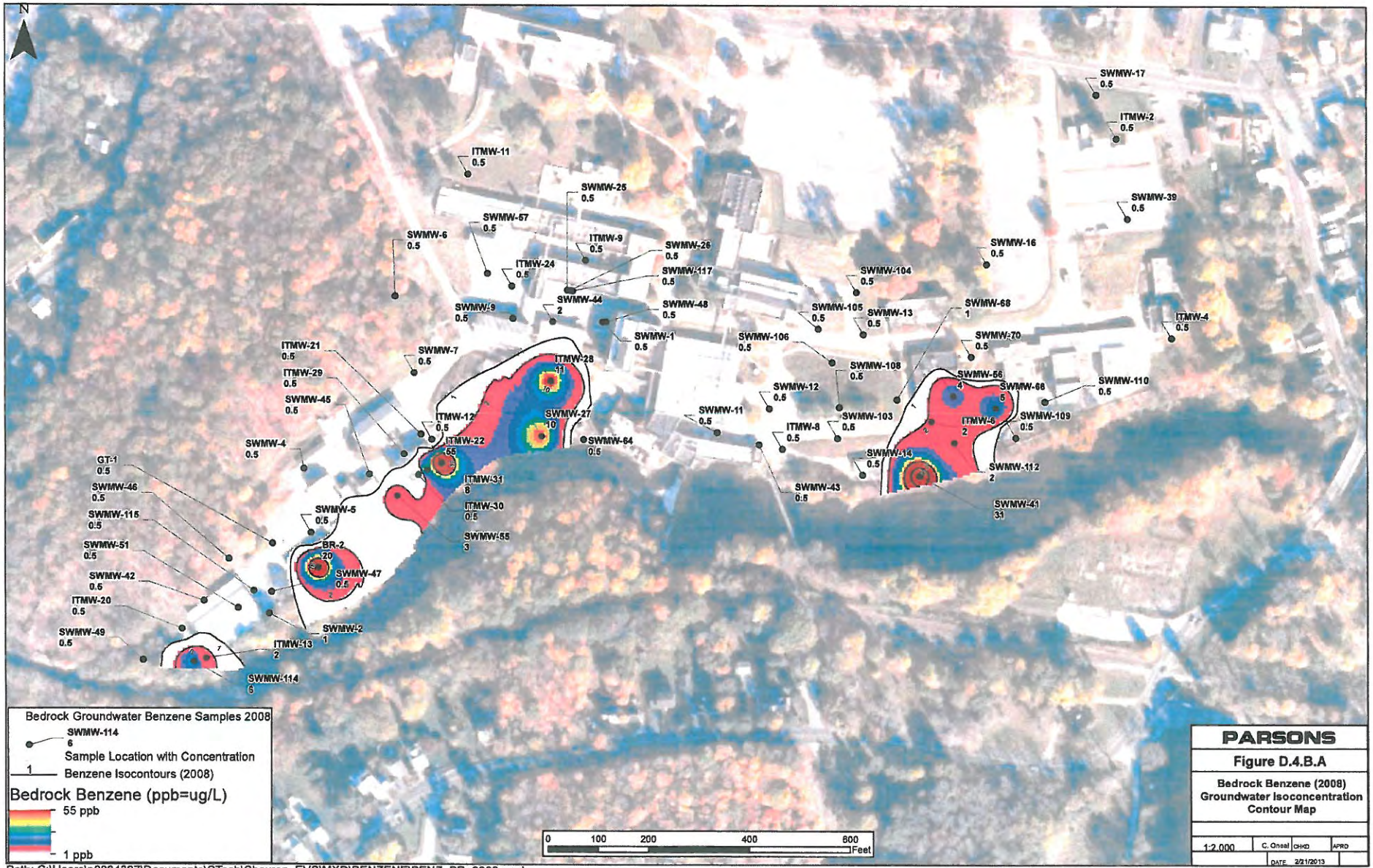

Bld 58/83 (Bedrock)
Site: Beacon, NY
200.0
150.0
100.0
50.0
0.0
-50.0
-100.0
-150.0
Pre Purge ORP (mv)
01/11/2014
07/05/2014
12/27/2014
06/20/2015
12/12/2015
06/04/2016
11/26/2016
Sample Date
ITMW-13
SWMW-114
SWMW-125

APPENDIX A.4

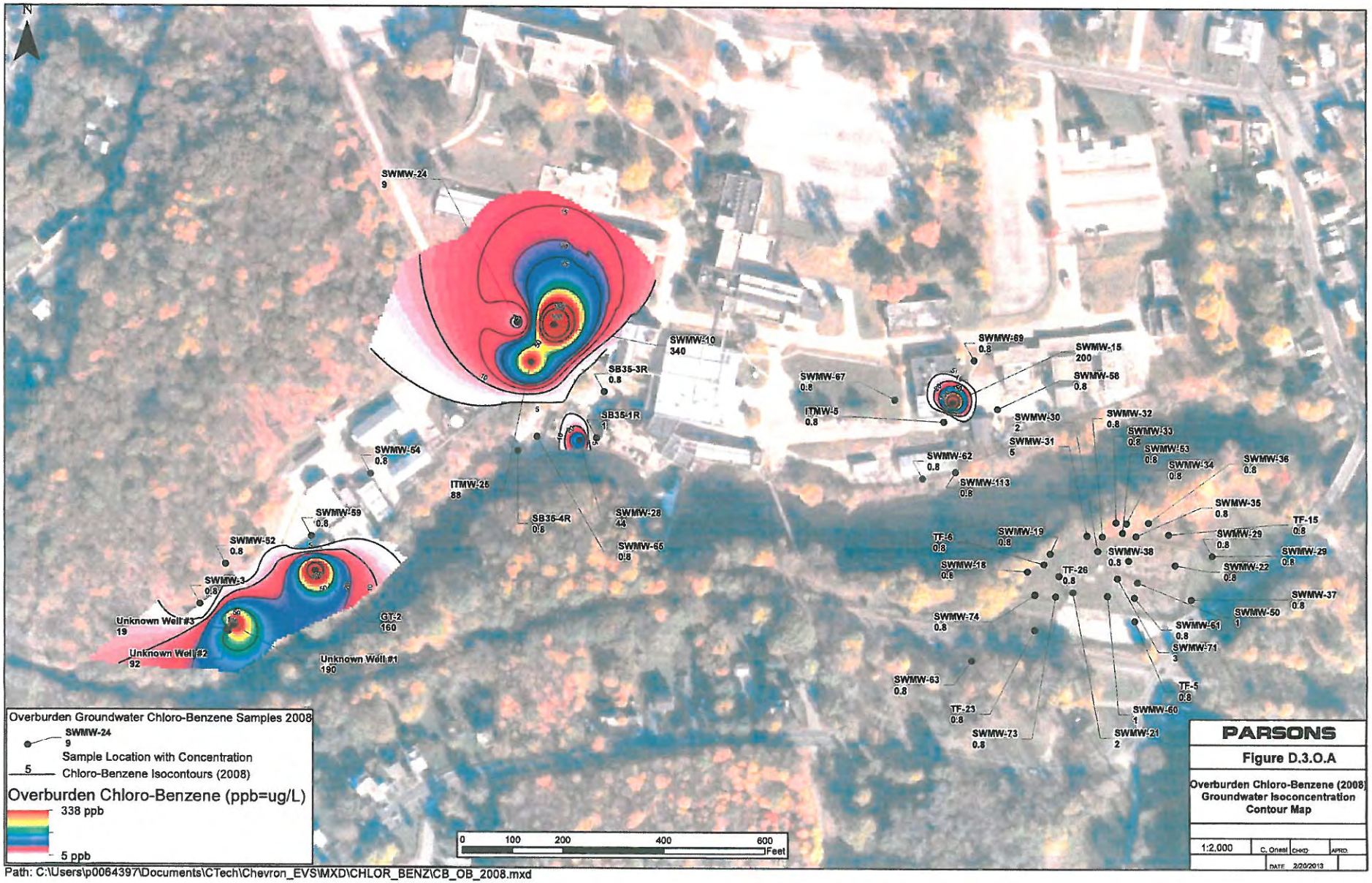
BENZENE, TCE, VC, AND CB ISO-CONCENTRATION MAPS FROM 2008 AND 2016



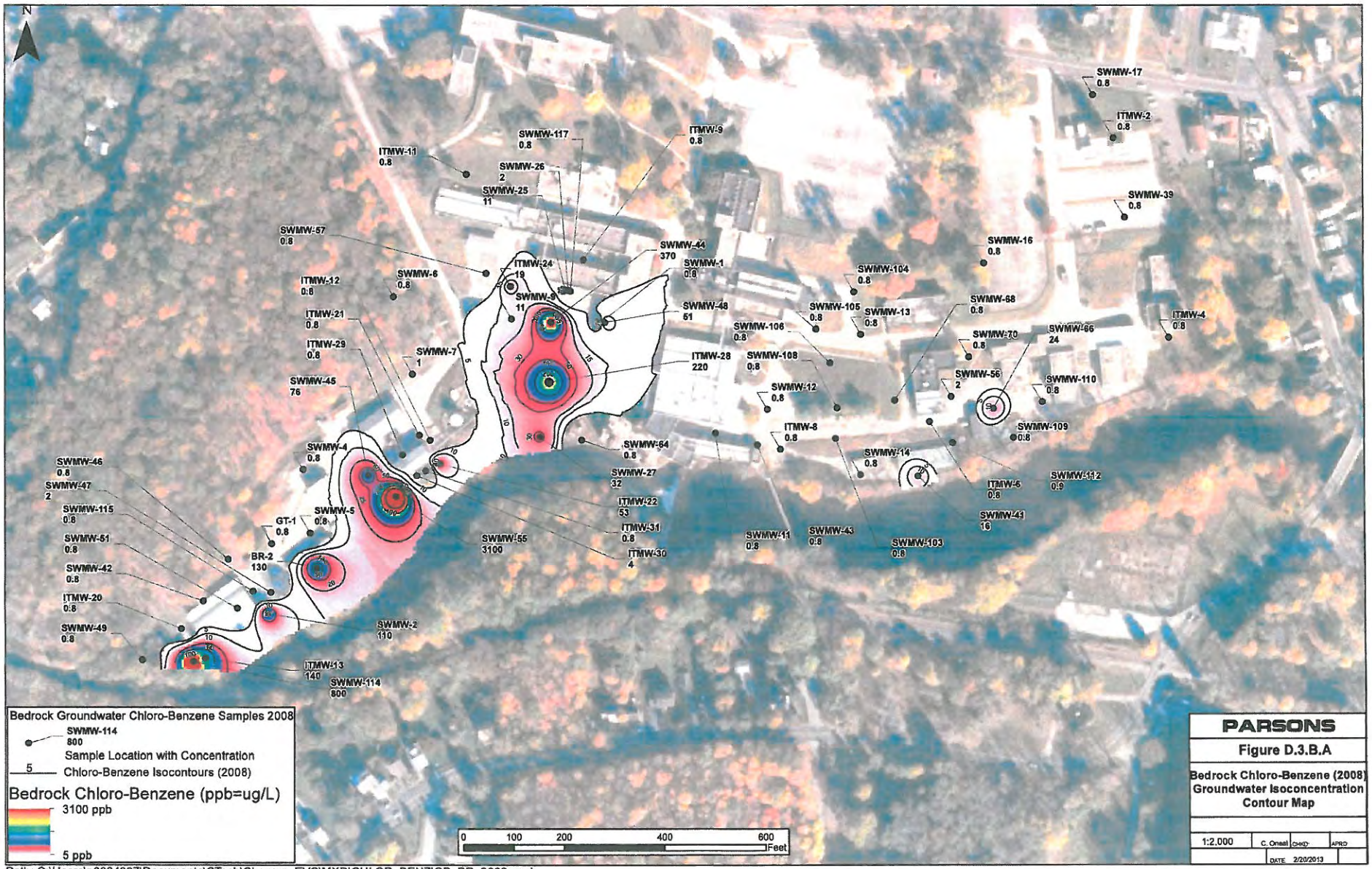
Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\BENZENE\BENZ_OB_2008.mxd



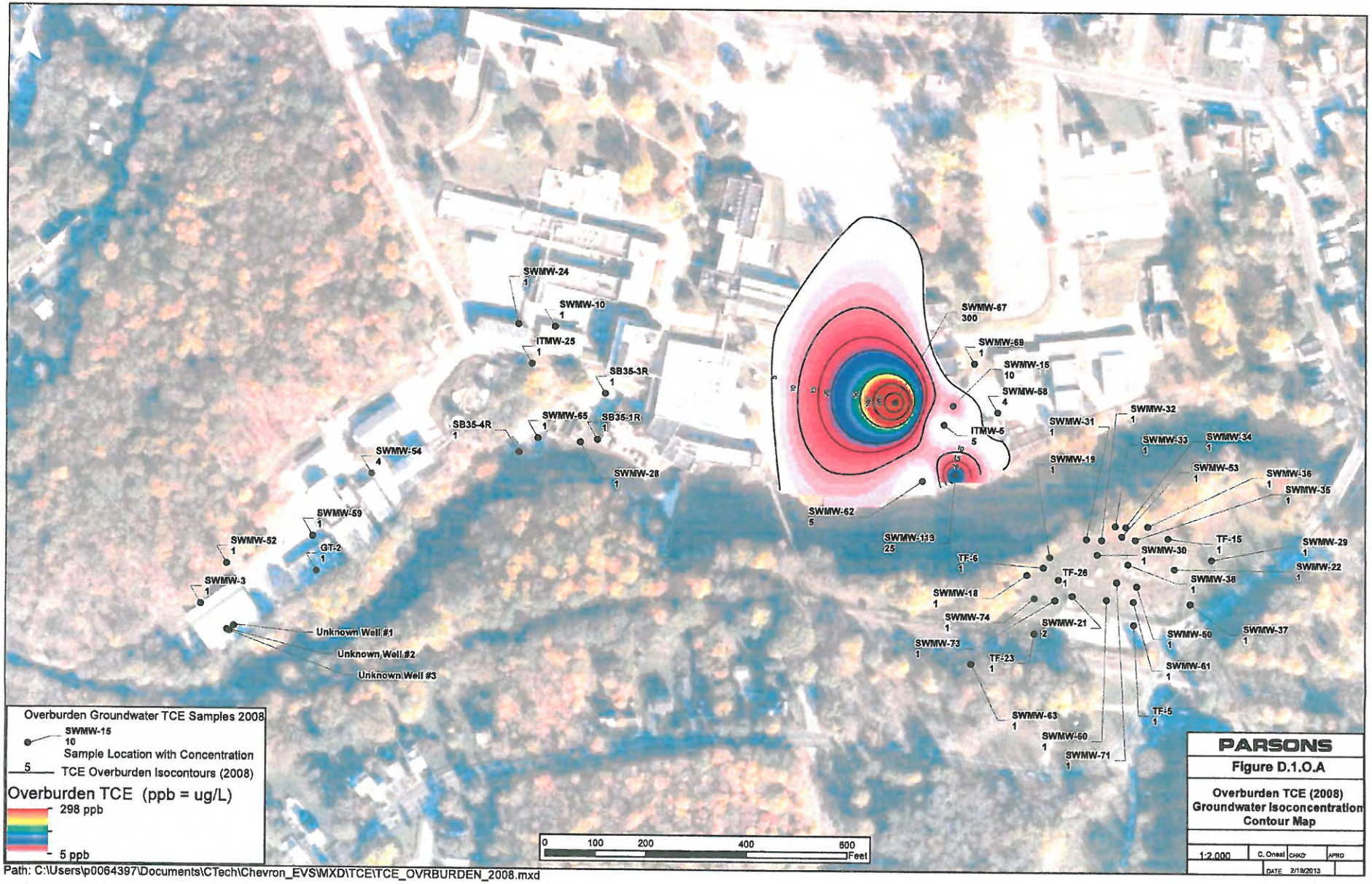
Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\BENZENE\BENZ_BR_2008.mxd



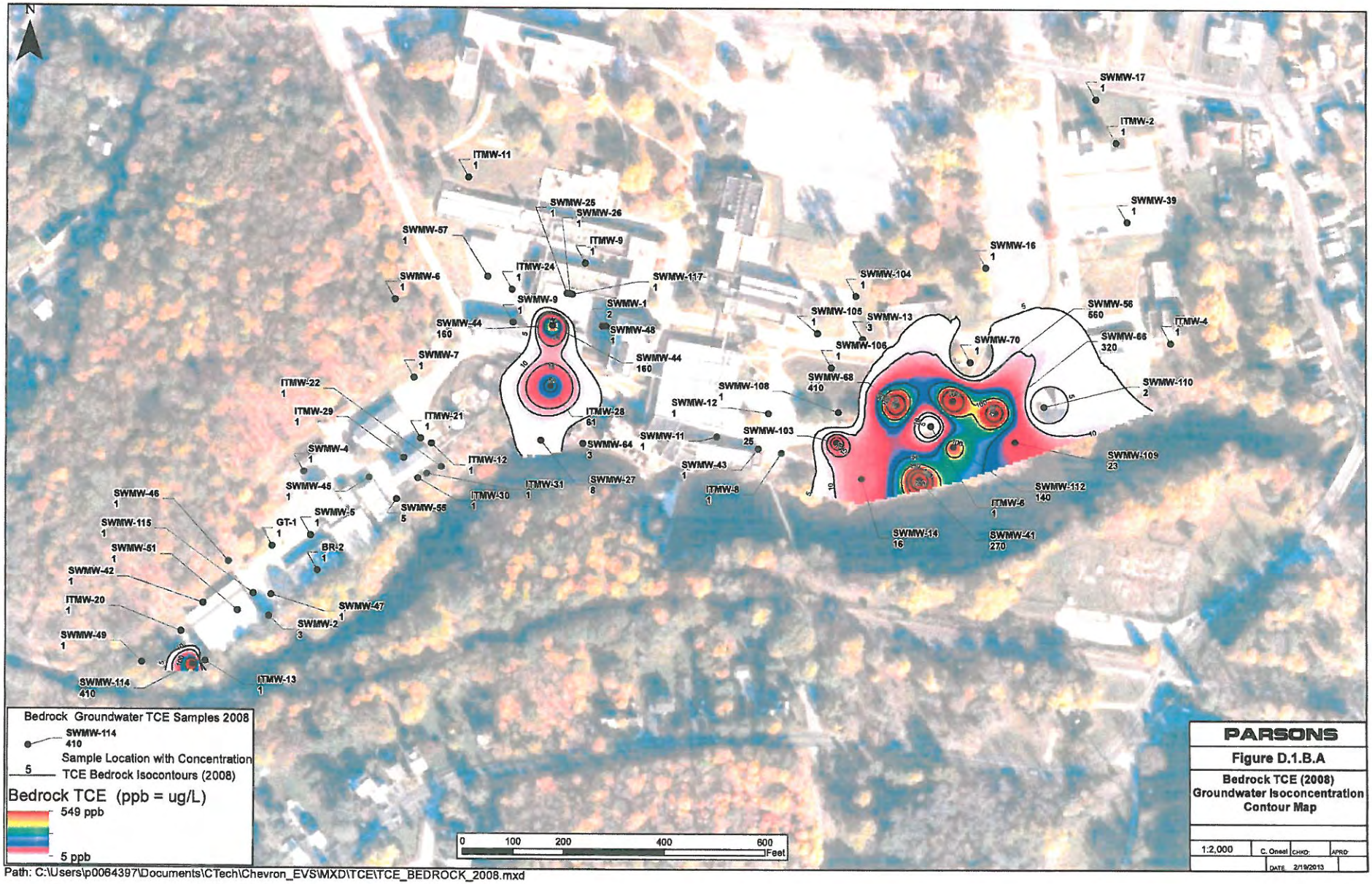
Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\CHLOR_BENZ\CB_OB_2008.mxd



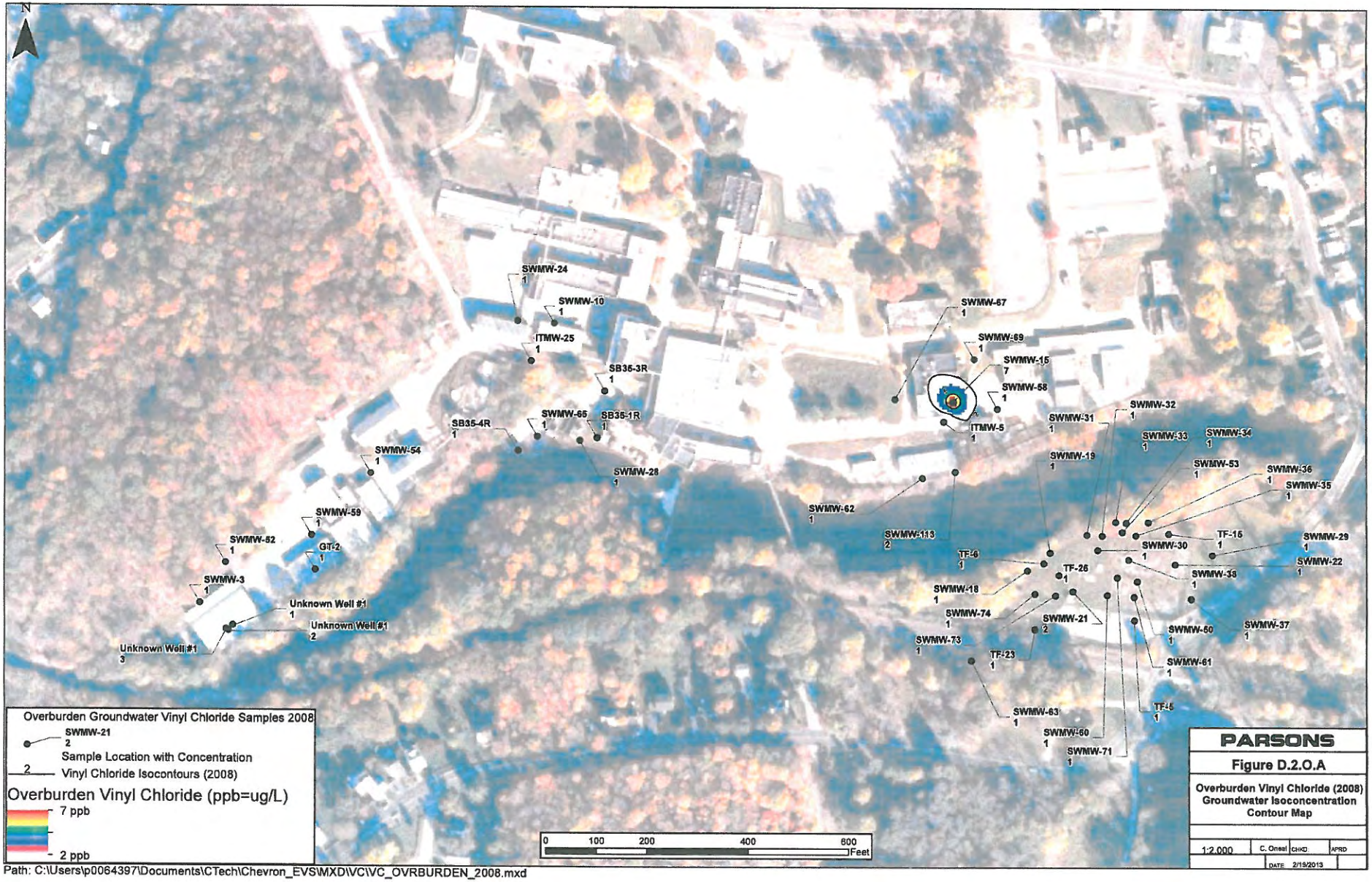
Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\CHLOR_BENZ\CB_BR_2008.mxd



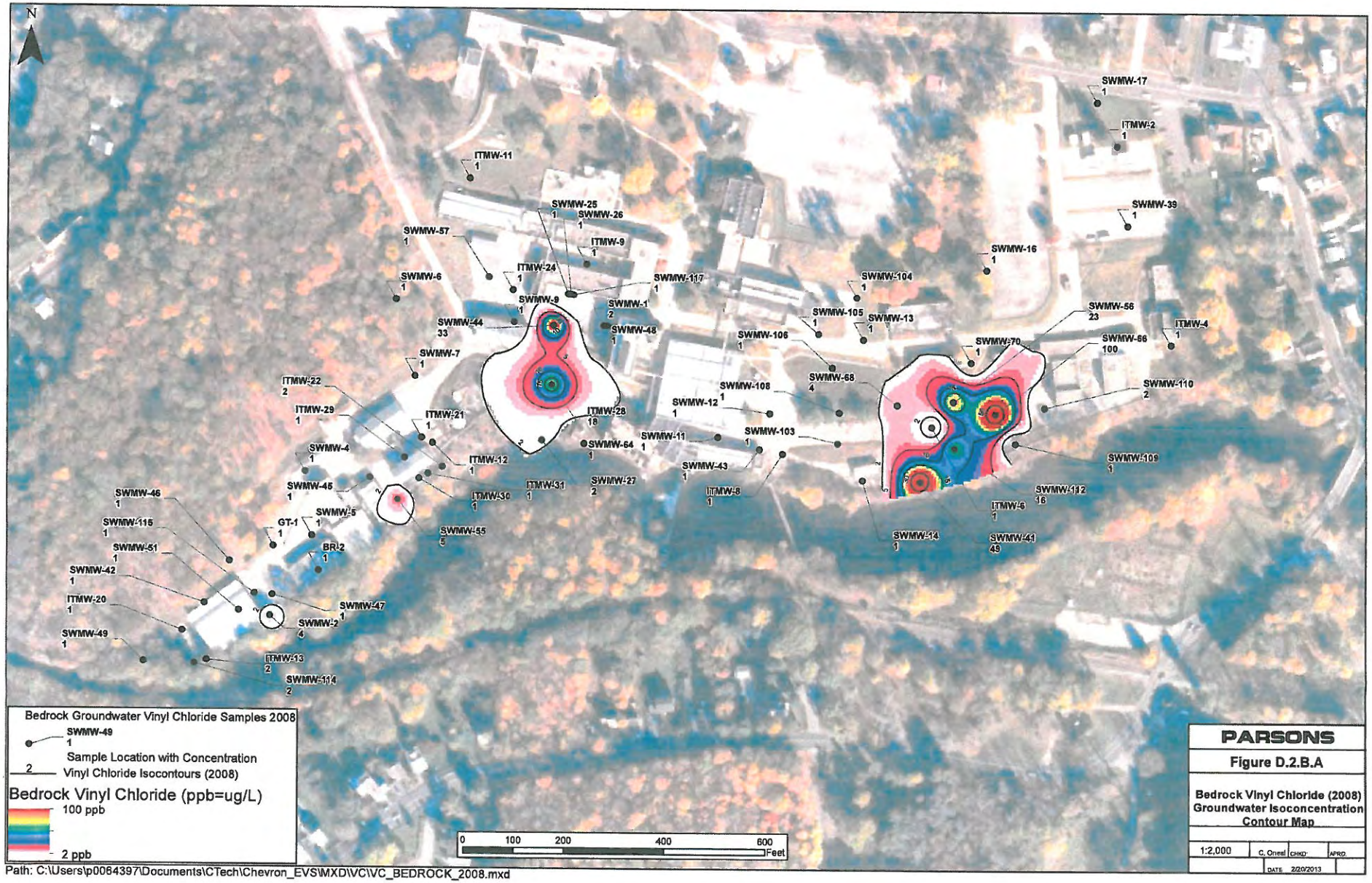
Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\TCE\TCE_OVRBURDEN_2008.mxd



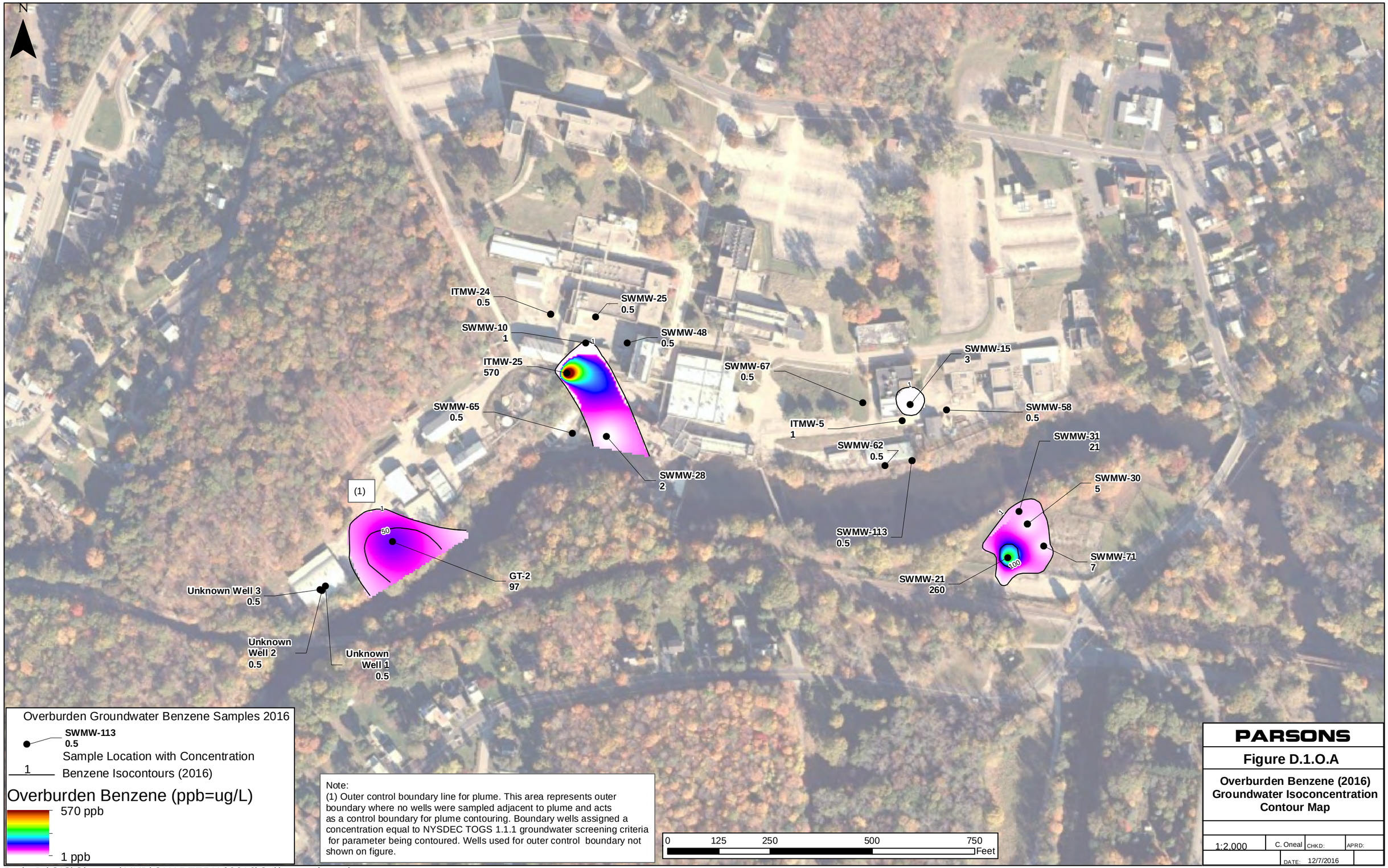
Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\TCE\TCE_BEDROCK_2008.mxd



Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\VC\VC_OVRBURDEN_2008.mxd



Path: C:\Users\p0064397\Documents\CTech\Chevron_EVS\MXD\VC\VC_BEDROCK_2008.mxd



Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\benz_ob.mxd

N

SWMW-44
0.9

ITMW-6
0.5

SWMW-13
0.5

SWMW-56
1

SWMW-66
0.5

SWMW-68
0.5

SWMW-103
0.5

(1)

SWMW-112
1

SWMW-111
0.5

SWMW-126
2

SWMW-14
0.5

SWMW-41
14

SWMW-45
0.7

ITMW-31
1

SWMW-55
3

ITMW-30
0.5

SWMW-123
0.5

ITMW-14
0.5

SWMW-2
0.5

ITMW-13
0.5

SWMW-125
4

SWMW-114
0.5

Bedrock Groundwater Benzene Samples 2016

SWMW-13
0.5
Sample Location with Concentration

Benzene Isocontours (2016)

Bedrock Benzene (ppb=ug/L)

14 ppb

1 ppb

Note:
(1) Outer control boundary line for plume. This area represents outer boundary where no wells were sampled adjacent to plume and acts as a control boundary for plume contouring. Boundary wells assigned a concentration equal to NYSDEC TOGS 1.1.1 groundwater screening criteria for parameter being contoured. Wells used for outer control boundary not shown on figure.

0 125 250 500 750 Feet

PARSONS

Figure D.1.B.A

Bedrock Benzene (2016) Groundwater Isoconcentration Contour Map

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/2/2016		

Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\benz_br.mxd

N

SWMW-25
0.5

ITMW-24
5

SWMW-10
210

SWMW-48
3

ITMW-25
73

SWMW-65
1

SWMW-28
18

100

5

5

SWMW-15
39

5

SWMW-67
0.5

20

SWMW-58
0.5

ITMW-5
0.9

SWMW-62
0.5

SWMW-113
3

SWMW-31
3

SWMW-30
1

SWMW-21
0.8

SWMW-71
2

Unknown
Well 1
78

GT-2
370

Unknown Well 3
13

Unknown
Well 2
19

200

5

(1)

5

Overburden Groundwater Chlorobenzene Samples 2016

SWMW-65
0.5
Sample Location with Concentration

5
Chlorobenzene Isocontours (2016)

Overburden Chlorobenzene (ppb=ug/L)

370 ppb

5 ppb

Note:
(1) Outer control boundary line for plume. This area represents outer boundary where no wells were sampled adjacent to plume and acts as a control boundary for plume contouring. Boundary wells assigned a concentration equal to NYSDEC TOGS 1.1.1 groundwater screening criteria for parameter being contoured. Wells used for outer control boundary not shown on figure.

0 125 250 500 750
Feet

PARSONS

Figure D.1.O.B

Overburden Chlorobenzene (2016) Groundwater Isoconcentration Contour Map

1:2,000	C. Oneal	CHKD:	APRD:
		DATE: 12/7/2016	

Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\CB_OB.mxd

N

SWMW-44
200

SWMW-68
0.5

SWMW-13
0.5

ITMW-6
0.5

SWMW-56
0.9

SWMW-111
0.5

SWMW-103
0.5

SWMW-66
0.5

ITMW-30
2

SWMW-45
100

SWMW-112
1

ITMW-31
1

SWMW-14
0.5

SWMW-126
2

SWMW-55
570

SWMW-41
1

ITMW-14
44

SWMW-123
23

SWMW-125
400

(1)

SWMW-114
17

SWMW-2
78

ITMW-13
4

Bedrock Groundwater Chlorobenzene Samples 2016

ITMW-31
0.5

Sample Location with Concentration

5 Chlorobenzene Isocontours (2016)

Bedrock Chlorobenzene (ppb=ug/L)

570 ppb

5 ppb

Note:
(1) Outer control boundary line for plume. This area represents outer boundary where no wells were sampled adjacent to plume and acts as a control boundary for plume contouring. Boundary wells assigned a concentration equal to NYSDEC TOGS 1.1.1 groundwater screening criteria for parameter being contoured. Wells used for outer control boundary not shown on figure.

0 125 250 500 750 Feet

PARSONS

Figure D.1.B.B

Bedrock Chlorobenzene (2016) Groundwater Isoconcentration Contour Map

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/2/2016		

Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\CB_BR.mxd

N

ITMW-24
0.5

SWMW-25
0.5

SWMW-10
0.5

20

SWMW-48
0.5

ITMW-25
0.5

5

SWMW-65
0.5

SWMW-28
0.5

(1)

SWMW-67
110

ITMW-5
66

SWMW-15
2

80

50

SWMW-58
27

SWMW-62
5

5

SWMW-113
9

SWMW-31
0.5

SWMW-30
0.5

SWMW-21
0.5

SWMW-71
0.5

GT-2
0.5

Unknown
Well 1
0.5

Unknown Well 3
0.5

Unknown
Well 2
0.5

Overburden Groundwater TCE Samples 2016

SWMW-65
0.5
Sample Location with Concentration

5
TCE Isocontours (2016)

Overburden TCE (ppb=ug/L)

110 ppb

5 ppb

Note:
(1) Outer control boundary line for plume. This area represents outer boundary where no wells were sampled adjacent to plume and acts as a control boundary for plume contouring. Boundary wells assigned a concentration equal to NYSDEC TOGS 1.1.1 groundwater screening criteria for parameter being contoured. Wells used for outer control boundary not shown on figure.

0 125 250 500 750
Feet

PARSONS

Figure D.1.O.C

**Overburden TCE (2016)
Groundwater Isoconcentration
Contour Map**

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/7/2016		

Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\TCE_OB.mxd

N

SWMW-44
150

SWMW-13
1

SWMW-68
340

(1)

ITMW-6
7

SWMW-56
300

SWMW-111
49

SWMW-66
200

SWMW-103
0.5

SWMW-112
180

SWMW-45
0.5

SWMW-14
15

SWMW-126
280

ITMW-31
0.5

SWMW-55
0.5

ITMW-30
0.5

SWMW-123
0.5

SWMW-41
190

SWMW-125
280

SWMW-2
2

SWMW-114
240

ITMW-14
0.5

ITMW-13
0.5

100
5
200
300

Bedrock Groundwater TCE Samples 2016

SWMW-2
1
Sample Location with Concentration

5
TCE Isocontours (2016)

Bedrock TCE (ppb=ug/L)

340 ppb

5 ppb

Note:
(1) Outer control boundary line for plume. This area represents outer boundary where no wells were sampled adjacent to plume and acts as a control boundary for plume contouring. Boundary wells assigned a concentration equal to NYSDEC TOGS 1.1.1 groundwater screening criteria for parameter being contoured. Wells used for outer control boundary not shown on figure.

0 125 250 500 750 Feet

PARSONS

Figure D.1.B.C

**Bedrock TCE (2016)
Groundwater Isoconcentration
Contour Map**

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/7/2016		

Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\TCE_BR.mxd

Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\VC_OB.mxd

N

SWMW-44
9

SWMW-13
0.5

(1)

ITMW-6
0.5

SWMW-68
2

SWMW-56
2

ITMW-31
0.5

SWMW-111
0.5

SWMW-66
5

ITMW-30
0.5

SWMW-103
0.5

SWMW-45
0.5

SWMW-112
6

SWMW-126
8

SWMW-55
0.5

SWMW-14
0.5

SWMW-123
0.5

SWMW-41
16

SWMW-125
7

SWMW-114
0.5

ITMW-14
0.6

SWMW-2
3

ITMW-13
0.5

Bedrock Groundwater Vinyl Chloride Samples 2016

SWMW-123
0.5
Sample Location with Concentration

2
Vinyl Chloride Isocontours (2016)

Bedrock Vinyl Chloride (ppb=ug/L)

16 ppb

2 ppb

Note:
(1) Outer control boundary line for plume. This area represents outer boundary where no wells were sampled adjacent to plume and acts as a control boundary for plume contouring. Boundary wells assigned a concentration equal to NYSDEC TOGS 1.1.1 groundwater screening criteria for parameter being contoured. Wells used for outer control boundary not shown on figure.

0 125 250 500 750 Feet

PARSONS

Figure D.1.B.D

Bedrock Vinyl Chloride (2016) Groundwater Isoconcentration Contour Map

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/7/2016		

Path: D:\GIS\Chevron\MXD\QUARTERLY\2016\Q4\VC_BR.mxd

APPENDIX A.5

CSIA DATA RESULTS FROM 2015 AND 2016

Discussion on Chlorobenzene CSIA Results – Beacon Site, NY

Kammy Sra, Chevron ETC
December 16, 2015

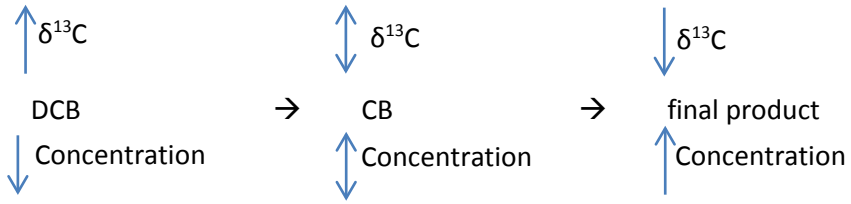
ETC has been working with the Beacon project team in evaluating groundwater monitoring data to assess if monitored natural attenuation (MNA) is a feasible alternative, particularly for chlorobenzene (CB). Based on the historical concentration data and additional quarterly monitoring in 2014, Compound-specific isotope analysis (CSIA) was used as a diagnostic tool to demonstrate natural biodegradation of chlorobenzene. A total of twelve monitoring well locations at the site were sampled for CSIA. The monitoring wells are located within four separate and distinct chlorobenzene plume areas labeled as:

- BLDG 45-55 (Overburden)
- BLDG 45-55 (Bedrock)
- BLDG 58-83-36 (Plume1)
- BLDG 58-83-36 (Plume2)

Overall, it appears that CB is naturally degrading within the distinct plume areas. ^{13}C signature for CB appears to be getting enriched significantly as groundwater is transported downgradient and as CB concentration decreases.

The monitoring wells within these four plumes are identified in Table 1 below along with the concentration data and isotopic data. CSIA for ^{13}C was conducted on all twelve groundwater samples for chlorobenzene, and on four groundwater samples for 1,2-dichlorobenzene (1,2-DCB) (which is generally the most dominant of the three dichlorobenzene (DCB) isomers at the site). These wells were chosen on the basis of relative CB to DCB ratio and the isotopic signature in CB. The objective for CSIA on DCB was to understand the impact of DCB degradation on the change in isotopic signature of both DCB and CB in groundwater samples from wells potentially located along groundwater flow path.

Based on the concentration data and apparent groundwater flow pattern towards the adjacent river (Fishkill Creek), the monitoring wells were assigned relative locations as being upgradient, mid-gradient, downgradient or background wells. If degradation of DCB and CB is taking place along a flow path, the expected chemistry outcomes would be as follows:



Dechlorination of DCB leads to the production of CB. In the forward direction as DCB degrades to CB, ^{13}C in DCB will get enriched whereas ^{13}C in CB will get depleted. The relative concentration of DCB will decrease while the concentration of CB will increase. CB can undergo further dechlorination and

degrade into other by-products and in the process will lead to relatively lower concentrations and also get enriched in ^{13}C. In the presence of DCB degradation, the isotopic signature of CB will be a result of competing depletion and enrichment of ^{13}C. Similarly, the concentration of CB will be determined by competing production (from DCB degradation) and consumption (from CB degradation) of CB. However, as DCB becomes more depleted, or is relatively absent, a stronger enrichment of ^{13}C in CB is expected. It appears at the site that CB was not only a byproduct of DCB degradation but existed as a separate contaminant source as well. This also potentially confounds the isotopic changes to CB.

For CB, enrichment in ^{13}C along an apparent groundwater flow path would imply that significant CB degradation has occurred which was able to overcome the depletion in ^{13}C that would have been produced by DCB degradation. Along a flow path, as CB concentration gets depleted, it is expected that ^{13}C would be enriched. When DCB is present upgradient of the system, lack of enrichment in ^{13}C for CB does not necessarily imply that there is no CB degradation. It is possible that ^{13}C signature does not show a shift, despite CB degradation, due to above mentioned competing depletion (from DCB degradation) and enrichment (from CB degradation) of the isotopic signature. In general, an isotopic shift of +0.5‰ in $\delta^{13}C$ is considered to be significant for both CB and DCB.

Presenting the data separately for CB, following points are noteworthy:

- Significant increase (1.6‰) in isotopic signature is noted for CB for groundwater samples for monitoring wells located relatively downgradient and with lower CB concentration in BLDG 45-55 (Overburden) plume.
- Significant increase (1.5‰) in isotopic signature is noted for CB for groundwater samples for monitoring wells located relatively downgradient and with lower CB concentration in BLDG 45-55 (Bedrock) plume.
- Significant increase (1.6‰) in isotopic signature is noted for CB for groundwater samples for monitoring wells located relatively downgradient and with lower CB concentration in BLDG 58-83-36 (Plume1) plume.
- The significantly higher enrichment of ^{13}C in monitoring wells located downgradient indicates that CB degradation is taking place within those plumes. Overall, the enrichment of ^{13}C occurs in CB in the direction of lower CB concentrations providing a strong evidence of natural degradation of CB.
- No changes in isotopic signature were noted for CB within BLDG 58-83-26 (Plume2). This might be expected since the plume also has a higher concentration of 1,2-DCB. Degradation of DCB will suppress the positive isotopic shift in ^{13}C for CB. This can be seen at another location where data for 13C is available for both CB and 1,2-DCB. At SWMW-44, while CB degradation and therefore ^{13}C enrichment in CB may be occurring, the DCB degradation to CB may deplete ^{13}C suppressing any positive shift in isotope signature for CB. In general, the isotopic shifts in $\delta^{13}C$ for CB may be suppressed by the presence and degradation of DCB as briefly discussed below.

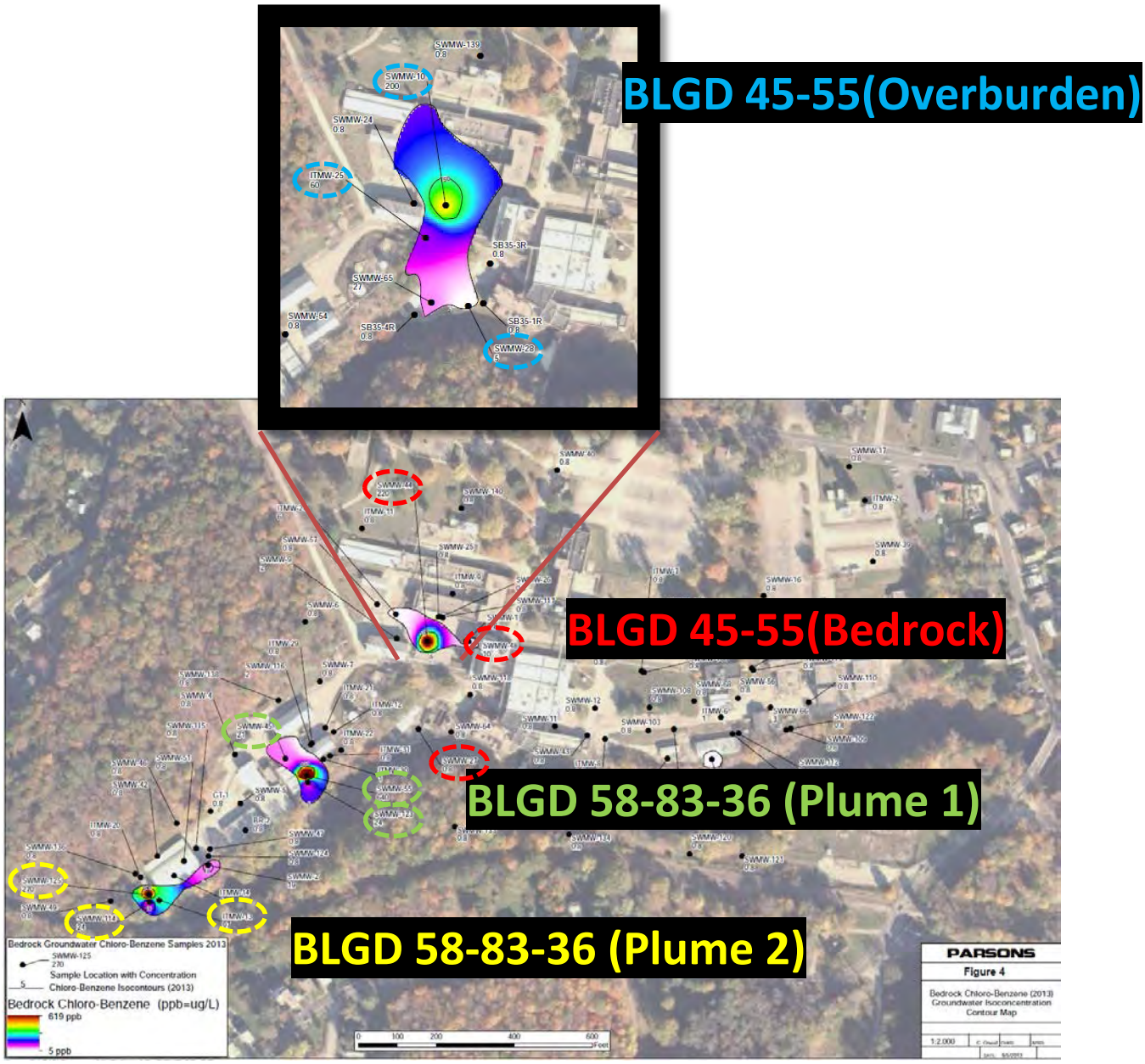


Figure 1: Illustration of the four chlorobenzene plumes 1) BLDG 45-55 (Overburden), 2) BLDG 45-55 (Bedrock), 3) BLDG 58-83-36 (Plume1), and 4) BLDG 58-83-36 (Plume2).

Table 1: Summary of concentration and isotopic data for CB

Location	Sample ID	Concentration (µg/L)	Isotope Results ($\delta^{13}C$, ‰)	Remarks
		CB	CB	
BLDG 45-55 (Overburden)	SWMW-10	82	ND	CB peak not resolved by GC.
	ITMW-25	70	-27.9	-
	SWMW-28	17	-26.3	-
BLDG 45-55 (Bedrock)	SWMW-44	220	-28.5	-
	SWMW-48	ND	ND	CB below detection limit.
	SWMW-27	27	-27.0	-
BLDG 58-83-36 (Plume1)	SWMW-45	75	-28.0	-
	SWMW-55	2000	-26.8	-
	SWMW-123	34	-26.4	-
BLDG 58-83-36 (Plume2)	SWMW-125	330 (320)	-28.2 (-28.2)	Values in bracket for field duplicate
	SWMW-114	9	-28.2	-
	ITMW-13	16	-28.3	-

CSIA for DCB

The relative concentrations of DCB and CB present an opportunity to understand the relative position of the groundwater sample along the degradation of DCB and CB spectrum. For instance, a high ratio of DCB to CB implies that the plume is rich in DCB and would be closer to the source signature for ^{13}C. A moderate DCB to CB ratio would imply that DCB has degraded into CB and the groundwater is relatively downgradient of the source area. At such a DCB to CB ratio, the isotopic signature for ^{13}C in DCB would be expected to be more enriched relative to the high DCB to CB ratio groundwater. For a low DCB to CB ratio, DCB would have almost completely degraded and consequently be further enriched in ^{13}C.

Data for 1,2-DCB isotope results (Table 2) is looked at separately to try and understand the confounding effect from competing processes. Of the four samples analyzed for DCB, isotopic results for two of the samples were not resolved due to issues with low level detection of DCB. For the two samples for which results were obtained, the following points are noteworthy:

- Sample for SWMW-125, which appears to have a relatively high DCB to CB ratio and a high DCB concentration (implying that it is likely in the vicinity of the DCB source area), has an isotopic signature $\delta^{13}C$ of -27.2. This value is enriched with respect to $\delta^{13}C$ for CB (-28.2) which is not unexpected as CB signature shows depletion as it is produced upon DCB degradation.
- Sample for SWMW-44, which has a medium DCB to CB ratio and DCB and CB relatively depleted, has an isotopic signature of -25.8. This is relatively much more enriched than SWMW-125 which may be in the vicinity of the DCB source area and has a higher DCB concentration. This indicates that as DCB/CB ratio decreases (i.e., as DCB degrades and CB is produced) the isotopic signature for ^{13}C gets enriched. Similar to SWMW-125, the DCB signature is also much more enriched than that for CB suggesting that as significant DCB degradation occurs, CB isotopic signature gets depleted. It lends support to assertion above that the presence and degradation of DCB is likely to suppress the positive shift in $\delta^{13}C$ for CB.
- Generally, enrichment of ^{13}C is noted in DCB as concentration of DCB decreases with respect to CB.

Table 2: Summary of concentration and isotopic data for DCB

Location	Sample ID	Concentration (µg/L)		Ratio	Isotope Results ($\delta^{13}C$, ‰)		Remarks
		CB	1,2-DCB	DCB/CB	CB	1,2-DCB	
BLDG 45-55 (Overburden)	ITMW-25	70	ND	-	-27.9	ND	1,2-DCB peak not resolved
BLDG 45-55 (Bedrock)	SWMW-44	220	47	0.21	-28.5	-25.8	-
	SWMW-123	34	ND	-	-26.4	ND	1,2-DCB peak not resolved
BLDG 58-83-36 (Plume2)	SWMW-125	330 (320)	360 (350)	1.09 (1.09)	-28.2 (-28.2)	-27.2	Values in bracket for field duplicate

Pace Analytical Energy Services LLC
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July 15, 2016

Edward J Ashton
Parsons
301 Plainfield Road
Suite 350
Syracuse, NY 13212

RE: **Beacon 2016 CSIA Sampling**

Pace Workorder: *19340*

Dear Edward Ashton:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, June 10, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ruth Welsh 07/15/2016
Ruth.Welsh@pacelabs.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 20

CERTIFICATE OF ANALYSIS

Pace Analytical Energy Services LLC
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Phone: (412) 826-5245
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LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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SAMPLE SUMMARY

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID	Sample ID	Matrix	Date Collected	Date Received
193400001	QA-WT1-160531	Water	5/31/2016 00:00	6/10/2016 13:46
193400002	SWMW-113-W-20.00-160609	Water	6/9/2016 10:35	6/10/2016 13:46
193400003	SWMW-113-WD-20.00-160609	Water	6/9/2016 12:01	6/10/2016 13:46
193400004	SWMW-126-W-40.00-160609	Water	6/9/2016 10:15	6/10/2016 13:46
193400005	SWMW-58-W-5.00-160609	Water	6/9/2016 09:35	6/10/2016 13:46
193400006	SWMW-66-W-43.00-160609	Water	6/9/2016 09:55	6/10/2016 13:46
193400007	SWMW-67-W-3.00-160609	Water	6/9/2016 08:45	6/10/2016 13:46
193400008	SWMW-68-W-31.00-160609	Water	6/9/2016 08:30	6/10/2016 13:46

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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400001** Date Received: 6/10/2016 13:46 Matrix: Water
Sample ID: **QA-WT1-160531** Date Collected: 5/31/2016 00:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24	Analytical Method: AM24							
Carbon 13 Isotope	**Complete**						JT	

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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400002** Date Received: 6/10/2016 13:46 Matrix: Water

Sample ID: **SWMW-113-W-20.00-160609** Date Collected: 6/9/2016 10:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24		Analytical Method: AM24						
Carbon 13 Isotope	**Complete**						JT	

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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400003** Date Received: 6/10/2016 13:46 Matrix: Water

Sample ID: **SWMW-113-WD-20.00-160609** Date Collected: 6/9/2016 12:01

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24			Analytical Method: AM24					
Carbon 13 Isotope	**Complete**						JT	

CERTIFICATE OF ANALYSIS

Pace Analytical Energy Services LLC
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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400004** Date Received: 6/10/2016 13:46 Matrix: Water

Sample ID: **SWMW-126-W-40.00-160609** Date Collected: 6/9/2016 10:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24		Analytical Method: AM24						
Carbon 13 Isotope	**Complete**						JT	

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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400005** Date Received: 6/10/2016 13:46 Matrix: Water

Sample ID: **SWMW-58-W-5.00-160609** Date Collected: 6/9/2016 09:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24		Analytical Method: AM24						
Carbon 13 Isotope	**Complete**						JT	

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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400006** Date Received: 6/10/2016 13:46 Matrix: Water

Sample ID: **SWMW-66-W-43.00-160609** Date Collected: 6/9/2016 09:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24		Analytical Method: AM24						
Carbon 13 Isotope	**Complete**						JT	

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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400007** Date Received: 6/10/2016 13:46 Matrix: Water

Sample ID: **SWMW-67-W-3.00-160609** Date Collected: 6/9/2016 08:45

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24		Analytical Method: AM24						
Carbon 13 Isotope	**Complete**						JT	

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID: **193400008** Date Received: 6/10/2016 13:46 Matrix: Water

Sample ID: **SWMW-68-W-31.00-160609** Date Collected: 6/9/2016 08:30

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
Compound Specific Isotopic - PAES								
Analysis Desc: AM24		Analytical Method: AM24						
Carbon 13 Isotope	**Complete**						JT	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 19340 Beacon 2016 CSIA Sampling

DEFINITIONS/QUALIFIERS

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 19340 Beacon 2016 CSIA Sampling

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
193400001	QA-WT1-160531			AM24	CSIA/1425
193400002	SWMW-113-W-20.00-160609			AM24	CSIA/1425
193400003	SWMW-113-WD-20.00-160609			AM24	CSIA/1425
193400004	SWMW-126-W-40.00-160609			AM24	CSIA/1425
193400005	SWMW-58-W-5.00-160609			AM24	CSIA/1425
193400006	SWMW-66-W-43.00-160609			AM24	CSIA/1425
193400007	SWMW-67-W-3.00-160609			AM24	CSIA/1425
193400008	SWMW-68-W-31.00-160609			AM24	CSIA/1425

Pace Analytical

Client: Parsons
301 Plainfield Rd Suite 350
Syracuse NY 13212
Tel: 315.679.1170
Report to Edward Ashton
Project: Beacon-2016 CSIA Sampling
Project #
Email: edward.j.ashton @ parsons.com

Pace Analytical CSIA Center
220 William Pitt Way
Pittsburgh, PA 15238
Tel: 412.826.5245
Report by: Dr. Yi Wang
Director, CSIA Center of Excellence
Cell: 609.721.2843
Email: yi.wang @ pacelabs.com

REPORT OF FORENSICS ISOTOPIC ANALYTICAL RESULTS

Date Received: 6/10/2016
Date Reported: 7/14/2016

Samples submitted for $\delta^{13}C$ (‰ PDB), stable carbon isotope ratios of dissolved chlorinated solvents

Pace CSIA Lab ID	Client's Sample ID Description	$\delta^{13}C$ VC	$\delta^{13}C$ cDCE	$\delta^{13}C$ TCE
19340-1	QA-WT1-160531	U -	U -	U -
19340-2	SWMW-113-W-20.00-160609	U -	-20.90	-18.88
19340-3	SWMW-113-WD-20.00-160609	U -	-21.25	-19.13
19340-4	SWMW-126-W-40.00-160609	-32.17	-26.25	-22.87
19340-5	SWMW-58-W-5.00-160609	U -	-28.35	-26.85
19340-6	SWMW-66-W-43.00-160609	-29.76	-27.18	-26.45
19340-7	SWMW-67-W-3.00-160609	U -	U -	-24.34
19340-8	SWMW-68-W-31.00-160609	-25.89	-27.40	-23.54

J-Target analyte produced a low peak signal and the result is considered usable to ± 2‰, but not the standard ± 0.5‰
U-Either not run or there was no peak corresponding to the target analyte & such a peak did not produce a reliable CSIA result
VC: Vinyl Chloride
cDCE: cis-1,2-dichloroethene
TCE: trichloroethene
Method: Compound Specific Isotope Analysis for ^{13}C and ^{2}H by GC-IRMS, for ^{37}Cl by GC-qMS

Quality Control STDs	$\delta^{13}C$ VC	$\delta^{13}C$ cDCE	$\delta^{13}C$ TCE
QC-1	-27.98	-12.20	-26.76
QC-2	-28.06	-12.10	-26.49
Mean	-28.02	-12.15	-26.63
Analytical Precision (1σ)	0.06	0.07	0.19

Pace CSIA Forensic Isotope Services

Product or Dissolved Organics: Chlorinated Solvents, Oil, Extract, Fraction and Kerogen
2D-CSIA for 1,4-D PCE TCE DCE VC TCA DCA CT CF DCM CA CM MTBE TBA BTEX CH_4 and more; Bulk ^{13}C, ^{2}H, ^{18}O, ^{34}S, and ^{15}N
Gas Sample
Gas Composition and 2D-CSIA of ^{13}C and ^{2}H of C1 to C5; ^{13}C of CO_2; ^{14}C of C1 and CO_2; ^{34}S of H_2S; ^{15}N and ^{18}O of N_2O gas
Water and Dissolved Inorganics
^{2}H, ^{3}H and ^{18}O; ^{34}S and ^{18}O of dissolved sulfate; ^{34}S of dissolved H_2S
^{15}N and ^{18}O of dissolved Nitrate; ^{15}N of Ammonia; ^{13}C of dissolved CO_2 and Carbonate/Bicarbonate
Soil and Minerals
^{13}C, ^{18}O, ^{15}N, ^{34}S, D/H; ^{14}C of carbonate or organics
Post-Analysis Forensic Isotope Data Interpretation

Pace Analytical Energy Sevices
220 William Pitt Way
Pittsburgh, PA 15238
phone: 412-826-5245

CSIA Report
Carbon

19340
Parsons
Client Project Name: Beacon - 2016 CSIA
Client Project #: Beacon - 2016 CSIA Sampling

Vinyl Chloride		Concentration (ug/l)			CSIA (Carbon)					
					Area		Co-elution	Analysis	Date	Delta (‰)
Lab ID	Client ID	Sample	PQL	Date	Sample	PQL				
193400002	SWMW-113-W-20.00-16060	<0.5 (U)	0.5	6/14/16	< 1 (U)	1	No	2959	7/12/16	-
193400003	SWMW-113-WD-20.00-1606	<0.5 (U)	0.5	6/14/16	< 1 (U)	1	No	2961	7/12/16	-
193400004	SWMW-126-W-40.00-16060	8	0.5	6/14/16	17.9	1	No	2969	7/12/16	-32.17
193400005	SWMW-58-W-5.00-160609	<0.5 (U)	0.5	6/14/16	< 1 (U)	1	No	2963	7/12/16	-
193400006	SWMW-66-W-43.00-160609	5	0.5	6/14/16	6.00	1	No	2971	7/12/16	-29.76
193400007	SWMW-67-W-3.00-160609	<0.5 (U)	0.5	6/14/16	< 1 (U)	1	No	2968	7/12/16	-
193400008	SWMW-68-W-31.00-160609	2	0.5	6/14/16	2.65	1	No	2970	7/12/16	-25.886
Duplicate	SWMW-113-W-20.00-16060	-	-	-	< 1 (U)	1	No	2960	7/12/16	-
Blank	-	0	-	-	<1 (U)	1	No	2956	7/12/16	-
LCS_Lo	-	10	-	-	14.7	1	No	2957	7/12/16	-27.98
LCS_Hi	-	20	-	-	26.3	1	No	2958	7/12/16	-28.06
LCS acceptance range								-28.90	<=>	-27.90

Method	8260B	AM-24-AR_C	AM-24-DL_C
Units	ug/l	Vs	‰, VPDB
Analyst	Lancaster Labs	CJS	CJS

Pace Analytical Energy Sevices
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Pittsburgh, PA 15238
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CSIA Report
Carbon

19340
Parsons
Client Project Name: Beacon - 2016 CSIA
Client Project #: Beacon - 2016 CSIA Sampling

cis-Dichloroethene		Concentration (ug/l)			CSIA (Carbon)					
					Area		Co-elution	Analysis	Date	Delta (‰)
Lab ID	Client ID	Sample	PQL	Date	Sample	PQL				
193400002	SWMW-113-W-20.00-16060	18	0.5	6/14/16	8.86	1	No	2959	7/12/16	-20.90
193400003	SWMW-113-WD-20.00-1606	19	0.5	6/14/16	8.32	1	No	2961	7/12/16	-21.25
193400004	SWMW-126-W-40.00-16060	150	0.5	6/14/16	5.97	1	No	2962	7/12/16	-26.25
193400005	SWMW-58-W-5.00-160609	30	0.5	6/14/16	14.1	1	No	2963	7/12/16	-28.35
193400006	SWMW-66-W-43.00-160609	300	5	6/15/16	14.1	1	No	2964	7/12/16	-27.18
193400007	SWMW-67-W-3.00-160609	0.6 (J)	0.5	6/14/16	< 1 (U)	1	No	2968	7/12/16	-
193400008	SWMW-68-W-31.00-160609	.42	0.5	6/14/16	15.7	1	No	2970	7/12/16	-27.40
Duplicate	SWMW-113-W-20.00-16060	-	-	-	8.13	1	No	2960	7/12/16	-20.79
Blank	-	0	-	-	<1 (U)	1	No	2956	7/12/16	-
LCS_Lo	-	5	-	-	4.82	1	No	2957	7/12/16	-12.20
LCS_Hi	-	25	-	-	13.9	1	No	2958	7/12/16	-12.10
LCS acceptance range								-11.22	<=>	-12.22

Method	8260B	AM-24-AR_C	AM-24-DL_C
Units	ug/l	Vs	‰, VPDB
Analyst	Lancaster Labs	CJS	CJS

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CSIA Report
Carbon

19340
Parsons
Client Project Name: Beacon - 2016 CSIA
Client Project #: Beacon - 2016 CSIA Sampling

Trichloroethene		Concentration (ug/l)			CSIA (Carbon)					
					Area		Co-elution	Analysis	Date	Delta (‰)
Lab ID	Client ID	Sample	PQL	Date	Sample	PQL				
193400002	SWMW-113-W-20.00-16060	8	0.5	6/14/16	3.44	1	No	2959	7/12/16	-18.88
193400003	SWMW-113-WD-20.00-1606	9	0.5	6/14/16	3.26	1	No	2961	7/12/16	-19.13
193400004	SWMW-126-W-40.00-16060	280	0.5	6/14/16	8.81	1	No	2962	7/12/16	-22.87
193400005	SWMW-58-W-5.00-160609	27	0.5	6/14/16	9.85	1	No	2963	7/12/16	-26.86
193400006	SWMW-66-W-43.00-160609	200	0.5	6/14/16	5.74	1	No	2964	7/12/16	-26.45
193400007	SWMW-67-W-3.00-160609	110	0.5	6/14/16	31.2	1	No	2968	7/12/16	-24.34
193400008	SWMW-68-W-31.00-160609	340	5	6/15/16	5.77	1	No	2966	7/12/16	-23.54
Duplicate	SWMW-113-W-20.00-16060	-	-	-	3.18	1	No	2960	7/12/16	-18.94
Blank	-	0	-	-	<1 (U)	1	No	2956	7/12/16	-
LCS_Lo	-	5	-	-	3.79	1	No	2957	7/12/16	-26.76
LCS_Hi	-	25	-	-	10.9	1	No	2958	7/12/16	-26.49
LCS acceptance range								-25.48	<=>	-26.48

Method	8260B	AM-24-AR_C	AM-24-DL_C
Units	ug/l	Vs	‰, VPDB
Analyst	Lancaster Labs	CJS	CJS

Pace Analytical Energy Sevices
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phone: 412-826-5245

CSIA Report
Carbon

19340
Parsons
Client Project Name: Beacon - 2016 CSIA
Client Project #: Beacon - 2016 CSIA Sampling

1CP (Surr.)		Sample Collection	CSIA (Carbon)						
Lab ID	Client ID		Area	Dilution	PQL	Co-elution	Analysis	Date	Delta (‰)
193400002	SWMW-113-W-20.00-160609	06/09/16	18.7	1	1	No	2959	07/12/16	-35.63
193400003	SWMW-113-WD-20.00-1606	06/09/16	17.9	1	1	No	2961	07/12/16	-35.79
193400004	SWMW-126-W-40.00-160609	06/09/16	16.6	10	1	No	2962	07/12/16	-35.60
193400004	SWMW-126-W-40.00-160609	06/09/16	21.8	1	1	Yes	2969	07/12/16	-32.43
193400005	SWMW-58-W-5.00-160609	06/09/16	15.3	1	1	No	2963	07/12/16	-36.38
193400006	SWMW-66-W-43.00-160609	06/09/16	26.9	20	1	No	2964	07/12/16	-36.38
193400006	SWMW-66-W-43.00-160609	06/09/16	10.4	1	1	No	2971	07/12/16	-35.88
193400007	SWMW-67-W-3.00-160609	06/09/16	11.1	1	1	No	2968	07/12/16	-37.16
193400008	SWMW-68-W-31.00-160609	06/09/16	14.0	20	1	No	2966	07/12/16	-36.25
193400008	SWMW-68-W-31.00-160609	06/09/16	10.7	1	1	No	2970	07/12/16	-36.19
Duplicate	SWMW-113-W-20.00-160609	06/09/16	16.9	1	1	No	2960	07/12/16	-35.66
Blank	-	-	27.8	1	1	No	2956	07/12/16	-36.93
LCS_Lo	-	-	17.1	1	1	No	2957	07/12/16	-36.62
LCS_Hi	-	-	17.2	1	1	No	2958	07/12/16	-36.57
Surrogate acceptance range							-37.49	<=>	-36.49

Method		AM-24-AR_C	AM-24-DL_C
Units		Vs	‰, VPDB
Analyst		CJS	CJS

Case Narrative: The blank, LCS's, duplicate and surrogates were all close to or within the acceptance range and the data is reported as valid and representative of the samples as received.

19340

Chain of Custody

COC #: CVX-0092

Lab Use Only
Lab Proj #
Lab ID
Job No 450008

Client Contact:

PARSONS
301 PLAINFIELD ROAD-SUITE 350
SYRACUSE, NY 13212

Hardcopy Report To: Edward.J.Ashton@parsons.com
Invoice To: Chevron

Privileged and Confidential
EDD To: Laura.Drachenberg@parsons.com
Sampler:
Program: BEACON-2016 CSIA Sampling

Analysis Turnaround Time:
Standard -
Rush Charges Authorized for -
2 weeks -
1 week -
Next Day -

Site Name: BEACON
Site Location: BEACON, NY

Ship to:
Bob Pirkle
Senior Scientist
Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245 Cell: (412) 996-4691 Robert.Pirkle@pacelabs.com

Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	MS/MSD	Composite (y/n)	Preservative: 1 GC-IRMS C-SCIA (TCE, DCE)	Preservative: 1 GC-IRMS C-SCIA (TCE, DCE, VC)	Lab Sample Numbers
QA	—	—	QA-WT1-160531	05/31/16	—	BLKWATER	Water	TB	9	☐	N	☐	☑	
SWMW-113 (2)	20	30	SWMW-113-W-20.00-160609	06/09/16	10:35	GW	Water	REG	6	☐	N	☐	☑	
SWMW-113 (2)	20	30	SWMW-113-WD-20.00-160609	06/09/16	12:01	FD	Water	REG	6	☐	N	☐	☑	
SWMW-126	40	50	SWMW-126-W-40.00-160609	06/09/16	10:15	GW	Water	REG	9	☐	N	☐	☑	
SWMW-58 (2)	5	30	SWMW-58-W-5.00-160609	06/09/16	9:35	GW	Water	REG	6	☐	N	☐	☑	
SWMW-66	43	63	SWMW-66-W-43.00-160609	06/09/16	9:55	GW	Water	REG	9	☐	N	☐	☑	
SWMW-67 (2)	3	27	SWMW-67-W-3.00-160609	06/09/16	8:45	GW	Water	REG	6	☐	N	☐	☑	
SWMW-68 (2)	31	51	SWMW-68-W-31.00-160609	06/09/16	8:30	GW	Water	REG	9	☐	N	☐	☑	

(1) No MS/MSD samples collected.
(2) Hold off on VC analysis until told to analyze by Kammy Sra (Chevron ETC) or Parsons. (SWMW-113, 58, 67, and 68).

Special Instructions: **Invoice to Chevron.**

Relinquished by: [signature]	Company Parsons	Received by: RWelch	Company PACE	Condition	Custody Seals Int
	Date/Time 6-9-16/1400		Date/Time 6-10-16 1040	Cooler Temp.	
Relinquished by:	Company	Received by:	Company	Condition	Custody Seals Int
	Date/Time		Date/Time	Cooler Temp.	

Preservatives: 0 = None; [1 = HCL]; [2 = HNO3]; [3 = H2SO4]; [4 = NaOH]; [5 = Zn Acetate]; [6 = MeOH]; [7 = NaHSO4]; 8 = Other (specify):

Date Printed: 6/9/2016

Cooler Receipt Form

Client Name: Parsons **Project:** Beacon **Lab Work Order:** 19340

A. **Shipping/Container Information** (circle appropriate response)

Courier: (FedEx) UPS USPS Client Other:_____ **Air bill Present:** (Yes) No

Tracking Number: 8993 7912 9050

Custody Seal on Cooler/Box Present: (Yes) No **Seals Intact:** (Yes) No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other:_____

Type of Ice: Wet Blue None **Ice Intact:** Yes Melted

Cooler Temperature: 2.4 **Radiation Screened:** Yes (No) **Chain of Custody Present:** (Yes) No

Comments:_____

B. **Laboratory Assignment/Log-in** (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC			✓	
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
PAES containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments:_____

_____

Cooler contents examined/received by : RW **Date:** 6-10-16

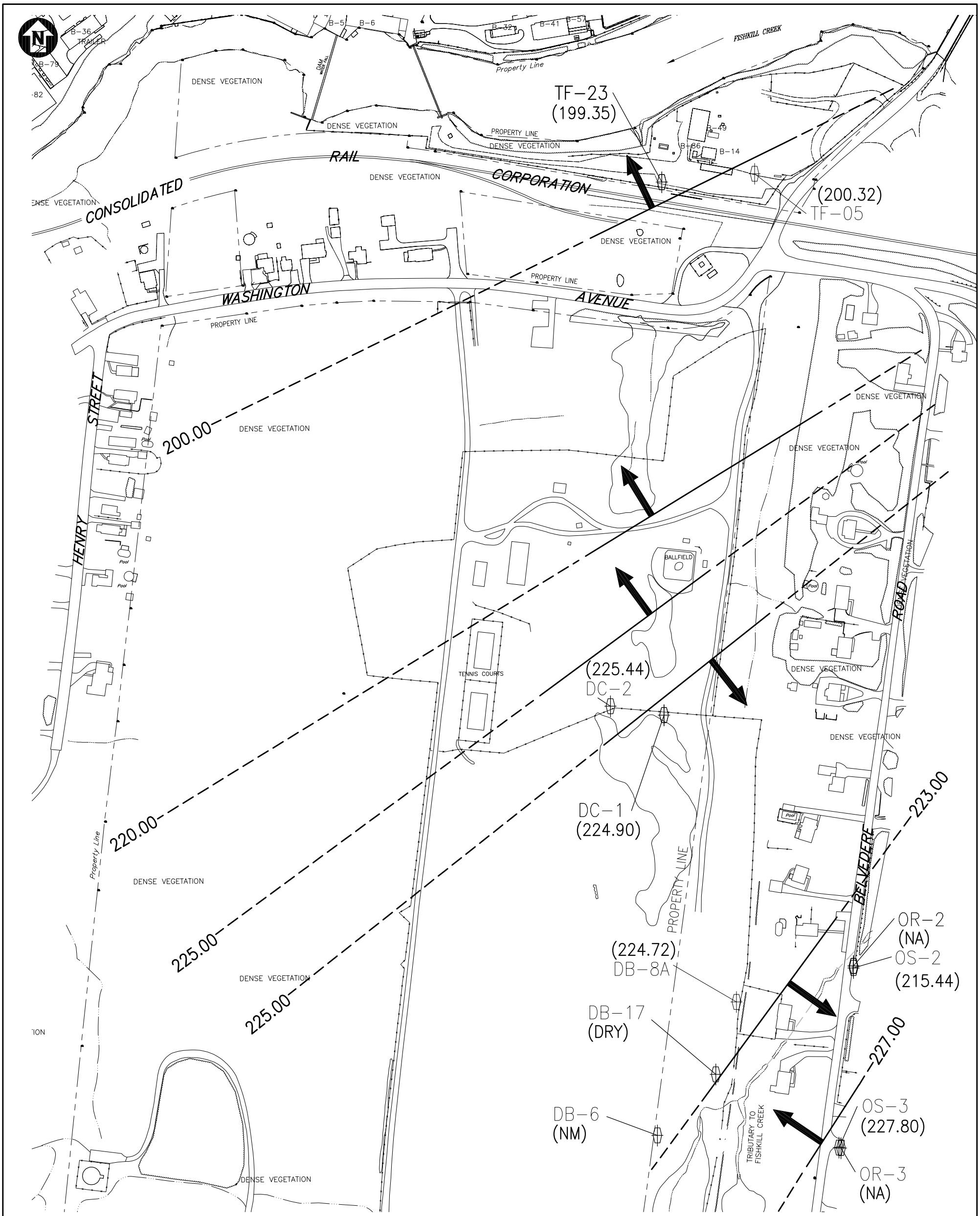
Project Manager Review : RW **Date:** 6-10-16

APPENDIX B

FORMER RCRA WELL PERMIT/CONSENT ORDER GROUNDWATER INVESTIGATION SUPPORTING FIGURES, GRAPHS, AND GROUNDWATER ANALYTICAL DATA

APPENDIX B.1

POTENTIOMETRIC GROUNDWATER SURFACE CONTOUR MAPS FROM JUNE AND NOVEMBER 2017



LEGEND:

- DC-2 — MONITORING WELL LOCATION
- 200.00 — GROUNDWATER ELEVATION CONTOUR
- (227.80) — GROUNDWATER ELEVATION RESULT (JUNE 2017)
- GROUNDWATER FLOW DIRECTION
- NM — NOT MEASURED
- NA — NON-APPLICABLE (NOTE: WELLS OR-2 AND OR-3 ARE BEDROCK WELLS AND ARE NOT CONTOURED. ONLY OVERBURDEN WELL CONTOURED).

200 100 0 200 400

SCALE: 1"=200'

SOURCE: BADEY & WATSON, SURVEYING & ENGINEERING, P.C.

THE MERIDIAN AND COORDINATE VALUES HEREON REFER TO THE NEW YORK STATE COORDINATE SYSTEM, EAST ZONE (NAD-1983) EXPRESSED IN FEET.

WELL AND BORING ELEVATIONS ARE REFERENCED TO A SITE VERTICAL DATUM ESTABLISHED BY TEXACO IN 1957, HEREINAFTER REFERRED TO AS THE TEXACO DATUM. THIS DATUM IS 1.07' BELOW NAVD 1988.

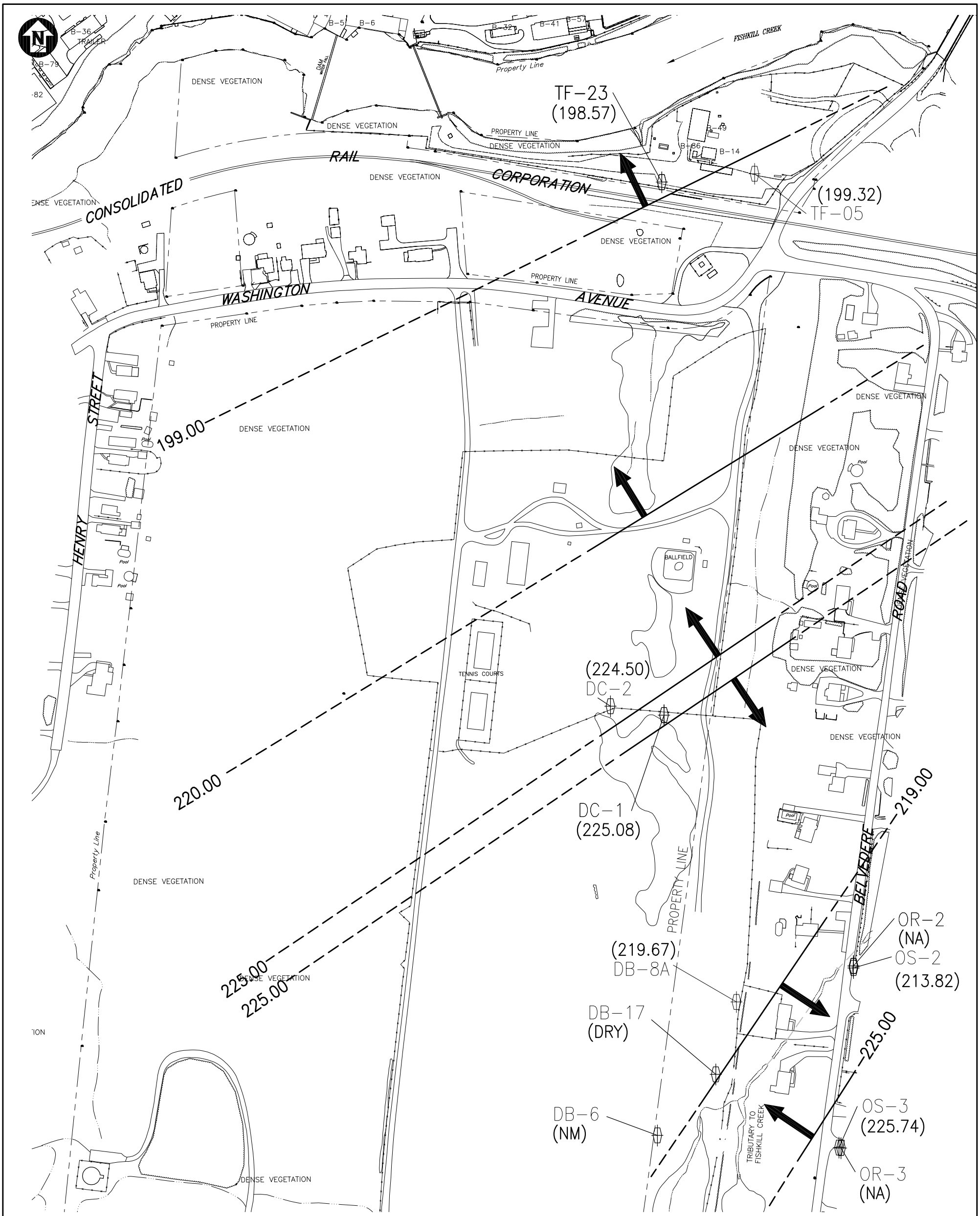
FILE NAME: P:\CHEVRON BEACON\446680- 2011 RCRA\12.0 CAD\REPORT FIGURES\446680_GW_CONT_2017-JUN.DWG
PLOT DATE: 12/6/2017 9:10 AM PLOTTED BY: GOLDTHWAIT, JAMES

FIGURE 3

FORMER TEXACO RESEARCH CENTER BEACON, NEW YORK

GROUNDWATER ELEVATION CONTOUR MAP (JUNE 2017)

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560



LEGEND:

- DC-2 MONITORING WELL LOCATION
- 199.00 GROUNDWATER ELEVATION CONTOUR
- (219.67) GROUNDWATER ELEVATION RESULT (NOVEMBER 2017)
- GROUNDWATER FLOW DIRECTION
- NM NOT MEASURED
- NA NON-APPLICABLE (NOTE: WELLS OR-2 AND OR-3 ARE BEDROCK WELLS AND ARE NOT CONTOURED. ONLY OVERBURDEN WELL CONTOURED).

200 100 0 200 400

SCALE: 1"=200'

SOURCE: BADEY & WATSON, SURVEYING & ENGINEERING, P.C.

THE MERIDIAN AND COORDINATE VALUES HEREON REFER TO THE NEW YORK STATE COORDINATE SYSTEM, EAST ZONE (NAD-1983) EXPRESSED IN FEET.

WELL AND BORING ELEVATIONS ARE REFERENCED TO A SITE VERTICAL DATUM ESTABLISHED BY TEXACO IN 1957, HEREINAFTER REFERRED TO AS THE TEXACO DATUM. THIS DATUM IS 1.07' BELOW NAVD 1988.

FILE NAME: P:\CHEVRON BEACON\446680- 2011 RCRA\12.0 CAD\REPORT FIGURES\446680_GW_CONT_2017-NOV.DWG
PLOT DATE: 12/15/2017 3:12 PM PLOTTED BY: GOLDTHWAIT, JAMES

FIGURE 4

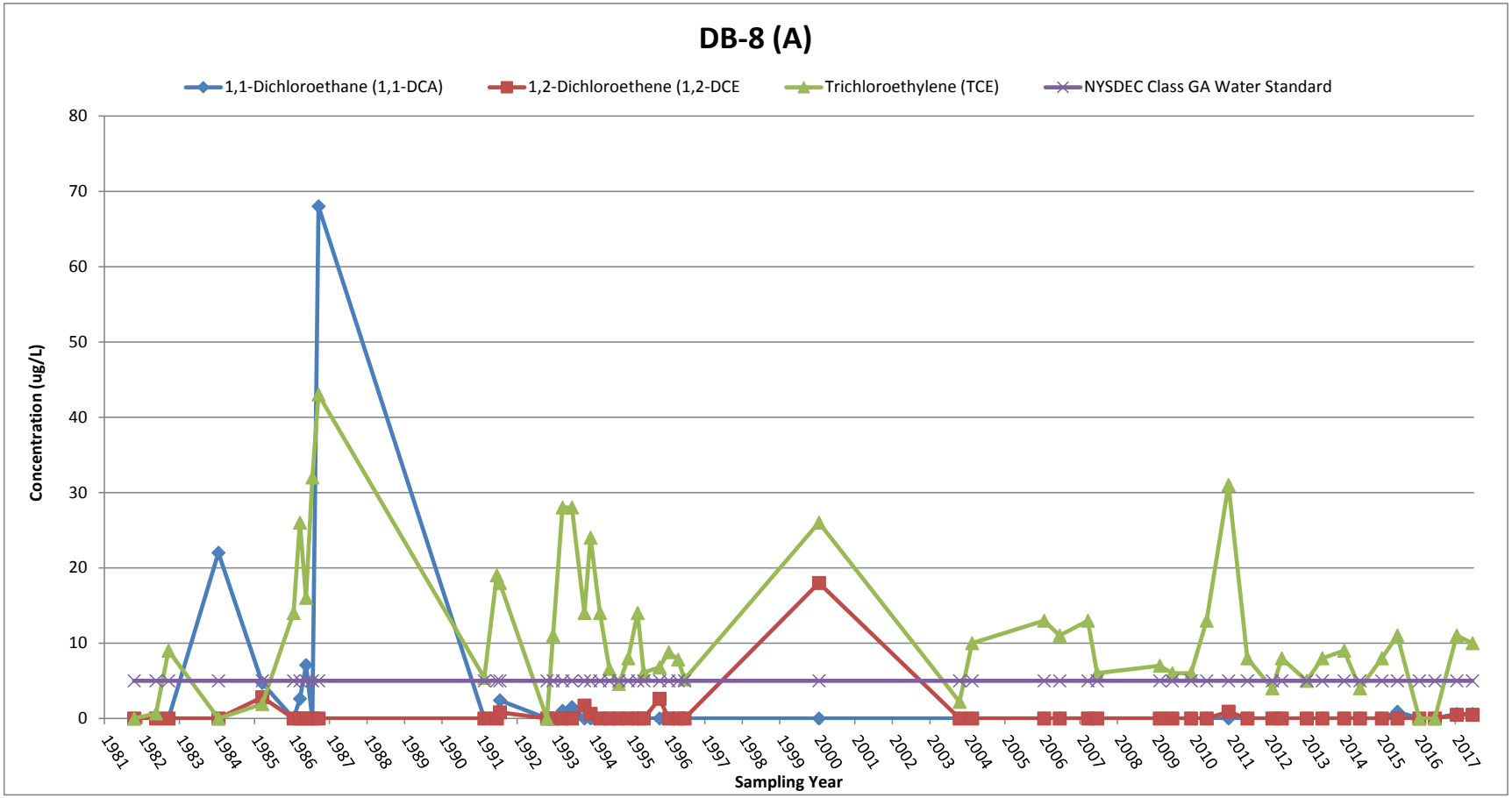
FORMER TEXACO RESEARCH CENTER BEACON, NEW YORK

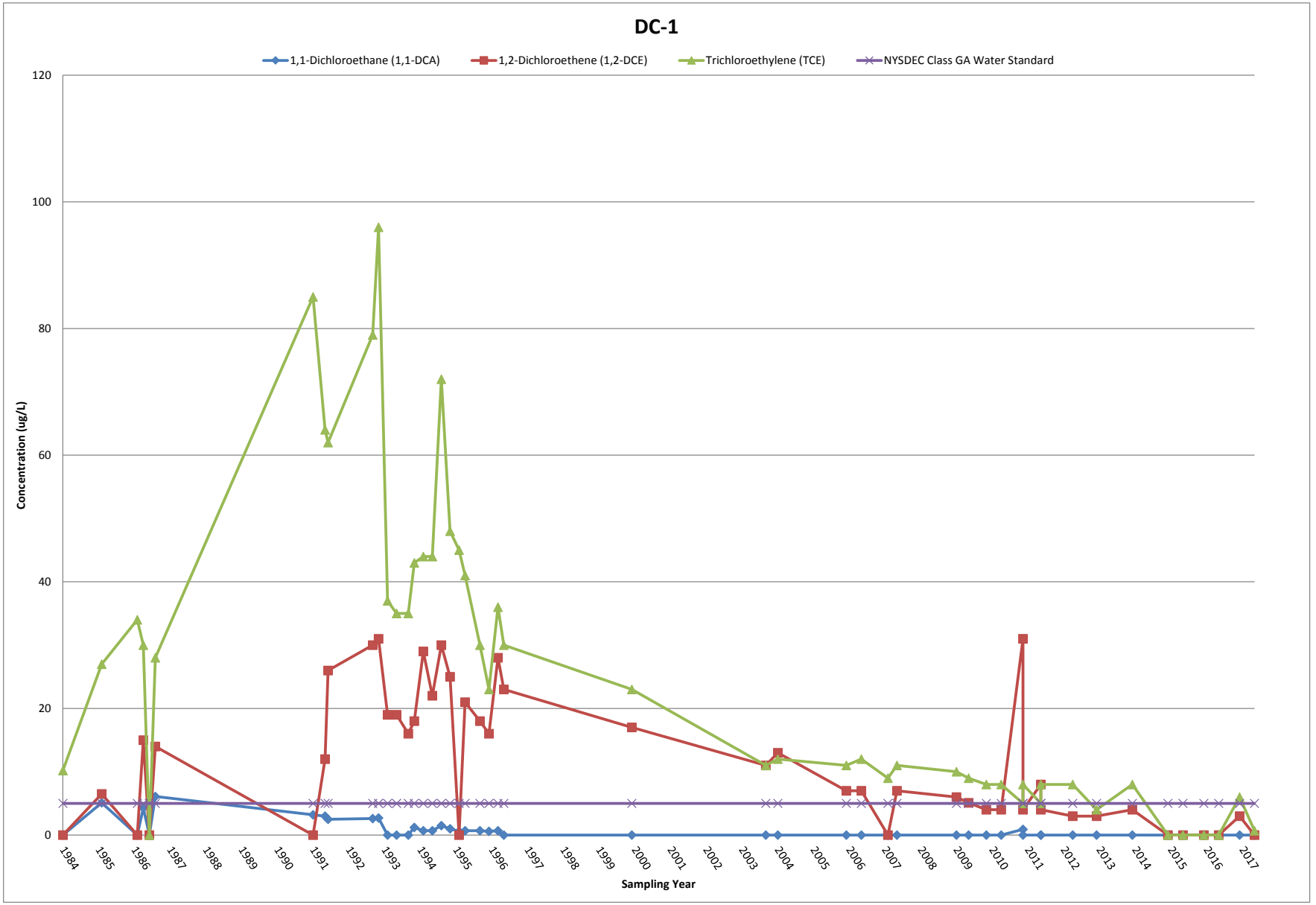
GROUNDWATER ELEVATION CONTOUR MAP (NOVEMBER 2017)

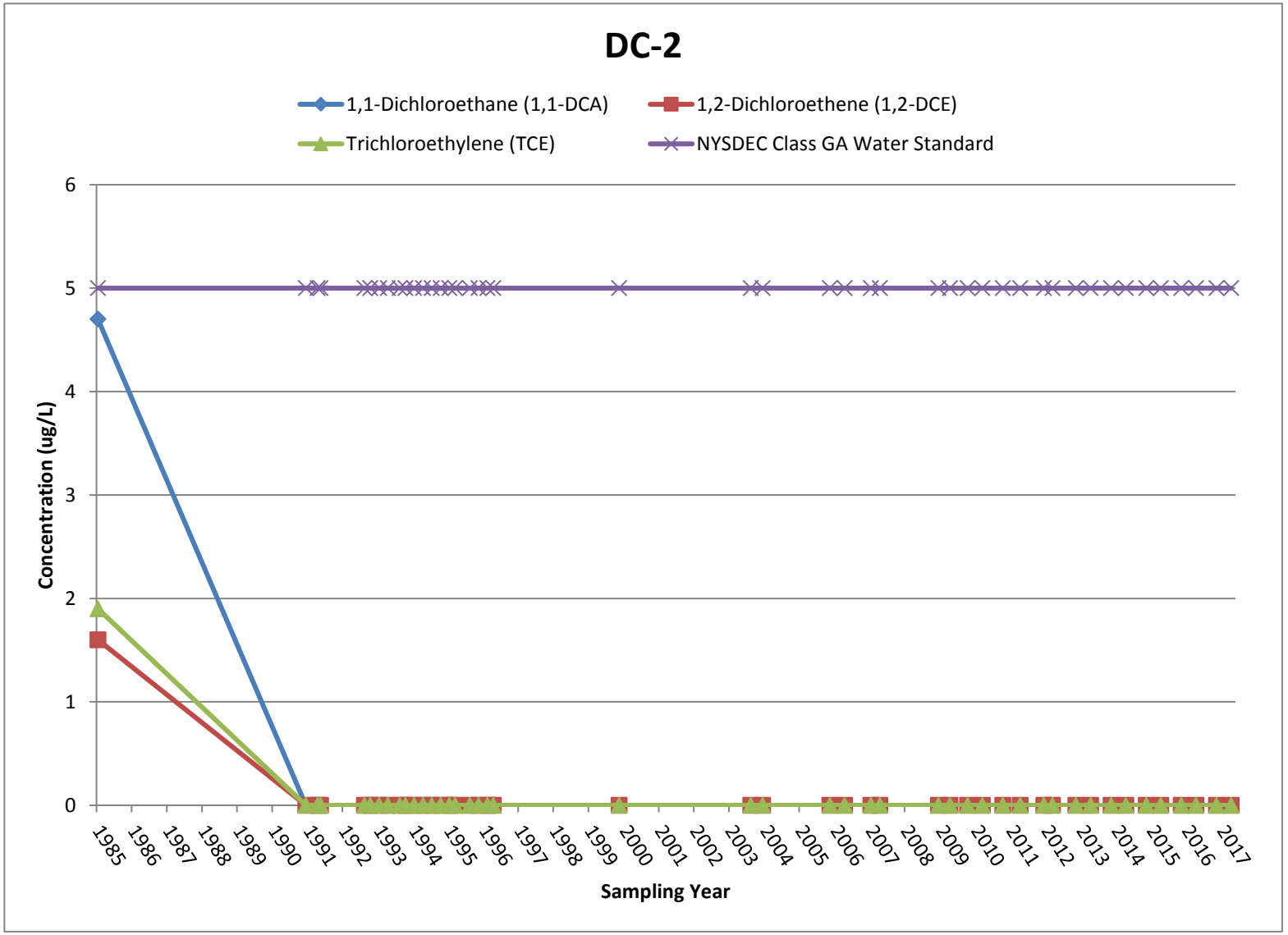
PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

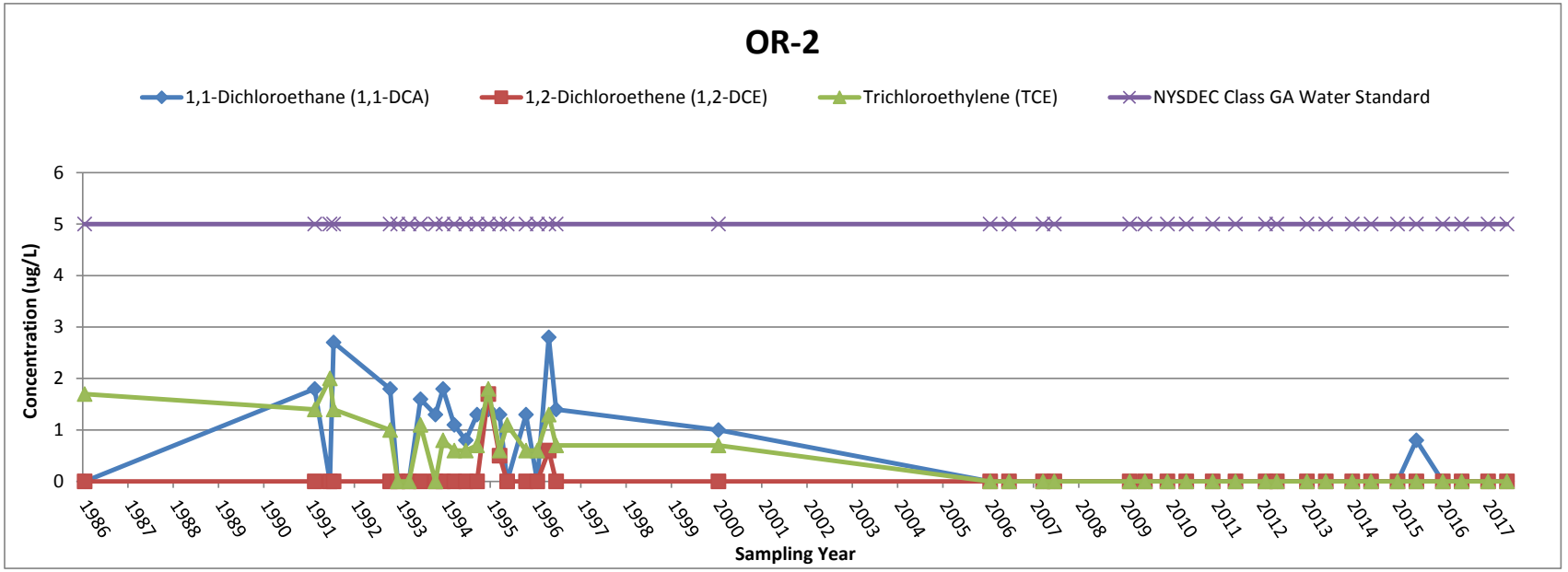
APPENDIX B.2

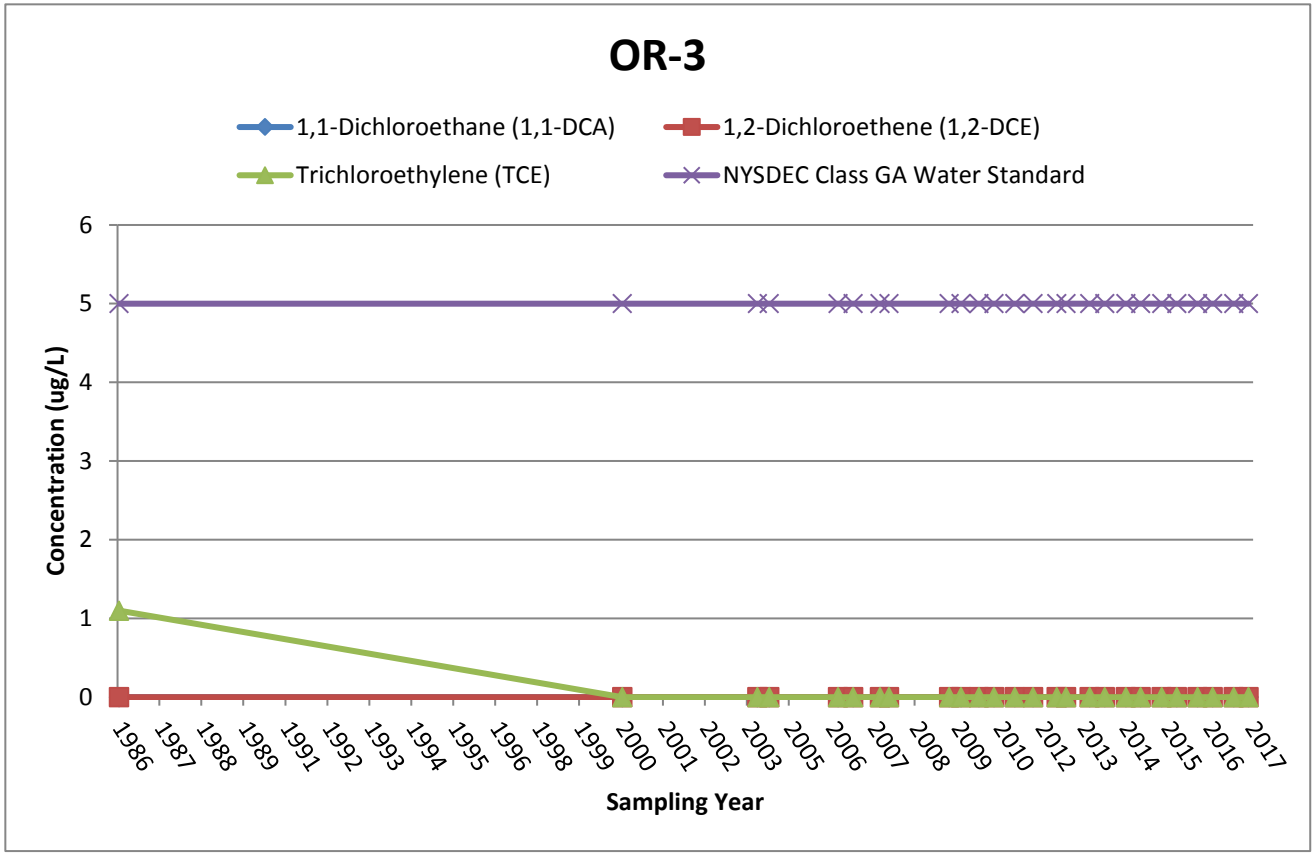
CHEMICAL TREND ANALYSIS GRAPHS FOR GROUNDWATER MONITORING WELLS (2017)

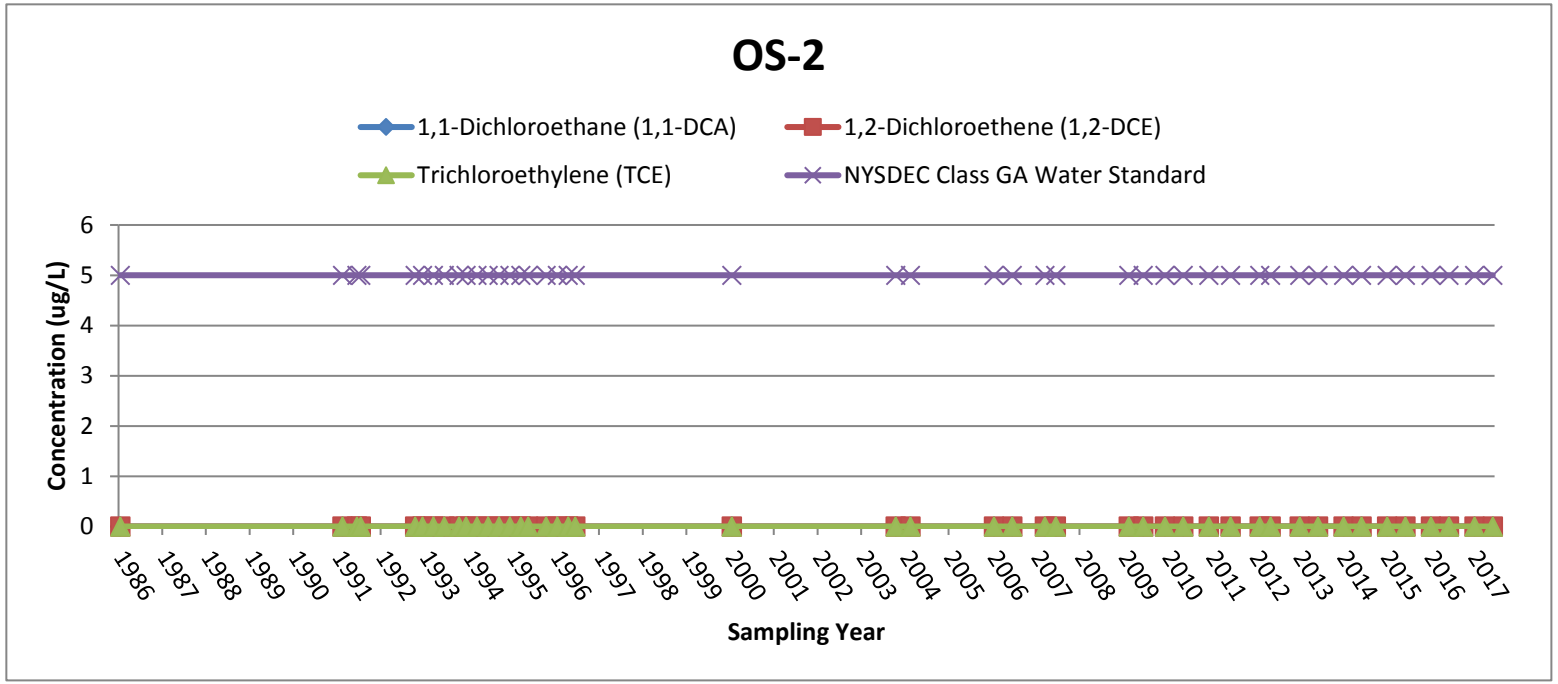

DB-8 (A)
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
Sampling Year
0
10
20
30
40
50
60
70
80
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

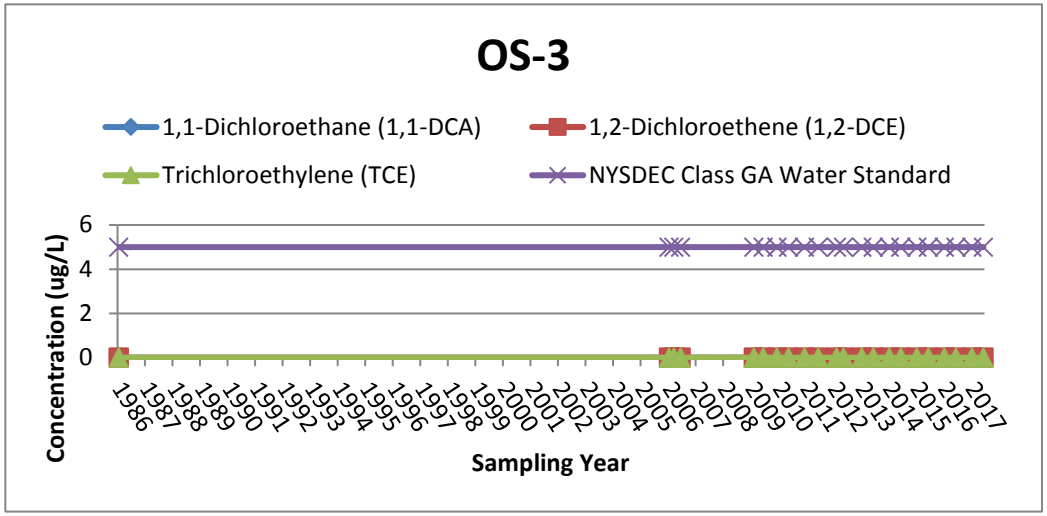

DC-1
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
120
100
80
60
40
20
0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year

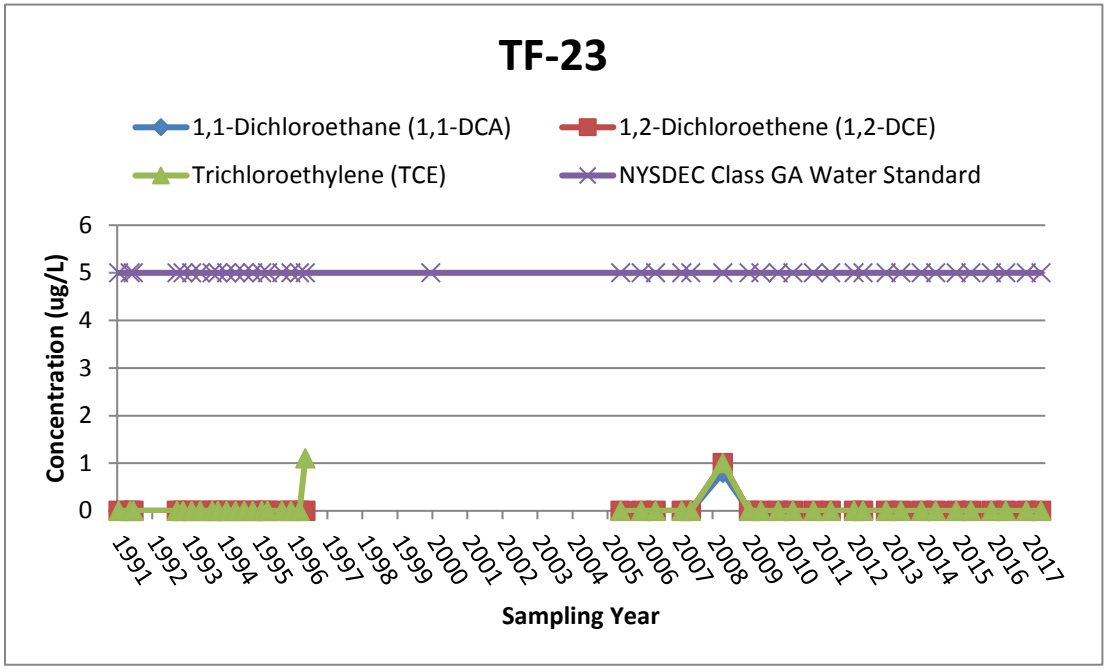

DC-2
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
0
1
2
3
4
5
6
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year

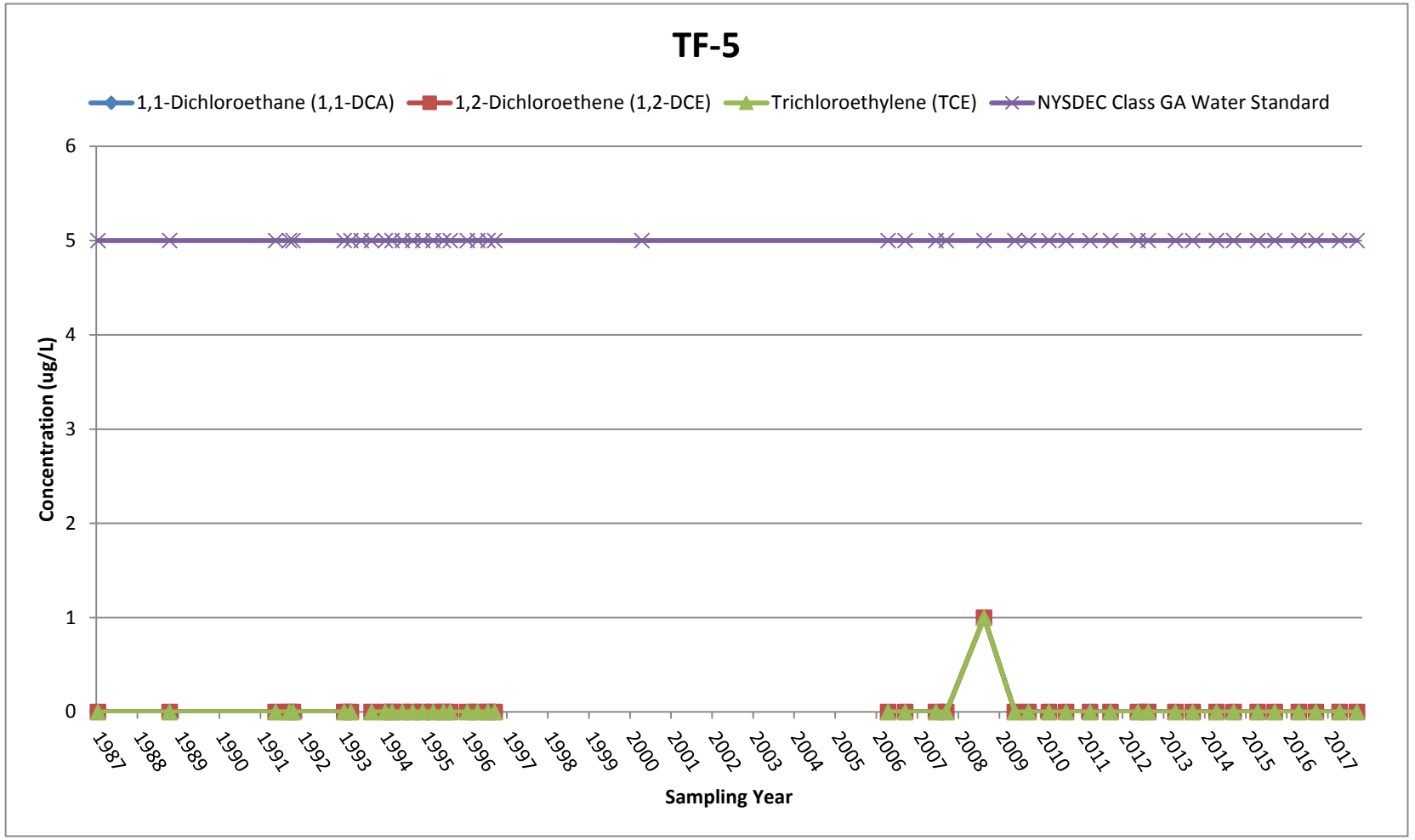

OR-2
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
0
1
2
3
4
5
6
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year

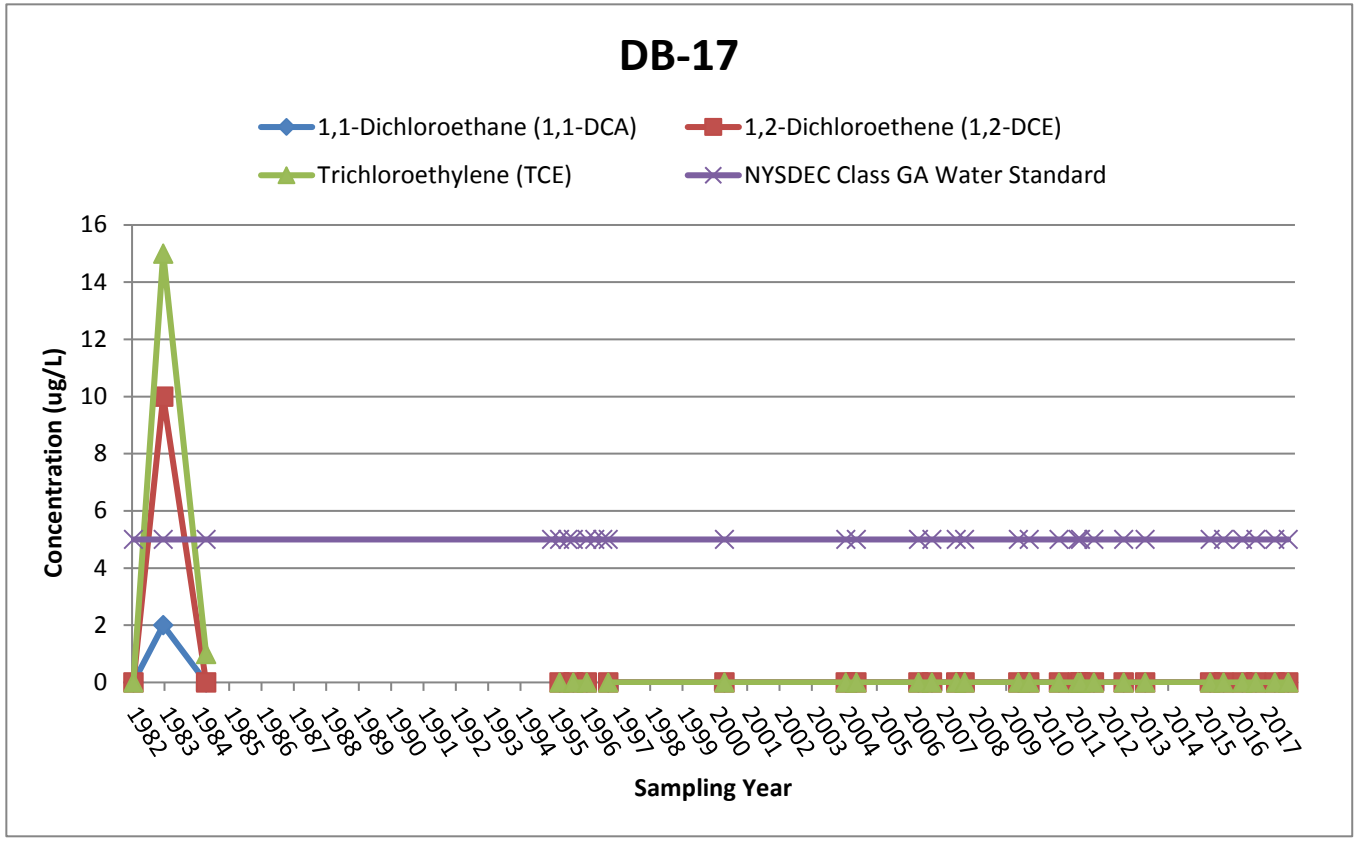

OR-3
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
6
5
4
3
2
1
0
1986
1987
1988
1989
1991
1992
1993
1994
1995
1996
1998
1999
2000
2001
2002
2003
2005
2006
2007
2008
2009
2010
2012
2013
2014
2015
2016
2017
Sampling Year


OS-2
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
0
1
2
3
4
5
6
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year


OS-3
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
6
4
2
0
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year


TF-23
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
0
1
2
3
4
5
6
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year


TF-5
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
0
1
2
3
4
5
6
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year


DB-17
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethene (1,2-DCE)
Trichloroethylene (TCE)
NYSDEC Class GA Water Standard
Concentration (ug/L)
0
2
4
6
8
10
12
14
16
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Sampling Year

APPENDIX C

RECOMMUNITY RECYCLING CENTER GROUNDWATER INVESTIGATION SUPPORTING FIGURES AND GROUNDWATER ANALYTICAL DATA

APPENDIX C.1

CHEMICAL ANALYTICAL DATA SUMMARY FIGURES (2010 AND 2016)

SWMW-131*
08/03/2010
0.0098U
0.271
0.002U
0.0246
0.0069UJ
0.0089U
0.0023U
0.000056U
3.8UJ
24UJ
1U
110J

WESTAGE REALTY
PROPERTY

SWMW-131(B)

SWMW-132(S)(B)
SWMW-131(D)(B)

SWMW-132(S)	SWMW-132(D)
08/03/2010	08/03/2010
0.0098U	0.0098U
0.116	0.12
0.002U	0.002U
0.162	0.0034U
0.0077J	0.0069UJ
0.0089U	0.0089U
0.0023U	0.0023U
0.000056U	0.000056U
3.8U	3.8UJ
10J	24UJ
1U	1U
31UJ	52J

SWMW-130(S)	SWMW-130(D)
08/03/2010	08/03/2010
0.0098U	0.0098U
0.0484	0.0299
0.002U	0.002U
0.0034U	0.0034U
0.0069UJ	0.0069UJ
0.0089U	0.0089U
0.0023U	0.0023U
0.000056U	0.000056U
3.8U	3.8U
24U	24U
1U	1U
38UJ	32UJ

SWMW-130(S)(B)
SWMW-130(D)(B)

APPROXIMATE
LOCATION OF
FISHKILL CREEK

20 10 0 20 40
SCALE: 1"=20'

LEGEND:

SWMW-**	GROUNDWATER MONITORING WELL LOCATION
SWMW-**(B)	DENOTES BEDROCK GROUNDWATER WELL IDENTIFICATION
SWMW-**(S)(B)	DENOTES SHALLOW BEDROCK GROUNDWATER WELL IDENTIFICATION
SWMW-**(D)(B)	DENOTES DEEP BEDROCK GROUNDWATER WELL IDENTIFICATION
	TAX PARCEL BOUNDARY LINE
	AREA BOUNDARY LINE

SWMW-**	PARSONS SOIL BORING
08/03/2010	SAMPLE DATE
0.0098U	ARSENIC (mg/L)
0.0484	BARIUM (mg/L)
0.002U	CADIUM (mg/L)
0.0034U	CHROMIUM (mg/L)
0.0069UJ	LEAD (mg/L)
0.0089U	SELENIUM (mg/L)
0.0023U	SILVER (mg/L)
0.000056U	MERCURY (mg/L)
3.8U	TOTAL CVOCs (ug/L)
24U	TOTAL VOCs (ug/L)
1U	TOTAL PAHs (ug/L)
38UJ	TOTAL SVOCs (ug/L)

U THE ANALYTE WAS ANALYZED, BUT NOT DETECTED. THE ASSOCIATED NUMERICAL VALUE IS AT OR BELOW THE METHOD DETECTION LIMIT.

J THE ANALYTE WAS POSITIVELY IDENTIFIED, BUT THE QUANITITATION IS AN ESTIMATE.

110J PARAMETER THAT EXCEEDS NYSDEC TOGS CLASS GA WATER STANDARDS.

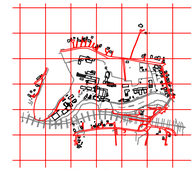
* DUPLICATE SAMPLE COLLECTED AT LOCATION. HIGHEST CONCENTRATIOIN OF EACH PARAMETER SHOWN.

ACRONYM DEFINITIONS:

SWMW WESTAGE REALTY PROPERTY MONITORING WELL

NOTES:

1. SCALE SHOWN IS FOR FULL SIZE DRAWING 22"x34".



KEY PLAN

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D

DRAWN BY: DLP — DATE: 12/6/10
CHECKED BY: EJA — DATE: 12/6/10
APPROVED BY: — DATE:
PROJECT MGR. — DATE:
SEAL

PARSONS
COMMERCIAL TECHNOLOGY GROUP

OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 446074
WBS 05000

PROJECT TITLE
WESTAGE REALTY PROPERTY
SUBSURFACE INVESTIGATION
FORMER TEXACO
RESEARCH CENTER
BEACON, NEW YORK

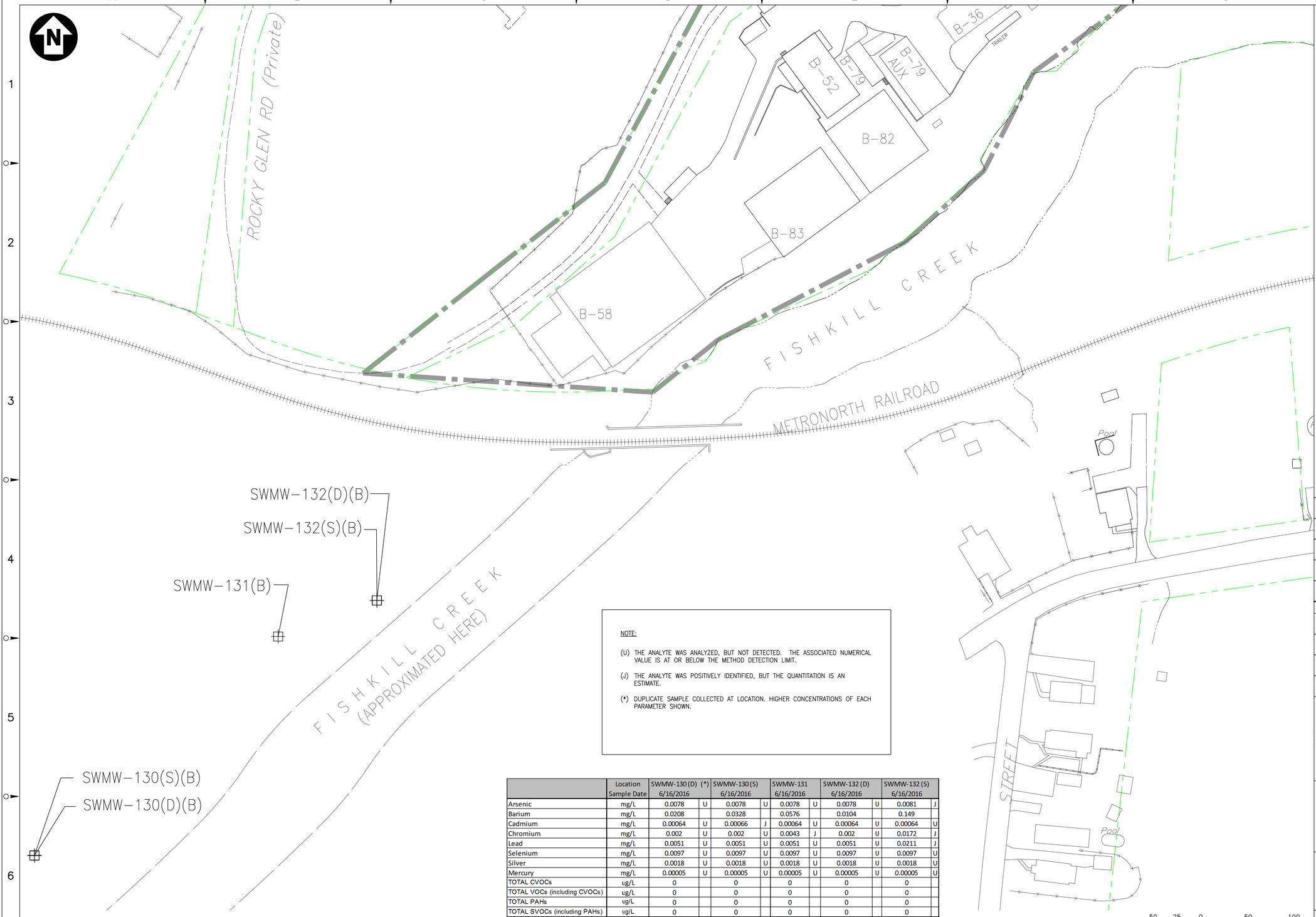
DRAWING TITLE
GROUNDWATER ANALYTICAL
DATA SUMMARY MAP
(METALS, VOCs, AND SVOCs)

SCALE: 1" = 120'-0"

DRAWING NO. FIGURE 3.1

REV. A

FILE NAME: P:\CHEVRON BEACON\CAD\446074C-SB_ANLYT_DATA_120610(2.1_3.1).DWG
PLOT DATE: 12/14/2010 1:37 PM PLOTTED BY: PRAIRIE, DALE

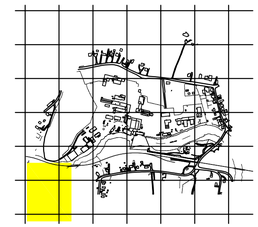


LEGEND:

- TAX PARCEL BOUNDARY LINE
- AREA BOUNDARY LINE
- ⊕ SWMW-** GROUNDWATER MONITORING WELL LOCATIONS
- SWMW-**(O) DENOTES OVERBURDEN GROUNDWATER WELL IDENTIFICATION
- SWMW-**(B) DENOTES BEDROCK GROUNDWATER WELL IDENTIFICATION
- SWMW-**(S)(B) DENOTES SHALLOW BEDROCK GROUNDWATER WELL IDENTIFICATION
- SWMW-**(D)(B) DENOTES DEEP BEDROCK GROUNDWATER WELL IDENTIFICATION

ACRONYM DEFINITIONS:

SWMW SITEWIDE MONITORING WELL



KEY PLAN

NOTE:

(U) THE ANALYTE WAS ANALYZED, BUT NOT DETECTED. THE ASSOCIATED NUMERICAL VALUE IS AT OR BELOW THE METHOD DETECTION LIMIT.

(J) THE ANALYTE WAS POSITIVELY IDENTIFIED, BUT THE QUANTITATION IS AN ESTIMATE.

(*) DUPLICATE SAMPLE COLLECTED AT LOCATION. HIGHER CONCENTRATIONS OF EACH PARAMETER SHOWN.

	Location	SWMW-130(D) (*)		SWMW-130(S)		SWMW-131		SWMW-132(D)		SWMW-132(S)	
	Sample Date	6/16/2016		6/16/2016		6/16/2016		6/16/2016		6/16/2016	
Arsenic	mg/L	0.0078	U	0.0078	U	0.0078	U	0.0078	U	0.0081	J
Barium	mg/L	0.0208		0.0328		0.0576		0.0104		0.149	
Cadmium	mg/L	0.00064	U	0.00066	J	0.00064	U	0.00064	U	0.00064	U
Chromium	mg/L	0.002	U	0.002	U	0.0043	J	0.002	U	0.0172	J
Lead	mg/L	0.0051	U	0.0051	U	0.0051	U	0.0051	U	0.0211	J
Selenium	mg/L	0.0097	U	0.0097	U	0.0097	U	0.0097	U	0.0097	U
Silver	mg/L	0.0018	U	0.0018	U	0.0018	U	0.0018	U	0.0018	U
Mercury	mg/L	0.00005	U	0.00005	U	0.00005	U	0.00005	U	0.00005	U
TOTAL CVOCs	ug/L	0		0		0		0		0	
TOTAL VOCs (including CVOCs)	ug/L	0		0		0		0		0	
TOTAL PAHs	ug/L	0		0		0		0		0	
TOTAL SVOCs (including PAHs)	ug/L	0		0		0		0		0	

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	-	10/26/16	JHG	EJA	EJA

DRAWN BY	JHG	DATE 10/26/16
CHECKED BY	EJA	DATE 10/26/16
APPROVED BY	EJA	DATE 10/26/16
PROJECT MGR.	CFB	DATE 10/26/16

SEAL

PARSONS
COMMERCIAL TECHNOLOGY GROUP
OFFICE
301 PLAINFIELD ROAD
SYRACUSE, NY 13212
(315) 451-9560

JOB 450008

WBS 02000

PROJECT TITLE

2016 HUDSON BAYLOR GROUNDWATER SAMPLING EVENT

FORMER TEXACO RESEARCH CENTER
BEACON, NEW YORK

DRAWING TITLE

GROUNDWATER ANALYTICAL DATA SUMMARY MAP: HUDSON BAYLOR PROPERTY

SCALE 1" = 50'-0"

DRAWING NO. FIGURE 2

REV. A

FILE NAME: P:\CHEVRON BEACON\2014\CAD-DWGS\BEACON GW MAP.DWG
PLOT DATE: 10/27/2016 9:26 AM PLOTTED BY: GOLDTHWAIT, JAMES

APPENDIX C.2

ANALYTICAL DATA SUMMARY TABLES (2010 AND 2016)

TABLE 3.1
ANIONS AND METALS IN GROUNDWATER
WESTAGE REALTY PROPERTY GRONDWATER INVESTIGATION
FORMER TEXACO RESEARCH CENTER
BEACON, NEW YORK

	Field Sample ID			SWMW-130(S)(8-3-10)	SWMW-130(D)(8-3-10)	SWMW-131(8-3-10)	SWMW-1131(8-3-10)*	SWMW-132(S)(8-3-10)	SWMW-132(D)(8-3-10)
	Location			SWMW-130	SWMW-130	SWMW-131	SWMW-1131	SWMW-132	SWMW-132
	Sample Date			08/03/2010	08/03/2010	08/03/2010	08/03/2010	08/03/2010	08/03/2010
	Sample Delivery Group			1205994	1205994	1205994	1205994	1205994	1205994
	Matrix			Water	Water	Water	Water	Water	Water
	Sample Purpose			Regular sample	Regular sample	Regular sample	Duplicate sample	Regular sample	Regular sample
	Sample Type			Groundwater Sample	Groundwater Sample	Groundwater Sample	Groundwater Sample	Groundwater Sample	Groundwater Sample
Parameter Name	**Analytical Method**	**Units**	**TOGS [1]**						
Anions by EPA Method 300.0									
Chloride	EPA 300.0	mg/l	250	1.6 J	1.6 J	8 J	7.3 J	35.9 J	5.7 J
Sulfate	EPA 300.0	mg/l	250	16.5	18.3	128	136	347	29.9
Metals by EPA Method 6010B									
Aluminum	SW-846 6010B	mg/l	0.1	0.1 J	0.633 J	0.261 J	0.267 J	4.87	0.202 J
Antimony	SW-846 6010B	mg/l	0.003	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Arsenic	SW-846 6010B	mg/l	0.025	0.0098 U	0.0098 U	0.0098 U	0.0098 U	0.0098 U	0.0098 U
Barium	SW-846 6010B	mg/l	1	0.0484	0.0299	0.271	0.262	0.116	0.12
Beryllium	SW-846 6010B	mg/l	0.003	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U
Cadmium	SW-846 6010B	mg/l	0.005	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Calcium	SW-846 6010B	mg/l	NS	61200	45900	21600	20900	81000	35200
Chromium	SW-846 6010B	mg/l	0.05	0.0034 U	0.0034 U	0.0246	0.024	0.162	0.0034 U
Cobalt	SW-846 6010B	mg/l	NS	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Copper	SW-846 6010B	mg/l	0.2	0.0032 U	0.0085 U	0.0079 U	0.0092 U	0.02	0.0054 U
Iron	SW-846 6010B	mg/l	0.3	0.11 UJ	0.77 J	0.199 UJ	0.196 UJ	2.88	0.113 UJ
Lead	SW-846 6010B	mg/l	0.025	0.0069 UJ	0.0069 UJ	0.0069 UJ	0.0069 UJ	0.0077 J	0.0069 UJ
Magnesium	SW-846 6010B	mg/l	35	3.51 J	3.48 J	0.166 J	0.181 J	0.98	4.17 J
Manganese	SW-846 6010B	mg/l	0.3	0.0204 J	0.0316 J	0.0018 J	0.0022 J	0.0764	0.0032 J
Nickel	SW-846 6010B	mg/l	0.1	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Potassium	SW-846 6010B	mg/l	NS	1.27	1.06	382	366	147	2.46
Selenium	SW-846 6010B	mg/l	0.01	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U	0.0089 U
Silver	SW-846 6010B	mg/l	0.05	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U
Sodium	SW-846 6010B	mg/l	20	8.69	7.14	229	217	149	7.78
Thallium	SW-846 6010B	mg/l	0.0005	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U
Vanadium	SW-846 6010B	mg/l	NS	0.0025 U	0.0025 U	0.0111	0.0106	0.0237	0.0025 U
Zinc	SW-846 6010B	mg/l	2	0.0081 U	0.0081 U	0.0081 U	0.0081 U	0.0135 J	0.0081 U
Mercury by EPA Method 7470A									
Mercury	SW-846 7470A	mg/l	0.0007	0.000056 U	0.000056 U	0.000056 U	0.000056 U	0.000056 U	0.000056 U

TABLE 3.2
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
WESTAGE REALTY PROPERTY GROUNDWATER INVESTIGATION
FORMER TEXACO RESEARCH CENTER
BEACON, NEW YORK

	Field Sample ID Location Sample Date Sample Delivery Group Matrix Sample Purpose Sample Type			SWMW-130(S)(8-3-10) SWMW-130 08/03/2010 1205994 Water Regular sample Groundwater Sample	SWMW-130(D)(8-3-10) SWMW-130 08/03/2010 1205994 Water Regular sample Groundwater Sample	SWMW-131(8-3-10) SWMW-131 08/03/2010 1205994 Water Regular sample Groundwater Sample	SWMW-1131(8-3-10)* SWMW-1131 08/03/2010 1205994 Water Duplicate sample Groundwater Sample	SWMW-132(S)(8-3-10) SWMW-132 08/03/2010 1205994 Water Regular sample Groundwater Sample
Parameter Name	**Analytical Method**	**Units**	**TOGS (1)**					
VOCs by EPA Method 8260B								
1,1,1-Trichloroethane(2)	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
1,1,2,2-Tetrachloroethane(2)	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
1,1,2-Trichloroethane(2)	SW-846 8260B	ug/l	1	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
1,1-Dichloroethane(2)	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
1,1-Dichloroethene (Dichloroethylene)(2)	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
1,2-Dichloroethane(2)	SW-846 8260B	ug/l	0.6	1 U	1 U	1 UJ	1 UJ	1 U
1,2-Dichloropropane(2)	SW-846 8260B	ug/l	1	1 U	1 U	1 UJ	1 UJ	1 U
2-Butanone (Methyl ethyl ketone)	SW-846 8260B	ug/l	5	3 U	3 U	3 UJ	3 UJ	3 U
2-Hexanone	SW-846 8260B	ug/l	50	3 U	3 U	3 UJ	3 UJ	3 U
4-Methyl-2-pentanone	SW-846 8260B	ug/l	NS	3 U	3 U	3 UJ	3 UJ	3 U
Acetone	SW-846 8260B	ug/l	50	6 U	6 U	6 UJ	6 UJ	10 J
Benzene	SW-846 8260B	ug/l	1	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Bromodichloromethane(2)	SW-846 8260B	ug/l	50	1 U	1 U	1 UJ	1 UJ	1 U
Bromoform	SW-846 8260B	ug/l	50	1 U	1 U	1 UJ	1 UJ	1 U
Bromomethane (Methyl bromide)	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
Carbon Disulfide	SW-846 8260B	ug/l	60	1 U	1 U	1 UJ	1 UJ	1 U
Carbon Tetrachloride(2)	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
Chlorobenzene(2)	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Chloroethane(2)	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
Chloroform(2)	SW-846 8260B	ug/l	7	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Chloromethane (Methyl chloride)(2)	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
cis-1,2-Dichloroethene(2)	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
cis-1,3-Dichloropropene(2)	SW-846 8260B	ug/l	NS	1 U	1 U	1 UJ	1 UJ	1 U
Dibromochloromethane(2)	SW-846 8260B	ug/l	50	1 U	1 U	1 UJ	1 UJ	1 U
Diisopropyl ether	SW-846 8260B	ug/l	NS	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Ethyl-t-butylether	SW-846 8260B	ug/l	NS	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Ethylbenzene	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Methyl-t-butyl ether	SW-846 8260B	ug/l	10	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Methylene chloride (Dichloromethane)(2)	SW-846 8260B	ug/l	5	2 U	2 U	2 UJ	2 UJ	2 U
Styrene	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
Tert-amyl methyl ether	SW-846 8260B	ug/l	NS	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Tertiary Butyl Alcohol	SW-846 8260B	ug/l	NS	10 U	10 U	10 UJ	10 UJ	10 U
Tetrachloroethene(2)	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Toluene	SW-846 8260B	ug/l	5	0.7 U	0.7 U	0.7 UJ	0.7 UJ	0.7 U
trans-1,2-Dichloroethene(2)	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
trans-1,3-Dichloropropene(2)	SW-846 8260B	ug/l	0.4	1 U	1 U	1 UJ	1 UJ	1 U
Trichloroethene (Trichloroethylene)(2)	SW-846 8260B	ug/l	5	1 U	1 U	1 UJ	1 UJ	1 U
Vinyl chloride (Chloroethene)(2)	SW-846 8260B	ug/l	2	1 U	1 U	1 UJ	1 UJ	1 U
Xylenes, Total	SW-846 8260B	ug/l	5	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U
Total CVOCs	SW-846 8260B	ug/l	NS	3.8 U	3.8 U	3.8 UJ	3.8 UJ	3.8 U
Total VOCs (including CVOCs)	SW-846 8260B	ug/l	NS	24 U	24 U	24 UJ	24 UJ	10 J

TABLE 3.2
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
WESTAGE REALTY PROPERTY GROUNDWATER INVESTIGATION
FORMER TEXACO RESEARCH CENTER
BEACON, NEW YORK

	Field Sample ID Location Sample Date Sample Delivery Group Matrix Sample Purpose Sample Type			SWMW-132(D)(8-3-10) SWMW-132 08/03/2010 1205994 Water Regular sample Groundwater Sample
Parameter Name	**Analytical Method**	**Units**	**TOGS (1)**	
VOCs by EPA Method 8260B				
1,1,1-Trichloroethane(2)	SW-846 8260B	ug/l	5	0.8 U
1,1,2,2-Tetrachloroethane(2)	SW-846 8260B	ug/l	5	1 U
1,1,2-Trichloroethane(2)	SW-846 8260B	ug/l	1	0.8 U
1,1-Dichloroethane(2)	SW-846 8260B	ug/l	5	1 U
1,1-Dichloroethene (Dichloroethylene)(2)	SW-846 8260B	ug/l	5	0.8 U
1,2-Dichloroethane(2)	SW-846 8260B	ug/l	0.6	1 U
1,2-Dichloropropane(2)	SW-846 8260B	ug/l	1	1 U
2-Butanone (Methyl ethyl ketone)	SW-846 8260B	ug/l	5	3 U
2-Hexanone	SW-846 8260B	ug/l	50	3 U
4-Methyl-2-pentanone	SW-846 8260B	ug/l	NS	3 U
Acetone	SW-846 8260B	ug/l	50	6 U
Benzene	SW-846 8260B	ug/l	1	0.5 U
Bromodichloromethane(2)	SW-846 8260B	ug/l	50	1 U
Bromoform	SW-846 8260B	ug/l	50	1 U
Bromomethane (Methyl bromide)	SW-846 8260B	ug/l	5	1 U
Carbon Disulfide	SW-846 8260B	ug/l	60	1 U
Carbon Tetrachloride(2)	SW-846 8260B	ug/l	5	1 U
Chlorobenzene(2)	SW-846 8260B	ug/l	5	0.8 U
Chloroethane(2)	SW-846 8260B	ug/l	5	1 U
Chloroform(2)	SW-846 8260B	ug/l	7	0.8 U
Chloromethane (Methyl chloride)(2)	SW-846 8260B	ug/l	5	1 U
cis-1,2-Dichloroethene(2)	SW-846 8260B	ug/l	5	0.8 U
cis-1,3-Dichloropropene(2)	SW-846 8260B	ug/l	NS	1 U
Dibromochloromethane(2)	SW-846 8260B	ug/l	50	1 U
Diisopropyl ether	SW-846 8260B	ug/l	NS	0.8 U
Ethyl-t-butylether	SW-846 8260B	ug/l	NS	0.8 U
Ethylbenzene	SW-846 8260B	ug/l	5	0.8 U
Methyl-t-butyl ether	SW-846 8260B	ug/l	10	0.5 U
Methylene chloride (Dichloromethane)(2)	SW-846 8260B	ug/l	5	2 U
Styrene	SW-846 8260B	ug/l	5	1 U
Tert-amyl methyl ether	SW-846 8260B	ug/l	NS	0.8 U
Tertiary Butyl Alcohol	SW-846 8260B	ug/l	NS	10 U
Tetrachloroethene(2)	SW-846 8260B	ug/l	5	0.8 U
Toluene	SW-846 8260B	ug/l	5	0.7 U
trans-1,2-Dichloroethene(2)	SW-846 8260B	ug/l	5	0.8 U
trans-1,3-Dichloropropene(2)	SW-846 8260B	ug/l	0.4	1 U
Trichloroethene (Trichloroethylene)(2)	SW-846 8260B	ug/l	5	1 U
Vinyl chloride (Chloroethene)(2)	SW-846 8260B	ug/l	2	1 U
Xylenes, Total	SW-846 8260B	ug/l	5	0.8 U
Total CVOCs	SW-846 8260B	ug/l	NS	3.8 UJ
Total VOCs (including CVOCs)	SW-846 8260B	ug/l	NS	24 UJ

TABLE 3.3
SEMIVOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
WESTAGE REALTY PROPERTY GROUNDWATER INVESTIGATION
FORMER TEXACO RESEARCH CENTER
BEACON, NEW YORK

	Field Sample ID Location Sample Date Sample Delivery Group Matrix Sample Purpose Sample Type			SWMW-130(S)(8-3-10) SWMW-130 08/03/2010 1205994 Water Regular sample Groundwater Sample	SWMW-130(D)(8-3-10) SWMW-130 08/03/2010 1205994 Water Regular sample Groundwater Sample	SWMW-131(8-3-10) SWMW-131 08/03/2010 1205994 Water Regular sample Groundwater Sample	SWMW-1131(8-3-10)* SWMW-1131 08/03/2010 1205994 Water Duplicate sample Groundwater Sample	SWMW-132(S)(8-3-10) SWMW-132 08/03/2010 1205994 Water Regular sample Groundwater Sample	SWMW-132(D)(8-3-10) SWMW-132 08/03/2010 1205994 Water Regular sample Groundwater Sample
Parameter Name	**Analytical Method**	**Units**	**TOGS [1]**						
SVOCs by EPA Method 8270C									
1,2,4-Trichlorobenzene	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene (o-Dichlorobenzene)	SW-846 8270C	ug/l	3	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	SW-846 8270C	ug/l	3	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	SW-846 8270C	ug/l	3	1 U	1 U	1 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
2,4,6-Trichlorophenol	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dichlorophenol	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
2,4-Dimethylphenol	SW-846 8270C	ug/l	50	3 U	3 U	3 U	3 U	3 U	3 U
2,4-Dinitrophenol	SW-846 8270C	ug/l	10	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
2,6-Dinitrotoluene	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
2-Chloronaphthalene	SW-846 8270C	ug/l	10	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
2-Chlorophenol (o-Chlorophenol)	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
2-Methyl-naphthlalene	SW-846 8270C	ug/l	50	1 U	1 U	1 U	1 U	1 U	1 U
2-Methylphenol (o-Cresol)	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline (o-Nitroaniline)	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitrophenol (o-Nitrophenol)	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	SW-846 8270C	ug/l	5	2 U	2 U	2 U	2 U	2 U	2 U
3-Nitroaniline	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	SW-846 8270C	ug/l	NS	5 U	5 U	5 U	5 U	5 U	5 U
4-Bromophenylphenylether	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
4-Chloroaniline	SW-846 8270C	ug/l	5	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
4-Chlorophenyl phenyl ether	SW-846 8270C	ug/l	NS	2 U	2 U	2 U	2 U	2 U	2 U
4-Nitroaniline	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
4-Nitrophenol	SW-846 8270C	ug/l	NS	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthene[3]	SW-846 8270C	ug/l	20	1 U	1 U	1 U	1 U	1 U	1 U
Acenaphthylene	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
Anthracene[3]	SW-846 8270C	ug/l	50	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)anthracene[3]	SW-846 8270C	ug/l	0.002	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)pyrene[3]	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(b)fluoranthene[3]	SW-846 8270C	ug/l	0.002	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene[3]	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(k)fluoranthene[3]	SW-846 8270C	ug/l	0.002	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethoxy)methane	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Chloroethyl) ether	SW-846 8270C	ug/l	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Bis(2-chloroisopropyl) ether	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
bis(2-Ethylhexyl)phthalate	SW-846 8270C	ug/l	5	8 UJ	11 UJ	110 J	12 UJ	6 UJ	52 J
Butylbenzylphthalate	SW-846 8270C	ug/l	50	2 U	2 U	2 U	2 U	2 U	2 U
Carbazole	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene[3]	SW-846 8270C	ug/l	0.002	1 U	1 U	1 U	1 U	1 U	1 U
Di-n-butylphthalate	SW-846 8270C	ug/l	50	2 U	2 U	2 U	2 U	2 U	2 U
Di-n-octylphthalate	SW-846 8270C	ug/l	50	2 U	2 U	2 U	2 U	2 U	2 U
Dibenz(a,h)anthracene[3]	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
Dibenzofuran	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
Diethylphthalate	SW-846 8270C	ug/l	50	2 U	2 U	2 U	2 U	2 U	2 U
Dimethylphthalate	SW-846 8270C	ug/l	50	2 U	2 U	2 U	2 U	2 U	2 U
Fluoranthene[3]	SW-846 8270C	ug/l	50	1 U	1 U	1 U	1 U	1 U	1 U
Fluorene	SW-846 8270C	ug/l	50	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobenzene	SW-846 8270C	ug/l	0.04	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobutadiene	SW-846 8270C	ug/l	0.5	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	SW-846 8270C	ug/l	5	5 U	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	SW-846 8270C	ug/l	5	1 U	1 U	1 U	1 U	1 U	1 U
Indeno(1,2,3-cd)pyrene	SW-846 8270C	ug/l	0.002	1 U	1 U	1 U	1 U	1 U	1 U
Isophorone	SW-846 8270C	ug/l	50	1 U	1 U	1 U	1 U	4 J	1 U
N-Nitrosodi-n-propylamine	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
N-Nitrosodiphenylamine (Diphenylamine)	SW-846 8270C	ug/l	50	2 U	2 U	2 U	2 U	2 U	2 U
Naphthalene[3]	SW-846 8270C	ug/l	10	1 U	1 U	1 U	1 U	1 U	1 U
Nitrobenzene	SW-846 8270C	ug/l	0.4	1 U	1 U	1 U	1 U	1 U	1 U
p-Chloro-m-cresol	SW-846 8270C	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
p-Cresol	SW-846 8270C	ug/l	NS	2 U	2 U	2 U	2 U	2 U	2 U
Pentachlorophenol	SW-846 8270C	ug/l	1	3 U	3 U	3 U	3 U	3 U	3 U
Phenanthrene[3]	SW-846 8270C	ug/l	50	1 U	1 U	1 U	1 U	1 U	1 U
Phenol	SW-846 8270C	ug/l	1	9 UJ	11 UJ	12 UJ	3 UJ	4 UJ	1 U
Pyrene[3]	SW-846 8270C	ug/l	50	1 U	1 U	1 U	1 U	1 U	1 U
Total PAHs	SW-846 8260B	ug/l	NS	1 U	1 U	1 U	1 U	1 U	1 U
Total SVOCs (including PAHs)	SW-846 8260B	ug/l	NS	38 UJ	32 UJ	110 J	33 UJ	31 UJ	52 J

Notes for Tables 3.1, 3.2, and 3.3

	Concentration of parameter(s) exceeds regulatory groundwater screening criterion
J	The analyte was positively identified, But the quantitation is an estimation.
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
NS	Not specified.
(1)	Groundwater criteria obtained from the NYSDEC document entitled, "Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998; Errata Sheet for June 1998 Edition.
(2)	Chlorinated volatile organic compounds (CVOCs)
(3)	Polycyclic Aromatic Hydrocarbon (PAHs)
*	Duplicate sample.

Table 2
Groundwater Analytical Data Summary Table
Hudson Baylor Property
(June 2016)
(Former Westage Realty Property)
Former Texaco Research Center
Beacon, New York

Location ID				SWMW-130 (D)		SWMW-130 (D)		SWMW-130 (S)		SWMW-131		SWMW-132 (D)		SWMW-132 (S)	
Field Sample ID				SWMW-130D-W-46.00-160616		SWMW-130D-WD-46.00-160616		SWMW-130S-W-26.00-160616		SWMW-131-W-53.80-160616		SWMW-132D-W-92.00-160616		SWMW-132S-W-35.00-160616	
Date Sampled				06/16/2016		06/16/2016		06/16/2016		06/16/2016		06/16/2016		06/16/2016	
SDG				1673356		1673356		1673356		1673356		1673356		1673356	
Sample Matrix				WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose				REG		FD		REG		REG		REG		REG	
Sample Type				GW		GW		GW		GW		GW		GW	
Parameter Name	**Units**	**Analytical Method**	**NY_TOGS[1]**												
Anions by EPA Method 300.0															
Chloride	**mg/L**	**EPA 300.0**	**250.0 mg/l**	3		2.9		2		3.7		3		2.4	
Sulfate (SO4)	**mg/L**	**EPA 300.0**	**250.0 mg/l**	13.9		13.1		11.5		89.9		10.3		9.7	
Metals by EPA Method 6010C															
Aluminum	**mg/L**	**SW-846 6010C**	**0.1 mg/l**	0.346	J	0.445		0.952		1.13		0.0929	U	29.4	
Antimony	**mg/L**	**SW-846 6010C**	**0.0030 mg/l**	0.0062	U	0.0062	U	0.0062	U	0.0062	U	0.0062	U	0.0062	U
Arsenic	**mg/L**	**SW-846 6010C**	**0.025 mg/l**	0.0078	U	0.0078	U	0.0078	U	0.0078	U	0.0078	U	0.0081	J
Barium	**mg/L**	**SW-846 6010C**	**1.0 mg/l**	0.02		0.0208		0.0328		0.0576		0.0104		0.149	
Beryllium	**mg/L**	**SW-846 6010C**	**0.0030 mg/l**	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0045	J
Cadmium	**mg/L**	**SW-846 6010C**	**0.0050 mg/l**	0.00064	U	0.00064	U	0.00066	J	0.00064	U	0.00064	U	0.00064	U
Calcium	**mg/L**	**SW-846 6010C**	**NS**	39.4		38.8		61.5		18.3		43		48.1	
Chromium	**mg/L**	**SW-846 6010C**	**0.05 mg/l**	0.002	U	0.002	U	0.002	U	0.0043	J	0.002	U	0.0172	J
Cobalt	**mg/L**	**SW-846 6010C**	**0.0050 mg/l**	0.0009	U	0.0009	U	0.0009	U	0.0009	U	0.0009	U	0.0063	J
Copper	**mg/L**	**SW-846 6010C**	**0.2 mg/l**	0.0032	U	0.0032	U	0.0039	J	0.0039	J	0.0032	U	0.0214	
Iron	**mg/L**	**SW-846 6010C**	**0.3 mg/l**	0.269	J	0.349	J	0.587		0.576		0.0333	U	29.2	
Lead	**mg/L**	**SW-846 6010C**	**0.025 mg/l**	0.0051	U	0.0051	U	0.0051	U	0.0051	U	0.0051	U	0.0211	J
Magnesium	**mg/L**	**SW-846 6010C**	**35.0 mg/l**	3.09		3.06		3.88		4.24		5.93		12.5	
Manganese	**mg/L**	**SW-846 6010C**	**0.3 mg/l**	0.006	J	0.0098	J	0.0155	J	0.0057	J	0.0012	U	0.541	J
Nickel	**mg/L**	**SW-846 6010C**	**0.1 mg/l**	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	0.0066	J
Potassium	**mg/L**	**SW-846 6010C**	**NS**	0.503	J	0.519	J	1.22		25		0.624	J	3.45	
Selenium	**mg/L**	**SW-846 6010C**	**0.01 mg/l**	0.0097	U	0.0097	U	0.0097	U	0.0097	U	0.0097	U	0.0097	U
Silver	**mg/L**	**SW-846 6010C**	**0.05 mg/l**	0.0018	U	0.0018	U	0.0018	U	0.0018	U	0.0018	U	0.0018	U
Sodium	**mg/L**	**SW-846 6010C**	**20.0 mg/l**	3.74		3.72		11.8		55.9		3.59		4.29	
Thallium	**mg/L**	**SW-846 6010C**	**0.00050 mg/l**	0.0094	U	0.0094	U	0.0094	U	0.0094	U	0.0094	U	0.0194	J
Vanadium	**mg/L**	**SW-846 6010C**	**NS**	0.0023	U	0.0023	U	0.0023	U	0.0054	J	0.0023	U	0.0299	
Zinc	**mg/L**	**SW-846 6010C**	**2.0 mg/l**	0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0557	
Mercury by EPA Method 7470A															
Mercury	**mg/L**	**SW-846 7470A**	**0.00070 mg/l**	0.00005	U	0.00005	U	0.00005	U	0.00005	U	0.00005	U	0.00005	U
VOCs[(4)] by EPA Method 8260C															
1,1 Dichloroethene[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane[(2)]	**ug/L**	**SW-846 8260C**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane[(2)]	**ug/L**	**SW-846 8260C**	**0.6 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane[(2)]	**ug/L**	**SW-846 8260C**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Butanone (Methyl ethyl ketone)	**ug/L**	**SW-846 8260C**	**50.0 ug/l**	3	U	3	U	3	U	3	U	3	U	3	U
2-Hexanone	**ug/L**	**SW-846 8260C**	**50.0 ug/l**	3	U	3	U	3	U	3	U	3	U	3	U
4-Methyl-2-pentanone	**ug/L**	**SW-846 8260C**	**NS**	3	U	3	U	3	U	3	U	3	U	3	U
Acetone	**ug/L**	**SW-846 8260C**	**50.0 ug/l**	6	U	6	U	6	U	6	U	6	U	6	U
Benzene	**ug/L**	**SW-846 8260C**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane[(2)]	**ug/L**	**SW-846 8260C**	**50.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	**ug/L**	**SW-846 8260C**	**50.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromomethane (Methyl bromide)	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	**ug/L**	**SW-846 8260C**	**60.0 ug/l**	1	U	1	U	1	U	1	U	1	U	1	U
Carbon Tetrachloride[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroform[(2)]	**ug/L**	**SW-846 8260C**	**7.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloromethane (Methyl chloride)[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,2-Dichloroethene[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene[(2)]	**ug/L**	**SW-846 8260C**	**0.4 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dibromochloromethane[(2)]	**ug/L**	**SW-846 8260C**	**50.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Diisopropyl ether	**ug/L**	**SW-846 8260C**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethyl-t-butylether	**ug/L**	**SW-846 8260C**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methyl-t-butyl ether	**ug/L**	**SW-846 8260C**	**10.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Methylene chloride (Dichloromethane)[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
Styrene	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	1	U	1	U	1	U	1	U	1	U	1	U
tert-Amyl methyl ether	**ug/L**	**SW-846 8260C**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Tertiary Butyl Alcohol	**ug/L**	**SW-846 8260C**	**NS**	5	U	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene[(2)]	**ug/L**	**SW-846 8260C**	**0.4 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethene (Trichloroethylene)[(2)]	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl chloride (Chloroethene)[(2)]	**ug/L**	**SW-846 8260C**	**2.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Xylene (total)	**ug/L**	**SW-846 8260C**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
TOTAL CVOCs[(2)]	**ug/L**	**SW-846 8260C**	**NS**	0		0		0		0		0		0	
TOTAL VOCs (including CVOCs)	**ug/L**	**SW-846 8260C**	**NS**	0		0		0		0		0		0	

Table 2
Groundwater Analytical Data Summary Table
Hudson Baylor Property
(June 2016)
(Former Westage Realty Property)
Former Texaco Research Center
Beacon, New York

Location ID				SWMW-130 (D)		SWMW-130 (D)		SWMW-130 (S)		SWMW-131		SWMW-132 (D)		SWMW-132 (S)	
Field Sample ID				SWMW-130D-W-46.00-160616		SWMW-130D-WD-46.00-160616		SWMW-130S-W-26.00-160616		SWMW-131-W-53.80-160616		SWMW-132D-W-92.00-160616		SWMW-132S-W-35.00-160616	
Date Sampled				06/16/2016		06/16/2016		06/16/2016		06/16/2016		06/16/2016		06/16/2016	
SDG				1673356		1673356		1673356		1673356		1673356		1673356	
Sample Matrix				WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose				REG		FD		REG		REG		REG		REG	
Sample Type				GW		GW		GW		GW		GW		GW	
Parameter Name	**Units**	**Analytical Method**	**NY_TOGS[1]**												
SVOCs [5] by EPA Method 8270D															
1,2,4-Trichlorobenzene	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene (o-Dichlorobenzene)	**ug/L**	**SW-846 8270D**	**3.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichlorobenzene	**ug/L**	**SW-846 8270D**	**3.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dichlorobenzene	**ug/L**	**SW-846 8270D**	**3.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,4,5-Trichlorophenol	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,4,6-Trichlorophenol	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,4-Dichlorophenol	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,4-Dimethylphenol	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2,4-Dinitrophenol	**ug/L**	**SW-846 8270D**	**10.0 ug/l**	10	U	11	U	10	U	11	U	11	U	11	U
2,4-Dinitrotoluene	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	1	U	1	U	1	U	1	U	1	U	1	U
2,6-Dinitrotoluene	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Chloronaphthalene	**ug/L**	**SW-846 8270D**	**10.0 ug/l**	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
2-Chlorophenol (o-Chlorophenol)	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Methyl-Naphthlalene	**ug/L**	**SW-846 8270D**	**NS**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
2-Methylphenol (o-Cresol)	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Nitroaniline (o-Nitroaniline)	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Nitrophenol (o-Nitrophenol)	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
3,3'-Dichlorobenzidine	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
3-Nitroaniline	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	5	U	5	U	5	U	5	U	5	U	5	U
4-Bromophenylphenylether	**ug/L**	**SW-846 8270D**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
4-Chloroaniline	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
4-Chlorophenyl phenyl ether	**ug/L**	**SW-846 8270D**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
4-Methylphenol (p-Cresol)	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
4-Nitroaniline	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
4-Nitrophenol	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	10	U	11	U	10	U	11	U	11	U	11	U
Acenaphthene	**ug/L**	**SW-846 8270D**	**20.0 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Acenaphthylene	**ug/L**	**SW-846 8270D**	**NS**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Anthracene[3]	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(a)anthracene[3]	**ug/L**	**SW-846 8270D**	**0.0020 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(a)pyrene[3]	**ug/L**	**SW-846 8270D**	**NS**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(b)fluoranthene[3]	**ug/L**	**SW-846 8270D**	**0.0020 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(g,h,i)perylene[3]	**ug/L**	**SW-846 8270D**	**NS**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(k)fluoranthene[3]	**ug/L**	**SW-846 8270D**	**0.0020 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
bis(2-Chloroethoxy)methane	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
bis(2-Chloroethyl) ether	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
bis(2-chloroisopropyl) ether	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
bis(2-Ethylhexyl)phthalate	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
Butylbenzylphthalate	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
Carbazole	**ug/L**	**SW-846 8270D**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chrysene[3]	**ug/L**	**SW-846 8270D**	**0.0020 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Di-n-butylphthalate	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
Di-n-octylphthalate	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
Dibenz(a,h)anthracene[3]	**ug/L**	**SW-846 8270D**	**NS**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Dibenzofuran	**ug/L**	**SW-846 8270D**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Diethylphthalate	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
Dimethyl phthalate	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	2	U	2	U	2	U	2	U	2	U	2	U
Fluoranthene[3]	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Fluorene	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Hexachlorobenzene	**ug/L**	**SW-846 8270D**	**0.04 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Hexachlorobutadiene	**ug/L**	**SW-846 8270D**	**0.5 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorocyclopentadiene	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	**ug/L**	**SW-846 8270D**	**5.0 ug/l**	1	U	1	U	1	U	1	U	1	U	1	U
Indeno(1,2,3-cd)Pyrene	**ug/L**	**SW-846 8270D**	**0.0020 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Isophorone	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
N-Nitrosodi-n-propylamine	**ug/L**	**SW-846 8270D**	**NS**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
N-Nitrosodiphenylamine (Diphenylamine)	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene[3]	**ug/L**	**SW-846 8270D**	**10.0 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nitrobenzene	**ug/L**	**SW-846 8270D**	**0.4 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
p-Chloro-m-cresol	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Pentachlorophenol	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	1	U	1	U	1	U	1	U	1	U	1	U
Phenanthrene[3]	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Phenol	**ug/L**	**SW-846 8270D**	**1.0 ug/l**	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Pyrene[3]	**ug/L**	**SW-846 8270D**	**50.0 ug/l**	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
TOTAL PAHs[3]	**ug/L**	**SW-846 8270D**	NS	0		0		0		0		0		0	
TOTAL SVOCs [5] (including PAHs)	**ug/L**	**SW-846 8270D**	NS	0		0		0		0		0		0	

Notes for Table 2

	Concentration of parameter(s) exceeds regulatory groundwater screening criterion.
J	The analyte was positively identified, but the quantitation is an estimation.
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.
mg/L	Milligrams per liter.
µg/L	Micrograms per liter.
NS	Not sampled.
	Sample Type
	GW = Groundwater
	Sample Purpose
	REG = Regular
	FD = Field Duplicate
(1)	Groundwater criteria obtained from the NYSDEC document entitled, "Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations", June 1998; Errata Sheet for June 1998 Edition.
(2)	Chlorinated Volatile Organic Compounds (CVOCs)
(3)	Polycyclic Aromatic Hydrocarbons (PAHs)
(4)	Volatile Organic Compounds (VOCs)
(5)	Semivolatile Organic Compounds (SVOCs)