2013 PERIODIC REVIEW REPORT
BREWSTER VILLAGE WELL FIELD SITE

(Site No.: 3-40-012)
Village of Brewster, Brewster, Putnam County, New York

Prepared for:
New York State Department of Environmental Conservation

Prepared by:
Camp Dresser McKee & Smith
11 British American Boulevard, Suite 200
Latham, New York

March 2014

CDM Smith

Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form

Site Details **Box 1**

Site No. 340012

Site Name Brewster Village Well Field

Site Address: Brewster Zip Code: 10509
City/Town: Southeast
County: Putnam
Site Acreage: 1.0

Reporting Period: December 31, 2012 to December 31, 2013

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

Box 2

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

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

_____ _____
Signature of Standby Consultant/Contractor Date

SITE NO. 340012 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
57-3-24	R & R DEVELOPMENT CORP	Monitoring Plan O&M Plan

Institutional controls: New wells cannot be drilled without a permit from the County Department of Health. The local planning board and the dealership property owner are to contact that EPA prior to the approval of any construction on the dealership property and any planned development in the general vicinity of the site.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
57-3-24	Groundwater Treatment System Vapor Mitigation

Engineering Controls: A groundwater pump and treat system is on-site and periodic groundwater monitoring is required. A SSDS is installed at the dealership and is to be run by the dealership

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

YES	NO
☑	☐

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

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

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

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

YES	NO
☑	☐

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

_____ _____

Signature of Standby Consultant/Contractor Date

IC/EC CERTIFICATIONS

Box 6

Professional Engineer Signature

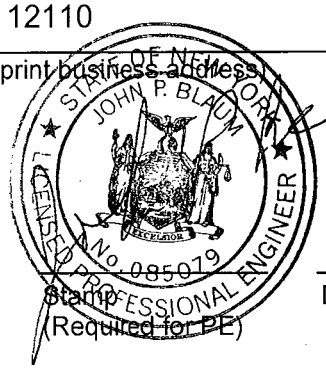
I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I John P. Blaum at CDM Smith
print name

11 British American Blvd., Ste. 200

Latham, NY 12110
(print business address)

am certifying as a Professional Engineer.



Signature of Professional Engineer

Stamp (Required for PE)

3/14/14
Date

Table of Contents

Table of Contents

List of Tables

List of Figures

List of Appendices

Section 1

Section 1
Executive Summary

1.1 Site History and Remedial Program

The Brewster Well Field Site (the "Site") is located on the northern and southern banks of the East Branch Croton River (the "River"), and is approximately three-quarters of a mile west of the Village of Brewster in the Town of Southeast, Putnam County, New York as shown on Figure 1, the Site Location Map. The Site was found to be contaminated with chlorinated solvents, primarily tetrachloroethene (PCE) and trichloroethene (TCE). Alben Dry Cleaners was determined to be the source of the contamination.

The Brewster Well Field, which supplies water to approximately 2,200 people, was found to be contaminated with halogenated volatile organic compounds that included PCE, TCE and cis-1,2-dichloroethylene (DCE). The initial contamination discovery was made in 1978. An on-site packed air stripper was installed in 1984 to provide treatment of the Village's water supply and was later replaced by a full scale air stripper in 1985.

After completing a Remedial Investigation and Feasibility Study (RI/FS), the OU-1 Record of Decision (ROD) was signed in 1986. The selected remedy included continued operation of the air stripper to treat the Village's water supply and a second groundwater treatment system to capture the contaminant plume. This second air stripper system was installed northwest of the Brady Stannard Chevrolet dealership and operated until 2007, when it was replaced with a new tray air stripper system, located to the east of Smith Cairns Subaru dealership. The original air stripper groundwater treatment system was demolished in 2012. The new groundwater treatment system was located to better capture the contaminant plume that still exists under the former Alben Dry Cleaners building, which is now the Subaru dealership. All former and existing treatment systems can be found on the Site Plan included as Figure 2. In 2009, the EPA issued an Explanation of Significant Differences (ESD) documenting changes to the original remedy including the installation of an enhanced subslab vapor mitigation system to prevent vapor intrusion and remediate contaminated soil discovered beneath the Smith Cairns Subaru dealership building. The ESD also detailed institutional controls to prevent potential exposure to contaminated soils and groundwater in the vicinity of the Site.

1.2 Remedy Evaluation

This Periodic Review Report (PRR) will cover the time period between December 31, 2012 and December 31, 2013. The annual groundwater sampling event was completed in April 2013. The next groundwater sampling event is scheduled for April 2014 and the 2014 PRR will cover January 2014 through December 2014.

The groundwater treatment system treated approximately 103,069,805 gallons of water from system start-up in February 2008 through December 27, 2013. The system operated almost continuously during this period. Aztech Technologies Inc. (Aztech) monitors the treatment system remotely, performs monthly sampling of the system influent and discharge, and completes any regular maintenance as necessary.

Concentrations of PCE, DCE, and Vinyl Chloride in the combined influent to the groundwater treatment system have decreased significantly since system sampling started in March 2008. PCE concentrations in the combined system influent dropped 50 percent from 880 µg/L in March 2008 to 440 µg/L in December 2013, however, PCE increased from 250 µg/L in December 2012 to 440 µg/L in December 2013. DCE concentrations dropped 87 percent from 110 µg/L to 14 µg/L between 2008 and 2013 and decreased 39 percent between December 2012 and December 2013, from 23 µg/L to 14 µg/L. Vinyl chloride concentrations in the combined system influent dropped from 15 µg/L in March 2008 to non-detect in December 2011 and have remained below the method detection limit for most months through December 2013, with two minor spikes up to 4.8 and 4.9 µg/L in June and October of 2013, respectively. TCE concentrations in the combined system influent dropped 22 percent from 9 µg/L in March 2008 to 7 µg/L in December 2013, but increased from non-detect in December 2012 to 7 µg/L in December 2013.

Annual groundwater sampling results continue to show chlorinated volatile organic compounds (CVOCs) in two areas of the Site; one near the extraction wells for the current groundwater treatment system and a second area northwest of the Brady Stannard Chevrolet dealership near wells TH-7 and DGC-6I (see Figure ???). Comparing annual groundwater sampling results from 2012 and 2013 collected from approximately 30 monitoring wells on- and off-site, PCE concentrations were slightly lower in the area near TH-7 and steady near the extraction wells. DCE concentrations were lower across most of the Site and steady near the extraction wells. Vinyl chloride concentrations decreased significantly across the Site.

Extraction well EW-6 was abandoned and re-installed in the same location in June 2013. The new extraction well was installed deeper than the original, to 35 feet bgs and was constructed of 6-inch diameter stainless steel casing and screen to prevent corrosion. A problem with the electrical conduit prevented bringing the well on-line with the treatment system. The conduit is scheduled to be repaired by Aztech in spring 2014.

Monthly Operation and Maintenance is performed by Aztech including monthly sampling and periodic cleaning of the air stripper trays. Any operational issues when possible are resolved remotely or during monthly site visits by Aztech. Daily fax reports are sent to CDM Smith and Aztech by the groundwater treatment system Pro Control System.

Total costs for operation of the treatment system and completion of all the required monitoring, sampling, and reporting was $137,244 in 2013.

This annual PRR is required to verify site conditions.

The following measures are recommended to better define and capture the contaminant plume on-site and maintain the Site:

- Repair electrical conduit to extraction well EW-6 to bring the well on-line with the groundwater treatment system;
- Repair existing monitoring wells as needed.

Section 2

Section 2
Site Overview

This PRR was prepared by CDM Smith for the New York State Department of Environmental Conservation (NYSDEC) under Work Assignment DCWA No. 8 of CDM Smith's standby contract D007621 with NYSDEC. The NYSDEC has assigned the Site the ID No. 3-40-012.

2.1 Objectives of the Periodic Review

The periodic review (PR) process is used to determine if a remedy continues to be properly managed, as set forth in the Site Management Plan (SMP). The objectives of the PR for sites in the State Superfund Program (SSP) are as follows:

- Evaluate if chosen remedy is performing properly and effectively and is protective of public health and the environment;
- Determine compliance with the ROD, Explanation of Significant Differences (ESD) and the SMP;
- Evaluate treatment system and recommend repairs, if necessary;
- Evaluate the condition of the remedy;
- Ascertain that the intent of the institutional controls (IC) continues to be met, the engineering controls remain in place, and both are effective and protect public human health and the environment; and
- Evaluate the O&M costs.

2.2 Site Location

The Site is located on the northern and southern banks of the East Branch of the Croton River and is approximately three-quarters of a mile west of the Village of Brewster in the Town of Southeast, Putnam County, New York. The land to the north and west of the site is largely residential while most of the land south of the site is occupied by commercial or light industrial facilities.

2.3 Site History

The Brewster Well Field, which supplies water to approximately 2,200 people, was found to be contaminated with halogenated volatile organic compounds (VOCs) that included PCE, TCE and DCE. The initial contamination discovery was made in 1978. Alben Dry Cleaners was determined to be the source of the contamination, which is now the location of the Subaru dealership. The Site was placed on the National Priorities List in December 1982. Under a cooperative agreement with the EPA Office of Research and Development, a packed air stripper was installed in 1984 at the Village's well field to provide treatment of their water supply.

After completing a RI/FS, the OU-1 ROD was signed in 1986. The selected remedy included:

- Continued operation (by the Village of Brewster) of the existing air stripping system at the well field north of the River to provide the Village a water supply that exceeds applicable or relevant and appropriate standards (ARARs).
- The design and construction of a groundwater treatment system (GWTS) to contain the groundwater contaminant plume, restore groundwater quality through the extraction, treatment and re-injection of the treated water, and to restore groundwater quality south of the East Branch Croton River.

The ROD identified ARARs for the Site to include EPA's Maximum Contaminant Levels (MCLs), and New York State's groundwater quality standards established pursuant to the Clean Water Act, as follows:

- EPA Safe Drinking Water Act limit of 5 µg/L for TCE;
- NYS Groundwater Standard of 10 µg/L for TCE.

The ROD also called for an RI/FS to identify and address the source(s) of the groundwater contamination. A supplemental RI/FS was completed in July 1988. Based upon the results of soil and groundwater sampling activities, a significant source of contamination was identified as a dry well adjacent to Alben Dry Cleaners. In September 1988, a second operable unit (OU-2) ROD was issued by EPA. This "source control" ROD called for the excavation and off-site disposal of the dry well, its contents, and surrounding contaminated soils. This OU-2 remedial action was completed by Foster Wheeler Environmental (FWC) in September 1991.

During the Five-Year Review conducted in 2007, it was determined that a plume exists under the Subaru dealership (former location of the Alben Dry Cleaners) that was not being fully captured by the original GWTS. As a result, a new treatment system with three extraction wells and a stacked tray air stripper was installed at the Subaru dealership in 2007 by the EPA under contract with Aztech.

In October 2009, the EPA issued an ESD for the Site. Citing the results of soil gas samples collected beneath the slab of the Subaru dealership, it explained that a subslab mitigation system was installed and later enhanced to target a small volume of contaminated soil identified beneath the building.

It should also be noted that there was a historical spill of petroleum on the Brady-Stannard Cadillac/Chevrolet property due to a collapsed underground storage tank. An old SVE system is still located on that site, as indicated on Figure 2, but it is not operational. Residual petroleum contamination associated with this spill remains at the Site; however, this spill is not an area of concern related to the Site and is not discussed further in this PRR.

In 2012, the original remediation system was demolished and removed from the site by an EPA contractor. The associated extraction wells were abandoned; however, the injection wells were not abandoned and remain on-site. At this time, EPA does not intend to abandon the injection wells.

Old groundwater treatment system, demolished in 2012

New groundwater treatment system installed in 2007

2.4 Site Geology and Hydrogeology

The subsurface hydrogeology consists of unconsolidated sediments overlying bedrock. No contamination was found in the bedrock wells. All recovery wells are located in the unconsolidated overburden. Groundwater flow on the south side of of the East Branch of the Croton River (from source area) is to the north. Under natural conditions (i.e. no well field), groundwater would discharge to the river from both the north and south. However, due to the historic pumping at the Village Well Field north of the river, groundwater flows beneath the river from the south thus drawing contamination from the Site towards the Brewster well field.

The East Branch of the Croton River flows to the southwest and contributes to the Croton Falls Reservoir approximately 3.5 miles downstream. The East Branch of the Croton River is also impounded approximately 3,000 feet upstream to form the East Branch Croton Reservoir.

Section 3

Section 3

Evaluate Remedy Performance, Effectiveness and Protectiveness

The treatment system at the Site consists of the following primary elements:

- A GWTS consisting of three groundwater extraction wells with level controls, a stacked tray air stripper, a blower with a variable frequency drive (VFD), a Pro Control system for remote monitoring, and groundwater discharge to the East Branch of the Croton River; and
- An enhanced subslab mitigation system

The GWTS was installed to the east of the Site in the summer of 2007 by Aztech and was put into service in October 2007. Three extraction wells ERTEW-5, ERTEW-6 and ERTEW-7 were installed in parking areas along the front (north side) of the Subaru dealership , as shown on Figure 2. The pumps extract groundwater from the wells and convey it to the air stripper treatment system. The treated groundwater is discharged to the river and the air is discharged through the discharge stack to the atmosphere. Weekly system checks and monthly sampling of the influent and effluent are being completed by Aztech.

System improvements made in July 2008 included installing the VFD on the air stripper blower and a Pro Control system that provides treatment system monitoring without weekly trips to the Site. Both of these improvements were in support of the NYSDEC DER-31/Green Remediation to reduce power consumption and green house gas emissions. Both these improvements resulted in a cost savings by reducing the electrical costs by running the blower at a lower speed but still achieving the discharge requirements and reducing the number of trips to the Site each month from 4 to 1, therefore, reducing man-hours, fuel consumption and overall greenhouse gas emissions.

In July 2013, extraction well ERTEW-6 was abandoned and re-installed a few feet from the location of the original well to a depth of 35 feet bgs, using 6-inch diameter stainless steel casing and well screen to prevent corrosion. A problem with the electrical conduit prevented bringing the well on-line with the treatment system. The conduit is scheduled to be excavated repaired by Aztech in spring 2014.

The GWTS continues to remove contaminants of concern (COCs) from the groundwater to address the contamination coming from under the Subaru dealership building and preventing migration downgradient. The extraction wells appear to be providing containment and have reduced COC concentrations in groundwater since start-up, though the concentrations have leveled off.

The subslab mitigation system was installed by EPA in the Subaru dealership building in May 2006 in response to elevated VOC concentrations detected in subslab vapor intrusion samples collected from beneath the slab of the building. EPA has been responsible for operation and maintenance of the enhanced subslab mitigation system since it was installed. In March 2010, the subslab mitigation system was enhanced with additional piping to reach the area of greatest contamination and a greater capacity blower to facilitate more efficient VOC removal from this area. Subslab concentrations continue to decline, as evidenced by subslab air samples collected by EPA in March 2011, indicating

the success of the mitigation system run in conjuction with the GWTS. Soil samples collected by EPA in the zone of highest COC concentrations in July 2011 met EPA's clean-up objective of 4 mg/kg PCE and NYSDEC's unrestricted use soil clean-up objective of 1.3 mg/kg. The enhanced subslab mitigation system continues to operate due to residual contamination remaining in the groundwater beneath the building.

3.1 Operation and Maintenance Plan

The GWTS Pro Control system automatically generates a daily status report, which includes system status, air pressure and temperature, as well as flow rates and cumulative flow for extraction wells ERTEW-5, ERTEW-6, and ERTEW-7. These status reports are faxed daily by the system to CDM Smith and Aztech.

On a monthly basis, Aztech samples each extraction well, the combined influent, and the treated water discharge for VOCs. Due to the re-installation of the new ERTEW-6 extraction well and the electrical conduit issues since installation, this well was only sampled in January, September, and October during 2013.

The air stripper trays on the GWTS are cleaned about once per year by scraping and washing using a dilute muriatic acid solution to remove or reduce the scale build up seen historically through the GWTS operation. This cleaning is completed annually, or when the backpressure on the system increases significantly, or when the air stripper is not effectively removing VOCs from the water. As part of Aztech's monthly site maintenance, the pin wheels on the flow meters are removed and cleaned. This is to ensure that accurate flow volumes are recorded.

An O&M Manual for the Site was completed by Aztech and is included as Appendix A.

3.1.1 O&M Compliance Report

The groundwater treatment system has been in compliance with Effluent Limitations and Monitoring Requirements set by NYSDEC Division of Water, and enforced by NYSDEC Division of Environmental Remediationsince since March of 2008 when Aztech began collecting samples monthly from the systems treated discharge. A new Effluent Limitations and Monitoring Requirements Memorandum was issued by DOW on August 6, 2013 for the Site (Appendix B), which are effective until July 2018. The limitations and monitoring requirements were unchanged from the previous memorandum at 10 µg/L for each of the COCs, including DCE, TCE, Vinyl Chloride, and PCE.

The following table provides a summary of required O&M activities for the Site along with the frequency of compliance between June 2011 and December 2013.

Confirm Compliance with O&M Activities

Activity	Required Frequency (X)			Compliance Dates
	Monthly	Yearly	As Needed	
Preventive Maintenance	X			1/16/2013 2/7/2013 3/13/2013 4/10/2013 4/30/2013 6/6/2013 7/11/2013 8/20/2013 9/12/2013 10/10/2013 11/15/2013 12/11/2013
Groundwater Influent & Effluent Sampling	X			1/16/2013 2/7/2013 3/13/2013 4/10/2013 4/30/2013 6/6/2013 7/11/2013 8/20/2013 9/12/2013 10/10/2013 11/15/2013 12/11/2013
Water Level Monitoring		X		4/29/2013
Monitoring Well Sampling		X		4/29/13-5/1/2013
Air Stripper Tray Cleaning			X	2/20/13
Monitoring Well Maintenance			X	-

3.1.2 Evaluation of O&M Activities

3.1.2.1 Pumping Rates

Pumping rates for each extraction well are recorded automatically by the Pro Control system. The system measures instantaneous pumping rates in gallons per minute (gpm) as well as cumulative pumping volumes. The total volume pumped by the system is later calculated by summing the volumes from the three wells. Pumping volumes and other information collected on the GWTS are reported in Tables 3-1 through 3-4.

The system pumped approximately 103,069,805 gallons of water from February 2008 through December 27, 2013. Pumping rates for all wells are presented in Table 3-1. In 2013, the pumping rate in ERTEW-5 was fairly constant at approximately 14 gallons per minute (gpm) until March when the pump stopped working. After the pump was replaced in May 2013, well ERTEW-5 averaged 16 gpm for the remainder of the year.

The pump in extraction well ERTEW-6 stopped running in November 2012 due to fouling of the well and although ERTEW-6 was re-installed in July 2013, the pump was not operating due to a problem

with the electrical conduit. The electrical conduit is scheduled to be excavated and repaired in spring 2014.

The flow rate in ERTEW-7 was relatively constant during 2013 averaging approximately 20 gpm except for a shut-down period from mid-October through mid-December, at which time the pump was repaired and the well resumed pumping at an average of 21 gpm. The largest amount of water was pumped by ERTEW-7 with a total of 8,247,669 gallons pumped during 2013, followed by ERTEW-5, which pumped 6,711,948 gallons. The GWTS shut down 19 times due to power failures during 2013 for 1 to 25 days at a time as indicated in Table 3-4. The Pro Control system stopped sending fax reports four times during 2013 due to communication problems that lasted from 1 to 7 days.

3.1.2.2 Groundwater Elevation Measurement

There are 83 monitoring wells on and in the vicinity of the Site. A subset of approximately 60 monitoring wells are gauged during the annual groundwater sampling event, usually in the spring. A sufficient number of wells are gauged to establish the current direction of groundwater flow across the Site.

On April 29, 2013, CDM Smith collected groundwater elevation data and depth to bottom measurements from 47 wells during the annual groundwater sampling event (Table 3-5). Groundwater elevation measurements were recorded under pumping conditions while the GWTS and Village wells were operating.

Groundwater in the shallow aquifer, as measured in the shallow wells to the north of the River, was observed to be flowing south towards the River (Figure 3) while south of the river, groundwater in the shallow aquifer flowed north towards the River. The extraction wells were pumping during the gauging activities, but do not appear to have had much draw-down effect in the shallow wells. Intermediate depth wells may or may not be located in the same unconfined aquifer as the shallow wells; sufficient boring logs are not available to make this determination. Close to extraction wells ERTEW-5, ERTEW-6, and ERTEW-7, groundwater at the intermediate depth in the aquifer was flowing towards the extraction wells (Figure 4). In other areas south of the River, water measured in the intermediate wells was observed flowing north towards the River, while groundwater north of the River flowed south towards the River.

3.1.2.3 Groundwater Treatment System Analytical

Aztech collects groundwater samples monthly from extraction wells ERTEW-5, ERTEW-6, and ERTEW-7, combined influent, and effluent. Monthly groundwater samples are analyzed for VOCs by EPA Method 601. Samples are analyzed by Adirondack Environmental Services, Inc. in Albany, NY, a NYSDOH approved ELAP certified laboratory. Analytical summary reports for monthly and annual groundwater sampling are included in Appendix C. Table 3-2 provides a summary of the sample results for the system influent and effluent, and each extraction well from March 2008 through December, 2013. Figures in Appendix D show TCE, PCE, DCE, and Vinyl Chloride concentrations from March 2008 through December 2013.

During 2013, TCE concentration in the combined influent fluctuated from a low of approximately 2 and a high of 9 µg/L, which is at or below the combined influent TCE concentration observed in March 2008 (9 µg/L). Vinyl Chloride concentrations in the combined influent also fluctuated during 2013 between non-detect and a high of approximately 5 µg/L. PCE concentrations in combined influent ranged from a low of 57 µg/L in April to a high of 440 µg/L in December 2013, down from 880 µg/L in

2008. DCE concentrations in combined influent samples ranged from a high of 35 µg/L in January to a low of 6.3 µg/L in December 2013, down from 110 µg/L DCE in 2008.

No samples were collected from extraction well ERTEW-5 in April and May 2013 when the pump was broken. TCE concentrations in groundwater samples from extraction well ERTEW-5 were non-detect until June 2013, when the new pump was turned on and TCE was measured at 5.4 µg/L and then returned to non-detect for the remainder of 2013, down from 10 µg/L when system sampling started in March 2008. Vinyl chloride concentrations in ERTEW-5 were non-detect from March 2011 until June 2013, when the new pump was turned on and the vinyl chloride concentration increased to 12 µg/L. The VC levels then fluctuated between non-detect and 9 µg/L for the remainder of the year, down from 19 µg/L in 2008. PCE concentrations in ERTEW-5 ranged from a low of420 µg/L in November 2013 to a high of 640 µg/L in June 2013, down from 1,600 µg/L in 2008. DCE concentrations in ERTEW-5 were between 14 µg/L in December 2013 and 42 µg/L in February 2013, down from 160 µg/L in 2008.

Due to the problems with fouling and then re-installation of extraction well ERTEW-6, samples were only collected from this well in January, September, and October of 2013. TCE concentrations in these samples were below the detection limit of 1-5 µg/L, compared with the 2008 concentration of 12 µg/L when system sampling began. Vinyl Chloride concentrations in ERTEW-6 ranged from non-detect to a high of 75 µg/L in January 2013. PCE concentrations ranged from a high of 530 µg/L in September 2013 to non-detect, down from 1,500 µg/L in 2008. DCE concentrations in ERTEW-6 ranged from non-detect to a high of 120 µg/L in January 2013 (28 µg/L in September 2013), as compared to 190 µg/L in 2008.

Groundwater samples were collected from extraction well ERTEW-7 every month during 2013. TCE concentrations in groundwater samples from extraction well ERTEW-7 ranged from 2.7 µg/L in December 2013 to 13 µg/L in October 2013, as compared to a starting concentration of 6 µg/L in 2008. Vinyl Chloride concentrations in ERTEW-7 ranged from non-detect to 4.9 µg/L in October 2013, down from a starting concentration of 10 µg/L. PCE concentrations in ERTEW-7 fluctuated from a high of 87 µg/L in October 2013 to non-detect, as compared to a starting concentration of 48 µg/L in 2008. DCE concentrations ranged from below the detection limit of 1 µg/L in June 2013 to 40 µg/L in October 2013, as compared to the 2008 starting concentration of 10 µg/L.

With the exception of a PCE detection of 2 µg/L in September 2013, effluent concentrations were below detection limits of 1 µg/L for all analytes during 2013. The DOW limitations for PCE, DCE, TCE, and Vinyl Chloride is 10 µg/L for each COC.

3.1.2.4 System Operation and Maintenance

During 2013, Aztech continued to make monthly O&M visits to collect system groundwater samples. Aztech sampled the GWTS influent from each of the extraction wells, combined influent, and effluent. The GWTS equipment was also inspected during these visits for obvious leaks, corrosion, or other issues, such as fouling of the stripper trays and pressure in the blower. Daily status reports continue to be received from the system and one report for each week in 2013 are included in Appendix E along with Aztech's site visit log sheets for monthly O&M activities. Pinwheels on flow meters are cleaned every month.

In July 2013, extraction well ERTEW-6 was abandoned and re-installed a few feet from the location of the original well to a depth of 35 feet bgs (same depth as ERTEW-5 and ERTEW-7), using 6-inch diameter stainless steel casing and screen to prevent corrosion. Aztech attempted to install the new

ERTEW-6 extraction well with a hollow stem auger rig in May 2013, but could not advance through a large boulder. The well was later installed by Aztech using a roto-sonic rig in July 2013. On August 12, 2013, Aztech installed the road box on the new ERTEW-6 well and installed lines and conduit to connect it to the existing lines running to the GWTS. However, a problem with the electrical conduit prevented bringing the well on-line with the treatment system. The conduit is scheduled to be excavated and repaired by Aztech in spring 2014. The monitoring well construction log is included in Appendix F.

The original ERTEW-6 extraction well, set at 20 feet bgs and constructed of 4 inch diameter PVC, had not been producing well since its installation in 2008, usually only yielding 2-3 gallons per minute (gpm) and it stopped producing completely around November 2012. Evidence of fouling was observed, which likely caused the poor production rates. The well and piping were jetted out by Aztech and again by a plumbing contractor in February 2013.

Additional O&M activities performed by Aztech included repair of the heater in the GWTS shed and cleaning of the air stripper trays in February 2013. Also, in May 2013, Aztech re-developed extraction well ERTEW-5 and installed a new submersible pump in response to decreased pumping rates in March 2013 in this well.

3.2 Monitoring Plan Compliance Report

This PRR assesses whether the Site has been managed as set forth in the O&M Plan prepared by Aztech in 2010 and the ROD (EPA 1986).

3.2.1 Groundwater Sampling

The on-site network of 83 groundwater monitoring wells are installed to depths ranging from six feet to 104 feet below the top of the well. These wells are used to monitor plume migration and evaluate groundwater treatment effectiveness. In order to provide the data for compliance, monitoring, groundwater sampling and gauging is performed annually. Subsets of the accessible monitoring wells are gauged during this yearly gauging and a selected list of wells is sampled.

Three new monitoring wells were installed between November-December 2010 on the north side of the River on the western edge of the Site. These wells were intended to delineate the plume of contaminants detected in the area of well TH7. Drilling was performed by Aztech and was overseen by CDM Smith personnel. Boring logs were included in Appendix J of the 2011 Final Periodic Review Report, Brewster Village Well Field Site (CDM Smith, March 2012).

The shallow monitoring wells are generally screened within the upper ten feet of sediments, consisting primarily of somewhat finer grained alluvium and upper glacial outwash materials. The intermediate wells are screened generally between depths of 15 to 50 feet, within sediments consisting primarily of coarser grained, glaciofluvial sand and gravel. The groundwater elevation data collected in April 2013 is summarized in Table 3-5.

Appendix G includes groundwater sampling data for COCs from December 2000 through December 2013 and Appendix H includes some historical isoconcentration plots. Between April 29 and May 1, 2013, CDM Smith collected groundwater samples from 31 monitoring wells at the Site and surrounding area. The wells consisted of shallow and intermediate depth wells. The monitoring well locations are shown on Figure 2. Table 3-5 provides a summary of sample identification, depth to groundwater, depth to bottom, date and time of sample.

Groundwater samples were collected using low flow sample techniques to purge groundwater until water quality parameters stabilized. Samples were analyzed for VOCs by EPA Method 8260 plus MTBE. For QA/QC purposes, two blind duplicate samples were also collected during the sample event and a trip blank was provided by the laboratory. The groundwater samples were submitted to H2M Labs, Inc. in Melville, New York for analysis. Data validation was completed by Nancy Potak of Greensboro, Vermont.

The analytical results were compared to New York State Ambient Water Quality Standards (AWQS) (NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1) and the NYS Drinking Water Standard (NYS DWS). Tables 3-6 through 3-8 provide a summary of the analytical results for the 2013 sample round and Appendix G provides a summary of the historical groundwater analytical results. A complete laboratory report is included in Appendix C and the data validation report is included in Appendix I.

3.2.2 Shallow Groundwater Sample Analytical Results

CDM Smith collected a total of four samples from the shallow aquifer at the Site. Table 3-6 provides a summary of groundwater analytical results for VOCs in the shallow depth wells and Table 3-8 provides a summary of VOCs detected at all depths during the April-May 2013 sampling round.

VOCs were only detected above the AWQS in 1 shallow well, DGC19S, as follows:

- Benzene was detected at an estimated concentration of 4 µg/L above the AWQS of 0.7 µg/L but below the NYS DWS of 5 µg/L;

Benzene is a compound associated with petroleum products and is not associated with the solvent release at the Site. However, it could be associated with a former petroleum spill at the Brady-Stannard dealership. Well DGC-19S is located near the location of this former spill.

3.2.3 Intermediate Groundwater Sample Analytical Results

CDM Smith collected a total of 27 groundwater samples from the intermediate depth monitoring wells at the Site and all samples were analyzed for VOCs by EPA Method 8260. The analytical results were compared to the AWQS and the NYS DWS. Table 3-7 provides a summary of groundwater analytical results for VOCs in the intermediate depth wells from the April-May 2013 sampling round. Isoconcentration plots of PCE, DCE, and Vinyl Chloride exceedances are included as Figures 5, 6, and 7, respectively.

VOCs were detected in 10 of the 27 intermediate depth wells sampled as follows:

- PCE was detected in 12 wells at concentrations ranging from 1J µg/L in wells DGC-19I, where J indicates an estimated value, to 81 µg/L in well ERTEW-7. Of the 12 detections, 6 were above the AWQS and NYS DWS of 5 µg/L;
- DCE was detected in 8 wells at concentrations ranging from 5J µg/L in well DGC-19I to 37 µg/L in well ERTEW-7 and DGC-17I. All 8 detections were at or above the AWQS and NYS DWS of 5 µg/L;
- Vinyl Chloride was detected in 3 wells at concentrations ranging from 2J µg/L in well DGC-19I to 3J µg/L in ERTEW-7. Of the 3 detections, 2 were above the AWQS of 2 µg/L and the NYS DWS of 5 µg/L;

- TCE was detected in 12 wells at concentrations ranging from 1J µg/L in wells DGC-7I, and CDM-3 to 9J µg/L in well ERTEW-7. Of the 12 detections, 2 were above the AWQS and NYS DWS of 5 µg/L;

3.2.4 Quality Control / Quality Assurance for Groundwater Samples

The duplicates, DUP-1 and DUP-2, QA/QC sample results were consistent with the results for DGC-19I and TH-6, respectively. Two trip blanks were also submitted and analyzed for VOCs by EPA Method 8260 plus MTBE. The sample results for the trip blank were non-detect for all analytes. The monitoring results indicated that PCE, TCE, DCE, and Vinyl Chloride represent the major groundwater contaminants for this site. The historical groundwater contaminant isoconcentration maps for PCE, TCE, DCE, and Vinyl Chloride are provided in Appendix H. Historical groundwater analytical summary tables are included in Appendix G.

PCE is the most prevalent groundwater contaminant at this site. The isoconcentration map for PCE (Figure 5) indicated two source areas of this constituent, one on-site in the area of the extraction well (ERT-EW7 81 µg/L), and a second one in the area of monitoring well TH-7 (21 µg/L), CDM-03 (8 µg/L), and DGC-6I (11 µg/L) located north of the river. Groundwater containing PCE at a concentration above the site cleanup standard of 5 µg/L was also found in DGC-1I (13 µg/L), DGC-3I (11 µg/L), and DGC-16I (7 µg/L). Groundwater containing PCE above the cleanup standard does not appear to extend northeastward to the municipal well field.

DCE is the second most prevalent groundwater contaminant at this site. The isoconcentration map for DCE (Figure 6) also indicates the same two source areas as PCE, one near TH-07 (15 µg/L), DGC-7I (30 µg/L), DGC-6I (32 µg/L), DGC-9I (13 µg/L), and DGC-17I (34 µg/L), and a second in the area of the extraction wells (ERTEW-7, 36 µg/L) including DGC-3I (10 µg/L). The DCE at these locations may represent degradation products of PCE. Groundwater containing DCE above the cleanup standard of 5 µg/L does not appear to extend northeastward to the municipal well field.

Vinyl Chloride is the third most prevalent groundwater contaminant at this site. The isoconcentration map for Vinyl Chloride indicates one source area of this constituent in the area of extraction wells (ERTEW-7, 3 µg/L) (Figure 7). A small concentration of Vinyl Chloride was also detected in TH-7 (2 µg/L) on the north of the site across the Croton River and DGC-7I (2 µg/L).

3.2.5 Data Validation

Data validation for the 2013 annual sampling was completed by Nancy Potak of Greensboro, VT. Her report indicated that all data was usable with a qualifier "J"added to some data due to:

- Relative percent differences in initial calibration were more than 20% for some analytes;
- Relative percent differences between continuing calibration detections were greater than 20% for some analytes;
- All of the laboratory control sample recoveries were not within the 70% -130% quality control limits for bromomethane (68%) in lab report CDM012;
- A low concentration of acetone (2J ug/l) was detected in the one method blank associated with the analyses of all of the samples in lab report CDM012.

3.2.6 Confirm Compliance with Monitoring Plan

The following table provides confirmation that the compliance monitoring is being performed in accordance with the monitoring plan.

Activity	Required Frequency		Compliance Dates
	Monthly	Annually	
Groundwater Sampling Monitoring Wells		X	4/29/13-5/1/13
Water Level Monitoring		X	4/29/13
Sampling of Extraction Wells, System Influent and Effluent	X		1/16/2013 2/7/2013 3/13/2013 4/10/2013 4/30/2013 6/6/2013 7/11/2013 8/20/2013 9/12/2013 10/10/2013 11/15/2013 12/11/2013

3.2.7 Confirmation that Performance Standards are being Met

Table 3-2 provides a summary of the sample results for the system influent and effluent, and extraction wells from March 2008 through December 2013. The figures in Appendix D show TCE, PCE, DCE, and Vinyl Chloride concentrations in monthly system samples from March 2008 through December 2013. A significant reduction in PCE, TCE, DCE, and vinyl chloride is evident in the combined influent samples since system sampling began in March 2008. Between system start up in March 2008 and the latest sampling in December 2013, PCE concentrations in the combined system influent dropped from the initial concentration of 880 µg /L to 440 µg /L but increased from a low of 250 µg/L in 2012; DCE dropped from 110 µg /L to 14 µg /L; vinyl chloride dropped from 15 µg /L to non-detect (at a detection limit of 5 µg/L), and TCE concentrations dropped from a starting value of 9 µg /L to 7 µg/L.

These figures show that the groundwater treatment system is effectively removing PCE, TCE, DCE and Vinyl Chloride from the groundwater. The mass removal calculations for VOCs shown in Table 3-3 were calculated using analytical sample data and pumping rates from removal wells ERTEW-5, ERTEW-6, and ERTEW-7 from March 2008 through December 2013.

Since monitoring began in March 2008, the GWTS has removed an estimated 403 pounds of VOCs from groundwater. Most of the VOC extraction has been from well EW-5 and most of the VOC removal is PCE (Table 3-3).

Concentrations of COCs have decreased since the treatment system was installed, however, concentrations of DCE, TCE, PCE, and vinyl chloride are still being detected in the system influent.

3.3 Institutional Controls/Engineering Controls Certification Plan Report

An Institutional and Engineering Controls Plan is included as Appendix J. Institutional Controls and Engineering Controls (IC/EC) at the Site currently consist of:

- Operation and maintenance of the air stripper at the Village water supply well field;
- Operation and maintenance of groundwater treatment system at the Site;
- Requirement that new wells installed in Putnam County are permitted by the County Department of Health, preventing installation of drinking water wells in the contaminated plume;
- Requirement that the local planning board must contact EPA prior to the approval of any construction on the dealership property and vicinity of the Site; and
- The Site Management Plan (Included with IC/EC Controls Plan Report in Appendix J).

3.3.1 IC/EC Requirements and Compliance

Determination of compliance with the IC/EC at the Site is made based on the following criteria:

- The IC/EC(s) applied at the Site are in place and unchanged from the previous certification;
- Nothing has occurred that would impair the ability of such controls to protect the public health and the environment, or constitute a violation or failure to comply with any element of the SMP for such controls;
- Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of such controls.

The Site IC/ECs are in compliance with the requirements stated above.

Section 4

Section 4
Evaluate Costs

4.1 Summary of Costs

Total costs for operation of the treatment system and completion of all the required monitoring, sampling, and reporting in January through December, 2013 was approximately $137,243.90. The breakdown of major costs for 2008 through 2012 is as follows:

Year	Plant O&M	Costs for Annual Sampling	Long Term Monitoring and Reporting	Analytical Costs for 1 Year of Monthly Sampling	Total Annual Cost
2008	$48,030.00	$4,749.00	$36,944.30	$2,734.82	$92,458.12
2009	$27,886.45	$4,299.00	$43,265.38	$2,734.82	$78,185.65
2010	$24,488.30	$5,464.25	$23,213.80	$2,734.82	$55,901.17
2011	$38,923.83	$6,896.42	$62,861.96	$2,283.88	$110,966.09
2012	$21,629.36	$4,164.95	$46,222.80	$ - *	$72,017.11
2013	$71,484.05	$4,183.06	$61,576.79	$ - *	$137,243.90

* Starting in November 2011, invoices for monthly sampling are included in Plant O&M

The long-term monitoring and reporting costs, which are billed by CDM Smith, include costs associated with project management and annual periodic reporting throughout the year. The 2013 costs include costs for preliminary activities under a new contract and data management for historical data. This long-term monitoring and reporting cost is based on invoices billed to NYSDEC (Appendix K) and includes all labor costs to complete one round of annual groundwater sampling including travel expenses, but not including analytical costs or equipment costs. The analytical costs, now billed by Adirondack Labs for monthly groundwater treatment system sampling, were estimated for 2008 and 2009 based on invoices available from 2010. Costs for annual sampling are based on lab analytical costs, data validation costs, and equipment rental costs and do not include labor costs or travel expenses.

The plant O&M costs are billed by Aztech for monthly site visits to maintain the groundwater treatment system and collect system samples. Invoices are included as Appendix K. The O&M figure includes materials required for monthly maintenance and also utility costs for running the system. The O&M costs for 2008 also included upgrading the system with the variable frequency drive (VFD) and the Pro Control auto dialer. These costs included materials and time to install and program the new components, as well as performing the pilot test of the VFD. O&M costs dropped after these upgrades were completed.

Three new monitoring wells were installed in November-December 2010 on the north side of the River on the western edge of the Site. Drilling was performed by Aztech and was overseen by CDM

Smith personnel. Aztech's costs for installing the new wells are included in the plant O&M for 2011. Once the wells were installed, YEC Inc., of Valley Cottage, New York surveyed the new wells and billed $1,717.17, which is not included in the costs above. Aztech's costs for abandoning and re-installing extraction well ERTEW-6 are included in the 2013 plant O&M costs. CDM Smith's labor, travel expenses, and rental equipment costs associated with the well installation are included above under Long Term Monitoring and Reporting. The Long Term Monitoring and Reporting cost reported for 2011 above includes labor for installation of the new monitoring wells in December 2010 as well as groundwater sampling in 2010, both of which were invoiced in 2011. Annual sampling costs for 2011 included $975 for brush clearing, which was not done in previous years, but was done in 2013 and will continue to be an annual or bi-annual expense.

Section 5

Section 5
Conclusions and Recommendations

5.1 Conclusions

5.1.1 Groundwater Treatment System

The GWTS continues to remove COCs from the groundwater to address the contamination coming from under the Subaru dealership building and to prevent migration down-gradient. As stated in Section 3.1.2.3, during 2013, TCE concentration in the combined influent fluctuated between approximately 2 and 9 µg/L, which is at or below the combined influent TCE concentration observed in March 2008 (9 µg/L). Vinyl Chloride concentrations in the combined influent also fluctuated during 2013 between non-detect and approximately 5 µg/L down from 15 µg/L in March 2008. PCE concentrations in combined influent ranged from 57 µg/L in April 2013 to 440 µg/L in December 2013, down from 880 µg/L in 2008 but an increase the highest concentration detected from 2012. DCE concentrations in combined influent samples ranged from 35 µg/L to 6.3 µg/L, down from 110 µg/L DCE in 2008.

5.1.2 Annual Groundwater Sampling

On April 29, 2013, CDM Smith collected groundwater elevation data and depth to bottom from 47 wells on and in the vicinity of the Site (Table 3-5). CDM Smith's conclusions are based on an evaluation and interpretation of the 2013 groundwater monitoring data and comparison to 2008 through 2012 groundwater monitoring data. The aforementioned comparison is as follows:

- Groundwater flow at this Site consists of shallow and deeper groundwater flow zones. Intermediate depth wells may or may not be located in the same unconfined aquifer as the shallow wells. Water in the shallow zones flows towards the Croton River on both sides. Closer to extraction wells ERTEW5, ERTEW6, and ERTEW7, the groundwater at intermediate depth in the aquifer was flowing towards the extraction wells, as expected under pumping conditions. In other areas, water measured in the intermediate depth wells was observed flowing towards the river

Two plumes of PCE, DCE, and vinyl chloride are present across the site (Figures 5, 6, 7). The GWTS extraction wells ERTEW-5, ERTEW-6, and ERTEW-7 were installed in the vicinity of the principal source area. A smaller, lower concentration residual plume exists near the river and wells TH7, DGC6I, and DGC7I. Comparing the 2013 data to the 2008 and 2005 data shows that these sources have decreased and that the remedial system and natural attenuation are reducing COC concentrations across the Site. Additionally, between 2009 and 2011, an increase in site-wide PCE, DCE, and vinyl chloride concentrations was observed. However, the 2012 and 2013 site-wide sampling results for the same parameters showed lower overall concentrations, as compared to 2011. Continued monitoring will show whether there is a continued trend of decreasing concentrations of COCs over the Site.

Review of the historical data showed one CVOC plume from the source area at the current location of the treatment system towards the old groundwater treatment system location and old extraction wells EW1 through EW4. When this system was shutdown and the new system started, it may have

created a split in the plume near the Brady-Stannard dealership, leaving part of the plume behind. Further monitoring in this area is recommended to be sure concentrations continue to decrease.

5.1.3 EPA 2012 5-Year Review Report Conclusions and Recommendations

EPA completed a 5-Year Review Report for the Site in April 2012, which discussed data collected in the preceding five year period, reevaluated risk and remedy protectiveness based on updated assumptions, and made recommendations for follow-up actions. The 5-Year Review concluded that "the implemented remedies at the Brewster Well field site currently protect human health and the environment in the short-term since the vapor mitigation system is preventing exposure to contaminated vapors and area-wide well drilling bans and use of a treated municipal water supply prevent exposure to contaminated groundwater. In order for the remedies to be protective in the long-term, the extent of the low volatile organic compound (VOC) concentration plume needs to be delineated and alternatives to address the contamination evaluated." Furthermore, the 5-Year Review Report concluded that confirmation surface water sampling performed in March 2012 indicated that the surface water does not contain COCs and further sampling is not necessary. The report also recommended the installation of additional monitoring wells in the area northeast of the Brady-Stannard dealership to better define the groundwater plume in the vicinity of monitoring wells DGC7I and DGC17I. Finally, to address the low VOC concentration portion of the groundwater plume near the East Branch of the Croton River, the report suggested evaluating chemical/biological treatment injections, system expansions, and/or monitored natural attenuation.

5.2 Recommendations

CDM Smith makes the following recommendations for the Brewster Well Field system;

- The groundwater treatment system should continue to be monitored monthly and annual groundwater sampling should be carried out in 2014 with COC evaluation after the next sampling round.
- The tray air stripper is effectively removing VOCs and meeting the effluent discharge criteria. ERT-EW5 provides most of the water being treated by the air stripper. ERT-EW6, which is the well with the highest contamination, has been re-installed, but the conduit connecting the well to the GWTS needs to be repaired. CDM Smith recommends redeveloping ERTEW-7 and repairing the conduit to ERTEW-6 to get the new well back on-line in order to capture the highest levels of groundwater contamination.
- To reduce the chance of well and pump failure in the future, the production wells ERT-EW5, -EW6 and -EW7 should be cleaned each year by surging and pumping and the pumps cleaned, in addition to the lines to the treatment system as needed.
- When the old groundwater treatment system was decommissioned in 2012, the injection wells were not abandoned. These wells are no longer in use and are not likely to be useful for any future injections since they are not located in the source area and the water table is shallow in that area, which could make injections difficult. CDM Smith recommends that the injection wells associated with the decommissioned treatment system be abandoned to prevent them serving as a potential conduit for contamination.
- During the November 2012 sampling, CDM Smith identified nine (9) monitoring wells that are in need of new road box covers. In order to protect the integrity of the wells, these road box

covers should be replaced if possible. In some cases, the road boxes may be damaged and may need to be replaced. Additionally, CDM Smith identified three (3) wells with bent stick-up risers, which are problematic for well gauging, causing the water level meter to become lodged in the well. CDM Smith recommends cutting off these well risers below the bend and coupling on a new riser section.

Tables

Table 3-1
Brewster Village Well Field Site (Site No. 3-40-012)
Groundwater Treatment System Pumping Volumes - 2013

Date	ERTEW-5		ERTEW-6		ERTEW-7		Total of 3 recovery wells	
	Flow Rate (gpm)	Cumulative Flow (gal)	Flow Rate (gpm)	Cumulative Flow (gal)	Flow Rate (gpm)	Cumulative Flow (gal)	Flow Rate (gpm)	Cumulative Flow (gal)
1/4/2013	16	40,955,027	0	7,174,867	19	40,258,181	35	88,388,075
1/11/2013	13	41,100,733	0	7,174,867	19	40,446,569	31	88,722,169
1/18/2013	13	41,232,420	0	7,174,867	19	40,632,235	32	89,039,522
1/25/2013	14	41,366,184	0	7,174,867	18	40,816,038	33	89,357,089
2/1/2013	15	41,512,395	0	7,174,867	18	40,997,462	32	89,684,724
2/7/2013	0	41,619,820	0	7,174,868	0	41,131,213	0	89,925,901
2/15/2013	15	41,784,626	0	7,174,867	21	41,366,400	36	90,325,893
2/22/2013	14	41,931,854	0	7,174,867	22	41,580,272	36	90,686,993
3/1/2013	17	42,083,911	0	7,174,867	22	41,794,620	39	91,053,398
3/8/2013	17	42,255,636	0	7,174,867	22	42,014,544	39	91,445,047
3/15/2013	17	42,426,056	0	7,174,867	22	42,233,201	39	91,834,124
3/22/2013	0	42,546,830	0	7,174,867	22	42,455,465	22	92,177,162
3/29/2013	0	42,546,830	0	7,174,868	22	42,679,502	22	92,401,200
4/5/2013	0	42,546,830	0	7,174,868	23	42,904,728	23	92,626,426
4/12/2013	0	42,546,830	0	7,174,868	22	43,130,161	22	92,851,859
4/19/2013	0	42,546,830	0	7,174,868	22	43,353,397	22	93,075,095
4/26/2013	0	42,546,830	0	7,174,868	22	43,582,418	22	93,304,116
5/3/2013	0	42,546,830	0	7,174,868	22	43,807,382	22	93,529,080
5/10/2013	20	42,616,623	0	7,174,869	23	43,990,246	43	93,781,738
5/17/2013	18	42,811,404	0	7,174,869	23	44,216,824	41	94,203,097
5/24/2013	18	42,996,601	0	7,174,869	23	44,423,611	41	94,595,081
5/31/2013	18	43,181,087	0	7,174,869	23	44,644,460	41	95,000,416
6/7/2013	18	43,320,235	0	7,174,869	22	44,781,185	40	95,276,289
6/14/2013	22	43,520,552	0	7,174,869	23	44,927,834	45	95,623,255
6/19/2013	20	43,669,366	0	7,174,869	23	45,022,142	43	95,866,377
6/26/2013	19	43,907,167	0	7,174,869	22	45,289,792	42	96,371,828
7/3/2013	18	44,099,009	0	7,174,869	22	45,516,436	41	96,790,314
7/9/2013	18	44,203,860	0	7,174,869	23	45,645,954	40	97,024,683
7/19/2013	NO REPORT							
7/27/2013	16	44,436,047	0	7,174,869	22	45,952,640	38	97,563,556
8/2/2013	16	44,569,682	0	7,174,869	22	46,142,102	38	97,886,653
8/9/2013	15	44,722,061	0	7,174,869	22	46,364,904	37	98,261,834
8/16/2013	17	44,857,113	0	7,174,870	22	46,555,743	39	98,587,726
8/23/2013	17	45,026,410	0	7,174,893	22	46,774,571	39	98,975,874
8/28/2013	17	45,147,224	0	7,174,893	22	46,929,663	38	99,251,780
9/6/2013	17	45,362,749	3	7,195,154	21	47,202,085	40	99,759,988
9/13/2013	0	45,522,051	0	7,210,005	0	47,401,239	0	100,133,295
9/20/2013	0	45,522,051	0	7,210,005	0	47,401,239	0	100,133,295
9/27/2013	17	45,535,413	0	7,210,005	21	47,417,771	38	100,163,189
10/4/2013	19	45,720,357	0	7,210,005	21	47,631,244	40	100,561,606
10/11/2013	19	45,903,534	3	7,214,096	0	47,825,611	21	100,943,241
10/18/2013	18	46,086,572	2	7,242,195	0	47,825,611	20	101,154,378
10/25/2013	0	46,188,175	0	7,250,540	0	47,825,681	0	101,264,396
11/1/2013	18	46,281,373	0	7,250,540	0	47,826,604	18	101,358,517
11/8/2013	17	46,456,330	0	7,250,540	0	47,826,604	17	101,533,474
11/15/2013	17	46,631,325	0	7,250,540	0	47,826,604	17	101,708,469
11/22/2013	17	46,800,936	0	7,250,540	0	47,830,428	17	101,881,904
11/29/2013	15	46,915,045	0	7,250,540	0	47,830,428	15	101,996,013
12/6/2013	15	47,067,060	0	7,250,540	0	47,830,428	15	102,148,028
12/13/2013	15	47,215,842	0	7,250,540	21	47,881,428	35	102,347,810
12/20/2013	14	47,361,300	0	7,250,540	21	48,096,595	36	102,708,435
12/27/2013	14	47,505,253	0	7,250,540	22	48,314,012	36	103,069,805

Table 3-2
Brewster Well Field Site (Site No. 3-40-012
Analytical Summary
Monthly Groundwater Sampling Results - 2013

SPDES Contaminants	SPDES Discharge Criteria (ug/L)	Concentration (ug/L) in Recovery Well ERTEW-5											
		1/16/2013	2/7/2013	3/13/2013	4/10/2013	4/30/2013	6/6/2013	7/11/2013	8/20/2013	9/12/2013	10/10/2013	11/15/2013	12/11/2013
cis 1,2-Dichloroethene	10	36	42	39	NS	NS	39	28	27	29	28	17	14
Tetrachloroethene	10	530	510	560	NS	NS	640	590	610	550	550	420	500
Vinyl Chloride	10	< 10	< 10	< 10	NS	NS	12	<5	6.5	<5	9	<5	5.6
Trichloroethene	10	< 10	< 10	< 10	NS	NS	5.4	<5	<5	<5	<5	<5	<5
Methylene Chloride		< 10	< 10	5.4	NS	NS	<5	<5	8.1	<5	<5	<5	5.6
Chloroform		< 10	< 10	< 10	NS	NS	<5	<5	<5	<5	<5	<5	<5

SPDES Contaminants	SPDES Discharge Criteria (ug/L)	Concentration (ug/L) in Recovery Well ERTEW-6											
		1/16/2013	2/7/2013	3/13/2013	4/10/2013	4/30/2013	6/6/2013	7/11/2013	8/20/2013	9/12/2013	10/10/2013	11/15/2013	12/11/2013
cis 1,2-Dichloroethene	10	120	NS	NS	NS	NS	NS	NS	NS	28	<1	NS	NS
Tetrachloroethene	10	47	NS	NS	NS	NS	NS	NS	NS	530	<1	NS	NS
Vinyl Chloride	10	75	NS	NS	NS	NS	NS	NS	NS	<5	<1	NS	NS
Trichloroethene	10	<5	NS	NS	NS	NS	NS	NS	NS	<5	<1	NS	NS
Chloroform		<5	NS	NS	NS	NS	NS	NS	NS	<5	<1	NS	NS

SPDES Contaminants	SPDES Discharge Criteria (ug/L)	Concentration (ug/L) in Recovery Well ERTEW-7											
		1/16/2013	2/7/2013	3/13/2013	4/10/2013	4/30/2013	6/6/2013	7/11/2013	8/20/2013	9/12/2013	10/10/2013	11/15/2013	12/11/2013
cis 1,2-Dichloroethene	10	27	21	20	20	25	<1	16	27	33	40	16	6.7
Tetrachloroethene	10	77	53	50	64	64	55	45	<1	74	87	18	15
Vinyl Chloride	10	2	<1	<1	2	<5	1.8	1.7	3.1	<1	4.9	<1	<1
Trichloroethene	10	9.1	9.3	7.5	7.4	6.9	7.3	8.4	10	11	13	6.4	2.7
Methylene Chloride		<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1

SPDES Contaminants	SPDES Discharge Criteria (ug/L)	Concentration (ug/L) in Combined Influent											
		1/16/2013	2/7/2013	3/13/2013	4/10/2013	4/30/2013	6/6/2013	7/11/2013	8/20/2013	9/12/2013	10/10/2013	11/15/2013	12/11/2013
cis 1,2-Dichloroethene	10	35	30	28	18	NS	24	21	26	30	19	6.3	14
Tetrachloroethene	10	270	250	260	57	NS	320	280	280	200	370	160	440
Vinyl Chloride	10	<5	<5	<5	<5	NS	4.8	<5	<5	<2	4.9	<2	<5
Trichloroethene	10	7	7.5	6.9	6.4	NS	7.6	8.8	7.5	8.5	2.2	3.6	7
Chloroform		<5	<5	<5	<5	NS	<2	<5	<5	<2	<2	<2	<5

SPDES Contaminants	SPDES Discharge Criteria (ug/L)	Concentration (ug/L) in Effluent											
		1/16/2013	2/7/2013	3/13/2013	4/10/2013	4/30/2013	6/6/2013	7/11/2013	8/20/2013	9/12/2013	10/10/2013	11/15/2013	12/11/2013
cis 1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1
Vinyl Chloride	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

J - Compound quantitation less than the sample quantitation
limit but greater than zero, also used to qualify tentatively
E - Estimated value, concentration exceeds the instrument calibration range
D - Diluted sample
NS - Not sampled
B - Analyte detected in blank

Table 3-3
Brewster Village Well Field Site (Site No. 3-40-012)
VOC Removal Summary - 2013

Interval Dates for Flow Data **12/28/12-1/25/13** **Sample Date** **1/16/2013**							
Well ID		**ERTEW-5**		**ERTEW-6**		**ERTEW-7**	
		Flow for interval (gal)	**572,879**	**Flow for interval (gal)**	**0**	**Flow for interval (gal)**	**749,695**
Compounds	**Total Mass Extracted (lbs) from all wells**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**
cis 1,2-Dichloroethene	0.34	36	0.17	120	0.00	27	0.17
Tetrachloroethene	3.02	530	2.53	47	0.00	77	0.48
Vinyl Chloride	0.01	0	0.00	75	0.00	2	0.01
Trichloroethene	0.06	0	0.00	0	0.00	9.1	0.06
Total VOCs removed for interval (lbs)	3.43		2.71		0.00		0.72
Total VOCs removed cumulative (lbs) since 2/29/08	371.57						

Interval Dates for Flow Data **1/25/13-2/22/13** **Sample Date** **2/7/2013**							
Well ID		**ERTEW-5**		**ERTEW-6**		**ERTEW-7**	
		Flow for interval (gal)	**565,670**	**Flow for interval (gal)**	**0**	**Flow for interval (gal)**	**764,234**
Compounds	**Total Mass Extracted (lbs) from all wells**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**
cis 1,2-Dichloroethene	0.33	42	0.20		0.00	21	0.13
Tetrachloroethene	2.75	510	2.41		0.00	53	0.34
Vinyl Chloride	0.00	0	0.00		0.00	0	0.00
Trichloroethene	0.06	0	0.00		0.00	9.3	0.06
Total VOCs removed for interval (lbs)	3.14		2.61		0.00		0.53
Total VOCs removed cumulative (lbs) since 2/29/08	374.71						

Interval Dates for Flow Data **2/22/13-3/29/13** **Sample Date** **3/13/2013**							
Well ID		**ERTEW-5**		**ERTEW-6**		**ERTEW-7**	
		Flow for interval (gal)	**614,976**	**Flow for interval (gal)**	**0**	**Flow for interval (gal)**	**1,099,230**
Compounds	**Total Mass Extracted (lbs) from all wells**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**
cis 1,2-Dichloroethene	0.38	39	0.20		0.00	20	0.18
Tetrachloroethene	3.33	560	2.87		0.00	50	0.46
Vinyl Chloride	0.00	0	0.00		0.00	0	0.00
Trichloroethene	0.07	0	0.00		0.00	7.5	0.07
Total VOCs removed for interval (lbs)	3.78		3.07		0.00		0.71
Total VOCs removed cumulative (lbs) since 2/29/08	378.50						

Table 3-3
Brewster Village Well Field Site (Site No. 3-40-012)
VOC Removal Summary - 2013

Interval Dates for Flow Data
3/29/13-4/26/13

Sample Date
4/10/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	0	Flow for interval (gal)	0	Flow for interval (gal)	902,916
Compounds	Total Mass Extracted (lbs) from all wells	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)
cis 1,2-Dichloroethene	0.15		0.00		0.00	20	0.15
Tetrachloroethene	0.48		0.00		0.00	64	0.48
Vinyl Chloride	0.02		0.00		0.00	2	0.02
Trichloroethene	0.06		0.00		0.00	7.4	0.06
Total VOCs removed for interval (lbs)	0.70		0.00		0.00		0.70
Total VOCs removed cumulative (lbs) since 2/29/08	379.20						

Interval Dates for Flow Data
4/26/13-5/31/13

Sample Date
4/30/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	634,257	Flow for interval (gal)	0	Flow for interval (gal)	1,062,042
Compounds	Total Mass Extracted (lbs) from all wells	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)
cis 1,2-Dichloroethene	0.22		0.00		0.00	25	0.22
Tetrachloroethene	0.57		0.00		0.00	64	0.57
Vinyl Chloride	0.00		0.00		0.00	0	0.00
Trichloroethene	0.06		0.00		0.00	6.9	0.06
Total VOCs removed for interval (lbs)	0.85		0.00		0.00		0.85
Total VOCs removed cumulative (lbs) since 2/29/08	380.05						

Interval Dates for Flow Data
5/31/13-6/28/13

Sample Date
6/6/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	634,257	Flow for interval (gal)	0	Flow for interval (gal)	1,062,042
Compounds	Total Mass Extracted (lbs) from all wells	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)
cis 1,2-Dichloroethene	0.21	39	0.21		0.00	0	0.00
Tetrachloroethene	3.87	640	3.39		0.00	55	0.49
Vinyl Chloride	0.08	12	0.06		0.00	1.8	0.02
Trichloroethene	0.09	5.4	0.03		0.00	7.3	0.06
Total VOCs removed for interval (lbs)	4.25		3.69		0.00		0.57
Total VOCs removed cumulative (lbs) since 2/29/08	384.30						

Table 3-3
Brewster Village Well Field Site (Site No. 3-40-012)
VOC Removal Summary - 2013

Interval Dates for Flow Data
6/28/13-7/27/13

Sample Date
7/11/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	528,880	Flow for interval (gal)	0	Flow for interval (gal)	662,848
Compounds	Total Mass Extracted (lbs) from all wells	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)
cis 1,2-Dichloroethene	0.21	28	0.12		0.00	16	0.09
Tetrachloroethene	2.85	590	2.60		0.00	45	0.25
Vinyl Chloride	0.01	0	0.00		0.00	1.7	0.01
Trichloroethene	0.05	0	0.00		0.00	8.4	0.05
Total VOCs removed for interval (lbs)	3.12		2.73		0.00		0.39
Total VOCs removed cumulative (lbs) since 2/29/08	387.42						

Interval Dates for Flow Data
7/27/13-8/28/2013

Sample Date
8/20/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	711,177	Flow for interval (gal)	24	Flow for interval (gal)	977,023
Compounds	Total Mass Extracted (lbs) from all wells	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)
cis 1,2-Dichloroethene	0.38	27	0.16	0	0.00	27	0.22
Tetrachloroethene	3.62	610	3.62	0	0.00	0	0.00
Vinyl Chloride	0.06	6.5	0.04	0	0.00	3.1	0.03
Trichloroethene	0.08	0	0.00	0	0.00	10	0.08
Total VOCs removed for interval (lbs)	4.15		3.82		0.00		0.33
Total VOCs removed cumulative (lbs) since 2/29/08	391.57						

Interval Dates for Flow Data
8/28/2013-9/27/2013

Sample Date
9/12/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	388,189	Flow for interval (gal)	35,112	Flow for interval (gal)	488,108
Compounds	Total Mass Extracted (lbs) from all wells	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)	Concentration (ug/L)	Mass extracted (lbs)
cis 1,2-Dichloroethene	0.24	29	0.09	28	0.01	33	0.13
Tetrachloroethene	2.24	550	1.78	530	0.16	74	0.30
Vinyl Chloride	0.00	0	0.00	0	0.00	0	0.00
Trichloroethene	0.04	0	0.00	0	0.00	11	0.04
Total VOCs removed for interval (lbs)	2.52		1.88		0.16		0.48
Total VOCs removed cumulative (lbs) since 2/29/08	394.09						

Table 3-3
Brewster Village Well Field Site (Site No. 3-40-012)
VOC Removal Summary - 2013

Interval Dates for Flow Data
9/27/2013-10/25/2013

Sample Date
10/10/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	652,762	Flow for interval (gal)	40,535	Flow for interval (gal)	407,910
Compounds	**Total Mass Extracted (lbs) from all wells**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**
cis 1,2-Dichloroethene	0.29	28	0.15	0	0.00	40	0.14
Tetrachloroethene	3.29	550	3.00	0	0.00	87	0.30
Vinyl Chloride	0.07	9	0.05	0	0.00	4.9	0.02
Trichloroethene	0.04	0	0.00	0	0.00	13	0.04
Total VOCs removed for interval (lbs)	3.69		3.20		0.00		0.49
Total VOCs removed cumulative (lbs) since 2/29/08	397.78						

Interval Dates for Flow Data
10/25/2013-11/29/2013

Sample Date
11/15/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	726,870	Flow for interval (gal)	0	Flow for interval (gal)	4,747
Compounds	**Total Mass Extracted (lbs) from all wells**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**
cis 1,2-Dichloroethene	0.10	17	0.10	0	0.00	16	0.00
Tetrachloroethene	2.55	420	2.55	0	0.00	18	0.00
Vinyl Chloride	0.00	0	0.00	0	0.00	0	0.00
Trichloroethene	0.00	0	0.00	0	0.00	6.4	0.00
Total VOCs removed for interval (lbs)	2.65		2.65		0.00		0.00
Total VOCs removed cumulative (lbs) since 2/29/08	400.43						

Interval Dates for Flow Data
11/29/2013-12/27/2013

Sample Date
12/11/2013

Well ID		ERTEW-5		ERTEW-6		ERTEW-7	
		Flow for interval (gal)	590,208	Flow for interval (gal)	0	Flow for interval (gal)	483,584
Compounds	**Total Mass Extracted (lbs) from all wells**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**	**Concentration (ug/L)**	**Mass extracted (lbs)**
cis 1,2-Dichloroethene	0.10	14	0.07	0	0.00	6.7	0.03
Tetrachloroethene	2.52	500	2.46	0	0.00	15	0.06
Vinyl Chloride	0.03	5.6	0.03	0	0.00	0	0.00
Trichloroethene	0.01	0	0.00	0	0.00	2.7	0.01
Total VOCs removed for interval (lbs)	2.66		2.56		0.00		0.10
Total VOCs removed cumulative (lbs) since 2/29/08	403.09						

Table 3-4
Brewster Village Well Field Site (Site No. 3-40-012)
Groundwater Treatment System Shut-Down Periods - 2013

Time and Date of Shut Down	System Running Again by This Date
1/23/2013 10:01	1/24/2013
2/5/2013 14:10	2/6/2013
2/6/2013 12:14	2/7/2013
2/7/2013 12:44	*
2/19/2013 9:17	2/19/2013
2/26/2013 10:54	2/26/2013
3/6/2013 11:16	3/7/2013
3/12/2013 8:07	3/13/2013
5/9/2013 12:17	5/10/2013
6/1/2013 16:22	6/4/2013
6/24/2013 19:28	6/26/2013
7/15/2013 11:46	*
8/13/2013 8:03	*
8/20/2013 13:35	8/21/2013
8/29/2013 12:02	*
9/12/2013 19:50	9/27/2013
10/10/2013 14:05	10/11/2013
10/22/2013 8:03	10/29/2013
11/24/2013 10:37	11/27/2013

*Missing fax reports:
2/8/2013 through 2/13/2013
6/20/2013 through 6/23/2013
7/10/2013 through 7/26/2013
8/14/2013
8/29/2013 through 9/4/2013

Table 3-5
Brewster Village Well Field Site (Site No. 3-40-012)
Groundwater Sample Information Summary
April 2013

WELL	Top of Casing Elevation (feet above mean sea level)	Depth to Water (feet from top of casing)	Depth to bottom (feet from top of casing)	Groundwater Elevation (feet above mean sea level)	Date Sampled	Time Sampled	DESCRIPTION	Identified Action Items
CDM 1	342.42	12.50	40.94	329.92	4/30/2013	14:25	ID = 2" steel casing, stickup	
CDM 2	349.88	19.95	49.10	329.93	4/30/2013	15:05	ID = 2" steel casing, stickup	
CDM 3	352.30	22.10	45.20	330.20	4/30/2013	15:50	ID = 2" steel casing, stickup	
DGC10D	336.61	NG	NG	NA			ID = 4" steel casing, stickup	
DGC10I	338.43	NG	NG	NA			ID = 2" steel casing, stickup	
DGC10S	336.63	NG	NG	NA			ID = 2" steel casing, stickup	
DGC11D	No Data	NG	NG	NA				
DGC11I	336.67	NG	NG	NA	5/1/2013	12:50	ID = 2" steel casing, stickup	Riser bent below grade
DGC11S	336.99	NG	NG	NA			ID = 2" steel casing, stickup	
DGC12I	337.81	NG	NG	NA			ID = 2" steel casing, stickup	
DGC12S	337.02	NG	NG	NA			ID = 2" steel casing, stickup	
DGC13I	334.43	4.60	NG	329.83	5/1/2013	9:25	ID = 2" steel casing, stickup	
DGC13S	335.84	5.47	NG	330.37			ID = 2" steel casing, stickup	
DGC14D	340.37	Destroyed		NA			ID = 4" steel, stickup	Well base still damaged
DGC14I	340.21	9.75	24.56	330.46	4/29/2013	15:50	ID = 2" steel, stickup	
DGC14S	341.37	10.15	12.90	331.22			ID = 2" steel, stickup	
DGC15D	341.86	NG	NG	NA			ID = 4" steel, stickup	
DGC15I	341.92	NG	NG	NA			ID = 2" steel, stickup	
DGC15S	343.46	NG	NG	NA			ID = 2" steel, stickup	
DGC16I	339.11	9.03	NG	330.08	4/30/2013	11:05	ID = 2" steel, stickup	
DGC16S	339.96	9.65	NG	330.31	4/30/2013	11:33	ID = 2" steel, stickup	
DGC17I	335.25	5.23	NG	330.02	4/30/2013	12:25	ID = 2" steel, stickup	Riser bent at or just below grade
DGC18I	338.43	7.60	30.28	330.83	4/29/2013	12:10	ID = 2" steel, stickup	
DGC18S	338.04	8.17	10.64	329.87	5/1/2013	14:20	ID = 2" steel, stickup	
DGC19D	338.04	7.10	34.20	330.94			ID = 2" PVC, flushmount	Road Box cover missing
DGC19I	336.92	6.80	22.00	330.12	4/29/2013	14:35	ID = 2" steel, flushmount	
DGC19S	337.19	7.00	10.60	330.19	4/29/2013	15:15	ID = 2" steel, flushmount	
DGC1D	336.63	6.15	NG	330.48			ID = 4" steel casing, stickup	
DGC1I	336.61	7.22	NG	329.39	5/1/2013	10:20	ID = 2" steel casing, stickup	
DGC1S	336.66	7.19	NG	329.47			ID = 2" steel casing, stickup	
DGC2D	338.43	5.55	NG	332.88			ID = 4" steel casing, stickup	
DGC2I	338.55	8.53	NG	330.02	4/30/2013	17:10	ID = 2" steel casing, stickup	
DGC2S	338.22	NG	NG	NA			ID = 2" steel casing, stickup	Broken bailer in well; not measured
DGC3I	335.49	5.30	22.80	330.19	4/29/2013	12:55	ID = 2" steel casing, flushmount	Secondary cover depressed, possibly surface water infiltrating into well
DGC3S	335.97	5.00	10.20	330.97			ID = 2" steel casing, flushmount	Secondary cover depressed, possibly surface water infiltrating into well
DGC5I	341.97	NG	NG	NA			ID = 2" steel casing, stickup	
DGC5S	340.99	NG	NG	NA			ID = 2" steel casing, stickup	
DGC6I	337.64	7.59	NG	330.05	4/30/2013	12:00	ID = 2" steel casing, stickup	
DGC7D	334.11	Artesian Well		NA			ID = 4" steel casing. stickup	
DGC7I	333.74	2.75	NG	330.99	4/30/2013	12:45	ID = 2" steel casing, stickup	
DGC7S	334.09	3.16	NG	330.93			ID = 2" steel casing, stickup	
DGC8I	335.20	5.38	NG	329.82	4/30/2013	13:00	ID = 2" steel casing, stickup	
DGC8S	334.78	4.60	NG	330.18			ID = 2" steel casing, stickup	
DGC9I	333.29	2.95	NG	330.34	4/30/2013	13:25	ID = 2" steel casing, stickup	
DGC9S	333.42	3.80	NG	329.62	5/1/2013	13:40	ID = 2" steel casing, stickup	
ERT10D	337.89	NG	NG	NA			ID = 2" PVC	
ERT10I	337.91	NG	NG	NA			ID = 2" PVC	
ERT1I	337.94	NG	NG	NA			ID = .5" PVC, flushmount	Road Box cover missing
ERT1S	338.05	NG	NG	NA			ID = .5" PVC, flushmount	Road Box cover missing
ERT2I	338.20	7.65	33.90	330.55	4/29/2013	17:55	ID = .5" PVC, flushmount	
ERT2S	338.31	7.33	16.51	330.98			ID = .5" PVC, flushmount	
ERT3I	338.64	NG	NG	NA			ID = .5" PVC, flushmount	Damaged
ERT4I	338.47	7.29	NG	331.18			ID = .5" PVC, flushmount	Road Box cover missing
ERT5I	338.03	7.04	NG	330.99			ID = .5" PVC, flushmount	
ERT5S	338.08	Damaged		NA			ID = .5" PVC, flushmount	Hit by Plow, unable to Gauge/Sample
ERT6I	339.65	8.41	NG	331.24			ID = .5" PVC, flushmount	
ERT7I	339.99	8.95	NG	331.04	4/29/2013	16:45	ID = .5" PVC, flushmount	
ERT8D	341.99	10.29	NG	331.70			ID = 2" PVC, flushmount	
ERT8I	341.70	10.67	NG	331.03	4/30/2013	9:50	ID = 2" PVC, flushmount	
ERT8S	341.43	7.00	NG	334.43			ID = 2" PVC, flushmount	
ERT9D	339.63	8.63	41.11	331.00			ID = 2" PVC, flushmount	Road Box cover missing
ERT9I	339.51	8.51	27.95	331.00	4/29/2013	14:00	ID = 2" PVC, flushmount	Road Box cover missing
ERTEW5	337.79	NG	NG	NA			ID = 6" PVC, Sch 80, PVC cap	
ERTEW6	337.74	NG	NG	NA			ID = 4" PVC, flushmount	
ERTEW7	337.76	NG	NG	NA	5/1/2013	15:00	ID = 6" PVC, flushmount	
ERTPR-1	339.27	NG	NG	NA			north well 2" PVC	
ERTPR-1	339.25	NG	NG	NA			west well 2" PVC	
ERTPR-1	339.23	NG	NG	NA			east well 2" PVC	
EW1	332.56*	NG	NG	NA			4" steel inside full size manhole	
EW2	332.27*	NG	NG	NA			4" steel inside full size manhole	
EW3	332.08*	NG	NG	NA			4" steel inside full size manhole	
EW4	332.28*	NG	NG	NA			4" steel inside full size manhole	
GMS02 ***	339.59	8.61	35.14	330.98	4/29/2013	13:25	ID = 2" PVC	Road Box cover missing
GMS04 ***	339.60	6.61	NG	332.99			ID = 2", Locking well cap, Flushmount	
IW10	334.31**	NG	NG	NA			6" steel	
IW11	334.19**	NG	NG	NA			6" steel	
IW12	334.22**	NG	NG	NA			6" steel	
IW5	334.35**	NG	NG	NA			6" steel	
IW6	334.24**	NG	NG	NA			6" steel	
IW7	334.21**	NG	NG	NA			6" steel	
IW8	334.23**	NG	NG	NA			6" steel	
IW9	334.22**	NG	NG	NA			6" steel	
TH11A	332.62	5.04	9.89	327.58			2" PVC stickup	
TH11B	334.70	3.11	24.11	331.59	5/1/2013	11:15	2" PVC stickup	
TH13	337.32	NG	NG	NA			ID = 1.5" pvc, Stickup, 4" outer casing, blank rubber cap	
TH6	337.05	6.54	NG	330.51	5/1/2013	12:25	2" PVC stickup	
TH7	337.35	7.54	28.68	329.81	4/30/2013	16:30	2" PVC stickup	
TH9	333.64	3.95	NG	329.69	5/1/2013	11:50	2" PVC stickup	

Notes:
Well elevations based on Badey & Watson June 26, 2002 survey for Sevenson Environmental Services, Inc.
* = Well elevation taken at bottom of manhole
** = Well elevation taken at cross mark set on flange
*** = Well elevations based on 2006 EPA master survey
ID = Interior diameter
NA = Not available
NG = Well not gauged

Table 3-6
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - Shallow Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	DGC-9S		DGC-16S		DGC-19S		DGC-18S	
Lab Sample Number			1305191-006A		1305080-008A		1305080-012A		1305191-009A	
Sampling Date			5/1/2013		4/30/2013		4/29/2013		5/1/2013	
Matrix			GW		GW		GW		GW	
Dilution Factor			1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	17		10	U
Toluene	5	5	10	U	10	U	1	J	10	U
Xylene (total)	5	5	10	U	10	U	3	J	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	2	J	10	U
Acetone	50		10	U	3	J	10	U	10	U
Benzene	0.7	5	10	U	10	U	4	J	10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the sample
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NYS Drinking Water Standards if applicable.
Compounds not detected in any of the samples were removed from the table.

Table 3-7
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - Intermediate Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	DGC-1I		DGC-2I		DGC-3I		DGC-6I		DGC-7I		DGC-8I	
Lab Sample Number			1305191-004A		1305191-005A		1305080-001A		1305080-002A		1305080-003A		1305080-004A	
Sampling Date			5/1/2013		4/30/2013		4/29/2013		4/30/2013		4/30/2013		4/30/2013	
Matrix			GW		GW		GW		GW		GW		GW	
Dilution Factor			1		1		1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Toluene	5	5	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	10	U	10	U	3	J	10	U	10	U
Tetrachloroethene	5	5	13		10	U	11		11		10	U	10	U
Xylene (total)	5	5	10	U	10	U	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	10	U	10	U	11		35		32		10	U
cis-1,2-Dichloroethene	5	5	5	U	5	U	10	J	32	J	30	J	5	UJ
Acetone	50		10	U	10	U	10	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	2	2	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	5	5	10	U	10	U	4	J	5	J	1	J	10	U
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	10	U	10	U	10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the sample
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NYS Drinking Water Standards if applicable
Compounds not detected in any of the samples were removed from the table

Table 3-7
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - Intermediate Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	DGC-9I		DGC-11I		DGC-13I		DGC-14I		DGC-16I		DGC-17I	
Lab Sample Number			1305080-005A		1305191-007A		1305191-008A		1305080-006A		1305080-007A		1305080-009A	
Sampling Date			4/30/2013		5/1/2013		5/1/2013		4/29/2013		4/30/2013		4/30/2013	
Matrix			GW		GW		GW		GW		GW		GW	
Dilution Factor			1		1		1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Toluene	5	5	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	5	5	3	J	10	U	10	U	10	U	7	J	3	J
Xylene (total)	5	5	10	U	10	U	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	14		10	U	10	U	10	U	10	U	37	
cis-1,2-Dichloroethene	5	5	13	J	5	U	5	U	5	UJ	5	UJ	34	J
Acetone	50		10	U	10	U	10	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	2	2	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	5	5	3	J	10	U	10	U	10	U	10	U	3	J
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	10	U	10	U	10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the sam
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NY
Compounds not detected in any of the samples were removed from the tabl

Table 3-7
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - Intermediate Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	DGC-18I		DGC-19I		CDM-1		CDM-02		CDM-03		ERT-2I	
Lab Sample Number			1305080-010A		1305080-011A		1305191-001A		1305191-002A		1305191-003A		1305080-013A	
Sampling Date			4/29/2013		4/29/2013		4/30/2013		4/30/2013		4/30/2013		4/29/2013	
Matrix			GW		GW		GW		GW		GW		GW	
Dilution Factor			1		1		1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Toluene	5	5	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	5	5	10	U	1	J	10	U	10	U	8	J	10	U
Xylene (total)	5	5	10	U	10	U	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	10	U	5	J	10	U	10	U	10	U	10	U
cis-1,2-Dichloroethene	5	5	5	UJ	4	J	5	U	5	U	5	U	5	UJ
Acetone	50		10	U	10	U	10	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	3	J	10	U	10	U	10	U	10	U
Vinyl chloride	2	2	10	U	2	J	10	U	10	U	10	U	10	U
Trichloroethene	5	5	10	U	10	U	10	U	10	U	1	J	10	U
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	10	U	10	U	10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the sam
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NY
Compounds not detected in any of the samples were removed from the tabl

Table 3-7
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - Intermediate Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	ERT-7I		ERT-8I		ERT-9I		ERT-EW5		ERT-EW6		ERT-EW7	
Lab Sample Number			1305080-014A		1305080-015A		1305080-016A						1305191-010A	
Sampling Date			4/29/2013		4/30/2013		4/29/2013						5/1/2013	
Matrix			GW		GW		GW						GW	
Dilution Factor			1		1		1						1	
Units			ug/L		ug/L		ug/L						ug/L	
Compound				**Q**		**Q**		**Q**	.	**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	NS		NS		10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	NS		NS		36	J
Toluene	5	5	10	U	10	U	10	U	NS		NS		10	U
Chlorobenzene	5		10	U	10	U	10	U	NS		NS		10	U
Tetrachloroethene	5	5	10	U	2	J	10	U	NS		NS		81	
Xylene (total)	5	5	10	U	10	U	10	U	NS		NS		10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	NS		NS		10	U
1,2-Dichloroethene (total)	5	5	10	U	10	U	10	U	NS		NS		37	
cis-1,2-Dichloroethene	5	5	5	UJ	5	UJ	5	UJ	NS		NS		36	
Acetone	50		10	U	10	U	10	U	NS		NS		10	U
Benzene	0.7	5	10	U	10	U	10	U	NS		NS		10	U
Vinyl chloride	2	2	10	U	10	U	10	U	NS		NS		3	J
Trichloroethene	5	5	10	U	10	U	10	U	NS		NS		9	J
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	NS		NS		10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the san
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NY
Compounds not detected in any of the samples were removed from the tabl

Table 3-7
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - Intermediate Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	GMS-02		TH-11B		TH-6		TH-7		TH-9	
Lab Sample Number			1305080-017A		1305191-014A		1305191-011A		1305191-012A		1305191-013A	
Sampling Date			4/29/2013		5/1/2013		5/1/2013		4/30/2013		5/1/2013	
Matrix			GW		GW		GW		GW		GW	
Dilution Factor			1		1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	15	J	10	UJ
Toluene	5	5	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	5	5	3	J	10	U	10	U	21		10	U
Xylene (total)	5	5	10	U	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	10	U	10	U	10	U	16		10	U
cis-1,2-Dichloroethene	5	5	5	UJ	5	U	5	U	15		5	U
Acetone	50		10	U	10	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	2	2	10	U	10	U	10	U	2	J	10	U
Trichloroethene	5	5	10	U	10	U	10	U	4	J	10	U
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	10	U	10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the san
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NY
Compounds not detected in any of the samples were removed from the tabl

Table 3-8
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - All Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	DGC-1I		DGC-2I		DGC-3I		DGC-6I		DGC-7I		DGC-8I		DGC-9I		DGC-11I	
Lab Sample Number			1305191-004A		1305191-005A		1305080-001A		1305080-002A		1305080-003A		1305080-004A		1305080-005A		1305191-007A	
Sampling Date			5/1/2013		4/30/2013		4/29/2013		4/30/2013		4/30/2013		4/30/2013		4/30/2013		5/1/2013	
Matrix			GW		GW		GW		GW		GW		GW		GW		GW	
Dilution Factor			1		1		1		1		1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Toluene	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	10	U	10	U	3	J	10	U	10	U	10	U	10	U
Tetrachloroethene	5	5	13		10	U	11		11		10	U	10	U	3	J	10	U
Xylene (total)	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	10	U	10	U	11		35		32		10	U	14		10	U
cis-1,2-Dichloroethene	5	5	5	U	5	U	10	J	32	J	30	J	5	UJ	13	J	5	U
Acetone	50		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	2	2	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	5	5	10	U	10	U	4	J	5	J	1	J	10	U	3	J	10	U
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the sample
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NYS Drinking Water Standards if applicable
Compounds not detected in any of the samples were removed from the table

Table 3-8
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - All Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	DGC-13I		DGC-14I		DGC-16I		DGC-17I		DGC-18I		DGC-19I		CDM-1		CDM-02	
Lab Sample Number			1305191-008A		1305080-006A		1305080-007A		1305080-009A		1305080-010A		1305080-011A		1305191-001A		1305191-002A	
Sampling Date			5/1/2013		4/29/2013		4/30/2013		4/30/2013		4/29/2013		4/29/2013		4/30/2013		4/30/2013	
Matrix			GW		GW		GW		GW		GW		GW		GW		GW	
Dilution Factor			1		1		1		1		1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Toluene	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	5	5	10	U	10	U	7	J	3	J	10	U	1	J	10	U	10	U
Xylene (total)	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	10	U	10	U	10	U	37		10	U	5	J	10	U	10	U
cis-1,2-Dichloroethene	5	5	5	U	5	UJ	5	UJ	34	J	5	UJ	4	J	5	U	5	U
Acetone	50		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	10	U	10	U	10	U	10	U	3	J	10	U	10	U
Vinyl chloride	2	2	10	U	10	U	10	U	10	U	10	U	2	J	10	U	10	U
Trichloroethene	5	5	10	U	10	U	10	U	3	J	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the san
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NY
Compounds not detected in any of the samples were removed from the tabl

Table 3-8
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - All Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	CDM-03		DGC-9S		DGC-16S		DGC-19S		DGC-18S		ERT-2I		ERT-7I		ERT-8I	
Lab Sample Number			1305191-003A		1305191-006A		1305080-008A		1305080-012A		1305191-009A		1305080-013A		1305080-014A		1305080-015A	
Sampling Date			4/30/2013		5/1/2013		4/30/2013		4/29/2013		5/1/2013		4/29/2013		4/29/2013		4/30/2013	
Matrix			GW		GW		GW		GW		GW		GW		GW		GW	
Dilution Factor			1		1		1		1		1		1		1		1	
Units			ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	10	U	10	U	17		10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Toluene	5	5	10	U	10	U	10	U	1	J	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	5	5	8	J	10	U	10	U	10	U	10	U	10	U	10	U	2	J
Xylene (total)	5	5	10	U	10	U	10	U	3	J	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	10	U	10	U	2	J	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,2-Dichloroethene	5	5	5	U	5	U	5	UJ	5	UJ	5	U	5	UJ	5	UJ	5	UJ
Acetone	50		10	U	10	U	3	J	10	U	2	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	10	U	10	U	4	J	10	U	10	U	10	U	10	U
Vinyl chloride	2	2	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	5	5	1	J	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	5	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

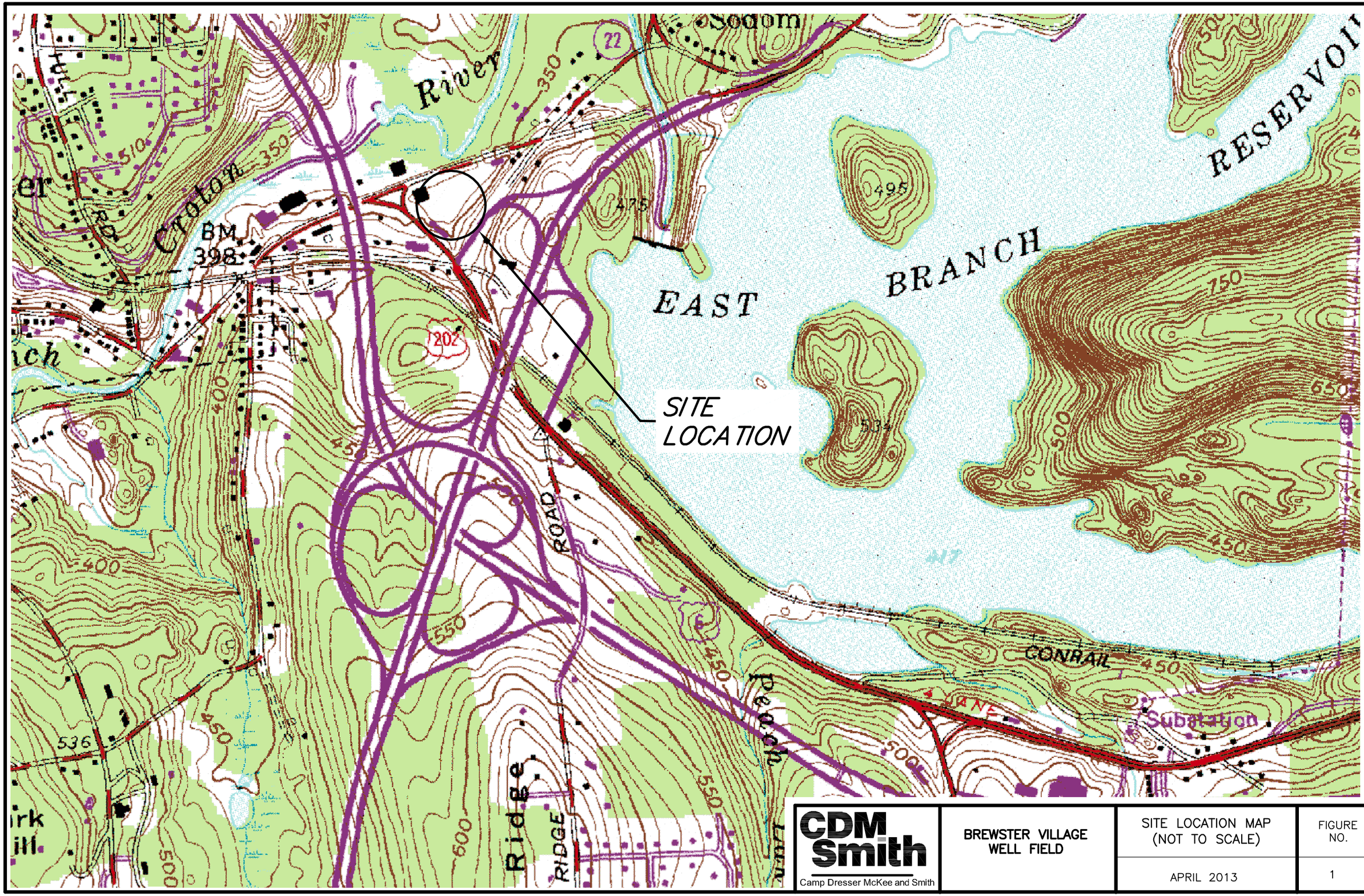
Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the san
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NY
Compounds not detected in any of the samples were removed from the tabl

Table 3-8
Brewster Village Well Field Site (Site No. 3-40-012)
2013 Annual Groundwater Sampling Results - All Wells

Sample Id	NYSDEC Ambient Water Quality Standards and Guidance Values (ug/L)	NYS Drinking Water Standards (ug/L)	ERT-9I		ERT-EW5		ERT-EW6		ERT-EW7		GMS-02		TH-11B		TH-6		TH-7		TH-9	
Lab Sample Number			1305080-016A						1305191-010A		1305080-017A		1305191-014A		1305191-011A		1305191-012A		1305191-013A	
Sampling Date			4/29/2013						5/1/2013		4/29/2013		5/1/2013		5/1/2013		4/30/2013		5/1/2013	
Matrix			GW						GW		GW		GW		GW		GW		GW	
Dilution Factor			1						1		1		1		1		1		1	
Units			ug/L						ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Compound				**Q**	.	**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**		**Q**
Ethylbenzene	5	5	10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene			10	UJ	NS		NS		36	J	10	UJ	10	UJ	10	UJ	15	J	10	UJ
Toluene	5	5	10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	5		10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	5	5	10	U	NS		NS		81		3	J	10	U	10	U	21		10	U
Xylene (total)	5	5	10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U
Methyl tert-butyl ether	10	10	10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	5	5	10	U	NS		NS		37		10	U	10	U	10	U	16		10	U
cis-1,2-Dichloroethene	5	5	5	UJ	NS		NS		36		5	UJ	5	U	5	U	15		5	U
Acetone	50		10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U
Benzene	0.7	5	10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	2	2	10	U	NS		NS		3	J	10	U	10	U	10	U	2	J	10	U
Trichloroethene	5	5	10	U	NS		NS		9	J	10	U	10	U	10	U	4	J	10	U
1,1,2,2-Tetrachloroethane	5	5	10	U	NS		NS		10	U	10	U	10	U	10	U	10	U	10	U

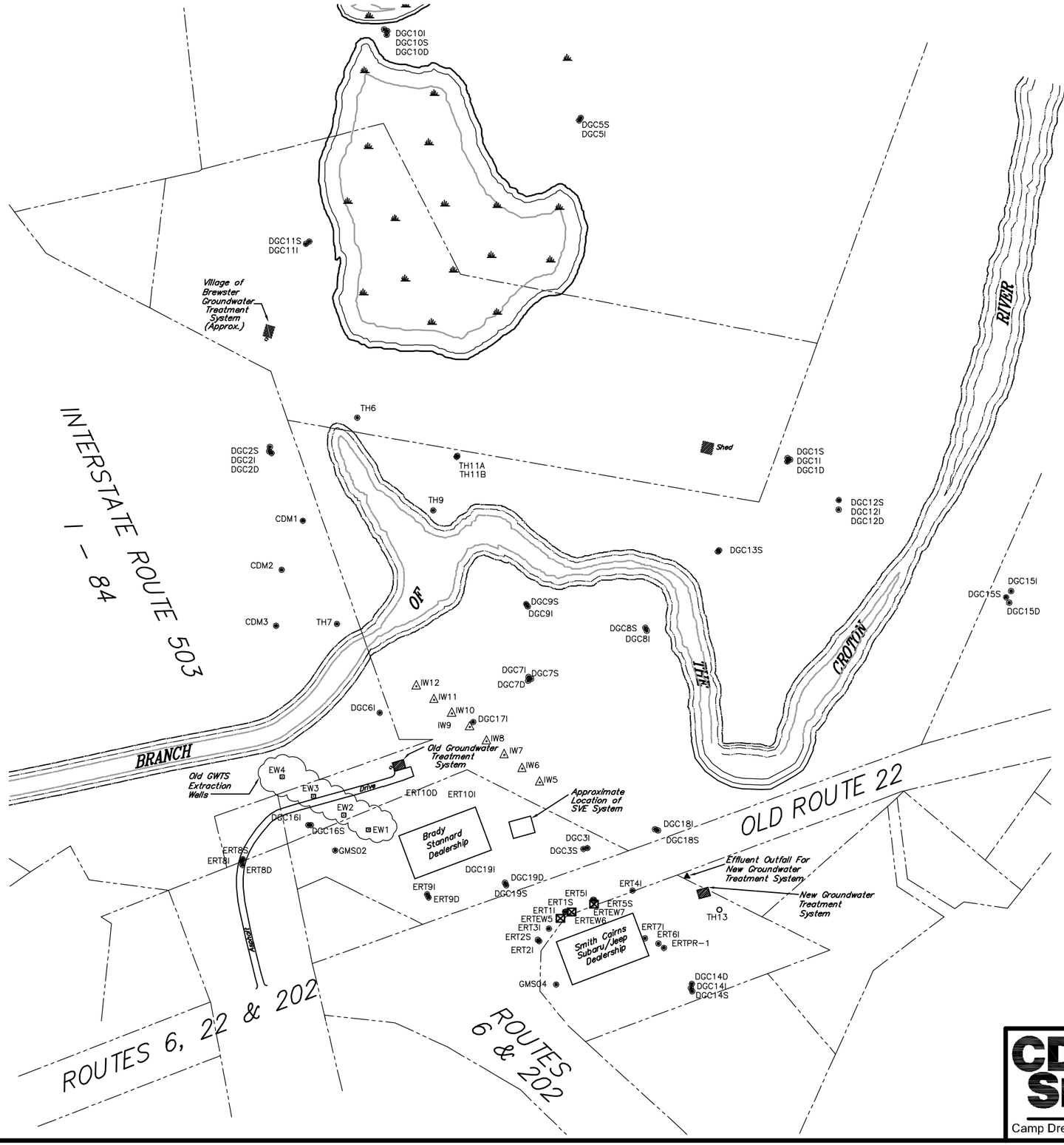
Notes:
U - Compound was analyzed for but not detected
J - Indicates an estimated value
B - Indicates the analyte is found in the associated blank as well as in the sam
ug/L - micrograms per liter = parts per billion (ppb)
Notes:
Shaded values exceed the NYSDEC Ambient Water Quality Standards and NY
Compounds not detected in any of the samples were removed from the tabl

Figures



CDM Smith Camp Dresser McKee and Smith	BREWSTER VILLAGE WELL FIELD	SITE LOCATION MAP (NOT TO SCALE) APRIL 2013	FIGURE NO. 1

0897–94720



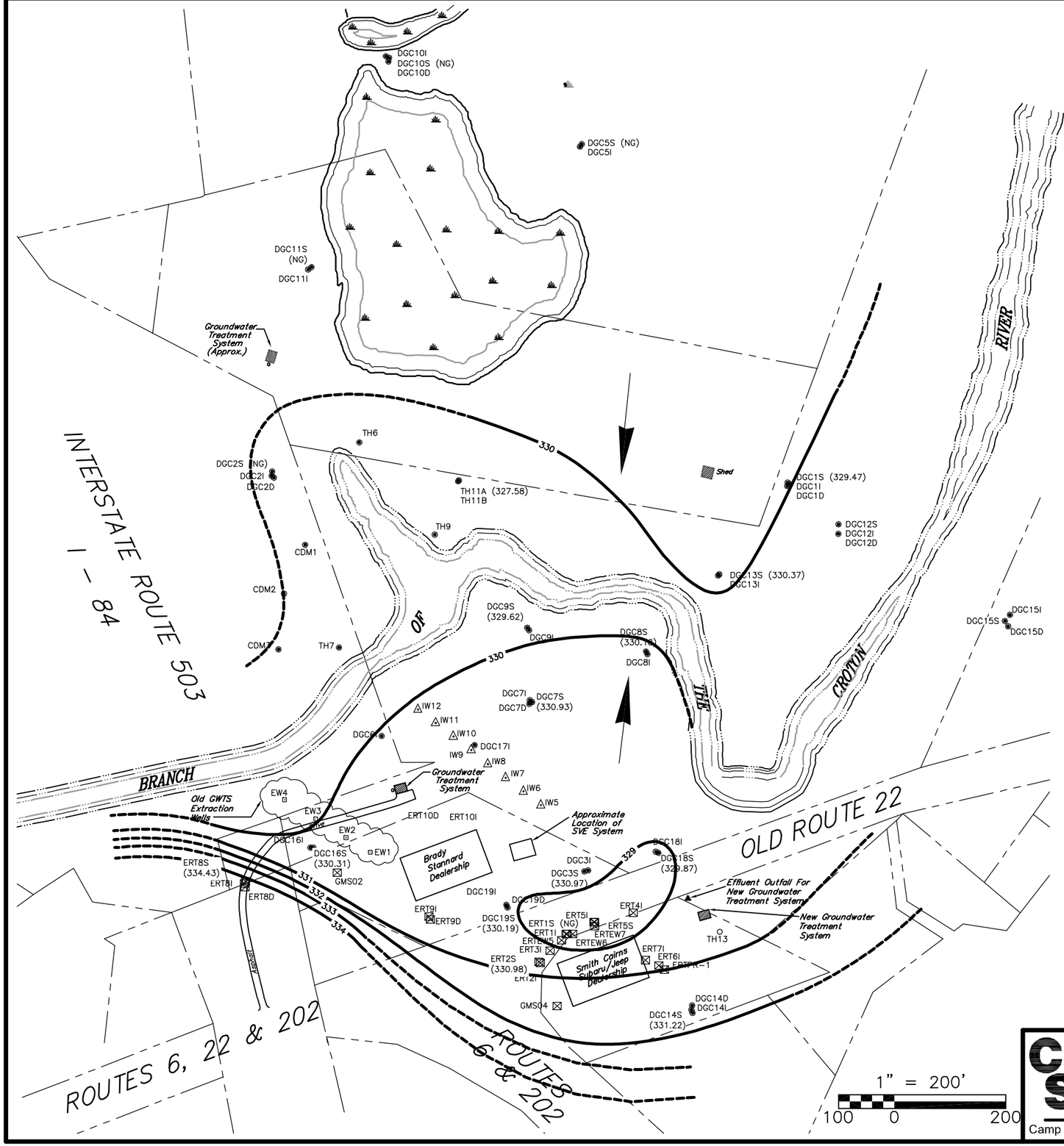
LEGEND

◉ *DG5I*	MONITORING WELL WITH DESIGNATION
⊡ *EW1*	OLD GWTS EXTRACTION WELL WITH DESIGNATION
△ *IW1*	OLD GWTS INJECTION WELL WITH DESIGNATION
⊠ *ERT-EW5*	NEW GWTS EXTRACTION WELL WITH DESIGNATION
— — — — —	APPROXIMATE PROPERTY LINE

THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF AND IS CERTIFIED ONLY TO: SEVENSON ENVIRONMENTAL SERVICES, INC.

CDM Smith Camp Dresser McKee and Smith	BREWSTER VILLAGE WELL FIELD	SITE PLAN	FIGURE NO.
		APRIL 2013	2

0897-94720



LEGEND

- DGC8S (329.93) — MONITORING WELL WITH DESIGNATION (GROUNDWATER ELEVATION)
- EW1 — OLD GWTS EXTRACTION WELL WITH DESIGNATION
- IW1 — OLD GWTS INJECTION WELL WITH DESIGNATION
- ERT-1 — NEW GWTS EXTRACTION WELL WITH DESIGNATION
- APPROXIMATE PROPERTY LINE
- 330 — CONCEPTUAL GROUNDWATER CONTOUR LINE CONTOUR INTERVAL 5 FT ABOVE MEAN SEA LEVEL
- INFERRED GROUNDWATER CONTOUR LINE
- GROUNDWATER FLOW DIRECTION

THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF AND IS CERTIFIED ONLY TO: SEVENSON ENVIRONMENTAL SERVICES, INC.

True North at 74° 30' West Longitude

N

April 2013 Gauging Data - Shallow Wells

WELL	Top of Casing Elevation (feet above mean sea level)	Depth to Water (feet from top of casing)	Depth to bottom (feet from top of casing)	Groundwater Elevation (feet above mean sea level)
DGC1S	336.66	7.19	NG	329.47
DGC3S	335.97	5.00	10.20	330.97
DGC7S	334.09	3.16	NG	330.93
DGC8S	334.78	4.60	NG	330.18
DGC9S	333.42	3.80	NG	329.62
DGC13S	335.84	5.47	NG	330.37
DGC14S	341.37	10.15	12.90	331.22
DGC16S	339.96	9.65	NG	330.31
DGC18S	338.04	8.17	10.64	329.87
DGC19S	337.19	7.00	10.60	330.19
TH11A	332.62	5.04	9.89	327.58
ERT2S	338.31	7.33	16.51	330.98
ERT8S	341.43	7.00	NG	334.43

Notes:
Well elevations based on Badey & Watson June 26, 2002 survey for Severson Environmental Services, Inc
NG = Well not gauged

Camp Dresser McKee and Smith

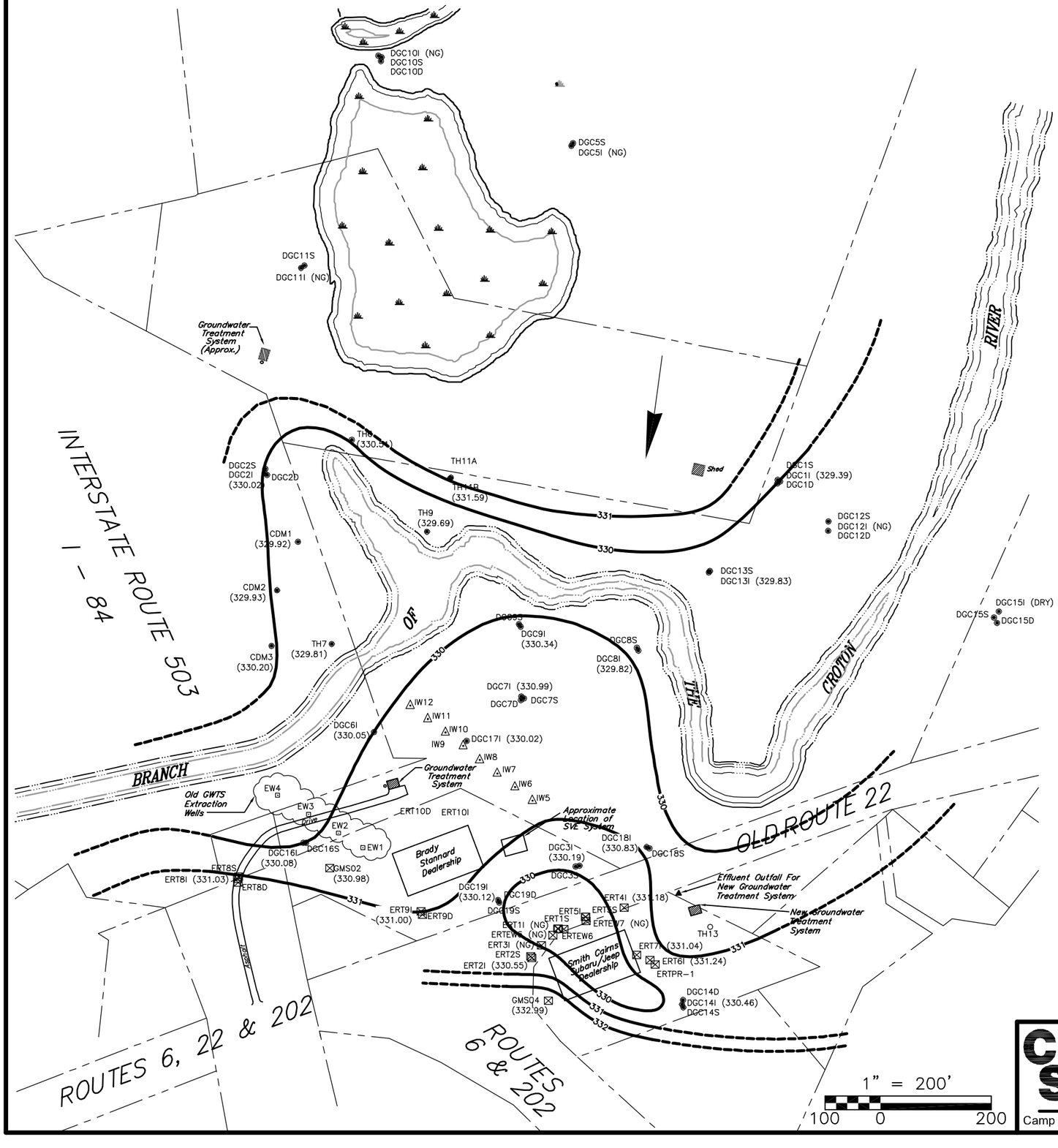
BREWSTER VILLAGE WELL FIELD

GROUNDWATER CONTOURS FOR SHALLOW WELLS

APRIL 2013

FIGURE NO. 3

0897-94720



LEGEND

- DGC2I (330.26) — MONITORING WELL WITH DESIGNATION (GROUNDWATER ELEVATION)
- EW1 — OLD GWTS EXTRACTION WELL WITH DESIGNATION
- IW1 — OLD GWTS INJECTION WELL WITH DESIGNATION
- ERT-1 — NEW GWTS EXTRACTION WELL WITH DESIGNATION
- APPROXIMATE PROPERTY LINE
- 330 — CONCEPTUAL GROUNDWATER CONTOUR LINE CONTOUR INTERVAL 5 FT ABOVE MEAN SEA LEVEL
- INFERRED GROUNDWATER CONTOUR LINE
- GROUNDWATER FLOW DIRECTION

THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF AND IS CERTIFIED ONLY TO: SEVENSON ENVIRONMENTAL SERVICES, INC.

April 2013 Gauging Data - Intermediate Depth Wells

WELL	Top of Casing Elevation (feet above mean sea level)	Depth to Water (feet from top of casing)	Depth to bottom (feet from top of casing)	Groundwater Elevation (feet above mean sea level)
DGC1I	336.61	7.22	NG	329.39
DGC2I	338.55	8.53	NG	330.02
DGC3I	335.49	5.30	22.80	330.19
DGC6I	337.64	7.59	NG	330.05
DGC7I	333.74	2.75	NG	330.99
DGC8I	335.20	5.38	NG	329.82
DGC9I	333.29	2.95	NG	330.34
DGC13I	334.43	4.60	NG	329.83
DGC14I	340.21	9.75	24.56	330.46
DGC16I	339.11	9.03	NG	330.08
DGC17I	335.25	5.23	NG	330.02
DGC18I	338.43	7.60	30.28	330.83
DGC19I	336.92	6.80	22.00	330.12
GMS04	339.60	6.61	NG	332.99
TH7	337.35	7.54	28.68	329.81
TH9	333.64	3.95	NG	329.69
TH11B	334.70	3.11	24.11	331.59
ERT2I	338.20	7.65	33.90	330.55
ERT4I	338.47	7.29	NG	331.18
ERT6I	339.65	8.41	NG	331.24
ERT7I	339.99	8.95	NG	331.04
ERT8I	341.70	10.67	NG	331.03
ERT9I	339.51	8.51	27.95	331.00
TH6	337.05	6.54	NG	330.51
CDM 1	342.42	12.50	40.94	329.92
CDM 2	349.88	19.95	49.10	329.93
CDM 3	352.30	22.10	45.20	330.20
GMS02 ***	339.59	8.61	35.14	330.98

Notes:
Well elevations based on Badey & Watson June 26, 2002 survey for Sevenson Environmental Services, Inc.
*** = Well elevations based on 2006 EPA master survey
NG = Well not gauged

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BREWSTER VILLAGE WELL FIELD

GROUNDWATER CONTOURS FOR INTERMEDIATE WELLS

APRIL 2013

FIGURE NO. 4

0897-94720

LEGEND

- DGC8I (2 ug/L) — MONITORING WELL WITH DESIGNATION (TETRACHLOROETHENE CONCENTRATION, ug/L)
- EW1 — OLD GWTS EXTRACTION WELL WITH DESIGNATION
- IW1 — OLD GWTS INJECTION WELL WITH DESIGNATION
- ERT-1 — NEW GWTS EXTRACTION WELL WITH DESIGNATION
- APPROXIMATE PROPERTY LINE
- 20 — ISOCONCENTRATION CONTOUR LINE CONTOUR INTERVAL 10ug/L

THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF AND IS CERTIFIED ONLY TO: SEVENSON ENVIRONMENTAL SERVICES, INC.

Groundwater Samples Collected April 2013	
	Tetrachloroethene
Well	(µg/L)
DGC-1I	13
DGC-2I	ND
DGC3I	11
DGC6I	11
DGC7I	ND
DGC8I	ND
DGC9I	3
DGC11I	ND
DGC13I	ND
DGC14I	ND
DGC16I	7
DGC17I	3
DGC18I	ND
DGC19I	1
CDM1	ND
CDM2	ND
CDM3	8
ERT-2I	ND
ERT-7I	ND
ERT-8I	2
ERT-9I	ND
ERT-EW5	NS
ERT-EW6	NS
ERT-EW7	81
GMS-02	3
TH-11B	ND
TH-6	ND
TH-7	21
TH-9	ND

True North at 74° 30' West Longitude

1" = 200'

100 0 200

Camp Dresser McKee and Smith

BREWSTER VILLAGE WELL FIELD

TETRACHLOROETHENE ISOCONCENTRATION INTERMEDIATE WELLS

APRIL 2013

FIGURE NO. 5

0897-94720

LEGEND

- DGC6I (32ug/L) — MONITORING WELL WITH DESIGNATION (1,2–DICHLOROETHENE CONCENTRATION, ug/L)
- EW1 — OLD GWTS EXTRACTION WELL WITH DESIGNATION
- IW1 — OLD GWTS INJECTION WELL WITH DESIGNATION
- ERT–1 — NEW GWTS EXTRACTION WELL WITH DESIGNATION
- APPROXIMATE PROPERTY LINE
- 20 — ISOCONCENTRATION CONTOUR LINE CONTOUR INTERVAL 10ug/L

THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF AND IS CERTIFIED ONLY TO: SEVENSON ENVIRONMENTAL SERVICES, INC.

Groundwater Samples Collected April 2013	
	1,2-Dichloroethene (total)
Well	(µg/L)
DGC-1I	ND
DGC-2I	ND
DGC3I	10
DGC6I	32
DGC7I	30
DGC8I	ND
DGC9I	13
DGC11I	ND
DGC13I	ND
DGC14I	ND
DGC16I	ND
DGC17I	34
DGC18I	ND
DGC19I	4
CDM1	ND
CDM2	ND
CDM3	ND
ERT-2I	ND
ERT-7I	ND
ERT-8I	ND
ERT-9I	ND
ERT-EW5	NS
ERT-EW6	NS
ERT-EW7	36
GMS-02	ND
TH-11B	ND
TH-6	ND
TH-7	15
TH-9	ND

True North at 74° 30' West Longitude

1" = 200'
100 0 200

CDM Smith
Camp Dresser McKee and Smith

BREWSTER VILLAGE WELL FIELD

1,2–DICHLOROETHENE ISOCONCENTRATION INTERMEDIATE WELLS

APRIL 2013

FIGURE NO. 6

0897–94720

LEGEND

- TH7 (2ug/L) — MONITORING WELL WITH DESIGNATION (VINYL CHLORIDE CONCENTRATION, ug/L)
- EW1 — OLD GWTS EXTRACTION WELL WITH DESIGNATION
- IW1 — OLD GWTS INJECTION WELL WITH DESIGNATION
- ERT-1 — NEW GWTS EXTRACTION WELL WITH DESIGNATION
- APPROXIMATE PROPERTY LINE
- 20 — ISOCONCENTRATION CONTOUR LINE CONTOUR INTERVAL 2ug/L

THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF AND IS CERTIFIED ONLY TO: SEVENSON ENVIRONMENTAL SERVICES, INC.

Groundwater Samples Collected April 2013	
	Vinyl chloride
Well	(µg/L)
DGC-1I	ND
DGC-2I	ND
DGC3I	ND
DGC6I	ND
DGC7I	ND
DGC8I	ND
DGC9I	ND
DGC11I	ND
DGC13I	ND
DGC14I	ND
DGC16I	ND
DGC17I	ND
DGC18I	ND
DGC19I	2
CDM1	ND
CDM2	ND
CDM3	ND
ERT-2I	ND
ERT-7I	ND
ERT-8I	ND
ERT-9I	ND
ERT-EW5	NS
ERT-EW6	NS
ERT-EW7	3
GMS-02	ND
TH-11B	ND
TH-6	ND
TH-7	2
TH-9	ND

CDM Smith
Camp Dresser McKee and Smith

BREWSTER VILLAGE WELL FIELD

VINYL CHLORIDE ISOCONCENTRATION INTERMEDIATE WELLS

APRIL 2013

FIGURE NO. 7

0897–94720

Appendices (on disk)