LMS/CLN/52138

Long-Term Groundwater Monitoring Report Colonie, New York, Site— Monitored Natural Attenuation Remedy

July 2025 Sampling Event

September 2025

U.S. DEPARTMENT OF ENERGY | Legacy Management

This document is designed for online viewing.

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Abbreviations

AEC	U.S. Atomic Energy Commission
amsl	above mean sea level
bgs	below ground surface
cDCE	*cis*-1,2-dichloroethene
COC	contaminant of concern
DO	dissolved oxygen
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ft	feet
ft/d	feet per day
FUSRAP	Formerly Utilized Sites Remedial Action Program
GAC	granular activated carbon
I	gradient
K	hydraulic conductivity
LM	Office of Legacy Management
LTM	long-term monitoring
µg/L	micrograms per liter
µS/cm	microsiemens per centimeter
mg/L	milligrams per liter
MNA	monitored natural attenuation
mV	millivolts
n_e	effective porosity
NTU	nephelometric turbidity units
NYSDEC	New York State Department of Environmental Conservation
ORP	oxidation-reduction potential
OU	operable unit
PCE	tetrachloroethene
RI	Remedial Investigation
ROD	Record of Decision
SAP	Sampling and Analysis Plan
TCE	trichloroethene
TCG	target cleanup goal

USACE	U.S. Army Corps of Engineers
VC	vinyl chloride
VOC	volatile organic compound
VP	vicinity property
V_s	groundwater seepage velocity

Executive Summary

This is the fourth long-term groundwater monitoring report prepared by the U.S. Department of Energy Office of Legacy Management (LM) for the Colonie, New York, Site. The Record of Decision (ROD) for Colonie, NY, site groundwater specifies that the selected remedy is monitored natural attenuation (MNA). The remedial action objectives for site groundwater are designed to (1) limit the exposure of potential future onsite urban residents to volatile organic compounds (VOCs) that may migrate toward homes via the vapor intrusion pathway and (2) reduce the concentrations of VOCs in onsite groundwater to levels that are protective of future onsite urban residents who may be exposed to these compounds via the vapor intrusion pathway.

The remedial action objectives are being achieved as evidenced by overall decreases in concentrations of the four groundwater contaminants of concern (COCs) and by the comparison of these concentrations to the following ROD-specified target cleanup goals (TCGs): 5.5 micrograms per liter (µg/L) for tetrachloroethene (PCE), 18 µg/L for trichloroethene (TCE), 1800 µg/L for *cis*-1,2-dichloroethene (cDCE), and 1.4 µg/L for vinyl chloride (VC).

The groundwater remedy includes a long-term groundwater monitoring program that will continue until natural environmental processes reduce the contamination to concentrations below cleanup levels. The Groundwater ROD specifies that cleanup will be achieved when COC concentrations are below TCGs over four consecutive quarters, but these events no longer occur quarterly. As specified in the Site Management Plan, LM will evaluate the effectiveness of monitored natural attenuation and to provide statistical justification for altering sampling frequencies or ceasing monitoring.

All wells show decreasing long-term trends of COCs. Only one well in the seven-well monitoring well network currently has COC concentrations above its TCG. The TCG of 5.5 µg/L for PCE is exceeded at monitoring well MW-41S (7.60 µg/L). The MNA remedy is approaching compliance with TCGs, which is estimated to occur by 2032.

1.0 Introduction

This long-term groundwater monitoring report has been prepared by the U.S. Department of Energy (DOE) Office of Legacy Management (LM) for the Colonie, New York, Site. This is the fourth long-term monitoring (LTM) report that LM has prepared for the site in support of the monitored natural attenuation (MNA) remedy for volatile organic compounds (VOCs), and it presents the methods, results, and evaluations of the groundwater monitoring event conducted in July 2025.

The monitoring event represented in this report was completed in accordance with the *Colonie FUSRAP Site Record of Decision—Colonie Site Groundwater* (USACE 2010a), hereafter referred to as the Groundwater Record of Decision (ROD) and following the *Long-Term Stewardship Plan for the Colonie, New York, Site* (DOE 2025b). Many of the documents referenced in this report are available on the LM Colonie, New York, Site webpage at https://www.energy.gov/lm/colonie-new-york-site.

1.1 Purpose

This report documents the progress of the groundwater MNA remedy by reviewing monitoring data over time and evaluating monitoring endpoints. Compliance status of the remedy was ascertained by comparing groundwater analytical results to the target cleanup goals (TCGs) that were established in the Groundwater ROD. In addition, this report provides conclusions derived from data evaluation and offers recommendations relative to the LTM program.

1.2 Site Description

The site is at 1130 Central Avenue (New York State Route 5) in the town of Colonie, Albany County, New York (Figure 1). The site comprises 11.2 acres of privately owned vacant land. The site was sold by the federal government in January 2023. Central Avenue forms its northern boundary. Commercial properties are located directly to the east. CSX Transportation Inc. (CSX) and National Railroad Passenger Corporation (Amtrak) railroad tracks are on the southern boundary, and residences are on the south side of the railroad tracks. Commercial and municipal properties are on the western boundary of the site (Figure 2). The site is in an urban area consisting of residential and commercial properties in an industrial zoning district (Colonie 2007). U.S. Census Bureau data from 2020 indicated that approximately 85,590 people lived in Colonie (U.S. Census Bureau 2025). Homes and businesses in the area are supplied by the Latham Water District. Water sources are the Mohawk River and five supply wells that are greater than 4 miles away and upgradient of the site (Colonie 2020; USACE 2017a).

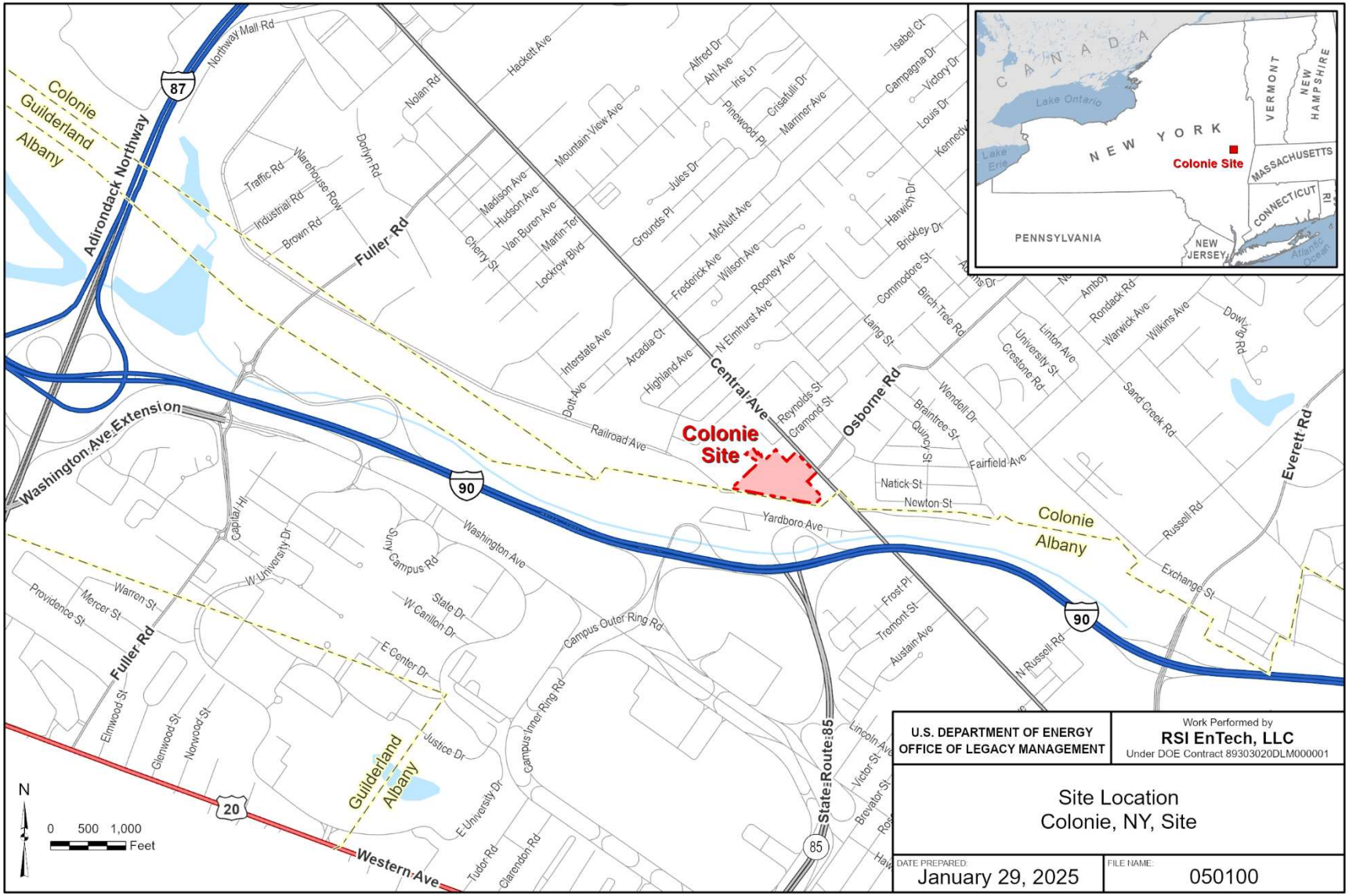

Figure 1. Colonie, New York, Site Location

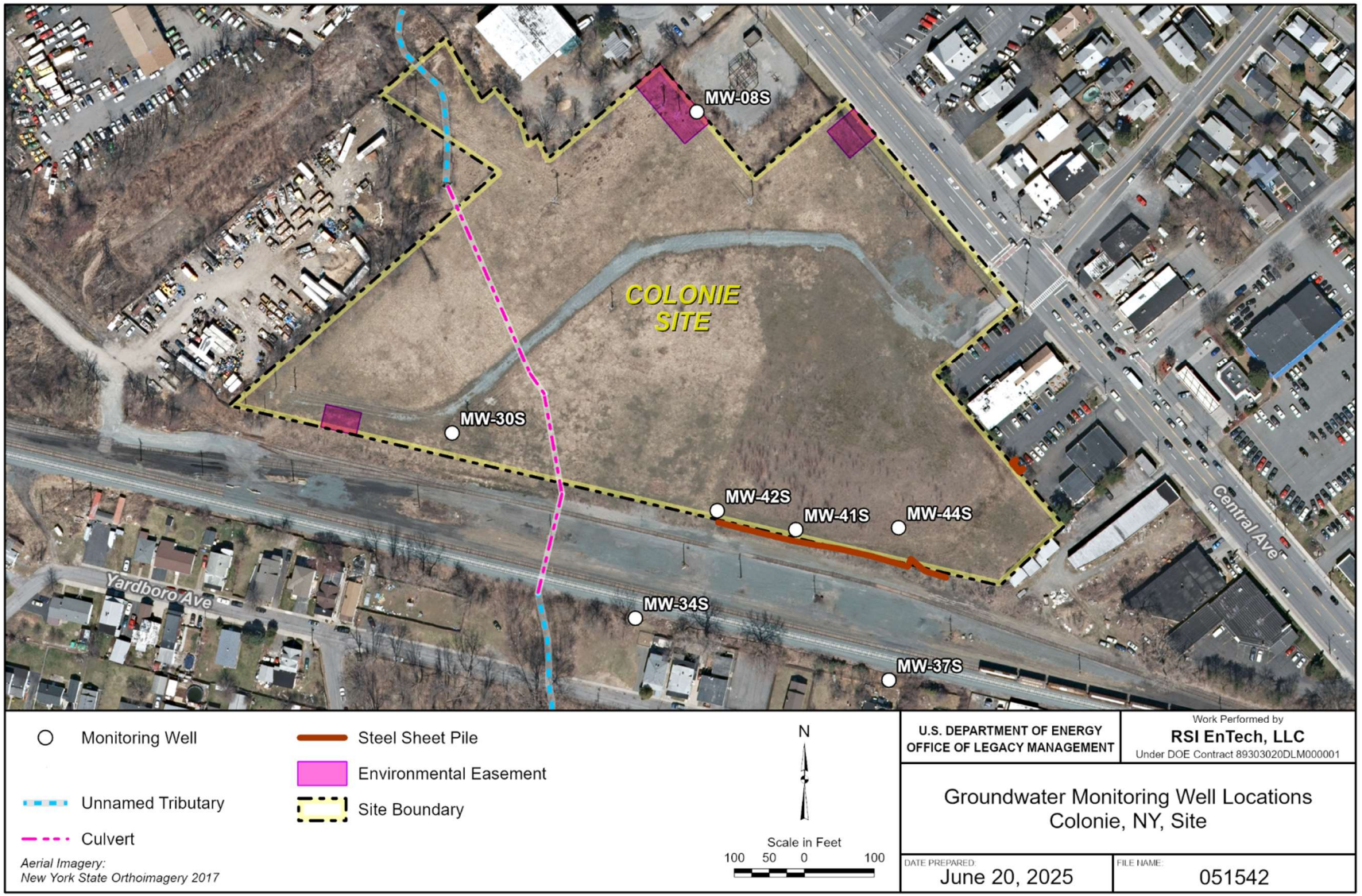

Figure 2. Groundwater Monitoring Well Locations

1.3 Site History

Industrial operations at the site began in 1923, when a factory was built to manufacture wooden products. In 1927, the factory was converted to a brass foundry to manufacture rolling stock components. In 1937, National Lead (now NL Industries Inc.) purchased the foundry and began conducting electroplating operations. National Lead purchased an adjacent lot to the west that contained Patroon Lake and used it to dispose of casting sand and other industrial wastes. In 1958, National Lead began producing items manufactured from uranium and thorium under licenses issued by the U.S. Atomic Energy Commission (AEC) and the State of New York. The AEC contract was terminated in 1968; afterward, work at the plant was devoted to manufacturing shielding components, aircraft counterweights, and artillery projectiles that included depleted uranium.

The industrial operations resulted in contaminated soil, groundwater, and structures at the site and at vicinity properties (VPs). Depleted uranium was released from the plant exhaust stacks and spread across the site and 56 VPs. The New York State Supreme Court shut down the plant in 1984 due to airborne releases of depleted uranium. Congress assigned the authority for cleanup to DOE, which acquired the site for that purpose.

DOE performed cleanup actions under the Formerly Utilized Sites Remedial Action Program (FUSRAP) from 1984 to 1997. During that period, DOE investigated the VPs, onsite structures, groundwater, and surface and subsurface soils; developed a plan to remove radiologically impacted soils; remediated 53 of 56 VPs; removed onsite buildings; and stored the waste materials generated during these actions.

In 1997, Congress transferred responsibility for FUSRAP investigation and remediation to the U.S. Army Corps of Engineers (USACE). In 2003, USACE completed the Remedial Investigation (RI) of groundwater (USACE 2003). In 2007, USACE completed the large-scale soil removal action at the main site and the three remaining VPs by excavating and disposing of 135,000 cubic yards of soil contaminated with radionuclides, metals, and VOCs offsite and then backfilling with clean soil (USACE 2010c). In 2010, USACE initiated a groundwater monitoring program to measure the progress of MNA of groundwater contaminants (USACE 2010b; USACE 2014a).

From 2011 to 2014, USACE investigated depleted uranium dust contamination within VP structures (USACE 2018). All radioactive materials that were above the risk-based cleanup goals have been removed from the site and the VPs. No further action is required to address soil contamination. However, metals contamination remains in subsurface soils in three specific inaccessible areas near utility infrastructure. These areas are managed by an environmental easement and Site Management Plan (DOE and USACE 2020). The environmental easement areas are shown in Figure 2. The environmental easements and the responsibility for upkeep of the Site Management Plan transferred to the new property owner with the sale in 2023 (DOE 2025b), while LM maintains access rights to continue monitoring the groundwater remedy.

The Groundwater ROD was signed in April 2010. The selected remedy for management of site groundwater was MNA with land use controls to limit potential exposure to groundwater

contaminants until TCGs are achieved. The Groundwater ROD specified a 2- to 5-year enhanced data collection period to measure the progress and compliance status of the MNA remedy.

In June 2010, USACE established the LTM program, which included the enhanced data collection period consisting of an initial eight consecutive quarterly groundwater monitoring events. The initial eight quarterly events occurred from November 2010 to August 2012.

Long-term groundwater monitoring will continue until TCGs are achieved for tetrachloroethene (PCE), the single remaining VOC in exceedance (DOE 2024b; USACE 2017a).

The cleanup at the site and VPs was completed in accordance with RODs for two of the site operable units (OUs): the Main Site Soils OU (USACE 2015a) and the VP OU (USACE 2017b). The Site Closeout Report documenting the completion of the remedial actions for these OUs was completed in February 2018 (USACE 2018). Completion of the Groundwater OU (USACE 2010a) response action is in process. The site was transferred for long-term stewardship from USACE to LM in September 2019. LM has continued the LTM program and has developed a long-term stewardship program (DOE 2025b), which updates annually to document the processes and requirements for the management of the site.

1.3.1 Hydrogeology

The following, condensed from the Groundwater ROD (USACE 2010), is a summary of the geological units represented at the site starting from the uppermost unit to the lowermost unit.

Artificial Fill and Flood Plain Sediments: This unit consists of artificial fill materials and natural flood plain sediments. Fill materials placed at the site during industrial use included gravel, sand, brick fragments, and other construction-type materials that have since been replaced by clean fill soil during the post-excavation backfill operation at the main site. Flood plain sediments are thin deposits of materials related to sedimentation in the former Patroon Lake and from floods of the unnamed tributary of Patroon Creek.

Dune Sand: This unit is fine-grained sand that is light yellow-brown and cross laminated. Based on lithologic logs, it thins from northwest to southwest across the site and occurs near the ground surface predominantly above the water table.

Upper Silt: This unit, also known as the upper aquifer, is composed of lake silt and sand and represents the uppermost water-bearing zone or water table at the site. Grain size analyses showed significant silt fractions in samples collected from this unit.

Upper Clay: This is the most easily identified unit in conductivity logs and consists of a varved sequence of clay and silt. This unit separates the two uppermost water-bearing zones at the site, acting as a confining layer for the lower aquifer.

Lower Silt: This unit consists predominantly of silt with some clay and lies above the lower clay. This confined water-bearing zone is known as the lower aquifer.

Lower Clay: The lower clay is approximately 100 feet (ft) thick at the site. It is olive gray and homogenous, showing few signs of silt or sand interbeds. The lower clay is the basal hydrogeologic boundary.

Till: The glacial till unit is dark gray and poorly sorted (10% sand, 40% gravel, and 50% clay). This unit is encountered at approximately 140 ft below ground surface (bgs). One site borehole penetrated the till to a depth of 160 ft bgs. Bedrock underlies the till.

The soil units are shown in Figure 3 and described below, beginning from the ground surface. Additional geological information is provided in the RI report (USACE 2003).

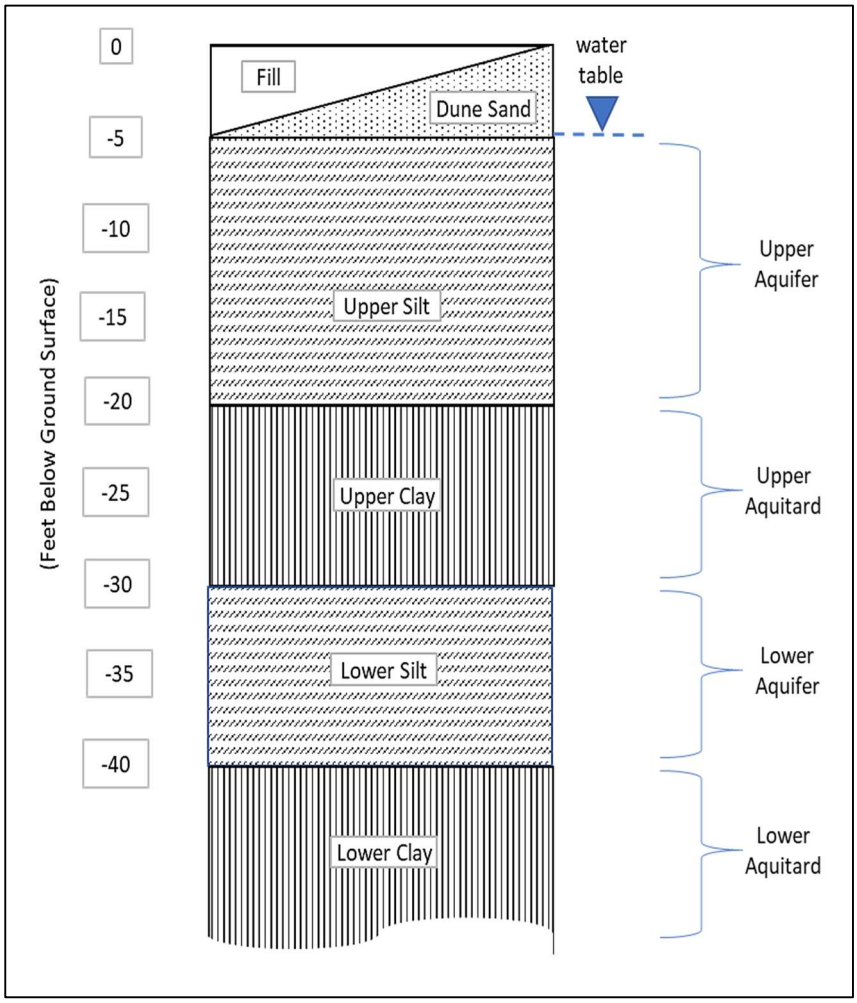

Figure 3. Geologic Cross Section

The water table is generally encountered at less than 10 ft bgs. Groundwater level measurements indicate that the saturated thickness of the upper aquifer ranges from more than 20 ft in the north to less than 15 ft in the south near the property line. The base of the upper aquifer is defined by the top of the upper clay and ranges from elevations of approximately 202 to 205 ft above mean sea level (amsl). The thickness of the upper clay ranges from approximately 12 to 15 ft. The top surface of the lower silt, in which the lower aquifer is present, is typically encountered at an

elevation of approximately 190 ft amsl. The thickness of the lower aquifer ranges from 10 ft to approximately 15 ft.

A review of the groundwater and geologic unit elevations indicates that the lower aquifer is a confined water-bearing unit, with depth to groundwater less than 10 ft below grade. Groundwater in the lower aquifer is under confining pressure and rises in the monitoring wells to elevations above the top of the upper clay to levels comparable to those of the upper aquifer.

Hydraulic conductivities of these units measured from field tests ranged from 0.04 to 109 feet per day (ft/d) in the upper aquifer (mean and median of 1.5 and 1.3 ft/d, respectively) to 0.29 to 31 ft/d in the lower aquifer (mean and median of 6.4 and 0.68 ft/d, respectively).

Groundwater flow across the site is generally north-northeast to south-southwest in both aquifers. A notable man-made feature that locally affects groundwater flow on the site is the steel sheet pile wall installed in July 2005 to maintain the stability of the CSX railroad tracks during the soil excavation of the main site (Figure 2). The sheet pile wall was driven to depths of 30 and 50 ft bgs. It is approximately 260 ft long (USACE 2017a). This subsurface feature interrupts groundwater flow locally in the southeast portion of the site and elongates the flow path by diverting flow around the structure. An unnamed tributary of Patroon Creek enters the site from the west and flows southeastward, ultimately discharging into Patroon Creek, as shown in Figure 2. The tributary is enclosed in a buried culvert except in the "keyhole" area in the western side of the site. The unnamed tributary drains an area of approximately 300 acres north of the site in the town of Colonie and has been significantly channeled into culverts (USACE 2003).

1.3.2 Groundwater Contamination

Results of the groundwater RI conducted between 1999 and 2002 showed elevated concentrations of VOCs in monitoring wells in the upper aquifer. Maximum VOC concentrations of PCE, trichloroethene (TCE), *cis*-1,2-dichloroethene (cDCE), and vinyl chloride (VC) were identified in the eastern portion of the site during the RI. RI data indicated that the lower aquifer was not impacted by VOC concentrations above evaluation criteria (USACE 2003).

The originally estimated extent of the onsite VOC mass area in the upper aquifer was provided in Figures 6 and 7 of the Groundwater ROD, which are included in Appendix A. These drawings show that the historical VOC mass was largely present within the site property, with a portion of the mass overlapping onto the CSX property in the general direction of groundwater flow. The leading edge of the VOC mass extended just into the CSX rail corridor at that time but did not travel farther downgradient, as evidenced by groundwater results from sentinel wells just south of the railroad tracks.

Groundwater RI data provided in Appendix B include historical groundwater analytical data for VOCs from 1998 through 2009. These results show that the highest concentrations of VOCs occurred in the early part of the record, with overall decreasing trends in VOCs occurring across the site, as can be seen in subsequent data. The decreasing trend is also attributed to the removal of VOC source soils during the large-scale excavation of soil and associated dewatering at the main site.

Analytical data obtained after the RI showed that VOC concentrations have declined significantly and continue to do so. Previous analytical results show that the only VOC exceedances of TCGs (in this case, PCE) were in onsite monitoring wells MW-30S, MW-41S, and MW-44S. Since the Groundwater ROD was issued, groundwater monitoring results from 2010 to date indicate an overall decrease in VOC concentrations, further reducing the availability and extent of the VOC mass in groundwater. Historical data are presented in Appendix D.

Groundwater contamination levels have consistently decreased since the excavation of source zone soils was completed in 2007 (USACE 2010b). The presence of the PCE breakdown products TCE, cDCE, and VC indicates that natural degradation processes are occurring. As a result, MNA was determined to be a viable means of achieving the TCGs (USACE 2010b; USACE 2016; USACE 2017a).

1.3.3 Target Cleanup Goals for Groundwater

Site-specific remedial action objectives were developed to (1) limit the exposure of potential future onsite urban residents to VOC constituents that could migrate toward homes via the vapor intrusion pathway and (2) reduce the concentrations of VOCs in onsite groundwater to levels that are protective of future onsite urban residents who may be exposed to these compounds via the vapor intrusion pathway. The proposed action was implemented to reduce excess cancer risk from inhaling vapors that might intrude into a hypothetical onsite residence to less than 1 in 1 million (1×10^{-6}). Four chlorinated VOCs have been identified as contaminants of concern (COCs). Radiological COCs no longer need to be monitored. The remaining COCs and their TCGs are summarized in Table 1.

Table 1. Target Cleanup Goals

Contaminants of Concern	Target Cleanup Goals (µg/L)
PCE	5.5
TCE	18
cDCE	1800
VC	1.4

Abbreviation:
µg/L = micrograms per liter

The groundwater remedy includes a long-term groundwater monitoring program that will continue until natural environmental processes reduce the contamination to concentrations below cleanup levels (USACE 2010a). The Groundwater ROD specifies that the groundwater remedy will be considered complete and monitoring discontinued after four quarters of compliance for all four VOCs with respect to these TCGs at each site monitoring well. In 2017, USACE estimated that contaminants would achieve cleanup standards in 15 years (i.e., by 2032) based on modeling using Monitoring and Remediation Optimization System software (USACE 2017a).

In the prior July 2023 monitoring event, there was only one exceedance of TCGs. PCE exceeded the TCG of 5.5 µg/L in well MW-41S (DOE 2024b).

2.0 Monitoring Program Description

The LTM program is described in the *Long-Term Stewardship Plan for the Colonie, New York, Site* (DOE 2025b). Groundwater sampling and analysis activities are conducted according to the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites* (DOE 2025c), hereafter referred to as the Sampling and Analysis Plan (SAP). Field and laboratory data are validated according to the LMS *Environmental Data Validation Procedure* (DOE 2024a).

Site-specific sampling instructions are stated in a program directive included in a SAP appendix. The program directive specifies that:

- Monitoring wells will be redeveloped using the guidance in the SAP and supporting guidance in *Inspection and Maintenance of Groundwater Monitoring and Extraction Wells* (DOE 2025a).
- Sample analyses will be conducted by a laboratory that is accredited under the New York State Department of Health Environmental Laboratory Approval Program for the category of parameters analyzed.
- Investigation-derived waste groundwater will be filtered onsite using a granular activated carbon (GAC) medium and released to the ground.

2020 LTM Program Modifications

USACE transferred the site to LM in September 2019, and LM produced a Long-Term Surveillance and Maintenance Plan (DOE 2019). LM conducted a sampling event in July 2020. LM sampled each well for a suite of MNA parameters and well stability parameters and determined that geochemical conditions were similar to those during previous measurements. The report recommended the following specifics:

- Continue redeveloping wells before sampling events as indicated by SAP parameters
- Continue sampling for well stabilization parameters and VOCs
- Remove the stuck pump from well MW-44S
- Decommission offsite well MW-32S

2021 LTM Program Modifications

NYSDEC requested that a 2021 sampling event take place in order for future events to match the previously established biennial schedule. The report contained the following recommendations:

- Sample groundwater every 2 years
- Continue sampling for well stabilization parameters and VOCs
- Stop sampling for MNA parameters as it is no longer warranted

2023–2025 LTM Program Modifications

No modifications to the LTM program were enacted in 2023 or in 2025.

2.1 Monitoring Well Network

The current monitoring well network consists of the seven wells indicated in Table 2. The locations of the seven wells are shown in Figure 2. Section 3.6 provides details regarding the purpose of each monitoring well.

2.2 July 2025 Long-Term Monitoring Event

The following sections discuss the data from the July 2025 monitoring event. Fieldwork began and was completed on Tuesday, July 8, 2025. The weather was warm and humid, with partial cloud cover and no wind. All seven wells were found to be secured by locks and in good condition. During the event, groundwater level measurements were made and groundwater samples were collected for chemical analysis.

2.2.1 Well Sampling

On Tuesday, July 8, the sampling technicians commenced work at wells MW-34S and MW-37S. After completing the sampling of the Amtrak right-of-way wells, the team continued to the main site mid-morning and sampled wells MW-08S, MW-30S, MW-42S, and MW-41S and finished with well MW-44S in the early afternoon. All wells were sampled using the low-flow protocol and samples were unfiltered as specified in the SAP. The analyses included VOCs and the well stability parameters as shown in Table 3.

Table 2. Monitoring Well Network

Well ID	Installation Date	Coordinates [2]		Inner Diam-eter	Top of Casing (TOC) Elevation [ft msl]	Ground Surface Elevation [ft msl]	Top of Screen		Pump Intake		Bottom of Screen		Well Total Depth [3]	
		Northing [ft]	Easting [ft]				Depth (ft from TOC)	Elevation (ft amsl)	Depth (ft from TOC)	Elevation (ft amsl)	Depth (ft from TOC)	Elevation (ft amsl)	Depth (ft from TOC)	Elevation (ft amsl)
MW-08S	7/28/1988	1406050.14	679397.21	2"	230.90	228.90	8.00	222.90	10.50	220.40	13.00	217.90	15.00	215.90
MW-30S	8/2/2000	1405591.48	679047.79	2"	226.74	225.24	6.00	220.74	10.00	216.74	16.00	210.74	16.00	210.74
MW-34S	12/20/2001	1405327.12	679309.35	2"	219.84	218.33	10.01	209.83	15.01	204.83	20.01	199.83	20.01	199.83
MW-37S	1/27/2002	1405238.84	679671.42	2"	219.96	218.05	12.91	207.05	17.91	202.05	22.91	197.05	22.91	197.05
MW-41S	12/11/2006	1405453.53	679538.46	2"	224.82	223.15	11.67	213.15	16.67	208.15	21.67	203.15	23.67	201.15
MW-42S	12/12/2006	1405480.59	679426.27	2"	225.77	224.23	11.54	214.23	16.54	209.23	21.54	204.23	24.54	201.23
MW-44S [4]	7/13/2020	1405455.84	679685.19	2"	225.11	223.36	13.91	211.20	18.91	206.20	23.91	201.20	23.91	201.20

Notes:

[1] Abbreviations: ft: feet, amsl: above mean sea level, TOC: top of casing,

[2] Coordinates Reference: New York State Plane NAD83 East Zone, Units: US survey feet.

[3] Well total depths are from boring logs/wellconstruction diagrams prepared at the time of well construction.

[4] Well MW-44S was damaged in 2019 and repaired on July 13, 2020. Coordinates and TOC elevation were re-surveyed on July 18, 2020.

Table 3. Analysis Summary

Parameters (All Are Aqueous)	Analytical Method[a]	Field or Laboratory	Primary Samples	Field Duplicate	Waste Water[b]	Trip[c] Blank	No. of Samples
VOCs (PCE, TCE, cDCE, VC)	SW 8260B	Laboratory	7	1	1	1	10
Dissolved oxygen	SM 4500-O	Field	7	0	0	0	7
Temperature	SM 2550	Field	7	0	0	0	7
Oxidation-reduction potential	ASTM D1498-00	Field	7	0	0	0	7
pH	EPA 9045C	Field	7	0	0	0	7
Specific conductance	SM 2510	Field	7	0	0	0	7
Turbidity	EPA 2130	Field	7	0	0	0	7
Totals			**49**	**1**	**1**	**1**	**52**

Notes:
[a] Test methods are described in EPA's SW-846 test methods for hazardous waste (EPA 2015).
[b] Waste purge water was filtered through GAC prior to release.
[c] One trip blank was used for the shipment of VOC samples.

Abbreviations:
ASTM = ASTM International
EPA = U.S. Environmental Protection Agency
SM = Standard Method
SW = solid waste

All samples were shipped to the laboratory by overnight delivery in a single shipment. An equipment trip blank sample was taken as a control sample, and a sample was taken of the GAC-treated effluent from well MW-41S to demonstrate the effectiveness of the GAC filtration and ensure that released purge water meets NYSDEC standards. A field duplicate was collected at well MW-08S.

3.0 Monitoring Results

Field measurements and laboratory results of the July 2025 sampling event are discussed in the following sections. The current and previous field measurements and laboratory results from long-term monitoring are summarized in Appendix D. The data validation memorandum is included as Appendix E.

3.1 Groundwater Elevations

Groundwater elevations were measured from all monitoring wells within a 6-hour period on July 8, 2025, and taken with the same water level meter. No weather events occurred during the measuring period (weather fronts can rapidly change water table elevations). Groundwater elevations are shown in Table 4, and a contour map of the water table is shown in Figure 4. For comparison, groundwater elevations from the LTM program dating from 2010 to the present are included in Appendix D.

Table 4. Groundwater Elevations, July 8, 2025

Well ID	Coordinates[a]		Ground Surface Elevation (ft amsl)	Top of Casing Elevation (ft amsl)	Depth Below Top of Casing to Water (ft)	Groundwater Elevation (ft amsl)
	Northing	Easting				
MW-08S	1406050.14	679397.21	228.90	230.90	4.54	226.36
MW-30S	1405591.48	679047.79	225.24	226.74	8.63	218.11
MW-34S	1405327.12	679309.35	218.33	219.84	7.3	212.54
MW-37S	1405238.84	679671.42	218.05	219.96	6.74	213.22
MW-41S	1405453.53	679538.46	223.15	224.82	5.51	219.31
MW-42S	1405480.59	679426.27	224.23	225.77	7.7	218.07
MW-44S	1405455.84	679685.19	223.36	225.11	5.8	219.31

Note:
[a] Coordinate references: New York State Plane North American Datum of 1983 East Zone. Units are in U.S. survey feet.

The groundwater elevation ranged from a maximum of 226.36 ft amsl at upgradient well MW-08S to a minimum of 212.54 ft amsl at offsite well MW-34S. The water table averaged 1.66 ft lower than that during the previous monitoring event in July 2023. As indicated in Figure 4, the groundwater flow direction was to the south-southwest, which is consistent with all previous observations. Groundwater seepage velocity (V_s) can be calculated using the site's average hydraulic conductivity (K) of 1.5 ft/d (USACE 2003) and an assumed effective porosity (n_e) of 30% (Ohio EPA 2006), where $V_s = K \times I/n_e$. The gradient (I) was approximately 3% near well MW-41S. The seepage velocity near well MW-41S is calculated to be approximately 0.028 ft/d or approximately 10 ft per year.

3.2 Well Stability Parameters

Well stability parameters were measured after well purging once all the parameters had stabilized. Purging is an integral part of the low-flow sampling protocol immediately before groundwater samples are collected from each well. In accordance with the SAP, the stability criteria are specific conductance, ±10%; pH, ±0.2 standard units; and turbidity, <10 NTU.

The stabilization parameter results are summarized in Table 5. For comparison, well stability parameters dating from the beginning of the LTM program in 2010 up to 2025 are included in Appendix D.

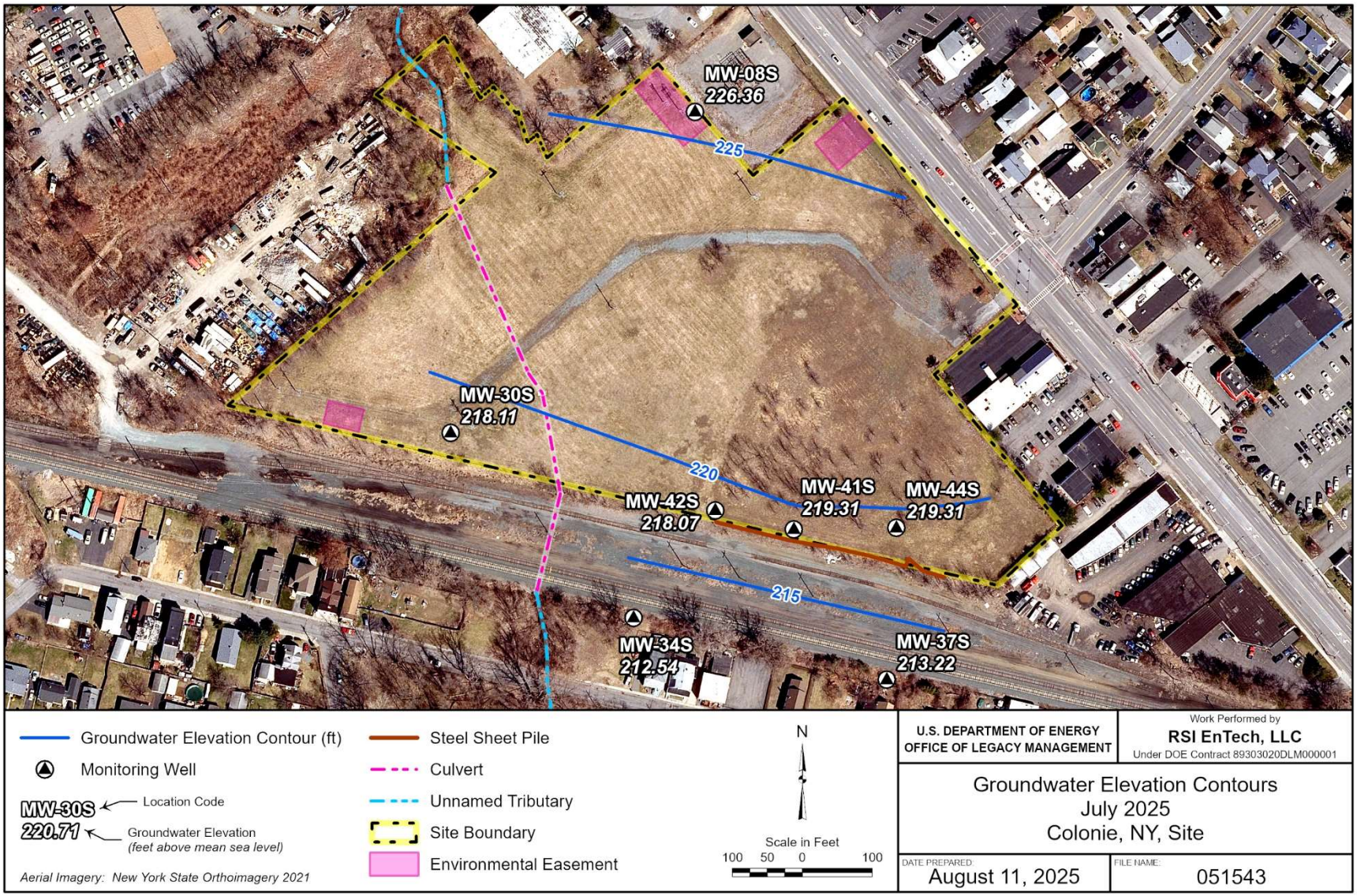

Figure 4. Groundwater Elevation Contours, July 2025

Table 5. Well Stability Parameter Results

Well ID	MW-08S	MW-30S	MW-34S	MW-37S	MW-41S	MW-42S	MW-44S
Sample Date	**7/8/25**	**7/8/25**	**7/8/25**	**7/8/25**	**7/8/25**	**7/8/25**	**7/8/25**
Parameter							
Dissolved oxygen (mg/L)	1.73	2.8	2.93	2.27	0.48	0.5	0.29
Oxidation-reduction potential (mV)	78.7	70.8	20.3	–61.2	–50.4	–72.2	-92.9
pH (standard units)	6.40	6.67	6.41	6.75	6.61	6.95	6.97
Specific conductance (µS/cm)	546	463.7	383.9	491.4	1007	475.6	701
Temperature (°C)	16.8	15.6	17.7	16.0	13.7	14.2	12.6
Turbidity (NTU)	2.73	15.9	2.0	2.78	7.50	5.45	4.94

Abbreviations:
µS/cm = microsiemens per centimeter
mg/L = milligrams per liter
mV = millivolts

Dissolved oxygen (DO) concentrations ranged from 0.29 milligram per liter (mg/L) at monitoring well MW-44S to 2.93 mg/L at well MW-34S and averaged 1.57 mg/L. DO readings have typically ranged from 0 to 3 mg/L during previous sampling events.

The oxidation-reduction potential (ORP) was measured using a silver/silver chloride reference electrode and ranged from −92.9 millivolts (mV) at well MW-44S to +78.7 mV at well MW-08S and averaged -15.3 mV. The measurements suggest slightly reducing conditions. ORP has historically been in the same range of approximately −100 to +200 mV.

The pH ranged from a minimum of 6.40 at well MW-08S to a maximum of 6.97 in well MW-44S, and the average (logarithmic mean) was 6.68. All pH results have historically been circumneutral.

Specific conductance ranged from a minimum of 383.9 microsiemens per centimeter (µS/cm) at well MW-34S to a maximum of 1007 µS/cm at well MW-41S and averaged 581.2 µS/cm. Drinking water typically ranges from 200 to 800 µS/cm. The U.S. Environmental Protection Agency (EPA) secondary maximum contaminant level for total dissolved solids is 500 mg/L, which is equivalent to a specific conductance of 780 µS/cm (EPA 2025). Specific conductance is unrelated to VOC concentrations.

The temperature of the groundwater measured in the flow-through cell ranged from a minimum of 12.6 °C at well MW-44S to a maximum of 17.7 °C at well MW-34S and averaged 15.2 °C.

Turbidity ranged from a minimum of 2.0 NTU at well MW-34S to a maximum of 15.9 NTU at well MW-30S and averaged 5.9 NTU. Turbidities decreased from the last sampling event, and only one well, MW-34S, could not meet the <10 NTU criteria, which did not affect collection of a sample.

3.3 Contaminant Concentrations

All seven wells were sampled for the COC VOCs by EPA SW-846 Method 8260D (EPA 2015). Well MW-08S was sampled in duplicate. Table 6 shows VOC analysis results for the present and previous sampling events in comparison to the TCGs. Analysis results from the LTM program dating from 2010 to the present are also included in Appendix D.
Figure 5 shows VOC results on a map of the site.

There was one single exceedance of TCGs in July 2025; PCE exceeded the TCG of 5.5 micrograms per liter (µg/L) in well MW-41S. The PCE concentration was 7.60 µg/L.

Upgradient well MW-08S had no detected VOC results for this event. Results at this well have been not detected since 2010. The apparent decrease in VOC concentrations in July 2020, as shown in Table 6, is due to the decrease in the method detection limits from 1.0 to 0.333 µg/L.

Cross-gradient well MW-30S had no exceedances for this event. Results at this well have been below the TCGs since 2021.

Offsite well MW-34S had no exceedances for this event. Results at this well have been below the TCGs since 2010.

Offsite well MW-37S had no exceedances for this event. Results at this well have been below the TCGs since 2017.

Onsite well MW-41S exhibited a PCE concentration of 7.60 µg/L, which exceeds the TCG of 5.5 µg/L. The well exhibits a trend of decreasing concentration over time as shown in Figure 6. TCE, cDCE, and VC concentrations were very similar to those from the previous sampling event.

Onsite well MW-42S had no exceedances for this event. Results at this well have been below the TCGs since 2010.

Onsite well MW-44S had no detected VOC results for this event. Results at this well have been below the TCGs since 2020.

3.4 Temporal and Spatial Changes in COC Results

Most detectable COCs had lower concentrations in July 2025 compared to those in July 2023. The only exceedance in July 2025 is in the same well as that in the July 2023 exceedance. As in previous events, PCE remains elevated near the former source zone: the southeast corner of the building formerly near well MW-41S. PCE remains near or below the detection limit in downgradient wells MW-34S and MW-37S. The PCE breakdown products TCE and cDCE show slight upticks in concentrations in well MW-41S, as expected with the decay of and decrease in concentration of PCE in that well.

As shown in the time-series plot of well MW-41S (Figure 6), PCE concentrations continue to decline.

Table 6. VOC Analysis Results

Sample Date			11 / 2010		3 / 2011		5 / 2011		8 / 2011		2 / 2012		5 / 2012		8 / 2012		8 / 2015		3 / 2016		8 / 2016		4 / 2017		7 / 2020		7 / 2021		7 / 2023		7 / 2025	
Well	Analyte	Target Cleanup Goal	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q
MW-08S	PCE	5.5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
	TCE	18.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
	cDCE	1,800	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
	VC	1.4	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
MW-30S	PCE	5.5	5.6		4.7		3.6		4.4		4.5		4.6		6.0		2.8		1.5		3.9		3.1		6.67		2.88		0.800	J	0.550	J
	TCE	18.0	1.4		1.1		0.5	J	1.6		1.7		1.6		2.4		1.6		0.52	J	1.2		1.0	U	1.54		0.333	U	0.490	J	0.333	U
	cDCE	1,800	0.56	J	0.67	J	1.0	U	1.3		1.4		1.3		2.3		2.0		0.76	J	0.96	J	1.0	U	0.54	J	0.333	U	0.520	J	0.333	U
	VC	1.4	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
MW-34S	PCE	5.5	0.96		0.75	J	0.66	J	0.71	J	0.70	J	0.72	J	0.73	J	0.45	J	0.49	J	0.61	J	0.75	J	0.47	J	0.51	J	0.370	J	0.333	U
	TCE	18.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.29	J	0.333	U	0.333	U	0.333	U	0.333	U
	cDCE	1,800	1.6		0.96	J	0.93	J	1.2		1.1	J	0.86	J	1.5		0.91	J	0.79	J	1.3		1.2		1.34		1.09		1.04		0.550	J
	VC	1.4	2.5		1.8		2.4		2.2		2.3		2.0		3.4		1.7	J	1.1		1.6		1.1		0.97	J	0.86	J	0.740	J	0.333	U
MW-37S	PCE	5.5	0.25	J	1.0	U	0.25	J	0.39	J	0.58	J	0.21	J	0.37	J	0.49	J	0.38	J	1.0	U	0.50	J	0.333	U	0.333	U	0.480	J	0.360	J
	TCE	18.0	0.36	J	0.333	J	0.41	J	0.63	J	0.68	J	0.31	J	0.53	J	0.58	J	0.62	J	0.28	J	0.42	J	0.333	U	0.333	U	0.480	J	0.333	U
	cDCE	1,800	17.0		27		27.0		34.0		28		39		48.0		52.0		39		51		49		45.6		41.6		33.3		21.0	
	VC	1.4	0.50	J	0.66	J	0.91	J	0.53	J	0.40	J	0.63	J	0.69	J	0.59	J	0.35	J	0.48	J	0.65	J	0.333	U	0.62		0.860	J	0.460	J
MW-41S	PCE	5.5	26.0		15		39.0		24		30.0		28		30.0		14.0		25		18		24		15		12.7		8.05		7.60	
	TCE	18.0	8.3		5.3		11.0		7.1		6.8		7.4		8.6		4.5		6.1		5.3		5.1		4.93		4.86		2.53		2.81	
	cDCE	1,800	1.0		3.5		6.8		5.2		4.4		5.2		5.1		4.2		4.7		4.7		4.8		5.77		6.35		4.71		4.97	
	VC	1.4	0.66	J	0.58	J	0.92	J	0.69	J	1.0		1.2		1.0		0.90	J	0.53	J	0.62	J	0.58	J	0.333	U	0.76	J	1.09		1.06	
MW-42S	PCE	5.5	0.43		0.20	J	0.37	J	0.23	J	0.22	J	1.0	U	1.0	U	1.0	U	1.0	U	0.34	J	0.34	J	0.333	U	0.333	U	0.333	U	0.333	U
	TCE	18.0	1.3		1.0		0.75	J	0.73	J	0.54	J	0.73	J	0.59	J	0.65	J	0.45	J	0.75	J	0.75	J	0.52	J	0.333	U	0.333	U	0.333	U
	cDCE	1,800	4.3		3.4		9.2		12		6.6		7.4		11.0		13.0		8.5		7.6		7.6		7.0		5.31		4.88		4.34	
	VC	1.4	1.0	U	1.0	U	0.22	J	1.0	U	0.22	J	1.0	U	0.21	J	1.0	U	1.0	U	NS		1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
MW-44S	PCE	5.5	NS														3.1		13		15		18		0.333	U	0.333	U	0.333	U	0.333	U
	TCE	18.0															4.0		7.7		9.9		9.9		0.333	U	0.333	U	0.333	U	0.333	U
	cDCE	1,800															3.1		2.8		3.5		3.3		0.51	J	0.333	U	0.333	U	0.333	U
	VC	1.4															1.0	U	1.0	U	1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U

Note:
Shaded entries indicate that the value exceeds the TCG.

Abbreviations:
J = estimated value below the method reporting limit
NS = not sampled
Q = qualifier assigned by laboratory
U = not detected at method reporting limit

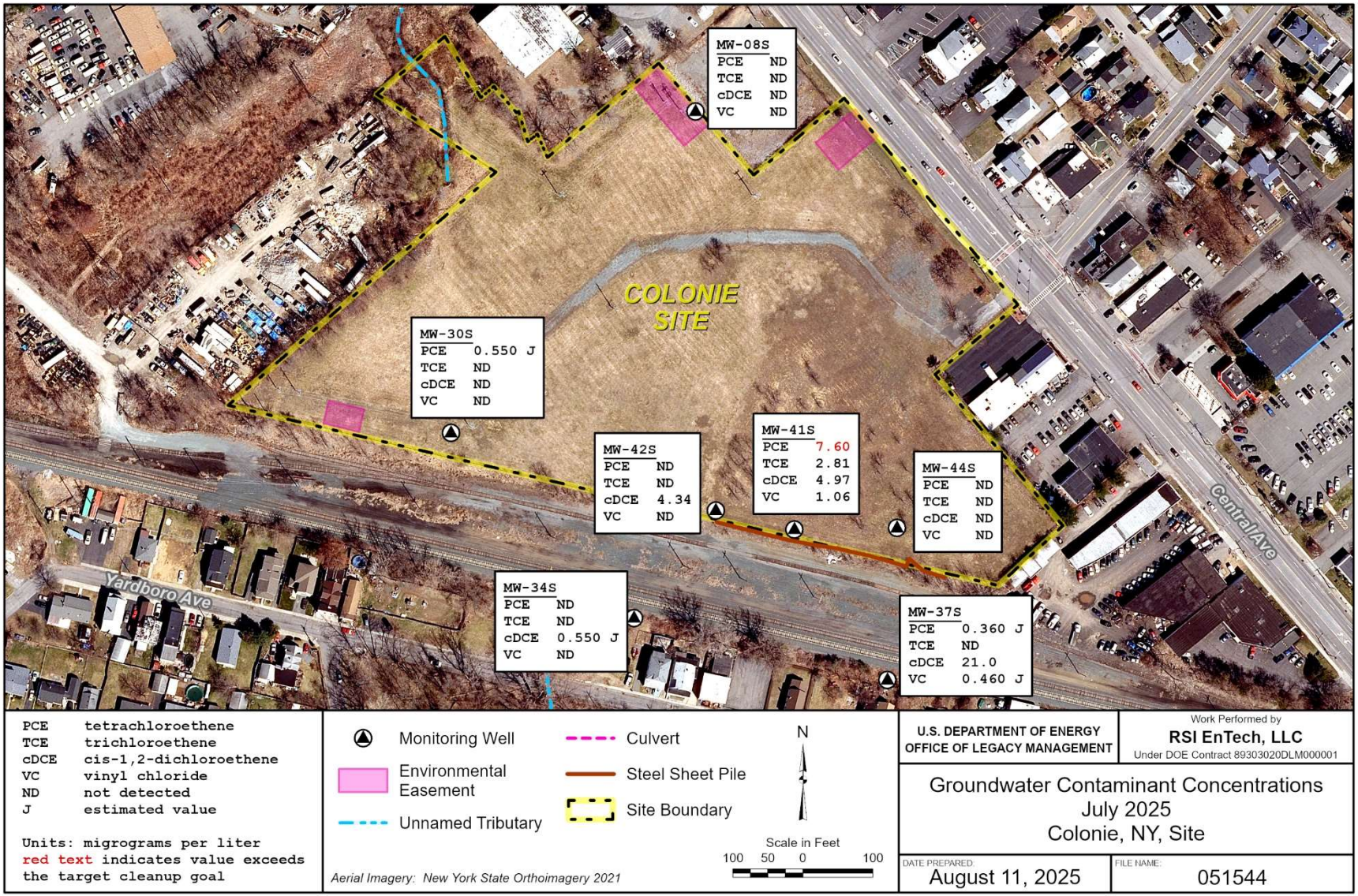

Figure 5. Groundwater Contaminant Concentrations, July 2025

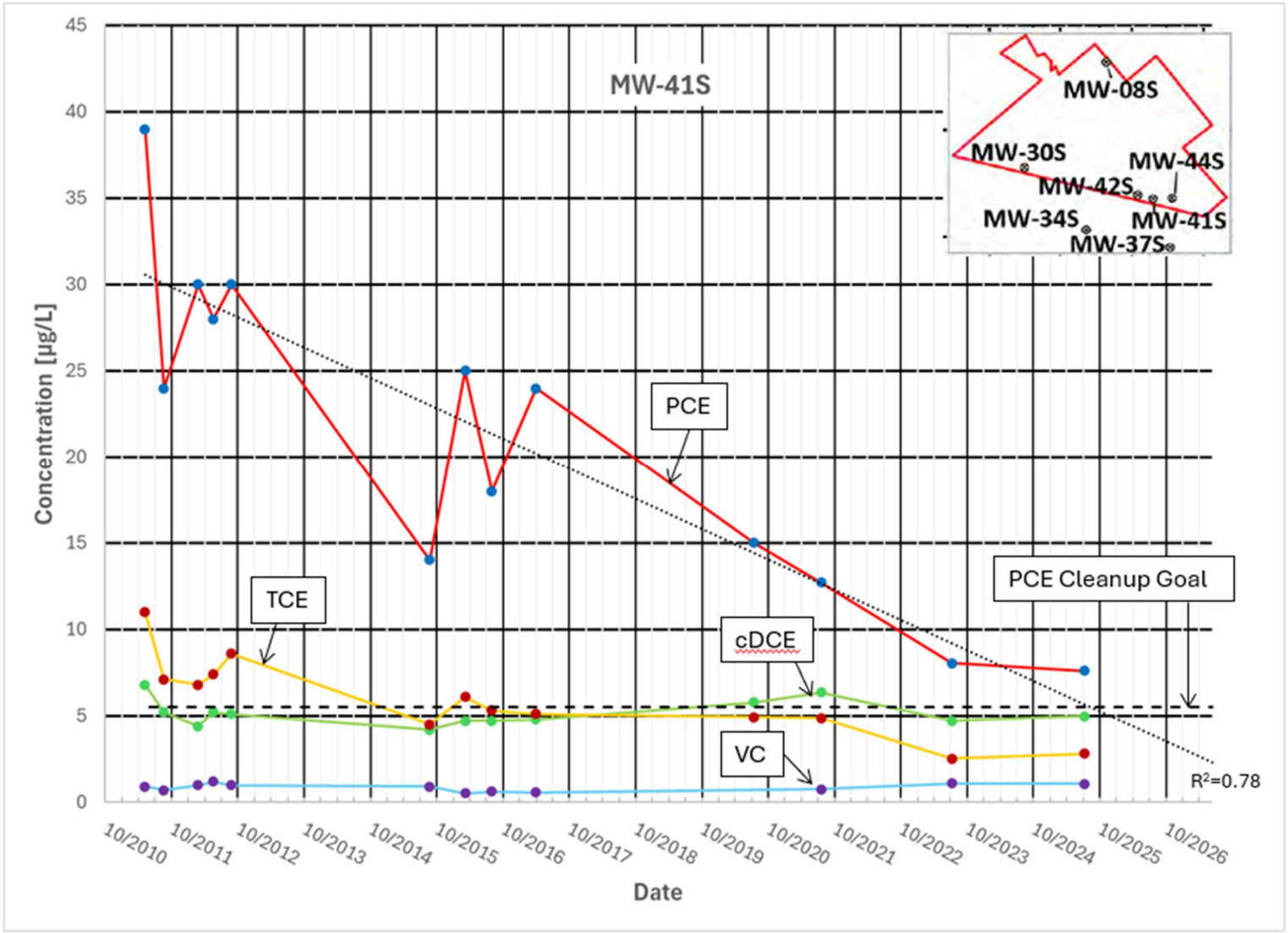

Figure 6. Graph of VOCs Versus Time at MW-41S

3.5 Comparison of COC Results to TCGs

As observed during the previous four monitoring events (2020 to 2025, inclusive), PCE was the only COC to exceed its TCG (Table 6). The PCE exceedances have previously occurred in two wells during that time period: MW-41S and MW-30S (for MW-30S, the only exceedance was in 2020). The only other VOC to show exceedances in the past was VC in well MW-34S, but this well has not exhibited an exceedance since 2016.

3.6 Evaluation of the Monitoring Well Network

The following discussion reviews the utility of each monitoring well:

- **MW-08S:** This upgradient well serves to indicate potential upgradient influences and defines much of the gradient across the site. Analysis results have been nondetectable from all sampling events.
- **MW-30S:** This onsite well shows groundwater conditions near the former landfill location.
- **MW-34S:** This offsite downgradient well serves as a sentinel well to demonstrate that contaminant migration is not occurring.
- **MW-37S:** This is another sentinel well downgradient from the former building location. There has not been a TCG exceedance at this well.
- **MW-41S:** This well indicates contaminant concentrations from the former building's source zone. It exhibits the single PCE exceedance at the site, but it is decreasing.
- **MW-42S:** This well indicates contaminant concentrations from the former building's source zone. The four VOCs are below their TCGs here, and concentrations continue to decrease. This well is redundant to well MW-41S but is farther west.
- **MW-44S:** This well indicates groundwater contaminant concentrations from the former building's source zone. Contaminant concentrations have been nondetectable during the last four sampling events.

4.0 Conclusions and Recommendations

4.1 Conclusions

The following conclusions were made based on the remedy evaluation:

- Groundwater flow direction remains to the south-southwest consistent with the previous measurements.
- The TCGs are exceeded for only one COC in a single well. PCE was the only COC to exceed its TCG. This exceedance occurred in well MW-41S but shows consistently declining concentrations.
- The MNA remedy is on target to be in compliance with TCGs by the estimated 2032 date.
- Well MW-30S has consistently been turbid but was much less so during this sampling event than previously.

4.2 Recommendations

This section presents recommendations based on the review of groundwater data trends and comparison of analytical results to TCG concentrations. The following actions are recommended:

- Sample groundwater in 2 years (2027).
- Continue sampling for well stabilization parameters and COCs.
- Note that declining turbidities indicate that there is no need to develop wells prior to sampling.
- Remove the bladder pumps from wells MW-30S and MW-42S and ship back with sampling supplies at the next event. Replace the pumps with dedicated peristaltic tubing.
- Continue to evaluate the effectiveness of monitoring natural attenuation and provide statistical justification for altering sampling frequencies or ceasing monitoring, as appropriate.

5.0 References

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Appendix A

Groundwater Record of Decision Figures 6 and 7


CENTRAL AVENUE N.Y.S. ROUTE 5
(99' RIGHT OF WAY)
PROJECT NORTH
NIAGARA MOHAWK SUBSTATION
RESIDENCE
VELLANO'S
MONROE MUFFLER
GRIMMS
TOWN OF COLONIE
CITY OF ALBANY
MURPHY'S OVERHEAD DOOR
DENSE TREES
DENSE TREES & BRUSH GROUND OBSCURED
GRAVEL ACCESS ROAD
RAILROAD AVENUE
(80' RIGHT OF WAY)
YARDBORO AVENUE
(40' RIGHT OF WAY)
I-90 TO ROUTE 85 RAMP
CLUSTER "H"
10
50
100
1000
LEGEND
MONITORING WELL USED FOR LONG-TERM MONITORING
GEOPROBE LOCATION
CB CATCH BASIN
GUY WIRE
IRF IRON ROD FOUND
MONITORING WELL
PZ-14B PIEZOMETER
SMH SANITARY MANHOLE
MON SQUARE CONCRETE MONUMENT
STORM MH STORMWATER MANHOLE
TMH TELEPHONE MANHOLE
TSB TRAFFIC SIGNAL BOX
UTILITY POLE
WMTR WATER METER
WSO WATER SHUT-OFF
YCIRF YELLOW CAPPED IRON ROD FOUND
OVERHEAD ELECTRIC
UNDERGROUND PIPE
FENCE LINE
HDPE HIGH DENSITY POLYETHYLENE PIPE
RCP REINFORCED CONCRETE PIPE
ONSITE PORTION OF VOC PLUME
BAR SCALE
60 0 30 60 120
1 inch = 60 ft.

GENERAL NOTES:

1. THIS SURVEY IS BASED ON PHOTOGRAMMETRIC MAPPING PREPARED BY LOCKWOOD MAPPING, INC., PHOTOS DATED MAY 13, 1998.

2. FIELD EDIT BASED ON SITE WORK CONDUCTED THROUGH JULY 2005

3. MONITORING WELLS REMOVED DUE TO EXCAVATION: WELL 19S/NOV 2002, WELL 7S/NOV 2004, WELL 1F/JUN 2005, WELL 5S/M/F/JUL 2005.

4. EXCAVATION LIMIT CONTOURS PROVIDED BY CT MALE ASSOCIATES JULY 2005, ELEVATIONS SHOWN IN COMPLETED UNITS ARE BOTTOM OF EXCAVATION.

5. TOPOGRAPHIC INFORMATION TO THE SOUTH OF YARDBORO AVENUE SURVEYED BY CT MALE, INC. 2002.

6. ONLY AVERAGE VOC VALUES ARE SHOWN FOR WELLS.

7. GEOPROBE CONCENTRATIONS REPRESENT HISTORICAL RI DATA.

8. ALL UTILITIES ARE NOT SHOWN.

9. CONTAMINANT CONTOURS BASED ON GEOPROBE AND MONITORING WELL DATA SHOWN ON THE FIGURE. GEOPROBE DATA INCLUDES PHASE I, II, AND III RESULTS (OCT 1999 TO DEC 2001). ONLY GEOPROBE DETECTIONS ARE SHOWN.

10. WELL DATA IS AVERAGE OF FOUR 2003 TO 2005 SEMIANNUAL SAMPLE EVENTS (SECOND HALF 2003 TO FIRST HALF 2005) EXCEPT;
DATA FOR WELL 05S IS AVE. OF THREE SAMPLE EVENTS; AND
DATA FOR WELL 36S AND PZ12 IS AVE. OF TWO SAMPLE EVENTS; AND
DATA FOR WELLS 07S AND 40S IS BASED ON ONE SAMPLE EVENT.

11. VOC CONCENTRATIONS SHOWN FOR THE GEOPROBES ARE THE MAXIMUM OF THE SHALLOW UPPER SILT LAYER (0' –15') AND THE DEEP UPPER SILT LAYER (15' –30').

12. VOC WAS NOT DETECTED AT LOCATIONS WHERE NO CONCENTRATION DATA IS PROVIDED.

U.S. ARMY CORPS OF ENGINEERS
FORMERLY UTILIZED SITES
REMEDIAL ACTION PROGRAM

FIGURE 6
ESTIMATED EXTENT OF ONSITE VOCs
IN EXCESS OF RAO CONCENTRATION (2003–2005)

Cabrera Services

COLONIE FUSRAP SITE
1130 CENTRAL AVENUE, ALBANY, NY 12205

SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
1" = 60'	837935D92	1 OF 1	

LEGEND

Symbol	Description
⊕	MONITORING WELL USED FOR LONG-TERM MONITORING
□ CB	CATCH BASIN
←	GUY WIRE
○ IRF	IRON ROD FOUND
⊕	MONITORING WELL
PZ-14B	PIEZOMETER
○ SMH	SANITARY MANHOLE
⊠ MON	SQUARE CONCRETE MONUMENT
○ STORM MH	STORMWATER MANHOLE
○ TMH	TELEPHONE MANHOLE
□ TSB	TRAFFIC SIGNAL BOX
	UTILITY POLE
○ WMTR	WATER METER
○ WSO	WATER SHUT-OFF
○ YCIRF	YELLOW CAPPED IRON ROD FOUND
	OVERHEAD ELECTRIC
	UNDERGROUND PIPE
	FENCE LINE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
RCP	REINFORCED CONCRETE PIPE
	SOIL UNITS WHERE VOC CONTAMINATED SOILS EXCAVATED
	VOC CONCENTRATION IN GROUNDWATER (UG/L)

GENERAL NOTES:

1. THIS SURVEY IS BASED ON PHOTOGRAMMETRIC MAPPING PREPARED BY LOCKWOOD MAPPING, INC., PHOTOS DATED MAY 13, 1998.

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DATA FOR WELL 36S AND PZ12 IS AVE. OF TWO SAMPLE EVENTS; AND
DATA FOR WELLS 07S AND 40S IS BASED ON ONE SAMPLE EVENT.

11. VOC CONCENTRATIONS SHOWN FOR THE GEOPROBES ARE THE MAXIMUM OF THE SHALLOW UPPER SILT LAYER (0' –15') AND THE DEEP UPPER SILT LAYER (15' –30').

12. VOC WAS NOT DETECTED AT LOCATIONS WHERE NO CONCENTRATION DATA IS PROVIDED.

U.S. ARMY CORPS OF ENGINEERS
FORMERLY UTILIZED SITES
REMEDIAL ACTION PROGRAM

FIGURE 7
SOIL EXCAVATION AREAS AND
ESTIMATED VOC PLUME IN GROUNDWATER
(2003–2005)

Cabrera Services

COLONIE FUSRAP SITE
1130 CENTRAL AVENUE, ALBANY, NY 12205

SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
1" = 60'	837935D92	1 OF 1	

Appendix B

Groundwater Remedial Investigation Data Summary Tables

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	28-Jul-08		29-Oct-08		18-Feb-09		21-May-09		1-Dec-98		1-May-99		1-Oct-99		1-Jan-00	
Well ID		MW-02S		MW-02S		MW-02S		MW-02S		MW-08S		MW-08S		MW-08S		MW-08S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	-		-		-		-		10	U	5	U	10	U	-	
PCE	µg/L	-		-		-		-		10	U	5	U	10	U	-	
TCE	µg/L	-		-		-		-		10	U	5	U	10	U	-	
VC	µg/L	-		-		-		-		10	U	10	U	10	U	-	
cis-1,2-DCE	µg/L	-		-		-		-		10^	U	5^	U	10^	U	-	
trans-1,2-DCE	µg/L	-		-		-		-								-	
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		-		-		-		**1.7**	**B**	2.9	U	2.1	U	-	
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		2.3	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	**1.00**	J	**1.15**	**J**	**1.24**	**J**	**0.967**	**J**	-		-		-		-	
DOC	mg/L	**1.34**	J	**0.940**	**J**	**1.190**	**J**	**0.953**	**J**	-		-		-		-	
Ethane	µg/L	2.0	U	2.0	U	2.0	U	2.0	U	-		-		-		-	
Ethene	µg/L	2.0	U	2.0	U	2.0	U	2.0	U	-		-		-		-	
Methane	µg/L	**12.0**		**14**		**13**		**8.7**		-		-		-		-	
Nitrate-N	mg/L	0.10	U	**14**	**J**	0.10	U	0.10	U	-		-		-		-	
Sulfate	mg/L	**46.7**		**14**		**62.7**		**45.0**		-		-		-		-	
Chloride	mg/L	**84.7**		**14**		**162**		**92.8**		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	**0.43**		**14**		0.50	U	0.40		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	**1.2**		**14**		**0.6**		1.4		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.20		7.63		7.42		7.27		-		-		-		-	
Specific Conductance	mS/cm	0.510		0.494		0.702		0.461		-		-		-		-	
Turbidity	NTU	76.0		23.0		22.4		1.5		-		-		-		-	
Dissolved Oxygen	mg/L	3.36		NM		2.12		9.97		-		-		-		-	
Temperature	°C	14.11		13.26		10.72		11.99		-		-		-		-	
ORP	mV	-72.8		-133.0		-156.8		-106.2		-		-		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Mar-00		1-Aug-00		1-Dec-00		1-Feb-01		1-Aug-01		1-Dec-01		1-Feb-02		2-Jun-02	
Well ID		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	10	U	10	U	-		1	U	0.83	U	-		0.5	U	0.5	U
PCE	µg/L	10	U	10	U	-		1	U	0.78	U	-		0.5	U	0.5	U
TCE	µg/L	10	U	10	U	-		1	U	0.49	U	-		0.5	U	0.5	U
VC	µg/L	10	U	10	U	-		2	U	1.0	U	-		0.5	U	0.5	U
cis-1,2-DCE	µg/L	10^	U	10^	U	-		1^	U	0.49	U	-		0.5	U	0.5	U
trans-1,2-DCE	µg/L					-				0.84	U	-		0.5	U	0.5	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	2.3	U	1.3	U	-		**4.3**		1.2	U	-		2.8	U	2.8	U
Lead (Dissolved)	µg/L	-		-		1.3	U	3.2		-		1.2	U	2.8	U	2.8	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		-		-		-		-		-		-		-	
Specific Conductance	mS/cm	-		-		-		-		-		-		-		-	
Turbidity	NTU	-		-		-		-		-		-		-		-	
Dissolved Oxygen	mg/L	-		-		-		-		-		-		-		-	
Temperature	°C	-		-		-		-		-		-		-		-	
ORP	mV	-		-		-		-		-		-		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Mar-03		3-Dec-03		4-Jul-04		4-Dec-04		5-Jun-05		5-Dec-05		1-Dec-06		26-Jun-07	
Well ID		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	**0.3**	**J**	0.5	U	1.0	U	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U
TCE	µg/L	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	0.5	U	0.5	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,2-DCE	µg/L	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-DCE	µg/L	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**~~2.2~~**	**R**	2.2	U	3	U	2	UJ	2	U	2	U	2	U	2	U
Lead (Dissolved)	µg/L			2.2	U	25	U	25	U	2.2	UJ	2	U	-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		6.65		-		6.26		6.74		6.8		6.71		6.58	
Specific Conductance	mS/cm	-		0.452		-		0.353		0.432		0.633		0.336		0.314	
Turbidity	NTU	-		0.0		-		1.4		5.3		0.0		0.0		1.3	
Dissolved Oxygen	mg/L	-		4.58		-		0.71		2.28		0.86		1.05		0.64	
Temperature	°C	-		6.22		-		16.72		8.63		13.17		10.02		11.28	
ORP	mV	-		222.2		-		282.3		192.4		221.1		230.6		84.3	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	28-Dec-08		28-Jul-08		29-Oct-08		18-Feb-09		21-May-09		1-Dec-98		1-May-99		1-Oct-99	
Well ID		MW-08S		MW-08S		MW-08S		MW-08S		MW-08S		MW-010S		MW-010S		MW-010S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	10	U	5	U	10	U
PCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	10	U	5	U	10	U
TCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	10	U	5	U	10	U
VC	µg/L	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	10	U	10	U	10	U
cis-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	10^	U	5^	U	10^	U
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U						
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		1.0	U	1.0	U	1.0	U	1.0	U	**2.4**	**B**	2.9	U	2.1	U
Lead (Dissolved)	µg/L	-		1.0	U	1.0	U	1.0	U	1.0	U	-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-									
Ferrous Iron, Fe(II)	mg/L	-		-		-		-									
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.36		5.52		6.68		7.00		6.20		-		-		-	
Specific Conductance	mS/cm	0.486		0.401		0.280		0.483		0.418		-		-		-	
Turbidity	NTU	10.4		1.3		1.0		0.0		0.0		-		-		-	
Dissolved Oxygen	mg/L	0.97		0.95		0.45		0.00		4.08		-		-		-	
Temperature	°C	13.90		16.61		12.95		5.80		13.19		-		-		-	
ORP	mV	161.4		520.3		150.0		115.0		198.1		-		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Jan-00		1-Mar-00		1-Aug-00		1-Dec-00		1-Feb-01		1-Aug-01		1-Dec-01		1-Feb-02	
Well ID		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	-		10	U	10	U	-		1	U	0.83	U	-		0.5	U
PCE	µg/L	-		10	U	10	U	-		1	U	0.78	U	-		0.5	U
TCE	µg/L	-		10	U	10	U	-		1	U	0.49	U	-		0.5	U
VC	µg/L	-		10	U	10	U	-		2	U	1.0	U	-		0.5	U
cis-1,2-DCE	µg/L	-		10^	U	10^	U	-		1^	U	0.49	U	-		0.5	U
trans-1,2-DCE	µg/L	-						-				0.84	U	-		0.5	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		2.3	U	1.3	UV	-		**10**		1.2	U	-		2.8	U
Lead (Dissolved)	µg/L	2.3	U	-		-		3.6	V	3.4		-		1.2	U	2.8	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																
Ferrous Iron, Fe(II)	mg/L																
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		-		-		-		-		-		-		-	
Specific Conductance	mS/cm	-		-		-		-		-		-		-		-	
Turbidity	NTU	-		-		-		-		-		-		-		-	
Dissolved Oxygen	mg/L	-		-		-		-		-		-		-		-	
Temperature	°C	-		-		-		-		-		-		-		-	
ORP	mV	-		-		-		-		-		-		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Jun-02		1-Mar-03		3-Dec-03		4-Jul-04		4-Dec-04		5-Jun-05		5-Dec-05		1-Dec-06		26-Jun-07	
Well ID		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S		MW-010S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U
TCE	µg/L	0.5	U	0.5	U	0.5	U	**0.21**	**J**	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	0.5	U	0.5	U	0.5	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,2-DCE	µg/L	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-DCE	µg/L	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	2.8	U	2.2	U	2.2	U	3	U	3	U	2	U	2	U	2	U	2	U
Lead (Dissolved)	µg/L	10	U	2.2	U	2.2	U	25	U	25	U	25	U	2	U	-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																		
Ferrous Iron, Fe(II)	mg/L																		
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		7.95		-		7.98		8		7.91		7.74		8.00		6.90	
Specific Conductance	mS/cm	-		0.224		-		0.331		0.385		0.355		0.242		0.227		0.347	
Turbidity	NTU	-		3.8		-		0		0.5		0.2		3.2		0.0		5.2	
Dissolved Oxygen	mg/L	-		3.8		-		1.7		1.48		2.13		2.72		1.46		0.22	
Temperature	°C	-		10.06		-		12.26		10.43		11.25		9.78		10.76		16.58	
ORP	mV	-		-14.7		-		-79.9		-69.2		101.3		-42.5		-94.1		201.3	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	28-Jul-08		29-Oct-08		18-Feb-09		21-May-09		1-Dec-98		1-May-99		1-Oct-99		1-Jan-00	
Well ID		MW-010S		MW-010S		MW-010S		MW-010S		MW-21S		MW-21S		MW-21S		MW-21S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	10	U	5	U	10	U	-	
PCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	10	U	5	U	10	U	-	
TCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	10	U	5	U	10	U	-	
VC	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	10	U	10	U	10	U	-	
cis-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	10^	U	5^	U	10^	U	-	
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U							-	
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**0.588**	J	1.0	U	1.0	U	1.0	U	**2.3**	**B**	2.9	U	2.1	U	-	
Lead (Dissolved)	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	-		-		-		2.3	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																
Ferrous Iron, Fe(II)	mg/L																
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	5.71		7.94		7.82		7.80		-		-		-		-	
Specific Conductance	mS/cm	0.297		0.255		0.355		0.266		-		-		-		-	
Turbidity	NTU	NM		0.0		1.2		0.0		-		-		-		-	
Dissolved Oxygen	mg/L	2.91		0.74		7.38		-		-		-		-		-	
Temperature	°C	20.78		12.92		7.51		14.07		-		-		-		-	
ORP	mV	411.7		-117.8		-95.6		-9.0		-		-		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Mar-00		1-Aug-00		1-Dec-00		1-Feb-01		1-Aug-01		1-Dec-01		1-Feb-02		2-Jun-02	
Well ID		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	10	U	10	U	-		1	U	0.83	U	-		0.5	U	0.5	U
PCE	µg/L	10	U	10	U	-		1	U	0.78	U	-		**240**	**D**	**41**	**D**
TCE	µg/L	10	U	10	U	-		1	U	0.49	U	-		**23**	**V**	**3**	
VC	µg/L	10	U	10	U	-		2	U	1.0	U	-		0.5	U	0.5	U
cis-1,2-DCE	µg/L	10^	U	10^	U	-		1^	U	0.49	U	-		0.5	U	0.5	U
trans-1,2-DCE	µg/L					-				0.84	U	-		0.5	U	0.5	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	2.3	U	1.3	U	-		**2.1**	**B**	1.2	U	-		2.8	U	2.8	U
Lead (Dissolved)	µg/L	-		-		1.3	U	1.9	B	-		1.2	U	2.8	U	2.8	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																
Ferrous Iron, Fe(II)	mg/L																
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		-		-		-		-		-		-		-	
Specific Conductance	mS/cm	-		-		-		-		-		-		-		-	
Turbidity	NTU	-		-		-		-		-		-		-		-	
Dissolved Oxygen	mg/L	-		-		-		-		-		-		-		-	
Temperature	°C	-		-		-		-		-		-		-		-	
ORP	mV	-		-		-		-		-		-		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Mar-03		4-Dec-03		4-Jul-04		4-Dec-04		5-Jun-05		30-Nov-05		1-Dec-05		1-Dec-06	
Well ID		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	-		1.0	U	1.0	U
PCE	µg/L	**7**		**3**		**2.5**		**1.7**		**1.5**	J	-		1.0	U	**0.5**	J
TCE	µg/L	**0.5**		0.5	U	1.0	U	1.0	U	1.0	U	-		1.0	U	1.0	U
VC	µg/L	0.5	U	0.5	U	2.0	U	2.0	U	2.0	U	-		2.0	U	2.0	U
cis-1,2-DCE	µg/L	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	-		1.0	U	1.0	U
trans-1,2-DCE	µg/L	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	-		1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	2.2	U	2.2	U	3	U	3	U	2	U	-		2	U	2	U
Lead (Dissolved)	µg/L	2.2	U	2.2	U	25	U	25	U	25	U	2	U	-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																
Ferrous Iron, Fe(II)	mg/L																
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	7.48		7.46		7.17		7.75		7.36		7.84				4.77	
Specific Conductance	mS/cm	0.253		0.426		0.446		0.437		0.320		0.288				0.551	
Turbidity	NTU	1.0		1.6		1.8		0.4		5.3		1.4				166.0	
Dissolved Oxygen	mg/L	2.14		1.83		0.78		0.78		1.59		0.81				0.30	
Temperature	°C	8.52		15.23		10.97		11.7		11.47		9.90				14.55	
ORP	mV	-38.3		-128.5		28.8		-186.8		-123.4		-149.3				114.3	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Jun-07		28-Jul-08		29-Oct-08		18-Feb-09		21-May-09		1-Feb-01		1-Aug-01		1-Feb-02	
Well ID		MW-21S		MW-21S		MW-21S		MW-21S		MW-21S		MW-30S		MW-30S		MW-30S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1	U	0.83	U	0.5	U
PCE	µg/L	**1.6**		1.0	U	1.0	U	1.0	U	1.0	U	**67**	**D**	**42**		**23**	**V**
TCE	µg/L	**0.12**	J	1.0	U	1.0	U	1.0	U	1.0	U	**19**		**15**		**8**	
VC	µg/L	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	2	U	1.0	U	0.5	U
cis-1,2-DCE	µg/L	**0.15**	J	1.0	U	1.0	U	1.0	U	1.0	U	**2.4^**		0.49	U	1	
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			0.84	U	0.5	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	1	B	1.0	U	1.0	U	1.0	U	1.0	U	**30.5**		---	**R**	2.8	U
Lead (Dissolved)	µg/L	-		1.0	U	1.0	U	1.0	U	1.0	U	**26.5**		R		2.8	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		**47.39**		1.24	U	-	
Gross Beta	pCi/L	-		-		-		-		-		83.31		8.28		-	
Total Uranium	µg/L	-		-		-		-		-		0.54		0.0551		0.1919	**B**
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																
Ferrous Iron, Fe(II)	mg/L																
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.85		9.04		8.55		8.54		5.71		-		-		-	
Specific Conductance	mS/cm	0.195		0.179		0.183		0.147		0.409		-		-		-	
Turbidity	NTU	0.3		0.0		46.8		4.5		0.0		-		-		-	
Dissolved Oxygen	mg/L	3.91		1.89		4.53		47.34		10.11		-		-		-	
Temperature	°C	14.21		12.05		9.24		11.29		11.32		-		-		-	
ORP	mV	205.7		59.8		-87.0		-48.5		-32.7		-		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	2-Jun-02		1-Mar-03		3-Dec-03		4-Jul-04		1-Dec-04		5-Jun-05		1-Dec-05	
Well ID		MW-30S		MW-30S		MW-30S		MW-30S		MW-30S		MW-30S		MW-30S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	**29**	**D**	**23**		**21**		**33.0**		**20.0**		**21.0**	J	**23.0**	
TCE	µg/L	**5**		**3**		**3**		**11.0**		**3.5**		**8.8**		**4.3**	
VC	µg/L	0.5	U	0.5	U	0.5	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,2-DCE	µg/L	0.3	JJ	0.5	U	**0.6**		**1.7**		**0.5**	**J**	**2.2**		**1.1**	
trans-1,2-DCE	µg/L	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	2.8	U	---	**R**	2.2	U	2	U	3	UJ	2	U	2	U
Lead (Dissolved)	µg/L	2.8	U			2.2	U	25	U	25	U	25	U	2	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-0.02	U	0.50	UJ	1.70	UJ	3.80	UJ
Gross Beta	pCi/L	-		-		-		5.70		5.10	J	4.80	J	**35.00**	J
Total Uranium	µg/L	0.2897	**B**	1.2897	**B**	0.16565	**J**	0.30		0.14	U	0.21	U	0.27	U
Combined Radium 226/228	pCi/L	-		-		-		0.78	U	0.92	UJ	0.86	UJ	**1.34**	J
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L														
Ferrous Iron, Fe(II)	mg/L														
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		6.44		-		6.22		6.39		6.34		6.30	
Specific Conductance	mS/cm	-		0.991		-		0.777		0.903		0.741		0.527	
Turbidity	NTU	-		18		-		3.7		3		2		12.2	
Dissolved Oxygen	mg/L	-		10.31		-		2.1		5.8		6.88		2.83	
Temperature	°C	-		7.36		-		16.61		10.84		12.93		12.96	
ORP	mV	-		226.7		-		222.6		212.9		191.6		187.8	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Dec-06		1-Jun-07		29-Jul-08		6-Nov-08		17-Feb-09		18-May-09		1-Feb-02		2-Jun-02	
Well ID		MW-30S		MW-30S		MW-30S		MW-30S		MW-30S		MW-30S		MW-32S		MW-32S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	**2**	
PCE	µg/L	**20.0**		**9.7**		**14.0**		**12.0**		**9.0**		**7.8**		**1200**	**D**	**490**	**D**
TCE	µg/L	**8.7**		**3.1**		**5.8**		**5.4**		**2.9**		**3.1**		**420**	**D**	**190**	**D**
VC	µg/L	2.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**23**		**11**	
cis-1,2-DCE	µg/L	**2.0**		**0.94**	J	**3.2**		**2.7**		**1.4**		**2.4**		**940**	**D**	**440**	**D**
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**14**		**9**	
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**2.9**		**1.6**	B	**0.529**	J	**0.881**	**J**	**1.91**		1.0	U	2.8	U	2.8	U
Lead (Dissolved)	µg/L	-		-		1.0	U	1.0	U	1.0	U	1.0	U	2.8	U	2.8	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	5.30		1.20	U	0.944	U	2.89	U	2.75	U	0.600	U	-		-	
Gross Beta	pCi/L	8.60		5.90	U	**8.90**		8.35	**J**	**9.61**	**J**	**6.37**	**J**	-		-	
Total Uranium	µg/L	0.14	U	0.41		**0.56**		0.54		**0.48**		**0.475**	**J**	3.7454		28.163	
Combined Radium 226/228	pCi/L	0.51	U	0.48	J	1.755		1.769	J	**0.991**	**J**	3.296	U				
Gross Alpha - Dissolved	pCi/L	-		-1.60	U	0.303	U	1.68	U	0.212	U	-0.162	U	-		-	
Gross Beta - Dissolved	pCi/L	-		0.40	U	**5.85**	J	9.42	**J**	**8.34**	**J**	**9.91**	**J**	-		-	
Total Uranium - Dissolved	µg/L	-		0.22	U	**0.46**		0.49		**0.43**		**0.587**	**J**	-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		0.65	J	1.203		1.197	U	0.407	U	0.512	U	-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																
Ferrous Iron, Fe(II)	mg/L																
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.07		6.29		5.80		6.22		6.31		6.37		-		-	
Specific Conductance	mS/cm	0.581		0.597		1.114		0.869		0.807		0.956		-		-	
Turbidity	NTU	146.8		110.1		5.0		16.0		0.0		60.5		-		-	
Dissolved Oxygen	mg/L	3.49		5.41		0.93		2.23		4.80		9.67		-		-	
Temperature	°C	12.41		13.72		18.08		14.56		7.49		9.14		-		-	
ORP	mV	102.1		160		452.2		273.6		110.0		239.0		-		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Mar-03		3-Dec-03		4-Jul-04		4-Dec-04		5-Jun-05		1-Dec-05		1-Dec-06		1-Jun-07	
Well ID		MW-32S		MW-32S		MW-32S		MW-32S		MW-32S		MW-32S		MW-32S		MW-32S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	**2**		**2**		**1.0**		**0.9**	**J**	1.0	U	**0.31**	J	**0.31**	J	**1.00**	J
PCE	µg/L	**660**	**D**	**440**		**420.0**	**J**	**360.0**	**J**	**200**	J	**140**		**18**		**9.4**	
TCE	µg/L	**310**	**D**	**230**		**200.0**	**J**	**170.0**	**J**	**150**		**89**		6		4.1	
VC	µg/L	**6**		**5**		**2.8**		**2.5**	**J**	**2.3**		**2.4**		**0.4**	J	**0.53**	J
cis-1,2-DCE	µg/L	**550**	**D**	**390**		**9.5**	**J**	**230.0**	**J**	**240**		**260**		**27**		**18**	
trans-1,2-DCE	µg/L	**9**		**9**		**5.2**		**5.3**		**4.0**		**4.2**		**0.7**	J	**0.48**	J
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**3.5**	**B**	2.2	U	3	U	2	U	2	UJ	**1.2**	J	**2.9**		2	U
Lead (Dissolved)	µg/L	3.2	B	2.2	U	25	U	25	U	1.3	U	2	U	-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		**221**	J	**322**		**535**	J	**296**	J	**53.40**		**81**	
Gross Beta	pCi/L	-		-		**112**		**128**		**376**	J	**163**	J	34.70		21.30	
Total Uranium	µg/L			**275.83**		**700**	J	**641**		**896**		**592**		**181**		**177**	
Combined Radium 226/228	pCi/L					1.24	J	1.00	J	3.17	J	0.48	UJ	0.50		0.44	U
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		**64**	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		19.10	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		17.60	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		0.66	U
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L																
Ferrous Iron, Fe(II)	mg/L																
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.52		-		5.86		6.62		6.61		6.48		6.63		6.49	
Specific Conductance	mS/cm	0.606		-		0.975		0.795		0.981		0.795		0.285		0.236	
Turbidity	NTU	115.1		-		1.8		51.8		4.7		15.9		13.8		9.8	
Dissolved Oxygen	mg/L	1.59		-		0.66		0.35		0.35		0.32		4.50		1.42	
Temperature	°C	6.14		-		16.4		11.49		12.93		10.74		10.35		13.65	
ORP	mV	78		-		212		86.8		118.9		108.4		157.4		107.9	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	6-Aug-08		4-Nov-08		23-Feb-09		19-May-09		1-Feb-02		2-Jun-02		1-Mar-03		3-Dec-03		4-Jul-04	
Well ID		MW-32S		MW-32S		MW-32S		MW-32S		MW-34S		MW-34S		MW-34S		MW-34S		MW-34S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.5	U	0.5	U	0.5	U	1.0	U
PCE	µg/L	**72.0**		**21.0**		**21**		**9.9**		**250**	**D**	**10**		**1**		**2**		**1.3**	
TCE	µg/L	**23.0**		**7.7**		**6.3**		**4.5**		0.5	U	0.5	U	**0.3**	**J**	0.5	U	**0.27**	**J**
VC	µg/L	**0.93**	J	**0.91**	**J**	**0.59**	**J**	**0.65**	**J**	**2**		**1**		0.5	U	**2**		**1.8**	**J**
cis-1,2-DCE	µg/L	**23.0**		**20.0**		**13**		**11**		**2**		**2**		**1**		**2**		**1.1**	
trans-1,2-DCE	µg/L	**0.98**	J	**0.64**	**J**	**0.42**	**J**	**0.44**	**J**	0.5	U	0.5	U	0.5	U	0.5	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	-		-		-		-		-	
Lead (Dissolved)	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	**60**	J	50.20		**59.6**		**35.3**	**J**	-		-		-		-		-	
Gross Beta	pCi/L	**31.1**		32.80		**37.7**		**27.0**		-		-		-		-		-	
Total Uranium	µg/L	**160**		110.00		**157**	**J**	**95.2**	**J**	-		-		-		-		-	
Combined Radium 226/228	pCi/L	0.752		2.13	J	**0.461**	**J**	1.21	U	-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	**68.3**	J	43.3		**65.5**		**36.2**	**J**	-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	**31.9**		29.4		**30.3**		**25.8**	**J**	-		-		-		-		-	
Total Uranium - Dissolved	µg/L	**170**	J	108		**185**	**J**	**111**	**J**	-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	0.692		0.728	U	**0.701**	**J**	**1.581**	**J**	-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	**1.80**	J	-		**1.44**	**J**	**1.44**	**J**	-		-		-		-		-	
DOC	mg/L	**1.95**	J	-		**1.62**	**J**	**1.59**		-		-		-		-		-	
Ethane	µg/L	2.0	U	-		2.0	U	2.0	U	-		-		-		-		-	
Ethene	µg/L	2.0	U	-		2.0	U	2.0	U	-		-		-		-		-	
Methane	µg/L	**150**		-		**180**		**120**		-		-		-		-		-	
Nitrate-N	mg/L	**0.0864**	J	-		**0.116**	**J**	**0.202**	**J**	-		-		-		-		-	
Sulfate	mg/L	**16.3**		-		**13.5**		**17.9**		-		-		-		-		-	
Chloride	mg/L	**7.71**		-		**5.63**		**6.71**		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	0.70				0.70		0.20		-		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	0.2	U			0.2	U	0.2	U	-		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	4.09		6.38		7.11		6.06		-		-		6.98		6.86		6.86	
Specific Conductance	mS/cm	0.225		0.198		0.292		0.379		-		-		0.68		1.123		1.123	
Turbidity	NTU	63.0		1.0		116.0		0.0		-		-		176		6.6		6.6	
Dissolved Oxygen	mg/L	1.00		0.66		0.00		0.60		-		-		0.68		0.25		0.25	
Temperature	°C	18.02		14.95		6.70		10.74		-		-		8.55		13.93		13.93	
ORP	mV	425.3		111.6		107.0		237.0		-		-		115.3		141.5		141.5	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	4-Dec-04		5-Jun-05		1-Dec-05		1-Dec-06		1-Jun-07		1-Aug-08		30-Oct-08		19-Feb-09		26-May-09	
Well ID		MW-34S		MW-34S		MW-34S		MW-34S		MW-34S		MW-34S		MW-34S		MW-34S		MW-34S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	**1.1**		0.6	J	**1.1**		**1.9**		**0.41**	J	**0.92**	J	**1.0**		**0.94**	**J**	**0.85**	**J**
TCE	µg/L	**0.2**	**J**	1.0	U	1.0	U	**0.4**	J	**0.16**	J	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	**1.7**	**J**	1.3	J	**1.8**	J	**1.0**	J	**1.3**	J	**1.6**		**1.8**		**1.6**		**2.0**	
cis-1,2-DCE	µg/L	**1.0**		0.6	J	**1.3**		**2.1**		**0.75**	J	**0.93**	J	**1.3**		**0.89**	**J**	**0.85**	**J**
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		-		-		-		-		-		-		-		-	
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		2.31	J	2.25	J	2.16		2.19	J
DOC	mg/L	-		-		-		-		-		3.13	J	2.55	J	2.4		2.65	J
Ethane	µg/L	-		-		-		-		-		2	U	2	U	2	U	2	U
Ethene	µg/L	-		-		-		-		-		2	U	2	U	2	U	2	U
Methane	µg/L	-		-		-		-		-		13		13		13		15	
Nitrate-N	mg/L	-		-		-		-		-		0.161		0.13	J	0.239		0.229	
Sulfate	mg/L	-		-		-		-		-		92		95		79		84	
Chloride	mg/L	-		-		-		-		-		96		108		73		109	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		1		1		0	U	1	
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		0		0		0		0	U
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.74		7.16		7.05		6.87		7.91		6.42		6.91		7.15		7.10	
Specific Conductance	mS/cm	0.707		0.833		0.500		0.353		0.620		0.414		0.507		0.582		0.527	
Turbidity	NTU	67.2		33.3		86.0		24.1		0.0		0.0		0.0		>1000		1287.0	
Dissolved Oxygen	mg/L	0.82		0.53		0.35		0.62		0.09		0.48		0.31		0.00		0.61	
Temperature	°C	11.65		10.96		11.72		11.98		13.51		13.58		13.78		8.90		10.73	
ORP	mV	181.9		50		101.3		89.2		259.4		283.0		13.1		150.0		121.8	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	Feb-02		Jun-02		Mar-03		Dec-03		Jul-04		Dec-04		Jun-05		Dec-05		Dec-06	
Well ID		MW-35S		MW-35S		MW-35S		MW-35S		MW-35S		MW-35S		MW-35S		MW-35S		MW-35S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	0.5	U	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	**0.2**	**J**	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	UJ	1.0	U	1.0	U
TCE	µg/L	0.5	U	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	0.5	U	0.5	U	0.5	U	0.5	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,2-DCE	µg/L	0.5	U	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-DCE	µg/L	0.5	U	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		-		-		-		-		-		-		-		-	
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-		-	
Methane	mg/L	-		-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		-		7.11		6.97		7.25		6.58		6.02		6.54		6.70	
Specific Conductance	mS/cm	-		-		0.308		0.995		4.37		0.948		0.311		0.397		0.777	
Turbidity	NTU	-		-		1.4		2.2		74.3		6.5		0.0		19.5		18.6	
Dissolved Oxygen	mg/L	-		-		10.82		4.05		4.31		2.37		5.36		3.32		2.19	
Temperature	°C	-		-		7.41		12.72		10.37		11.88		11.76		10.65		12.90	
ORP	mV	-		-		120.4		179.6		231.1		206.6		226.7		64.2		82.7	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	Jun-07		Aug-08		Oct-08		Feb-09		May-09		Feb-02		Jun-02		Mar-03		Dec-03	
Well ID		MW-35S		MW-35S		MW-35S		MW-35S		MW-35S		MW-37S		MW-37S		MW-37S		MW-37S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.5	U	0.5	U	0.5	U
PCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.5	U	0.5	U	0.5	U
TCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.5	U	0.5	U	0.5	U
VC	µg/L	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.5	U	**0.4**	**J**	**0.7**	
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.5	U	0.5	U	0.5	U	0.5	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		-		-		-		-		-		-		-		-	
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-									
Gross Beta	pCi/L	-		-		-		-		-									
Total Uranium	µg/L	-		-		-		-		-		1.5309	B	0.6003	B			0.2418	J
Combined Radium 226/228	pCi/L	-		-		-		-		-									
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-									
Gross Beta - Dissolved	pCi/L	-		-		-		-		-									
Total Uranium - Dissolved	µg/L	-		-		-		-		-									
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-									
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		1.01	J	1.53		1.13	J	0.847	J	-		-		-		-	
DOC	mg/L	-		1.32	J	1.6		1.06	J	1.22	J	-		-		-		-	
Ethane	µg/L	-		2	U	2	U	2	U	2	U	-		-		-		-	
Ethene	µg/L	-		2	U	2	U	2	U	2	U	-		-		-		-	
Methane	mg/L	-		2	U	2	U	2	U	2	U	-		-		-		-	
Nitrate-N	mg/L	-		0.1	U	0.0571	J	0.0588	J	0.1	U	-		-		-		-	
Sulfate	mg/L	-		11		12		10		18		-		-		-		-	
Chloride	mg/L	-		115		50		35		136		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	-		0		0	U	0	U	0	U	-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	-		0	U	0	U	0	U	0	U	-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	5.16		6.65		6.75		6.56		6.56		-		-		7.22		-	
Specific Conductance	mS/cm	0.383		0.237		0.184		0.446		0.446		-		-		0.863		-	
Turbidity	NTU	10.8		1.0		9.2		0.0		0.0		-		-		1.7		-	
Dissolved Oxygen	mg/L	6.22		9.41		13.13		3.00		3.00		-		-		0.65		-	
Temperature	°C	15.73		13.76		7.12		10.78		10.78		-		-		10.09		-	
ORP	mV	545.2		192.7		68.8		61.0		61.0		-		-		-95.7		-	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	Jul-04		Dec-04		Jun-05		Dec-05		Dec-06		Jun-07		Aug-08		Oct-08		Feb-09	
Well ID		MW-37S		MW-37S		MW-37S		MW-37S		MW-37S		MW-37S		MW-37S		MW-37S		MW-37S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	1.0	U	**0.6**	**J**	**0.4**	J	1.0	U	**0.3**	J	1.0	U	**0.22**	J	**0.23**	**J**	**0.51**	**J**
TCE	µg/L	**0.18**	**J**	**0.28**	**J**	**0.4**	J	1.0	U	**0.9**	J	**0.3**	J	**0.33**	J	**0.38**	**J**	**0.71**	**J**
VC	µg/L	**0.41**	**J**	**0.7**	**J**	**1.0**	J	**1.0**	J	**1.1**	J	2.0	U	**0.99**	J	**1.1**	**J**	**0.85**	**J**
cis-1,2-DCE	µg/L	**0.98**	**J**	**0.98**	**J**	**3.1**	J	**2.7**		**5.5**		**2.1**		**1.6**		**2.3**		**3.6**	
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		-		-		-		-		-		-		-		-	
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	2.4	U	10	J	0	UJ	3.2	UJ	6.9	U	4.2	U	1.26	U	1.9	J	1.26	U
Gross Beta	pCi/L	13		13.4		11.2	J		R	18		19.9		22.3		13.5		14.1	
Total Uranium	µg/L	0.5		0.24		0.61		0.21	U	0.27	U	NA	U	0.24		0.21	U	1.1	
Combined Radium 226/228	pCi/L	0.81	U	1.55	J	0.98	UJ	4.58	J	1.92	U	1.36	J	2.013		2.13	J	2.596	J
Gross Alpha - Dissolved	pCi/L											0.06	U	1.78	J	0.974	U	0.443	U
Gross Beta - Dissolved	pCi/L											11.6		16.1		9.05	J	11.2	
Total Uranium - Dissolved	µg/L											0	U	0		0	U	0	J
Combined Radium 226/228 - Dissolved	pCi/L											1	J	2		2	J	1	J
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		1.01	J	1.53		1.13	J
DOC	mg/L	-		-		-		-		-		-		1.32	J	1.6		1.06	J
Ethane	µg/L	-		-		-		-		-		-		2	U	2	U	2	U
Ethene	µg/L	-		-		-		-		-		-		2	U	2	U	2	U
Methane	mg/L	-		-		-		-		-		-		2	U	2	U	2	U
Nitrate-N	mg/L	-		-		-		-		-		-		0.1	U	0.0571	J	0.0588	J
Sulfate	mg/L	-		-		-		-		-		-		11		12		10	
Chloride	mg/L	-		-		-		-		-		-		115		50		35	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		-		0		0	U	0	U
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		-		0	U	0	U	0	U
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	7.12		7.04		6.99		7.12		6.99		6.83		6.67		7.25		7.05	
Specific Conductance	mS/cm	0.919		0.987		1.066		0.755		0.659		0.611		0.676		0.630		0.565	
Turbidity	NTU	22.6		29.9		6.2		318.4		91.0		53.5		54.2		6.5		2085.8	
Dissolved Oxygen	mg/L	7.34		1.3		0.3		2.36		0.47		1.68		1.71		5.10		0.94	
Temperature	°C	13.82		11.3		11.6		10.29		11.76		12.32		12.30		12.62		10.09	
ORP	mV	-83.6		-33.8		-74.3		-66.5		-83.8		-85.9		-77.9		-96.4		-48.9	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	26-May-09		2-Jun-02		1-Mar-03		3-Dec-03		4-Jul-04		4-Dec-04		5-Jun-05		1-Dec-05	
Well ID		MW-37S		MW-39S		MW-39S		MW-39S		MW-39S		MW-39S		MW-39S		MW-39S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	**0.27**	**J**	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	UJ	1.0	U
TCE	µg/L	**0.36**	**J**	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	**1.2**	**J**	0.5	U	0.5	U	0.5	U	2.0	U	2.0	U	2.0	U	2.0	U
cis-1,2-DCE	µg/L	**1.9**		0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-DCE	µg/L	1.0	U	0.5	U	0.5	U	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		-		-		-		-		-		-		-	
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	1.47	J	-		-		-		-		-		-		-	
Gross Beta	pCi/L	11.8		-		-		-		-		-		-		-	
Total Uranium	µg/L	0.285		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	2.74	U	-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	2.29	J	-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	1.58	J	-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	0		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	0	U	-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	0.847	J	-		-		-		-		-		-		-	
DOC	mg/L	1.22	J	-		-		-		-		-		-		-	
Ethane	µg/L	2	U	-		-		-		-		-		-		-	
Ethene	µg/L	2	U	-		-		-		-		-		-		-	
Methane	mg/L	2	U	-		-		-		-		-		-		-	
Nitrate-N	mg/L	0.1	U	-		-		-		-		-		-		-	
Sulfate	mg/L	18		-		-		-		-		-		-		-	
Chloride	mg/L	136		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	0	U	-		-		-		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	0	U	-		-		-		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.41		-		7.96		-		7.6		7.62		7.34		8	
Specific Conductance	mS/cm	0.717		-		0.254		-		0.754		0.514		1.603		0.448	
Turbidity	NTU	76.0		-		721.6		-		194		745.1		854		701	
Dissolved Oxygen	mg/L	1.14		-		2.06		-		1.58		3		2.13		4.57	
Temperature	^{o}C	11.48		-		7.83		-		11.25		10.37		10.88		12.67	
ORP	mV	-56.3		-		71.1		-		167.1		59.8		90		-71.5	

See notes at the end of the table.

Table B-1
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	1-Dec-06		1-Jun-07		1-Aug-08		30-Oct-08		19-Feb-09		May-09	
Well ID		MW-39S		MW-39S		MW-39S		MW-39S		MW-39S		MW-39S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
TCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	2.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	-		-		-		-		-		-	
Lead (Dissolved)	µg/L	-		-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-	
Methane	mg/L	-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	7.9		3.38		7.12		7.65		7.89		7.64	
Specific Conductance	mS/cm	0.335		2.074		0.427		0.384		0.418		0.703	
Turbidity	NTU	681		335.0		1350.3		473.0		559.6		495.0	
Dissolved Oxygen	mg/L	3.81		0.12		1.60		1.23		10.77		5.05	
Temperature	°C	10.78		11.31		12.66		9.86		8.59		8.96	
ORP	mV	-10.2		369.2		351.5		25.2		-152.7		38.2	

See notes at the end of the table.

Table B-2
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	Dec-98		May-99		Oct-99		Mar-00		Aug-00		Feb-01		Aug-01		Feb-02	
Well ID		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	10	U	5	U	0.5	U	10	U	20	U	2	U	0.83	U	0.5	U
PCE	µg/L	**1**	**J**	**1**	**J**	**3**		**2**	**J**	**6**	**JD**	2	U	0.78	U	0.5	U
TCE	µg/L	**2**	**J**	5	U	**1**		10	U	20	U	2	U	0.49	U	0.5	U
VC	µg/L	**14**		**4**	**J**	**10**		**8**	**J**	20	U	**2.3**	**J**	1.0	U	**3**	
cis-1,2-DCE	µg/L	**14^**		**8^**		**10^**		**6^**	**J**	20^	U	**2^**	**J**	**2**	**J**	**2**	
trans-1,2-DCE	µg/L													0.84	U	0.5	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**16**		**3,120**		**151**		**339**		**701**		**1,180**		**133**		**95.1**	**NV**
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		-	
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228	pCi/L	-		-		-		-		-		-		-		-	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		-		-	
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		-		-	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		-	
DOC	mg/L	-		-		-		-		-		-		-		-	
Ethane	µg/L	-		-		-		-		-		-		-		-	
Ethene	µg/L	-		-		-		-		-		-		-		-	
Methane	µg/L	-		-		-		-		-		-		-		-	
Nitrate-N	mg/L	-		-		-		-		-		-		-		-	
Sulfate	mg/L	-		-		-		-		-		-		-		-	
Chloride	mg/L	-		-		-		-		-		-		-		-	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		-		-		-	
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		-		-		-	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		-		-		-		-		-		-		-	
Specific Conductance	mS/cm	-		-		-		-		-		-		-		-	
Turbidity	NTU	-		-		-		-		-		-		-		-	
Dissolved Oxygen	mg/L	-		-		-		-		-		-		-		-	
Temperature	°C	-		-		-		-		-		-		-		-	
ORP	mV	-		-		-		-		-		-		-		-	

See notes at the end of the table.

Table B-2
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	Jun-02		Jul-04		Dec-04		Jun-05		Dec-05		Dec-06		Jun-07		Aug-08	
Well ID		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S		MW-40S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	0.5	U	1.0	U	1.0	U	1.0	UJ	1.0	U	1.0	U	1.0	U	1.0	U
TCE	µg/L	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	**3**		2.0	U	2.0	U	2.0	U	2.0	UJ	2.0	U	2.0	U	1.0	U
cis-1,2-DCE	µg/L	**4**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-DCE	µg/L	0.5	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**206**		**61.7**		**247**	J	**125**		**3.9**		**424**		**170**		**77.5**	
Lead (Dissolved)	µg/L	-		-		-		-		-		-		-		**0.541**	J
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	-		0.37	U	8.80	J	4.70	J	1.00	UJ	3.70		4.70		**25.3**	
Gross Beta	pCi/L	-		0.80	U	4.20	U	5.10	J	1.30	U	3.50	J	3.10	U	**52.2**	
Total Uranium	µg/L	-		0.50		0.50		0.42	J	-		0.20	U	0.87		**2.3**	
Combined Radium 226/228	pCi/L	-		0.32	U	0.73	UJ	0.10	UJ	-		0.39	U	0.54	J	2.083	
Gross Alpha - Dissolved	pCi/L	-		-		-		-		-		-		0.40	U	**2.85**	J
Gross Beta - Dissolved	pCi/L	-		-		-		-		-		-		0.90	U	**10.6**	
Total Uranium - Dissolved	µg/L	-		-		-		-		-		-		1.00		**0.51**	J
Combined Radium 226/228 - Dissolved	pCi/L	-		-		-		-		-		-		0.53	U	1.235	
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	-		-		-		-		-		-		-		**0.801**	
DOC	mg/L	-		-		-		-		-		-		-		**1.12**	J
Ethane	µg/L	-		-		-		-		-		-		-		**0.680**	J
Ethene	µg/L	-		-		-		-		-		-		-		2.0	U
Methane	µg/L	-		-		-		-		-		-		-		**53.0**	
Nitrate-N	mg/L	-		-		-		-		-		-		-		**0.243**	
Sulfate	mg/L	-		-		-		-		-		-		-		**13.8**	J
Chloride	mg/L	-		-		-		-		-		-		-		**38.0**	
Soluble Manganese, Mn(II)	mg/L	-		-		-		-		-		-		-		0.35	
Ferrous Iron, Fe(II)	mg/L	-		-		-		-		-		-		-		0.2	U
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	-		7.02		7.84		7.95		8.16		7.73		7.64		6.91	
Specific Conductance	mS/cm	-		0.399		0.326		0.321		0.224		0.211		0.223		0.201	
Turbidity	NTU	-		16.7		146.8		83		18.9		97.1		64.7		1555.0	
Dissolved Oxygen	mg/L	-		0.82		0.9		5.99		2.21		1.75		2.38		1.68	
Temperature	°C	-		37.97		12.94		12.56		11.92		13.29		13.07		18.00	
ORP	mV	-		-23.9		87.1		29.3		-113.8		-47.9		-78.9		389.5	

See notes at the end of the table.

Table B-2
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	Nov-08		Feb-09		May-09		Dec-06		Jan-07		Jun-07		Aug-08		Nov-08	
Well ID		MW-40S		MW-40S		MW-40S		MW-41S		MW-41S		MW-41S		MW-41S		MW-41S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	-		1.0	U	1.0	U	1.0	U
PCE	µg/L	1.0	U	1.0	U	1.0	U	**53**	D	-		**45**	E	**33.0**		**31.0**	
TCE	µg/L	1.0	U	1.0	U	1.0	U	**8.3**		-		**10.0**		**7.3**		**6.7**	
VC	µg/L	1.0	U	1.0	U	1.0	U	**0.6**	J	-		**0.6**	J	**0.78**	J	**0.77**	**J**
cis-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	**6.4**		-		**8.3**		**4.7**		**4.6**	
trans-1,2-DCE	µg/L	1.0	U	1.0	U	1.0	U	1.0	U	-		0.2	J	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**129**		**41.8**		**110**		**20.3**		-		**6.2**		**13.8**		**3.16**	
Lead (Dissolved)	µg/L	**3.38**		**0.654**	**J**	1.0	U	-		-		-		1.0	U	1.0	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	7	**J**	**38.9**		**40.7**	**J**	-		**56**		4.60	J	**17.5**		4.58	**J**
Gross Beta	pCi/L	10		**72.1**		**55.5**	**J**	-		**103**		9.60	J	**51.2**	J	15.1	
Total Uranium	µg/L	1		**0.87**		**3.55**		-		3.50		0.90		**1.7**		0.81	
Combined Radium 226/228	pCi/L	1.182	U	**1.07**	**J**	3.13	U	-		1.69		0.93	J	1.285		1.889	**J**
Gross Alpha - Dissolved	pCi/L	1.110	U	1.36	U	**1.73**	**J**	-		-		2.00	U	1.55	U	2	U
Gross Beta - Dissolved	pCi/L	1.200	U	-0.395	U	1.33	U	-		-		4.40		**6.63**	J	4.75	**J**
Total Uranium - Dissolved	µg/L	0.190	**J**	**0.31**		**2.57**		-		-		0.30	U	**0.38**		0.28	
Combined Radium 226/228 - Dissolved	pCi/L	0.897	U	**0.826**	**J**	0.775	U	-		-		1.16	J	0.901		0.743	U
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	**0.678**	**J**	**0.677**	**J**	**0.713**	**J**	-		-		-		**2.89**		**2.64**	**J**
DOC	mg/L	**0.962**	**J**	**0.698**	**J**	**0.882**	**J**	-		-		-		**3.21**		**3.09**	**J**
Ethane	µg/L	0.63	J	2.0	U	**12**		-		-		-		**1.4**	J	0.84	J
Ethene	µg/L	2.0	U	2.0	U	2.0	U	-		-		-		2.0	U	2.0	U
Methane	µg/L	**57**		**55**		**190**		-		-		-		**78.0**		**56**	
Nitrate-N	mg/L	**0.117**	**J**	**0.0839**	**J**	0.10	U	-		-		-		**0.114**	J	**0.106**	**J**
Sulfate	mg/L	**15.4**		**14.4**		**13.8**		-		-		-		**75.6**		**80.1**	
Chloride	mg/L	**42.1**		**43.2**		**45**		-		-		-		**49.0**		**63.1**	
Soluble Manganese, Mn(II)	mg/L	0.25		0.025		0.025		-		-		-		0.68		0.68	
Ferrous Iron, Fe(II)	mg/L	0.2	U	0.2	U	0.2	U	-		-		-		0.6		0.6	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	7.88		7.88		7.50		7.14		-		7.08		3.89		7.12	
Specific Conductance	mS/cm	0.176		0.261		0.255		0.484		-		0.390		0.471		0.415	
Turbidity	NTU	491		202.4		1866.0		910.1		-		48.3		676.0		378	
Dissolved Oxygen	mg/L	1.79		8.16		5.93		2.70		-		1.40		2.37		0.31	
Temperature	°C	15.14		11.21		10.52		12.83		-		13.48		14.44		14.17	
ORP	mV	78.8		-88.5		-52.0		16.8		-		-50.0		413.1		-33.7	

See notes at the end of the table.

Table B-2
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	Feb-09		May-09		Dec-06		1-Jan-07		1-Jun-07		5-Aug-08		4-Nov-08		17-Feb-09	
Well ID		MW-41S		MW-41S		MW-42S		MW-42S		MW-42S		MW-42S		MW-42S		MW-42S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	1.0	U	-		1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	**37**		**37**		**0.8**	J	-		1.0	U	**0.51**	J	**0.34**	**J**	**0.30**	**J**
TCE	µg/L	**6.9**		**6.5**		**0.3**	J	-		1.0	U	**1.1**		**1.0**	**J**	**1.0**	
VC	µg/L	1.0	U	**0.56**	**J**	2.0	U	-		2.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-DCE	µg/L	**4.7**		**4.7**		**2.9**		-		**2.2**		**2.2**		**2.3**		**2.0**	
trans-1,2-DCE	µg/L	1.0	U	**0.24**	**J**	1.0	U	-		1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**2.02**		**2.96**		**2.4**		-		**1.6**	B	**3.56**		**3.26**		**3.69**	
Lead (Dissolved)	µg/L	1.0	U	1.0	U	-		-		-		1.0	U	1.0	U	1.0	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	2.86	U	**11.8**		-		1.40	U	1.10	U	**4.51**	J	2.95	J	**12.1**	
Gross Beta	pCi/L	**6.26**		**31.3**		-		8.00	U	0.20	U	**15.5**		2.08	U	**27.1**	
Total Uranium	µg/L	**0.49**		**2.01**	**J**	-		0.90		0.37		**0.59**		0.43		**0.44**	
Combined Radium 226/228	pCi/L	**0.586**	**J**	2.183	U	-		1.20	J	0.87	J	1.622		1.501	U	**1.97**	
Gross Alpha - Dissolved	pCi/L	-0.063	U	**1.80**	**J**	-		-		2.30	U	1.17	U	2.9	J	0.0717	U
Gross Beta - Dissolved	pCi/L	**5.56**	**J**	**5.11**		-		-		1.30	U	**14.4**		2.71	U	1.65	U
Total Uranium - Dissolved	µg/L	**0.33**		**2.93**	**J**	-		-		0.69		**0.23**	J	0.27		**0.40**	
Combined Radium 226/228 - Dissolved	pCi/L	**0.772**	**J**	0.952	U	-		-		0.41	U	0.751		0.89	U	**0.638**	**J**
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	**2.72**		**2.88**		-		-		-		**14.5**		**12.1**		**9.53**	
DOC	mg/L	**2.48**		**2.79**		-		-		-		**14.9**		**12.7**		**9.48**	
Ethane	µg/L	2.0	U	**0.65**	**J**	-		-		-		**1.2**	J	2.0	U	2.0	U
Ethene	µg/L	2.0	U	2.0	U	-		-		-		2.0	U	2.0	U	2.0	U
Methane	µg/L	**66**		**110**		-		-		-		**230**		**400**		**510**	
Nitrate-N	mg/L	**0.112**	**J**	0.10	U	-		-		-		0.10	U	**0.118**	**J**	**0.0789**	**J**
Sulfate	mg/L	**74.2**		**70.8**		-		-		-		**98.6**		**96.1**		**75.2**	
Chloride	mg/L	**68.1**		**90.4**		-		-		-		**55**		**69.5**		**87.4**	
Soluble Manganese, Mn(II)	mg/L	0.05		0.68		-		-		-		0.70		0.70		0.05	
Ferrous Iron, Fe(II)	mg/L	0.8		1.8		-		-		-		2.2		2.2		2.6	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	6.94		6.92		6.89		-		6.75		6.10		6.83		6.93	
Specific Conductance	mS/cm	0.545		0.773		0.703		-		0.691		0.592		0.603		0.674	
Turbidity	NTU	154.3		17.6		32.1		-		29.4		466.0		155		261.0	
Dissolved Oxygen	mg/L	2.74		3.18		0.41		-		3.12		1.11		6.38		0.89	
Temperature	°C	9.11		10.19		12.56		-		13.57		15.82		14.66		9.49	
ORP	mV	-8.1		18.0		-60.1		-		-83.7		-173.3		-62.7		-87.1	

See notes at the end of the table.

Table B-2
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Sampling Date	Units	19-May-09		1-Dec-06		1-Jan-07		1-Jun-07		5-Aug-08		4-Nov-08		17-Feb-09		19-May-09	
Well ID		MW-42S		MW-43S		MW-43S		MW-43S		MW-43S		MW-43S		MW-43S		MW-43S	
VOCs		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
1,1-DCE	µg/L	1.0	U	1.0	U	-		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
PCE	µg/L	**0.28**	**J**	1.0	U	-		1.0	U	1.0	U	**0.22**	**J**	1.0	U	1.0	U
TCE	µg/L	**0.78**	**J**	1.0	U	-		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
VC	µg/L	1.0	U	2.0	U	-		2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-DCE	µg/L	**1.5**		1.0	U	-		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-DCE	µg/L	1.0	U	1.0	U	-		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Metals		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Lead (Total)	µg/L	**3.59**		**1.0**	B	-		2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Lead (Dissolved)	µg/L	1.0	U	-		-		-		1.0	U	1.0	U	1.0	U	1.0	U
Radiological Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
Gross Alpha	pCi/L	**10.7**	**J**	-		13.60		4.10	U	-0.0578	U	1.1	U	-0.343	U	-0.0199	U
Gross Beta	pCi/L	**20.1**	**J**	-		11.20		5.20	U	**14.0**		7.4	**J**	**3.62**	**J**	**2.11**	**J**
Total Uranium	µg/L	**0.834**		-		7.40		1.09		**0.74**		0.86		**0.64**		**0.449**	**J**
Combined Radium 226/228	pCi/L	1.749	U	-		1.38	J	0.85	J	0.82035		1.019	U	0.258	U	0.653	U
Gross Alpha - Dissolved	pCi/L	**1.78**	**J**	-		-		1.90	U	1.57	U	1.79	U	0.237	U	-0.245	U
Gross Beta - Dissolved	pCi/L	**1.93**	**J**	-		-		4.10	U	**5.71**	J	4.64	**J**	**2.72**	**J**	**2.76**	**J**
Total Uranium - Dissolved	µg/L	**0.344**		-		-		0.70		**0.74**		0.78		**0.89**		**0.507**	**J**
Combined Radium 226/228 - Dissolved	pCi/L	**0.931**	**J**	-		-		0.62	J	**1.206**		1.445	U	0.465	U	**0.947**	**J**
MNA Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
TOC	mg/L	**8.79**		-		-		-		**1.68**	J	**1.64**		**1.66**		**1.09**	**J**
DOC	mg/L	**8.90**		-		-		-		**1.93**	J	**1.74**		**1.49**	**J**	**1.19**	**J**
Ethane	µg/L	**1.2**	**J**	-		-		-		2.0	U	2.0	U	2.0	U	2.0	U
Ethene	µg/L	2.0	U	-		-		-		2.0	U	2.0	U	2.0	U	2.0	U
Methane	µg/L	**470**		-		-		-		**6.6**		**1.8**	**J**	**5.8**		**6.5**	
Nitrate-N	mg/L	0.10	U	-		-		-		**0.345**		**0.320**		**0.135**	**J**	**0.164**	
Sulfate	mg/L	**66.3**		-		-		-		**44.3**		**45.0**		**46.1**		**37.2**	
Chloride	mg/L	**101**		-		-		-		**108**		**94.2**		**71.5**		**97.6**	
Soluble Manganese, Mn(II)	mg/L	0.68		-		-		-		0.50		0.46		0.175		0.500	
Ferrous Iron, Fe(II)	mg/L	1.2		-		-		-		0.2	U	0.2	U	0.2	U	0.0	
Field Parameters		Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q	Results	Q
pH	SU	4.84		7.07		-		7.01		5.90		7.15		7.34		8.56	
Specific Conductance	mS/cm	0.681		1.100		-		0.824		0.560		0.371		0.458		0.150	
Turbidity	NTU	66.5		43.4		-		41.5		28.0		14		20.0		1305.0	
Dissolved Oxygen	mg/L	17.39		1.52		-		1.41		NM		2.54		2.24		1.32	
Temperature	°C	9.77		10.29		-		12.43		14.23		13.05		7.18		12.59	
ORP	mV	-28.5		42.9		-		-14.9		176.1		58.2		12.0		84.4	

See notes at the end of the table.

Table B-2
Historical Analytical Results - Upper Aquifer
DOE Colonie New York, Site

Notes:
Q = data qualifier
^ = total value of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene µg/L = micrograms per liter
mg/L = milligrams per liter
pCi/L = picoCuries per liter
mS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Units
SU - Standard Units
mV = millivolts
Boldface text = result was detected above the method detection limits

* = standard applies to each isomer individually
U = non-detect as less than method reporting limit
J = estimated value
B = blank
E = exceeding the calibration range
N = spiked sample recovery not within control limits
V = presumptive evidence of a compound
UJ = estimated, not detected
JB = estimated, blank value
NM = analyte not measured

Appendix C

Well Logs and Construction Details

GEOLOGIC DRILL LOG

PROJECT	JOB NO.	SHEET NO.	HOLE NO.
Colonie Interim Storage Site	14501-139	1 OF 1	B39W08S

SITE	COORDINATES	ANGLE FROM HORIZ	BEARING
CISS	N 1776 E 1122	Vertical	------

BEGUN	COMPLETED	DRILLER	DRILL MAKE AND MODEL	SIZE	OVERBURDEN	ROCK (FT.)	TOTAL DEPTH
11-7-84	11-7-84	Empire Soils	Acker AD-2	7-1/2"			14.0

CORE RECOVERY (FT./%)	CORE BOXES	SAMPLES	EL. TOP CASING	GROUND EL.	DEPTH/EL. GROUND WATER	DEPTH/EL. TOP OF ROCK
/			231.45	229	/	/

SAMPLE HAMMER WEIGHT/FALL	CASING LEFT IN HOLE: DIA./LENGTH	LOGGED BY:
		E. W. Lundeen

SAMP. TYPE AND DIAM.	SAMP. ADV. LEN. CORE	SAMPLE REC. CORE REC.	SAMPLE BLOWS N" % CORE RECOVERY	WATER PRESSURE TESTS: LOSS IN G.P.M	WATER PRESSURE TESTS: PRESS. P.S.I.	WATER PRESSURE TESTS: TIME IN MIN.	ELEV.	DEPTH	GRAPHICS	SAMPLE	DESCRIPTION AND CLASSIFICATION	NOTES ON: WATER LEVELS, WATER RETURN, CHARACTER OF DRILLING, ETC.
							228.8				0.0 - 0.3 Ft. TOPSOIL.	
								5			0.3 - 10.8 Ft. SAND (SP). Light brown, medium- to coarse-grained, well sorted, rounded to subangular, frosted particles. 10% silt. Noncohesive. Dry to saturated at 3.5 Ft. (DUNE SAND)	
								10				
							218.1				10.8 - 14.0 Ft. Clayey SILT (ML). Gray to dark gray noncohesive to slightly cohesive, slightly plastic material. Rapid to moderate dilatancy. (UPPER SAND)	
							214.9				Bottom of borehole at 14.0 Ft. Monitor well installed and screened at 6.0 to 11.0 Ft., 11/7/84.	

S = SPLIT SPOON; ST = SHELBY TUBE; = DENNISON; P = PITCHER; O = OTHER

SITE: CISS

HOLE NO.: B39W08S

Drilling Log

IT CORPORATION
A Member of the IT Group

Monitoring Well 30-S

Project Colonie FUSRAP Site — Owner USACE
Location Colonie, NY — Proj. No. 866724
Surface Elev. ____ — Total Hole Depth 14.5 ft. — Diameter ____
Top of Casing 226.74 ft. — Water Level Initial 6 ft — Static ____
Screen: Dia 2 in — Length 10 ft. — Type/Size Sch 40PVC in
Casing: Dia 2 in. — Length 6 ft. — Type Sch 40PVC
Fill Material ____ — Rig/Core ____
Drill Co. Maxim Technology — Method HSA
Driller C. DiNova — Log By T. Maynard — Date 08/01/00 — Permit # ____
Checked By ____ — License No. ____

See Site Map For Boring Location

COMMENTS:

Atmosphere & samples monitored by EC's

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2							
0							0-10': Dark brown-brown, medium grained sand, increased silt content w/depth, increased moisture-wetness w/depth, trace boulder, cobble, gravel, fine gravel, content decreases w/depth.
2							
4							
6						SM	
8							
10							10-12': Brown, saturated, sandy silt;60-80% silt, very fine-fine grained sand, trace clay, medium dense.
12				2/2/2/2 80%		SM	
14						SM	
16							
18							
20							
22							
24							

Colonie FUSRAP Site	DISTRICT: Baltimore	BORING NUMBER: MW – 34S
COMPANY NAME: IT Corporation	DRILL SUBCONTRACTOR: Parratt Wolff	SHEET: 1 of 2

PROJECT NAME	SITE LOCATION
TERC CONTRACT NO. DACA31-95-D-0083	1130 Central Ave. Albany, NY
NAME OF DRILLER: Mickey Marshall	HOLE LOCATION: See site map
NAME OF GEOLOGIST: Marc Flanagan	SIGNATURE OF GEOLOGIST:
TYPE AND SIZE OF DRILLING AND SAMPLING EQUIPMENT: Hollow Stem Auger / Split spoon sampler	DATE STARTED: 12/20/2001 / DATE COMPLETED: 12/20/2001
	SURFACE ELEVATION: 218.33
	DEPTH TO FIRST ENCOUNTERED WATER: NA
DEPTH TO REFUSAL: NA	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
DEPTH DRILLED INTO BEDROCK: NA	OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA
TOTAL DEPTH OF HOLE: 18.5'	TOTAL FLUID LOSSES: NA

GEOTECHNICAL SAMPLES	SAMPLE DEPTH	UNDISTURBED/DISTURBED	TOTAL NUMBER OF CORE BOXES

ENVIRONMENTAL SAMPLES	SAMPLE DEPTH	ANALYTES	TOTAL CORE RECOVERY %

DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	CASING TYPE	WELL DEPTH	SCREENED INTERVAL
Monitoring well installed	#0 Morie	MW – 34S	2" PVC	18.5'	8.5'-18.5'

DATE	START TIME	FINISH TIME	DRILLING DEPTH	DESCRIPTION

SKETCH OF DRILLING LOCATION/ADDITIONAL COMMENTS SCALE:

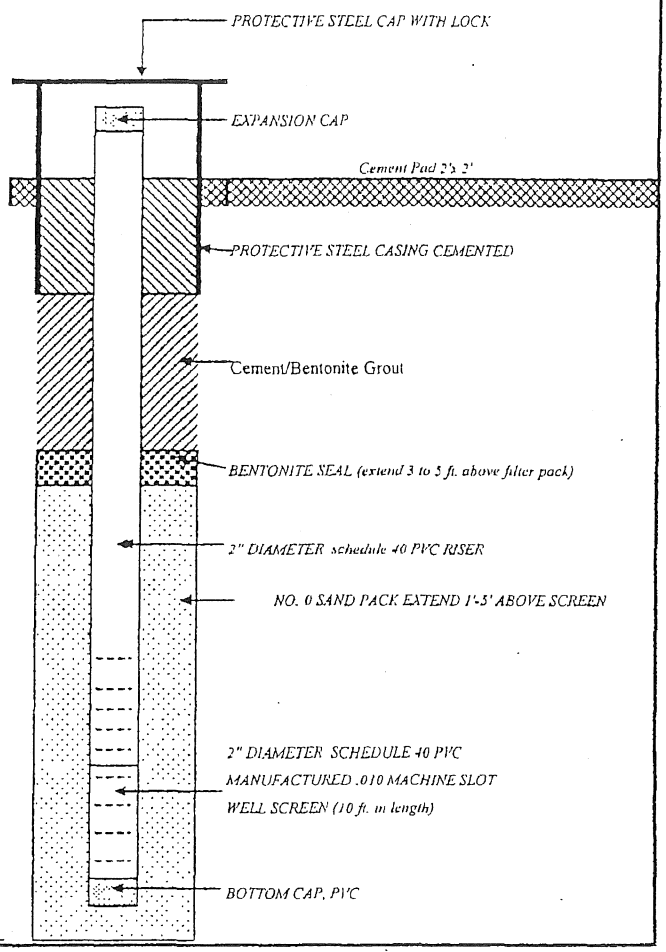
PROJECT TO 33, DC SCHOOLS	BORING.
NOTE: ATTACH WELL CONSTRUCTION DIAGRAM	MW – 34S

IT DRILLING LOG (CONTINUATION SHEET)						BORING NUMBER MW – 34S
OJECT NAME: COLONIE FUSRAP SITE				GEOLOGIST: M.Flanagan		SHEET: 2
DEPTH	BLOW COUNT	USCS SYMBOL	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	SAMPLE ID/DEPTH	REMARKS
						Augered down to 8'. No split spoons collected.
8---	5	ML	Brown to brown-gray silt, trace clay content, slight density, Wet	7.0		
-	3					
-	4					
-	2					
10---	3	ML	Gray-brown silt, trace clay content, slight density, Wet.	6.0		
-	3					
-	2					
-	3					
12---	2	ML	Gray-brown silt, trace clay content, slight density, Last ~4" gray silt, some clay, medium density, Wet.	10.0		
-	3					
-	2					
-	2					
14---	2	CL	Gray-brown clay, medium density, some silt interbedded, Wet.	15.0		
-	2					
-	3					
-	3					
16---	3	CL	Gray-brown clay, medium density, trace silt in 2 horizons, Wet.	15.0		
-	3					
-	3					
-	5					
18---						

FIELD FORM
STICK-UP WELL CONSTRUCTION DIAGRAM
COLONIE FUSRAP (to be completed in the field)
WELL ID (MW - 34S)

	DEPTH (RECORD ON THIS FORM)
SURFACE	
DEPTH BOTTOM STEEL CSG-	1.80
DEPTH TOP BENTONITE-	3.5
DEPTH BOTTM BENTONITE-	6.5
DEPTH TOP SAND-	6.5
DEPTH TOP OF SCREEN-	8.5
DEPTH BOTTOM SCREEN-	18.5
TOTAL DEPTH-	18.5

CONSTRUCTION DETAILS



GEOLOGIST: M.Flanagan
DATE INSTALLED: 12-20-01
DATE COMPLETED:12-20-01
BOREHOLE DIAMETER: 8 in.
TYPE OF DRILLING:Hollow Stem Auger
DRILLER/RIG: M.Marshall/Parrat Wolff

LOCATION DESCRIPTION: "C"

Colonie FUSRAP Site	DISTRICT: Baltimore	BORING NUMBER: MW – 37S
COMPANY NAME: IT Corporation	DRILL SUBCONTRACTOR: Parratt Wolff	SHEET: 1 of 2

PROJECT NAME: TERC CONTRACT NO. DACA31-95-D-0083	SITE LOCATION: 1130 Central Ave. Albany, NY
NAME OF DRILLER: Mickey Marshall	HOLE LOCATION: See site map
NAME OF GEOLOGIST: Marc Flanagan	SIGNATURE OF GEOLOGIST:
TYPE AND SIZE OF DRILLING AND SAMPLING EQUIPMENT: Hollow Stem Auger / Split spoon sampler	DATE STARTED: 1/27/2002 — DATE COMPLETED: 1/27/2002
	SURFACE ELEVATION: 220 (est.)
	DEPTH TO FIRST ENCOUNTERED WATER: NA
DEPTH TO REFUSAL: NA	DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
DEPTH DRILLED INTO BEDROCK: NA	OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA
TOTAL DEPTH OF HOLE: 22'	TOTAL FLUID LOSSES: NA

GEOTECHNICAL SAMPLES	SAMPLE DEPTH	UNDISTURBED/DISTURBED	TOTAL NUMBER OF CORE BOXES

ENVIRONMENTAL SAMPLES	SAMPLE DEPTH	ANALYTES	TOTAL CORE RECOVERY %

DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	CASING TYPE	WELL DEPTH	SCREENED INTERVAL
Monitoring well installed	#0 Morie	MW – 37S	2" PVC	22'	10'-20'

DATE	START TIME	FINISH TIME	DRILLING DEPTH	DESCRIPTION

SKETCH OF DRILLING LOCATION/ADDITIONAL COMMENTS SCALE:

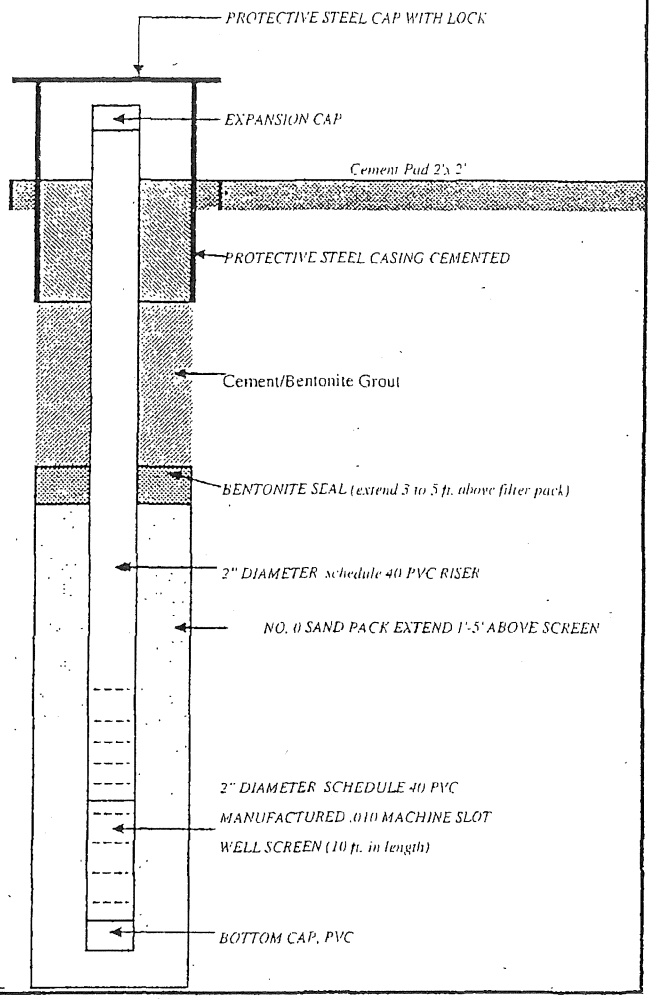
PROJECT TO 33, DC SCHOOLS	BORING.
NOTE: ATTACH WELL CONSTRUCTION DIAGRAM	MW – 37S

IT DRILLING LOG (CONTINUATION SHEET)				BORING NUMBER MW – 37S		
PROJECT NAME: COLONIE FUSRAP SITE				GEOLOGIST: M. Flanagan		SHEET: 2
DEPTH	BLOW COUNT	USCS SYMBOL	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	SAMPLE ID/DEPTH	REMARKS
						Augered down to 10'. No split spoons collected.
10--- - - - 12--- - - - 14--- - - - 16--- - - - 18--- - - - 20--- - - - 22---	4 4 6 4 4 4 4 5 1 3 3 2 3 3 2 3 2 3 2 3 3 5 4 5	ML	Brown-gray silt, trace fine grain sand, slight density, Wet.	<1.0		
		ML	Brown-gray silt, slight density, Wet.	<1.0		
		ML	Brown-gray silt, slight density, Wet.	<1.0		
		ML	Brown-gray silt, slight density, trace brown-gray clay in 2" lens at bottom of spoon, Wet.	<1.0		
		CL	Brown-gray silt, some clay, interbedded throughout spoon, medium density, Wet.	<1.0		
		ML	Brown-gray silt, slight density, ~1" brown-gray clay lens, interbedded at bottom of spoon, Wet.	<1.0		

FIELD FORM
STICK-UP WELL CONSTRUCTION DIAGRAM
COLONIE FUSRAP (to be completed in the field)
WELL ID (MW - 37S)

	DEPTH (RECORD ON THIS FORM)
SURFACE	
DEPTH BOTTOM STEEL CSG-	~2.0
DEPTH TOP BENTONITE-	3.0
DEPTH BOTTM BENTONITE-	8.0
DEPTH TOP SAND-	8.0
DEPTH TOP OF SCREEN-	11.0
DEPTH BOTTOM SCREEN-	21.0
TOTAL DEPTH-	22.0

CONSTRUCTION DETAILS



GEOLOGIST: M. Flanagan
DATE INSTALLED: 1-27-02
DATE COMPLETED:1-27-02
BOREHOLE DIAMETER: 8 in.
TYPE OF DRILLING:Hollow Stem Auger
DRILLER/RIG: M.Marshall/Parrat Wolff

LOCATION DESCRIPTION: "F"

Drilling Log

Monitoring Well **MW-41S**

Project Colonie FUSRAP Site | Owner Shaw Environmental, Inc.

Location Central Ave., Colonie, NY

Surface Elev. 223.0 ft. | Total Hole Depth 23.0 ft. | Proj. No. 837935

Top of Casing NA | Water Level Initial ▽ 14.0 ft. | North ____ East ____

Screen: Dia 2 in. | Length 10 ft. | Static NA | Diameter 6.25 in.

Casing: Dia 2 in. | Length 11 ft. | Type/Size PVC Sch 40/0.010 in.

Fill Material Morie Sand #1 | Type PVC Sch 40

Drill Co. ADT | Rig/Core ____

Driller R.Comfort | Method HSA

Checked By ____ | Log By R.Adams | Date 12/11/06 | Permit # NA

License No. ____

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0							
2		0.09				SW	Grass, brown coarse grain SAND and GRAVEL, dry (fill).
4		0.22				SP	Brown, medium grain SAND, some subangular gravel, dry.
6		0.92				SP	Brown, medium grain SAND, little subangular gravel, moist.
8		0.92				SM	Brown, fine to medium grain SAND, some silt, moist.
10		0.88				ML	Brown-gray, SILT, little clay, moist.
12		0.92				SM	Brown, fine grain SAND and SILT, moist.
14 ▽		0.87				ML	Gray, SILT, trace clay, moist.
16		0.33				MH	Gray, SILT, trace clay, saturated.
18		0.92					
20		0.92					
22							
24							

IT_COMMERCIAL Rev: 12/6/99 COLONIE DEC06.GPJ IT_CORP.GDT 1/10/07

Drilling Log

Monitoring Well **MW-42S**

Page: 1 of 1

Project Colonie FUSRAP Site — Owner Shaw Environmental, Inc.

Location Central Ave., Colonie, NY — Proj. No. 837935

Surface Elev. 223.0 ft. — Total Hole Depth 23.0 ft. — North ____ — East ____

Top of Casing NA — Water Level Initial ▽ 10.0 ft. — Static NA — Diameter 6.25 in.

Screen: Dia 2 in. — Length 10 ft. — Type/Size PVC Sch 40/0.010 in.

Casing: Dia 2 in. — Length 10 ft. — Type PVC Sch 40

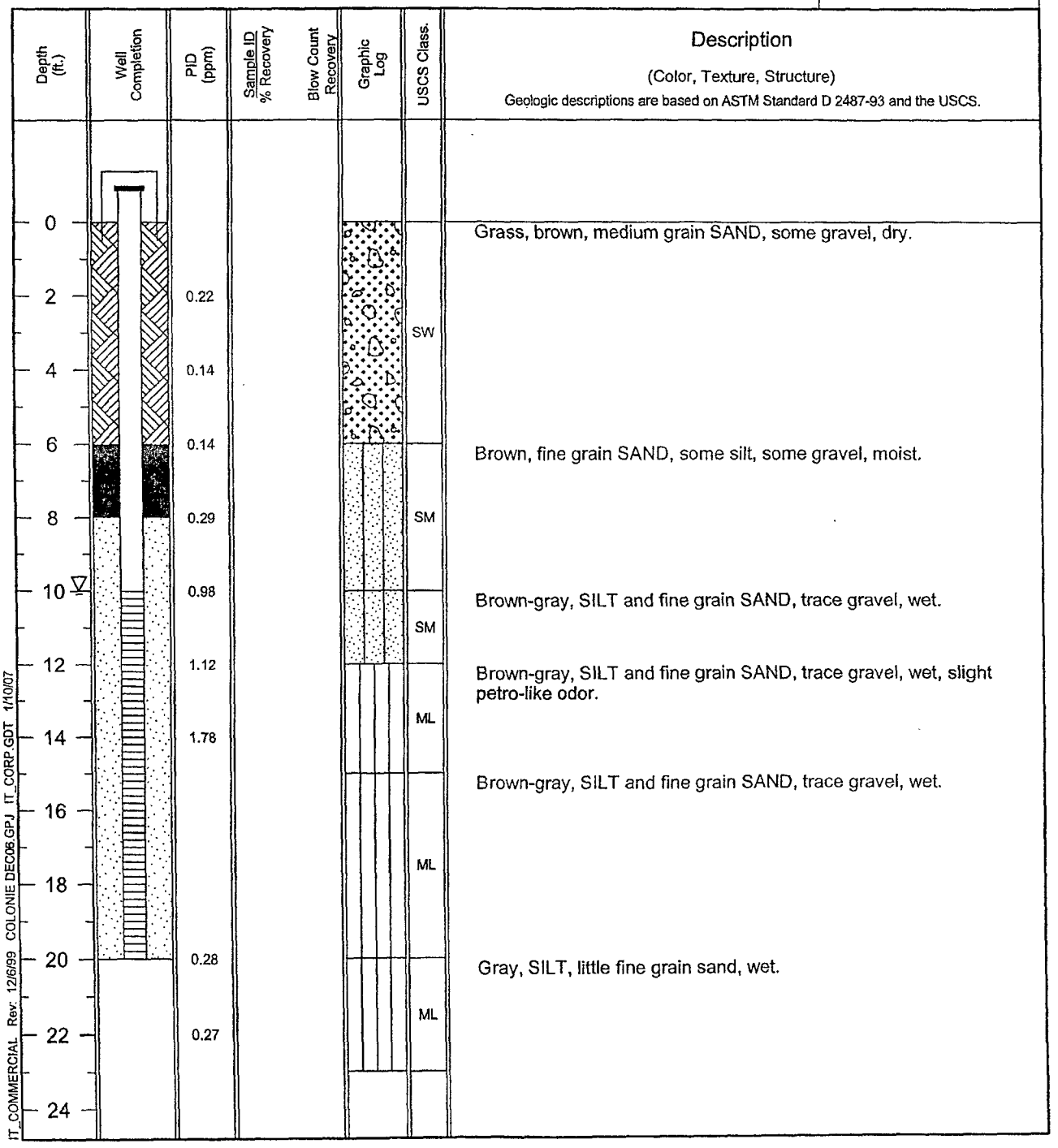
Fill Material Morie Sand #1 — Rig/Core ____

Drill Co. ADT — Method HSA

Driller R.Comfort — Log By R.Adams — Date 12/12/06 — Permit # NA

Checked By ____ — License No. ____

COMMENTS



IT_COMMERCIAL Rev: 12/6/99 COLONIE DEC06.GPJ IT_CORP.GDT 1/10/07

VISUAL CLASSIFICATION OF SOILS

BORING NUMBER	**MW44S**	PROJECT NAME	Colonie FUSRAP						
PROJECT NUMBER	500304	COORDINATES	Northing 1405456.27, Easting 679685.18					DATE	
ELEVATION	Ground: 223.20 ft msl	TOC: 224.65 ft msl						STARTED	7/27/2015
GEOLOGIST	B. Squire	GWL	Depth		Date/Time			COMPLETED	7/27/2015
DRILLING METHOD	HSA & Split Spoon							PAGE/PAGES	1/2

DEPTH (ft)	SAMPLE NUMBER	RECOVERY (ft)	PID (ppm)	DESCRIPTION	USCS SYMBOL	REMARKS
1 2 3 4 5				Brown f-c SAND, little silt, little rock, damp		Hand auger, log from cuttings
6 7	1	1	0.0	Brown silty SAND, some gravel, loose, damp	SM	
8 9	2	1.5	0.0	As above, grading to gray-brown		
10 11	3	1.0	0.0	As above, moist		
12 13	4	1.5	0.0	As above Brown f SAND, few to little silt, loose, wet	SP/SM	
14 15	5	0.0	0.0	As above (trace recovery)		
16 17	6	1.0	0.0	As above Gray vf-f SAND, some silt, loose, saturated	SM	
18 19	7	1.5	0.0	As above,		
20	8	NR	0.0	As above		

Continued on page 2

NOTES:

c = coarse
m = medium
f = fine
vf = very fine

ft = feet
NA= not applicable
NR= not recorded
ppm = parts per million

Drilling Contractor: Parratt-Wolffe
Drilling Equipment: HSA and split spoon
Driller: M. Eaves

VISUAL CLASSIFICATION OF SOILS

BORING NUMBER	MW44S	PROJECT NAME	Colonie FUSRAP						
PROJECT NUMBER	500304	COORDINATES	Northing 1405456.27, Easting 679685.18					DATE	
ELEVATION	Ground: 223.20 ft msl	TOC: 224.65 ft msl						STARTED	7/27/2015
GEOLOGIST	B. Squire	GWL	Depth		Date/Time			COMPLETED	7/27/2015
DRILLING METHOD	HSA & Split Spoon							PAGE/PAGES	2/2

DEPTH (ft)	SAMPLE TYPE & NUMBER	RECOVERY (ft)	PID / Oil Screen (ppm / pos-neg)	DESCRIPTION	USCS SYMBOL	REMARKS
21	8 (cont.)	NR	0.0	As above	SM	
22				Drilled interval		
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
39						
39						
40				End of boring = 22 ft.		

NOTES:

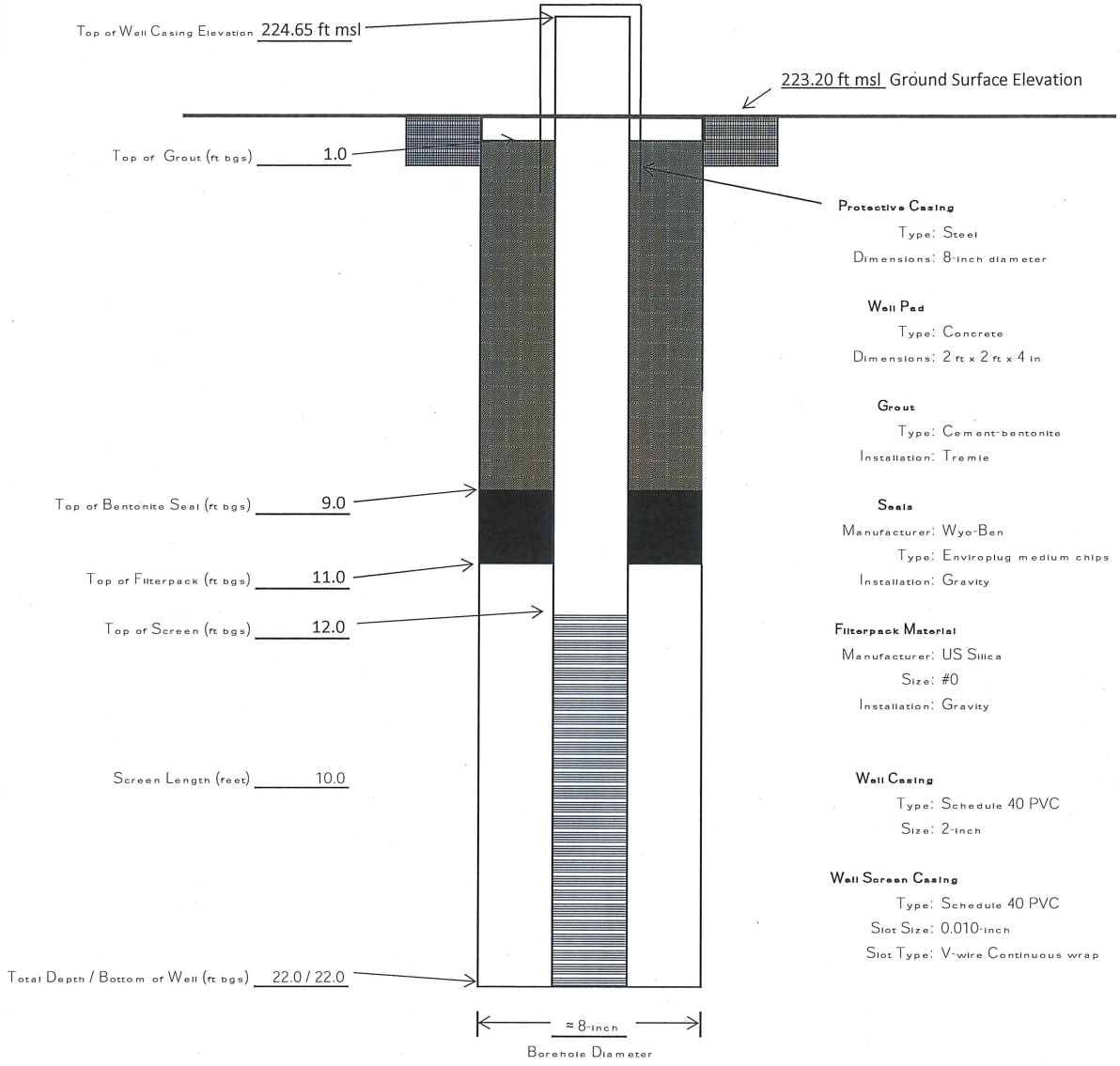
c = coarse
m = medium
f = fine
vf = very fine

ft = feet
NA= not applicable
NR= not recorded
ppm = parts per million

Drilling Contractor: Parratt-Wolffe
Drilling Equipment: HSA and split spoon
Driller: M. Eaves

MONITORING WELL CONSTRUCTION LOG

PROJECT	Colonie FUSRAP	WELL NUMBER	MW44S		
LOCATION	Colonie, NY	SITE LOCATION	Main Site		
CLIENT	USACE	DATE INSTALLED	7/27/2015		
SUBCONTRACTOR	Parratt Wolff	NORTHING	1405456.27		
DRILLER	M. Eaves	EASTING	679685.18		
SHAW FIELD REPRESENTATIVE	B. Squire	NAD		NGVD	



NOTES: Elevations are feet above mean sea level
ft bgs = feet below ground surface

Not to Scale

Appendix D

Long-Term Monitoring Data Summary Table

Appendix D:
Long Term Monitoring
Data Summary Table

	Sample Date		11 / 2010		3 / 2011		5 / 2011		8 / 2011		2 / 2012		5 / 2012		8 / 2012		8 / 2015		3 / 2016		8 / 2016		4 / 2017		7 / 2020		7 / 2021		7 / 2023		7 / 2025	
Well	Analyte	Target Cleanup Goal	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q	Result [µg/L]	Q
MW-08S	PCE	5.5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
	TCE	18.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
	cDCE	1,800	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
	VC	1.4	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	NS		1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
MW-30S	PCE	5.5	5.6		4.7		3.6		4.4		4.5		4.6		6.0		2.8		1.5		3.9		3.1		6.67		2.88		0.800	J	0.550	J
	TCE	18.0	1.4		1.1		0.5	J	1.6		1.7		1.6		2.4		1.6		0.52	J	1.2		1.0	U	1.54		0.333	U	0.490	J	0.333	U
	cDCE	1,800	0.56	J	0.67	J	1.0	U	1.3		1.4		1.3		2.3		2.0		0.76	J	0.96	J	1.0	U	0.54	J	0.333	U	0.520	J	0.333	U
	VC	1.4	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
MW-34S	PCE	5.5	0.96		0.75	J	0.66	J	0.71	J	0.70	J	0.72	J	0.73	J	0.45	J	0.49	J	0.61	J	0.75	J	0.47	J	0.51	J	0.370	J	0.333	U
	TCE	18.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.29	J	0.333	U	0.333	U	0.333	U	0.333	U
	cDCE	1,800	1.6		0.96	J	0.93	J	1.2		1.1	J	0.86	J	1.5		0.91	J	0.79	J	1.3		1.2		1.34		1.09		1.04		0.550	J
	VC	1.4	2.5		1.8		2.4		2.2		2.3		2.0		3.4		1.7	J	1.1		1.6		1.1		0.97	J	0.86	J	0.740	J	0.333	U
MW-37S	PCE	5.5	0.25	J	1.0	U	0.25	J	0.39	J	0.58	J	0.21	J	0.37	J	0.49	J	0.38	J	1.0	U	0.50	J	0.333	U	0.333	U	0.480	J	0.360	J
	TCE	18.0	0.36	J	0.333	J	0.41	J	0.63	J	0.68	J	0.31	J	0.53	J	0.58	J	0.62	J	0.28	J	0.42	J	0.333	U	0.333	U	0.480	J	0.333	U
	cDCE	1,800	17.0		27		27.0		34.0		28		39		48.0		52.0		39		51		49		45.6		41.6		33.3		21.0	
	VC	1.4	0.50	J	0.66	J	0.91	J	0.53	J	0.40	J	0.63	J	0.69	J	0.59	J	0.35	J	0.48	J	0.65	J	0.333	U	0.62		0.860	J	0.460	J
MW-41S	PCE	5.5	26.0		15		39.0		24		30.0		28		30.0		14.0		25		18		24		15		12.7		8.05		7.60	
	TCE	18.0	8.3		5.3		11.0		7.1		6.8		7.4		8.6		4.5		6.1		5.3		5.1		4.93		4.86		2.53		2.81	
	cDCE	1,800	1.0		3.5		6.8		5.2		4.4		5.2		5.1		4.2		4.7		4.7		4.8		5.77		6.35		4.71		4.97	
	VC	1.4	0.66	J	0.58	J	0.92	J	0.69	J	1.0		1.2		1.0		0.90	J	0.53	J	0.62	J	0.58	J	0.333	U	0.76	J	1.09		1.06	
MW-42S	PCE	5.5	0.43		0.20	J	0.37	J	0.23	J	0.22	J	1.0	U	1.0	U	1.0	U	1.0	U	0.34	J	0.34	J	0.333	U	0.333	U	0.333	U	0.333	U
	TCE	18.0	1.3		1.0		0.75	J	0.73	J	0.54	J	0.73	J	0.59	J	0.65	J	0.45	J	0.75	J	0.75	J	0.52	J	0.333	U	0.333	U	0.333	U
	cDCE	1,800	4.3		3.4		9.2		12		6.6		7.4		11.0		13.0		8.5		7.6		7.6		7.0		5.31		4.88		4.34	
	VC	1.4	1.0	U	1.0	U	0.22	J	1.0	U	0.22	J	1.0	U	0.21	J	1.0	U	1.0	U	NS		1.0	U	0.333	U	0.333	U	0.333	U	0.333	U
MW-44S	PCE	5.5															3.1		13		15		18		0.333	U	0.333	U	0.333	U	0.333	U
	TCE	18.0															4.0		7.7		9.9		9.9		0.333	U	0.333	U	0.333	U	0.333	U
	cDCE	1,800							NS								3.1		2.8		3.5		3.3		0.51	J	0.333	U	0.333	U	0.333	U
	VC	1.4															1.0	U	1.0	U	1.0	U	1.0	U	0.333	U	0.333	U	0.333	U	0.333	U

Appendix E

Data Validation Memorandum

memo

To:	Rob Rice, RSI EnTech
From:	Gretchen Baer, RSI EnTech
CC:	Mike Bradley, RSI EnTech Janice McDonald, RSI EnTech Gretchen Baer, RSI EnTech
Date:	August 13, 2025
Re:	Validation of July 2025 Biennial Environmental Sampling Data from the Colonie, New York, Site

Validation of data generated from the July 2025 groundwater biennial sampling event at the Colonie, New York, Site has been completed. This Level 3 validation was conducted according to *Environmental Data Validation Procedure* (LMS/PRO/S15870-2.0).

The samples were submitted for analysis identified by Task Code CLN01-01.2507005. Planned monitoring locations are defined in the tables from Appendix A of the *Sampling and Analysis Plan for the U. S. Department of Energy Office of Legacy Management Sites* (LMS/PRO/S04351-16.9), also called the SAP (Enclosure 1). Note that a "Sampling Notification Letter" was not sent to LM for this event. Samples were collected at all seven of the seven planned locations. See the Trip Report (Enclosure 2) for additional details.

All environmental data from this sampling event are considered validated and available for use. Site data are available for viewing with dynamic mapping via the GEMS (Geospatial Environmental Mapping System) website at http://gems.lm.doe.gov/#. The Field Data Assessment (Enclosure 3) includes discussion of the field data and field quality control samples. The Laboratory Performance Assessment (Enclosure 4) documents the review of the laboratory data. An assessment of anomalous data is included in Enclosure 5. Summaries of Enclosures 3, 4, and 5 are presented below.

Tables for Planned Monitoring Locations (Enclosure 1)

Trip Report (Enclosure 2)

Field Data Assessment (Enclosure 3)

Verification of Field Activities

A Field Activities Verification Checklist was completed with no issues identified.

Assessment of Field Quality Control Samples

Assessment of field quality control samples was conducted. A trip blank was submitted with the sample shipment and no target compounds were detected. A field duplicate sample was collected and the duplicate results met acceptance criteria.

Laboratory Performance Assessment (Enclosure 4)

Laboratory analytical quality control criteria were met as qualified in the Laboratory Performance Assessment. Analytical data and the associated qualifiers can be viewed in reports from the environmental database.

Assessment of Anomalous Data (Enclosure 5)

None of the laboratory results or field measurements were identified as outliers. Assessment of anomalous data is documented in Enclosure 5.

Enclosures (5)

Enclosure 1
Tables for Planned Monitoring Locations

Constituent Sampling Breakdown

Site	Colonie Site				
Analyte	Groundwater	Surface Water	Required Detection Limit (mg/L)	Analytical Method	Line Item Code
Approx. No. Samples/yr	7	0			
Field Measurements					
Total Alkalinity					
Dissolved Oxygen	X				
Redox Potential	X				
pH	X				
Specific Conductance	X				
Turbidity	X				
Temperature	X				
Laboratory Measurements					
Aluminum					
Ammonia as N (NH3-N)					
Calcium					
Chloride					
Chromium					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Selenium					
Silica					
Sodium					
Strontium					
Uranium					
VOCs	X		0.001	SW-846 8260	VOA-A-008
Zinc					
Total No. of Analytes	1				

Note: All analyte samples are considered unfiltered unless stated otherwise. All private well samples are to be unfiltered. The total number of analytes does not include field parameters.

Sampling Frequencies for Locations at Colonie, New York

Location ID	Quarterly	Annually	Biennially	Triennially	Not Sampled	Notes
Monitoring Wells						
MW-08S			X			Next in 2025
MW-30S			X			Next in 2025
MW-34S			X			Next in 2025
MW-37S			X			Next in 2025
MW-41S			X			Next in 2025
MW-42S			X			Next in 2025
MW-44S			X			Next in 2025

Sampling conducted in July.

Legend

- Well to be Sampled
- Site Boundary

N

0 150 300 Feet

U.S. DEPARTMENT OF ENERGY
OFFICE OF LEGACY MANAGEMENT

Work Performed by
RSI EnTech, LLC
Under DOE Contract 89303020DLM000001

Planned Sample Locations
Colonie, NY, Site
July 2025

DATE PREPARED: June 11, 2025

FILE NAME: 051396-DVP

Doc B-L

Enclosure 2
Trip Report

memo

To:	Rob Rice, RSI EnTech
From:	Brad Meinders, RSI EnTech
Date:	July 18, 2025
CC:	Mike Bradley, RSI EnTech Elizabeth Romano, RSI EnTech
Re:	Sampling Trip Report

Site: Colonie, New York

Date of Event: July 8, 2025

Team Members: Bradley Meinders and Sarah Huerta, RSI EnTech

Number of Locations Sampled: Samples were collected from all seven active groundwater monitoring wells located at the Colonie, NY, Site. Also collected were a trip blank, a quality control (QC) sample, and an equipment blank associated with the granulated activated carbon (GAC) filter.

Location Specific Information: Location specific information is presented in Table 1.

Table 1. Location Specific Information

Location IDs	Comments
MW-08S	Location of duplicate QC sample.
MW-30S	The turbidity criteria of 10 NTU was not met during the purge.
MW-41S	Only location needing required filtration with GAC.

Quality Control Sample Cross Reference: A summary of the quality control samples collected and the associations are shown in Table 2.

Table 2. Quality Control Sample Summary

False Location	False Sample ID	Parent Location	Parent Sample ID	Sample Type	Associated Matrix
2332	CLN01-01.2507005-008	MW-08S	CLN01-01.2507005-001	Duplicate	Groundwater
2333	CLN01-01.2507005-009	NA	NA	Trip Blank	Water

Task Codes Assigned: Samples were assigned to CLN01-01.2507005. Field data sheets can be found in \\lm\raapps\sms\CLN01-01.2507005\RECORDS\FieldData.

Sample Shipment: All samples were shipped overnight via FedEx from Albany, NY, to GEL Laboratories in Charleston, SC, on July 8, 2025.

Water Level Measurements: Water levels were measured at all sampled wells upon arrival at the well.

Well Inspection Summary: All wells were in good condition.

Sampling Method: Samples were collected according to the *Sampling and Analysis Plan for the U. S. Department of Energy Office of Legacy Management Sites* (LMS/PRO/S04351-16.9), also called the SAP. Purge water at well MW-41S was treated on-site with GAC as described in Program Directive PD-2025-06-CLN. A sample (called 'Effluent1') was collected from the GAC effluent.

Field Variance:

- The turbidity measurements at location MW-30S were higher than 10 nephelometric turbidity unit (NTU), likely due to the disturbance created from pulling the pump from the well.
- The purge water passing through the GAC system required turning the system upside down to collect the sample of treated purge water ('Effluent1' sample). The absence of manufacturer's instruction and the step of turning upside down (i.e., gravity induced) were not as described in program directive PD-2025-06-CLN. All purge water for location MW-41S did come into contact with the system, and the water was in a safe configuration to release on the ground.
- Purge water for all locations (except MW-41S) was not treated with the GAC-medium prior to dispersion, which does not adhere to the program directive.

Equipment: A peristaltic pump was used to purge and sample all wells. Silicone pump head tubing was used. All equipment functioned properly with this exception: at location MW-42S, the water level was below the top of the bladder pump. To allow access to the static water level the bladder pump and tubing were removed from the well. At this location, the water was purged and sampled through newly installed tubing rather than through the bladder pump/tubing.

Stakeholder/Regulatory/DOE: The DOE Site Manager, Melissa Lutz, was present for all activities on July 8, 2025. One regulator from the New York State Department of Environmental Conservation was present for some activities on July 8, 2025.

Safety Issues: (A) When sampling wells MW-34S and MW-37S, which are accessed by crossing railroad tracks, sampling personnel must be accompanied by an Amtrak engineer. Sampling personnel must have completed Amtrak Contractor Orientation Training and must wear all required PPE, including hard hats, eye protection, safety-toe boots, and orange high-vis vests. **(B)** Wasps were nesting under the MW-08S well cover.

Access Issues: Keys to the locks on the wells were not present. Therefore, existing locks at all wells were cut and replaced. Keys are currently held by Brad Meinders and Rob Rice.

General Information: There are 3 rights-of-entry used for offsite sampling: Amtrak/LMS, Amtrak /DOE, and LM/private party.

Immediate Actions Taken: None.

Future Actions Required or Suggested: Nothing to note.

Enclosure 3
Field Data Assessment

Water Sampling Field Activities Verification Checklist

Project	Colonie, New York, Site	**Date(s) of Water Sampling**	July 8, 2025
Date(s) of Verification	July 29, 2025	**Name of Verifier**	Gretchen Baer

Checklist Item	Response (Yes/No/NA)	Comments
1. Is the SAP the primary document directing field procedures?	Yes	
List any Program Directives or other documents, SOPs, instructions.	----------	PD-2025-06-CLN
2. Were the sampling locations specified in the planning documents sampled?	Yes	
3. Were field equipment calibrations conducted as specified in the above-named documents?	Yes	
4. Was an operational check of the field equipment conducted daily?	Yes	
Did the operational checks meet criteria?	Yes	
5. Were the number and types of field measurements (alkalinity, temperature, specific conductance, pH, turbidity, DO, ORP, colorimetry) taken as specified?	Yes	
6. Were wells categorized correctly?	Yes	
7. Were the following conditions met when purging a **Category I** well:	----------	
Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	Yes	
Did pH, specific conductance, and turbidity measurements meet criteria prior to sampling?	Yes	
Was the flow rate less than 500 mL/min?	Yes	

Water Sampling Field Activities Verification Checklist (continued)

Checklist Item	Response (Yes/No/NA)	Comments
8. Were the following conditions met when purging a **Category II** well:	----------	
Was the flow rate less than 500 mL/min?	NA	
Was one pump/tubing volume removed prior to sampling?	NA	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	Duplicate samples were collected at one location.
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	NA	All equipment was dedicated
11. Were trip blanks prepared and included with each shipment of VOC samples?	Yes	
12. Were the true identities of the QC samples documented?	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	Yes	
15. Were the number and types of samples collected as specified?	Yes	
16. Were chain of custody records completed and was sample custody maintained?	Yes	
17. Was all pertinent information documented on the field data sheets?	Yes	
18. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
19. Were water levels measured at the locations specified in the planning documents?	Yes	Water levels were measured at all sampled locations.

Sampling Protocol

Sample results for all monitoring wells were qualified with an F flag, indicating the wells were purged and sampled using the low-flow method. At all monitoring well locations, purging and sampling met the Category I criteria.

Field Duplicate Assessment

Field duplicate samples are collected and analyzed as an indication of overall precision of the measurement process. The observed precision includes both field and laboratory precision and has more variability than laboratory duplicates, which measures only laboratory performance. A duplicate sample was collected from location MW-08S. The relative percent difference for duplicate results that are greater than five times the practical quantitation limit (PQL) should be less than 20%. For results that are less than five times the PQL, the range should be no greater than the PQL. The duplicate results met the criteria, demonstrating acceptable overall precision.

Trip Blank

Trip blanks are prepared and analyzed to document contamination attributable to shipping and field handling procedures. This type of blank is useful in documenting contamination of volatile organic samples. One trip blank was submitted with these samples. No target analytes were detected in the trip blank at concentrations greater than the method detection limits (MDLs).

Field Measurements

A calibration and a calibration check were performed with acceptable results. An end-of-event check was not performed. The pre-sampling purge criteria were met for all wells. The Category I turbidity criterion could not be met at location MW-30S.

Validation Report: Field Duplicates

29-Jul-2025

Project: Colonie Site **Task Code:** CLN01-01.2507005 Lab Code: GEN

	Duplicate: CLN01-01.2507005-008				Sample: CLN01-01.2507005-001 MW-08S						
Analyte	**Result**	**Qualifiers**	**Uncert.**	**Dilution**	**Result**	**Qualifiers**	**Uncert.**	**Dilution**	**RPD**	**RER**	**Units**
cis-1,2-Dichloroethene	0.333	U		1	0.333	U		1			ug/L
Tetrachloroethene	0.333	U		1	0.333	U		1			ug/L
Trichloroethene	0.333	U		1	0.333	U		1			ug/L
Vinyl chloride	0.333	U		1	0.333	U		1			ug/L

QC Checks: RPD: Relative Percent Difference RER: Relative Error Ratio

Enclosure 4
Laboratory Performance Assessment

General Information

Task Code:	CLN01-01.2507005
Sample Event:	July 8, 2025
Site(s):	Colonie, New York
Laboratory:	GEL Laboratories, Charleston, South Carolina
Work Order No.:	732263
Analysis:	Organics
Validator:	Gretchen Baer
Review Date:	July 29, 2025

This validation was performed according to the *Environmental Data Validation Procedure* (LMS/PRO/S15870-2.0). The procedure was applied at Level 3, Data Validation.

This validation includes the evaluation of data quality indicators (DQIs) associated with the data. DQIs are the quantitative and qualitative descriptors that are used to interpret the degree of acceptability or utility of data. Indicators of data quality include the analysis of laboratory control samples to assess accuracy, duplicates and replicates to assess precision, and interference check samples to assess bias (see attached worksheets). The comparability, completeness, and sensitivity of the data are also evaluated in the sections to follow.

All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures based on methods specified by line item code, which are listed in Table 1.

Table 1. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Volatile Organic Compounds	VOA-A-007	SW-846 5030B	SW846 8260D

Data Qualifier Summary

None of the analytical results required additional qualification.

Sample Shipping/Receiving

GEL Laboratories, in Charleston, South Carolina, received ten water samples on July 9, 2025, accompanied by a Chain of Custody form. The form was checked to confirm that all samples were listed with sample collection dates and times, and that signatures and dates were present – indicating sample relinquishment and receipt. The Chain of Custody form was complete with no errors or omissions.

See Program Directive PD-2025-06-CLN.

- A sample was collected from the GAC system to demonstrate that there was no breakthrough or bypass of the filter medium. The samplers submitted this sample on the Chain of Custody as location ID “Effluent1,” which was appropriate. The sample information was entered into EDGE and the Trip Report as an Equipment Blank sample, which was not appropriate. (An equipment blank is defined in the SAP as “a sample collected from the rinsate water after the decontamination of nondedicated equipment

that was used to collect field samples." There was no nondedicated equipment used for sample collection and no equipment decontamination was performed.)

- This location ID was changed to "2334" when the laboratory EDD was loaded to the database (IssueTrak 35141), which was also inappropriate; the GAC system should have been considered a type of treatment system, and its sample should not have been assigned a blind QC identifier.
- The effluent sample was inappropriately listed in the field data (EDGE) as a QC sample with an assigned parent sample.

Preservation and Holding Times

The sample shipment was received intact with the temperature inside the iced cooler at 6 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analysis. All samples were analyzed within the applicable holding time. A vial was received with visible headspace. The laboratory used only vials with no headspace for analysis. No qualification of the data was necessary

Detection and Quantitation Limits

The method detection limit (MDL) was reported for all analytes as required. The MDL, as defined in Title 40 *Code of Federal Regulations* Section 136, is the minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The practical quantitation limit (PQL) for these analytes is the lowest concentration that can be reliably measured and is defined as five times the MDL. All reported MDLs demonstrate compliance with contractual requirements.

The LTSP (*Long-Term Stewardship Plan for the Colonie, New York, Site* [DOE 2025], https://www.energy.gov/sites/default/files/2025-04/s13262-4.0.pdf) provides groundwater target cleanup goals (TCGs). These are summarized in Table 2. The reported MDLs are below the TCGs.

Table 2. Groundwater Target Cleanup Goals (µg/L) for the Colonie, NY, Site

Contaminant of Concern	TCG
Tetrachloroethene	5.5
Trichloroethene	18
cis-1,2-Dichloroethene	1800
Vinyl chloride	1.4

Laboratory Instrument Calibration

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for the analytes of interest. Initial calibration verification demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing calibration verification demonstrates that the initial calibration remains valid by checking the performance of the instrument on a continuing basis. Initial and continuing calibration standards must be prepared

from independent sources to ensure the validity of the calibration. All laboratory instrument calibrations and calibration verifications were performed in accordance with the cited methods.

Method SW-846 8260D, Volatile Organics
Initial calibration of instrument "VOA8" was performed on July 8, 2025, using nine calibration standards. Calibration curves are established using linear regression or the average response factor approach. Calibrations using average response factors had relative standard deviations of less than 15%. Linear regression calibrations had correlation coefficient values greater than 0.99 and intercepts less than three times the MDL. Initial and continuing calibration verification checks were made at the required frequency. All target compounds had percent drift values less than 20%. The mass spectrometer calibration and resolution were checked at the beginning of each analytical run in accordance with the procedure.

Method and Calibration Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. Calibration blanks are analyzed to assess instrument contamination prior to and during sample analysis. All method blank and calibration blank results were below the PQL for all analytes. In cases where a blank concentration exceeds the MDL, the associated sample results are qualified with a U flag (not detected) when the sample result is greater than the MDL but less than 5 times the blank concentration (and less than 10 times the blank concentration for common laboratory contaminants). The method blank results were below the MDL for all target compounds.

VOA Internal Standard and Surrogate Recoveries

Laboratory performance for individual samples is evaluated by means of surrogate spikes. All samples are spiked with surrogate compounds prior to sample preparation. Surrogate recoveries are used to monitor factors such as interference and high concentrations of analytes. Surrogate recoveries may also be influenced by the success in recoveries of the internal standards. All surrogate recoveries were within the acceptance ranges. The recovery of the internal standards added to the samples is monitored to measure the purging efficiency. Internal standard recoveries were stable and within acceptance ranges.

Matrix Spike Analysis

Matrix spike and matrix spike duplicate (MS/MSD) samples are used to measure method performance in the sample matrix. The MS/MSD data are not evaluated when the concentration of the un-spiked sample is greater than four times the spike. The spike recoveries met the acceptance criteria for all analytes evaluated.

Laboratory Replicate Analysis

Laboratory replicate analyses are used to determine laboratory precision for each sample matrix. The relative percent difference (RPD) for results that are greater than five times the PQL should be less than 20% (or less than the laboratory-derived control limits for organics). For results that are less than five times the PQL, the range should be no greater than the PQL. The replicate results met the criteria, demonstrating acceptable overall precision.

Laboratory Control Sample

Laboratory control samples were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. All control sample results were acceptable for all analytes.

Chromatography Peak Integration

The integration of analyte peaks was reviewed for all chromatography sample data. All peak integrations, including manual integrations, were satisfactory.

Compound Identification

The mass spectral data were reviewed for each reported organic compound to verify that analytes were identified correctly. Compounds that were reported with results above the MDL but that do not meet the mass spectra compound identification criteria are qualified with a U flag as not detected.

Completeness

Results were reported in the correct units for all analytes requested using contract-required laboratory qualifiers.

Electronic Data Deliverable (EDD) File

The EDD file arrived on July 23, 2025. The EDD was examined to verify that the file was complete and in compliance with requirements. The contents of the file were compared to the requested analyses to ensure all and only the requested data were delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

GRETCHEN BAER (Affiliate)

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Date: 2025.08.19 08:07:15 -06'00'

Report Prepared By: _____

Gretchen Baer
Data Validator

General Data Validation Report

Task Code: CLN01-01.2507005 **Lab Code:** GEN **Validator:** Gretchen Baer **Validation Date:** 07-29-2025

Project: Colonie Site **# Samples:** 9

Analysis Type: [ ] General Chemistry [ ] Metals [X] Organics [ ] Radiochemistry

Chain of Custody	***Sample***
Present: OK Signed: OK Dated: OK	Integrity: OK Preservation OK Temperature: OK

Check	Summary
Holding Times:	All analyses were completed within the applicable holding times.
Detection Limits:	The reported detection limits are equal to or below the contract required limits.
Field Blanks:	There were 2 field blanks associated with this task.
Field Duplicates:	There was 1 duplicate evaluated.

Organics Data Validation Summary

29-Jul-2025

Task Code: CLN01-01.2507005

Project: Colonie Site

Lab Code: GEN

Surrogate Recovery:	All surrogate recoveries were within the laboratory acceptance limits.
LCS/LCSD Performance:	All LCS/LCSD results were within the laboratory acceptance limits.
MS/MSD Performance:	All MS/MSD results were within the laboratory acceptance limits.
Method Blank Performance:	All method blanks were below the MDL.

Enclosure 5
Assessment of Anomalous Data

Potential Outliers Report

Potential outliers are results that lie outside the historical range, possibly due to transcription errors, data calculation errors, or measurement system problems. However, outliers can also represent true values outside the historical range. Potential outliers are identified by generating the Data Validation Outliers Report from data in the environmental database. The new data are compared to historical values and data that fall outside the historical data range are listed on the report along with the historical minimum and maximum values. The potential outliers are further reviewed and may be subject to statistical evaluation using the ProUCL application developed by the EPA (https://www.epa.gov/land-research/proucl-software). The review also includes an evaluation of any notable trends in the data that may indicate the outliers represent true extreme values.

There were seven values outside the historical range. Of these values, none were identified as statistical outliers. Further review of the data for the remaining outliers did not indicate any laboratory errors. Potential anomalies in the field parameters were also examined for patterns of repeated high or low bias, which suggest a systematic error due to instrument malfunction. No such patterns were found and the data from this event are acceptable as qualified. See the Data Validation Outliers Report, below.

Data Validation Outliers Report - No Field Parameters **Report Date: 07/29/2025**

Comparison to Historical Data Since: 1/1/2015 12:00:00 AM Fraction: Any

Task: CLN01-01.2507005

Analyte	Location	Analysis Location	Units	Fraction	Result	Lab Qualifier(s)	Type	HistMIN	HistMAX	HistSet Size	Outlier?
Tetrachloroethene	MW-30S	LB	ug/L	N	0.550	J	< HistMIN	0.8	6.67	8	No; downward trend
cis-1,2-Dichloroethene	MW-34S	LB	ug/L	N	0.550	J	< HistMIN	0.79	1.34	7	No
Tetrachloroethene	MW-34S	LB	ug/L	N	0.333	U	< HistMIN	0.37	0.75	7	No; downward trend
Vinyl chloride	MW-34S	LB	ug/L	N	0.333	U	< HistMIN	0.74	1.7	7	No; downward trend
cis-1,2-Dichloroethene	MW-37S	LB	ug/L	N	21.0		< HistMIN	33.3	52	7	No; downward trend
Tetrachloroethene	MW-41S	LB	ug/L	N	7.60		< HistMIN	8.05	25	8	No; downward trend
cis-1,2-Dichloroethene	MW-42S	LB	ug/L	N	4.34		< HistMIN	4.88	13	7	No

FRACTION: D = Dissolved N = NA T = Total