PERIODIC REVIEW REPORT

FOR

REMEDIAL ACTION

AT

THE DEFENSE NATIONAL STOCKPILE CENTER SCOTIA DEPOT

GLENVILLE, NEW YORK

Prepared for:

U.S. Army Corps of Engineers

Prepared by:

AECOM

AECOM Technical Services

December 2016 - May 2019

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1.0 EXECUTIVE SUMMARY

AECOM Technical Services, Inc. (AECOM), on behalf of the United States Army Corps of Engineers (USACE) through the General Services Administration (GSA) is submitting this Periodic Review Report (PRR) along with a completed Institutional Controls and Engineering Controls (IC/EC) Certification Form (Attachment A) for the Defense National Stockpile Center Scotia Depot (Site). This report is being submitted as requested by the New York State Department of Environmental Conservation (NYSDEC) in its letter dated February 27, 2019 to Mr. David Baker of the GSA (NYSDEC, 2019). The letter provides guidance for preparing the PRR and IC/EC form and requires that they be submitted to NYSDEC no later than May 12, 2019.

1.1 Summary of Site

The Site, located in Glenville NY, overlies a United States Environmental Protection Agency (USEPA) designated Sole Source Aquifer referred to as the Schenectady or Great Flats Aquifer system, which is adjacent to and extends beneath the Mohawk River over a distance of approximately 12 miles in Schenectady County. Portions of the original Scotia Naval Depot have been subdivided and sold since 1972 by the United States Government. The Site now consists of several large privately held parcels in addition to a portion of land still administered by the United States GSA.

In the late 1980s, trichloroethene (TCE) was detected at low level concentrations of less than 1 microgram per liter (µg/L) (the NYSDEC Drinking Water Standard is 5 µg/L) in the Town of Rotterdam and City of Schenectady well fields. Six subsurface investigations were completed to identify the possible source of TCE in the residential wells and possibly the Town of Rotterdam and City of Schenectady municipal well fields, and to delineate the extent of the TCE groundwater plume. Based on these investigations, a record of decision (ROD) specifying a groundwater remedy was approved by the NYSDEC in March 2010 (NYSDEC, 2010), which included the installation of an in-situ permeable reactive barrier wall (PRB) by direct injection of zero-valent iron (ZVI) to reduce the mass of on-site contamination via abiotic degradation and to reduce the migration of contaminated groundwater off-site. Additionally, the need to complete soil vapor intrusion (SVI) evaluations for the on-site buildings was included in the ROD and the subsequent installation of SVI mitigation systems was completed to reduce exposure to vapors emanating from groundwater contaminants entering the indoor air through existing building slabs.

1.2 Effectiveness of Remedial Program

Since the installation of the remedial systems in 2016, conclusions can be drawn based on the data collected in this reporting period as to whether both the PRB and the SVI mitigation systems are functioning. Based on the groundwater data collected to date and observed TCE concentrations in the downgradient monitoring wells there appears to be a reduction of contaminant concentrations downgradient of the PRB wall. Based on the indoor air samples collected to date the SVI mitigation systems are reducing indoor air contaminant concentrations such that samples are similar to outdoor air. Effectiveness of the remedial program will continue to be evaluated with each new data set.

1.3 Compliance

In reference to the Site Management Plan (SMP) (AECOM, 2017b), there have been no areas of non-compliance throughout the reporting period of this PRR.

1.4 Recommendations

No changes to the activities at the Site are recommended at this time.

The periodic review process should be maintained at a one-year frequency as specified in the SMP. The next PRR will be due in May 2020.

2.0 SITE OVERVIEW

2.1 Site History

AECOM Technical Services, Inc. (AECOM) monitors the Defense National Stockpile Center Scotia Depot, located in Glenville, New York (hereinafter referred to as the "Site") on behalf of the United States Army Corps of Engineers (USACE). The periodic review process is used for determining if a remedy is properly managed, as set forth in Site documents, and if the remedy is protective of human health and the environment. This PRR has been prepared to evaluate the overall effectiveness of the remedies that have been implemented at the Site. The Site is currently in the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 447023, which is administered by the New York State Department of Environmental Conservation (NYSDEC).

Originally built in 1942 and 1943, the Site served as a storage, supply and distribution, depot for naval forces. On January 1, 1960, the Navy turned the facility over to the General Services Administration (GSA). During the period between early 1966 and approximately 1973, the USACE/Army Material Command (AMC) leased buildings from the Navy for the fabrication and storage of vehicles as well as other military equipment. Portions of the original Scotia Naval Depot have been subdivided and sold since 1972 by the United States Government.

The Site is adjacent to the north side of NYS Route 5 (Amsterdam Road) in the Town of Glenville, Schenectady County, New York (**Figure 2-1**). The Site and surrounding adjacent properties are zoned for industrial and commercial use. Residential properties are located to the south between Amsterdam Road and the Mohawk River. The Mohawk River is located approximately 1,500 feet west-southwest of the Site and represents the major drainage feature in Schenectady County.

Figure 2-2 shows a map of the Site overlaid with the property owners for each parcel associated with the remedial systems. The Site now consists of several large privately held parcels in addition to a portion of land still administered by the GSA. The property owners for each of the parcels identified on **Figure 2-2,** and the component of the Site remedies associated with each parcel are identified in **Table 2-1**.

Table 2-1: Parcel Identification and Property Owners

Parcel ID	Tax Map Parcel No.	Property Owner	Remedy Component(s)
Parcel 1	29.00-3-16.15	Galesi Group (Scotia Industrial Park)	soil vapor intrusion (SVI) mitigation systems and monitoring well network
Parcel 2	29.00-3-16.15	Galesi Group (Scotia Industrial Park)	permeable reactive barrier (PRB) wall and monitoring well network)

Parcel C-1	29.00-3-16.71	GSA (Remedial Party)	monitoring well network
Parcel C-3	29.00-3-24	Belgioioso Cheese Inc.	monitoring well network

The private parcels owned by Scotia Industrial Park, Inc. (Galesi Group) contain a variety of industrial tenants; while the GSA leases its remaining portion to the Defense Logistics Agency/Defense National Stockpile Center. Ownership of parcel C-3 has been transferred from the GSA to Belgioioso Cheese Inc. since the issuance of the SMP.

The Site overlies a United States Environmental Protection Agency (USEPA) designated Sole Source Aquifer referred to as the Schenectady or Great Flats Aquifer system, which is adjacent to and extends beneath the Mohawk River over a distance of approximately 12 miles in Schenectady County. The unconsolidated deposits beneath the Site include ice-proximal end moraine and esker gravel units that vary in thickness from less than a foot to more than 50 feet, and overlie basal till, which appears to act as an aquitard. There are several sub-facies with lateral and vertical variation in grain size present. The water table beneath the Site is approximately 65 feet below ground surface (bgs), and groundwater beneath the Site flows from northeast to southwest toward the Mohawk River.

2.2 Remedial History

In the late 1980s, trichloroethene (TCE) was detected at low level concentrations of less than 1 microgram per liter (µg/L) (the NYSDEC Drinking Water Standard is 5 µg/L) in the Town of Rotterdam and City of Schenectady well fields. In an effort to determine the potential source(s) of the TCE, the New York State Department of Health (NYSDOH) performed sampling of private water supply wells downgradient of the Site during 1991. Volatile organic compounds (VOCs), including TCE; 1,1,1-trichloroethane (1,1,1-TCA); and tetrachloroethene (PCE), were detected in groundwater collected in some of these residential wells. The sampling results were consistent with the known groundwater contamination concentrations at the Defense National Stockpile Center Scotia Depot Site and the homes on NYS Route 5 were subsequently connected to public water provided by the Town of Glenville.

Subsequent to the NYSDOH residential groundwater sampling, six subsurface investigations were completed to identify the possible source of TCE in the residential wells to delineate the extent of the TCE groundwater plume. The investigations were completed between 1995 and 2007 and focused on the assemblage of properties comprising the former 337-acre Defense National Stockpile Center Scotia Depot. The NYSDEC 2007 Expanded Site Investigation (ESI) (NYSDEC, 2007) provides details on each of these investigations. During the investigations, two areas thought to represent possible TCE source areas, a former burn pit and the Sacandaga Road Landfill, were evaluated. Data suggested that although these areas may be contributing minor amounts of groundwater contamination, they do not represent TCE source areas. Instead, investigation data indicated that TCE disposal may have also occurred in the northeastern corner of the 401 sub-block and the area near the northern corner of the 403 sub-block; however a formal source area was never fully identified. In addition to these groundwater investigations, soil vapor intrusion (SVI) evaluations were conducted during the ESI that indicated off-site

groundwater containing TCE was not influencing the quality of indoor air at homes that directly overlie or that are along the margins of the TCE groundwater plume.

Based on these investigations, a Record of Decision (ROD) specifying a groundwater remedy was approved by the NYSDEC in March 2010 (NYSDEC, 2010). The ROD specified a remedial action for the groundwater plume that included treatment through the installation of a zero-valent iron (ZVI) permeable reactive barrier (PRB) wall. During this time, investigations were also conducted in relation to a carbon tetrachloride plume that was identified as a source for potential soil vapor intrusion. In addition to the groundwater remedy, the ROD also identified a data gap to be evaluated for soil vapor intrusion at the Building 201 sub-block, and mitigation would be required if needed. Indoor air and sub-slab sampling was conducted as part of the Pre Design Investigation (PDI) (Stone, 2013) and the areas requiring mitigation were identified.

Five off-site residential properties were identified as potentially impacted by the carbon tetrachloride plume. Offers for additional sampling were made by GSA to four of the potentially impacted off-site residential properties by certified mail on February 14, 2013, during the PDI; however, two property owners refused sampling and two did not respond to the offers. A summary of these efforts to offer additional sampling at the off-site residences was provided to the NYSDEC in 2013. Another resident already had a sub-slab depressurization (SSD) system installed at their property in response to radon, a naturally occurring gas unrelated to the Site, which is prevalent in the sub-surface in some areas. These systems are commonly installed in homes to mitigate indoor air contamination in areas where naturally occurring radon is found. Remedial Action Objectives and Implementation of the Selected Remedy

The remediation goals for the Site as listed in the ROD dated March 2010 (NYSDEC, 2010) are to eliminate or reduce to the extent practicable:

- Exposures of persons at or around the Site to VOCs in groundwater; and
- The release of contaminants from groundwater beneath structures into indoor air through soil vapor intrusion.

Furthermore, the remediation goals for the Site include attaining to the extent practicable:

- The NYSDEC Ambient Water Quality Standard (AWQS) and/or Guidance Value (GV) (NYSDEC, 1998); and
- Air guidelines provided in the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006; updated August 2015).

The Standards, Criteria and Guidance (SCGs) applicable to the groundwater at the Site are the AWQS and GV found in the Technical and Operational Guidance Series (TOGS) 1.1.1 (NYSDEC, 1998) and as presented in the ROD. Contaminants of Concern (COCs) at the Site and their respective AWQS are presented in **Table 2-2**.

Table 2-2: Groundwater SCGs

Contaminants of Concern	Ambient Water Quality Standard
1,1,1-Trichloroethane	5 µg/L
Trichloroethene	5 µg/L
Tetrachloroethene	5 µg/L

Carbon Tetrachloride	5 µg/L
Toluene	5 µg/L

Table 2-3 reports the contaminants of concern as determined by the ROD for Site sub-slab soil vapor and indoor air along with their respective air guidelines.

Table 2-3: Sub-Slab Vapor and Indoor Air Contaminants of Concern and NYSDOH Air Guidelines

Contaminants of Concern	NYSDOH Air Guidelines (µg/m^3)[1]	NYSDOH Decision Matrix
1,1,1-Trichloroethane	Not available	Matrix 2
Trichloroethene	2[2]	Matrix 1
Tetrachloroethene	30[3]	Matrix 2
Carbon Tetrachloride	Not available	Matrix 1

[1] NYSDOH (2006)

[2] Revised as of August 2015

[3] Revised as of September 2013

The primary guidance document governing soil vapor work in New York is the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006; with updates). Three decision matrices have been developed as part of this guidance by the NYSDOH as risk management tools that provide specified actions based on the concentrations of individual compounds in the indoor air and sub-slab soil vapor. The Site soil vapor contaminants are found on two of the three decision matrices: Matrix 1 (**Table 2-4**) or Matrix 2 (**Table 2-5**), based on the guidance. Four actions are possible from these matrices: no further action (NFA), identify and reduce (IR) sources within the structure, monitor (MO) of indoor air and sub-slab soil vapor, and mitigate (MI).

Table 2-4: NYSDOH Decision Matrix 1

Sub-Slab Vapor (µg/m^3)	Indoor Air (µg/m^3)			
	<0.25	**0.25 to <1**	**1 to <5**	**5 and above**
<5	NFA	IR	IR	IR
5 to <50	NFA	MO	MO	MI
50 to <250	MO	MO/MI	MI	MI
250 and above	MI	MI	MI	MI

NFA – No Further Action

IR – Identify and Reduce

MO – Monitor Only

MI – Mitigate

Table 2-5: NYSDOH Decision Matrix 2

Sub-Slab Vapor (µg/m^3)	Indoor Air (µg/m^3)			
	<3	**3 to <30**	**30 to <100**	**100 and above**
<100	NFA	IR	IR	IR
100 to <1,000	MO	MO/MI	MI	MI
1,000 and above	MI	MI	MI	MI

See Table 2-3 for explanation of acronym/abbreviation

The remedy selected by the NYSDEC in the March 2010 ROD to address groundwater contamination was a ZVI PRB wall. The PRB wall, installed in 2016, consists of two continuous segments extending approximately 900 feet on a northwest-southeast alignment and is adjacent to a right-of-way easement between National Grid and the Glenville Business & Technology Park. It is positioned in the vicinity between 3rd and 5th Streets to the north and south and Avenues B and C to the west and east, located within the current Glenville Business & Industrial Park. The PRB was placed using vertical inclusion propagation (VIP) technology, which includes a series of conventionally drilled boreholes along the PRB alignment, with specialized expansion casings grouted into the boreholes. The PRB was constructed by injection of iron filings into these expansion casings with quality assurance monitoring of the injections to quantify the PRB geometry and iron loading densities. The final 900-foot wall is comprised of a 250 feet long shallow PRB that is 15 feet high (65 to 80 feet bgs), and a 650 feet long deep PRB, which is 45 feet high (65 to 110 feet bgs).

To address the potential SVI issues described in the March 2010 ROD and confirmed in the PDI, SVI mitigation systems were installed in four of the on-site buildings (Buildings 201 through 204) during early 2016. As a conservative measure, the SVI mitigation systems were installed to cover the entire building footprint, to the extent practicable, even where the NYSDOH decision matrices did not require mitigation. A core drill was used to core through the concrete slab for the installation of the suction points, which were constructed of PVC pipe, installed flush with the bottom of the slab and sealed with urethane caulk within the annulus and at the surface. A total of 12 SVI mitigation systems were installed in each building, each consisting of two suction points connected to a single GP-501 radon away fan to generate suction and evacuate the vapor beneath the slab. As required by the NYSDOH, a visual pressure gauge was installed for each of the fans to allow for monitoring of system performance. Each SVI mitigation system was fitted with a flexible U-tube for this purpose.

A total of 32 soil vapor monitoring points were installed in the four buildings (eight in each building). These locations were distributed throughout the building, allowing monitoring of

vacuum distribution beneath the slab and sub-slab vapor concentrations. Permanent sampling points were installed at each of the locations utilizing the VaporPin™ system. This system includes a stainless steel barbed fitting with a silicone sleeve which is permanently installed in the slab and capped when not in use. A secured stainless-steel cover is installed over the barb fitting.

3.0 EVALUATE REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

3.1 Summary of Groundwater Remedy Performance

Since the installation of the ZVI PRB in 2016, nine groundwater monitoring events have been conducted in accordance with the NYSDEC approved SMP (eight quarterly and one semi-annual). In 2015 a baseline groundwater sampling event was conducted to document the Site conditions prior to the PRB installation. The installment of the PRB was completed in November 2016. The first quarterly sampling event was conducted in December 2016, one month following the installation, and continued on a quarterly basis through September 2018. The most recent event in December 2018 was the first semi-annual sampling event.

The groundwater monitoring well locations are shown on the Site layout plan (**Figure 3-1)**. The groundwater samples were analyzed by ALS Laboratories (Middletown, PA). Site-wide groundwater elevation data is collected during each groundwater monitoring event. Groundwater elevation data to date indicate seasonal variability in groundwater levels at the Site, likely influenced by the seasonal variation in the level of the Mohawk River and/or precipitation, located downgradient of the Site, which is controlled by locks and flood gates. Analysis of the groundwater level data indicates that even though seasonal variability exists, the direction of groundwater flow through the ZVI PRB wall from the northeast to the southwest remains consistent. Groundwater elevation data is provided in **Table 3-1**. A summary of the quarterly VOC, groundwater MNA and field parameter results is included in **Table 3-2**, and a summary of the annual Site-wide groundwater results is included in **Table 3-3**.

3.1.1 Volatile Organic Compounds

As stated in the SMP, effectiveness of the remedy is to be demonstrated by a decrease in the groundwater VOC concentrations between the upgradient and downgradient compliance wells. Groundwater sampling results over the last several monitoring events exhibits decreasing concentrations of VOCs between upgradient and downgradient monitoring well pairs, suggesting that the ZVI PRB is effectively reducing concentrations as designed in the vicinity of the wall. The decreasing concentrations of VOC are shown in **Table 3-4**.

To further analyze the groundwater data a nonparametric trend analysis for TCE was performed on performance monitoring wells MW-28, MW-29, MW-30, MW-31, MW-32, MW-33, MW-34 and MW-35 using the GSI Mann-Kendall Toolkit (Connor et al., 2012). The GSI Mann-Kendall Toolkit (Toolkit) is a spreadsheet that analyzes time-series groundwater monitoring data to determine trends using the Mann-Kendall statistical analysis method. The Toolkit yields a qualitative determination of increasing, decreasing or stable groundwater concentrations.

The Toolkit was utilized to evaluate TCE in each well using monitoring data collected from December 2015 to December 2018 (10 total monitoring events). The input/output spreadsheets, including the results of the Mann-Kendall analysis, are included in **Appendix A**. This analysis demonstrates that three of the four downgradient monitoring wells (MW-30, MW-32 and MW-34) have decreasing trends for TCE. Stable and/or increasing TCE trends were observed in upgradient monitoring wells MW-33 and MW-35 while decreasing TCE trends were observed in upgradient monitoring well MW-31. No significant trend was observed in well pair MW-28/MW-29. These results suggest that the permeable reactive barrier is creating reductions in

downgradient TCE concentrations in the vicinity of monitoring well pairs MW-32/MW-33 and MW-34/MW-35. Effectiveness of the remedial program and trend analysis will continue to be evaluated with each new data set.

During the first two quarterly sampling events (December 2016 and March 2017), groundwater conditions in the compliance well pairs (MW-28 through MW-35) appeared to have been affected by the PRB wall injection events, as would be expected given the nature of the technology installation process. The ZVI was injected into the subsurface in a carrier fluid (guar) that dissolved in the subsurface and impacted groundwater geochemistry to create temporary reducing conditions in the aquifer. The breakdown of the guar spurred biological activity in the subsurface and may have facilitated biological degradation of VOCs. Effects of guar were observed both upgradient and downgradient of the PRB as increased concentration of total organic carbon (TOC). Based on the quarterly data, it appears to have taken approximately 6 months (2 quarterly events) after the ZVI injections for groundwater conditions in this area to return to normal. Beginning in the third quarterly sampling event (June 2017), the VOCs detected in the compliance wells downgradient of the PRB were lower than the concentrations in their corresponding upgradient wells. This trend has continued to be true for all compliance well pairs during each subsequent sampling event through December 2018, with the exception of two events – the December 2017 event at MW-30/MW-31 and the September 2018 event at MW-28/MW-29. More details regarding the observed groundwater conditions at the Site since the installation of the PRB are given in the most recent groundwater monitoring report (AECOM, 2019).

Across the Site, in general, detected concentrations of TCE (and other VOCs) in wells outside of the compliance well network have not fluctuated significantly between quarterly events indicating that the contaminant plume is in a state of equilibrium. As described in the ZVI PRB Remedial Action Work Plan (RAWP) (AECOM, 2016), expectations are that ZVI PRBs will function for at least 30 years with the possibility of a greater lifetime depending on Site conditions.

3.1.2 Monitored Natural Attenuation Parameters

Groundwater samples were also analyzed for monitored natural attenuation (MNA) parameters for the 12 wells sampled during quarterly and semi-annual sampling events. The MNA Parameters that were evaluated include: acetylene, total alkalinity, chloride, nitrate, sulfate, methane, ethane, ethene and total organic carbon. These parameters are used to help determine subsurface conditions and gather information about the types of reactions that are occurring. A summary of the quarterly and semi-annual results of the MNA parameters can be found in **Tables 3-2.**

Initially methane, ethane and ethene concentrations increased from the breakdown of the ZVI carrier fluids (guar) and served as an indicator of biological reductive dechlorination activity in the subsurface. Elevated levels of methane continue to be observed in most downgradient compliance wells, suggesting the continued occurrence of anaerobic biological activity in the subsurface.

Overall, the MNA data does not show consistency in the well pairs throughout the expanse of the PRB. MNA parameters have indicated that both biotic and abiotic reactions, at different times, are responsible for the observed decreases in VOC concentrations across the ZVI PRB. The

December 2018 monitoring data for well pairs MW-30/MW-31 and MW-32/MW-33 may indicate that the groundwater conditions at the Site are shifting away from the anaerobic biotic conditions that were created in the wake of the PRB wall installation, to conditions that are more indicative of abiotic reductive dechlorination that is expected of the redox reactions that take place as groundwater flows through a ZVI PRB wall. MNA parameters will continue to be monitored during subsequent sampling events.

3.1.3 Field Parameters

The field parameters monitored for each sampling event include: dissolved oxygen, ORP, pH, turbidity, conductivity and groundwater elevation. A summary of the quarterly and annual results of the field parameters can be found in **Tables 3-2 and 3-3**, respectively**.**

During quarterly sampling events conducted to date DO measurements were variable with some well pairs showing an increase and some pairs showing a decrease from upgradient to downgradient of the PRB. It should be noted that there were some increases in DO concentrations during the past few sampling events suggesting that anaerobic conditions observed shortly after PRB installation may not be sustained. While ORP values are still not showing values that are typically expected downgradient of a ZVI PRB wall, the ORP levels decreased significantly from upgradient to downgradient at well pairs MW-31/30, MW-33/32 and MW-35/34 during recent monitoring events. Lower ORP values are expected downgradient of the PRB indicating reducing conditions as the groundwater passes through the PRB, however we expect to see ORP levels in the -300 to -400 range, with little to no DO for the Beta elimination VOC reduction to occur. To date these expected values have not been observed on a consistent basis and no definitive trends on DO and ORP measurements have been defined. More explanation on field parameters collected to date and observations based on this data is provided in the most recent groundwater monitoring report (AECOM, 2019).

3.2 Summary of Indoor Air Remedy Performance

Results obtained from the December 2016, 2017 and 2018 AECOM sampling events have been compared to the Stone Environmental 2014 indoor air data (Stone, 2014a) that was collected prior to the SVI mitigation system installation (**Table 3-5**). The 2016, 2017 and 2018 sampling event data results show that the current indoor air VOC concentrations are similar to those measured in the concurrent outdoor air samples indicating that the SVI mitigation systems are functioning as designed by preventing sub-slab vapor from migrating into indoor air.

During sampling and monitoring events all accessible sub-slab vacuum system readings indicate sufficient vacuum in most monitoring points, with some locations showing very good suction (less than -0.004 inches of water) and other locations showing weaker suction. This could be due to building construction or changed airflow patterns throughout the workday as tenants are opening and closing doors. The indoor air data measured in each building confirms that the SVI mitigation system is functioning as designed and the combined suction strength for the systems in each building is enough to provide mitigation to the entire building. Furthermore, U-tube monometer measurements indicate that the SVI mitigation systems were producing vacuum beneath the building slab. All sub-slab vacuum readings and U-tube monometer monitoring results are presented in **Table 3-6**. The off-site residential system was inspected in December 2018 and was found to be operating as expected.

4.0 INSTITUTIONAL AND ENGINEERING CONTROLS PLAN COMPLIANCE REPORT

The final site remedy included implementation of both Institutional Controls (IC) and Engineering Controls (EC). The SMP was developed to support those controls. A summary of the controls and required site activities are summarized below.

4.1 Institutional Controls / Engineering Controls Requirements and Compliance

4.1.1 Institutional Controls

An IC, required by the ROD in the form of an Environmental Easement (EE), was implemented to: (1) ensure compliance with the SMP; (2) restrict the use of groundwater as a source of potable or process water, without the necessary water quality treatment as determined by NYSDOH; (3) require any new structures in the area of the groundwater contamination to include sub-slab construction that allows for the installation and operation of mitigation systems, and, (4) require the property owner or designated representative to complete and submit to NYSDEC a periodic certification of institutional and engineering controls. Adherence to these ICs will be required by the EE and will be implemented under the SMP. ICs identified in the EE may not be discontinued without an amendment to or extinguishment of the EE. These ICs are:

- All ECs must be operated and maintained as specified in the SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from NYSDEC;
- Any new structures in the area of the groundwater contamination shall include sub-slab construction that allows for the installation and operation of mitigation systems, or be constructed with vapor barriers incorporated into the slab;
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP; and,
- Access to the Site must be provided to agents, employees, or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the EE.

On April 9th, 2019 the GSA, USACE and AECOM were notified that the new property owner of Parcel C-3, BelGioioso Cheese Inc. plans to conduct a groundwater pump test at the Site. BelGioioso submitted a request to conduct the pump test, including a pump test plan, to NYSDEC, and the plan was approved. The USACE has submitted comments on the pump test plan and intends to be present during pump test operations. At times time the exact dates and locations of the pump test are unknown; however, the USACE has asked to be informed of any activities associated with the pump test as they unfold. The request to perform the pump test confirms that BelGioioso is following the required IC procedures in accordance with the SMP in regards to groundwater use at the Site.

4.1.2 Engineering Controls Requirements and Compliance

4.1.2.1 Permeable Reactive Barrier

In accordance with the ROD for the remedial action at the Site, a ZVI PRB was installed in order to mitigate the impacted groundwater plume. Results from the groundwater monitoring program will be used to evaluate the effectiveness of the remedy. In accordance with the SMP, the groundwater remedy is considered effective if VOC concentrations are decreasing in the compliance monitoring well pairs (MW-28/MW-29, MW-30/MW-31, MW-32/MW-33, and MW-34/MW-35) and if contaminated groundwater is not migrating off-site. Because the PRB is installed fully below ground, the disturbed area has been restored to pre-existing conditions. No maintenance of the PRB is required. The injection casings have been left in place with flush mount completions in case additional injections are warranted in the future. There are no recommendations for changes to the ZVI PRB ECs at this time.

4.1.2.2 Soil Vapor Intrusion Remediation Systems

SVI mitigation at the Site is being performed to mitigate the potential for vapor intrusion to occur in the buildings. The potential for vapor intrusion is indicated by (1) the presence of groundwater related VOCs in both sub-slab vapor and indoor air; and (2) the magnitude of the difference of the concentrations of these VOCs detected in soil vapor compared to indoor air. Since there has been carbon tetrachloride detected in the buildings, and the only potential source that has been identified is dissolved in groundwater below the buildings, it has been concluded that the likely source is the groundwater. Since the sub-slab vapor concentrations are much higher than the indoor air concentrations, it appears that the pathway is from sub-slab vapor through the slab into the building.

The SVI mitigation system will mitigate SVI by redirecting the vapor transport from the sub-slab to the suction points and then into the air above the building, rather than through the slab into the building. The SVI mitigation systems *may or may not* reduce the carbon tetrachloride concentrations below the slab. Reduction of sub-slab concentrations is not required to achieve mitigation. Similarly, the SVI mitigation system may or may not substantially affect the mass of carbon tetrachloride in the subsurface. The SVI mitigation system is not a soil vapor extraction (SVE) system that will remove contaminants from the subsurface and eventually end the need to mitigating vapor intrusion. Mitigation is just a process that prevents contaminant exposure to the occupants of the buildings.

Since groundwater is the presumed source of the carbon tetrachloride vapors that are now migrating to beneath the buildings, it is likely that mitigation will be necessary until groundwater concentrations decline sufficiently so that sub-slab concentrations satisfy the NYSDOH Decision

Matrix 1. No active remediation is planned to reduce groundwater carbon tetrachloride concentrations, but the dissolved concentrations are quite low and appear to be attenuating naturally. Therefore, natural attenuation should eventually reduce the concentrations sufficiently to allow the SVI mitigation systems to be turned off.

The active SVI mitigation systems within Buildings 201, 202, 203, and 204 will be operated through the heating season of 2019/2020 and will then be turned off in May 2020. During the heating season of 2020/2021, after the SVI mitigation systems have been off for at least six months, a full round of indoor air and sub-slab vapor samples will be collected. The sub-slab vapor samples will determine if the sub-slab VOC concentrations have been affected by the systems or not. If these results, when compared to **Tables 2-3 and 2-4**, lead to the conclusion of "no further action", "identify and reduce", or "monitor only", then the SVI mitigation systems will remain off. If the results lead to the conclusion that mitigation is required, then the SVI mitigation systems will be turned back on. There are no recommendations for changes to the SVI mitigation systems ECs at this time.

4.2 Institutional Controls / Engineering Controls Certification

The completed IC/EC Certification form is included in **Appendix B.**

5.0 MONITORING PLAN COMPLIANCE REPORT

5.1 Components of the Monitoring Plan

The requirements of the monitoring plan by media are presented below in **Tables 5-1 and 5-2**.

Table 5-1: Inspection and Sampling Schedule

Activity	Frequency	Date	Locations Inspected/Sampled
Site Wide IC/EC Inspection	Semi- Annually	December and June	All SVI mitigation systems All Monitoring Wells
Off Site SVI Mitigation System Inspection	Annually	June	Off-Site Residence
Site-Wide Groundwater Monitoring	Annually	June	GEP-3, MW-B-3, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-14, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, MW-36, GEP-2, GEP-1, GEP-4
Groundwater Monitoring for PRB Effectiveness	Quarterly for first two years; semi-annually thereafter	March, June, September, December	MW-15, MW-16, MW-24, MW-26, MW-28, MW-29,MW-30, MW-31, MW-32, MW-33, MW-34, MW-35,
SVI mitigation system Monitoring	Semi-annually for sub-slab pressure differential monitoring (through December 2019); annually during heating season for indoor air sampling and sub-slab sampling (through winter of 2020/2021).	December and June	All SVI mitigation systems

Table 5-2: Sampling Requirements and Schedule

Monitoring Event[1]	Analytical Parameters			Schedule
	VOCs[2] (EPA Method 8260C)	MNA Parameters[3]	VOCs (TO-15 SIM)[4]	
Site-wide groundwater monitoring	X			Annually
Groundwater monitoring for PRB effectiveness	X	X		Quarterly for first 8 quarters; semi-annually thereafter
SVI Mitigation System Monitoring			X	Semi-annually for sub-slab pressure differential monitoring; annual for indoor air analyses.

5.2 Summary of Monitoring Completed During Reporting Period

5.2.1 Site-Wide Inspection

Site-wide inspections have been performed semi-annually to check for system operation. The SVI mitigation system at the off-site residence (1695 Amsterdam Road, Scotia, NY 12302) has been inspected annually. The Site-wide inspection forms, completed annually, are included in **Appendix C**. More information on the site-wide inspections can be found in the SMP.

5.2.2 Groundwater Monitoring

Volatile Organic Compounds (VOCs) at the Site have been monitored since 2015, in accordance with the schedule designated in the SMP. In 2015, a baseline groundwater investigation for all site-wide wells was completed and included sampling from 36 wells. The sampling schedule includes 12 monitoring wells sampled on a quarterly basis for the first two years, then semi-annually thereafter, and one annual site-wide sampling event consisting of 36 monitoring well sample locations. The installment of the PRB was completed in November 2016. Directly following the installment of the PRB, the first quarterly sampling event was conducted in December 2016. The next quarterly sampling event occurred in March 2017 and continued throughout September 2018 for a total of 8 quarters. The compliance monitoring well pairs (MW-28 through MW-35), in addition to MW-24 (downgradient), MW-26 (downgradient), MW-15 (upgradient) and MW-16 (outside of plume), have been sampled quarterly since

December 2016 and have entered the semi-annual monitoring schedule as specified in the SMP. The first semi-annual sampling event occurred in December 2018. Samples have been analyzed for the parameters reported in **Table 3-2** to assess the performance of the remedy. Two annual sampling events were conducted (June 2017 and June 2018) which included a site-wide sampling of monitoring wells (**Table 3-3**). The PRB location as well as monitoring well locations are shown on **Figure 5-1**. All samples were collected following the sampling techniques listed in 4.3.1.1 of the SMP.

5.2.3 Soil Vapor Intrusion Mitigation Systems Monitoring

Since the installation of the SVI mitigation systems in June 2016 there have been semi-annual inspections of all systems on-site. There have also been annual inspections of the off-site system. Indoor air sampling had occurred annually during the heating season (November 15 through March 15) and sub-slab differential pressure readings have been collected semi-annually. The purpose of this was to continue monitoring concentrations of the targeted VOCs in order to assess the performance of the recently installed SVI mitigation systems with the intention to mitigate the potential for impacted soil vapor intrusion into the building. The annual on-site sampling event includes an inspection and documentation of any tenant and building changes along with updating chemical/product inventories for each tenant. Sampling has been performed in accordance with the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006 with updates). All samples were collected in individually certified clean Summa canisters provided by the laboratories.

Each December, 12 indoor air samples have been collected from the four buildings along with one outdoor air sample and analyzed for VOCs by Method TO-15 SIM. Monitoring locations are shown on **Figures 5-2 through 5-5**. Laboratory results from all previous sampling events are summarized in **Table 3-5**. The SVI Decision Matrix results from all previous sampling events are included in **Table 5-3**.

The residential off-site SVI mitigation system is inspected annually in June to ensure the system is operating. The inspection consists of a visual observation of the gauge located on the outside of the home which indicates if the system is on or off. The system has been on and operating during each annual inspection event during this reporting period. No indoor air or sub slab vapor samples are collected at the residence.

5.3 Comparisons with Remedial Objectives

5.3.1 Permeable Reactive Barrier Remedy Effectiveness

The remediation goal for the PRB at the Site as listed in the ROD dated March 2010 is to eliminate or reduce to the extent practicable exposures of persons at or around the Site to VOCs in groundwater. As stated in the SMP, effectiveness of the remedy will be demonstrated by a decrease in the groundwater VOC concentrations between the upgradient and downgradient compliance wells (MW-28/MW-29, MW-30/MW-31, MW-32/MW-33, and MW-34/MW-35). Based on the previous statements, the data collected thus far indicates that the PRB is reducing groundwater VOC concentrations as groundwater data shows lower VOC concentrations in the downgradient compliance wells and thus the PRB appears to be achieving the remedial

objectives. More information on the effectiveness of the PRB can be found in Section 3.1 of this document. The performance of the PRB will be continuously evaluated with each new data set.

5.3.2 Soil Vapor Intrusion Mitigation Systems Effectiveness

The remediation goal for the SVI mitigation systems at the Site as listed in the ROD is to eliminate or reduce to the extent practicable the release of contaminants from groundwater beneath structures into indoor air through soil vapor intrusion. The 2018 sampling event data results show that the current indoor air VOC concentrations are similar to those measured in the concurrent outdoor air samples indicating that the SVI mitigation systems are functioning as designed.

5.4 Monitoring Deficiencies

Since the initiation of post-remedy installation sampling and monitoring in 2016 the only deficiencies in required monitoring were due to damaged monitoring wells, damaged SVI mitigation systems, damaged sub-slab vapor monitoring points, or in some cases inaccessible SVI remediation monitoring locations due to building operations. Discussions with the building owner and tenants on how to prevent future damages are ongoing.

In the June 2018, the second annual sampling event, MW-8, MW-11 and MW-12 were found to be damaged and could not be sampled. In December 2018 MW-22 was found to have been destroyed and could not be sampled. These wells were recently repaired, and have subsequently reentered the annually scheduled Site-wide groundwater sampling events. More detail on the SVI mitigation system and monitoring well network deficiencies and repairs is provided in Section 6.0

The respective annual SVI monitoring reports and quarterly groundwater monitoring reports (AECOM, 2017c, 2017d, 2017e, 2017f, 2018, 2018a, 2018b, 2018c, 2018d, 2019, 2019a) submitted to NYSDEC provide further details on specific activities performed, analytical testing results, and observations made during the sampling events.

5.5 Conclusions and Recommendations for Changes

At this time there are no recommendations for changes to the on-site PRB, on-site SVI or off-site residential system sampling and monitoring program.

6.0 OPERATION & MAINTENANCE PLAN COMPLIANCE REPORT

6.1 Components of the Operation & Maintenance Plan

6.1.1 Permeable Reactive Barrier

Since the PRB is installed fully below ground, the disturbed area has been restored to pre-existing conditions. No maintenance of the PRB is required. The monitoring well network that is used to evaluate the effectiveness of the PRB wall must be maintained and monitoring wells must be in good condition allowing for sample collection.

6.1.2 Soil Vapor Intrusion Remediation Systems

As stated in the SMP (AECOM, 2017b), routine inspection of the off-site residential system, and on-site individual suction points, overall systems and building conditions are an essential part of maintaining the systems and ensuring they are operating as designed. Inspections, as described in Section 5.2.1, have been conducted on a semi-annual basis from the time the systems were completed. The list provided in Appendix F of the SMP (AECOM, 2017b) includes general elements of the system inspections and system operation.

6.2 Summary of Operation & Maintenance Completed During Reporting Period

6.2.1 Permeable Reactive Barrier

Throughout this reporting period there have been repairs made to the groundwater monitoring well network associated with the PRB to ensure compliance with the sampling plan for the Site.

In January 2019 and April 2019 the following monitoring wells were replaced because they were either damaged beyond repair or lost due to site development: MW-11, MW-12, MW-22, and MW-B-1. The following wells were converted to flush mount to prevent damage due to anticipated future site development: MW-8, GEP-1. MW-17, MW-18, MW-19, MW-20, MW-25 and GEP-4.

6.2.2 Soil Vapor Intrusion Remediation Systems

Throughout this reporting period there have been necessary repairs due to building tenant induced damages to the SVI mitigation systems. The observed damage to the SVI mitigation systems was minor and does not have a major impact on the overall functionality of the systems, however repairs were made to ensure that the systems were operating as intended. During the semi-annual inspections in 2016, 2017 and 2018 damages to the SVI mitigation systems were noticed in all four buildings. Damages were reported and repairs were completed as needed. A summary of the damaged and repaired items within each building is provided below.

Damages that needed repairs in Building 201 included two damaged sub-slab monitoring points, one broken gate valve, two broken suction points, and two broken monometers. Damages that needed repairs in Building 202 included a fluctuating extraction fan that was replaced, three broken monometers, two broken suction points, and one broken sub-slab monitoring point. Damages that needed repairs in Building 203 included two broken suction points, two gate valves, and one fan that was replaced due to a dead motor. Damages that needed repairs in

Building 204 included three suction points, one monometer, one gate valve, and two sub-slab monitoring points.

In addition to the repairs mentioned above, in June 2018 all sub-slab monitoring points were countersunk below finished grade to reduce the chance of repetitive damage from building tenant activities.

6.3 Evaluation of Remedial Systems

The following sections present an evaluation of the functionality of the remedial systems with respect to the operation and maintenance activities performed on their respective components

6.3.1 Permeable Reactive Barrier

Overall, the functionality of the PRB has not been affected by the operation and maintenance activities performed on the monitoring well network.

6.3.2 Soil Vapor Intrusion Remediation System

Overall, the SVI mitigation systems have operated without shutdown from when installation was completed in 2016 throughout 2018. After the installations of the SVI mitigation systems were completed, the systems were turned on and underwent a communication test on June 30, 2016 to ensure that a sufficient vacuum was being generated. Each vacuum monitoring point (eight locations per building) was tested for vacuum using a digital micro-monometer to ensure that the SVI mitigation systems were creating a pressure differential beneath the building slabs. A vacuum reading of -0.004 inches of water or greater indicated that the systems were creating enough of a pressure differential to provide sufficient system operation to mitigate the potential SVI impacts. Initial vacuum monitoring results indicated that the systems were creating a sufficient pressure differential to be considered operational. U-Tube monometer readings were also recorded at this time. Results of the communication testing and U-Tube monometer readings are provided in **Table 2-4**.

No general maintenance to the systems was required during the first three years of operation other than repair of the observed system damages described above. Sufficient vacuum was still recorded at most monitoring points even when system damages were noted. Subsequently the overall functionality of the SVI mitigation systems was not affected by damages, and repairs were completed as soon as possible to ensure optimal system performance.

6.4 Operation and Maintenance Deficiencies

Overall there have been no deficiencies to the operation and maintenance plans for the groundwater and soil vapor intrusion remedies at the Site. All noticed damages were documented and repaired.

6.5 Conclusions and Recommendations for Improvements

Overall, based on the data collected to date, the groundwater remedy (i.e., the PRB) and soil vapor intrusion mitigation system at the Site are in place and appear to be achieving remedial objectives. At this time there are no recommendations for modifications or improvements to the PRB or SVI operation and maintenance schedules.

7.0 OVERALL PERIODIC REVIEW REPORT CONCLUSIONS AND RECOMMENDATIONS

7.1 Compliance with Site Management Plan

The SMP includes a monitoring schedule that provided an outline for the sampling, monitoring and inspection events conducted at the Site. For the period that this PRR covers, December 2016 through May 2019, all requirements for such events laid out in the SMP were met.

7.2 Performance and Effectiveness of the Remedy

The following sections present an evaluation of the overall performance and effectiveness of the reactive barrier and soil vapor intrusion systems.

7.2.1 Permeable Reactive Barrier Conclusions

As stated in the SMP, effectiveness of the remedy is to be demonstrated by a decrease in the groundwater VOC concentrations between the upgradient and downgradient compliance wells (MW-28/MW-29, MW-30/MW-31, MW-32/MW-33, and MW-34/MW-35). A comparison of the groundwater analytical test results to date shows that the compliance wells downgradient of the PRB contain lower concentrations of VOCs (specifically TCE) than their corresponding upgradient wells. Recent sampling events have shown greater differential in VOC concentrations between the compliance well pairs than sampling events early on after installation of the ZVI PRB wall.

As described in the PRB RAWP, expectations are that ZVI PRBs will function for at least 30 years with the possibility of a greater lifetime depending on Site conditions. Approximately 2.5 years have elapsed since the completion of PRB construction.

7.2.2 Soil Vapor Intrusion Systems Conclusions

Since installation of the SVI mitigation systems all indoor air sampling results show that the systems are effectively preventing sub-slab vapor migration into indoor air. Annual air sampling results show that the current indoor air VOC concentrations are similar to those measured in the concurrent outdoor air samples indicating that the SVI mitigation systems are functioning as designed. The off-site residential system was inspected annually in December 2016, 2017, 2018 and was found to be operating.

7.3 Future Periodic Review Report Submittals

No changes to the activities at the Site are recommended at this time and monitoring programs will continue to follow the schedules outline in Section 5.0. The PRR should continue to be completed annually as stated in the SMP. The next PRR will be due in May 2020.

8.0 REFERENCES

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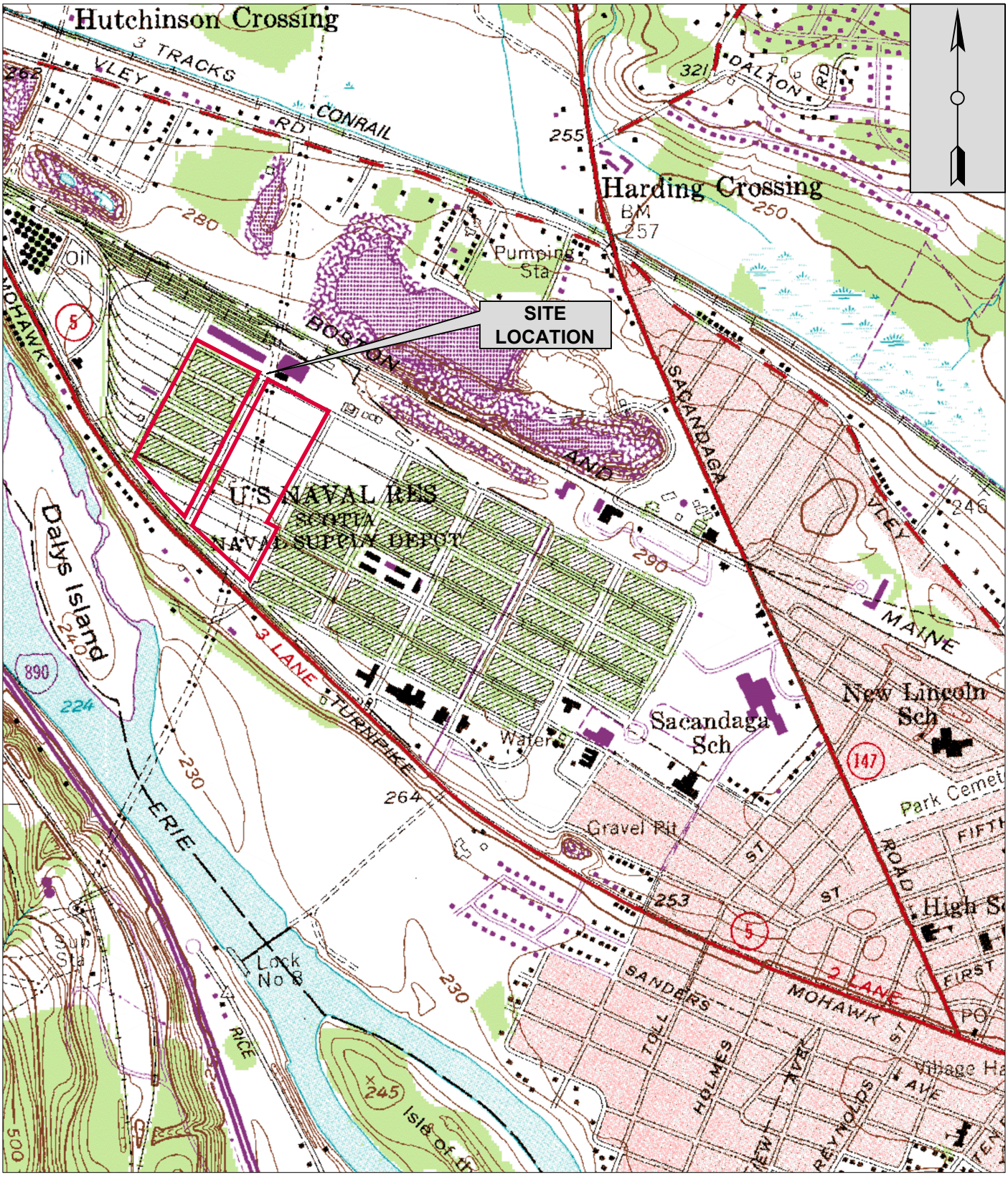
FIGURES



MAP REFERENCE:
IMAGE SHOWN FROM U.S.G.S.7.5 MINUTE
QUADRANGLE, SCHENECTADY SERIES

0 2000' 4000'

PERIODIC REVIEW REPORT
DEFENSE NATIONAL STOCKPILE
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641

US ARMY Corps of Engineers

SITE LOCATION MAP

AECOM

Figure: 2-1

Figure 2-2

PROPERTY OWNER MAP

PERIODIC REVIEW REPORT
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: April, 2019

US ARMY Corps of Engineers

LEGEND

- MW-6 — MONITORING WELL
- PRB WALL LOCATION

EASEMENT KEY

- SCOTIA INDUSTRIAL PARK PARCEL 1
- SCOTIA INDUSTRIAL PARK PARCEL 2
- GSA PARCEL C-1
- BELGIOIOSO CHEESE INC. PARCEL C-3 THROUGH SCHENECTADY METROPLEX DEVELOPMENT AUTHORITY
- NATIONAL GRID R.O.W. AND APPROXIMATE GAS EASEMENT
- APPROXIMATE NATIONAL GRID GAS PIPELINE E-36 EASEMENT

0 300' 600'

MAP REFERENCE:
MAPPING BASED ON PLANS 1 AND 2 OF 2 TITLED ENVIRONMENTAL EASEMENT SURVEY PORTION OF LANDS NOW OR FORMERLY OF SCHENECTADY COUNTY INDUSTRIAL DEVELOPMENT AGENCY AND LANDS OF THE UNITED STATES OF AMERICA SCOTIA GSA/DLA DEPOT, TOWN OF GLENVILLE, SCHENECTADY COUNTY, NEW YORK, DWG. NO. 16-476, BY C.T. MALE ASSOCIATES, DATED AUG. 11, 2016, INCLUDING ALL NOTES AND REFERENCES THEREIN.

AECOM

Figure: 3-1

SITE LAYOUT MAP

US ARMY Corps of Engineers

PERIODIC REVIEW REPORT

DEFENSE NATIONAL STOCKPILE CENTER

SCOTIA DEPOT SITE - SCOTIA, NY

Project No.: 60440641 Date: April 2019

SITE KEY

- 15 FT. HIGH PERMEABLE REACTIVE BARRIER WALL - 65' - 80' BGS
- 45 FT. HIGH PERMEABLE REACTIVE BARRIER WALL - 65' - 110' BGS
- SVI VACUUM EXTRACTION POINT
- SVI BLOWER LOCATION
- SVI PIPE ROUTING
- 203AI-1 SVI MONITORING POINT
- MW-25 MONITORING WELL
- APPROXIMATE EXTENT OF TCE GROUNDWATER PLUME
- APPROXIMATE EXTENT OF CARBON TETRACHLORIDE PLUME

0 200' 400'

AECOM

Figure: 5-1

PRB LOCATION MAP AND MONITORING LOCATIONS

250.0 FT. NATIONAL GRID POWER COMPANY EASEMENT

TOWERS

15.0 FT. (TYP.)

250.0 FT. (SHALLOW ZONE)

900.0 FT.

650.0 FT. (DEEP ZONE)

PROPERTY BOUNDARY (TYP.)

CONCRETE REMAINS

80.0'

1st STREET

5th STREET

AVENUE A

AVENUE B

AVENUE C

BUILDING 201

BUILDING 202

BUILDING 203

BUILDING 204

BUILDING 403

BUILDING 404

BUILDING 405

BUILDING 406

MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW B-1, PMW-2

GEP-1, GEP-2, GEP-3, GEP-4

A, A'

B, B'

LEGEND

- 15 FT. HIGH PERMEABLE REACTIVE BARRIER WALL - 65' - 80' BGS
- 45 FT. HIGH PERMEABLE REACTIVE BARRIER WALL - 65' - 110' BGS
- MW-25 MONITORING WELL
- APPROXIMATE EXTENT OF TCE - TRICHLOROETHENE GROUNDWATER PLUME
- APPROXIMATE EXTENT OF CT - CARBON TETRACHLORIDE GROUNDWATER PLUME

0 200' 400'

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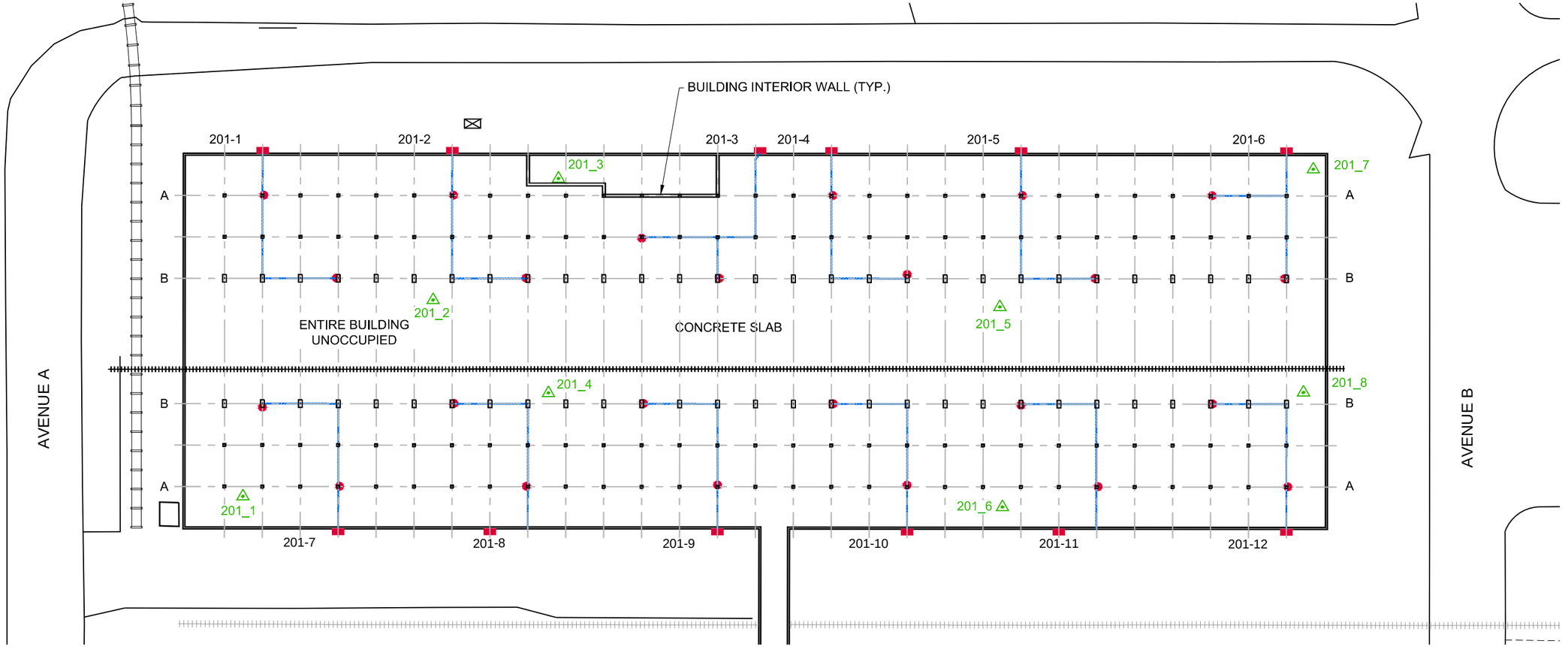

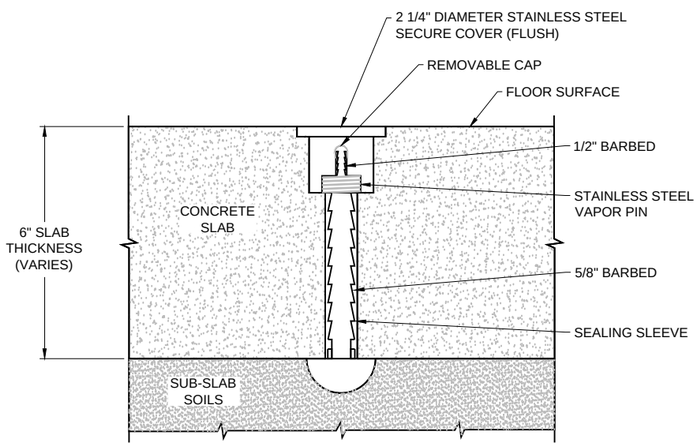

SOIL VAPOR SAMPLING POINT DETAIL

NTS

BUILDING 201
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL

0 60' 120'

AECOM

Figure: 5-2

BUILDING 201
SVI MONITORING LOCATIONS

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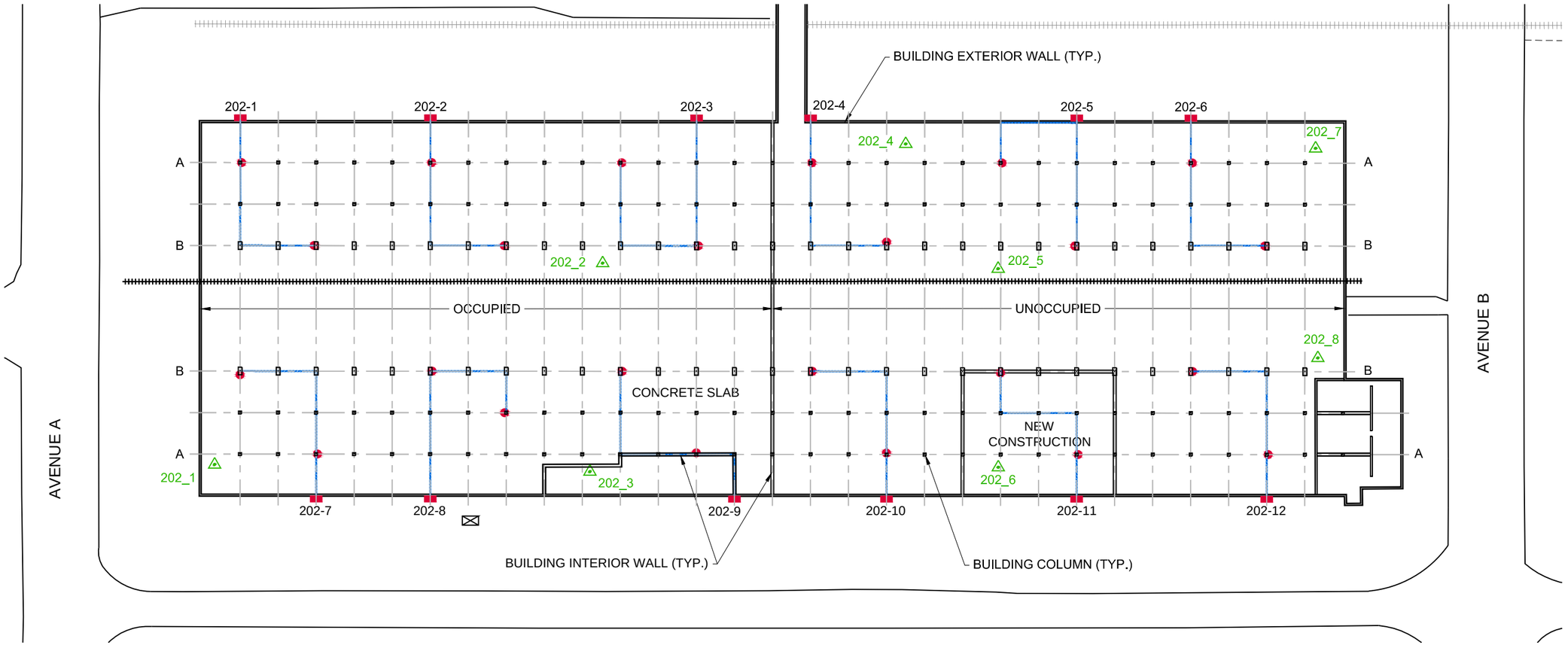

BUILDING 202
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL

0 60' 120'

AECOM

Figure: 5-3

BUILDING 202
SVI MONITORING LOCATIONS

US ARMY Corps of Engineers

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SCOTIA DEPOT SITE - SCOTIA, NY
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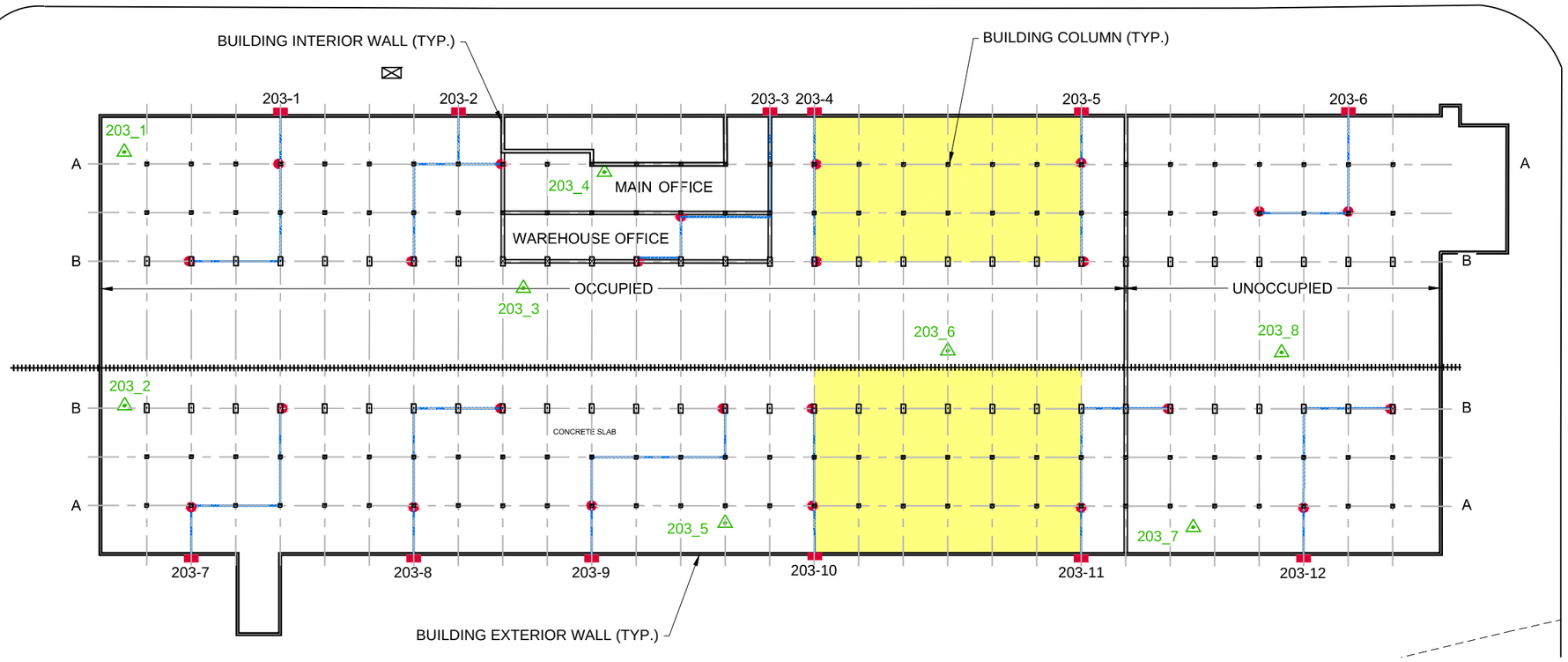

BUILDING 203
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- AREA INACCESSIBLE
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL

0 60' 120'

AECOM

Figure: 5-4

BUILDING 203
SVI MONITORING LOCATIONS

US ARMY Corps
of Engineers

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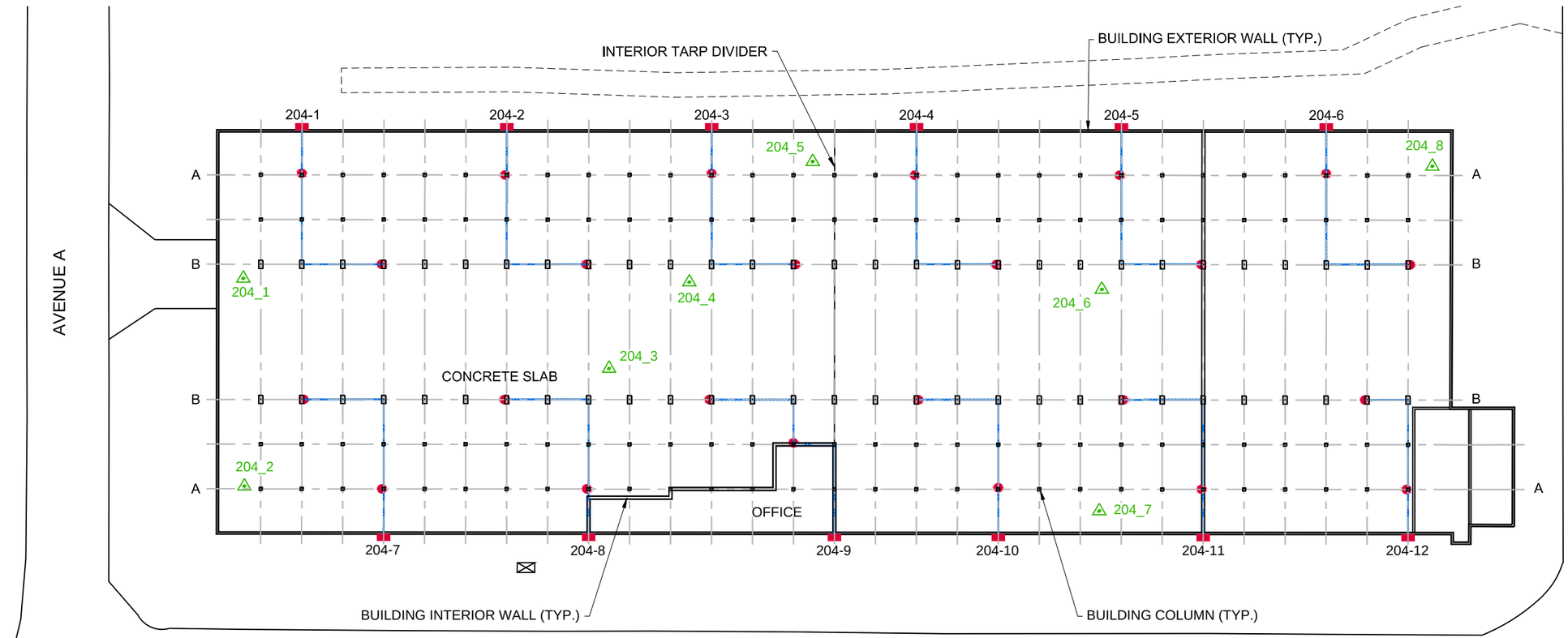
SCOTIA DEPOT SITE - SCOTIA, NY
Project No.: 60440641 Date: April, 2019



BUILDING 204
PLAN

LEGEND

- SINGLE VACUUM EXTRACTION POINT
- BLOWER LOCATION
- PIPE ROUTING
- CONFIRMATION TESTING VACUUM MONITORING POINT
- ELECTRICAL SUPPLY PEDESTAL

0 60' 120'

AECOM

Figure: 5-5

BUILDING 204
SVI MONITORING LOCATIONS

US ARMY Corps of Engineers

PERIODIC REVIEW REPORT
DEFENSE NATIONAL STOCKPILE CENTER
SCOTIA DEPOT SITE - SCOTIA, NY
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TABLES

Table 3-1
Groundwater Elevations Data
The Defense National Stockpile Center Scotia Depot

Well IDs	Screened Interval (ft bgs)	Ground Surface Elevation (ft)	Reference Point Elevation (ft)	Depth To Water (ft bgs) Q1 2017	Depth to Water (ft bgs) Q2 2017	Depth To Water (ft bgs) Q3 2017	Depth To Water (ft bgs) Q4 2017	Depth To Water (ft bgs) Q1 2018	Depth To Water (ft bgs) Q2 2018	Depth To Water (ft bgs) Q3 2018	Depth To Water (ft bgs) Q4 2018	Groundwater Elevation 2015	Groundwater Elevation 2016	Groundwater Elevation Q1 2017	Groundwater Elevation Q2 2017	Groundwater Elevation Q3 2017	Groundwater Elevation Q4 2017	Groundwater Elevation Q1 2018	Groundwater Elevation Q2 2018	Groundwater Elevation Q3 2018	Groundwater Elevation Q4 2018
B-1	48-68	-	287.14	-	57.34		-		dry	dry	dry	**227.74**	-	-	**229.80**	-	-	-	-	-	-
B-3	47.5-67.5	-	287.05	-	-		-	-	58.61	58.74	59.74	**227.95**	-	-	-	-	-	-	**228.44**	**228.31**	**227.31**
MW-4	63.8-73.8	289.58	291.74	-	-		-	-	-	-	-	**225.74**	-	-	-	-	-	-	-	-	-
MW-5	62.5-72.5	287.95	290.11	70.50	63.82	64.00	72.12	71.83	64.30	63.72	71.27	**225.75**	**219.29**	**219.61**	**226.29**	**226.11**	**217.99**	**218.28**	**225.81**	**226.39**	**218.84**
MW-6	58.5-68.5	286.28	288.58	68.78	62.03	62.27	70.19	69.96	62.57	62.11	69.32	**225.86**	**219.80**	**219.80**	**226.55**	**226.31**	**218.39**	**218.62**	**226.01**	**226.47**	**219.26**
MW-7	61-71	286.8	289.26	68.47	61.96	61.95	67.84	68.22	62.80	62.32	67.11	**226.28**	**223.16**	**220.79**	**227.30**	**227.31**	**221.42**	**221.04**	**226.46**	**226.94**	**222.15**
MW-9	110-120	285.98	288.33	68.55	61.85	62.04	69.70	69.74	62.40	61.89	69.06	**225.83**	**219.75**	**219.78**	**226.48**	**226.29**	**218.63**	**218.59**	**225.93**	**226.44**	**219.27**
MW-10	65-80	290.94	293.15	-	-	-	-	-	-	-	-	**228.24**	-	-	-	-	-	-	-	-	-
MW-11	65-80	295.73	295.12	70.12	64.36	65.36	69.55	70.15	66.12	66.80	67.43	**227.7**	**225.91**	**225.00**	**230.76**	**229.76**	**225.57**	**224.97**	**229.00**	**228.32**	**227.69**
MW-13	65-80	292.62	293.85	69.90	64.25	64.40	68.86	69.72	65.75	65.99	67.51	**227.32**	**225.43**	**223.95**	**229.60**	**229.45**	**224.99**	**224.13**	**228.10**	**227.86**	**226.34**
MW-14	65-80	-	296.2	70.13	64.88	65.60	69.13	70.17	66.81	67.52	67.18	**228.08**	**226.56**	**226.07**	**231.32**	**230.60**	**227.07**	**226.03**	**229.39**	**228.68**	**229.02**
MW-15	65-80	-	293.67	68.35	63.07	63.49	67.00	68.20	64.88	65.32	65.42	**227.8**	**226.27**	**225.32**	**230.60**	**230.18**	**226.67**	**225.47**	**228.79**	**228.35**	**228.25**
MW-16	55-70	-	288.33	66.38	60.7	60.28	63.72	65.13	62.14	61.36	63.17	**226.39**	**225.38**	**221.95**	**227.63**	**228.05**	**224.61**	**223.20**	**226.19**	**226.97**	**225.16**
MW-17	60-75	-	295.24	69.25	64.09	64.66	67.99	69.20	65.98	66.60	66.26	**228.08**	**226.55**	**225.99**	**231.15**	**230.58**	**227.25**	**226.04**	**229.26**	**228.64**	**228.98**
MW-18	60-75	-	295.24	69.56	64.49	64.86	68.15	69.48	66.34	66.76	66.62	**227.94**	**226.46**	**225.68**	**230.75**	**230.38**	**227.09**	**225.76**	**228.90**	**228.48**	**228.62**
MW-19	62-77	-	297.67	70.54	65.74	66.42	69.63	70.80	67.80	68.66	67.50	**228.43**	**226.85**	**227.13**	**231.93**	**231.25**	**228.04**	**226.87**	**229.87**	**229.01**	**230.17**
MW-20	63-78	-	301.55	73.72	69.22	69.90	72.93	74.10	71.35	72.34	70.82	**228.71**	**227.01**	**227.83**	**232.33**	**231.65**	**228.62**	**227.45**	**230.20**	**229.21**	**230.73**
MW-21	57-72	-	296.52	70.55	65.19	65.40	69.70	-	-	67.85	67.61	-	-	-	-	-	-	-	-	**228.67**	**228.91**
MW-22	63-78	-	298.91	72.08	67.64	67.80	70.61	72.20	69.65	70.14	-	**228.29**	**226.73**	**226.83**	**231.27**	**231.11**	**228.30**	**226.71**	**229.26**	**228.77**	-
MW-23	63-78	-	300.54	72.14	67.98	68.55	-	-	70.70	71.23	70.76	**228.9**	**227.06**	**228.40**	**232.56**	**231.99**	-	-	**229.84**	**229.31**	**229.78**
MW-24	90-100	290.24	292.45	68.85	63.4	63.62	67.33	68.46	65.02	65.13	66.06	**226.79**	**225.30**	**223.60**	**229.05**	**228.83**	**225.12**	**223.99**	**227.43**	**227.32**	**226.39**
MW-25	65-75	288.16	290.26	65.44	60.61	60.57	63.56	65.13	62.48	62.59	62.42	**227.16**	**225.82**	**224.82**	**229.65**	**229.69**	**226.70**	**225.13**	**227.78**	**227.67**	**227.84**
MW-26	100-110	287.23	286.45	63.85	58.44	58.35	61.80	63.19	60.02	59.86	60.88	**226.06**	**224.75**	**222.60**	**228.01**	**228.10**	**224.65**	**223.26**	**226.43**	**226.59**	**225.57**
MW-27	100-110	286.08	288.32	68.67	61.89	62.00	67.35	67.93	63.11	62.52	66.72	**225.5**	**223.44**	**219.65**	**226.43**	**226.32**	**220.97**	**220.39**	**225.21**	**225.80**	**221.60**
MW-28	67-72	292.55	292.25	67.94	62.46	63.06	66.72	67.81	64.18	64.63	65.24	**227.07**	**225.41**	**224.31**	**229.79**	**229.19**	**225.53**	**224.44**	**228.07**	**227.62**	**227.01**
MW-29	67-72	292.50	292.13	67.80	62.31	62.94	66.90	67.70	64.04	64.49	65.06	**227.05**	**225.38**	**224.33**	**229.82**	**229.19**	**225.23**	**224.43**	**228.09**	**227.64**	**227.07**
MW-30	82-92	291.76	291.63	67.65	62.19	62.59	66.35	67.35	63.83	64.11	64.93	**226.98**	**225.35**	**223.98**	**229.44**	**229.04**	**225.28**	**224.28**	**227.80**	**227.52**	**226.70**
MW-31	82-92	291.80	291.54	67.42	62.02	62.43	66.14	67.20	63.70	63.99	64.69	**226.95**	**225.40**	**224.12**	**229.52**	**229.11**	**225.40**	**224.34**	**227.84**	**227.55**	**226.85**
MW-32	82-92	290.12	289.75	66.05	60.7	60.82	64.33	65.57	62.30	62.36	63.15	**226.86**	**225.45**	**223.70**	**229.05**	**228.93**	**225.42**	**224.18**	**227.45**	**227.39**	**226.60**
MW-33	82-92	290.27	289.91	66.11	60.8	60.86	64.37	65.65	62.40	62.49	63.23	**226.89**	**225.51**	**223.80**	**229.11**	**229.05**	**225.54**	**224.26**	**227.51**	**227.42**	**226.68**
MW-34	82-92	287.30	287.05	63.70	58.39	58.28	61.54	63.16	60.02	59.84	60.68	**226.73**	**225.48**	**223.35**	**228.66**	**228.77**	**225.51**	**223.89**	**227.03**	**227.21**	**226.37**
MW-35	82-92	287.25	286.96	63.56	58.28	58.15	61.40	62.88	59.92	59.70	60.49	**226.69**	**225.46**	**223.40**	**228.68**	**228.81**	**225.56**	**224.08**	**227.04**	**227.26**	**226.47**
MW-36	70-80	292.61	292.36	66.10	61.87	60.98	64.42	66.40	63.23	64.27	63.36	**227.8**	**226.12**	**226.26**	**230.49**	**231.38**	**227.94**	**225.96**	**229.13**	**228.09**	**229.00**
GEP-1	59.6-74.6	-	294.98	70.55	65.06	-	69.30	70.33	-	-	67.72	**227.36**	-	**224.43**	**229.92**	-	**225.68**	**224.65**	-	-	**227.26**
GEP-2	60.6-75.6	-	296.02	70.43	65.18	65.69	69.19	70.35	67.00	67.52	67.51	**227.9**	**226.38**	**225.59**	**230.84**	**230.33**	**226.83**	**225.67**	**229.02**	**228.50**	**228.51**
GEP-3	59.6-74.6	-	292.97	67.71	62.47	62.85	66.30	67.54	64.25	64.62	64.86	**227.81**	**226.31**	**225.26**	**230.50**	**230.12**	**226.67**	**225.43**	**228.72**	**228.35**	**228.11**
GEP-4	60.15-75.15	-	295.62	70.23	65.01	65.50	68.98	-	-	-	-	**227.73**	**226.22**	**225.39**	**230.61**	**230.12**	**226.64**	-	-	-	-

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-15									
		11/9/2015	12/14/2016	3/22/2017	6/21/2017	9/28/2017	12/14/2017	3/14/2018	6/20/2018	9/18/2018	12/20/2018
		Upgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**1.9**	**4.4**	**1.9**	**3.8**	**7.4**	**4.3**	**3.2**	**2.9**	**5.2**	**6.9**
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	**0.44 J**	0.75 U	0.75 U	**0.69 J**	0.75 U	0.75 U	0.75 U	**0.35 J**	**0.51 J**
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	**0.45 J**	0.75 U	0.75 U	0.75 U	0.75 U	**0.48 J**
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	**0.6 J**	**1.7**	**0.84 J**	**0.66 J**	**1.4**	**1.3**	**0.88 J**	**0.62 J**	**0.98 J**	**1.4**
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**77.3**	**183**	**80.5**	**122**	**185**	**143**	**87.8**	**72.1**	**130**	**193**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.4**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.10**	**0.26**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.044 U	0.04 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**182**	**212**	**201**	**217**	**229**	**216**	**223**	**209**	**236**	**224**
Chloride (mg/L)	NS	**28.9**	**14.3**	**28.3**	**40.1**	**30.6**	**39.7**	**24.0**	**46.4**	**42.5**	**37.1**
Nitrate (mg/L)	NS	**0.58**	**0.56**	**0.90**	**0.52**	**0.58**	**0.60**	**0.70**	**0.48**	**0.54**	**0.70**
Sulfate (mg/L)	NS	**12.3**	**12.4**	**21.3**	**20.5**	**14.3**	**20.5**	**12.4**	**15.2**	**13.2**	**11.3**
Methane (µg/L)	NS	**0.19 J**	**0.21 J**	**0.21 J**	**0.25 J**	**0.21 J**	0.50 U	**0.18 J**	**1.3 J+**	1.5 U	1.5 U
Ethane (µg/L)	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	3.3 U	3.3 U
Ethene (µg/L)	NS	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	2.4 U	2.4 U
Total Organic Carbon (mg/L)	NS	**0.55 J**	**0.57 J**	**0.47 J**	**0.21 J**	**0.59 J**	**0.33 J**	**0.26 J**	**0.41 J**	**0.46 J**	**1.0 J+**
Field Parameters											
pH (pH Unit)	NS	7.73	7.31	7.53	7.42	7.16	7.38	7.94	7.62	7.49	7.43
Turbidity (NTU)	NS	11.1	7.00	15.7	2.10	52.1	6.30	9.22	153.0	8.7	17.9
ORP (MeV)	NS	91.4	54.6	-0.6	114.6	92.8	16.6	-1.1	67.2	135.2	320.4
Conductivity (mS/cm)	NS	0.358	0.250	0.387	0.487	0.709	0.416	0.295	0.369	0.458	0.585
Dissolved Oxygen (mg/L)	NS	31.45	8.04	6.37	4.90	9.22	8.38	7.64	6.72	9.44	9.4
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.9
Groundwater Elevation (ft)	NS	227.80	226.27	225.32	230.60	230.18	226.67	225.47	228.79	228.35	228.25

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-16									
		11/11/2015	12/12/2016	3/20/2017	6/20/2017	9/25/2017	12/11/2017	3/13/2018	6/19/2018	9/18/2018	12/18/2018
		Outside Plume									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**0.49 J**	0.75 U	**0.53 J**	**0.50 J**	**0.44 J**	0.75 U	0.75 U	0.75 U	**0.34 J**	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**0.55 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.15**	NA
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.044 U	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**248**	**312**	**317**	**322**	**480**	**322**	**295**	**317**	**339**	**321**
Chloride (mg/L)	NS	**13.6**	**9.0**	**5.6**	**20.2**	**4.3**	**4.0**	**2.9**	**3.9**	**2.3**	**2.8**
Nitrate (mg/L)	NS	**1.6**	**1.6**	**2.1**	**3.7**	**1.4**	**1.1**	**1.6**	**2.0**	**1.9**	**0.88 J**
Sulfate (mg/L)	NS	**35.2**	**44.8**	**65.3**	**75.5**	**64.8**	**119**	**123**	**27.3**	**28.7**	**46.0**
Methane (µg/L)	NS	0.25 U	**0.14 J**	0.50 U	**0.19 J**	**0.23 J**	0.50 U	0.25 U	1.1 U	1.2 U	1.5 U
Ethane (µg/L)	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	3.3 U	3.3 U
Ethene (µg/L)	NS	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	2.4 U	2.4 U
Total Organic Carbon (mg/L)	NS	**3.6**	**0.96 J**	**1.1**	**0.67 J**	**0.64 J**	**0.9 J**	**0.86 J**	**1.2**	**0.62 J**	**1.5 J+**
Field Parameters											
pH (pH Unit)	NS	7.64	7.27	10.8	6.57	7.12	7.1	6.76	7.89	7.08	7.25
Turbidity (NTU)	NS	8.01	14.8	7.71	4.40	199	30.9	8.14	10.77	20.50	1.53
ORP (MeV)	NS	137.6	139.9	115.9	298.7	82.2	94.5	118.7	16.2	215.7	138.2
Conductivity (mS/cm)	NS	0.361	0.388	0.436	0.486	0.928	0.596	0.462	0.441	0.511	0.874
Dissolved Oxygen (mg/L)	NS	22.27	9.50	10.40	10.82	9.81	10.30	10.09	11.71	10.04	10.93
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.2
Groundwater Elevation (ft)	NS	226.39	225.38	221.95	227.63	228.05	224.61	223.20	226.19	226.97	225.16

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-24									
		11/10/2015	12/13/2016	3/21/2017	6/26/2017	9/26/2017	12/12/2017	3/14/2018	6/21/2018	9/18/2018	12/20/2018
		Downgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.37 J**	0.75 U	0.75 U	**0.55 J**
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.40 J**	**3.0**	**6.1**
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**0.93 J**	**1.4**	**1.7**	**1.2**	**1.0**	**0.94 J**	**2.0**	**0.66 J**	**0.97 J**	**1.3**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.4**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**1.4**	**1.4**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.044 U	0.04 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**168**	**198**	**205**	**195**	**282**	**352**	**313**	**159**	**200**	**185**
Chloride (mg/L)	NS	**36.3**	**38.5**	**59.0**	**41.0**	**110**	**155**	**60.8**	**37.1**	**36.7**	**32.6**
Nitrate (mg/L)	NS	**0.9**	0.06 U	0.06 U	**0.04 J**	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Sulfate (mg/L)	NS	**15.5**	**21.4**	**24.1**	**22.1**	0.5 U	**0.48 J**	**0.22 J**	**21.5**	**14.2**	**2.7**
Methane (µg/L)	NS	**0.82**	**1.6**	**1.7**	**2.2**	**7.8**	**431**	**927**	**1.3 J+**	**13.9**	**102**
Ethane (µg/L)	NS	**0.34 J**	0.50 U	0.50 U	0.50 U	**0.29 J**	0.50 U	0.50 U	0.50 U	**1.5 J**	**11.2**
Ethene (µg/L)	NS	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**1.0 J**	**0.20 J**	**9.5**	**9.7**
Total Organic Carbon (mg/L)	NS	**3.5**	**1.9**	**1.0 J**	**0.79 J**	**94.6**	**96.2**	**44.1**	**4.5**	**3.1**	**4.0**
Field Parameters											
pH (pH Unit)	NS	7.75	7.22	7.83	7.78	7.40	7.29	7.97	7.95	7.70	7.92
Turbidity (NTU)	NS	9.33	13.9	16.3	35.2	88.37	2.8	16.0	19.5	7.94	2.77
ORP (MeV)	NS	-80.2	-93.2	-111.3	-108.6	-169.9	-83.1	-127.6	-147.3	-162.2	-185.0
Conductivity (mS/cm)	NS	0.327	0.570	0.438	0.365	1.396	8.411	0.409	0.204	0.403	0.436
Dissolved Oxygen (mg/L)	NS	0.94	0.44	0.55	1.20	0.30	0.15	0.55	11.71	7.23	0.5
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1
Groundwater Elevation (ft)	NS	226.79	225.30	223.60	229.05	228.83	225.12	223.99	227.43	227.32	226.39

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-26									
		11/17/2015	12/13/2016	3/21/2017	6/26/2017	9/25/2017	12/12/2017	3/14/2018	6/20/2018	9/18/2018	12/18/2018
		Downgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	**0.57 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.61**	**0.23**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.43**	**0.029 J**
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**204**	**197**	**196**	**223**	**317**	**204**	**196**	**225**	**178**	**179**
Chloride (mg/L)	NS	**45.2**	**44.9**	**53.4**	**133**	**86.2**	**56.7**	**32.3**	**49.1**	**21**	**48.3**
Nitrate (mg/L)	NS	0.06 U	**0.04 J**	0.06 U	**0.02 J**	0.06 U	0.06 U	0.06 U	0.06 U	**0.04 J**	**0.06 J**
Sulfate (mg/L)	NS	**25.1**	**24.6**	**29.4**	**20.9**	**5.9**	**25.7**	**10.6**	**16.3**	**4.8**	**22.4**
Methane (µg/L)	NS	**34.8**	**2.7**	**1.4 J**	**2.1**	**444**	**20.7**	**26.6**	**80**	**12.9**	**19.7 J+**
Ethane (µg/L)	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	3.3 U	3.3 U
Ethene (µg/L)	NS	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	2.4 U	2.4 U
Total Organic Carbon (mg/L)	NS	**9.3**	**2.6**	**1.3 J**	**30.7**	**52.1**	**1.1**	**5.8 J**	**0.50 J**	**12.9**	**2.2**
Field Parameters											
pH (pH Unit)	NS	7.52	7.22	7.80	7.23	7.39	7.65	7.56	7.57	7.29	7.43
Turbidity (NTU)	NS	68.3	21.8	31.9	0.4	60.96	57.38	18.6	36.2	9.12	7.65
ORP (MeV)	NS	-103.6	-28.9	-46.4	-26.9	-138.7	-173.0	-89.4	-75.3	82.0	-44.9
Conductivity (mS/cm)	NS	0.324	0.590	0.469	0.630	1.347	0.426	0.260	0.415	0.270	0.715
Dissolved Oxygen (mg/L)	NS	0.00	0.33	0.27	0.62	0.33	0.66	0.27	1.38	8.9	0.55
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.3
Groundwater Elevation (ft)	NS	226.06	224.75	222.60	228.01	228.10	224.65	223.26	226.43	226.59	225.57

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well									
		MW-28									
		12/1/2015	12/14/2016	3/22/2017	6/27/2017	9/27/2017	12/14/2017	3/15/2018	6/22/2018	9/21/2018	12/20/2018
		Downgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**11.2**	**10.4**	**9.9**	**8.9 J**	**10.5**	**9.5**	**5.6**	**10.5**	**9.0**	**9.8**
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	**0.46 J**	0.75 U	0.75 U	0.75 U	0.75 U	**0.33 J**	0.75 U	**0.44 J**	**0.42 J**	**0.34 J**
1,1-Dichloroethane (1,1-DCA)	5	**1.0**	**0.77 J**	**0.88 J**	**1.0 J**	**1.3**	**0.84 J**	**0.69 J**	**0.86 J**	**1.2**	**1.2**
1,1-Dichloroethene (1,1-DCE)	5	**0.53 J**	**0.43 J**	**0.53 J**	**0.38 J**	**0.76 J**	**0.45 J**	0.75 U	**0.39 J**	**0.34 J**	**0.42 J**
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	**0.61 J**	0.75 U	**0.62 J**	0.75 U	**0.53 J**	**0.57 J**	0.75 U	0.75 U	0.75 U	**0.42 J**
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	**4.7**	**4.3**	**4.4**	**4.7 J**	**5.5**	**5.0**	**4.4**	**4.9**	**4.5**	**4.7**
Tetrachloroethene (PCE; PERC)	5	**33**	**44.6**	**42.4**	**36.3 J**	**37.1**	**45.2**	**23.2**	**38.7**	**43.7**	**34.7**
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	**0.47 J**	**0.42 J**	**0.37 J**	**0.35 J**	**0.49 J**	0.75 U	**0.36 J**	**0.33 J**	0.75 U
Trichloroethene (TCE)	5	**182**	**196**	**181**	**195**	**170**	**201**	**153**	**214**	**232 J**	**195**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**3.9**	**3.7**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.045 U	**0.024 J**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.044 U	0.04 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**352**	**316**	**295**	**352**	**380**	**383**	**360**	**422**	**345**	**342**
Chloride (mg/L)	NS	**22.1**	**32.4**	**25.7**	**29.0**	**25.7**	**20.4**	**20.9**	**33.1**	**42.7**	**25.4**
Nitrate (mg/L)	NS	0.06 U	**0.06 J**	**0.44**	**1.5**	**0.18 J**	**1.2**	**1.5**	**0.58**	**0.58**	**0.16 J**
Sulfate (mg/L)	NS	**22.4**	**20.9**	**21.6**	**13.0**	**10.3**	**22.4**	**20.2**	**23.1**	**13.2**	**13.1**
Methane (µg/L)	NS	**3.4**	**3.0**	**0.94**	**1.0**	**0.37 J**	0.50 U	0.25 U	**1800**	**60.8**	1.5 U
Ethane (µg/L)	NS	0.50 U	**3.6**	**1.0**	0.50 U	**0.45 J**	0.50 U	0.50 U	0.50 U	**1.3 J**	3.3 U
Ethene (µg/L)	NS	0.75 U	**1.3 J**	**1.9**	0.75 U	**0.72 J**	0.75 U	0.75 U	0.75 U	**1.4 J**	2.4 U
Total Organic Carbon (mg/L)	NS	**1.9**	**2.3**	**0.81 J**	**0.76 J**	**1.9**	**0.94 J**	**0.36 J**	**4.1**	**0.85 J**	**2.1 J+**
Field Parameters											
pH (pH Unit)	NS	6.83	7.03	7.12	7.05	6.87	7.15	8.17	7.33	7.08	7.21
Turbidity (NTU)	NS	209	1.5	2.07	-3	61.1	229.80	8.52	1.32	0.02	0.59
ORP (MeV)	NS	273	71.2	77.1	97.4	32.1	19.0	-16.3	11.1	120.9	81.7
Conductivity (mS/cm)	NS	0.324	0.366	0.520	0.554	1.045	0.564	0.406	0.733	0.797	0.759
Dissolved Oxygen (mg/L)	NS	6.75	3.94	5.2	7.59	4.3	8.45	11.96	0.63	8.83	4.13
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.7
Groundwater Elevation (ft)	NS	227.07	225.41	224.31	229.79	229.19	225.53	224.44	228.07	227.62	227.01

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well									
		MW-29									
		12/1/2015	12/14/2016	3/22/2017	6/27/2017	9/27/2017	12/14/2017	3/15/2018	6/22/2018	9/20/2018	12/20/2018
		Upgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**12.4**	**14.0 J**	**10.4**	**11.8 J**	**13.6**	**14.6**	**13.2**	**11.8**	**10.4**	**9.3**
1,1,2,2-Tetrachloroethane	5	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.45 J**	**0.34 J**	**0.36 J**
1,1-Dichloroethane (1,1-DCA)	5	**0.97 J**	3.8 U	**0.45 J**	**1.0 J**	**1.2**	**0.88 J**	**0.91 J**	**0.84 J**	**0.87 J**	**1.0 J**
1,1-Dichloroethene (1,1-DCE)	5	**0.68 J**	3.8 U	**0.55 J**	**0.63 J**	**0.99 J**	**0.96 J**	**0.77 J**	**0.48 J**	**0.41 J**	**0.46 J**
1,2-Dichloroethane (EDC)	0.6	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	3.8 U	**0.63 J**	0.75 U	**0.85 J**	**0.71 J**	**0.72 J**	**0.82 J**	0.75 U	**0.67 J**
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	**4.9**	**6.1 J**	**3.1**	**5.8 J**	**5.6**	**5.7**	**5.4**	**5.1**	**3.7**	**4.1**
Tetrachloroethene (PCE; PERC)	5	**33.2**	**30.8 J**	**37.2**	**38.1 J**	**42.2**	**41.7**	**38.9**	**35.4**	**31.9**	**30.8**
Toluene	5	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	3.8 U	**0.61 J**	**0.70 J**	**0.67 J**	**0.62 J**	**0.44 J**	**0.59 J**	**0.35 J**	**0.40 J**
Trichloroethene (TCE)	5	**224**	**209 J**	**197**	**264**	**226**	**233**	**207**	**248**	**218**	**218**
Vinyl Chloride (VC)	2	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**2.8**	**2**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.062 J**	**0.14**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.044 U	0.040 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**327**	**301**	**258**	**361**	**374**	**348**	**360**	**370**	**374**	**380**
Chloride (mg/L)	NS	**28.2**	**28.4**	**21.3**	**49.4**	**24.2**	**21.3**	**23.4**	**28**	**29.9**	**28.8**
Nitrate (mg/L)	NS	**0.1 J**	**0.26**	**0.52**	**1.3**	**0.12 J**	**0.86**	**1.3**	**0.38**	**0.48 J**	**0.50**
Sulfate (mg/L)	NS	**29.2**	**24.9**	**20.1**	**13.8**	**16.1**	**22.7**	**15**	**21**	**11.8**	**21.0**
Methane (µg/L)	NS	**13.9**	**0.62**	**1.1**	**0.20 J**	**0.21 J**	0.50 U	0.25 U	**210**	1.5 U	1.5 U
Ethane (µg/L)	NS	**0.81 J**	0.50 U	0.5 U	0.50	0.50 U	0.50 U	0.50 U	0.50 U	3.3 U	3.3 U
Ethene (µg/L)	NS	**0.59 J**	0.75 U	0.75 U	0.75	0.75 U	0.75 U	0.75 U	0.75 U	2.4 U	2.4 U
Total Organic Carbon (mg/L)	NS	**2.3**	**1.4**	**0.91 J**	**0.92 J**	**2.1**	**1.2**	**0.38 J**	**3.2**	**1.3**	**1.7 J+**
Field Parameters											
pH (pH Unit)	NS	7.06	7.02	7.43	7.02	6.91	7.01	7.79	7.33	7.14	7.2
Turbidity (NTU)	NS	82.4	0.62	2.73	2.80	65.1	1.50	8.11	15.2	0.02	4.55
ORP (MeV)	NS	-25.1	60.9	46.1	120	41.7	33.7	2.8	52.3	90.9	98.6
Conductivity (mS/cm)	NS	0.325	0.354	0.424	0.619	1.058	0.559	0.420	0.61	0.683	0.796
Dissolved Oxygen (mg/L)	NS	4.29	6.17	9.26	7.12	6.46	8.65	7.42	2.98	9.66	5.02
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.6
Groundwater Elevation (ft)	NS	227.05	225.38	224.33	229.79	229.19	225.23	224.43	228.09	227.64	227.07

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well									
		MW-30									
		12/1/2015	12/13/2016	3/21/2017	6/26/2017	9/27/2017	12/13/2017	3/15/2018	6/21/2018	9/20/2018	12/19/2018
		Downgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	**0.74 J**	**0.61 J**	**0.39 J**	**0.41 J**	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**25.2**	**42.3**	**66.3**	**24.3**	**18.4**	**19.6**	**9.8**	**8.1**	**8.2**	**7.3**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**12**	**36**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 UJ	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.16**	**0.087**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.04 U	0.040 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**143**	**319**	**210**	**154**	**104**	**347**	**141**	**58**	**59**	**51**
Chloride (mg/L)	NS	**38.4**	**182**	**136**	**49.6**	**35.3**	**87.3**	**43.6**	**38.8**	**40.7**	**39.2**
Nitrate (mg/L)	NS	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Sulfate (mg/L)	NS	**35.9**	**2.9**	0.5 U	**0.32 J**	0.5 U	**0.22 J**	0.5 U	**0.34 J**	0.5 U	**0.76 J**
Methane (µg/L)	NS	**47.4**	**146**	**870**	**3210**	**3560**	**12900**	**5860**	**3700**	**4410**	**3790**
Ethane (µg/L)	NS	**4.7**	**5.4**	**23.5**	**36.7**	**39.7**	**40.5**	**31.1**	**52**	**42.2**	**46.4**
Ethene (µg/L)	NS	**2.2**	**3.3**	**9.1**	**12.7**	**8.5**	**4.2**	**2.2**	**6.3**	**4.3**	**2.8**
Total Organic Carbon (mg/L)	NS	**2.2**	**225**	**139**	**75.2**	**27.0**	**366**	**50.9**	**9.7 J**	**10.2**	**12.1**
Field Parameters											
pH (pH Unit)	NS	8.91	6.83	7.60	8.01	8.01	7.41	8.54	8.28	8.48	8.84
Turbidity (NTU)	NS	58.2	3.55	3.82	3	69.1	16.1	3.12	950.5	0.02	1.36
ORP (MeV)	NS	-278.4	-166.3	-166.9	-173.3	-212.2	-170.1	-122.8	12.1	-217.6	-208.4
Conductivity (mS/cm)	NS	0.210	1.410	0.740	0.320	0.412	0.758	0.212	0.238	0.235	0.216
Dissolved Oxygen (mg/L)	NS	3.70	0.29	0.17	0.48	0.06	0.80	0.19	0.98	8.41	0.44
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2
Groundwater Elevation (ft)	NS	226.98	225.35	223.98	229.44	229.04	225.28	224.28	227.80	227.52	226.70

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well MW-31									
		12/1/2015	12/14/2016	3/22/2017	6/26/2017	9/27/2017	12/13/2017	3/15/2018	6/21/2018	9/20/2018	12/19/2018
		Upgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	**0.41 J**	**0.50 J**	**0.42 J**	**0.40 J**	**0.37 J**	0.75 U	**0.34 J**	**0.37 J**
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**42.7**	**38.2**	**35.0**	**29.0**	**25.6**	**19.6**	**19.1**	**20.6**	**19.7 J+**	**19.1**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**4.1**	**1.9**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.76**	**0.87**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.04 U	0.04 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**178**	**222**	**381**	**150**	**132**	**119**	**143**	**169**	**169**	**172**
Chloride (mg/L)	NS	**41.9**	**56.6**	**98.5**	**31.0**	**31.7**	**36.3**	**50.6**	**39.9**	**32**	**34.6**
Nitrate (mg/L)	NS	0.06 U	0.06 U	**0.04 J**	**0.02 J**	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Sulfate (mg/L)	NS	**26.3**	**10.9**	**2.6**	**5.6**	**5.6**	**7.8**	**6.7**	**7.8**	**4.6**	**7.1**
Methane (µg/L)	NS	**20.7**	**3.5**	**106**	**56.5**	**29.1**	**59.4**	**34.4**	**120**	**90.6**	**126**
Ethane (µg/L)	NS	**2.2**	**1.5**	**10.1**	**2.7**	**2.6**	**3.3**	**2.6**	**5.7**	**4.2**	**4.3**
Ethene (µg/L)	NS	**0.91 J**	**0.84 J**	**4.7**	**3.2**	**2.3**	**1.9**	**1.6**	**104**	**1.4 J**	**1.3 J**
Total Organic Carbon (mg/L)	NS	**2.1**	**43.9**	**257**	**2.8**	**1.5**	**1.3**	**1.1**	**2.1**	**0.69 J**	**1.1 J+**
Field Parameters											
pH (pH Unit)	NS	7.80	7.20	7.61	9.79	7.63	7.68	8.31	7.83	7.85	8.00
Turbidity (NTU)	NS	51.7	8.03	11.4	4.60	8.60	8.62	2.95	2.6	0.02	4.36
ORP (MeV)	NS	-319.7	-163.1	-201.5	-283.2	-174.4	-208.0	-161.7	-155.1	-180.6	-172.9
Conductivity (mS/cm)	NS	0.243	0.348	0.850	0.280	0.526	0.294	0.261	0.324	0.378	0.362
Dissolved Oxygen (mg/L)	NS	1.29	0.28	0.22	0.70	0.13	0.19	0.17	0.22	7.99	0.48
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1
Groundwater Elevation (ft)	NS	226.95	225.40	224.12	229.52	229.11	225.40	224.34	227.84	227.55	226.85

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well									
		MW-32									
		11/30/2015	12/13/2016	3/21/2017	6/26/2017	9/26/2017	12/13/2017	3/14/2018	6/21/2018	9/20/2018	12/19/2018
		Downgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	**0.40 J**	**0.48 J**	**0.60 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	**1.2**	**1.3**	**1.2**	**0.68 J**	**0.61 J**	**0.62 J**	**1.3**	**0.85 J**
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**150**	**132**	**191**	**130**	**135**	**120**	**104**	**64.1**	**95.4**	**87.1**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**7.4**	**2.2**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.51**	**1.0**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.044 U	0.04 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**196**	**277**	**214**	**129**	**129**	**141**	**162**	**128**	**129**	**158**
Chloride (mg/L)	NS	**35.6**	**138**	**84.6**	**38.0**	**30.7**	**28.2**	**25.4**	**29.5**	**27.8**	**24.5**
Nitrate (mg/L)	NS	0.06 U	0.06 U	**0.02 J**	**0.02 J**	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Sulfate (mg/L)	NS	**21.1**	**2.8**	**0.68 J**	**0.50 J**	**0.4 J**	**6.0**	**7.1**	**2.3**	**1.4 J**	**6.0**
Methane (µg/L)	NS	**6.8**	**16.5**	**309**	**817**	**835**	**233 J**	**583**	**130**	**2650**	**407**
Ethane (µg/L)	NS	**0.5 J**	**1.5**	**19.3**	**35.9**	**29.4**	**5.6 J**	**10.7**	**2**	**21.1**	**12.0**
Ethene (µg/L)	NS	0.75 U	**1.8**	**10.3**	**15.6**	**5.4**	**2.3 J**	**3.3**	**0.25 J**	**4.7**	**1.5 J**
Total Organic Carbon (mg/L)	NS	**2.6**	**133**	**98.0**	**22.0**	**5.0**	**5.4 J**	**2.7**	**6.4**	**3.9**	**2.4**
Field Parameters											
pH (pH Unit)	NS	8.00	6.69	7.54	9.28	7.65	7.43	7.97	8.03	7.94	7.94
Turbidity (NTU)	NS	180	5.92	4.01	5.10	3.91	5.11	1.36	0.02	0.02	1.60
ORP (MeV)	NS	-234.2	-107.7	-140.7	-238.7	-149.4	-181.9	-106.4	-149.4	-201	-180.0
Conductivity (mS/cm)	NS	0.239	1.180	0.640	0.261	0.478	0.257	0.239	0.206	0.291	0.338
Dissolved Oxygen (mg/L)	NS	0.64	1.81	1.77	2.50	1.80	1.50	0.25	8.26	8.44	0.47
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.4
Groundwater Elevation (ft)	NS	226.86	225.45	223.70	229.05	228.93	225.42	224.18	227.45	227.39	226.60

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well									
		MW-33									
		11/24/2015	12/14/2016	3/22/2017	6/26/2017	9/26/2017	12/13/2017	3/14/2018	6/21/2018	9/19/2018	12/19/2018
		Upgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**133**	**93.5**	**151**	**152**	**170**	**142**	**155**	**178**	**137**	**159**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**3.9**	**2.1**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.05 U	**0.071**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.045 J**	0.04 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**172**	**218**	**194**	**205**	**202**	**212**	**215**	**215**	**213**	**211**
Chloride (mg/L)	NS	**41.8**	**43.2**	**29.2**	**22.8**	**24.6**	**28.1**	**23.0**	**22.5**	**24.8 J-**	**23.9**
Nitrate (mg/L)	NS	0.06 U	0.06 U	**0.32**	**0.32**	**0.30**	**0.32**	**0.34**	**0.42**	**0.4 J**	**0.44**
Sulfate (mg/L)	NS	**25.1**	**8.2**	**15.0**	**11.8**	**12.6**	**14.8**	**11.6**	**14.3**	**14.6**	**12.1**
Methane (µg/L)	NS	**64**	**3.4**	**9.2**	**16.0**	**17.8**	**7.2**	**6.1**	**17**	1.5 U	**10.3 J+**
Ethane (µg/L)	NS	**7**	**0.25 J**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	3.3 U	3.3 U
Ethene (µg/L)	NS	**3.6**	**0.48 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	2.4 U	2.4 U
Total Organic Carbon (mg/L)	NS	**8.1**	**30.9**	**2.1**	**0.54 J**	**0.44 J**	**0.44 J**	**0.83 J**	**1.6**	**0.58 J**	**1.1 J+**
Field Parameters											
pH (pH Unit)	NS	8.39	7.18	7.58	8.8	7.51	7.53	7.99	7.66	7.69	7.69
Turbidity (NTU)	NS	23.1	9.31	11.7	3.40	51.2	6.38	9.18	2.78	0.02	2.96
ORP (MeV)	NS	-471.2	-126.8	-64.3	44.9	-3.2	-20.4	-49.9	17.6	98.7	81.9
Conductivity (mS/cm)	NS	0.247	0.303	0.386	0.350	0.648	0.370	0.285	0.385	0.456	0.390
Dissolved Oxygen (mg/L)	NS	0.92	0.41	2.50	2.99	2.87	6.80	1.89	3.41	9.21	3.96
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.3
Groundwater Elevation (ft)	NS	226.89	225.51	223.80	229.11	229.05	225.54	224.26	227.51	227.42	226.68

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well									
		MW-34									
		11/24/2015	12/13/2016	3/21/2017	6/26/2017	9/26/2017	12/12/2017	3/13/2018	6/20/2018	9/19/2018	12/20/2018
		Downgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	**0.42 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**17.7**	**41.3**	**48.3**	**34.0**	**29.6**	**28.0**	**17.6**	**31.3**	**6.9**	**10.6**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**3.1**	**3.1**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.05 U	**0.068**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.04 U	0.04 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**99**	**191**	**597**	**201**	**197**	**203**	**174**	**226**	**183**	**162**
Chloride (mg/L)	NS	**48.5**	**62.3**	**461**	**15.7**	**11.7**	**12.9**	**15.4**	**16.3**	2.0 U	**12.6**
Nitrate (mg/L)	NS	**0.56**	**0.06 J**	0.06 U	**0.04 J**	0.06 U	**0.02 J**	**0.02 J**	0.06 U	**0.56 J**	0.06 U
Sulfate (mg/L)	NS	**64.3**	**23.8**	**0.56 J**	**13.4**	**9.0**	**7.3**	**8.5**	**11.2**	**3.9**	**3.3**
Methane (µg/L)	NS	**14.5**	**1.2**	**1780**	**12.4**	**88.1**	**531**	**1260**	**35**	1.5 U	**737**
Ethane (µg/L)	NS	**2.2**	0.50 U	**17.3**	0.50 U	**0.45 J**	**1.1**	**1.3**	0.50 U	3.31 U	**4.0**
Ethene (µg/L)	NS	**1.8**	0.75 U	**4.4**	0.75 U	**0.58 J**	0.75 U	0.75 U	0.75 U	2.41 U	2.4 U
Total Organic Carbon (mg/L)	NS	**5.9**	**12.0**	**631**	**3.3**	**3.8**	**4.1**	**3.4**	**0.93 J**	**6.8**	**3.2 J+**
Field Parameters											
pH (pH Unit)	NS	12.68	7.14	7.45	7.26	7.26	7.40	7.37	7.30	7.12	7.67
Turbidity (NTU)	NS	44.7	3.23	4.59	-4	4.40	4.20	5.63	1.4	0.02	4.26
ORP (MeV)	NS	-185.4	-8.4	-144.0	-139.4	-63.1	-133.4	25.0	-76.3	118.1	-29.2
Conductivity (mS/cm)	NS	0.361	0.630	2.280	0.332	0.578	0.310	0.234	0.332	0.312	0.341
Dissolved Oxygen (mg/L)	NS	6.9	1.12	0.12	0.46	0.62	2.70	0.34	1.31	8.69	0.47
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.2
Groundwater Elevation (ft)	NS	226.73	225.48	223.35	228.66	228.77	225.51	223.89	227.03	227.21	226.37

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-2
Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well									
		MW-35									
		11/24/2015	12/15/2016	3/22/2017	6/26/2017	9/26/2017	12/12/2017	3/13/2018	6/20/2018	9/19/20118	12/20/2018
		Upgradient									
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 UJ	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**31.9**	**31.8**	**12.5**	**43.8 J**	**47.8**	**43.5**	**21.2**	**39.4**	**15.2**	**38.1**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters											
Dissolved Hydrogen (nmol/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**2.6**	**2.1**
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA
Total Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	**0.45**	**0.12**
Dissolved Iron (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.044 U	**0.093**
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**181**	**223**	**51**	**202**	**192**	**210**	**171**	**197**	**115**	**195**
Chloride (mg/L)	NS	**42.2**	**53.9**	**2.0**	**17.1**	**14.4**	**22.2 J+**	**14.5**	**15.7**	**2.1**	**24.4**
Nitrate (mg/L)	NS	0.06 U	**0.04 J**	**0.14 J**	**0.66**	**0.6**	**0.44**	**0.44**	**0.64**	**0.68 J**	**0.58**
Sulfate (mg/L)	NS	**48.1**	**7.2**	**3.5**	**13.6**	**10.8**	**10.2**	**8.5**	**10.7**	**2.5**	**9.7**
Methane (µg/L)	NS	**13.8**	**0.90**	**5.8**	**7.2**	**7.5**	**7.9**	**32.7**	**23**	**50.5**	**12.3 J+**
Ethane (µg/L)	NS	**2.9**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	3.31 U	3.3 U
Ethene (µg/L)	NS	**1.6**	0.75 U	**0.32 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	2.41 U	2.4 U
Total Organic Carbon (mg/L)	NS	**7.7**	**18.3**	**1.4**	**0.75 J**	**0.68 J**	**0.56 J**	**1.2**	**0.6 J**	**3.5**	**1.1 J**
Field Parameters											
pH (pH Unit)	NS	9.68	7.09	8.79	7.66	7.46	7.44	7.46	7.55	7.49	7.77
Turbidity (NTU)	NS	381	5.99	16.3	38.2	31.91	13.81	11.00	25.8	33.8	4.49
ORP (MeV)	NS	-404	-167.9	-68.4	-10.6	30	0.40	57.10	69.5	65.6	45.4
Conductivity (mS/cm)	NS	0.287	0.329	0.078	0.324	0.600	0.338	0.218	0.335	0.204	0.453
Dissolved Oxygen (mg/L)	NS	0.79	0.41	6.63	3.67	4.58	4.84	1.32	3.54	9.57	5.38
Dissolved Oxygen- Membrane Probe (mg/L)	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.5
Groundwater Elevation (ft)	NS	226.69	225.46	223.40	228.68	228.81	225.56	224.08	227.04	227.26	226.47

Notes:
MNA - Monitored Natural Attenuation
NS - No Standard
NA - Not Analyzed
Acetylene analysis was added in June 2018.
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-3
Annual Site Wide Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	GEP-1		GEP-2			GEP-3			GEP-4		MW-B-3		
		11/10/2015	6/23/2017	11/10/2015	6/21/2017	6/20/2018	11/9/2015	6/23/2017	6/20/2018	11/9/2015	6/21/2017	11/13/2015	6/22/2017	7/18/2018
		Upgradient		Upgradient			Upgradient			Upgradient		Outside Plume		
VOCs (µg/L)														
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**4.6**	**3.3 J+**	**19.7**	**16.3**	**3.7**	**0.93 J**	**1.2**	**0.58 J**	**5.1**	**4.7**	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	**0.56 J**	**0.68 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	**0.43 J**	0.75 U	**1.1**	**1.1**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	**1.2**	**1.8**	**1.1**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	**1.0**	**0.45 J**	**3.5**	**3.2**	**0.80 J**	**1.1**	**0.57 J**	**0.36 J**	**0.68 J**	**0.80 J**	**1.8**	**3.9**	**5**
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**180**	**152 J+**	**210**	**167**	**51.3**	**143**	**131**	**74.9**	**85.9**	**72.4**	0.75 U	0.75 U	0.75 U
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters														
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	223	NA	**335**	NA	NA	**217**	NA	NA	**227**	NA	**110**	NA	NA
Chloride (mg/L)	NS	13.2	NA	**5.6**	NA	NA	**15.4**	NA	NA	**22.5**	NA	**155**	NA	NA
Nitrate (mg/L)	NS	1.0	NA	**0.38 J**	NA	NA	**0.79**	NA	NA	**0.71**	NA	**0.66 J+**	NA	NA
Sulfate (mg/L)	NS	10.2	NA	**9.9**	NA	NA	**10.8**	NA	NA	**13.2**	NA	**25.3**	NA	NA
Methane (µg/L)	NS	0.32 J	NA	**0.33 J**	NA	NA	**0.16 J**	NA	NA	**0.4 J**	NA	**0.39 J**	NA	NA
Ethane (µg/L)	NS	0.5 U	NA	0.5 U	NA	NA	0.5 U	NA	NA	0.5 U	NA	0.5 U	NA	NA
Ethene (µg/L)	NS	0.75 U	NA	0.75 U	NA	NA	0.75 U	NA	NA	0.75 U	NA	0.75 U	NA	NA
Total Organic Carbon (mg/L)	NS	3.4	NA	**2.9**	NA	NA	**0.47 J**	NA	NA	**2.7**	NA	**5.2**	NA	NA
Field Parameters														
pH (pH Unit)	NS	7.52	8.31	7.18	6.6	7.57	7.69	7.40	7.40	7.67	7.39	7.86	8.31	7.4
Turbidity (NTU)	NS	33.1	45.6	28.2	0	107	13.9	113.1	78.7	41.8	9.4	4.95	8	217.9
ORP (MeV)	NS	141.8	203.5	180.3	336.1	61.1	131.4	171.5	31.2	110.7	109.9	157.4	180.2	218.0
Conductivity (mS/cm)	NS	0.308	0.396	0.371	0.476	0.417	0.329	0.363	0.364	0.363	0.51	0.461	0.385	0.124
Dissolved Oxygen (mg/L)	NS	19.53	9.9	30.01	8.63	11.49	114.75	9.44	8.91	14.93	5.05	19.91	10.1	9.06
Groundwater Elevation (ft)	NS	224.81	NA	227.90	230.84	229.02	227.81	292.97	228.72	227.73	230.61	227.95	NA	228.44

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-3
Annual Site Wide Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-5			MW-6			MW-7			MW-9			MW-13
		11/12/2015	6/20/2017	6/19/2018	11/12/2015	6/20/2017	6/18/2018	11/11/2015	6/20/2017	6/18/2018	11/12/2015	6/20/2017	6/19/2018	6/20/2018
		Downgradient			Downgradient			Outside Plume			Downgradient			
VOCs (µg/L)														
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**0.51 J**	**0.41 J**	0.75 U	**2.1**	**0.77 J**	0.75 J	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**4.0**
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.34 J**	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	**2.0**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	**0.45 J**	**0.39 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**0.46 J**	**0.58 J**	0.75 U	**59.8**	**26.0**	**24.4**	**1.3**	0.75 U	**32.6**	**0.68 J**	0.75 U	0.75 U	**117**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters														
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**221**	NA	NA	**281**	NA	NA	**353**	NA	NA	**186**	NA	NA	NA
Chloride (mg/L)	NS	**197**	NA	NA	**28.4**	NA	NA	**26.7**	NA	NA	**12**	NA	NA	NA
Nitrate (mg/L)	NS	**6.7**	NA	NA	**1.7**	NA	NA	**1.1**	NA	NA	0.5 U	NA	NA	NA
Sulfate (mg/L)	NS	**36.7 J**	NA	NA	**23.2 J**	NA	NA	**15**	NA	NA	**56.7 J**	NA	NA	NA
Methane (µg/L)	NS	**0.19 J**	NA	NA	0.25 U	NA	NA	**1.7**	NA	NA	**2.7**	NA	NA	NA
Ethane (µg/L)	NS	0.5 U	NA	NA	0.5 U	NA	NA	0.5 U	NA	NA	0.5 U	NA	NA	NA
Ethene (µg/L)	NS	0.75 U	NA	NA	0.75 U	NA	NA	0.75 U	NA	NA	0.75 U	NA	NA	NA
Total Organic Carbon (mg/L)	NS	**7.3**	NA	NA	**5.5**	NA	NA	**5.5**	NA	NA	**3.3**	NA	NA	NA
Field Parameters														
pH (pH Unit)	NS	7.37	6.19	7.10	7.3	7.30	7.31	7.76	7.04	7.31	7.82	6.64	6.96	7.27
Turbidity (NTU)	NS	23.9	4.7	0.02	2.76	3.9	0.02	4.64	7.4	2.60	3.75	0.1	8.11	14.4
ORP (MeV)	NS	74.3	26.3	85.9	151.8	121.4	111.2	165.8	126.4	3.10	-121.4	-1.0	-22.0	28.5
Conductivity (mS/cm)	NS	0.654	0.701	1.59	0.317	0.419	0.358	0.32	0.732	0.58	0.237	0.386	0.39	0.401
Dissolved Oxygen (mg/L)	NS	17.86	12.4	9.60	24.39	8.9	9.98	11.81	7.38	1.31	0	0.59	0.44	8.62
Groundwater Elevation (ft)	NS	225.75	226.29	225.81	225.86	226.55	226.01	226.28	227.30	226.46	225.83	226.48	225.93	228.10

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-3
Annual Site Wide Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-14			MW-15				MW-16				MW-17		
		11/12/2015	6/21/2017	6/20/2018	11/9/2015	12/14/2016	6/21/2017	6/20/2018	11/11/2015	12/12/2016	6/20/2017	6/19/2018	11/16/2015	6/23/2017	6/20/2018
		Upgradient			Upgradient				Outside Plume				Upgradient		
VOCs (µg/L)															
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**3.9**	**1.2**	**2.5**	**1.9**	**4.4**	**3.8**	**2.9**	**0.49 J**	0.75 U	**0.50 J**	0.75 U	**17**	**22**	**19.8**
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	**0.43 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.63 J**	**1.1**	**0.84 J**
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	**0.44 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	**0.49 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.45 J**
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	**2.4**	**0.85 J**	**1.9**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**1.0**	**2.1**	**1.8**
Tetrachloroethene (PCE; PERC)	5	**10.8**	**10.5**	**13.8**	**0.60 J**	**1.7**	**0.66 J**	**0.62 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**3.7**	**2.4**	**3.7**	**77.3**	**183**	**122**	**72.1**	**0.55 J**	0.75 U	0.75 U	0.75 U	**15.2**	**35.2**	**20.5**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters															
Acetylene	NS	NA	NA	NA	NA	NA	NA	1.0 U	NA	NA	NA	1.0 U	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**242**	NA	NA	**182**	**212**	**217**	**209**	**248**	**312**	**322**	**317**	**310**	NA	NA
Chloride (mg/L)	NS	**26.4**	NA	NA	**28.9**	**14.3**	**40.1**	**46.4**	**13.6**	**9.0**	**20.2**	**3.9**	**4.9**	NA	NA
Nitrate (mg/L)	NS	**0.96**	NA	NA	**0.58**	**0.56**	**0.52**	**0.48**	**1.6**	**1.6**	**3.7**	**2**	**0.96**	NA	NA
Sulfate (mg/L)	NS	**21 J**	NA	NA	**12.3**	**12.4**	**20.5**	**15.2**	**35.2**	**44.8**	**75.5**	**27.3**	**14.3**	NA	NA
Methane (µg/L)	NS	**0.86**	NA	NA	**0.19 J**	0.5 U	0.5 U	**1.3 J+**	0.25 U	0.5 U	0.5 U	1.1 U	**0.13 J**	NA	NA
Ethane (µg/L)	NS	0.5 U	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA
Ethene (µg/L)	NS	0.75 U	NA	NA	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	NA	NA
Total Organic Carbon (mg/L)	NS	**6**	NA	NA	**0.55 J**	**0.57 J**	**0.21 J**	**0.41 J**	**3.6**	**0.96 J**	**0.67 J**	**1.2**	**2.7**	NA	NA
Field Parameters															
pH (pH Unit)	NS	7.39	7.28	7.01	7.73	7.31	7.42	7.62	7.64	7.27	6.57	7.89	7.38	7.13	7.15
Turbidity (NTU)	NS	136	5	3.80	11.1	7	2.1	153.0	8.01	14.8	4.4	10.77	9.02	3.1	30.7
ORP (MeV)	NS	119.4	122.6	52.1	91.4	54.6	114.6	67.2	137.6	139.9	298.7	16.2	118.6	159.7	134.1
Conductivity (mS/cm)	NS	0.302	0.479	0.426	0.358	0.25	0.5	0.369	0.361	0.388	0.486	0.441	0.257	0.462	0.423
Dissolved Oxygen (mg/L)	NS	14.94	-13.54	6.7	31.45	8.04	4.9	6.72	22.27	9.5	10.82	11.71	16.42	9.99	8.7
Groundwater Elevation (ft)	NS	228.08	231.32	229.39	227.80	226.27	230.60	228.79	226.39	225.38	227.63	226.19	228.08	231.15	229.26

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-3
Annual Site Wide Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-18			MW-19			MW-20			MW-22			MW-23		
		1/4/1900	6/21/2017	6/19/2018	11/16/2015	6/21/2017	6/19/2018	11/17/2015	6/22/2017	6/19/2018	11/16/2015	6//22/2017	6/21/2018	11/17/2015	6/22/2017	7/18/2018
		Upgradient			Upgradient			Upgradient			Upgradient			Outside Plume		
VOCs (µg/L)																
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
1,1,1-Trichloroethane (1,1,1-TCA)	5	**2.7**	**2.4**	0.75 U	**2.1**	**2.9**	**1.7**	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
1,1-Dichloroethene (1,1-DCE)	5	**0.39 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
Tetrachloroethene (PCE; PERC)	5	**1.6**	**1.8**	0.75 U	0.75 U	0.75 U	0.75 U	**1.5**	**3.7**	**3.0**	**5.6**	**3.8 J**	**6.3**	0.75 U	0.75 U	1 UJ
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
Trichloroethene (TCE)	5	**153**	**117**	**26.8**	**30**	**14.3**	**11.4**	**52.3**	**86.8**	**69.9**	**282**	**238**	**331**	0.75 U	0.75 U	1 UJ
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	3.8 U	0.75 U	0.75 U	1 UJ
MNA Parameters																
Acetylene	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**197**	NA	NA	**267**	NA	NA	**260**	NA	NA	**246**	NA	NA	**211**	NA	NA
Chloride (mg/L)	NS	**16.9**	NA	NA	**3.9**	NA	NA	**2.3**	NA	NA	2 U	NA	NA	**27.6**	NA	NA
Nitrate (mg/L)	NS	0.50 U	NA	NA	**0.48**	NA	NA	**0.74**	NA	NA	**4.5**	NA	NA	**0.66**	NA	NA
Sulfate (mg/L)	NS	**13.2**	NA	NA	**9.8**	NA	NA	**7.7 J**	NA	NA	**7.2**	NA	NA	**30.4 J**	NA	NA
Methane (µg/L)	NS	**1.1**	NA	NA	**0.65**	NA	NA	**1.4 J**	NA	NA	0.25 U	NA	NA	**0.17 J**	NA	NA
Ethane (µg/L)	NS	0.5 U	NA	NA	0.5 U	NA	NA	0.5 U	NA	NA	0.5 U	NA	NA	0.5 U	NA	NA
Ethene (µg/L)	NS	0.75 U	NA	NA	0.75 U	NA	NA	0.75 U	NA	NA	0.75 U	NA	NA	0.75 U	NA	NA
Total Organic Carbon (mg/L)	NS	**9.5**	NA	NA	**5**	NA	NA	**3.9**	NA	NA	**2.2**	NA	NA	**2.5**	NA	NA
Field Parameters																
pH (pH Unit)	NS	7.72	7.03	7.82	7.62	7.82	6.87	7.40	7.83	7.08	7.63	7.18	7.57	7.53	6.60	7.43
Turbidity (NTU)	NS	40.1	3.8	2.33	35.4	19.4	30.8	85.7	26.3	30.8	3.79	40.1	120	13	15.1	Over Range
ORP (MeV)	NS	88.7	298.7	38.5	93.0	297.8	141.6	184.8	136.1	103.5	115.6	178.4	88.6	134.3	169.4	189.4
Conductivity (mS/cm)	NS	0.301	0.394	0.402	0.244	0.428	0.382	0.264	0.36	0.331	0.224	0.36	0.342	0.273	0.405	0.463
Dissolved Oxygen (mg/L)	NS	18.46	6.33	12.25	14.23	8.82	8.80	17.61	9.46	9.55	16.55	11.11	9.92	12.71	9.07	9.07
Groundwater Elevation (ft)	NS	227.94	230.75	228.90	228.43	231.93	229.87	228.71	232.33	230.20	228.29	231.27	229.26	228.90	232.56	229.84

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-3
Annual Site Wide Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	MW-24				MW-25			MW-26				MW-27			MW-36		
		11/10/2015	12/13/2016	6/26/2017	6/21/2018	11/16/2015	6/21/2017	6/21/2018	11/17/2015	12/13/2016	6/26/2017	6/20/2018	11/11/2015	6/23/2017	6/19/2018	12/2/2015	6/22/2017	6/21/2018
		Downgradient				Upgradient			Downgradient				Downgradient			Upgradient		
VOCs (µg/L)																		
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.81 J**	**0.73 J**	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.51 J**	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	**0.40 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.57 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**0.93 J**	**1.4**	**1.2**	**0.66 J**	**96.7**	**76.7**	**80.3**	0.75 U	0.75 U	0.75 U	0.75 U	**189**	**211**	0.75 U	**1.0**	**0.81 J**	**1.7**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters																		
Acetylene	NS	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**168**	**198**	**195**	**159**	**198**	NA	NA	**204**	**197**	**223**	**225**	**282**	NA	NA	**197**	NA	NA
Chloride (mg/L)	NS	**36.3**	**38.5**	**41.0**	**37.1**	**16.3**	NA	NA	**45.2**	**44.9**	**133**	**49.1**	**13.8**	NA	NA	**46.6**	NA	NA
Nitrate (mg/L)	NS	**0.90**	0.06 U	0.2 U	0.06 U	**0.52**	NA	NA	0.06 U	**0.04 J**	0.02 U	0.06 U	**1.2**	NA	NA	0.06 U	NA	NA
Sulfate (mg/L)	NS	**15.5**	**21.4**	**22.1**	**21.5**	**9**	NA	NA	**25.1**	**24.6**	**20.9**	**16.3**	**22**	NA	NA	**21.2 J-**	NA	NA
Methane (µg/L)	NS	**0.82**	**1.6**	**2.2**	**1.3 J+**	**0.45 J**	NA	NA	**34.8**	**2.7**	**2.1**	**80**	**0.24 J**	NA	NA	**25.6**	NA	NA
Ethane (µg/L)	NS	**0.34 J**	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	**2.7**	NA	NA
Ethene (µg/L)	NS	0.75 U	0.75 U	0.8 U	**0.2 J**	0.75 U	NA	NA	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	NA	NA	**1.2 J**	NA	NA
Total Organic Carbon (mg/L)	NS	**3.5**	**1.9**	**0.79 J**	**4.5**	**5.6**	NA	NA	**9.3**	**2.6**	**30.7**	**0.5 J**	**2.9**	NA	NA	**1.7**	NA	NA
Field Parameters																		
pH (pH Unit)	NS	7.75	7.22	7.78	7.95	7.85	7.51	7.80	7.52	7.22	7.23	7.57	7.50	7.87	7.29	7.76	8.05	7.86
Turbidity (NTU)	NS	9.33	13.9	35.2	19.5	30.9	1.5	128	68.3	21.8	0.4	36.2	86.8	1.9	33.8	66.7	6.3	17.2
ORP (MeV)	NS	-80.2	-93.2	-108.6	-147.3	85.4	97.5	101.1	-103.6	-28.9	-26.9	-75.3	169.9	310.7	-46.0	-224.3	-71.7	85.5
Conductivity (mS/cm)	NS	0.327	0.57	0.365	0.204	0.201	0.446	0.349	0.324	0.59	0.63	0.415	0.411	0.429	0.85	0.282	0.422	7.86
Dissolved Oxygen (mg/L)	NS	0.94	0.44	1.2	11.71	11.25	4.6	7.6	0	0.33	0.62	1.38	21.89	5.3	9.00	5.29	1.08	3.27
Groundwater Elevation (ft)	NS	226.79	225.30	229.05	227.43	227.16	229.65	227.78	226.06	224.75	228.01	226.43	225.50	226.43	225.21	227.80	230.49	229.13

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-3
Annual Site Wide Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well Pair								Confirmation Well Pair							
		MW-28				MW-29				MW-30				MW-31			
		12/1/2015	12/14/2016	6/27/2017	6/22/2018	12/1/2015	12/14/2016	6/27/2017	6/22/2018	12/1/2015	12/13/2016	6/26/2017	7/18/2018	12/1/2015	12/14/2016	6/26/2017	6/21/2018
		Downgradient				Upgradient				Downgradient				Upgradient			
VOCs (µg/L)																	
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	1.0 U	0.75 U	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	**11.2**	**10.4**	**8.9 J+**	**10.5**	**12.4**	**14.0** J+	**11.8 J+**	**11.8**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	1.0 U	0.75 U	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	**0.46 J**	0.75 U	1.0 U	**0.44 J**	0.75 U	3.8 U	0.75 U	**0.45 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	**1.0**	**0.77 J**	**1.0 J+**	**0.86 J**	**0.97 J**	3.8 U	**1.0 J+**	**0.84 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	**0.53 J**	**0.43 J**	**0.38 J**	**0.39 J**	**0.68 J**	3.8 U	**0.63 J**	**0.48 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	**0.61 J**	0.75 U	0.75 U	**0.75 J**	0.75 U	3.8 U	0.75 U	**0.82 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	**4.7**	**4.3**	**4.7 J+**	**4.9**	**4.9**	**6.1** J+	**5.8 J+**	**5.1**	0.75 U	0.75 U	**0.61 J**	0.75 U	0.75 U	0.75 U	**0.50 J**	0.75 U
Tetrachloroethene (PCE; PERC)	5	**33**	**44.6**	**36.3 J+**	**38.7**	**33.2**	**30.8** J+	**38.1 J+**	**35.4**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	**0.47 J**	**0.37 J**	**0.36 J**	0.75 U	3.8 U	**0.70 J**	**0.59 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**182**	**196**	**195**	**214**	**224**	**209** J+	**264**	**248**	**25.2**	**42.3**	**24.3**	**8.1**	**42.7**	**38.2**	**29.0**	**20.6**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters																	
Acetylene	NS	NA	NA	NA	1 U	NA	NA	NA	1.0 U	NA	NA	NA	1.0 UJ	NA	NA	NA	1 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**352**	**316**	**352**	**422**	**327**	**301**	**361**	**370**	**143**	**319**	**154**	**58**	**178**	**222**	**150**	**169**
Chloride (mg/L)	NS	**22.1**	**32.4**	**29.0**	**33.1**	**28.2**	**28.4**	**49.4**	**28**	**38.4**	**182**	**49.6**	**38.8**	**41.9**	**56.6**	**31**	**39.9**
Nitrate (mg/L)	NS	0.06 U	**0.06 J**	**1.5**	**0.58**	**0.1 J**	**0.26**	**1.3 J**	**0.38**	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.2 U	0.06 U
Sulfate (mg/L)	NS	**22.4**	**20.9**	**13.0**	**23.1**	**29.2**	**24.9**	**13.8**	**21**	**35.9**	**2.9**	2.0 U	**0.34 J**	**26.3**	**10.9**	**5.6**	**7.8**
Methane (µg/L)	NS	**3.4**	**3.0**	**1.0**	**1800**	**13.9**	**0.62**	0.05 U	**210**	**47.4**	**146**	**3210**	**3700**	**20.7**	**3.5**	**56.5**	**120**
Ethane (µg/L)	NS	0.5 U	**3.6**	0.5 U	0.5 U	**0.81 J**	0.5 U	0.5 U	0.5 U	**4.7**	**5.4**	**36.7**	**52**	**2.2**	**1.5**	**2.7**	**5.7**
Ethene (µg/L)	NS	0.75 U	**1.3 J**	0.75 U	0.75 U	**0.59 J**	0.75 U	0.75 U	0.75 U	**2.2**	**3.3**	**12.7**	**6.3**	**0.91 J**	**0.84 J**	**3.2**	**2.4**
Total Organic Carbon (mg/L)	NS	**1.9**	**2.3**	**0.76 J**	**4.1**	**2.3**	**1.4**	**0.92 J**	**3.2**	**2.2**	**225**	**75.2**	**9.7 J**	**2.1**	**43.9**	**2.8**	**2.1**
Field Parameters																	
pH (pH Unit)	NS	6.83	7.03	7.05	7.33	7.06	7.02	7.02	7.33	8.91	6.83	7.77	8.28	7.80	7.20	9.79	7.83
Turbidity (NTU)	NS	209	1.5	-3	1.32	82.4	0.62	2.8	15.2	58.2	3.55	3	950.5	51.7	8.03	4.6	2.6
ORP (MeV)	NS	273.2	71.2	97.4	11.1	-25.1	60.9	120.2	52.3	-278.4	-166.3	-173.3	12.1	-319.7	-163.1	-283.2	-155.1
Conductivity (mS/cm)	NS	0.324	0.366	0.554	7.33	0.325	0.354	0.619	0.61	0.21	1.41	0.32	0.238	0.243	0.348	0.28	0.324
Dissolved Oxygen (mg/L)	NS	6.75	3.94	7.59	0.63	4.29	6.17	7.12	2.98	3.7	0.29	0.48	0.98	1.29	0.28	0.7	0.22
Groundwater Elevation (ft)	NS	227.07	225.41	229.79	228.07	227.05	225.38	229.82	228.09	226.98	225.35	229.44	227.80	226.95	225.40	229.52	227.84

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-3
Annual Site Wide Groundwater Sample Results
The Defense National Stockpile Center Scotia Depot

Analytes	NYSDEC Ambient Water Quality Standards and Guidance Value	Confirmation Well Pair								Confirmation Well Pair							
		MW-32				MW-33				MW-34				MW-35			
		11/30/2015	3/21/2017	6/26/2017	6/21/2018	11/24/2015	12/14/2016	6/26/2017	6/21/2018	11/24/2015	12/13/2016	6/26/2017	6/20/2018	11/24/2015	12/15/2016	6/26/2017	6/20/2018
		Downgradient				Upgradient				Downgradient				Upgradient			
VOCs (µg/L)																	
1,1,1,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,1-Trichloroethane (1,1,1-TCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2,2-Tetrachloroethane	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1,2-Trichloroethane	1	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane (1,1-DCA)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene (1,1-DCE)	5	0.75 U	**0.40 J**	**0.48 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2-Dichloroethane (EDC)	0.6	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Carbon Tetrachloride	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
cis-1,2-Dichloroethene (cis-1,2-DCE)	5	0.75 U	**1.2**	**1.3**	**0.62 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Tetrachloroethene (PCE; PERC)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**0.42 J**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,2-Dichloroethene (trans-1,2-DCE)	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene (TCE)	5	**150**	**191**	**130**	**64.1**	**133**	**93.5**	**152**	**178**	**17.7**	**41.3**	**34.0**	**31.3**	**31.9**	**31.8**	**43.8 J+**	**39.4**
Vinyl Chloride (VC)	2	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
MNA Parameters																	
Acetylene	NS	NA	NA	NA	1 U	NA	NA	NA	1 U	NA	NA	NA	1 U	NA	NA	NA	1 U
Alkalinity, Total (as $CaCO_3$) (mg/L)[1]	NS	**196**	**214**	**129**	**128**	**172**	**218**	**205**	**215**	**99**	**191**	**201**	**226**	**181**	**223**	**202**	**197**
Chloride (mg/L)	NS	**35.6**	**84.6**	**38.0**	**29.5**	**41.8**	**43.2**	**22.8**	**22.5**	**48.5**	**62.3**	**15.7**	**16.3**	**42.2**	**53.9**	**17.1**	**15.7**
Nitrate (mg/L)	NS	0.06 U	**0.02 J**	0.2 U	0.06 U	0.06 U	0.06 U	**0.32**	**0.42**	**0.56**	**0.06 J**	0.2 U	0.06 U	0.06 U	**0.040 J**	**0.66**	**0.64**
Sulfate (mg/L)	NS	**21.1**	**0.68 J**	2 U	**2.3**	**25.1**	**8.2**	**11.8**	**14.3**	**64.3**	**23.8**	**13.4**	**11.2**	**48.1**	**7.2**	**13.6**	**10.7**
Methane (µg/L)	NS	**6.8**	**309**	**817**	**130**	**64**	**3.4**	**16**	**17**	**14.5**	**1.2**	**12.4**	**35**	**13.8**	**0.90**	**7.2**	**23**
Ethane (µg/L)	NS	**0.5 J**	**19.3**	**35.9**	**2**	**7**	**0.25 J**	0.5 U	0.5 U	**2.2**	0.5 U	0.5 U	0.5 U	**2.9**	0.5 U	0.5 U	0.5 U
Ethene (µg/L)	NS	0.75 U	**10.3**	**15.6**	**0.25 J**	**3.6**	**0.48 J**	0.75 U	0.75 U	**1.8**	0.75 U	0.75 U	0.75 U	**1.6**	0.75 U	0.75 U	0.75 U
Total Organic Carbon (mg/L)	NS	**2.6**	**98**	**22**	**6.4**	**8.1**	**30.9**	**0.54 J**	**1.6**	**5.9**	**12**	**3.3**	**0.93 J**	**7.7**	**18.3**	**0.75** J	**0.6 J**
Field Parameters																	
pH (pH Unit)	NS	8.00	7.54	9.28	8.03	8.39	7.18	8.8	7.66	12.68	7.14	7.26	7.30	9.68	7.09	7.66	7.55
Turbidity (NTU)	NS	180	4.01	5.1	0.02	23.1	9.31	3.4	2.78	44.7	3.23	-4	1.4	381	5.99	38.2	25.8
ORP (MeV)	NS	-234.2	-140.7	-238.7	-149.4	-471.2	-126.8	44.9	17.6	-185.4	-8.4	-139.4	-76.3	-404	-167.9	-10.6	69.5
Conductivity (mS/cm)	NS	0.239	0.64	0.261	0.206	0.247	0.303	0.35	0.382	0.361	0.63	0.332	0.332	0.287	0.329	0.324	0.335
Dissolved Oxygen (mg/L)	NS	0.64	1.77	2.5	8.26	0.92	0.41	2.99	3.41	6.9	1.12	0.46	1.31	0.79	0.41	3.67	3.54
Groundwater Elevation (ft)	NS	226.86	223.70	229.05	227.45	226.89	225.51	229.11	227.51	226.73	225.48	228.66	227.03	226.69	225.46	228.68	227.04

Notes:
MNA - Monitored Natural Attenuation
NS - no standard
Detected concentrations are in bold font.
Detections exceeding the NYSDEC Ambient Water Quality Standards (AWQS) are highlighted in gray.
J - Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
J+ - The result is an estimated quantity, likely to be biased high.
J- - The result is an estimated quantity, likely to be biased low
U - Indicates that the analyte was not detected (ND).
1 - The Total Alkalinity is titrated to a pH of 4.5 and reported as mg $CaCO_3$/L.

Table 3-4
Total VOCs in Compliance Wells Post Remedy Installation
The Defense National Stockpile Center Scotia Depot

MW ID	Designation	12/14/2016	3/22/2017	6/27/2017	9/27/2017	12/14/2017	3/15/2018	6/22/2018	9/21/2018	12/20/2018
MW-29	Upgradient	259.9	249.94	322.03	291.11	298.17	267.34	303.48	265.97	265.09
MW-28	Downgradient	256.97	240.15	246.65	226.04	263.38	186.89	270.15	291.49	246.58
Percent Change		-1.13%	-3.92%	-23.41%	-22.35%	-11.67%	-30.09%	-10.98%	9.60%	-6.98%
MW-31	Upgradient	38.2	35.41	29.5	26.02	20	19.47	20.6	20.04	19.47
MW-30	Downgradient	42.3	67.04	24.91	18.79	20.01	9.8	8.1	8.2	7.3
Percent Change		10.73%	89.33%	-15.56%	-27.79%	0.05%	-49.67%	-60.68%	-59.08%	-62.51%
MW-33	Upgradient	93.5	151	152	170	142	155	178	137	159
MW-32	Downgradient	132	192.6	131.78	136.8	120.68	104.61	64.72	96.7	87.95
Percent Change		41.18%	27.55%	-13.30%	-19.53%	-15.01%	-32.51%	-63.64%	-29.42%	-44.69%
MW-35	Upgradient	31.8	12.5	43.8	47.8	43.5	21.2	39.4	15.2	31.1
MW-34	Downgradient	41.3	48.3	34	29.6	28	17.6	31.3	6.9	10.6
Percent Change		29.87%	286.40%	-22.37%	-38.08%	-35.63%	-16.98%	-20.56%	-54.61%	-65.92%

Reduction in total VOCs was observed between upgradient and downgradient compliance well

Table 3-5
Air Sample Analytical Results
Former Scotia Naval Depot
Glenville, NY

Stone 3/2014	AECOM	Carbon Tetrachloride (µg/m^3)				1,1,1-Trichloroethane (µg/m^3)				Tetrachloroethene (µg/m^3)				Trichloroethene (µg/m^3)			
		Stone	AECOM 2016	AECOM 2017	AECOM 2018	Stone	AECOM 2016	AECOM 2017	AECOM 2018	Stone	AECOM 2016	AECOM 2017	AECOM 2018	Stone	AECOM 2016	AECOM 2017	AECOM 2018
Sample ID	**Sample ID**																
IA06-1-B	**201IA-1**	0.692	0.49 J	0.40	0.32 J	0.038 J	0.015 J	0.0096 J	0.0078 J	0.068 J	0.054 J	0.044	0.053 J	0.107 U	0.037 J	0.031 U	0.025 UJ
IA05-1-B	**201IA-2**	0.673	0.51	0.39	0.34 J	0.109 U	0.014 J	0.011 J	0.0086 J	0.136	0.050	0.16	0.088 J	0.107 U	0.023 J	0.023 J	0.022 J
IA07-1-B	**201IA-3**	2.64	0.59	0.43	0.34 J	0.109 U	0.015 J	0.010 J	0.0079 J	0.258	0.094	0.11	0.14 J	0.107 U	0.046	0.082	0.019 J
IA11-1-B	**202IA-1**	1.95	0.45 J	0.39	0.32 J	0.469	0.018 J	0.012 J	0.010 J	0.142	0.054 J	0.15	0.11 J	0.107 U	0.030 J	0.025 J	0.028 J
IA12-1-B	**202IA-2**	1.01	0.45 J	0.40	0.34	0.147	0.017 J	0.011 J	0.012 J	0.061 J	0.060 J	0.075	0.11	0.107 U	0.034 J	0.014 J	0.030 J
NS	**202IA-3**	-	0.39	0.40	0.33	-	0.017 J	0.011 J	0.014 J	-	0.110	0.086	0.12	-	0.036	0.019	0.052
IA09-1-B	**203IA-1**	0.692	0.42 J	0.37	0.33	0.196	0.380 U	0.011 J	0.075 U	0.170	0.380 U	0.073	0.15	0.683	0.380 U	0.019 J	0.099
IA08-1-B	**203IA-2**	2.65	0.54	0.41	0.34	0.737	0.023 J	0.012 J	0.016 J	0.292	0.140	0.18	0.19	0.752	0.091	0.042	0.12
IA10-1-B	**203IA-3**	0.654	0.48	0.40	0.35 J	0.180	0.019 J	0.012 J	0.015 J	0.156	0.075	0.068	0.087 J	0.623	0.076	0.027 J	0.085 J
NS	**204IA-1**	-	0.50	0.40	0.37	-	0.029 J	0.0091 J	0.098 U	-	0.072	0.99	0.087 J	-	0.089	0.038	0.069 J
IA15-1-B	**204IA-2**	0.572	0.47	0.46	0.36 J	0.044 J	0.016 J	0.017 J	0.062 UJ	0.149	0.057	0.29	0.063 J	3.92	0.061	0.20	0.096 J
IA14-1-B	**204IA-3**	0.516	0.50	0.40	0.31	0.038 J	0.018 J	0.012 J	0.012 J	0.142	0.043	0.059	0.057	0.210	0.059	0.035	0.067
IABG-1-B	**NS**	0.447	-	-	-	0.109 U	-	-	-	0.054 J	-	-	-	0.107 U	-	-	-
IABG-2-B	**OA-1**	0.434	0.490 J	0.41	0.34 J	0.109 U	0.014 J	0.010 J	0.012 J	0.075 J	0.054 J	0.041	0.087 J	0.107 U	0.011 J	0.029 U	0.078 J
	2017 OA-1 Resample	-	-	0.48	-	-	-	0.014 J	-	-	-	0.079	-	-	-	0.11	-

Notes:
NS - No equivalent sample at this location
"-" - Not Sampled
IA - Indoor Air
IABG - Stone 2014 Outdoor Air Sample
OA - Outdoor Air
U - Qualifier denotes non-detect.
J - Qualifier denotes estimated value.
UJ - Qualifier denotes the analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be imprecise.

Table 3-5
Air Sample Analytical Results
Former Scotia Naval Depot
Glenville, NY

Stone 3/2014	AECOM	Vinyl Chloride (µg/m^3)				1,1-Dichloroethene (µg/m^3)				cis-1,2-Dichloroethene (µg/m^3)			
		Stone	AECOM 2016	AECOM 2017	AECOM 2018	Stone	AECOM 2016	AECOM 2017	AECOM 2018	Stone	AECOM 2016	AECOM 2017	AECOM 2018
Sample ID	**Sample ID**												
IA06-1-B	**201IA-1**	0.051 U	0.025 UJ	0.031 U	0.025 UJ	0.079 U	0.012 J	0.031 U	0.025 UJ	0.079 U	0.043 J	0.031 U	0.025 UJ
IA05-1-B	**201IA-2**	0.051 U	0.027 U	0.029 U	0.027 UJ	0.079 U	0.029 U	0.029 U	0.027 UJ	0.079 U	0.029 U	0.029 U	0.027 UJ
IA07-1-B	**201IA-3**	0.051 U	0.030 U	0.031 U	0.026 UJ	0.079 U	0.031 U	0.031 U	0.026 UJ	0.079 U	0.031 U	0.031 U	0.026 UJ
IA11-1-B	**202IA-1**	0.051 U	0.025 UJ	0.031 U	0.025 UJ	0.079 U	0.026 UJ	0.031 U	0.025 UJ	0.079 U	0.026 UJ	0.031 U	0.025 UJ
IA12-1-B	**202IA-2**	0.051 U	0.024 UJ	0.032 U	0.035 U	0.079 U	0.026 UJ	0.032 U	0.035 U	0.079 U	0.026 UJ	0.032 U	0.035 U
NS	**202IA-3**	-	0.022 U	0.034 U	0.034 U	-	0.023 U	0.034 U	0.034 U	-	0.023 U	0.034 U	0.034 U
IA09-1-B	**203IA-1**	0.051 U	0.360 U	0.032 U	0.071 U	0.079 U	0.380 U	0.032 U	0.071 U	0.079 U	0.380 U	0.032 U	0.071 U
IA08-1-B	**203IA-2**	0.051 U	0.030 U	0.032 U	0.034 U	0.079 U	0.031 U	0.032 U	0.034 U	0.079 U	0.031 U	0.032 U	0.034 U
IA10-1-B	**203IA-3**	0.051 U	0.027 U	0.033 U	0.050 UJ	0.079 U	0.029 U	0.033 U	0.050 UJ	0.079 U	0.029 U	0.033 U	0.050 UJ
NS	**204IA-1**	-	0.028 U	0.032 U	0.093 U	-	0.020 J	0.032 J	0.093 U	-	0.039	0.032	0.093 U
IA15-1-B	**204IA-2**	0.051 U	0.028 U	0.032 U	0.059 UJ	0.079 U	0.029 U	0.032 U	0.059 UJ	0.079 U	0.029 U	0.032 U	0.059 UJ
IA14-1-B	**204IA-3**	0.051 U	0.027 U	0.028 U	0.033 U	0.079 U	0.028 U	0.028 U	0.033 U	0.079 U	0.028 U	0.028 U	0.033 U
IABG-1-B	**NS**	0.051 U	-	-	-	0.079 U	-	-	-	0.079 U	-	-	-
IABG-2-B	**OA-1**	0.051 U	0.023 UJ	0.029 U	0.026 UJ	0.079 U	0.024 UJ	0.029 U	0.026 UJ	0.079 U	0.024 UJ	0.029 U	0.026 UJ
	2017 OA-1 Resample	-	-	0.032 U	-	-	-	0.032 U	-	-	-	0.032 U	-

Notes:
NS - No equivalent sample at this location
"-" - Not Sampled
IA - Indoor Air
IABG - Stone 2014 Outdoor Air Sample
OA - Outdoor Air
U - Qualifier denotes non-detect.
J - Qualifier denotes estimated value.
UJ - Qualifier denotes the analyte was analyzed for, but was not detected. The reported quantitation limit is approximated and may be imprecise.

Table 3-6
Field Readings System Startup Communication Test (June 2016)
Former Scotia Naval Depot
Glenville, NY

COMMUNICATION TESTING

BUILDING 204			BUILDING 202			BUILDING 201			BUILDING 203		
MP	Before	After	MP	Before	After	MP	Before	After	MP	Before	After
1	NM	-0.017	1	-0.016	-0.029	1	-0.030	-0.033	1	-0.002	-0.004
2	NM	-0.005	2	-0.048	-0.087	2	-0.049	-0.051	2	-0.004	-0.005
3	NM	-0.027	3	-0.017	-0.036	3	-0.014	-0.018	3	-0.008	-0.054
4	NM	-0.047	4	-0.045	-0.069	4	-0.060	-0.085	4	NM	-0.007
5	NM	-0.011	5	-0.049	-0.090	5	-0.025	NM	5	-0.001	-0.002
6	NM	-0.034	6	-0.054	-0.093	6	-0.014	NM	6	-0.025	-0.038
7	NM	-0.021	7	-0.020	-0.018	7	-0.006	NM	7	-0.010	-0.045
8	-0.002	-0.031	8	-0.014	-0.037	8	-0.028	NM	8	-0.015	-0.065

MONOMETER READINGS

BUILDING 204			BUILDING 202			BUILDING 201			BUILDING 203		
Point	Before	After	Point	Before	After	Point	Before	After	Point	Before	After
1A	NM	3.5	1A	3.0	3.3	1A	3.0	3.2	1A	2.3	2.9
1B	NM	3.4	1B	2.9	3.3	1B	2.7	3.0	1B	2.3	2.7
2A	NM	3.3	2A	3.4	3.7	2A	2.5	3.0	2A	2.3	3.1
2B	NM	3.6	2B	3.3	3.5	2B	2.5	3.0	2B	2.3	3.0
3A	NM	3.6	3A	2.9	3.4	3A	2.7	NM	3A	1.1	2.5
3B	NM	3.6	3B	2.9	3.4	3B	2.7	NM	3B	0.9	2.8
4A	NM	3.9	4A	3.1	3.3	4A	2.8	NM	4A	2.8	3.2
4B	NM	3.8	4B	3.0	3.3	4B	MNI	MNI	4B	2.1	3.1
5A	NM	3.3	5A	3.3	3.3	5A	2.9	NM	5A	1.8	2.5
5B	NM	3.3	5B	3.3	3.4	5B	2.9	NM	5B	1,7	2.4
6A	NM	2.9	6A	3.5	3.5	6A	3.0	NM	6A	1.6	2.8
6B	NM	2.8	6B	3.4	3.4	6B	3.2	NM	6B	1.7	2.9
7A	NM	4.0	7A	3.3	3.6	7A	3.0	3.2	7A	1.7	3.4
7B	NM	3.8	7B	3.3	3.6	7B	2.7	2.9	7B	1.6	3.4
8A	NM	3.2	8A	3.7	3.8	8A	3.1	3.4	8A	1.9	3.4
8B	NM	3.1	8B	3.6	3.7	8B	3.3	3.6	8B	2	3.5
9A	NM	3.6	9A	3.0	3.1	9A	2.9	NM	9A	2.4	3.5
9B	NM	3.6	9B	2.8	3.0	9B	2.9	NM	9B	2.1	3.3
10A	NM	3.5	10A	3.5	3.6	10A	3.0	NM	10A	1.3	3.1
10B	NM	3.5	10B	3.3	3.4	10B	3.3	NM	10B	1.1	3.0
11A	NM	3.1	11A	3.4	3.0	11A	2.9	NM	11A	1.7	2.9
11B	NM	2.8	11B	3.3	3.3	11B	3.2	NM	11B	0.8	2.3
12A	NM	3.8	12A	3.4	3.4	12A	3.5	NM	12A	1.8	2.3
12B	NM	3.4	12B	3.2	3.2	12B	3.5	NM	12B	2.7	2.7

Notes:
*All Readings measured in inches of water column
MP - Monitoring Point
NM - Not Measured
MNI - Monometer Not Installed

Table 3-6
Field Readings During December 2016 Sampling Event
Former Scotia Naval Depot
Glenville, NY

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.009	1	0.000	1	0.000	1	-0.040
2	-0.033	2	-0.047	2	-0.002	2	0.000
3	-0.007	3	-0.020	3	-0.020	3	-0.017
4	-0.064	4	-0.038	4	0.000	4	-0.022
5	NM	5	-0.040	5	0.009	5	0.000
6	-0.004	6	-0.045	6	-0.008	6	0.217
7	-0.021	7	-0.018	7	-0.020	7	-0.013
8	-0.022	8	-0.040	8	-0.022	8	-0.006

MONOMETER READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	2.9	1A	3.3	1A	2.3	1A	3.5
1B	2.7	1B	3.2	1B	1.7	1B	3.3
2A	3.0	2A	3.4	2A	3.0	2A	3.5
2B	3.0	2B	3.5	2B	3.0	2B	3.5
3A	3.3	3A	3.2	3A	2.6	3A	3.5
3B	3.5	3B	3.2	3B	2.8	3B	3.4
4A	2.9	4A	3.9	4A	2.5	4A	3.5
4B	4.4	4B	3.8	4B	2.1	4B	3.4
5A	3.5	5A	3.3	5A	2.4	5A	3.1
5B	3.1	5B	3.5	5B	2.3	5B	3.1
6A	3.2	6A	3.5	6A	2.5	6A	2.5
6B	3.4	6B	3.5	6B	2.5	6B	2.5
7A	3.2	7A	3.0	7A	2.7	7A	3.6
7B	2.8	7B	2.9	7B	2.5	7B	3.4
8A	3.4	8A	3.8	8A	2.5	8A	3.2
8B	3.7	8B	3.9	8B	2.6	8B	3.1
9A	3.6	9A	3.0	9A	3.1	9A	3.6
9B	3.3	9B	2.9	9B	2.7	9B	3.7
10A	3.3	10A	3.8	10A	2.6	10A	3.3
10B	3.6	10B	3.5	10B	2.5	10B	3.3
11A	2.9	11A	1 to 3	11A	3.7	11A	2.6
11B	2.3	11B	1 to 3	11B	1.9	11B	2.5
12A	3.5	12A	3.5	12A	2.4	12A	3.3
12B	3.5	12B	3.0	12B	2.2	12B	3.2

Notes:
Pressure measurements in units of inches of water column
NM- Not Monitored, the location was inaccessible or damaged
1 to 3: value displayed on manometer fluctuates between these values

Table 3-6
Field Readings During June 2017 Monitoring Event
Former Scotia Naval Depot
Glenville, NY

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.049	1	-0.027	1	-0.006	1	-0.031
2	-0.058	2	-0.081	2	-0.007	2	-0.004
3	-0.015	3	-0.031	3	-0.039	3	-0.023
4	-0.102	4	-0.073	4	0.003	4	-0.052
5	NM	5	-0.109	5	0.000	5	-0.022
6	-0.020	6	-0.100	6	-0.047	6	0.333
7	-0.022	7	-0.015	7	-0.032	7	NM
8	-0.045	8	-0.029	8	-0.045	8	-0.030

MONOMETER READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	3.1	1A	3.4	1A	2.5	1A	3.8
1B	2.9	1B	3.3	1B	2.0	1B	3.5
2A	3.0	2A	3.0	2A	3.2	2A	3.8
2B	3.0	2B	3.5	2B	3.4	2B	3.6
3A	3.4	3A	3.4	3A	2.8	3A	3.6
3B	3.4	3B	3.4	3B	2.9	3B	3.6
4A	3.1	4A	3.5	4A	3.5	4A	3.9
4B	3.4	4B	3.4	4B	3.4	4B	3.9
5A	3.5	5A	3.3	5A	2.5	5A	3.2
5B	3.1	5B	3.5	5B	3.0	5B	NM
6A	3.3	6A	3.6	6A	0.7	6A	3.0
6B	3.1	6B	NM	6B	NM	6B	2.9
7A	3.2	7A	3.3	7A	3.6	7A	3.9
7B	2.9	7B	3.2	7B	3.5	7B	3.8
8A	3.4	8A	3.7	8A	3.2	8A	3.7
8B	3.6	8B	3.8	8B	3.4	8B	3.3
9A	3.7	9A	3.1	9A	3.7	9A	3.5
9B	3.4	9B	3.0	9B	3.4	9B	3.5
10A	3.3	10A	3.6	10A	3.3	10A	3.2
10B	3.5	10B	3.5	10B	3.1	10B	3.0
11A	NM	11A	3.0	11A	3.0	11A	3.2
11B	NM	11B	3.4	11B	2.4	11B	3.0
12A	3.5	12A	3.3	12A	2.6	12A	3.4
12B	3.5	12B	3.2	12B	2.7	12B	3.7

Notes:
Pressure measurements in units of inches of water column
NM- Not Monitored, the location was inaccessible or damaged

Table 3-6
Field Readings During December 2017 Sampling Event
Former Scotia Naval Depot
Glenville, NY

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.02	1	-0.001	1	0.002	1	0.008
2	-0.024	2	-0.034	2	0.0	2	0.005
3	-0.006	3	-0.016	3	-0.020	3	-0.023
4	-0.004	4	-0.047	4	0.001	4	-0.038
5	NM	5	-0.043	5	0.0	5	-0.001
6	-0.017	6	-0.050	6	-0.009	6	NM
7	0.0	7	NM	7	-0.017	7	-0.009
8	-0.006	8	+	8	-0.017	8	-0.006

MONOMETER READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	2.9	1A	3.2	1A	2.3	1A	3.6
1B	2.7	1B	3.1	1B	1.7	1B	3.4
2A	3.0	2A	2.8	2A	3.0	2A	3.5
2B	3.0	2B	3.4	2B	3.0	2B	3.4
3A	3.3	3A	3.2	3A	2.6	3A	3.5
3B	3.3	3B	3.2	3B	2.8	3B	3.5
4A	3.0	4A	3.3	4A	2.5	4A	3.5
4B	3.3	4B	3.3	4B	2.3	4B	3.5
5A	3.8	5A	3.3	5A	2.3	5A	2.5
5B	3.1	5B	3.5	5B	2.0	5B	2.5
6A	3.1	6A^	NM	6A	2.0	6A	2.4
6B	3.4	6B^	NM	6B	2.0	6B	2.3
7A	3.1	7A	2.9	7A	2.3	7A	4.0
7B	2.7	7B	2.7	7B	2.5	7B	3.9
8A	3.4	8A	3.7	8A	2.0	8A	3.3
8B	3.6	8B	3.9	8B	2.1	8B	3.2
9A	3.0	9A	3.0	9A	3.4	9A	3.7
9B	3.2	9B	2.9	9B	3.2	9B	3.7
10A	3.3	10A	3.7	10A	1.9	10A	3.0
10B	3.5	10B	3.5	10B	1.8	10B	3.2
11A	3.0	11A	0.04 to 2.6	11A	2.6	11A	3.0
11B	3.4	11B	0.09 to 3.0	11B	1.8	11B	2.5
12A	3.6	12A	3.4	12A	2.1	12A	3.1
12B	3.5	12B	3.0	12B	1.9	12B	3.1

Notes:
Pressure measurements in units of inches of water column
NM- Not Monitored, the location was inaccessible or damaged
"0.04 to 2.6" - value displayed on manometer fluctuates between these values

Table 3-6
Field Readings During June 2018 Monitoring Event
Former Scotia Naval Depot
Glenville, NY

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.048	1	-0.041	1	-0.003	1	-0.018
2	-0.056	2	-0.090	2	-0.007	2	-0.004
3	-0.017	3	-0.044	3	-0.050	3	-0.031
4	-0.093	4	-0.078	4	-0.015	4	-0.055
5	-0.021	5	-0.005	5	0.000	5	-0.017
6	-0.031	6	-0.007	6	-0.031	6	NM
7	-0.023	7	-0.001	7	-0.029	7	-0.008
8	-0.039	8	-0.003	8	-0.034	8	-0.029

MANOMETER READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	3.1	1A	3.2	1A	2.3 (after repair)	1A	3.7
1B	2.9	1B	3.2	1B	1.9	1B	3.5
2A	3.1	2A	3.1	2A	3.1	2A	3.7
2B	3	2B	3.5	2B	3.3	2B	3.6
3A	3.4	3A	3.4	3A	2.7	3A	3.6
3B	3.4	3B	3.3	3B	2.7	3B	3.6
4A	3	4A	3.4	4A	3.5	4A	NM
4B	3.4	4B	3.3	4B	3.3	4B	3.3
5A	3.9	5A	3.3	5A	2.4	5A	NM
5B	3	5B	3.4	5B	2.4	5B	NM
6A	NM	6A	3.3	6A	2.6 (after repair)	6A	2.9
6B	3.3 (after repair)	6B	3.3 (after repair)	6B	2.6 (after repair)	6B	2.9
7A	3	7A	3.3 (after repair)	7A	3.9	7A	3.8
7B	3.2	7B	3.3	7B	3.4	7B	3.7
8A	3.3	8A	3.7	8A	0.0	8A	3.7
8B	3.6	8B	3.8	8B	0.0	8B	3.7
9A	3.2	9A	3.2	9A	3.5	9A	3.6
9B	3.4	9B	3.0	9B	3.3	9B	3.6
10A	3.3	10A	3.6	10A	2.8	10A	NM
10B	3.6	10B	3.4	10B	3.0	10B	NM
11A	0	11A	2.9	11A	3.0	11A	4.1
11B	3.5	11B	3.3	11B	2.3	11B	NM
12A	NM	12A	3.4	12A	3.6	12A	3.4
12B	3.7	12B	3.2	12B	2.6	12B	3.4

Notes:
Pressure measurements in units of inches of water column
NM- Not Monitored, the location was inaccessible or damaged

Table 3-6
Field Readings During December 2018 Sampling Event
Former Scotia Naval Depot
Glenville, NY

VACUUM READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
MP	Reading	MP	Reading	MP	Reading	MP	Reading
1	-0.015	1	-0.018	1	-0.003	1	0.038
2	-0.023	2	-0.038	2	0.004	2	0.030
3	-0.011	3	-0.031	3	-0.024	3	-0.017
4	-0.049	4	-0.050	4	0.020	4	-0.025
5	-0.025	5	-0.034	5	-0.004	5	-0.006
6	-0.028	6	-0.055	6	NM	6	NM
7	-0.019	7	-0.013	7	-0.021	7	-0.004
8	-0.007	8	-0.022	8	-0.015	8	-0.006

MANOMETER READINGS

BUILDING 201		BUILDING 202		BUILDING 203		BUILDING 204	
Point	Reading	Point	Reading	Point	Reading	Point	Reading
1A	3.2	1A	2.0	1A	2.4	1A	3.7
1B	2.9	1B	3.4	1B	2.0	1B	3.6
2A	3.0	2A	3.1	2A	2.9	2A	3.4
2B	3.0	2B	3.5	2B	3.0	2B	3.2
3A	3.3	3A	3.0	3A	2.7	3A	3.4
3B	3.2	3B	2.9	3B	2.8	3B	3.3
4A	3.0	4A	3.5	4A	2.4	4A	3.6
4B	3.3	4B	3.6	4B	2.4	4B	3.6
5A	3.5	5A	3.2	5A	2.3	5A	NM
5B	3.0	5B	3.4	5B	2.2	5B	0.9
6A	NM	6A	1.6	6A	2.4	6A	2.4
6B	3.3	6B	NM	6B	2.3	6B	2.2
7A	3.2	7A	3.2	7A	2.9	7A	4.2
7B	2.9	7B	3.1	7B	2.7	7B	4.0
8A	3.4	8A	4.0	8A	2.1	8A	3.5
8B	3.6	8B	3.9	8B	2.3	8B	3.4
9A	3.0	9A	3.0	9A	2.8	9A	3.6
9B	3.2	9B	3.0	9B	2.7	9B	3.6
10A	3.2	10A	3.7	10A	1.3	10A	NM
10B	3.5	10B	3.5	10B	1.6	10B	NM
11A	2.9	11A	Fluctuating	11A	2.3	11A	NM/on
11B	3.2	11B	Fluctuating	11B	1.5	11B	3.2
12A	NM	12A	3.5	12A	1.9	12A	2.9
12B	NM	12B	3.2	12B	1.6	12B	2.8

Notes:
Pressure measurements in units of inches of water column
NM- Not Monitored, the location was inaccessible or damaged

Table 5-3
NYSDOH Health Guidance Decision Matrix Outcomes
December 2018
Former Scotia Naval Depot
Glenville NY

Location ID Stone/AECOM	Analyte	Soil Vapor Concentration 2014 (µg/m^3)	Indoor Air Concentration 2014 (µg/m^3)	Indoor Air Concentration 2016 (µg/m^3)	Indoor Air Concentration 2017 (µg/m^3)	Indoor Air Concentration 2018 (µg/m^3)	New York State Department of Health Guidance/Decision Matrix Outcome[1]
IA05 - SV05 / 201IA-2	1,1,1-Trichloroethane	0.737	0.109 U	0.014 J	0.011 J	0.0086 J	No Further Action
	Carbon Tetrachloride	122	0.673	0.51	0.39	0.34 J	Mitigate
	Tetrachloroethene	0.542 J	0.136	0.05	0.16	0.088 J	No Further Action
	Trichloroethene	1.05	0.107 U	0.023 J	0.023 J	0.022 J	No Further Action
IA06 - SV06 / 201IA-1	1,1,1-Trichloroethane	27.3	0.038 J	0.015 J	0.0096 J	0.0078 J	No Further Action
	Carbon Tetrachloride	10.1	0.692	0.49 J	0.4	0.32 J	Monitor Only
	Tetrachloroethene	3.44	0.068 J	0.054 J	0.044	0.053 J	No Further Action
	Trichloroethene	2.82	0.107 U	0.037 J	0.031 U	0.025 UJ	No Further Action
IA07 - SV07 / 201IA-3	1,1,1-Trichloroethane	1.39	0.109 U	0.015 J	0.01 J	0.0079 J	No Further Action
	Carbon Tetrachloride	1,120	2.64	0.59	0.43	0.34 J	Mitigate
	Tetrachloroethene	0.868	0.258	0.094	0.11	0.14 J	No Further Action
	Trichloroethene	0.349	0.107 U	0.046	0.082	0.019 J	No Further Action
IA11 - SV11 / 202IA-1	1,1,1-Trichloroethane	96	0.469	0.018 J	0.012 J	0.010 J	No Further Action
	Carbon Tetrachloride	223	1.95	0.45 J	0.39	0.32 J	Mitigate
	Tetrachloroethene	5.85 U	0.142	0.054	0.15	0.11 J	No Further Action
	Trichloroethene	2.32 J	0.107 U	0.030 J	0.025 J	0.028 J	No Further Action
IA12 - SV12 / 202IA-2	1,1,1-Trichloroethane	103	0.147	0.017 J	0.011 J	0.012 J	No Further Action
	Carbon Tetrachloride	918	1.01	0.45 J	0.4	0.34	Mitigate
	Tetrachloroethene	0.271 U	0.061 J	0.060 J	0.075	0.11	No Further Action
	Trichloroethene	0.172 J	0.107 U	0.034 J	0.014 J	0.030 J	No Further Action
NS / 202IA-3	1,1,1-Trichloroethane	-	-	0.017 J	.011 J	0.014 J	N/A
	Carbon Tetrachloride	-	-	0.39	0.4	0.33	N/A
	Tetrachloroethene	-	-	0.11	0.086	0.12	N/A
	Trichloroethene	-	-	0.036	.019 J	0.052	N/A
IA08 - SV08 / 203IA-2	1,1,1-Trichloroethane	862	0.737	0.023 J	0.011 J	0.016 J	No Further Action
	Carbon Tetrachloride	3,270	2.65	0.54	0.37	0.34	Mitigate
	Tetrachloroethene	0.678	0.292	0.14	0.073	0.19	No Further Action
	Trichloroethene	0.699	0.752	0.091	0.019 J	0.12	No Further Action
IA09 - SV09 / 203IA-1	1,1,1-Trichloroethane	72.6	0.196	0.380 U	0.013 J	0.075 U	No Further Action
	Carbon Tetrachloride	68.9	0.692	0.42 J	0.41	0.33	Mitigate
	Tetrachloroethene	0.339	0.17	0.380 U	0.18	0.15	No Further Action
	Trichloroethene	0.333	0.683	0.380 U	0.042	0.099	No Further Action
IA10 - SV10 / 203IA-3	1,1,1-Trichloroethane	45.7	0.18	0.019 J	0.012 J	0.015 J	No Further Action
	Carbon Tetrachloride	22.3	0.654	0.48	0.4	0.35 J	Monitor Only
	Tetrachloroethene	0.231	0.156	0.075	0.068	0.087 J	No Further Action
	Trichloroethene	132	0.623	0.076	0.027J	0.085 J	Mitigate
SV13 / 204IA-1	1,1,1-Trichloroethane	8.07	Not Available	0.029 J	0.0091 J	0.098 U	No Further Action
	Carbon Tetrachloride	937	Not Available	0.5	0.4	0.37	Mitigate
	Tetrachloroethene	3.76	Not Available	0.072	0.99	0.087 J	No Further Action
	Trichloroethene	1,630	Not Available	0.089	0.038	0.069 J	Mitigate
IA14 - SV14 / 204IA-3	1,1,1-Trichloroethane	2.35	0.038 J	0.018 J	0.012 J	0.012 J	No Further Action
	Carbon Tetrachloride	1.99	0.516	0.5	0.4	0.31	No Further Action
	Tetrachloroethene	63.4	0.142	0.043	0.059	0.057	No Further Action
	Trichloroethene	3.12	0.21	0.059	0.035	0.067	No Further Action
IA15 - SV15 / 204IA-2	1,1,1-Trichloroethane	0.109 U	0.044 J	0.016 J	0.017 J	0.062 UJ	No Further Action
	Carbon Tetrachloride	0.774	0.572	0.47	0.46	0.36 J	No Further Action
	Tetrachloroethene	0.075 J	0.149	0.057	0.29	0.063 J	No Further Action
	Trichloroethene	0.065 J	3.92	0.061	0.20	0.096 J	No Further Action

Note:
[1] - Matrix outcome determined by 2014 sub-slab vapor concentrations and 2018 indoor air concentrations.

APPENDICES

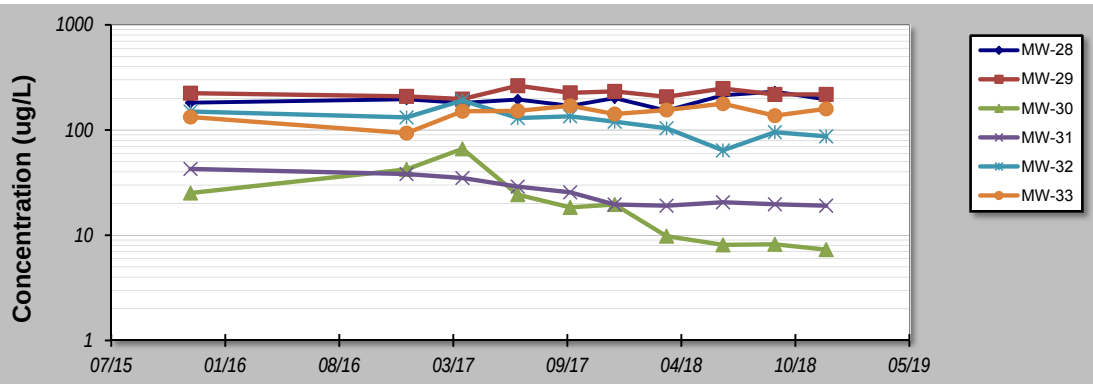
APPENDIX A: GSI Mann-Kendall Toolkit Results

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: 1-Apr-19
Facility Name: Former Scotia Navy Depot
Conducted By: M. Zenker

Job ID:
Constituent: TCE
Concentration Units: ug/L

Sampling Point ID:	MW-28	MW-29	MW-30	MW-31	MW-32	MW-33
Sampling Event	Sampling Date	TCE CONCENTRATION (ug/L)					
1	1-Dec-15	182	224	25.2	42.7	150	133
2	14-Dec-16	196	209	42.3	38.2	132	93.5
3	22-Mar-17	181	197	66.3	35	191	151
4	27-Jun-17	195	264	24.3	29	130	152
5	27-Sep-17	170	226	18.4	25.6	135	170
6	14-Dec-17	201	233	19.6	19.6	120	142
7	15-Mar-18	153	207	9.8	19.1	104	155
8	22-Jun-18	214	248	8.1	20.6	64.1	178
9	21-Sep-18	232	218	8.2	19.7	95.4	137
10	20-Dec-18	195	218	7.3	19.1	87.1	159
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.12	0.09	0.81	0.33	0.30	0.16
Mann-Kendall Statistic (S):		10	2	-35	-36	-33	19
Confidence Factor:		78.4%	53.5%	100.0%	>99.9%	99.9%	94.6%
Concentration Trend:		No Trend	No Trend	Decreasing	Decreasing	Decreasing	Prob. Increasing



Notes:

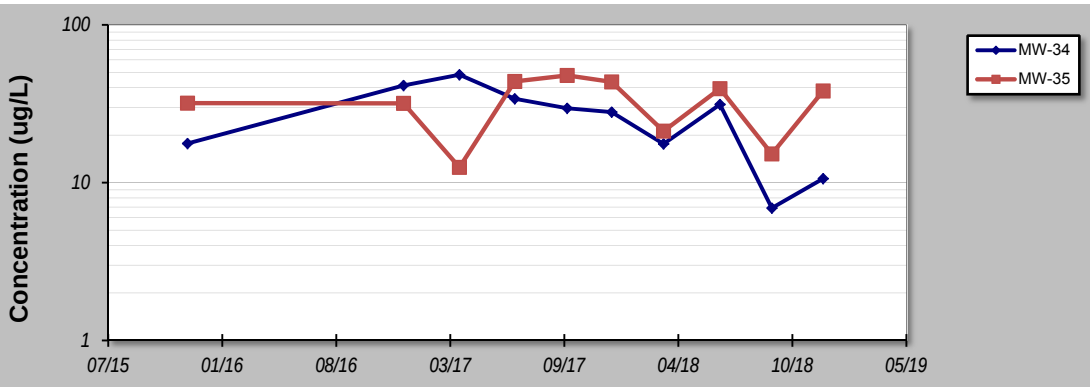
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: 1-Apr-19
Facility Name: Former Scotia Navy Depot
Conducted By: M. Zenker

Job ID:
Constituent: TCE
Concentration Units: ug/L

Sampling Point ID:	MW-34	MW-35					
Sampling Event	Sampling Date	TCE CONCENTRATION (ug/L)						
1	1-Dec-15	17.7	31.9					
2	14-Dec-16	41.3	31.8					
3	22-Mar-17	48.3	12.5					
4	27-Jun-17	34	43.8					
5	27-Sep-17	29.6	47.8					
6	14-Dec-17	28	43.5					
7	15-Mar-18	17.6	21.2					
8	22-Jun-18	31.3	39.4					
9	21-Sep-18	6.9	15.2					
10	20-Dec-18	10.6	38.1					
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.50	0.38					
Mann-Kendall Statistic (S):		-23	-3					
Confidence Factor:		97.7%	56.9%					
Concentration Trend:		Decreasing	Stable					



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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APPENDIX B: IC/EC Certification Form

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 447023

Site Name Defense National Stockpile Center Scotia Depot

Site Address: NYS Route 5 Zip Code: 12302-
City/Town: Glenville
County: Schenectady
Site Acreage: 59.700

Reporting Period: December 12, 2017 to April 12, 2019

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

Box 2

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

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 447023 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
29.00-3-16.71	U.S. General Services Administration	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan Monitoring Plan O&M Plan IC/EC Plan

Property may be used for Commercial and Industrial use as described in 6 NYCRR Part 375-1.8(g)(2) and as its current use for Research, Development and Technology uses as described in Glenville Town Code 270-20

29.00-3-24	~~U.S. General Services Administration~~ BelGioioso	Monitoring Plan O&M Plan IC/EC Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan

Property may be used for Commercial and Industrial use as described in 6 NYCRR Part 375-1.8(g)(2) and as its current use for Research, Development and Technology uses as described in Glenville Town Code 270-20.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
29.00-3-16.71	Vapor Mitigation Subsurface Barriers Monitoring Wells

- 4 SSDSs and a Permeable Reactive Barrier (zero-valent-iron wall) installed off-site on Parcel 29.00-3-16.15 to mitigate exposures in Buildings 201, 202, 203, 204, and to treat the TCE groundwater plume.
- All Engineering Controls (SSDSs and PRB) must be inspected, operated, monitored and maintained as specified in the SMP.
- Annual groundwater monitoring after the first eight quarters.
- Compliance with Soil Management Plan.
- Groundwater use prohibition without treatment.

Note: See section 2.1 on the PRR for more information regarding the location of the various components of these engineering controls

29.00-3-24	Vapor Mitigation Subsurface Barriers Monitoring Wells

- 4 SSDSs and a Permeable Reactive Barrier (zero-valent-iron wall) installed off-site on Parcel 29.00-3-16.15 to mitigate exposures in Buildings 201, 202, 203, 204, and to treat the TCE groundwater plume.
- All Engineering Controls (SSDSs and PRB) must be inspected, operated, monitored and maintained as specified in the SMP.
- Annual groundwater monitoring after the first eight quarters.
- Compliance with Soil Management Plan.
- Groundwater use prohibition without treatment.

Box 5

Periodic Review Report (PRR) Certification Statements

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

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

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

YES	NO
X	☐

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

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

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

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 447023

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I DAVID BAKER at 1 WTC, NY, NY 10007
print name print business address

am certifying as United States General Services Administration (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

David C Baker 5/23/19
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification Date

IC/EC CERTIFICATIONS

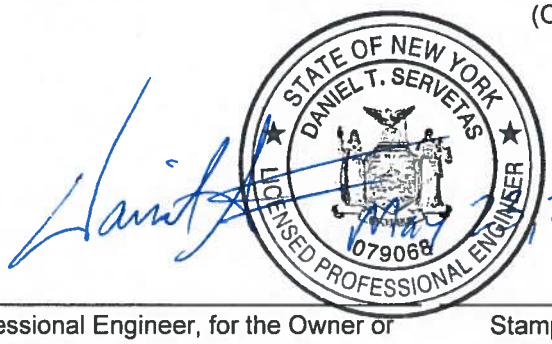
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Daniel Servetas (print name) at AECOM, 40 British American Boulevard, Latham, NY 12110 (print business address)

am certifying as a Professional Engineer for the United States General Services Administration (Owner or Remedial Party)



May 23, 2019

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification | Stamp (Required for PE) | Date

GSA

Real Property Utilization & Disposal

April 19, 2018

Chief, Site Control Division
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12333-7020

RE: Portion of the Former Scotia Depot
Avenue E, Town of Glenville
Schenectady County, New York
Lot C3 (Section 29, Block 3, Lot 24)

Dear Chief,

This notice is to inform you that on April 12, 2018, the US General Services Administration has transferred ownership of the property known as C-3, a Portion of the Former Scotia Depot. The new owner is:

Schenectady Metroplex Development Authority
433 State Street
Schenectady, NY 12305
Mr. Ray Gillen, Chair
Mr. Jaymhe Lahut, Executive Director

Please note, the new owner has been provided the final Revised Site Management Plan dated March 2018. If you have any questions, feel free to contact me at Barbara.salfity@gsa.gov or 617-565-5696.

Regards,

Barbara J. Salfity

Barbara J. Salfity, Branch Chief
U.S. General Services Administration
Real Property Utilization and Disposal

US General Services Administration
10 Causeway Street
Suite 1100
Boston, MA 02222
propertydisposal.gsa.gov

SITE NO. 447023 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
29.00-3-16.71	U.S. General Services Administration	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan Monitoring Plan O&M Plan IC/EC Plan

Property may be used for Commercial and Industrial use as described in 6 NYCRR Part 375-1.8(g)(2) and as its current use for Research, Development and Technology uses as described in Glenville Town Code 270-20

29.00-3-24	~~U.S. General Services Administration~~ BelGioioso	Monitoring Plan O&M Plan IC/EC Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan

Property may be used for Commercial and Industrial use as described in 6 NYCRR Part 375-1.8(g)(2) and as its current use for Research, Development and Technology uses as described in Glenville Town Code 270-20.

Box 4

Description of Engineering Controls

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- All Engineering Controls (SSDSs and PRB) must be inspected, operated, monitored and maintained as specified in the SMP.
- Annual groundwater monitoring after the first eight quarters.
- Compliance with Soil Management Plan.
- Groundwater use prohibition without treatment.

Note: See section 2.1 on the PRR for more information regarding the location of the various components of these engineering controls

29.00-3-24	Vapor Mitigation Subsurface Barriers Monitoring Wells

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- All Engineering Controls (SSDSs and PRB) must be inspected, operated, monitored and maintained as specified in the SMP.
- Annual groundwater monitoring after the first eight quarters.
- Compliance with Soil Management Plan.
- Groundwater use prohibition without treatment.

Box 5

Periodic Review Report (PRR) Certification Statements

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

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

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

YES	NO
X	☐

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

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

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

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 447023

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I DAVID C BAKER at 1 WTC, NY, NY 10007.
print name print business address

am certifying as United States General Services Administration (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

David Baker
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

5/10/19
Date

IC/EC CERTIFICATIONS

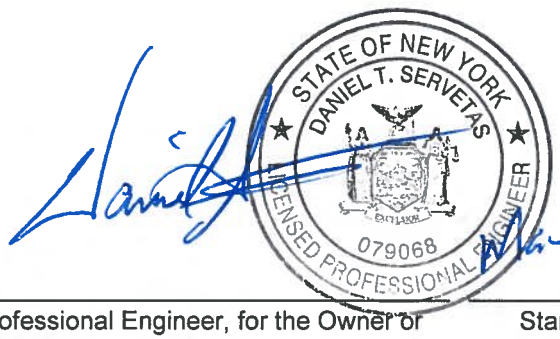
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Daniel Servetas (print name) at AECOM 40 British American Blvd., Latham, NY (print business address),

am certifying as a Professional Engineer for the United States General Services Administration (Owner or Remedial Party)



May 10, 2019

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification | Stamp (Required for PE) | Date

GSA

Real Property Utilization & Disposal

April 19, 2018

Chief, Site Control Division
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12333-7020

RE: Portion of the Former Scotia Depot
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Schenectady County, New York
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Schenectady Metroplex Development Authority
433 State Street
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Mr. Ray Gillen, Chair
Mr. Jaymhe Lahut, Executive Director

Please note, the new owner has been provided the final Revised Site Management Plan dated March 2018. If you have any questions, feel free to contact me at Barbara.salfity@gsa.gov or 617-565-5696.

Regards,

Barbara J. Salfity

Barbara J. Salfity, Branch Chief
U.S. General Services Administration
Real Property Utilization and Disposal

US General Services Administration
10 Causeway Street
Suite 1100
Boston, MA 02222
propertydisposal.gsa.gov

APPENDIX C: SVI Systems Site-Wide Inspection Forms

Site-Wide Inspection Form

The Defense National Stockpile Center Scotia Depot
Glenville, New York

Engineering Control (s): SVI Mitigation System Inspection Date: 12/13/2016

Item	Yes	No	N/A	Comments
Does the Engineering Control continue to perform as designed?	X			
Does the Engineering Control continue to protect human health and the environment?	X			
Does the Engineering Control comply with requirements established in the SMP?	X			
Has remedial performance criteria been achieved or maintained?	X			
Has sampling and analysis of appropriate media been performed during the monitoring event?	X			December 2016
Have there been any modifications made to the remedial or monitoring system?		X		
Does the remedial or monitoring system need to be changed or altered at this time?		X		
Has there been any intrusive activity, excavation, or construction occurred at the site?		X		
Were the activities mentioned above, performed in accordance with the SMP?	X			
Was there a change in the use of the site or were there new structures constructed on the site?	X			New tenants to building but does not affect system or monitoring
In case a new occupied structure is constructed or the use of the current building changed, was a vapor intrusion evaluation done?			X	
Were new mitigation systems installed based on monitoring results?		X		
Were the groundwater wells in the monitoring network inspected during this site inspection? If so, were the Monitoring Well Field Inspection Logs Completed?	X			Monitoring well inspection completed and note written in field book as needed.

Note: Upon completion of the form any non-conforming items warranting corrective action should be identified here within.

Name of Inspector: Gerlinde Wolf
Inspector's Company: AECOM

Signature of Inspector: G Wolf
Date: 12/13/2016

IMMEDIATELY REPORT ANY FAILURE OR DEFECT TO THE PROJECT MANAGER SO A COUNTERMEASURE PLAN CAN BE IMPLEMENTED.

Site-Wide Inspection Form

The Defense National Stockpile Center Scotia Depot
Glenville, New York

Engineering Control (s): SVI Mitigation System Inspection Date: 12/11/2017

Item	Yes	No	N/A	Comments
Does the Engineering Control continue to perform as designed?	X			Some repairs are needed.
Does the Engineering Control continue to protect human health and the environment?	X			Annual sample data does not exceed standards.
Does the Engineering Control comply with requirements established in the SMP?	X			
Has remedial performance criteria been achieved or maintained?	X			
Has sampling and analysis of appropriate media been performed during the monitoring event?	X			December 2017, December 2016
Have there been any modifications made to the remedial or monitoring system?		X		
Does the remedial or monitoring system need to be changed or altered at this time?		X		
Has there been any intrusive activity, excavation, or construction occurred at the site?		X		
Were the activities mentioned above, performed in accordance with the SMP?	X			
Was there a change in the use of the site or were there new structures constructed on the site?	X			New tenants to building but does not affect system or monitoring
In case a new occupied structure is constructed or the use of the current building changed, was a vapor intrusion evaluation done?			X	
Were new mitigation systems installed based on monitoring results?		X		
Were the groundwater wells in the monitoring network inspected during this site inspection? If so, were the Monitoring Well Field Inspection Logs Completed?	X			

Note: Upon completion of the form any non-conforming items warranting corrective action should be identified here within.

Name of Inspector: Gerlinde Wolf
Inspector's Company: AECOM

Signature of Inspector: GWolf
Date: 12/11/2017

IMMEDIATELY REPORT ANY FAILURE OR DEFECT TO THE PROJECT MANAGER SO A COUNTERMEASURE PLAN CAN BE IMPLEMENTED.

Site-Wide Semi-Annual Inspection Form

The Defense National Stockpile Center Scotia Depot
Glenville, New York

Engineering Control (s): SSDS Inspection Date: 12/20/2018

Item	Yes	No	N/A	Comments
Does the Engineering Control continue to perform as designed?	X			Damaged Systems in Buildings 201 and 204
Does the Engineering Control continue to protect human health and the environment?	X			Damaged Systems in Buildings 201 and 204
Does the Engineering Control comply with requirements established in the SMP?	X			
Has remedial performance criteria been achieved or maintained?	X			Damage to SSDS in Buildings 201 and 204
Has sampling and analysis of appropriate media been performed during the monitoring event?	X			
Have there been any modifications made to the remedial or monitoring system?		X		
Does the remedial or monitoring system need to be changed or altered at this time?		X		Repairs needed in Buildings 201 and 204
Has there been any intrusive activity, excavation, or construction occurred at the site?		X		
Were the activities mentioned above, performed in accordance with the SMP?	X			
Was there a change in the use of the site or were there new structures constructed on the site?	X			GSA sold Parcel C-3 on April 12, 2018. No new structures have been built to date but a change in use is expected in the future.
In case a new occupied structure is constructed or the use of the current building changed, was a vapor intrusion evaluation done?		X		
Were new mitigation systems installed based on monitoring results?		X		
Were the groundwater wells in the monitoring network inspected during this site inspection? If so, were the Monitoring Well Field Inspection Logs Completed?			X	

Note: Upon completion of the form any non-conforming items warranting corrective action should be identified here within.

Name of Inspector: Gerlinde Wolf and Tom Quakenbush Signature of Inspector: Gerlinde Wolf
Inspector's Company: AECOM Date: 12/21/2018

IMMEDIATELY REPORT ANY FAILURE OR DEFECT TO THE PROJECT MANAGER SO A COUNTERMEASURE PLAN CAN BE IMPLEMENTED.