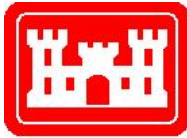


**FIVE-YEAR REVIEW REPORT FOR
NORTHEASTERN INDUSTRIAL PARK AOC 1 AND 7
FORMER SCHENECTADY ARMY DEPOT FUDS SITE
GUILDERLAND, NEW YORK**

Prepared by:



**U.S. Army Corps
of Engineers**
New England District

United States Army Corps of Engineers
New England District
696 Virginia Road
Concord, Massachusetts 01742

FINAL, JUNE 2018

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June 2018



Colonel William M. Conde
Commander and District Engineer
USACE New England District



Date

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LIST OF ACRONYMS AND ABBREVIATIONS

ACEMC	Albany County Environmental Management Council
AOC	Areas of Concern
ARAR	Applicable or Relevant and Appropriate Requirements
AWQS	Ambient Water Quality Standards
Bluestone	Bluestone Environmental Group, Inc.
CENAE	US Army Corps of Engineers, New England District
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DA	Department of the Army
1,2-DCA	1,2-Dichloroethane
1,2-DCE	Dichloroethene (total, consisting of cis- and trans-1,2 DCE)
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
EE	Environmental Easement
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FUDS	Formerly Used Defense Site
FYR	Five-Year Review
H2H	H2H Associates, LLC.
HHRA	Human Health Risk Assessment
IC/EC	Institutional and Engineering Controls
LLDPE	Linear Low-Density Polyethylene
LUC	Land Use Control
MCL	Maximum Contaminant Level
MNA	Monitored Natural Attenuation

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

NCP	National Contingency Plan
NEIP	Northeastern Industrial Park
NPL	National Priorities List
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	Operations and Maintenance
OU	Operating Unit
oz/yd ²	ounce per square yard
PAH	Polycyclic Aromatic Hydrocarbon
PDI	Pre-Design Investigation
QC	Quality Control
RAO	Remedial Action Objectives
RI	Remedial Investigation
RG	Remedial Goal
SADVA	Schenectady Army Depot – Voorheesville Area
SLERA	Screening-Level Ecological Risk Assessment
SMP	Site Management Plan
TCE	Trichloroethene
TOGS	Technical and Operational Guidance Series
U.S.	United States
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
UU/UE	Unlimited Use and Unrestricted Exposure
VC	Vinyl Chloride
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is or will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them. The following represents the first FYR for Areas of Concern (AOC) 1 and 7 at the Northeastern Industrial Park (NEIP), formerly the Schenectady Army Depot – Voorheesville Area (SADVA), located in Guilderland, New York. This document was prepared in accordance with the United States Environmental Protection Agency's (USEPA's) Comprehensive FYR Guidance, EPA 540-R-01-007 (USEPA, 2001).

This document was prepared pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121 and the National Contingency Plan (NCP). CERCLA §121 states the following:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The USEPA interpreted this requirement further in the NCP at 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii), which states the following:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

The Department of Defense (DoD) used the property as a warehouse and storage complex from 1941 to 1969. The primary purpose of the installation was receipt, storage, maintenance, and distribution of supply items. The SADVA site is now privately owned and operated as the NEIP. AOC 1 is a former United States (U.S.) Army landfill located in the southeastern portion of NEIP. AOC 7 is a triangular-shaped disposal area located between existing and former railroad tracks at the south end of SADVA and immediately west of AOC 1. Remedial Investigations (RI) were conducted from 1997 to 2007.

The contaminants of concern (COCs) identified for groundwater at AOC 1 were: trichloroethene (TCE), 1,2-dichloroethene (1,2-DCE) [total, consisting of cis- and trans-1,2 DCE], 1,2-dichloroethane (1,2-DCA), and vinyl chloride (VC). The RI found no groundwater contamination at AOC 7, and all measured soil sample concentrations were found to be below New York State Department of Environmental Conservation (NYSDEC) industrial use clean up objectives. AOC 7 needed no remedial action or long-term monitoring.

Response actions were performed at NEIP by the United States Army Corps of Engineers (USACE) as a Formerly Used Defense Site (FUDS) pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Remedial activity began 06 June 2013. The remedial actions as described in the Decision Document are a Landfill Cap/Cover system, Land Use Controls (LUCs), and Monitored Natural Attenuation (MNA) for groundwater. The LUCs include an Environmental Easement, which prohibits the use of groundwater for drinking purposes and construction of buildings over the plume and capped and covered areas, fencing, and posting of “No Trespassing” signs. Annual inspections are required to verify that the LUCs are maintained. Annual groundwater monitoring is required to monitor MNA parameters and COC concentrations. At the time of the first FYR, AOC 1 remains unsuitable for unlimited use and unrestricted exposure (UU/UE) and is being evaluated for protectiveness.

The remedy at AOC 1 and 7 is protective of human health and the environment. The annual Landfill Cap/Cover and LUCs inspections have shown that the systems are functioning as designed. The COCs have not been found above laboratory detection limits since long-term groundwater monitoring began in 2014. The remedial goals for the groundwater COCs are specified groundwater concentrations, which are being met. The Technical Assessment of AOC 1 and 7 indicates that the remedy is functioning as intended by the Decision Document and that the exposure assumptions, toxicity data, cleanup values, and remedial actions used at the time of the remedy selection are still valid.

The next FYR should be completed five years from the signature date of this FYR.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Northeastern Industrial Park, Former Schenectady Army Depot – Voorheesville Area, Formerly Used Defense Site (FUDS)		
EPA ID: C02NY000203		
Region: 2	State: NY	City/County: Guilderland/Albany
SITE STATUS		
NPL Status: Non-NPL		
Multiple OUs? No	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: Other Federal Agency If "Other Federal Agency" was selected above, enter Agency name: U.S. Army Corps of Engineers		
Author name (Federal or State Project Manager): Mr. Gregory J. Goepfert, Project Manager, U.S. Army Corps of Engineers (USACE)		
Author affiliation: USACE		
Review period: 27 June 2017 to 01 June 2018		
Date of site inspection: 11 October 2017		
Type of review: Statutory		
Review number: 1		
Triggering action date: 06 June 2013		
Due date (five years after triggering action date): 06 June 2018		

FIVE-YEAR REVIEW SUMMARY FORM (CONTINUED)

PROTECTIVENESS STATEMENT(S)		
Operable Unit: AOC 1 and 7	Protectiveness Determination: Protective	Addendum Due Date (if applicable): Not Applicable
Protectiveness Statement: The remedy at AOC 1 and 7 is protective of human health and the environment. The elements of the remedy include a Landfill Cap/Cover system, Land Use Controls (LUCs), and Monitored Natural Attenuation (MNA) for groundwater. The LUCs include an Environmental Easement, which prohibits the use of groundwater for drinking purposes and construction of buildings over the plume and capped and covered areas, fencing, and posting of "No Trespassing" signs. The LUC elements of the remedy ensure that there is no exposure to site contaminants of concern.		

SITEWIDE PROTECTIVENESS STATEMENT (IF APPLICABLE)	
<i>For sites that have achieved construction completion, enter a sitewide protectiveness determination and statement.</i>	
Protectiveness Determination: Protective	Addendum Due Date (if applicable): Not Applicable
Protectiveness Statement: Because the remedial action at AOC 1 and 7 is protective, the site is protective of human health and the environment.	

1.0 INTRODUCTION

The United States Army Corps of Engineers (USACE) New England District (CENAE) has completed this first Five-Year Review (FYR) for Areas of Concern (AOC) 1 and 7 at the Northeastern Industrial Park (NEIP) in Guilderland, New York (hereafter referred to as the Site). The FYR report evaluates the period of 06 June 2013 (initiation of Remedial Action) to 06 June 2018. This document was prepared in accordance with the United States Environmental Protection Agency's (USEPA's) Comprehensive FYR Guidance, EPA 540-R-01-007 (USEPA, 2001), and presents the results of the first FYR. The purpose of FYRs is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports. In addition, FYR reports identify issues found during the review, if any, and recommendations to address them.

This document was prepared pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121 and the National Contingency Plan (NCP). CERCLA §121 states the following:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The USEPA interpreted this requirement further in the NCP at 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii), which states the following:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

This statutory FYR is required because hazardous substances, pollutants, or contaminants remain above levels which would allow for unlimited use and unrestricted exposure (UU/UE). This FYR was conducted from June 2017 through June 2018.

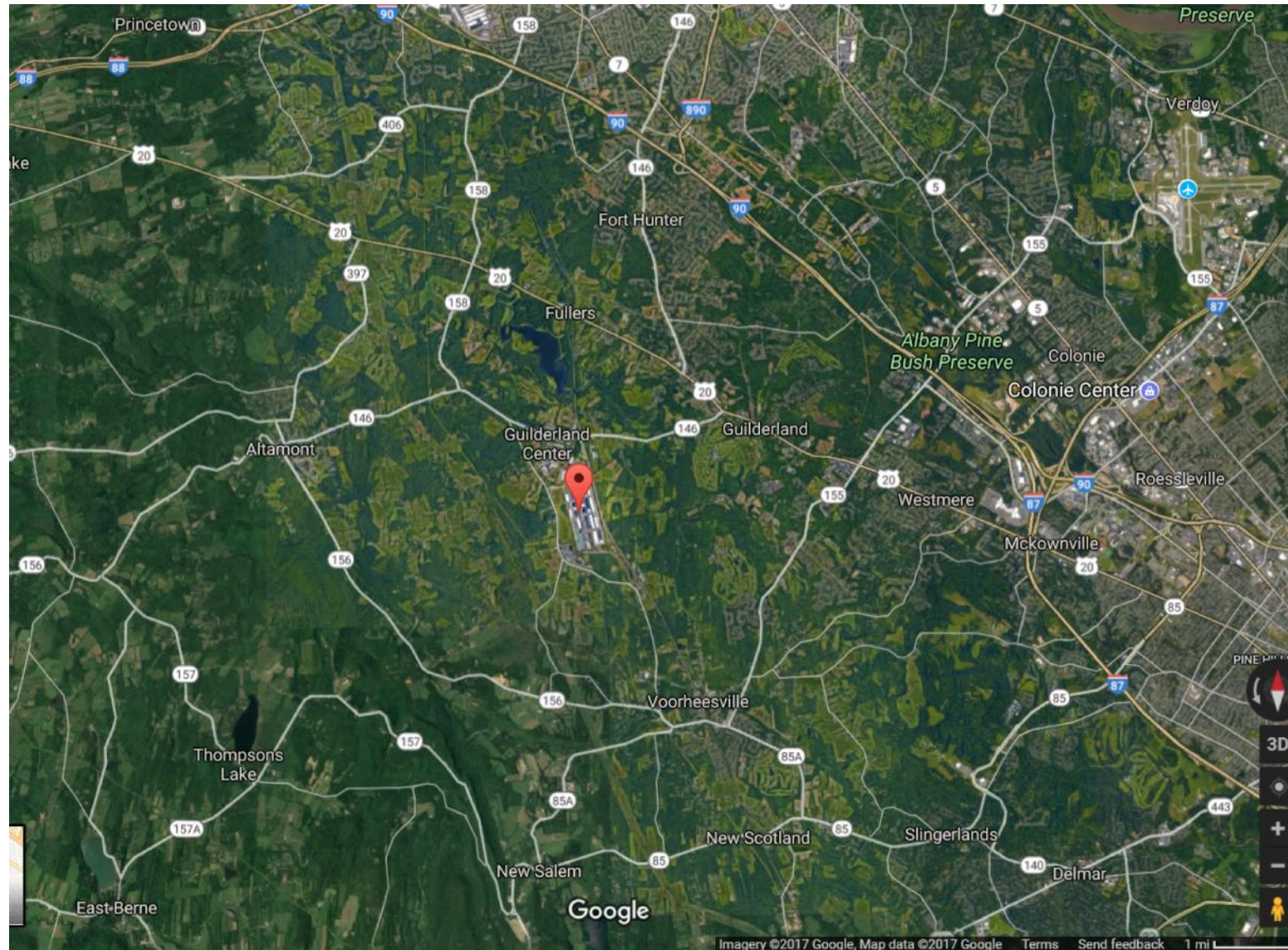
The Site is located in Guilderland, NY (**Figures 1-1 and 1-2**). AOC 1 is a former United States (U.S.) Army landfill located in the southeastern portion of NEIP. AOC 7 is a triangular-shaped disposal area located between existing and former railroad tracks at the south end of Schenectady Army Depot – Voorheesville Area (SADVA) and immediately west of AOC 1. The Decision Document for AOC 1 and 7, signed on 11 October 2011, contains the selected response action for this Site, consistent with CERCLA and the NCP. This is the first FYR performed for the Site. The triggering action for this FYR was the initiation of the remedial action on 06 June 2013.

1.1 Roles and Responsibilities

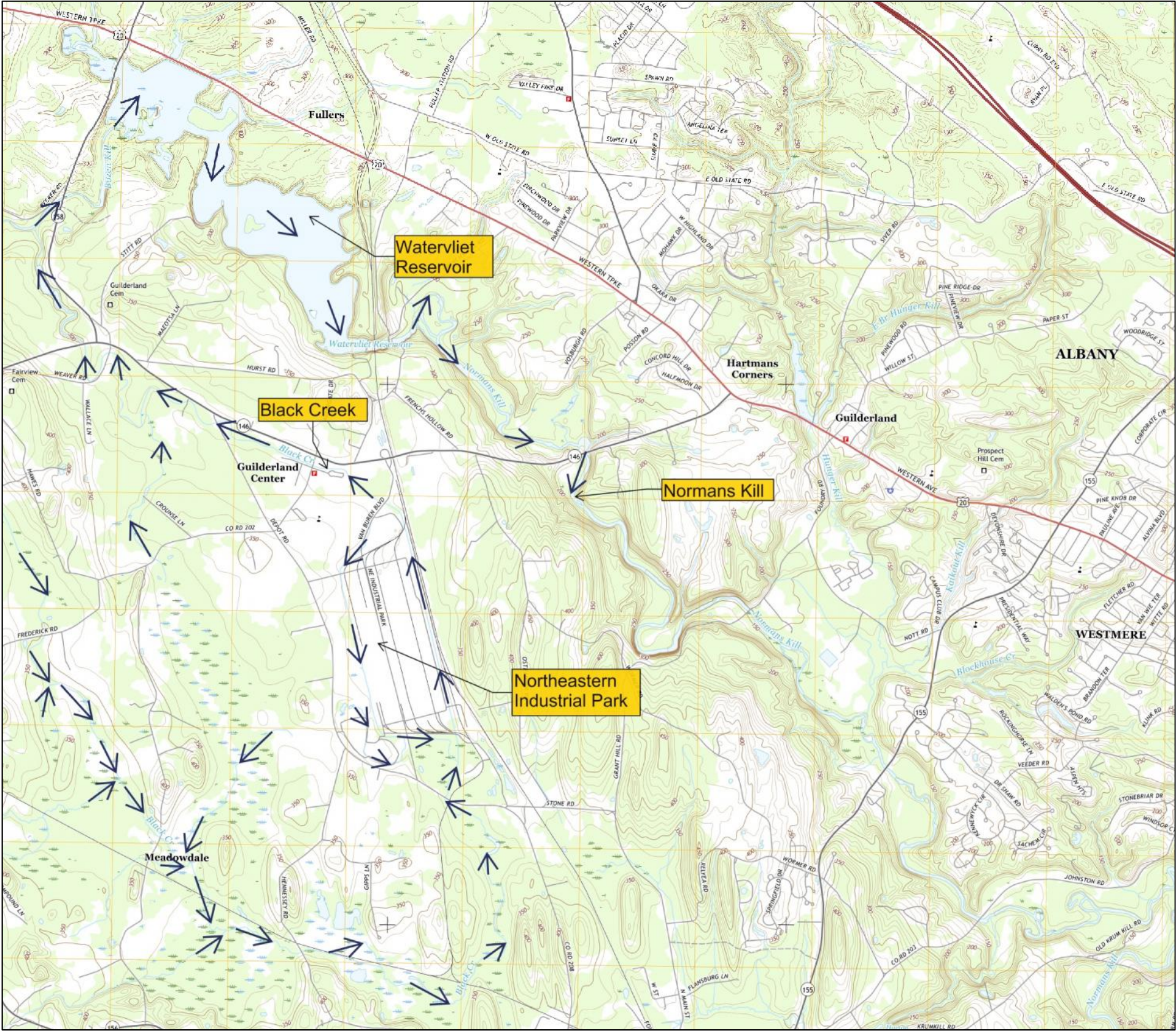
The Department of the Army (DA) serves as the Department of Defense (DoD) Executive Agent for execution of the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS). DA further delegated responsibility of the management and execution of the DERP-FUDS program to USACE. This FYR was prepared by Bluestone Environmental Group, Inc., under the oversight and review of USACE.

1.2 Organization of Report

Section 1 presents an introduction and overview of the FYR for the site. Section 2 presents the chronology of significant events at the site. Section 3 presents background information for the site. Section 4 describes the remedial actions that have occurred at the site. Section 5 summarizes activities at the sites since the Remedial Action. Section 6 summarizes the FYR process. Section 7 presents a technical assessment of site protectiveness. Section 8 describes any issues at the site which would compromise protectiveness. Section 9 summarizes recommendations and follow-up actions. Section 10 includes a protectiveness statement for the site. Section 11 indicates when the next FYR will take place. Additional information is included in the six appendices.



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→
Surface Flow Direction
Base Map: USGS, 2016
Voorheesville Quadrangle

Figure 1-2. Regional Surface Water Flow

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2.0 SITE CHRONOLOGY

This section describes the history of the site as it relates to use, ownership, and contamination. A list of important site events and relevant dates for the Site are listed in **Table 2-1**.

Table 2-1. Chronology of Site Events

Event	Date
DoD Ownership and Use as Warehouse and Storage Complex	1941 to 1969
Albany County Environmental Management Council (ACEMC) Report Prompting Environmental Concern at NEIP	1980
FUDS Project Initiation	1989
Landfill Added to FUDS Project	1990
Remedial Investigation for AOC 1	1997
Remedial Investigations for AOC 1 and 7	1999 to 2007
Feasibility Study for AOC 1 and 7	2010
Proposed Plan Issued for AOC 1 and 7	February 2011
Decision Document Signed	11 October 2011
Pre-Design Investigation	October 2012 to December 2012
100% Remedial Design	June 2013
Remedial Construction	06 June 2013 to 06 September 2013
Groundwater Monitoring Events	12 May 2014 28 July 2015 18 October 2016 19-20 December 2017
Landfill Cap and Soil Cover Inspections	14 May 2014 03 August 2015 21 October 2016 11 October 2017
Site Management Plan (SMP) Finalized	August 2014
New York State Department of Environmental Conservation (NYSDEC) Concurrence with Cap Installation	14 January 2015
Environmental Easement (EE) Approval	21 December 2015
NYSDEC Notification of Change in Site Classification from 2 to 4	13 February 2017

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3.0 BACKGROUND

This section provides a brief description of relevant background information for the Site.

3.1 Physical Characteristics

The NEIP (former SADVA) is located in the Town of Guilderland, one-quarter mile southeast of Guilderland Center, Albany County, New York (Figure 1-1). The site is relatively flat with surface slopes typically between 2% and 5%. A stormwater management system exists on the site to control surface water runoff. The original topography has changed due to the construction of the landfill cap/cover system.

3.2 Land and Resource Use

The Department of Defense (DoD) primarily used the SADVA site as a warehouse and storage complex from 1941 through 1969. The site was originally constructed as a regulating station and holding and re-consignment point, and later became a general depot for the U.S. Department of the Army. The principal mission of the installation was the receipt, storage, maintenance, and distribution of supply items (USACE, 2011).

The SADVA site is now privately owned and operated as the NEIP. AOC 1 is the former U.S. Army Southern Landfill located in the southeastern region of NEIP (**Figure 3-1**). AOC 7 is a triangular-shaped disposal area located on dry, open ground between existing and former railroad tracks at the south end of the site and immediately west of AOC 1. The future land use of this site was described in the NEIP General Environmental Impact Statement (EIS) from June 2005. The proposed use of AOC 1 and 7 are for commercial development, specifically eight office buildings and three parking lots [USACE, 2011; H2H Associates, LLC. (H2H), 2017]. However, no known re-development is planned for the near future (i.e., within the next five years). The ICs, specified in the Site Management Plan (SMP) and EE for the Site, prohibit intrusive ground-disturbing activities and load-bearing use on the cap and soil cover, construction of buildings within the controlled area, and groundwater use (H2H, 2014a).

3.3 History of Contamination

A 1980 report by the Albany County Environmental Management Council (ACEMC) prompted environmental concern at the NEIP property (ACEMC, 1980). This report described aerial photographs showing excavation and disposal activities occurring in the southeastern areas of the SADVA. The majority of the excavation and disposal activities occurred during the time SADVA was operated by the DoD. However, according to a report by the U.S. Army Toxic and Materials Agency (1980), no written records were found that would indicate disposal of wastes occurred at the property. For this reason, historical aerial photos were used to help identify periods of site disturbance that could correspond to waste disposal activities. In its report, ACEMC discussed observations of an approximately 15-acre dump that was referred to as the U.S. Army Southern Landfill (AOC 1), located in the southern part of SADVA. Next to the dumpsite was a 3-acre pond, which was located at the northeast edge of the dumpsite.

AOC 1 reportedly contains construction and demolition debris, industrial and domestic wastes, and wastes from a former burn pit area located elsewhere at SADVA. The landfill boundaries were previously determined by past investigations conducted from the early 1990's through 2007, by Malcolm Pirnie and Parsons under contract to the USACE. Impacts by volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs) and/or metals in surface soil, subsurface soil and groundwater have been documented, predominantly in the southern section.

3.4 Initial Response

There were no cleanup actions completed at AOC 1 and 7, prior to the signature of the Decision Document in 2011.

3.5 Basis for Taking Action

Based on the RIs, the primary COCs identified in soil at AOC 1 were PAHs [including benzo(a)pyrene] and arsenic. The COCs identified for groundwater at AOC 1 were: TCE, 1,2-DCE, 1,2-DCA, and VC. The presence of commonly identified daughter products* suggested that anaerobic degradation was potentially an active process at AOC 1.

A Human Health Risk Assessment (HHRA) was conducted for residential, as well as industrial, populations to be conservative (USACE, 2011). The HHRA evaluated four potential media of concern: soil, groundwater, sediment and surface water (from an on-site pond and surrounding wetlands) for both AOC 1 and 7. The potential route of exposure for soil would be incidental ingestion of surface/mixed soil, inhalation of volatiles from the soil and dermal contact with the soil. Potentially exposed populations include current and future outdoor workers, future indoor workers and current and future residents. The non-carcinogenic hazard quotients for detected chemicals were calculated as 0.94 and 0.26 for residential and industrial receptors, respectively. These are below the unacceptable non-carcinogenic hazard quotient of 1.0. The cumulative risks for carcinogenic chemicals detected in soil were 3.1×10^{-5} and 1.0×10^{-5} for residential and industrial receptors, which were within the USEPA's acceptable risk range of 1×10^{-6} to 1×10^{-4} . Thus, no unacceptable carcinogenic risks or non-carcinogenic health hazards are expected from soil exposure.

The potential route of exposure for groundwater is ingestion of on-site groundwater as drinking water, inhalation of groundwater from use of the water in the home (i.e. showering, laundry and dish washing) and inhalation of volatiles due to vapor intrusion from shallow groundwater into indoor air. Potentially exposed populations include current and future outdoor workers, future indoor workers, and current and future residents. It was determined that no unacceptable carcinogenic risks or non-carcinogenic health hazards are expected to exist for

* Daughter products, including 1,2-DCE and VC, were detected in 2000 and 2006, in groundwater samples from former wells ACE-2 and AMW-1 (Figure 3-2). These wells were later decommissioned due to their location within the footprint of the landfill cap. These compounds have not been detected during post-construction monitoring in the wells installed around the perimeter of the landfill cap (MW13-1, MW13-2, or MW13-3) in the vicinity of the former wells.

groundwater at AOC 7. Unacceptable carcinogenic risks were found in AOC 1 for groundwater for arsenic (1.7×10^{-2}), TCE (6×10^{-3}), and VC (1.5×10^{-3}). Non-carcinogenic health hazards associated with groundwater were related to cis-1,2-DCE (1.6) and the metals vanadium, selenium, and antimony (with a cumulative hazard index of 1.6).

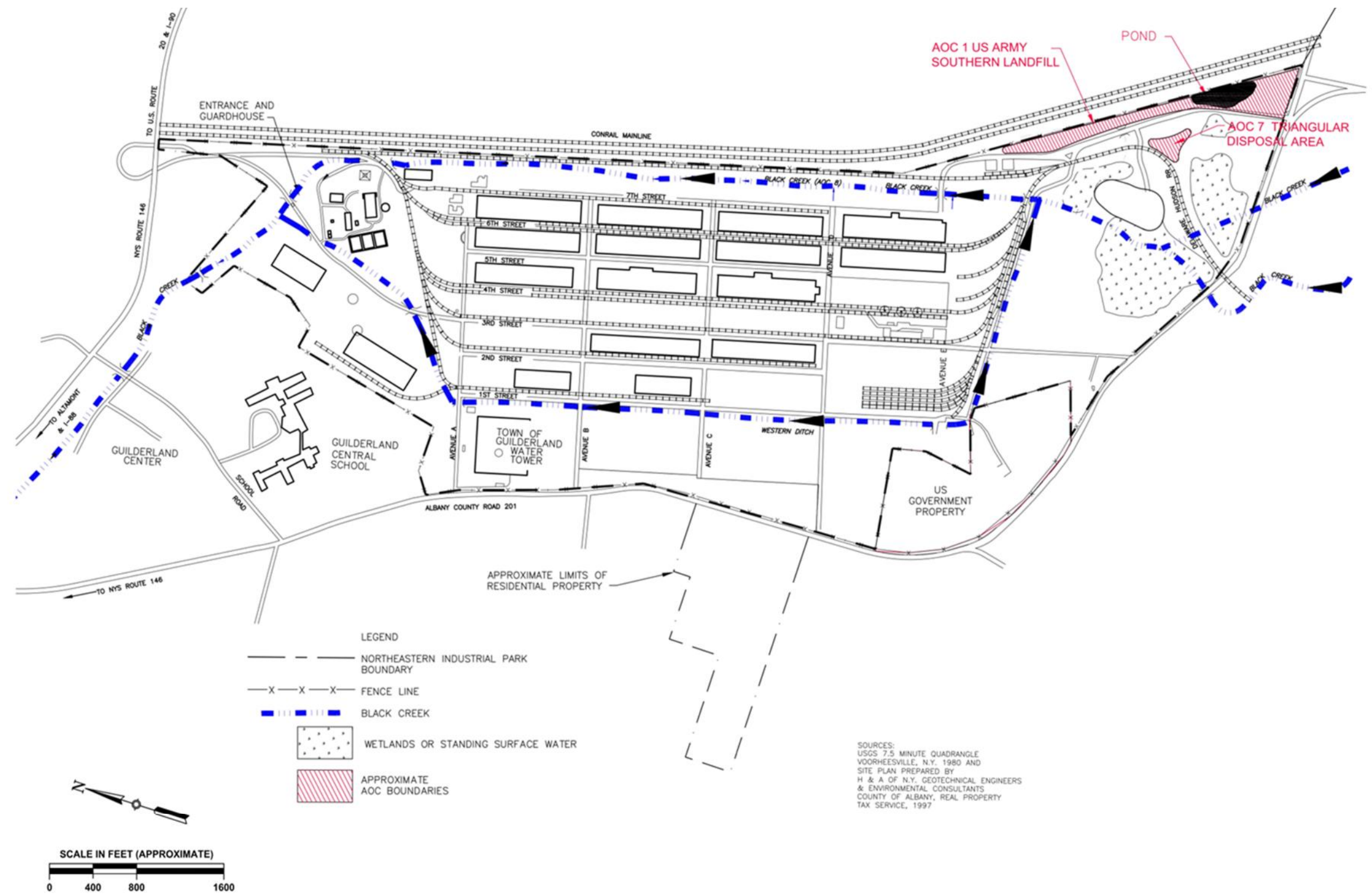
The potential route of exposure for sediment is incidental ingestion of sediment and dermal contact with sediment. The potentially exposed population is current and future outdoor workers, future indoor workers and current and future residents. The non-carcinogenic hazard quotient was 0.73 and the carcinogenic risk was 7.8×10^{-6} , which are both acceptable values.

The potential route of exposure for surface water is ingestion of surface water as drinking water or inhalation of surface water from use in the home (i.e. showering, laundry and dishwashing). The potentially exposed population is current and future outdoor workers, future indoor workers and current and future residents. The results indicated that potential adverse non-carcinogenic health hazards and/or cancer risks may occur if the pond surface water were to be used a drinking water source. The non-carcinogenic hazard quotient was 1.7. The carcinogenic risk was found to be 2.8×10^{-4} . It was determined that an unacceptable non-carcinogenic health hazard or cancer risk does not exist as the pond is not used as a drinking water source (USACE, 2011).

Overall, the RI characterization found no soil or groundwater contamination at AOC 7 that warranted remedial action. Based on the HHRA, it was determined that AOC 7 posed no unacceptable health risk with respect to soil, groundwater, surface water and sediment exposures. In addition, the vegetative cover over AOC 7 was intact, and all soil sample concentrations within the lateral limits of AOC 7 were below the applicable Title 6 New York Codes, Rules and Regulations (NYCRR) Part 375 industrial restricted land use soil cleanup objectives (USACE, 2011; H2H, 2017).

A Screening-Level Ecological Risk Assessment (SLERA) was conducted to assess potential adverse impacts to ecological receptors due to the presence of hazardous contaminants in soil, sediment, and surface water at the site. The objective was to evaluate the presence of unacceptable adverse risks or if ecological risks may be posed in the future. The SLERA indicated that while chemicals are present in media on site that could pose a risk to aquatic and terrestrial wildlife, the site supports wildlife typical for the area and for the commercial/industrial setting of the site. Overall, the SLERA concluded that there are no unacceptable risks to ecological receptors.

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Source: H2H, 2014a

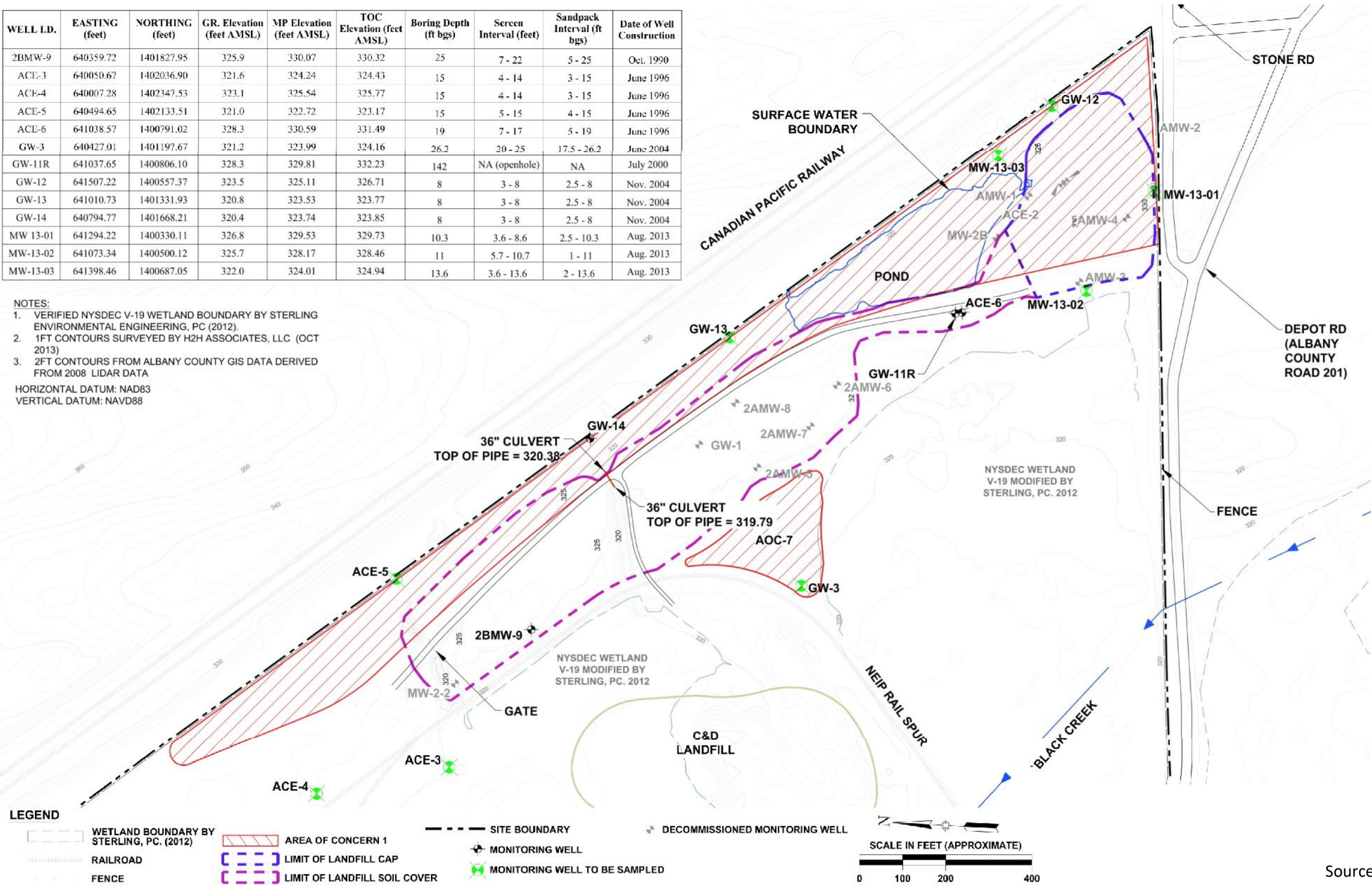
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WELL ID.	EASTING (feet)	NORTHING (feet)	GR. Elevation (feet AMSL)	MP Elevation (feet AMSL)	TOC Elevation (feet AMSL)	Boring Depth (ft bgs)	Screen Interval (feet)	Sandpack Interval (ft bgs)	Date of Well Construction
2BMW-9	640359.72	1401827.95	325.9	330.07	330.32	25	7 - 22	5 - 25	Oct. 1990
ACE-3	640050.67	1402036.90	321.6	324.24	324.43	15	4 - 14	3 - 15	June 1996
ACE-4	640007.28	1402347.53	323.1	325.54	325.77	15	4 - 14	3 - 15	June 1996
ACE-5	640494.65	1402133.51	321.0	322.72	323.17	15	5 - 15	4 - 15	June 1996
ACE-6	641038.57	1400791.02	328.3	330.59	331.49	19	7 - 17	5 - 19	June 1996
GW-3	640427.01	1401197.67	321.2	323.99	324.16	26.2	20 - 25	17.5 - 26.2	June 2004
GW-11R	641037.65	1400806.10	328.3	329.81	332.23	142	NA (openhole)	NA	July 2000
GW-12	641507.22	1400557.37	323.5	325.11	326.71	8	3 - 8	2.5 - 8	Nov. 2004
GW-13	641010.73	1401331.93	320.8	323.53	323.77	8	3 - 8	2.5 - 8	Nov. 2004
GW-14	640794.77	1401668.21	320.4	323.74	323.85	8	3 - 8	2.5 - 8	Nov. 2004
MW 13-01	641294.22	1400330.11	326.8	329.53	329.73	10.3	3.6 - 8.6	2.5 - 10.3	Aug. 2013
MW-13-02	641073.34	1400500.12	325.7	328.17	328.46	11	5.7 - 10.7	1 - 11	Aug. 2013
MW-13-03	641398.46	1400687.05	322.0	324.01	324.94	13.6	3.6 - 13.6	2 - 13.6	Aug. 2013

NOTES:

1. VERIFIED NYSDEC V-19 WETLAND BOUNDARY BY STERLING ENVIRONMENTAL ENGINEERING, PC (2012).
2. 1FT CONTOURS SURVEYED BY H2H ASSOCIATES, LLC (OCT 2013)
3. 2FT CONTOURS FROM ALBANY COUNTY GIS DATA DERIVED FROM 2008 LIDAR DATA

HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88



Source: H2H, 2017

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4.0 REMEDIAL ACTIONS

The following sections describe the selection, implementation, and operation of the remedy.

4.1 Remedy Selection

RAOs were developed to evaluate the applicability of remedial technologies and the effectiveness of remedial actions. The following RAOs were established in the Decision Document for AOC 1:

-) Eliminate or minimize the human health risks posed by TCE, VC, 1,2-DCA, and total 1,2-DCE in groundwater within the landfill by satisfying the Class GA groundwater standards for these analytes;
-) Although soils have not been completely characterized, the remedial action will eliminate the soil exposure pathway;
-) Mitigate the potential for future releases of contaminants in the landfill to groundwater; and,
-) Mitigate the potential for movement and offsite migration of TCE, VC, 1,2-DCA and total-1,2-DCE from the groundwater plume within the landfill.

The selected remedy for AOC 1 was Alternative 3 – Landfill Cover and Cap, Groundwater MNA, and Land Use Controls (LUCs) (USACE, 2011). The selected remedy included the Containment Presumptive Remedy for the landfill, thereby eliminating the soil exposure pathway and mitigating the potential for release of contaminants in the landfill to groundwater and movement and off-site migration of COCs from the groundwater. The Landfill Cover and Cap system satisfied the 40 CFR §264.310 requirements. MNA was selected to address the reduction of COCs to below remedial goals (RGs). LUCs are necessary to protect human health. The LUCs include an Environmental Easement, which prohibits the use of groundwater for drinking purposes and construction of buildings over the plume and capped and covered areas, fencing, and posting of “No Trespassing” signs.

4.2 Remedial Goals

For AOC 1, the HHRA concluded that unacceptable health risks would be posed by groundwater at AOC 1, if groundwater was used as a drinking water source. Groundwater RGs (**Table 4-1**) were established based on Federal Maximum Contaminant Levels (MCLs), as specified in 40 CFR §141.61, and NYSDEC Ambient Water Quality Standards (AWQS), as specified in the Technical and Operational Guidance Series (TOGS) 1.1.1 (NYSDEC, 1998). RGs were also identified for soil, based on 6 NYCRR §375-6.8(b).

Table 4-1. Chemical-Specific Remedial Goals for AOC 1

Groundwater	
Analyte	Value (µg/L)
1,2-Dichloroethane (1,2-DCA)	0.6*
1,2-Dichloroethene (total) (1,2-DCE)	5*
Trichloroethene (TCE)	5 ⁺
Vinyl Chloride (VC)	2 ⁺
Soil	
Analyte	Value (µg/Kg)[±]
Benzo(a)pyrene (PAH)	1,100
Total PAHs	1,000,000
Arsenic	16,000

* The NYSDEC AWQS [from 6 NYCRR 703.5(f), Table 1] was stricter than the Federal MCL (40 CFR 141.61), so the NYSDEC AWQS was established as the RG in the Decision Document.

⁺ The RGs for TCE and VC are the Federal MCLs.

[±] Soil RGs taken from 6 NYCRR §375-6.8(b).

4.3 Remedy Implementation

A pre-design investigation (PDI) was conducted from October through December 2012. The purpose of the PDI was to collect information required to design the final landfill cap and soil cover (H2H, 2017).

The PDI activities included:

-) Mowing and Clearing;
-) Utility Clearance;
-) Pre-Design Topographic Survey and Mapping;
-) Vibration Analysis;
-) Rare Endangered Species Identification;
-) Wetlands Permit/V-19 Wetland Boundary Verification;
-) Landfill Gas Monitoring; and,
-) Pre-Design Groundwater Sampling and Analysis.

The PDI was designed to:

-) Refine the characterization of the nature and extent of groundwater contamination at the site through additional sampling of monitoring wells.
-) Establish a base map for planning and design purposes.
-) Conduct such investigations as needed to finalize the design of the cap/soil cover.

The Remedial Design included the development of drawings and specifications (including 30%, 60%, and 95%/Final 100% Designs). NYSDEC was involved throughout the review process. The Final 100% Design was completed in June 2013, and landfill cap and soil cover construction began on 06 June 2013. Prior to the installation of the southern landfill cap, approximately 10,400 cubic yards of fill material was brought on-site to bring the existing grade up to meet the 4% minimum grade Title 6 NYCRR requirement for the cap (H2H, 2017).

Two types of cap/cover systems were constructed at AOC 1:

-) A constructed landfill cap for the southern section (2.8 acres); and
-) A soil cover for the northern section (8 acres).

The landfill cap system in the southern portion of the site incorporated the following (from the top to the bottom):

-) A topsoil layer of at least 6 inches to support vegetation to prevent erosion.
-) A 2-ft thick protective layer of soil graded, at a minimum of 4%, to promote drainage in accordance with Title 6 NYCRR Part 360-2 requirements.
-) A subsurface geocomposite system consisting of a single-sided textured nonwoven 6-ounce per square yard (oz/yd²) geotextile to capture water infiltration and drainage.
-) A low-permeability flexible 40-mil thick textured linear low-density polyethylene (LLDPE) geosynthetic membrane to accommodate differential settling.
-) A 10-oz/yd² nonwoven geotextile blanket cushion layer.
-) A 6-inch minimum thickness soil subbase layer free of rocks greater than ½-inch in diameter to provide a smooth foundation for the composite cap system.

The age, limited volume, and composition of the waste suggested that landfill gas would not be generated at the site. A waiver from inclusion of a gas management layer was requested from, and granted by, the NYSDEC (H2H, 2017).

After clearing and grubbing of existing vegetation, the soil cover system in the northern portion of the site incorporated the following components:

-) A topsoil layer at least 6-inches thick and seeded for vegetation for erosion control.
-) A 1-ft thick soil protective layer.
-) A 12-ft wide gravel access road to allow limited vehicle access to this area and to the southern area landfill cap. The road was constructed in the location of a former access road and consisted of an 8-inch layer of crushed gravel, sized 2 inches or less, which was placed over a non-woven geotextile, which was placed over an 8-inch compacted protective soil layer. This profile gave the access road a final elevation higher than the surrounding soil cover.

Remedial construction was completed in September 2013. A total of 12 monitoring wells were decommissioned during remedial construction, due to their locations within the work area. The following wells were decommissioned: AMW-1, AMW-2, AMW-3, AMW-4, MW-2B, MW-2-2, ACE-2, 2AMW-5, 2AMW-6, 2AMW-7, 2AMW-8, and GW-01.

Three new shallow monitoring wells were installed in August 2013, along the perimeter of the landfill cap (H2H, 2017):

-) Well MW-13-01, located near former well AMW-4, at the southern edge of the landfill cap.
-) Well MW-13-02, located near former well AMW-3, at the western edge of the landfill cap.
-) Well MW-13-03, located near former wells AMW-1 and AMW-2, at the northeastern edge of the landfill cap.

The SMP, finalized in August 2014, summarized the Institutional Controls/Engineering Controls (IC/ECs) and specified the details for annual monitoring, operations, and maintenance. The wells identified in the SMP for long-term monitoring are identified below in **Table 4-2**.

4.4 System Operation/Operation and Maintenance

4.4.1 Engineering Controls

Operation and maintenance at NEIP is described in the SMP. The grass cover/topsoil layer is inspected on an annual basis for the following:

-) Erosion;
-) Sinkholes;
-) Bare spots;
-) Dead species; and
-) Undesirable species.

The grass cover is mowed once per year, in the late fall. Trimming around existing features, such as fences, equipment and drainage ditches, and areas that cannot be reached with a mower is completed with smaller equipment that will not damage site features.

The cover soil and cap system are inspected annually. The inspection covers, but is not limited to, the following:

-) Surface cracks and irregularities in the cover system;
-) Presence and condition of vegetative growth;
-) Presence of burrowing animals;
-) Evidence of significant settlement, bulging or sinkholes;
-) Signs of erosion damage;
-) Signs of unstable conditions;
-) Signs of leachate or waste breakthrough;

Table 4-2. Groundwater Monitoring Well Data
18 December 2017

Well ID	EASTING (feet)	NORTHING (feet)	Ground Elevation (feet AMSL)	Depth to Water (feet TOC)	Depth to Bottom (feet TOC)	TOC Elevation (feet AMSL)	GW Elevation (feet AMSL)	Depth to Top of Screen (feet from Ground Level)	Depth to Bottom of Screen (feet from Ground Level)	Top of Screen Elevation (feet AMSL)	Bottom of Screen Elevation (feet AMSL)	Depth to Well Bottom (feet from Ground Level)
ACE-3	640050.67	1402036.9	319.29	7.05	16.30	324.43	317.38	4	14	315.29	305.29	15.0
ACE-4	640007.28	1402347.53	320.68	6.87	15.90	325.77	318.90	4	14	316.68	306.68	15.0
ACE-5	640494.65	1402133.51	318.52	3.22	16.64	323.17	319.95	5	15	313.52	303.52	15.0
GW-3	640427.01	1401197.97	321.2	7.31	14.25	324.16	316.85	20	25	301.20	296.20	27.0
GW-12	641507.22	1400557.37	323.5	4.79	10.47	326.71	321.92	3	8	320.50	315.50	8.0
GW-13	641010.73	1401331.93	320.8	3.16	10.09	323.77	320.61	3	8	317.80	312.80	8.0
MW-13-01	641294.22	1400330.11	326.8	6.80	11.58	329.73	322.93	3	8	323.80	318.80	10.5
MW-13-02	641073.34	1400500.12	325.7	6.43	12.95	328.46	322.03	3	8	322.70	317.70	11.0
MW-13-03	641398.46	1400687.05	322.0	4.00	14.91	324.94	320.94	3	13	319.00	309.00	13.6

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Engineering controls associated with site access are inspected annually. Unauthorized access to the Site is limited by the following engineering controls: i) vehicle access is restricted by a locked gate, ii) offsite pedestrian access is restricted by fencing surrounding the NEIP property; and, iii) onsite pedestrian access is restricted by the security gate to the NEIP Property.

The stormwater management system is inspected annually as outlined in the SMP. The following is inspected:

-) Overgrown vegetation;
-) Standing water;
-) Sediments and debris;
-) Erosion/washouts;
-) Culvert (where present); and
-) Damage to riprap (where applicable).

The condition and integrity of the existing environmental monitoring network of groundwater wells are inspected annually. Historically, all systems have been in good condition and operating properly.

4.4.2 Groundwater Monitoring

Groundwater monitoring was conducted in:

-) Winter 2013;
-) Spring 2014;
-) Summer 2015;
-) Fall 2016; and,
-) Winter 2017.

Groundwater samples were analyzed for VOCs and MNA indicators by the following USEPA methods, in accordance with the SMP:

-) VOCs – Method 8260
-) Total Organic Carbon – Method 9060;
-) Dissolved Gases - Methane, Ethane, Ethene – Method RSK 175;
-) Nitrate – Method 353.2;
-) Nitrite – Method SM4500NO3-F;
-) Sulfate – Method 300.0 by Ion Chromatography;
-) Total Sulfide – Method 9030B;
-) Chloride – Method 300.0 by Ion Chromatography;
-) Total Alkalinity – Method SM2320B;
-) Total Manganese – Method 6010 (unfiltered samples);
-) Iron Speciation (Total and Ferrous) – Method 6010C for total iron (unfiltered samples), ferrous iron by SM3500-Fe D, ferric iron by subtraction of ferrous iron from total iron

The groundwater analytical results from 2014 through 2017 (**Appendix C**) were evaluated by comparison to each other (historical trends), as well as to RGs. No groundwater COCs were detected at concentrations above the established RGs for AOC 1.

Samples from the decommissioned monitoring wells originally located in the footprint of the landfill cap area had low concentrations of COCs prior to commencing remedial actions (USACE 2011). However, COCs have not been detected in samples from the current monitoring well network collected in 2014, 2015, 2016 and 2017. Historical data for the site COCs are summarized in **Table 4-3**, and illustrated on **Figure 4-1**.

4.5 Cost Information

Actual costs for remedial construction and annual LTM are summarized in **Table 4-4**.

Table 4-3. Historical Groundwater Data for the Site COCs

		1,2-Dichloroethane	1,2-Dichloroethene, Total	Trichloroethene	Vinyl Chloride
Location	Year				
ACE-3	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
ACE-4	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
ACE-5	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
GW-3	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
GW-12	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
GW-13	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
MW-13-1	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
MW-13-2	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND
MW-13-3	2014	ND	ND	ND	ND
	2015	ND	ND	ND	ND
	2016	ND	ND	ND	ND
	2017	ND	ND (cis- & trans-)	ND	ND

Table 4-4. Remedy Implementation Costs

Cost Item	Actual Cost
<u>Capital Costs:</u>	\$2,875,264
<ul style="list-style-type: none">) Remedial Design Tasks (including work planning, PDI data collection and reporting, design drawings and specifications)) Remedial Action (including work planning, mobilization/site preparation, placement of cover material, construction of the impermeable landfill cap, and demobilization)) Remedial Action Completion Report and SMP/EE 	
<u>Annual GW Monitoring Costs:</u>	
<ul style="list-style-type: none">) Post-construction maintenance (inspections and mowing)) LTM groundwater sampling <ul style="list-style-type: none"> o Year 1 o Year 2 o Year 3 o Year 4 	 \$23,520 \$23,520 \$18,696 \$17,960

Well ID	EASTING (feet)	NORTHING (feet)	Depth to Water (feet TOC)	Depth to Bottom (feet TOC)	TOC Elevation (feet AMSL)	GW Elevation (feet AMSL)
ACE-3	640050.67	1402036.9	7.05	16.30	324.43	317.38
ACE-4	640007.28	1402347.53	6.87	15.90	325.77	318.90
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GW-3	640427.01	1401197.97	7.31	14.25	324.16	316.85
GW-12	641507.22	1400557.37	4.79	10.47	326.71	321.92
GW-13	641010.73	1401331.93	3.16	10.09	323.77	320.61
MW-13-01	641294.22	1400330.11	6.80	11.58	329.73	322.93
MW-13-02	641073.34	1400500.12	6.43	12.95	328.46	322.03
MW-13-03	641398.46	1400687.05	4	14.91	324.94	320.94

NOTES:
1. VERIFIED NYSDEC V-19 WETLAND BOUNDARY BY STERLING ENVIRONMENTAL ENGINEERING, PC (2012).
2. 1FT CONTOURS SURVEYED BY H2H ASSOCIATES, LLC (OCT 2013)
3. 2FT CONTOURS FROM ALBANY COUNTY GIS DATA DERIVED FROM 2008 LIDAR DATA
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

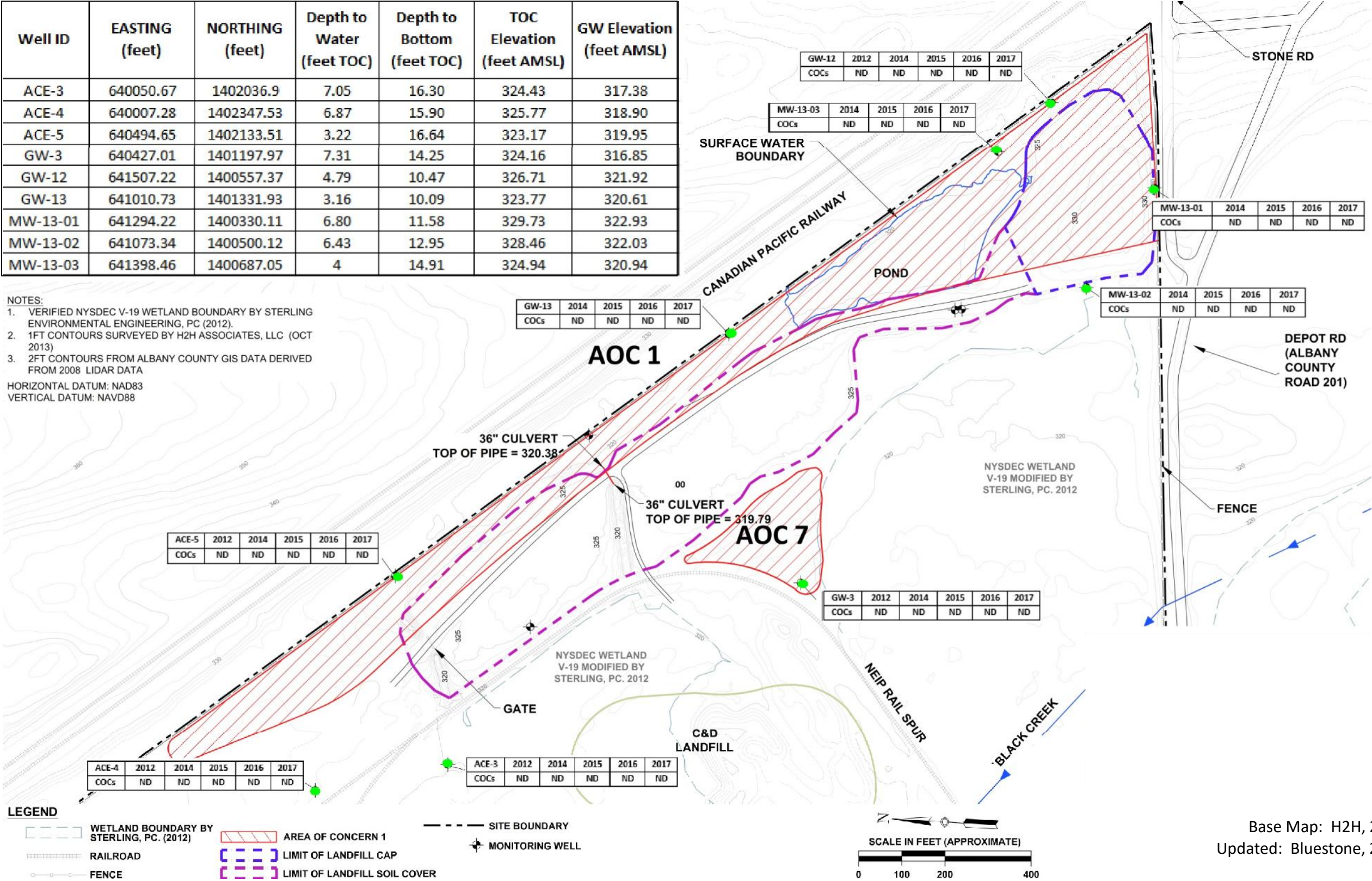
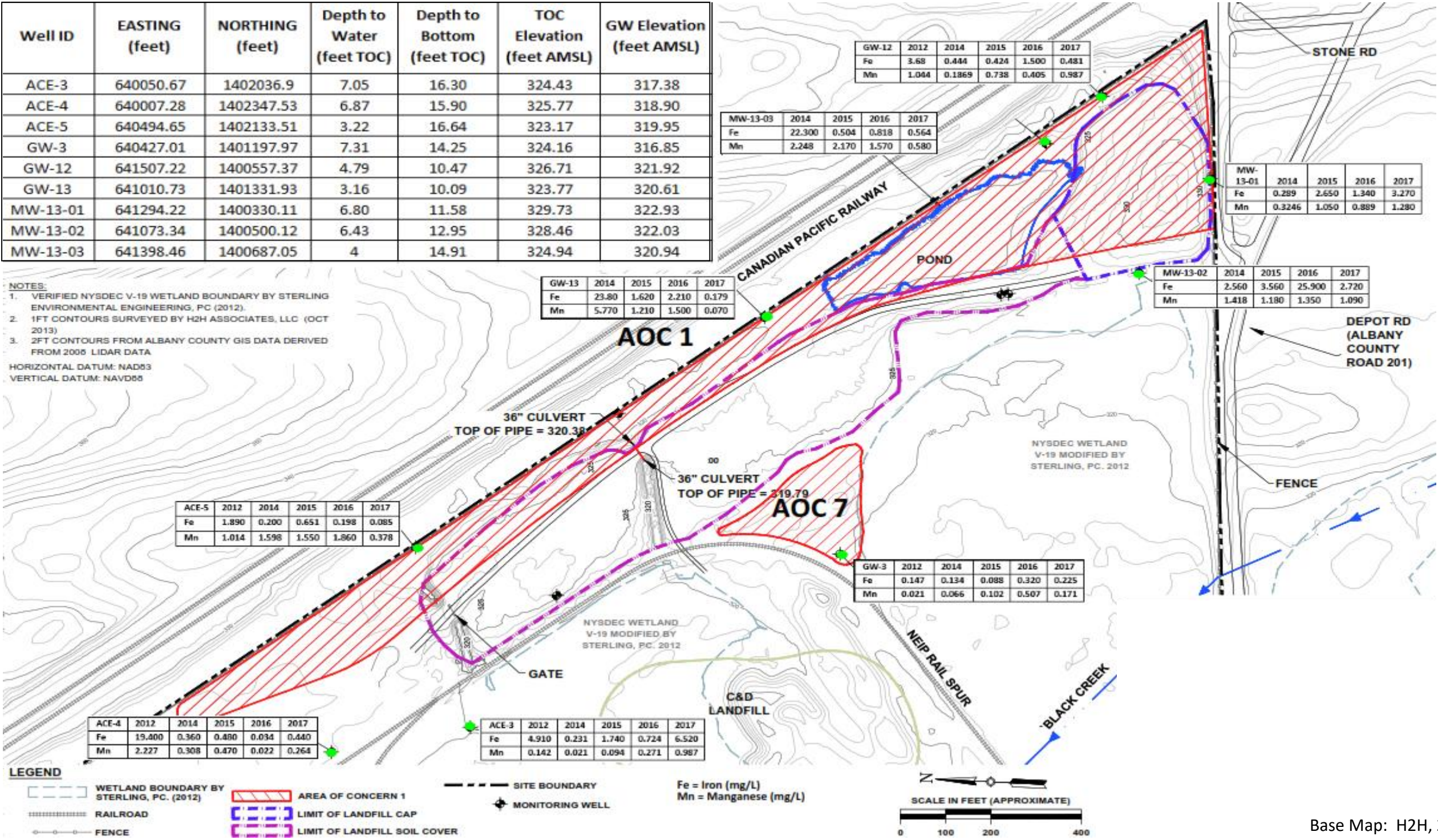


Figure 4-1. Historical Detections of COCs

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Base Map: H2H, 2017
Updated: Bluestone, 2018

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5.0 PROGRESS SINCE THE LAST REVIEW

This is the first FYR for the Site.

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6.0 FIVE-YEAR REVIEW PROCESS

This section summarizes the status of the major components of the FYR.

6.1 Administrative Components

As discussed in **Section 1.2**, USACE holds the responsibility for management of this FUDS. Mr. Gregory J. Goepfert is the Project Manager for USACE for the NEIP project. Regulatory oversight for this Site is provided by the NYSDEC and the New York State Department of Health (NYSDOH).

6.2 Community Notification and Involvement

Information related to NEIP AOC 1 and AOC 7 is available at the following information repositories:

-) The Guilderland Public Library
2228 Western Avenue (Route 20)
Guilderland, NY
518-456-2400
-) The Voorheesville Public Library
51 School Road
Voorheesville, NY
518-765-2791

A public notice of the FYR was published in the Albany Times Union on 13 February 2018 (provided in **Appendix A**). Community members with comments were urged to contact Mr. Gregory J. Goepfert, USACE New York District. To date, no public comments have been received. A public notice will be sent to the same newspaper announcing that the first FYR report for the site has been completed and will be available to the public at the site information repositories (Guilderland Public Library and the Voorheesville Public Library).

If any public comments are received prior to finalization of the FYR, they will be presented in **Appendix D**.

6.3 Document Review

A complete list of documents reviewed in this FYR can be found in **Appendix E**. The ARARs, RAOs, and cleanup levels were found in the Decision Document (USACE, 2011). The SMP was reviewed with respect to the requirements for long-term groundwater monitoring and site inspections. The 2016 Annual Report was reviewed for background information and historical groundwater analytical results and observations from previous inspections.

6.4 Data Review

Analytical data and site inspections from 2014, 2015, 2016 and 2017 were reviewed. The COCs were not observed above the laboratory detection limits in samples from any of the site wells

over the past four years (**Appendix C**). The absence of COCs from the current monitoring wells prevents the evaluation of MNA for the source area. However, the analytical data suggest that COCs are not migrating away from the landfill.

6.5 Site Inspection

The site inspection for the FYR was conducted simultaneously with the annual inspection on 11 October 2017, by Bluestone Environmental Group, Inc., in accordance with the SMP.

The inspections evaluated the following:

-) Whether the stormwater management system was functioning properly;
-) If vegetative growth was present and if it was excessive;
-) If any surface cracks, vector penetration, settlement, seepage, or erosion were noticed;
-) Information regarding the stability of the slopes;
-) Any signs of trespassing or vandalism along the site perimeter; and,
-) Any changes in land use.

Overall, the final Cover/Cap system has historically been in good condition. The most recent inspection was conducted on 11 October 2017. Photos from this site inspection are provided in **Appendix B**.

The integrity and condition of the final Cover/Cap system was good, with a few minor deficiencies. There were no surface cracks, vector penetration, erosion, slope stability issues or seepage in either the soil cover portion, or the smaller cap portion.

Observations during the 2017 site inspection include:

-) Healthy vegetation on both landfill cap and soil cover area.
-) No signs of rill erosion.
-) Wooden perimeter fence is in good condition (barrier between cover area and cap area) (Photo ID LC1).
-) Southern site perimeter fence near MW-13-01 is sagging and should be repaired (Photo ID LC3).
-) Trees are growing through southern fence near MW-13-01 (Photo ID LC5).
-) Monitoring Wells are in good condition and locks are properly secured.
-) Groundhog/rabbit holes in landfill cap area (no cap penetration) (Photo IDs LC9 and LC10).
-) Some bare spots in cap area where the vegetation had been trampled (possible wildlife settlement) (Photo ID LC11). *[These bare spots were later repaired on 20 November 2017.]*
-) Extreme vegetative growth on southern fence (however, this vegetation is not currently impacting the cap).

Overall, the landfill/soil cover systems and stormwater management system are functioning as designed.

Unauthorized access to the Site is limited by the following engineering controls: i) vehicle access is restricted by a locked gate (Photo ID SC1 through SC3), ii) offsite pedestrian access is restricted by the fencing surrounding the NEIP property (along the railroad tracks and Albany County Road 201); and, iii) onsite pedestrian access is restricted by the security gate to the NEIP Property. However, the metal chain-link perimeter fence appears to have been cut and bent back, creating a 3-ft x 3-ft hole in the bottom of the fence, approximately 40 feet north of ACE-5. A trail appears to be leaving the site through the hole in the fence (Photo IDs SC7 and SC8).

The major components of the stormwater management system were inspected, including two site stormwater channels, which are lined with grass and riprap. All components of the stormwater management system were inspected for evidence of overgrown vegetation, standing water, sediments and debris, erosion/washouts, culvert condition and performance (where present) and damage to riprap where applicable, as outlined in the SMP. No significant deficiencies were identified.

Observations of the stormwater management system during the 2017 site inspection include:

-) Culvert on the west side of channel (facing east) by the gate has a damaged trash screen (previously noted in 2016). The screen should be replaced or fastened more securely in place (Photo ID SC4). *[The trash screen was later repaired on 20 November 2017.]*
-) Vegetation growing through riprap. Not a significant concern, since there are no trees or thick weeds present.
-) Excessive vegetation growth surrounding culvert east of the stormwater channel and gravel path (Photo ID SC18). *[Vegetation was trimmed to allow for more efficient conveyance.]*

The condition and integrity of the existing environmental monitoring network was inspected. All of the groundwater monitoring wells were in good condition and securely locked.

6.6 Interviews

Three people familiar with the Landfill Cap/Cover at NEIP were interviewed as part of this FYR: Mr. Gregory J. Goepfert (USACE Project Manager), Ms. Lindsay Roberts (Leasing Agent for NEIP), and Mr. John Swartwout (NSYDEC). None of the people interviewed were aware of any recurring issues, or any major issues that have occurred over the past five years at NEIP. Ms. Roberts has only been at NEIP for approximately one year, but confirmed her interview responses with her supervisor, Mr. Dave Ahl. Summaries of the interviews are provided in **Appendix F**.

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7.0 TECHNICAL ASSESSMENT

7.1 Question A: Is the remedy functioning as intended by the decision documents?

Yes, the remedy is functioning as intended by the Decision Document (USACE, 2011). Groundwater monitoring, site maintenance, and inspections are the only O&M activities required. The MNA component of the remedy is performing as intended. Concentrations of the site COCs over four years of groundwater monitoring have not exceeded the RGs, which were based on Federal MCLs and NYSDEC AWQS.

ICs/ECs were implemented and include fencing and an EE. The EE, provided in **Appendix G**, prohibits the use of groundwater underlying AOC 1 and 7 “without necessary water quality treatment as determined by the NYSDOH or the Albany County Department of Health to render it safe for use as drinking water or for industrial purposes...” These controls are successfully restricting access to the site and groundwater. Continued monitoring of IC/ECs at the site is recommended.

There were no early indicators of potential issues at the site noted in the FYR. Annual site inspections should allow for early intervention in identified issues, such as vegetative growth on the landfill cap or soil cover.

7.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of remedy selection still valid?

Yes, the exposure assumptions, toxicity data, cleanup levels, and RAOs are still valid. There have been no changes in land use on or near the site that would cause a change in exposure pathways. There are no changes in the Federal MCLs or NYSDEC AWQS for the site COCs, and these criteria still guide the remedial action.

7.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

Since the Decision Document was signed in 2011, the NYSDEC added the Northern Long-Eared Bat (*Myotis septentrionalis*) to the Threatened Species List. Northern Long-Eared Bats can be found in Guilderland in the Winter. NYSDEC recommends no tree cutting from November 1 to April 1, in known hibernation areas. NEIP is an industrial site and does not contain trees within the AOCs, nor is forest management part of the remedial action.

Based on site inspections, there have been no known impacts from natural disasters at the site. No other information has come to light that could call into question the protectiveness of the remedy.

7.4 Technical Assessment Summary

Based on the data reviewed and the site information, the remedy is functioning as intended in the Decision Document. There have been no changes in the Federal MCLs or NYSDEC AWQCs

for the groundwater COCs. There have also been no changes to the standardized risk assessment methodology that affect the protectiveness of the remedy.

Throughout four groundwater monitoring events, none of the site COCs were observed above laboratory detection limits; thus, the RGs have already been met by the site COCs. MNA indicators (including methane) were detected in groundwater samples from wells near the capped landfill. A recommendation will be made to reduce the monitoring frequency from annual sampling to once every five years, preceding the FYR, to confirm that the remedy remains protective. A recommendation will also be made to limit future sampling and reporting to site COCs and other parameters necessary to evaluate remedy performance. The continued need for groundwater monitoring will be reevaluated during the next FYR.

Site inspection reports indicated that the LUCs are in place and operational.

8.0 ISSUES

No issues were discovered at NEIP AOC 1 or 7 during this review period.

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9.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

There are no recommendations for follow-up actions.

9.1 Other Findings

It is recommended that the frequency for groundwater monitoring be reduced from annual sampling to once every five years, preceding the FYR, to confirm that the remedy remains protective. It is also recommended that future sampling and reporting be limited to site COCs and other parameters necessary to evaluate remedy performance. The continued need for groundwater monitoring will be reevaluated during the next FYR.

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10.0 PROTECTIVENESS STATEMENT

The USACE conducted this first FYR for AOC 1 and 7, pursuant to USEPA guidance. FYRs are required because hazardous substances, pollutants or contaminants remain at the site above levels that allow for UU/UE. The remedy at AOC 1 and 7 is protective of human health and the environment.

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11.0 NEXT REVIEW

The next review for NEIP is due within five years of the signature date of this FYR Report.

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APPENDIX A
Public Notice

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PUBLIC NOTICE
FIVE-YEAR REVIEW FOR NORTHEASTERN INDUSTRIAL PARK, GUILDERLAND, NEW YORK

The U.S. Army Corps of Engineers (USACE) is conducting a Five-Year Review for Areas of Concern (AOCs) 1 and 7 at the Northeastern Industrial Park (NEIP), formerly known as the Schenectady Army Depot-Voorheesville Area (SADVA). In 2013, USACE constructed a landfill cap and cover system over the former Army landfill (AOC 1). The remedy also included land-use controls and monitored natural attenuation for groundwater; an environmental easement was put in place to prohibit withdrawal of groundwater from the area encompassing AOCs 1 & 7.

The purpose of this review is to ensure the selected remedy remains protective of human health and the environment. If the review identifies issues that affect protectiveness, the Five-Year Review report will recommend improvements. USACE plans to issue the final Five-Year Review in June 2018.

Site information is available on the USACE website:

<http://www.nan.usace.army.mil/Missions/Environmental/Environmental-Remediation/Formerly-Used-Defense-Sites/Former-Schenectady-Army-Depot-Voorheesville-Area/>

For more information, or to send comments, please contact:

Gregory J. Goepfert

USACE New York District

26 Federal Plaza, Rm 1811

New York, NY 10278-0900

(917) 790-8235

gregory.j.goepfert@usace.army.mil

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Public notice as it appeared in the Albany Times Union on 13 February 2018:

**PUBLIC NOTICE
FIVE-YEAR REVIEW FOR
NORTHEASTERN
INDUSTRIAL PARK,
GUILDERLAND, NEW YORK**

The U.S. Army Corps of Engineers (USACE) is conducting a Five-Year Review for Areas of Concern (AOCs) 1 and 7 at the Northeastern Industrial Park (NEIP), formerly known as the Schenectady Army Depot-Voorheesville Area (SADVA). In 2013, USACE constructed a landfill cap and cover system over the former Army landfill (AOC 1). The remedy also included land-use controls and monitored natural attenuation for groundwater; an environmental easement was put in place to prohibit withdrawal of groundwater from the area encompassing AOCs 1 & 7.

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Site information is available on the USACE website:

<http://www.nan.usace.army.mil/missions/environmental/environmental-remediation/formerly-used-defense-sites/former-schenectady-army-depot-voorheesville-area/>

For more information, or to send comments, please contact:

Gregory J. Goepfert
USACE New York District
26 Federal Plaza, Rm 1811
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TU 11 (982303)

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APPENDIX B
Photographic Log from Site Inspection 2017

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12-13 October 2017 Photographic Log
2017 Landfill Cap and Soil Cover Inspection
AOC 1, Northeastern Industrial Park, Guilderland, NY



Photo ID: SC1
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: Southeast
Soil Cover: Signage in tact



Photo ID: SC2
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: Southeast
Soil Cover: Signage in tact



Photo ID: SC3
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: Southeast
Soil Cover: Gate secured

**12-13 October 2017 Photographic Log
2017 Landfill Cap and Soil Cover Inspection
AOC 1, Northeastern Industrial Park, Guilderland, NY**



Photo ID: SC4
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: West
Soil Cover: Culvert trash screen damaged



Photo ID: SC7
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: Northeast
Soil Cover: Fence hole near ACE-5



Photo ID: SC8
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: Northeast
Soil Cover: Fence hole near ACE-5

**12-13 October 2017 Photographic Log
2017 Landfill Cap and Soil Cover Inspection
AOC 1, Northeastern Industrial Park, Guilderland, NY**



Photo ID: SC10
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 12, 2017
Inspector: Aaron Myers
Direction of Photograph: Southeast
Soil Cover: Landscaping completed



Photo ID: SC11
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 12, 2017
Inspector: Aaron Myers
Direction of Photograph: Northwest
Soil Cover: Landscaping completed



Photo ID: SC12
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 12, 2017
Inspector: Aaron Myers
Direction of Photograph: South
Soil Cover: Landscaping completed

**12-13 October 2017 Photographic Log
2017 Landfill Cap and Soil Cover Inspection
AOC 1, Northeastern Industrial Park, Guilderland, NY**



Photo ID: SC13
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 12, 2017
Inspector: Aaron Myers
Direction of Photograph: Northeast
Soil Cover: Channel in good condition



Photo ID: SC14
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 12, 2017
Inspector: Aaron Myers
Direction of Photograph: Northwest
Soil Cover: Landscaping completed



Photo ID: SC18
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: Southwest
Soil Cover: Middle channel's Eastern culvert-excessive vegetation

**12-13 October 2017 Photographic Log
2017 Landfill Cap and Soil Cover Inspection
AOC 1, Northeastern Industrial Park, Guilderland, NY**



Photo ID: LC1
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: East
Landfill Cap: Healthy vegetation overall



Photo ID: LC2
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: East
Landfill Cap: South slope of soil cap



Photo ID: LC3
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: Southeast
Landfill Cap: Sagging fence

**12-13 October 2017 Photographic Log
2017 Landfill Cap and Soil Cover Inspection
AOC 1, Northeastern Industrial Park, Guilderland, NY**



Photo ID: LC5
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: South
Landfill Cap: Tree grown through fence



Photo ID: LC7
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: North
Landfill Cap: Wooded fence separating the landfill cap and



Photo ID: LC9
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: South
Landfill Cap: Wildlife settlement along southern fence

**12-13 October 2017 Photographic Log
2017 Landfill Cap and Soil Cover Inspection
AOC 1, Northeastern Industrial Park, Guilderland, NY**



Photo ID: LC10
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: N/A
Landfill Cap: Wildlife settlement



Photo ID: LC11
Project Name: NEIP 5 Year Review
Location: Guilderland, NY
Date: October 11, 2017
Inspector: Aaron Myers
Direction of Photograph: N/A
Landfill Cap: Bare spot/wildlife settlement

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APPENDIX C
Analytical Groundwater Results (2014 to 2017)

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	LOCATION			ACE-3		ACE-3		ACE-3		ACE-3	
	SAMPLING DATE			5/12/2014		7/27/2015		10/17/2016		12/19/2017	
	LAB SAMPLE ID			L1410116-02		MC40285-2		JC29864		JC57698-2	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		7.07		3.82		7.13		7.08	
	Specific Conductance	N/A	mS/cm	0.895		1.077		1.079		0.322	
	Temperature	N/A	°C	8.77		10.91		17.03		7.14	
	Turbidity	N/A	NTU	3.59		8.76		2.28		20.7	
	Dissolved Oxygen	N/A	mg/L	0.76		8.08		2.83		2.22	
	ORP	N/A	mV	49.3		4.5		25.9		227	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.627		5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.706		5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	5	U	5.0	U	1.9	J	0.12	J ^{1,3}
General Chemistry											
	Alkalinity, Total	N/A		289		321		306		305	
	Chloride	N/A	mg/L	6.40		8.80		20.4		4.7	
	Nitrogen, Nitrite	N/A	mg/L	0.05	U	0.0033	U	0.0045	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.118		0.21		0.02	J	0.41	
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.0	U	1.0	U
	Sulfate	N/A	mg/L	210.0		252		437		142	
	Total Organic Carbon	N/A	mg/L	1.16		0.81	U	0.37	J	1.1	
	Iron, Ferrous	N/A	mg/L	0.5	U	0.072	U	0.10	UJ	0.20	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	0.231		1.740		0.724		6.520	
	Manganese, Total	N/A	mg/L	0.02046		0.094		0.271		0.987	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	0.50	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	U	0.50	U	0.50	U	0.62	UJ ²

¹ Methane was detected at concentrations below the contract required quantitation limit (CRQL) in both EB-1 and FB-1. Sample ACE-3 was associated with the contaminated blanks and detected methane at concentrations below the CRQL; therefore, the affected result was reported at the level of the CRQL and qualified "U", non-detect, per validation guidance.

² The %D was outside of acceptance limits for the closing continuing calibration and the value was associated with the non-compliant continuing calibration. Affected results were qualified "J", estimated, or UJ, estimated non-detect, on this basis.

³ The observed %RSD was above the acceptance limit and all samples were associated with the non-compliant initial calibration and affected results were qualified "J" or "UJ" on this basis.

⁴ The samples were prepared and analyzed outside of allowable validation holding time for ferrous iron (24 hours). All ferrous iron results were affected and reported non-detect; therefore, results were qualified "UJ" on this basis.

NOTES:

* NY-AWQS = New York State Ambient Water Quality Standards (TOGS 1.1.1).

⁺ Federal MCL = USEPA Maximum Contaminant Level

All groundwater samples analyzed in November 2012 and May 2014 were by Alpha Analytical of Westborough, Massachusetts.

All groundwater samples analyzed in July/August 2015 were by Accutest New England, Marlborough, Massachusetts.

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All groundwater samples collected in December 2017 were analyzed by SGS Accutest of Dayton, NJ.

All analytical results are expressed in micrograms per liter (µg/L).

** pH values in the July 2015 sampling event are low due to a possible equipment malfunction.

QUALIFIERS & ABBREVIATIONS:

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R: The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N/A: Not Applicable

NR: Not Reported

	LOCATION			ACE-4		ACE-4		ACE-4		ACE-4	
	SAMPLING DATE			5/12/2014		7/27/2015		10/17/2016		12/19/2017	
	LAB SAMPLE ID			L1410116-03		MC40285-1		JC29864		JC57698-1	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		6.80		3.77		6.66		6.9	
	Specific Conductance	N/A	mS/cm	0.950		1.071		0.915		0.424	
	Temperature	N/A	°C	9.43		13.01		15.2		9.38	
	Turbidity	N/A	NTU	4.05		3.03		2.56		11.1	
	Dissolved Oxygen	N/A	mg/L	0.47		7.28		0.88		4.84	
	ORP	N/A	mV	20.7		-122.4		26.5		184	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	5	U	5.0	U	0.06	UJ	0.06	UJ ³
General Chemistry											
	Alkalinity, Total	N/A		334		361		363		335	
	Chloride	N/A	mg/L	27.0		23.2		26.4		16.9	
	Nitrogen, Nitrite	N/A	mg/L	0.024	J	0.0033	U	0.0045	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.367		0.71		0.56		0.48	
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.0	U	1.0	U
	Sulfate	N/A	mg/L	180.0		210		213		223	
	Total Organic Carbon	N/A	mg/L	1.58		1.3		1.3		1.6	
	Iron, Ferrous	N/A	mg/L	0.11	J	0.072	U	0.10	UJ	0.20	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	0.360		0.480		0.0336		0.440	
	Manganese, Total	N/A	mg/L	0.3076		0.470		0.0219		0.264	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	0.50	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	U	0.50	U	0.50	U	0.62	UJ ²

²The %D was outside of acceptance limits for the closing continuing calibration and the value was associated with the non-compliant continuing calibration. Affected results were qualified "J", estimated, or UJ, estimated non-detect, on this basis.

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N/A: Not Applicable

NR: Not Reported

	LOCATION			ACE-5		ACE-5		ACE-5		ACE-5	
	SAMPLING DATE			5/12/2014		7/27/2015		10/18/2016		12/20/2017	
	LAB SAMPLE ID			L1410116-04		MC40285-3		JC29944		JC57789-4	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		6.99		3.89		6.61		7.08	
	Specific Conductance	N/A	mS/cm	4.638		4.787		4.854		2.92	
	Temperature	N/A	°C	9.84		11.93		14.95		7.2	
	Turbidity	N/A	NTU	5.15		1.97		2.88		0.0	
	Dissolved Oxygen	N/A	mg/L	1.11		2.13		0.47		3.05	
	ORP	N/A	mV	72.3		-38.9		80		273	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	5	U	5.0	U	0.21	J	0.06	UJ ³
General Chemistry											
	Alkalinity, Total	N/A		334		344		329		315	
	Chloride	N/A	mg/L	110.0		84.2		82.4		87.4	
	Nitrogen, Nitrite	N/A	mg/L	0.021	J	0.0033	U	0.0045	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.13		<0.11		0.030	U	0.11	U
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.0	U	1.0	U
	Sulfate	N/A	mg/L	3100		2910		3140		2930	
	Total Organic Carbon	N/A	mg/L	1.12		0.81	U	0.50	U	1.0	U
	Iron, Ferrous	N/A	mg/L	0.5	U	0.11		0.10	UJ	0.20	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	0.200		0.651		0.198	J	0.085	J
	Manganese, Total	N/A	mg/L	1.598		1.550		1.860		0.378	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	0.50	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	U	0.50	U	0.50	U	0.62	UJ ²

²The %D was outside of acceptance limits for the closing continuing calibration and the value was associated with the non-compliant continuing calibration. Affected results were qualified "J", estimated, or UJ, estimated non-detect, on this basis.

³The observed %RSD was above the acceptance limit and all samples were associated with the non-compliant initial calibration and affected results were qualified "J" or "UJ" on this basis.

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NOTES:

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All analytical results are expressed in micrograms per liter (µg/L).

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NR: Not Reported

	LOCATION			GW-3		GW-3		GW-3		GW-3	
	SAMPLING DATE			5/12/2014		7/28/2015		10/18/2016		12/19/2017	
	LAB SAMPLE ID			L1410116-01		MC40306-1		JC29944		JC57698-3	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		6.90		4.26		6.54		6.98	
	Specific Conductance	N/A	mS/cm	0.632		0.787		0.891		0.348	
	Temperature	N/A	°C	8.08		10.83		14.48		9.23	
	Turbidity	N/A	NTU	6.80		2.19		9.91		5.2	
	Dissolved Oxygen	N/A	mg/L	2.96		1		1.88		0	
	ORP	N/A	mV	74.9		-82.9		56.5		230	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	5	U	5.0	U	0.06	UJ	0.06	UJ ³
General Chemistry											
	Alkalinity, Total	N/A		300		357		359		354	
	Chloride	N/A	mg/L	1.10		1.80		3.9		17.3	
	Nitrogen, Nitrite	N/A	mg/L	0.021	J	0.0033	U	0.0045	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.216		0.66		0.50		0.37	
	Sulfide	N/A	mg/L	0.10	U	1.0	U	1.0	U	1.0	U
	Sulfate	N/A	mg/L	50.0		82.5		105.0		97	
	Total Organic Carbon	N/A	mg/L	1.30		0.93	J	0.50	U	1.0	U
	Iron, Ferrous	N/A	mg/L	0.5	U	0.072	U	0.10	UJ	0.20	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	0.134		0.088	J	0.320	J	0.225	J
	Manganese, Total	N/A	mg/L	0.06578		0.102		0.507		0.171	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	0.50	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	Trichloroethene	5.0*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0*	ug/l	1.0	U	0.50	U	0.50	U	0.62	UJ ²

²The %D was outside of acceptance limits for the closing continuing calibration and the value was associated with the non-compliant continuing calibration. Affected results were qualified "J", estimated, or UJ, estimated non-detect, on this basis.

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	LOCATION			GW-12		GW-12		GW-12		GW-12	
	SAMPLING DATE			5/15/2014		7/30/2015		10/19&24/2016		12/19&20/2017	
	LAB SAMPLE ID			L1410490-01		MC40360-2		MC48383		JC57789-1	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		7.18		4.47		6.83		7.41	
	Specific Conductance	N/A	mS/cm	3.213		3.458		3.558		2.79	
	Temperature	N/A	°C	13.61		17.53		17.47		8.81	
	Turbidity	N/A	NTU	72.4		7.59		57		2.5	
	Dissolved Oxygen	N/A	mg/L	2.30		0.46		0.96		3.84	
	ORP	N/A	mV	121.5		-51.5		18.9		145	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12 U	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16 U	UJ ³
	Methane	N/A	ug/l	5	U	5.0	U	0.06	U	0.060 U	UJ ³
General Chemistry											
	Alkalinity, Total	N/A		230		256		248		233	
	Chloride	N/A	mg/L	87.0		96.7		89.5		108.0	
	Nitrogen, Nitrite	N/A	mg/L	0.05	U	0.0033	U	0.0030	U	0.0100	U
	Nitrogen, Nitrate	N/A	mg/L	0.04	J	0.057	U	0.12		0.11 f	U
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.9	U	1.0	U
	Sulfate	N/A	mg/L	1900		1630		1460		1320	
	Total Organic Carbon	N/A	mg/L	1.98		1.1		1.8		2.7	U
	Iron, Ferrous	N/A	mg/L	0.09	J	0.072	U	0.042	UJ	0.20	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	0.444		0.424		1.5		0.481	J
	Manganese, Total	N/A	mg/L	0.1869		0.738		0.405		0.987	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	1.00	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	1.00	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	1.00	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	UJ	0.50	U	1.00	U	0.62	UJ ²

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	LOCATION			GW-13		GW-13		GW-13		GW-13	
	SAMPLING DATE			5/13/2014		7/28/2015		10/18/2016		12/20/2017	
	LAB SAMPLE ID			L1410230-03		MC40306-2		JC29944		JC57789-2	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual	JC30071	Qual		Qual
Field Parameters											
	pH **	N/A		6.87		4.23		6.65		7.04	
	Specific Conductance	N/A	mS/cm	3.429		3.304		3.547		1.75	
	Temperature	N/A	°C	9.74		13.47		14.91		5.67	
	Turbidity	N/A	NTU	64.1		2.97		5		0	
	Dissolved Oxygen	N/A	mg/L	1.47		2.81		0.65		1.88	
	ORP	N/A	mV	72.0		-80.7		34.6		287.0	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	5	U	5.0	U	0.78	J	0.06	UJ ³
General Chemistry											
	Alkalinity, Total	N/A		411		435		423		466	
	Chloride	N/A	mg/L	55.0		57.2		79.7		81.8	
	Nitrogen, Nitrite	N/A	mg/L	0.038	J	0.0033	U	0.0045	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.051	J	0.057	U	0.045	J	0.11 f	U
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.0	U	1.0	U
	Sulfate	N/A	mg/L	1700		1670		1440	U	1560	
	Total Organic Carbon	N/A	mg/L	1.290		0.91	J	0.50	U	1.00	U
	Iron, Ferrous	N/A	mg/L	0.20	J	0.07	U	0.10	UJ	0.20 e	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	23.8		1.620		2.210		0.179	J
	Manganese, Total	N/A	mg/L	5.77		1.210		1.500		0.070	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	0.50	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	UJ	0.50	U	0.50	U	0.62 a	UJ ²

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	LOCATION			MW-13-1		MW-13-1		MW-13-1		MW-13-1	
	SAMPLING DATE			5/13/2014		7/30/2015		10/19&20/2016		12/19/2017	
	LAB SAMPLE ID			L1410230-01		MC40360-2		MC48383		JC57698-4	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		7.08		4.42		6.85		7.24	
	Specific Conductance	N/A	mS/cm	3.833		4.829		5.405		4.84	
	Temperature	N/A	°C	9.10		12.84		16.25		10.22	
	Turbidity	N/A	NTU	22.1		6.75		53.7		4.4	
	Dissolved Oxygen	N/A	mg/L	0.66		1.43		0.38		1.44	
	ORP	N/A	mV	76.2		-106.4		8.8		126	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	45		131		61.5	J	11.7	J ³
General Chemistry											
	Alkalinity, Total	N/A		354		375		382		386	
	Chloride	N/A	mg/L	990		1230		1500		1310	
	Nitrogen, Nitrite	N/A	mg/L	0.027	J	0.0033	U	0.0030	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.018	J	0.062	J	0.11		0.11	U
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.9	U	1.0	U
	Sulfate	N/A	mg/L	260.0		247		237		243	
	Total Organic Carbon	N/A	mg/L	1.05		0.81	U	1.1		1.0	U
	Iron, Ferrous	N/A	mg/L	0.18	J	0.072	U	0.042	UJ	0.20 g	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	0.289		2.650		1.340		3.270	J
	Manganese, Total	N/A	mg/L	0.3246		1.050		0.889		1.280	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	1.0	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	1.0	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	1.0	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	UJ	0.50	U	1.0	U	0.62	UJ ²

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	LOCATION			MW-13-2		MW-13-2		MW-13-2		MW-13-2	
	SAMPLING DATE			5/13/2014		7/29/2015		10/19&24/2016		12/19/2017	
	LAB SAMPLE ID			L1410230-02		MC40336-1		MC48383		JC57698-5	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		7.07		4.54		6.89		7.08	
	Specific Conductance	N/A	mS/cm	1.340		1.255		1.204		0.892	
	Temperature	N/A	°C	9.41		13.31		15.73		9.45	
	Turbidity	N/A	NTU	3.73		7.72		437		49	
	Dissolved Oxygen	N/A	mg/L	0.44		0.71		0.59		0.45	
	ORP	N/A	mV	0.0		-144.3		-80.9		-21	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	35.7		501		1600	J	1030	J ³
General Chemistry											
	Alkalinity, Total	N/A		480		490		428		496	
	Chloride	N/A	mg/L	14.0		12.8		26.0		7.2	
	Nitrogen, Nitrite	N/A	mg/L	0.036	J	0.0033	U	0.0030	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.031	J	0.057	U	0.15		0.11	U
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.9	U	1	U
	Sulfate	N/A	mg/L	260		222		360		202	
	Total Organic Carbon	N/A	mg/L	4.87		4.0		3.3		2.8	U
	Iron, Ferrous	N/A	mg/L	0.5	U	0.072	U	0.042	UJ	0.20 g	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	2.560		3.560		25.900		2.720	J
	Manganese, Total	N/A	mg/L	1.418		1.180		1.350		1.090	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	1.00	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	1.00	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	1.00	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	UJ	0.50	U	1.00	U	0.62	UJ ²

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	LOCATION			MW-13-3		MW-13-3		MW-13-3		MW-13-3	
	SAMPLING DATE			5/14/2014		7/29/2015		10/19/2016		12/19/2017	
	LAB SAMPLE ID			L1410358-01		MC40336-2		JC30071		JC57698-9	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units		Qual		Qual		Qual		Qual
Field Parameters											
	pH **	N/A		7.09		4.45		6.87		7.39	
	Specific Conductance	N/A	mS/cm	4.221		3.624		3.311		2.65	
	Temperature	N/A	°C	17.11		17.95		17.77		10.03	
	Turbidity	N/A	NTU	62		4.11		8.67		8.4	
	Dissolved Oxygen	N/A	mg/L	2.71		2.75		0.53		1.72	
	ORP	N/A	mV	111.4		-39.9		-14.2		131	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	0.5	U	5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	0.5	U	5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	87.6		51.7		39.1	J	7.0	J ³
General Chemistry											
	Alkalinity, Total	N/A		304		290		278		4.0	U
	Chloride	N/A	mg/L	33.0		18.7		13.6		11.0	
	Nitrogen, Nitrite	N/A	mg/L	0.032	J	0.0033	U	0.0045	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.064	J	0.057	U	0.03	U	0.11	U
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.0	U	1.0	U
	Sulfate	N/A	mg/L	2500		1850		1650		1460	
	Total Organic Carbon	N/A	mg/L	2.46		1.1		1.6		1.00	U
	Iron, Ferrous	N/A	mg/L	0.58		0.072	U	0.100	UJ	0.20 g	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	22.30		0.504		0.818		0.564	
	Manganese, Total	N/A	mg/L	2.248		2.170		1.570		0.580	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	0.50	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	U	0.50	U	0.50	U	0.62	UJ ²

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U: Not detected at the reported detection limit for the sample.

UJ: The analyte was analyzed for and was not present above the level of the associated value. The associated numerical value may not accurately or precisely represent the concentration necessary to detect the analyte in this sample.

R: The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N/A: Not Applicable

NR: Not Reported

	LOCATION			DUP		DUP-01		DUP-01		DUP-01	
	SAMPLING DATE			5/13/2014		7/27/2015		10/17/2016		12/20/2017	
	LAB SAMPLE ID			L1410230-04		MC40285-4		JC29864		JC57789-5	
	SAMPLE TYPE										
	SAMPLE DEPTH (ft.)	Remedial									
		Goal	Units	(MW-13-2)	Qual	(ACE-4)	Qual	(ACE-4)	Qual		Qual
Field Parameters											
	pH **	N/A		7.07		3.77		6.66		7.08	
	Specific Conductance	N/A	mS/cm	1.340		1.071		0.915		2.92	
	Temperature	N/A	°C	9.41		13.01		15.2		7.20	
	Turbidity	N/A	NTU	3.73		3.03		2.56		0.00	
	Dissolved Oxygen	N/A	mg/L	0.44		7.28		0.88		3.05	
	ORP	N/A	mV	0.0		-122.4		26.5		273	
Dissolved Gases by GC											
	Ethane	N/A	ug/l	1.36		5.0	U	0.16	U	0.12	UJ ³
	Ethene	N/A	ug/l	1.1		5.0	U	0.12	U	0.16	UJ ³
	Methane	N/A	ug/l	440		5.0	U	0.06	UJ	0.06	UJ ³
General Chemistry											
	Alkalinity, Total	N/A		480		356		368		317	
	Chloride	N/A	mg/L	13.0		22.7		27.2		90.6	
	Nitrogen, Nitrite	N/A	mg/L	0.033	J	0.0033	U	0.0045	U	0.01	U
	Nitrogen, Nitrate	N/A	mg/L	0.08	J	0.70	J	0.50		0.11	U
	Sulfide	N/A	mg/L	0.1	U	1.0	U	1.0	U	1.0	U
	Sulfate	N/A	mg/L	240.0		208.0		217.0		2910	
	Total Organic Carbon	N/A	mg/L	5.26		1.3		0.77	J	1.0	U
	Iron, Ferrous	N/A	mg/L	0.5	U	0.072	U	0.10	UJ	0.20	UJ ⁴
Total Metals											
	Iron, Total	N/A	mg/L	3.08		0.483		0.0144		0.066	
	Manganese, Total	N/A	mg/L	1.468		0.467		0.0219		0.462	
Site Contaminants of Concern - Volatile Organics by GC/MS											
	1,2-Dichloroethane	0.6*	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	1,2-Dichloroethene, Total	5.0*	ug/l	2.5	U	0.50	U	0.50	U	NR	
	cis-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	trans-1,2-Dichloroethene	N/A	ug/l	2.5	U	0.50	U	0.50	U	0.50	U
	Trichloroethene	5.0 ⁺	ug/l	0.5	U	0.50	U	0.50	U	0.50	U
	Vinyl chloride	2.0 ⁺	ug/l	1.0	UJ	0.50	U	0.5	U	0.62	UJ ²

²The %D was outside of acceptance limits for the closing continuing calibration and the value was associated with the non-compliant continuing calibration. Affected results were qualified "J", estimated, or UJ, estimated non-detect, on this basis.

³The observed %RSD was above the acceptance limit and all samples were associated with the non-compliant initial calibration and affected results were qualified "J" or "UJ" on this basis.

⁴The samples were prepared and analyzed outside of allowable validation holding time for ferrous iron (24 hours). All ferrous iron results were affected and reported non-detect; therefore, results were qualified "UJ" on this basis.

NOTES:

* NY-AWQS = New York State Ambient Water Quality Standards (TOGS 1.1.1).

⁺ Federal MCL = USEPA Maximum Contaminant Level

All groundwater samples analyzed in November 2012 and May 2014 were by Alpha Analytical of Westborough, Massachusetts.

All groundwater samples analyzed in July/August 2015 were by Accutest New England, Marlborough, Massachusetts.

MW-13-1, MW-13-2 & GW-12 samples analyzed in October 2016 were by SGS Accutest New England, Marlborough, Massachusetts. The remainder of the October 2016 samples were analyzed

by SGS Accutest New Jersey.

All groundwater samples collected in December 2017 were analyzed by SGS Accutest of Dayton, NJ.

All analytical results are expressed in micrograms per liter (µg/L).

** pH values in the July 2015 sampling event are low due to a possible equipment malfunction.

QUALIFIERS & ABBREVIATIONS:

J: Estimated - The analyte was positively identified; the quantitation is an estimation.

U: Not detected at the reported detection limit for the sample.

UJ: The analyte was analyzed for and was not present above the level of the associated value. The associated numerical value may not accurately or precisely represent the concentration necessary to detect the analyte in this sample.

R: The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N/A: Not Applicable

NR: Not Reported

APPENDIX D
Comments Received from Support Agencies and/or the Community

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NO PUBLIC COMMENTS RECEIVED

AS OF 31 MAY 2018

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APPENDIX E
Documents Reviewed

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DOCUMENTS REVIEWED

Albany County Environmental Management Council (ACEMC), 1980. *Northeast Industrial Park (Voorheesville Depot) and Vicinity, Closed Landfill Study*. 25 June 1980.

EA Engineering, Science, and Technology, Inc., 1999. *Revised Draft Investigation Report. Archival Search Former Schenectady Army Depot - Voorheesville Area*, dated August 1999. EA, 2003. Archive Search Report.

Eltschlager, K.K., Hawkins, J.W., Ehler, W.C., and Baldassare, Fred, 2001. *Technical measures for the investigation and mitigation of fugitive methane hazards in areas of coal mining*, Office of Surface Mining Reclamation and Enforcement, 125 p.

H2H Associates, LLC, 2012. *Pre-Design Investigation Work Plan Northeast Industrial Park Area of Concern 1 & 7*. November 2012.

H2H Associates, LLC, 2014a. *Site Management Plan – Northeastern Industrial Park Area of Concern 1 & 7*. August 2014

H2H Associates, LLC, 2014b. *Landfill Cap and Soil Cover Certification Report, Area of Concern 1, Northeast Industrial Park, Guilderland, New York*. January 2014.

H2H Associates, LLC, 2017. *Final Annual Report No. 3, Groundwater Monitoring and Landfill Inspection, Northeastern Industrial Park Areas of Concern 1 & 7, Guilderland, New York*. Prepared for USACE New England District. February 2017.

Malcolm Pirnie, 1997. *Final Limited Remedial Investigation Report – Southern Disposal Landfill*. April 1997.

New Jersey Department of Environmental Protection (NJDEP), 2012. *Site Remediation Program, Monitored Natural Attenuation Technical Guidance, Version 1.0*. March 1, 2012

New York State Department of Environmental Conservation (NYSDEC), 2017. Letter dated 13 February 2017, to Mr. David W. Ahl, Vice President Galesi Group, Industrial Parks Division, RE: Change in Classification of DEC Site No. 401009, Northeast Industrial Park from Class 2 to Class 4.

NYSDEC, 2015. Letter dated 14 January 2015, to Mr. Gregory J. Goepfert, Project Manager, New York District, Corps of Engineers, RE: Former Schenectady Army Depot, 401009, Final Engineering Report, AOC 1.

NYSDEC, 1998. *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.*, T.O.G.S. 1.1.1

Parsons ES, 1998. *Final Preliminary Assessment Report Voorheesville Depot.* Prepared by Parsons Engineering Science, Inc. December 1998.

Parsons, 2007. *Remedial Investigation Report, Former Schenectady Army Depot Voorheesville Area.* May 2007.

Parsons, 2010. *Focused Feasibility Study for Areas of Concern 1 and 7 Former Schenectady Army Depot Voorheesville Area Guiderland, New York.* June 2010.

Parsons, 2011. *Proposed Plan for Areas of Concern 1 and 7 Former Schenectady Army Depot Voorheesville Area Guiderland, New York.* February 2011.

U.S. Army Corps of Engineers (USACE), 2011. *Final Decision Document, Former Schenectady Army Depot Areas of Concern 1 and 7: U.S. Army Southern Landfill and Triangular Disposal Area Formerly Used Defense Site.* Signed 11 October 2011.

U.S. Army Toxic and Hazardous Materials Agency, 1980. *Historical Summary and Report of Findings at Schenectady General Depot, Guiderland, New York.* July 1980.

U.S. Environmental Protection Agency (USEPA), 1996. *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedure, 540-S-95-504.*

USEPA, 2001. *Comprehensive Five-Year Review Guidance, 540-R-01-007.*

USEPA, 2015. *Use of Monitored Natural Attenuation for Inorganic Contaminants in Groundwater at Superfund Sites.* Prepared by the Office of Solid Waste and Emergency Response, Directive 9283.1-36. August 2015.

U.S. Geological Survey (USGS), 2016. *Voorheesville Quadrangle, Voorheesville, New York. New York-Albany Co. 7.5-Minute Series.*

APPENDIX F
Interview Summaries

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Five-Year Review
Northeastern Industrial Park (NEIP)
Contract No. W912WJ-17-C-0011
Interview Questions
29 January 2018; 11:00 am

INTERVIEW RECORD		
Site Name: Northeast Industrial Park (C02NY00203)		EPA ID No.:
Subject: Five-Year Review Interview		Time: 11:00am Date: 1/29/2018
Type: <u>Telephone</u> Visit Other Location of Visit: N/A		Incoming <u>Outgoing</u>
Contact Made By:		
Name: Anne MacMillan	Title: Project Manager	Organization: Bluestone Environmental Group, Inc.
Individual Contacted:		
Name: Mr. Gregory J. Goepfert	Title: Project Manager	Organization: USACE New York District
Telephone No: (917) 790-8235 Fax No: N/A E-Mail Address: gregory.j.goepfert@usace.army.mil		Street Address: 26 Federal Plaza, Rm 1811 City, State, Zip: New York, NY 10278-0900
Summary Of Conversation		
<p>Mr. Greg Goepfert (GG) is the Project Manager for the Formerly Used Defense Site (FUDS) Northeastern Industrial Park (NEIP) in Guilderland, NY. Mr. Goepfert is going to look for NEIP contact to interview for Bluestone. Mr. Goepfert is not aware of any reoccurring issues, or any major issues that have occurred over the past five years at NEIP.</p>		



Questions:

1. What is your role specific to NEIP?

GG- I am the Project Manager for the FUDS NEIP Site.

2. Are you aware of any recurring issues at the NEIP landfill?

GG- Only what has been recently reported. For example, the breach in the fence line, and the trash gate in the stormwater culvert, which has been subsequently repaired.

3. What, if any, issues have been encountered and corrected at NEIP since the implementation of the cap and cover system?

GG- No major issues have been experienced. Routine maintenance has occurred as planned. Bluestone repaired the stormwater culvert last year.

4. What, if any, issues were experienced during the implementation of the cap and cover system?

GG- None, to my knowledge.

5. Are there any unusual situations, or problems, at the site?

GG- None, to my knowledge.

6. Have there been any changes to the land uses of the landfill cap and cover or surrounding areas?

GG- None, to my knowledge.

7. Are there any anticipated changes to land uses surrounding the landfill cap and cover?

GG- None, to my knowledge.

8. Has there been any construction in AOC 1 or 7?

GG- None, to my knowledge.

9. Has the property been sold, subdivided, merged or undergone a tax map amendment during this period? Has there been a change of ownership?

GG- None, to my knowledge. The NEIP representative may know this information better.

10. Have any Federal, State, or local permits been issued for the property during this period?

GG- None, to my knowledge.

11. Have any drinking water sources been installed in AOC 1 or 7? Have any surface waters been used for drinking water in AOC 1?

GG- None, to my knowledge. Per the environmental easement that was established as part of the Decision Document, no groundwater use is supposed to occur.

12. What is your overall impression of the project? (general sentiment)

GG- This project has been a successful construction project that continues to follow the Decision Document and establishes and funds a budget for O&M.



13. What affects have site operations had on the surrounding community?

GG- None, to my knowledge, as it specifically relates to AOC 1 and 7.

14. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

GG- None, to my knowledge, as it specifically relates to AOC 1 and 7.

15. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

GG- None, to my knowledge.

16. Do you feel well informed about the site's activities and progress?

GG- Yes.

17. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

GG- I recommend that USACE continues to plan and budget for the future O&M activities as outlined in the Decision Document.

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Five-Year Review
Northeastern Industrial Park (NEIP)
Contract No. W912WJ-17-C-0011
Interview Questions
2 February 2018; 11:00 am

INTERVIEW RECORD			
Site Name: Northeast Industrial Park (C02NY00203)		EPA ID No.:	
Subject: Five-Year Review Interview		Time: 11:00am	Date: 2/2/2018
Type: Telephone Visit Other Location of Visit:		Incoming Outgoing	
Contact Made By:			
Name: Anne MacMillan	Title: Project Manager	Organization: Bluestone Environmental Group, Inc.	
Individual Contacted:			
Name: Ms. Lindsay Roberts	Title: Leasing Agent	Organization: NEIP	
Telephone No: 518-356-4445 Ext. 121 Fax No: N/A E-Mail Address: lroberts@galesi.com		Street Address: City, State, Zip:	
Summary Of Conversation Ms. Roberts is the leasing agent for the Formerly Used Defense Site (FUDS) Northeastern Industrial Park (NEIP) in Guilderland, NY. Ms. Roberts is not aware of any reoccurring issues, or any major issues that have occurred over the past five years at NEIP.			

Questions:

1. What is your role specific to NEIP?

LR- I am a leasing agent for the Northeastern Industrial Park. Dave Ahl is my supervisor and is in charge of the Industrial Park.

2. Are you aware of any recurring issues at the NEIP landfill?

LR- None, to my knowledge.

3. What, if any, issues have been encountered and corrected at NEIP since the implementation of the cap and cover system?

LR- None, to my knowledge.

4. What, if any, issues were experienced during the implementation of the cap and cover system?

LR- None, to my knowledge.

5. Are there any unusual situations, or problems, at the site?

LR- None, to my knowledge.

6. Have there been any changes to the land uses of the landfill cap and cover or surrounding areas?

LR- None, to my knowledge.

7. Are there any anticipated changes to land uses surrounding the landfill cap and cover?

LR- None, to my knowledge.

8. Has there been any construction in AOC 1 or 7?

LR- None, to my knowledge.

9. Has the property been sold, subdivided, merged or undergone a tax map amendment during this period? Has there been a change of ownership?

LR- Not to my knowledge.

10. Have any Federal, State, or local permits been issued for the property during this period?

LR- None, to my knowledge.

11. Have any drinking water sources been installed in AOC 1 or 7? Have any surface waters been used for drinking water in AOC 1?

LR- None, to my knowledge.

12. What is your overall impression of the project? (general sentiment)

LR- None, to my knowledge, I have only been in this position for one year.

13. What affects have site operations had on the surrounding community?

LR- None, to my knowledge.

14. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

LR- None, to my knowledge.



15. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

LR- None, to my knowledge.

16. Do you feel well informed about the site's activities and progress?

LR- Yes, there has been good communication with USACE.

17. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

LR- USACE has done a good job thus far, and have been very diligent at keeping us informed.

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Five-Year Review
Northeastern Industrial Park (NEIP)
Contract No. W912WJ-17-C-0011
Interview Questions
25 May 2018; 1:50 pm

INTERVIEW RECORD		
Site Name: Northeast Industrial Park (C02NY00203)		EPA ID No.:
Subject: Five-Year Review Interview		Time: 1:50pm
Date: 05/25/2018		
Type: <u>Telephone</u> Visit Other Location of Visit: N/A		Incoming <u>Outgoing</u>
Contact Made By:		
Name: Ms. Jennifer Harris	Title: Senior Engineer	Organization: Bluestone Environmental Group, Inc.
Individual Contacted:		
Name: Mr. John Swartwout	Title: Lead Environmental Engineer at Remedial Bureau A, Section C	Organization: New York State Department of Environmental Conservation (NYSDEC)
Telephone No: (518) 402-9620 Fax No: N/A E-Mail Address: john.swartwout.dec.ny.gov		Street Address: 625 Broadway, 12 th Floor City, State, Zip: Albany, New York 12233-7015
Summary Of Conversation		
Mr. John Swartwout (JS) is the Lead Environmental Engineer at Remedial Bureau A, Section C at NYSDEC. He has been involved with the Formerly Used Defense Site (FUDS) project at Northeastern Industrial Park (NEIP) in Guilderland, NY, since its inception. Mr. Swartwout is not aware of any reoccurring issues, or any major issues that have occurred over the past five years at NEIP.		



Questions:

1. What is your role specific to NEIP?

JS-I have served as Section Chief in the Division of Environmental Remediation for several years. Since project inception, I have provided oversight to several DEC Project Managers working on the project.

2. Are you aware of any recurring issues at the NEIP landfill?

JS-No recurring issues, to my knowledge.

3. What, if any, issues have been encountered and corrected at NEIP since the implementation of the cap and cover system?

JS-No known.

4. What, if any, issues were experienced during the implementation of the cap and cover system?

JS-No known.

5. Are there any unusual situations, or problems, at the site?

JS-No known.

6. Have there been any changes to the land uses of the landfill cap and cover or surrounding areas?

JS-No known changes.

7. Are there any anticipated changes to land uses surrounding the landfill cap and cover?

JS- No known changes.

8. Has there been any construction in AOC 1 or 7?

JS-No, aside from landfill cap and cover construction.

9. Has the property been sold, subdivided, merged or undergone a tax map amendment during this period? Has there been a change of ownership?

JS-No. If ownership changes, the facility is required to notify DEC. This site is on the State registry; therefore, advanced notice is required.

10. Have any Federal, State, or local permits been issued for the property during this period?

JS-No known.

11. Have any drinking water sources been installed in AOC 1 or 7? Have any surface waters been used for drinking water in AOC 1?

JS-None have been installed in AOC 1 or 7. The closest drinking water source is the reservoir downgradient of the site.

12. What is your overall impression of the project? (general sentiment)

JS-Everything has gone well with landfill construction and maintenance.



13. What affects have site operations had on the surrounding community?

JS-No negative impacts on the surrounding community. The site has actually improved visually, since the cap/cover was installed.

14. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

JS-Nothing related to the landfill area.

15. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

JS-No known.

16. Do you feel well informed about the site's activities and progress?

JS-Yes.

17. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

JS-None at this time.

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APPENDIX G
Environmental Easement and Survey

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Allen & Desnoyers LLP

Partners:
Gregory J. Allen
Dale A. Desnoyers
Patrick L. Kehoe
Denise J. D'Ambrosio

Of Counsel:
Ralph F. Ambrosio
Darren S. O'Connor
Val Washington
George J. Hoffman, Jr.

NOTICE TO MUNICIPALITY

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

December 21, 2015

Hon. Peter G. Barber
Town Supervisor
Town of Guilderland
P.O. Box 339, 5209 Western Tpk.
Guilderland, New York 12084

Re: Environmental Easement

Dear Supervisor Barber:

Attached please find a copy of an environmental easement granted to the New York State Department of Environmental Conservation ("Department") on October 5, 2015, and recorded in the Office of the Albany County Clerk on November 5, 2015, by Northeastern IP Holdings for property at 2 Van Buren Blvd., Guilderland, New York, Tax Map No. 50.-1-14.21, DEC Site No: 401009.

This Environmental Easement restricts future use of the above-referenced property. Any on-site activity must be done in accordance with the Environmental Easement and the Site Management Plan which is incorporated into the Environmental Easement. Department approval is also required prior to any groundwater use.

Article 71, Section 71-3607 of the New York State Environmental Conservation Law requires that:

1. Whenever the department is granted an environmental easement, it shall provide each affected local government with a copy of such easement and shall also provide a copy of any documents modifying or terminating such environmental easement.
2. Whenever an affected local government receives an application for a building permit or any other application affecting land use or development of land that is subject to an environmental easement and that may relate to or impact such easement, the affected local government shall notify the department and refer such

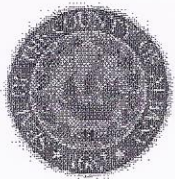
application to the department. The department shall evaluate whether the application is consistent with the environmental easement and shall notify the affected local government of its determination in a timely fashion, considering the time frame for the local government's review of the application. The affected local government shall not approve the application until it receives approval from the department.

An electronic version of every environmental easement that has been accepted by the Department is available to the public at: <http://www.dec.ny.gov/chemical/36045.html>. Please forward this notice to your building and/or planning departments, as applicable, to ensure your compliance with these provisions of New York State Environmental Conservation Law. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "Gregory J. Allen", followed by a horizontal line.

Gregory J. Allen, Esq.



ALBANY COUNTY – STATE OF NEW YORK
BRUCE A. HIDLEY COUNTY CLERK
16 EAGLE STREET, ALBANY, NEW YORK 12207

COUNTY CLERK'S RECORDING PAGE

THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH



INSTRUMENT #: 2015-103

Receipt#: 20150000693

Clerk: SP

Rec Date: 11/05/2015 10:15:50 AM

Doc Grp: D

Descrip: DEED, EASEMENT

Num Pgs: 10

Rec'd Frm: NYSDEC

Party1: NORTHEASTERN IP HOLDINGS INC

Party2: PEOPLE OF STATE OF NEW YORK

Town: GUILDERLAND TOWN

Recording:

Cover Page	5.00
Recording Fee	65.00
Cultural Ed	14.25
Records Management - Coun	1.00
Records Management - Stat	4.75
TP584	5.00

Sub Total: 95.00

Transfer Tax
Transfer Tax - State 0.00

Sub Total: 0.00

Total: 95.00

**** NOTICE: THIS IS NOT A BILL ****

***** Transfer Tax *****

Transfer Tax #: 2210

Transfer Tax

Consideration: 0.00

Total: 0.00

Record and Return To:

BOX 8

THIS PAGE CONSTITUTES THE CLERK'S
ENDORSEMENT, REQUIRED BY SECTION 316-a (5)
& 319 OF THE REAL PROPERTY LAW OF THE
STATE OF NEW YORK.

Bruce A. Hidley
Albany County Clerk

9
SP
County: Albany Site No: 401009

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36
OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 5th day of October, 2015, between Owner(s) Northeastern IP Holdings, Inc., having an office at 695 Rotterdam Industrial Park, Schenectady, New York 12306, County of Albany, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 2 Van Buren Blvd in the Town of Guilderland, County of Albany and State of New York, known and designated on the tax map of the County Clerk of Albany as tax map parcel numbers: Section 50 Block 1 Lot 14.21, being the same as that property conveyed to Grantor by deed dated September 30, 2001 and recorded in the Albany County Clerk's Office in Liber and Page 2720/1002. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 26.062 +/- acres, and is hereinafter more fully described in the Land Title Survey dated January 2, 2013 and last revised on March 31, 2014 prepared by Bruce W. Snyder, Delta Engineers, Architects, & Land Surveyors, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The controlled property is currently zoned for industrial uses as described in 6 NYCRR Part 375-1.8 (g)(2)(iv) and Guilderland Code 280-23.I. The controlled property is subject to additional restrictions as set forth in this Environmental Easement and Site Management Plan.

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Albany County Department of Health 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 the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) 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 this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by
the New York State Department of Environmental Conservation**

pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her 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

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to: Site Number: 401009
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to: Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

County: Albany

Site No: 401009

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Northeastern IP Holdings, Inc.:

By: 

Print Name: David M. Buicko

Title: Exec Vice Pres/COO Date: 7/21/15

Box 8
Sneeringer Monahan Provost
Redgrave Title Agency, Inc.
420 Warren Street
Hudson, New York 12534
518 828-4351 or 800 724-7856

M-059947

Record + Return to:
Allen + Deshayes LLP
90 State Street, Suite 1009
Albany, New York 12207

County: Albany Site No: 401009

Grantor's Acknowledgment

STATE OF NEW YORK)
COUNTY OF Schenectady) ss:

On the 21 day of July, in the year 2015, before me, the undersigned, personally appeared DAVID BOILKO, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Sandra D. Andi
Notary Public - State of New York

SANDRA D. ANDI
Notary Public, State of New York
No. 4737914
Qualified in Albany County
Commission Expires November 30, 2017

County: Albany Site No: 401009

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

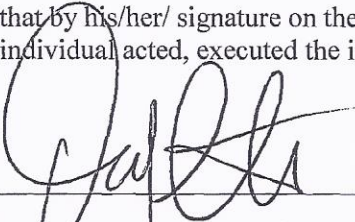
By:


Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 5th day of October, in the year 2015, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.



Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5082146
Qualified in Schenectady County
Commission Expires August 22, 2018

SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE TOWN OF GUILDERLAND, COUNTY OF ALBANY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

Beginning at a point on the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201), said point standing at the intersection of the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) with the westerly boundary of the lands of CSX Transportation, Inc. (Reputed Owner) (New York Central Railroad Company - Now or Formerly) (West Shore Railroad); thence S89°03'21"W 176.16 feet along the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) a metal fence post; thence N88°25'41"W 300.02 feet continuing along the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) to a metal fence post; thence N80°53'43"W 66.23 feet to a metal fence post; thence N81°55'11"W 88.99 feet to an iron rod; thence N03°09'49"E 1.00 feet to an iron rod; thence N87°55'11"W 70.55 feet still along the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) to an iron rod; thence N33°25'31"W 1,046.57 feet to an iron rod; thence northerly 487.89 feet along a curve to the left with a radius of 410.00 feet, a delta angle of 68°10'48" and a chord bearing and distance of N01°40'04"E 459.61 feet to an iron rod, thence N32°25'20"W 785.00 feet to an iron rod; thence N70°57'28"E 343.83 feet to an iron rod standing on the westerly boundary of the lands reputedly owned by CSX Transportation, Inc.; thence S32°25'20"E 2,534.68 feet along the westerly boundary of the lands reputedly owned by CSX Transportation, Inc. to the point and place of beginning.

Environmental Easement parcel containing 26.062 Acres (1,135,281.3 sq.ft.) more or less.

Subject to a 15 ft. wide permanent easement, reserved to the United States of America, its successors and assigns, for joint use with the Town of Guilderland Urban Renewal Agency, its successors and assigns, of the existing railroad tracks, together with an easement for the installation, construction, maintenance, replacement, or relocation and patrol of such facilities, in, on, over, and through the above referenced premises.

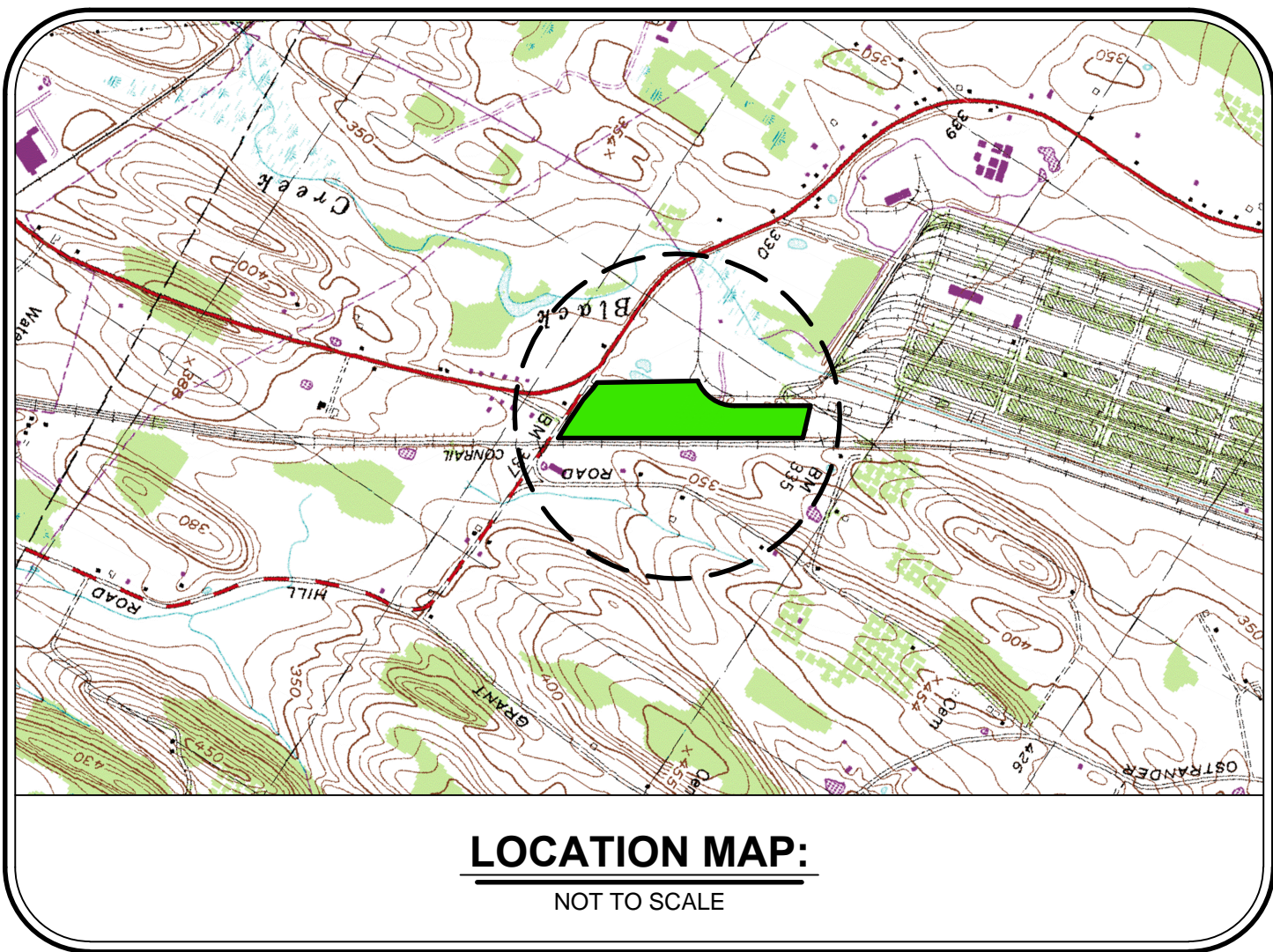
Also Subject to any other easements, covenants or restrictions of record.

RMR

Sneeringer Monahan Provost
Redgrave Title Agency, Inc.
420 Warren Street
Hudson, New York 12534
518 828-4351 or 800 724-7856

Box 8

M - 059947



ENVIRONMENTAL EASEMENT DESCRIPTION: PROPOSED DESCRIPTION OF A PORTION OF THE LANDS OF NORTHEASTERN IP HOLDINGS, INC. DEPOT ROAD, TOWN OF GUILDERLAND, ALBANY COUNTY

"ENVIRONMENTAL EASEMENT PARCEL"

ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE TOWN OF GUILDERLAND, COUNTY OF ALBANY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

Beginning at a point on the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201), said point standing at the intersection of the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) with the westerly boundary of the lands of CSX Transportation, Inc. (Reputed Owner) (New York Central Railroad Company - Now or Formerly) (West Shore Railroad); thence **S89°03'21"W 176.16 feet** along the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) to a metal fence post; thence **N87°55'11"W 300.02 feet** continuing along the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) to a metal fence post; thence **N80°53'43"W 66.23 feet** to a metal fence post; thence **N81°55'11"W 88.99 feet** to an iron rod; thence **N03°09'49"E 1.00 feet** to an iron rod; thence **N87°55'11"W 70.55 feet** still along the northerly highway boundary of Stone Road (Depot Road) (Voorheesville - Guilderland Center County Road #201) to an iron rod; thence **N33°25'31"W 1,046.57 feet** to an iron rod; thence northerly **487.89 feet** along a curve to the left with a radius of **410.00 feet**, a delta angle of **68°10'48"** and a chord bearing and distance of **N01°40'04"E 459.61 feet** to an iron rod; thence **N32°25'20"W 785.00 feet** to an iron rod; thence **N70°57'28"E 343.83 feet** to an iron rod standing on the westerly boundary of the lands reputedly owned by CSX Transportation, Inc.; thence **S32°25'20"E 2,534.68 feet** along the westerly boundary of the lands of reputedly owned by CSX Transportation, Inc. to the point and place of beginning.

The above described Environmental Easement parcel containing **26.062 Acres** (1,135,281.3 sq.ft.) more or less.

Subject to a 15 ft. wide permanent easement, reserved to the United States of America, its successors and assigns, for joint use with the Town of Guilderland Urban Renewal Agency, its successors and assigns, of the existing railroad tracks, together with an easement for the installation, construction, maintenance, replacement, or relocation and patrol of such facilities, in, on, over, and through the above referenced premises.

Also subject to any other easements, covenants or restrictions of record.

RECORD LEGAL DESCRIPTION:

ALL THAT CERTAIN TRACT, PIECE OR PARCEL OF LAND situate lying and being in the Town of Guilderland, County of Albany, and State of New York, more particularly bounded and described as follows:

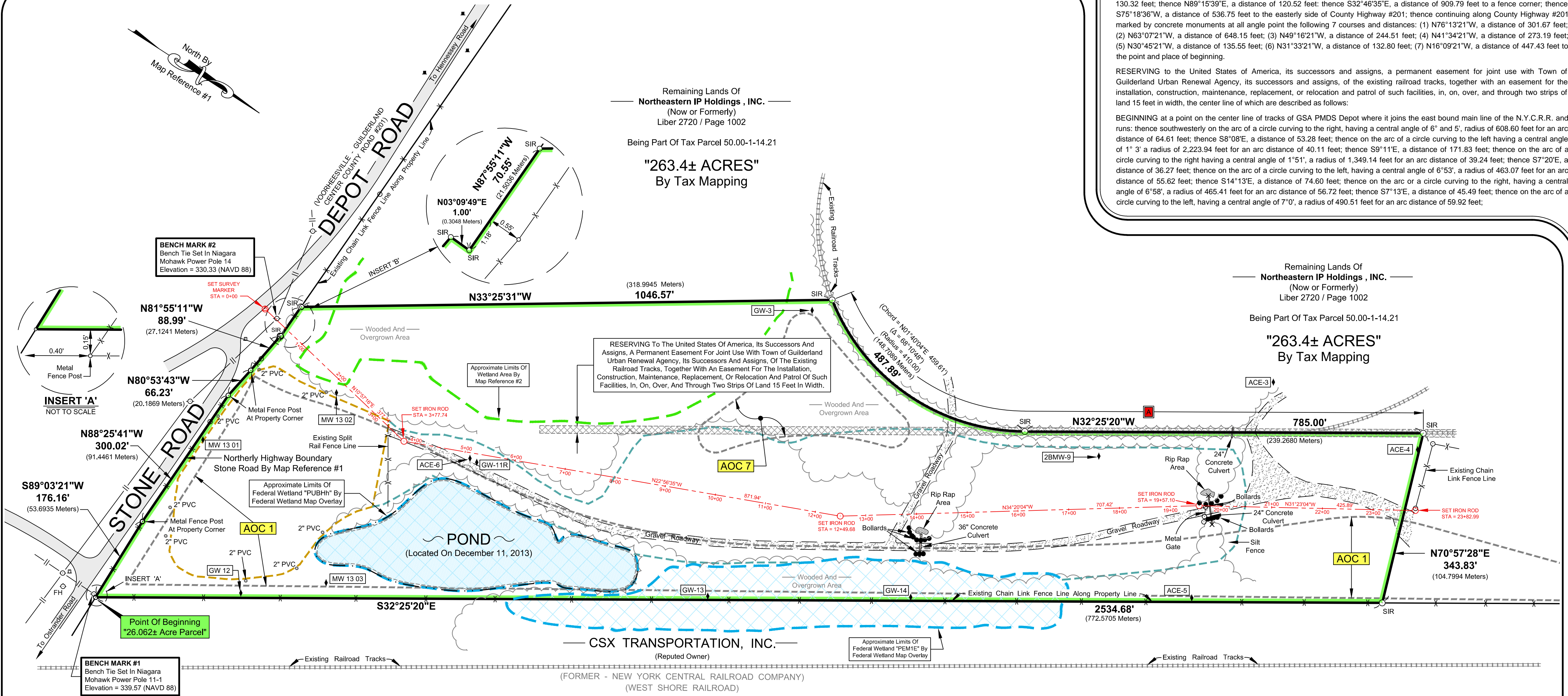
BEGINNING at the intersection of the westerly right-of-way line of the New York Central Railroad (West Shore Branch) with the northeasterly side of County Highway #201 and runs thence northerly and northerly along said highway to following courses and distances: S89°03'21"W, 176.16 feet; N88°25'41"W, 300.02 feet; N80°53'43"W, 66.23 feet; N87°55'11"W, 88 feet; N3°09'49"E, 1.0 feet; N87°55'11"W, 1,108.00 feet; N74°10'13"W, 293.00 feet; N67°26'13"W, 129.0 feet; N57°59'04"W, 272.37 feet; N58°02'00"W, 885.00 feet; N61°50'00"W, 38.95 feet; S73°37'00"W, 19.15 feet; N58°25'00"W, 113.27 feet; N76°03'00"W, 640.46 feet; N76°13'21"W, 301.67 feet; N63°07'21"W, 648.15 feet; N49°16'21"W, 244.51 feet; N41°34'21"W, 273.19 feet; N30°45'21"W, 135.55 feet; N31°33'21"W, 132.80 feet; N16°09'21"W, 447.43 feet; N16°17'20"W, 90.02 feet; N78°55'50"E, 1.0 feet; N00°11'50"E, 918.07 feet; N03°23'50"E, 251.00 feet; N00°43'10"W, 604.00 feet; N9°23'00"W, 381.31 feet; N21°16'10"W, 1,155.00 feet; N74°05'10"W, 1.0 feet; N11°53'53"W, 293.54 feet; N19°19'08"W, 225.67 feet; N30°43'12"W, 314.53 feet to the lands formerly of Iva Bloomingdale, now of Central School District No. 2 of the Town of Guilderland, Bethlehem, and New Scotland; thence along said School District lands the following four courses and distances: (1) N50°03'08"E, 234.61 feet; (2) S85°10'41"E, 353.57 feet; (3) N14°38'26"E, 2,665.08 feet; (4) N27°32'54"W, 294.50 feet; thence N24°22'06"E, crossing Black Creek, 27.50 feet to the easterly side thereof; thence S35°04'32"E along the northeasterly side of said Creek, 408.00 feet; thence S66°27'28"E, 1,053.02 feet; thence N13°43'19"E, 621.61 feet; thence N13°46'50"W, 334.21 feet; thence N75°27'26"E, 45.70 feet to the westerly boundary of the New York Central Railroad right-of-way (West Shore Branch); thence along said right-of-way the 7 following courses and distances: (1) S14°07'00"E, 235.15 feet; (2) N75°53'00"E, 13.00 feet; (3) S14°07'00"E, 4,848.91 feet; (4) thence southerly on the arc of a circle curving to the left having a radius of 4,649.56 feet, a central angle of 5°11'25" for an arc distance of 421.19 feet; (5) thence S19°18'35"E, a distance of 993.53 feet; (6) thence on the arc of a circle, curving to the left having a radius of 1,369.70 feet, a central angle of 13°06'45" for an arc distance of 313.46 feet; (7) thence S32°25'20"E, a distance of 3,607.10 feet to the point and place of beginning.

As shown on a map entitled Survey and Map of Lands Leased To Northeastern Industrial Park, Inc., showing buildings, easements, and exceptions prepared by Richard Danskin, P.C., dated August 15, 1980, and revised October 2, 1980, last revised January 26, 1998.

EXCEPTING AND RESERVING, therefrom, all the tract or parcel of land, situate in the Town of Guilderland, County of Albany, and State of New York, bounded and described as follows: BEGINNING at the centerline of a concrete monument on the easterly side of County Highway #201 at the northwesterly corner of the herein described parcel and runs thence N80°20'39"E, a distance of 923.58 feet; thence S19°39'21"E, along present fence a distance of 253.58 feet; thence S06°31'21"E, a distance of 91.43 feet; thence S5°40'39"W, a distance of 121.01 feet; thence S8°49'39"W, 211.50 feet; thence S6°57'39"W, a distance of 100.96 to a fence corner; thence N72°42'39"E, a distance of 360.02 feet; thence S53°16'21"E, a distance of 24.88 feet; thence N61°37'39"E, a distance of 130.32 feet; thence N89°15'39"E, a distance of 120.52 feet; thence S32°46'35"E, a distance of 909.79 feet to a fence corner; thence S75°18'36"W, a distance of 536.75 feet to the easterly side of County Highway #201; thence continuing along County Highway #201 marked by concrete monuments at all angle point the following 7 courses and distances: (1) N76°13'21"W, a distance of 301.67 feet; (2) N63°07'21"W, a distance of 648.15 feet; (3) N49°16'21"W, a distance of 244.51 feet; (4) N41°34'21"W, a distance of 273.19 feet; (5) N30°45'21"W, a distance of 135.55 feet; (6) N31°33'21"W, a distance of 132.80 feet; (7) N16°09'21"W, a distance of 447.43 feet to the point and place of beginning.

RESERVING to the United States of America, its successors and assigns, a permanent easement for joint use with Town of Guilderland Urban Renewal Agency, its successors and assigns, of the existing railroad tracks, together with an easement for the installation, construction, maintenance, replacement, or relocation and patrol of such facilities, in, on, over, and through two strips of land 15 feet in width, the center line of which are described as follows:

BEGINNING at a point on the center line of tracks of GSA PMDS Depot where it joins the east bound main line of the N.Y.C.R.R. and runs: thence southwesterly on the arc of a circle curving to the right, having a central angle of 6° and 5', radius of 608.60 feet for an arc distance of 64.61 feet; thence S8°08"E, a distance of 53.28 feet; thence on the arc of a circle curving to the left having a central angle of 1° 3' a radius of 2,223.94 feet for an arc distance of 40.11 feet; thence S8°11"E, a distance of 171.83 feet; thence on the arc of a circle curving to the right having a central angle of 1°51', a radius of 1,349.14 feet for an arc distance of 39.24 feet; thence S7°22"E, a distance of 36.27 feet; thence on the arc of a circle curving to the left, having a central angle of 6°53', a radius of 463.07 feet for an arc distance of 55.62 feet; thence S14°13"E, a distance of 74.80 feet; thence on the arc of a circle curving to the right, having a central angle of 6°58', a radius of 465.41 feet for an arc distance of 56.72 feet; thence S7°13"E, a distance of 45.49 feet; thence on the arc of a circle curving to the left, having a central angle of 7°0', a radius of 490.51 feet for an arc distance of 59.92 feet;



LEGEND:

- ⊙ Denotes Existing Iron Rod
- SIR ⊙ Denotes Set Iron Rod
- SIR ⊙ Denotes Set Metal Survey Marker
- ⊙ Denotes Existing Power Pole
- //— Denotes Overhead Power Pole Line
- PH ⊙ Denotes Existing Fire Hydrant
- GW 12 ⊙ Denotes Existing Monitoring Well
- MW 13 03 ⊙ Denotes Existing Monitoring Well
- Denotes Existing BOLLARD
- Denotes Existing Street Sign
- - - - - Denotes Location Of Landfill Cap Area By Map Reference #2
- - - - - Denotes Location Of Soil Cover Area By Map Reference #2
- AOC 7 Denotes Location Of Area Of Concern

DEED REFERENCE:

(D.R. #1)
Northeastern Industrial Park, Inc.
To
Northeastern IP Holdings, Inc.
Quit Claim Deed - Dated: September 30, 2002
Liber 2720 Of Deeds At Page 1002

Subject to any state of facts a current Abstract of Title may show.

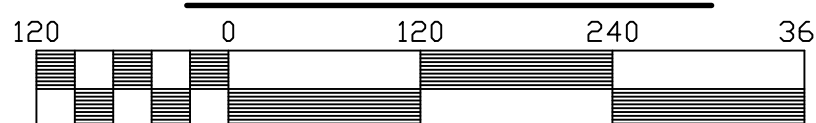
Subject to any other Easements, Covenants or Restrictions of Record

MAP REFERENCES:

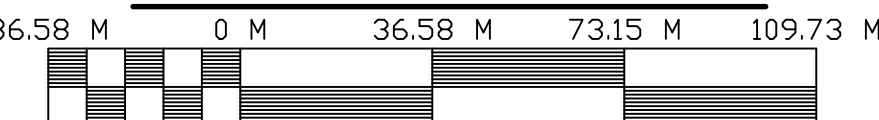
(M.R. #1)
"Survey And Map Of Lands Leased To Northeastern Industrial Park, Inc. Showing Buildings, Easements And Exceptions" By Richard Danskin, P.C., Dated August 15, 1980, Revised On October 2, 1980 And Last Revised On May 19, 2003

(M.R. #2)
Northeast Industrial Park Area Of Concern 1
Landfill Cap / Soil Cover Site Plan"
Town Of Guilderland - Albany County - State Of New York
By U.S. Army Corps Of Engineers, New England District
Concord, Massachusetts Dated January 23, 2014

SCALE: 1" = 120 FEET



SCALE: 1" = 36.58 METERS



STATEMENT OF ENCROACHMENTS:

A Existing Railroad Tracks Encroach Over The Northwest Property Line Of The "Environmental Easement" Onto The Remaining Lands Of Northeastern IP Holdings , INC. A Distance Of 2.5 Feet By 1272.89 Feet.

TOTAL ACREAGE ENVIRONMENTAL EASEMENT IS "26.062± ACRES"
(1,135,281.3± Sq. Ft.)

thence S14°13'E, for a distance of 3,215.54 feet; thence on the arc of a circle curving to the left, having a central angle of 2°50', a radius of 4,014.15 feet, for an arc distance of 198.49 feet; thence S17°03'E, a distance of 291.54 feet; thence on the arc of a circle curving to the left, having a central angle of 7°24', a radius of 498.22 feet for an arc distance of 64.34 feet; thence S24°27'E, a distance of 40.40 feet; thence on the arc of a circle curving to the right, having a central angle of 7°24', a radius of 480.28 feet for an arc distance of 62.02 feet; thence S17°03'E, a distance of 49.14 feet; thence on the arc of a circle curving to the left, having central angle of 7° and 24', a radius of 474.71 feet for an arc distance of 61.30 feet; thence S17°03'E, a distance of 1,554.40 feet; thence on the arc of a circle curving to the left, having a central angle of 15°30', a radius of 1,909.61 feet for an arc distance of 516.58 feet; thence S23°33'E, a distance of 223.83 feet to a point of intersection of the center line of track traveling from said point of intersection in a northwesterly direction; thence S32°33'E, a distance of 1,444.16 feet to the end of the tracks. All the above courses herein mentioned are along the center line of the tracks used by the GSA PMDS Depot, Voorheesville areas.

BEGINNING at a point on the center line of the tracks at the point of intersection of said center line of said tracks as above mentioned and running thence on the arc of a circle curving to the left, having a central angle of 42°, a radius of 611.39 feet for an arc distance of 455.63 feet; thence N75°15' W, a distance of 24.56 feet; thence on the arc of a circle curving to the left, having a central angle of 14°59', a radius of 463.99 feet for an arc distance of 121.33 feet; thence S89°46'W, a distance of 77.05 feet; thence the arc of a circle, curving to the left having a central angle of 6°2', a radius of 618.97 feet for an arc distance of 65.18 feet; thence S83°44'W, a distance of 73.74 feet; thence on the arc of a circle curving to the right having a central angle of 6°9', a radius of 1,680.04 feet for an arc distance of 180.31 feet; thence S89°53'W, a distance of 1,407.16 feet; thence on an arc of a circle curving to the left, having a central angle of 47°02', a radius of 401.16 feet for an arc distance of 329.30 feet to the easterly line of a 35 acre parcel to be deeded by GSA PMDS Depot Voorheesville Area, said last mentioned point being at a point near Gate 13. All of the above courses herein mentioned are along the center line of the tracks in use by the GSA PMDS Depot Voorheesville Area.

THE ABOVE excluded parcel and two strips of land are shown on a survey entitled "Survey and Map of Lands Leased To Northeastern Industrial Park, Inc.", showing buildings, easements and exceptions prepared by Richard Danskin, P.C., dated August 15, 1980, and revised October 2, 1980, last revised January 26, 1998.

ALSO, EXCEPTING AND RESERVING therefrom, all that tract or parcel of land situate in the Town of Guilderland, County of Albany, and State of New York and being located at or near Guilderland Center, New York, and more particularly described as follows:

BEGINNING at the northwest corner of the herein described parcel, said point being S18°24'11"E, a distance of 885.65 feet from the northeast corner of lands leased to Central School District No. 2 (Town of Guilderland, Bethlehem and New Scotland), by the Urban Renewal Agency, said course making an interior angle of 45°48' with the easterly boundary of the aforementioned lands of Central School District No. 2; thence through lands of the Urban Renewal Agency for the following 12 courses and distances: (1) N87°48'26"E, a distance of 252.77 feet to a point; (2) N80°53'51"E, a distance of 105.69 feet to a point; (3) S81°51'22"E, a distance of 175.63 feet to a point; (4) S23°37'56"E, a distance of 264.35 feet to a point; (5) S04°18'20"E, a distance of 181.43 feet to a point; (6) S48°07'12"W, a distance of 170.27 feet to a point; (7) N71°38'14"W, a distance of 184.88 feet to a point; (8) S70°34'30"W, a distance of 233.20 feet to a point; (9) N67°29'04"W, a distance of 125.08 feet to a point; (10) N01°54'14"W, a distance of 341.96 feet to a point; (11) N02°17'36"W, a distance of 164.04 feet to a point; (12) N20°43'14"E, a distance of 83.01 feet to the point and place of beginning.

ALSO EXCEPTING AND RESERVING therefrom, All that piece or parcel of land, situate, lying and being in the Town of Guilderland, County of Albany and State of New York, bounded and described as follows: Beginning at a point on the northwesterly line of Albany County Route #201 (Depot Road) as it is intersected by the southerly line of Lands of the United States Government and runs thence N85°22'00"E along said southerly line a distance of 716.48 feet; thence S13°37'00"E along a reserved 60 foot roadway a distance of 419.70 feet; thence S86°19'00"W a distance of 72.63 feet to a point on the Albany County Route #201 (Depot Road) thence N45°43'00"W along said roadway a distance of 113.27 feet to a concrete monument, thence N63°21'00"W continuing along the northwesterly line of said road a distance of 640.46 feet to the point and place of beginning.

THE CLOSING INSTRUMENT ONLY - NOT INSURED: Containing 353,280 square feet of 8.1 acres of land, more or less, and being shown as a parcel described upon a survey of the lands to be acquired by the Town of Guilderland from the Town of Guilderland Urban Renewal Agency, Scale - 1 inch equals 100 feet, dated October 18, 1971, map and survey by Seale and Carpenter, Land Surveyors and Planners, One Alton Road, Albany, New York and designated as Sheet 2 of 4.

Excepting from the above those parcels conveyed to American Real Estate Investment, LP by deed recorded 5/14/98 in Liber 2603 page 251.

ALSO EXCEPTING AND RESERVING THEREFROM All that parcel of land situated in the Town of Guilderland, County of Albany, State of New York as follows:

Beginning at a point in the easterly right of way line of County Route 201 with its intersection with the division line between the lands now or formerly of the United States of America on the South and the lands now or formerly of Northeastern Industrial Park, Inc. on the North, thence from said point of beginning along said easterly highway right of way line the following three (3) courses; (1) North 16 degrees 17 minutes 20 seconds West, 90.02 feet, (2) North 78 degrees 55 minutes 50 seconds East, 1.0 feet, (3) North 06 degrees 11 minutes 50 seconds East, 675.42 feet to a point; thence through the lands of said Northeastern Industrial Park, Inc., the following four (4) courses: (1) North 80 degrees 03 minutes 50 seconds East, 76.19 feet, (2) South 00 degrees 11 minutes 50 seconds West, 513.82 feet, (3) South 89 degrees 48 minutes 12 seconds East, 95.00 feet, (4) South 00 degrees 11 minutes 55 seconds West, 236.26 feet to a point in the first mentioned division line; thence South 80 degrees 20 minutes 39 seconds West, 147.61 feet along said division line to the point of beginning.

EXCEPTING AND RESERVING THEREFROM All that certain plot, piece or parcel of land, situate, lying and being in the Town of Guilderland, County of Albany and State of New York, with the buildings and improvements thereon erected bounded and described as follows:

Beginning at a point in the division line between the lands now or formerly of the Central School District No. 2, Towns of Guilderland, Bethlehem and New Scotland on the Northwest and lands now or formerly of the United States of America (Schenectady General Depot-Voorheesville Area) on the Southeast, said point being 148.76 feet distant southwesterly measured along said division line from the most northerly corner of lands of the United States of America as the same is shown on a map entitled, "Schenectady General Depot-Voorheesville Area-Survey Utilities, Boundary Railroads-Boundary and Property Line", dated March 27, 1952, and made by E.W. Boutelle and Son; thence southwesterly along said division line 1,000.00 feet to a point; thence southeasterly with an interior angle on 90 deg, and through the lands now or formerly of the United States of America, a distance of 252.59 feet to a point; thence northeasterly with an interior angle of 111 deg, 14'44" continuing through lands now or formerly of the United States of America, a distance of 296.41 feet to a point; thence northeasterly with an interior angle of 158 deg, 45'16" along a line parallel to the aforementioned division line and continuing through the lands now or formerly of the United States of America for a distance of 613.67 feet to a point; thence northwesterly with the interior angle of 107 deg, 00'00" and continuing through the lands now or formerly of the United States of America, a distance of 376.45 feet to the point of beginning, the last mentioned course making an interior angle of 73 deg, 00'00" with the first mentioned course.

"ENVIRONMENTAL EASEMENT"

Portion Of The Lands Of
Northeastern IP Holdings, Inc.

Town Of Guilderland - Albany County
State Of New York

Surveyor's Certification

TO: New York State Department Of Environmental Conservation

THE UNDERSIGNED HEREBY CERTIFIES THAT THIS IS

AN ACCURATE MAP OF AN ACTUAL FIELD SURVEY

DATED: January 2, 2013 AND

THAT BOTH MAP AND SURVEY ARE CORRECT.

Bruce W. Snyder
Bruce W. Snyder
Registered Land Surveyor No.050195
In The State Of New York
Date Of Survey: January 2, 2013
Date Of Last Revision: March 31, 2014
Project Number: 2013.453.001



SHEET 1 OF 1

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DELTA
ENGINEERS, ARCHITECTS, & LAND SURVEYORS

Unauthorized Alteration Or Addition To A Survey Map Bearing A Licensed Land Surveyor's Seal Is A Violation Of Section 7209-2, Of The New York State Education Law.

Only Copies From The Original Of This Survey Marked With The Land Surveyor's Signature And An Original Embossed Or Ink Seal Shall Be Considered Valid True Copies.

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