

Colonie FUSRAP Site

ALBANY COUNTY,
COLONIE, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: 4-0126-00200/00005

Prepared by:

U. S. Army Corps of Engineers New York & Baltimore Districts
and
U.S. Department of Energy Office of Legacy Management

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

MARCH 2020

MARCH 2020

CERTIFICATION STATEMENT

I, CARL M. YOUNG, P.G.*, certify that I am currently a Qualified Environmental Professional (QEP) as defined in 6 NYCRR Part 375 and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

_____ QEP
April 06, 2020 _____ DATE

* Professional Geologist, Commonwealth of Pennsylvania, License No. PG004748

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ALBANY COUNTY
COLONIE, NEW YORK**

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List of Acronyms

BTEX	benzene, toluene, ethylbenzene, xylene
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	<i>Code of Federal Regulations</i>
COC	contaminant of concern
COR	commercial office or residential
DER	Division of Environmental Remediation
DOE	U.S. Department of Energy
cDCE	<i>cis</i> -1,2-dichloroethene
ECL	Environmental Conservation Law
EWP	Excavation Work Plan
FSSU	Final Status Survey Unit
FUSRAP	Formerly Utilized Sites Remedial Action Program
IC	Institutional Control
LM	Office of Legacy Management
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
mg/kg	milligram per kilogram
µg/L	micrograms per liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NL	National Lead Industries
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
OU	Operable Unit
PCB	polychlorinated biphenyl
pCi/g	picocuries per gram
PCE	tetrachloroethene
PRR	Periodic Review Report
QEP	Qualified Environmental Professional
RAO	Remedial Action Objective
ROD	Record of Decision
RP	Remedial Party
SMP	Site Management Plan
TAL	Target Analyte List
TCE	trichloroethene
TCG	target cleanup goal
TCL	Target Compound List
USACE	U.S. Army Corps of Engineers
USC	<i>United States Code</i>
VC	vinyl chloride
VOC	volatile organic compound

ES EXECUTIVE SUMMARY

The following provides a summary of the controls implemented at the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

<p>Site Identification:</p>	<p>Colonie FUSRAP Site, Colonie, Albany County, New York</p>	
<p>Institutional Controls:</p>	<ol style="list-style-type: none"> 1. The Soil Easement Areas, as further identified in Appendix D, Schedule A, may be used for Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv). 2. No digging or excavation shall be permitted in the Soil Easement Areas without prior written approval of DOE and NYSDEC. 3. Vegetable gardens and farming are prohibited in the Soil Easement Areas. 4. The use of groundwater underlying the Site, as described in Appendix D, Schedule B, 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 NYSDEC. 5. The potential for vapor intrusion must be evaluated for any buildings designed for occupancy on the Site, as described in Appendix D, Schedule B, and appropriate actions to address exposures must be implemented. 6. Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP. 7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP. 8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP. 9. Maintenance, monitoring, inspection, and reporting of any physical component of the remedy shall be performed as defined in this SMP. 	
<p>Inspections:</p>	<p>Frequency:</p>	
<p>1. Sitewide Inspection</p>	<p>Annually</p>	
<p>Reporting:</p>	<p>Frequency:</p>	
<p>1. Sitewide Inspection Report</p>	<p>Annually</p>	
<p>2. Periodic Review Report</p>	<p>5 Years</p>	

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Colonie Formerly Utilized Sites Remedial Action Program (FUSRAP) Site located in the town of Colonie, New York (hereafter referred to as the “Site”) (Figure 1).

The State of New York concurred with the Record of Decision (ROD) documents for both the Soil and the Groundwater Operable Units (OUs). The Soil ROD specifies emplacement of Institutional Controls (ICs) in the form of an Environmental Easement and an SMP for the following three areas: Final Status Survey Units (FSSUs) 104, 124, and the North Lawn (collectively the “Soil Easement Areas”) (USACE 2015). The Groundwater ROD (USACE 2010c) specifies restrictions on groundwater use, protections against exposure to soil vapors, and long-term monitoring of groundwater, which are being applied statewide.

The U.S. Army Corps of Engineers (USACE) utilized the administrative, procedural, and regulatory provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 *United States Code* Section 9601 (42 USC 9601), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 *Code of Federal Regulations* Section 300 (40 CFR 300), to guide the remediation process at the Colonie FUSRAP Site. USACE is the lead agency for this CERCLA response action. NYSDEC is the lead regulatory agency for the Site (NYSDEC Site Number 4-0126-00200/00005) and provides oversight and regulatory support. Stakeholders’ responsibilities for the Colonie Site are easement compliance (NYSDEC); grantor/Owner of the easement (DOE); grantee (USACE FUSRAP Program); and third-party agents, contractors, and representatives to be determined as needed. Appendix C contains responsibilities of the Owner and Remedial Party (RP).

USACE completed a large-scale removal action involving excavation and offsite disposal of more than 135,000 cubic yards of contaminated soil. During the removal action, in accordance with Multi-Agency Radiation Survey and Site Investigation Manual

(MARSSIM) guidance, the Main Site was divided into 27 FSSUs. All radiologically contaminated soils exceeding Remedial Action Objectives (RAOs) were remediated regardless of depth. Soil removal action cleanup goals were met at 23 of the 27 FSSUs. At the four remaining FSSUs (104, 109, 124, and the North Lawn), soil removal cleanup goals for contaminants of concern (COCs), except for metals, were met; due to obstructions by fixed features such as utilities and rail lines.

In accordance with CERCLA, a Human Health Risk Assessment was performed for these four FSSUs. There is no unacceptable risk to future adult workers at any of the four FSSUs. Units 124 and the North Lawn both posed an unacceptable risk to future resident children exposed to lead in subsurface soils. At Unit 104, the hazard index was elevated (i.e., hazard index of 1.4) due to arsenic in subsurface soils. Unit 109 was found not to pose any unacceptable risk and therefore is not subject to the Environmental Easement. In accordance with the ROD, this SMP addresses the three locations (i.e., FSSUs 104, 124, and the North Lawn) where ICs are being imposed in the form of an Environmental Easement.

The Environmental Easement is designed to protect human health and the environment from exposure to heavy metals in soil and from dissolved solvents in groundwater and soil vapor. In addition to restricting soil excavation in the three Soil Easement Areas identified in Figure 2, this SMP also identifies a location where elevated metals were found at depths greater than nine feet (Figures 2 and 3). No risk has been determined to result from these elevated metal concentrations at depth and therefore no CERCLA action will be taken. Identification of this location in Figure 2 acknowledges NYSDEC's regulation of soil contamination up to a depth of 15 feet below ground surface. The groundwater restrictions will apply until natural attenuative processes reduce the dissolved solvent concentrations to the remedial objectives listed in the Groundwater ROD.

ICs have been incorporated into the site remedy to control exposure to soil contamination within the Soil Easement Areas and exposure to groundwater beneath the entire site to ensure protection of public health and the environment. An Environmental

Easement granted to the NYSDEC and recorded with the Albany County Clerk requires compliance with this SMP and all ICs placed on the Site.

This SMP was prepared to manage remaining contamination at the Site within the Easement Areas until the Environmental Easement is extinguished in accordance with Environmental Conservation Law (ECL) Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement (DOE) and DOE's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement.
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, Title 6 of the New York Codes, Rules, and Regulations (NYCRR) Part 375 and is thereby subject to applicable penalties.

All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the Site is provided in Appendix A of this SMP.

This SMP was prepared by USACE and DOE, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs that are required by the Environmental Easement for the Site.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, post-remedial removal of contaminated sediment or soil, or other significant change to site conditions. In accordance with the

Environmental Easement for the Site, the NYSDEC will provide a notice of any approved changes to the SMP and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the Property Owner to the NYSDEC, as needed, in accordance with NYSDEC's Division of Environmental Remediation (DER)-10 for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the 6 NYCRR Part 375 and/or ECL.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity in the Soil Easement Areas, with the exception of emergency utility workers, pursuant to the Excavation Work Plan (EWP).

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser or lessee and the RP have been provided with a copy of the RODs and all final copies of plans and reports required under the SMP.
- Within 15 days after the transfer of all or part of the Site, the new Owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix A.

Table 1: Notifications*

Name	Contact Information
NYSDEC Project Manager: John Abunaw	518-402-8776 John.Abunaw@dec.ny.gov
NYSDEC Regional HW Engineer: Andrew Fleck	518-357-2045 Andrew.Fleck@dec.ny.gov
USACE Project Manager: James Moore	917-790-8230 James.T.Moore@usace.army.mil
DOE Site Manager: Darina Castillo	720-377-3824 Darina.Castillo@lm.doe.gov
DOE Realty Officer: David McNeil	303-410-4827 David.McNeil@lm.doe.gov
DOE Office of Legacy Management Emergency Number (24 hours)	970-248-6070 or 877-695-5322

***Notes:**

- 1) Notifications are subject to change and will be updated as necessary.
- 2) LM is the initial point of contact upon the return of the Site to DOE for long-term care.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The Site is in the town of Colonie, Albany County, New York and the municipal address is 1130 Central Avenue (New York State Route 5), Albany, New York, 12205. The Site is identified as Section 53.11 Block 1 and Lots 13.2 and 14 on the Town of Colonie Tax Map. The Site is an approximately 11.29-acre area. The Site is bounded by a heavily wooded lot to the west (7 Railroad Avenue), CSX and Amtrak railroad tracks on the southwest and south, active commercial properties on the east and northeast, New York State Route 5 (Central Avenue) on the north, and a defunct National Grid electrical substation on the northwest (Figure 2). The boundaries of the Site are more fully described in Appendix D, “Environmental Easement.” The Owner of the Site at the time of issuance of this SMP is the United States acting by and through LM.

2.2 Physical Setting

2.2.1 Land Use

The Site is situated in an urban area consisting of both residential and commercial properties and is currently a vacant lot. The Site is zoned for industrial use by the Town of Colonie.

The properties adjoining the Site and in the neighborhood surrounding the Site include both commercial and residential properties. The properties immediately south of the Site include a rail line and residential properties in the City of Albany; the properties immediately north of the Site include commercial office and residential (COR) properties; the properties immediately east of the Site include COR properties; and the properties to the west of the Site include industrial properties. COR districts are the intermixing of commercial, office, and residential land uses, reducing the need for excessive parking and laying the foundation for an increase in the use of public transit. The term “COR” is a Town of Colonie zoning designation.

2.2.2 Geology

The Site is on the eastern edge of the Central Plateau physiographic province, with the Adirondack province to the north and the northern extension of the Valley and Ridge province to the east. The Site is on relatively flat, slightly rolling terrain in the Pine Bush area within the Mohawk-Hudson lowland. Maximum topographic relief across the Site is about 15 feet. The highest point on the property, in the northwest corner, has an elevation of approximately 235 feet above mean sea level. The land slopes gently from the northwest toward the south-southeast. A steep embankment exists between the CSX rail line, which parallels the southern site boundary, and the properties along Yardboro Avenue.

The primary geologic feature in the vicinity of the Site is the Colonie Channel, which is a buried, glacially scoured valley. Most of the unconsolidated sediments above the bedrock present at the Site were deposited in glacial Lake Albany created during continental glacier advances and retreats in the Hudson Valley. A brief description of the geological units, from the uppermost to the lowermost unit, is as follows:

- Artificial fill and flood plain sediments: This unit formerly consisted of fill materials placed at the Site, including gravel, sand, brick fragments, metal barrels, glass, foundry tools, foundry slag, and disturbed sediment. The unit varies in thickness and was as much as 12.5 feet thick over the relict channel. The unit largely has been removed during the removal action.
- Dune sand: This unit is fine-grained sand that is light yellow-brown and cross laminated. The unit is discontinuous across the Site and can range from 0 to 13 feet thick.
- Upper silt: Previously referred to as the upper sand. This unit is composed of lake sand and lake silt and sand. The unit is continuous across the Site and can range to 24 feet thick.
- Upper clay: This unit is most easily identified in geophysical conductivity logs and consists of a varved sequence of clay and silt. The unit is discontinuous across the Site and can range from 12 to 15 feet thick.
- Lower silt: Previously referred to as lower sand. This unit consists predominantly of silt with some clay and lies above the lower clay. The unit is continuous across the Site, and the thickness ranges from 10 to 15 feet.
- Lower clay: The clay is observed to be olive gray and very homogenous, showing few signs of silt or sand interbeds. The unit is continuous and at least 100 feet thick.

- Till: This unit is described as dark gray, poorly sorted, and very stiff. One site borehole penetrated the till at a depth of 160 feet below grade. The till extends to bedrock of Ordovician shale.

2.2.3 Hydrogeology

The upper hydrogeologic units are the upper silt unit (or upper aquifer) and the lower silt unit (or lower aquifer). The upper aquifer is composed of lacustrine silt and sand, and the lower aquifer consists predominantly of silty sand with some clay. These two water-bearing zones are typically separated by an easily identified clay layer known as the upper aquitard that consists of a varied sequence of clay and silt that is 12 to 15 feet thick (Moore et al. 2014).

The upper aquifer is generally encountered at a depth of less than 10 feet below ground surface. The saturated thickness of this zone ranges from over 20 feet in the north portion of the site to less than 15 feet in the south near the property line. The thickness of the lower aquifer ranges from 10 to 15 feet. Groundwater flow is generally to the southeast in both groundwater zones, as shown in Figure 4. There is an observable downward hydraulic gradient over the northern portion of the site, with localized upward hydraulic gradients near the unnamed tributary and Patroon Creek (USACE 2003).

Groundwater level data provided in a 2003 Groundwater Remedial Investigation Report (USACE 2003) indicate that the hydraulic gradient and general direction of groundwater flow in the lower aquifer closely resemble those in the upper aquifer. The upper aquifer drains to the southeast toward the unnamed tributary of Patroon Creek.

2.3 **Investigation and Remedial History**

The following narrative provides a brief history, remedial timeline, and summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 7.0 (References).

History of Industrial Use

Industrial operations began at the Site in approximately 1923 when the Embossing Company purchased a portion of the present-day site to construct a facility to manufacture wood products and toys. In 1927, Magnus Metal Company Inc. purchased the property and converted the facility to a brass foundry for manufacturing railroad components. Magnus Metal Company Inc. cast the brass components in sand molds and manufactured brass bearing housings with surfaces of babbitt metal (an alloy of lead, copper, and antimony).

In 1937, National Lead Industries (NL) purchased the facility and continued the brass foundry operations initiated by Magnus Metal Company Inc. At some point before 1941, NL purchased an adjacent lot that contained a portion of Patroon Lake and began filling Patroon Lake with used casting sand that contained high levels of lead and other metals. After World War II, the plant began casting aluminum parts and frames for aircraft. In 1958, the nuclear division of NL began producing items manufactured from uranium and thorium under a license issued by the U.S. Atomic Energy Commission. NL discontinued its brass foundry operations in 1960.

From 1958 through 1984, NL carried out a number of processes using radioactive materials, primarily depleted uranium but also thorium and enriched uranium. The plant handled enriched uranium from approximately 1960 to 1972. From 1966 to 1972, NL held several contracts to manufacture fuel from enriched uranium for experimental nuclear reactors. Operations were conducted at the plant to reduce depleted uranium-tetrafluoride to depleted uranium metal, which was then fabricated into shielding components, ballast weights for airplanes, and armor piercing projectiles.

In 1980, DOE surveyed the vicinity properties surrounding the NL plant and determined that uranium released into the air during former operations was deposited on nearby residential and commercial properties and structures. DOE found the preponderance of the deposition in the direction of the area's prevailing winds (from the northwest and the southeast). In October 1983, DOE performed more detailed radiological investigations of the individual vicinity properties, with the objective of locating where uranium concentrations exceeded the remedial action guidelines agreed upon by the State of New

York and DOE (DOE 1985). DOE identified 56 vicinity properties requiring remedial action.

Cleanup of Vicinity Properties and Main Site Soil

New York State officials closed NL in 1984, after which Congress authorized DOE to remediate the property. In February 1984, the Secretary of Energy accepted an offer from NL to donate the land, buildings, and equipment to DOE to help expedite the cleanup.

In 1984, 1985, and 1988, 53 vicinity properties were remediated, certification docketed were prepared attesting to their radiological status, and all contaminated materials from remediation activities were staged on the Colonie Main Site pending disposal.

In 1985, DOE acquired a portion of the Niagara Mohawk property bordering the Colonie Main Site and subsequently designated it as part of the Main Site.

In November 1992, DOE had prepared a characterization report for the Site documenting the results of field activities and outlining the nature and extent of contamination (DOE 1992). From 1992 to 1996, the remaining NL site buildings were demolished by DOE. Authority for remediating the Site was assigned to DOE by Congress through the Energy and Water Development Appropriations Act of 1984.

In October 1997, authority for executing FUSRAP remediation activities was transferred from DOE to USACE by further congressional action. In accordance with the removal action goals in the Final Action Memorandum (USACE 2001), USACE removed all radioactively contaminated soils exceeding cleanup criteria regardless of depth and all metals-contaminated soils exceeding criteria to a depth of 9 feet below original grade. USACE also removed soil containing VOC sources where encountered. Once USACE determined that a soil excavation unit met the cleanup criteria and NYSDEC concurred, the area was backfilled with certified clean fill material and restored. The Final Post-Remedial Action Report documents the remedial work performed (USACE 2010a). On March 26, 2015, USACE signed the Main Site Soils OU ROD (USACE 2015).

Groundwater Investigations

From 1984 through 1988, groundwater samples were collected quarterly. Results of this sampling were published in annual environmental summary reports, which are available in the Colonie FUSRAP Administrative Record. Since taking over responsibility for the Site in 1997, USACE has conducted periodic groundwater sampling to monitor for radioactive and chemical contamination. A phased groundwater investigation has been conducted to determine the nature and extent of contamination in the groundwater, as presented below.

Groundwater samples were collected from a total of 29 sample stations during the 1999 Phase I Geoprobe Groundwater Sampling event. The samples were acquired using the direct push Geoprobe (temporary installations) sampling procedure and were analyzed for volatile organic compounds (VOCs). The sampling approach involved the initial collection of 22 groundwater samples on 50-foot centers along the southern boundary of the Site. This initial line of samples was intended to provide data to assess contaminant concentrations downgradient of potential source areas at the Site and to evaluate the potential for offsite migration of contaminants. Based on water-level contours for the Site, these sample points were positioned to intercept groundwater as it flowed beyond the Site to the south. The seven remaining samples were collected across the site to provide additional characterization data. Results of the 1999 Phase I Geoprobe Groundwater Sampling were presented in the October 1999 Geoprobe Groundwater Sampling Report (USACE 2003).

Analytical results from the Phase I Geoprobe Groundwater Sampling indicated the presence of elevated levels of VOCs along the southern site boundary. The Phase II Geoprobe Groundwater Sampling was designed to further characterize the nature and extent of potential offsite VOC groundwater migration. A pair of shallow and deep Geoprobe samples were collected at 24 locations. Forty-eight groundwater samples (24 shallow and 24 deep) were collected from the 24 locations on 50-foot centers along the CSX property directly south of the Site and analyzed for VOCs. As requested by NYSDEC, three samples were also analyzed for radiological parameters, including total uranium,

isotopic thorium, and gross alpha/beta contamination. Results of the Phase II Geoprobe Groundwater Sampling were presented in the Phase II Geoprobe Groundwater Sampling Report (USACE 2003).

The Phase III Geoprobe Groundwater Sampling event was designed to delineate the extent of VOC contamination identified in the Phase I and Phase II sampling. The Phase III investigation utilized both Geoprobe groundwater sampling and the installation and sampling of additional monitoring wells. Geoprobe groundwater samples were collected from 47 locations, while 14 new monitoring wells (7 deep wells, designated M, and 7 shallow wells, designated S) were installed and subsequently sampled. The results of the Phase III sampling are discussed in the Final Groundwater Remedial Investigation Report (USACE 2003).

Groundwater Record of Decision

On April 9, 2010, USACE issued the Colonie Groundwater OU ROD. In accordance with the Groundwater ROD (USACE 2010c), a remedy of the monitored natural attenuation and long-term monitoring of groundwater began in November 2010. Based on the marked progress toward target cleanup goals (TCGs), USACE optimized the groundwater long term monitoring program (USACE 2014) by reducing the well network, sampling frequency, and analytical parameters.

USACE Investigation and Cleanup of Vicinity Properties

In 2010, USACE performed a review of the 53 Vicinity Properties remediated by DOE in the 1980s to ensure that the residual concentrations met proposed Applicable or Relevant and Appropriate Requirements (ARARs) and current MARSSIM guidance. The conclusion of the review was that additional work was necessary at two Vicinity Properties (USACE 2010b) at 50 Yardboro Avenue and 1118 Central Avenue. Those properties were then addressed with additional sampling and limited soil removal (USACE 2012). The Vicinity Property OU ROD was signed on September 20, 2017 (USACE 2017), subsequent to a public meeting held on February 1, 2017. The ROD

declared no action for dust and no further action for soil and other media for the Vicinity Properties.

Site Closeout Report

The Site Closeout Report (USACE 2018) summarizes the completion remediation of the site soils, groundwater, and vicinity properties. The Site Closeout Report received regulatory concurrence from NYSDEC in a letter dated May 22, 2018.

2.4 Remedial Action Objectives

USACE selected media-specific RAOs based on the nature and extent of contamination, the potential for human exposure, and the most reasonable future land use assumptions. RAOs provide goals for protecting human health and the environment from media-specific constituents.

Soil Remedial Action Objectives

The RAOs for the soil are listed in the Soil ROD (USACE 2015). The RAOs for the COCs in site soils are designed to:

- Prevent direct contact with soil having arsenic concentrations in excess of an arithmetically determined mean background concentration of 7.4 milligrams per kilogram (mg/kg).
- Prevent direct contact with soil having lead concentrations exceeding 450 mg/kg, which would result in unacceptable risks due to lead blood levels above 10 micrograms per deciliter.

As extensive onsite soil removal has been completed; the current RAOs are meant to prevent direct contact with site soils that present a possible future risk to receptors but remain in place due to their inaccessibility. USACE identified three discrete soil locations that were inaccessible due to their proximity to active rail lines, utility power poles, or water mains and thus were not excavated. These three FSSU locations—Unit 104, Unit 124, and Unit North Lawn—are subject to the RAOs listed above.

Soil cleanup criteria for Colonie soil are:

- Uranium-238: 35 pCi/g
- Thorium-232: 2.8 pCi/g
- Lead, total: 450 mg/kg
- Copper, total: 1912 mg/kg
- Arsenic, total: 7.4 mg/kg

Groundwater Remedial Action Objectives

The RAOs for the Colonie Site groundwater are listed in the Groundwater ROD (USACE 2010c) as follows:

- Limit exposure of potential future onsite urban residents to VOC constituents that may migrate into homes via the vapor intrusion pathway.
- Reduce the concentrations of VOCs in onsite groundwater to levels that are protective of future onsite urban residents who may be exposed to these compounds via the vapor intrusion pathway.

The remedial action will reduce the excess cancer risk due to inhalation of vapors intruding into a hypothetical onsite residence to less than 1 in 1 million (1×10^{-6}). This risk reduction will be achieved by lowering the concentrations of groundwater contaminants to the following target cleanup goal (TCG) concentrations:

- PCE: 5.5 micrograms per liter ($\mu\text{g/L}$)
- TCE: 18 $\mu\text{g/L}$
- *cis*-1,2-dichloroethene (cDCE): 1800 $\mu\text{g/L}$
- Vinyl chloride (VC): 1.4 $\mu\text{g/L}$

As there are no federal or state cleanup standards related to vapor intrusion, these target concentrations are based on the human health risk assessment results derived using the Johnson & Ettinger air model for subsurface vapor intrusion (USEPA 2002). As discussed above, the onsite pathway for vapor intrusion does not exist but could become

complete in the future. The Johnson & Ettinger model relates volatile groundwater concentrations to indoor vapor concentrations, which are further translated into risks and hazards based on toxicity and exposure. The target risk level and site-specific values for various parameters related to VOC migration were loaded into the model, and the corresponding groundwater VOC constituent concentrations were calculated as the model output.

FUSRAP utilizes the administrative, procedural, and regulatory provisions of CERCLA and the NCP. As such, the determining factor to qualify for a response action is whether there is potential harm to human health or the environment. USACE has done a thorough analysis of the site-specific characteristics of the groundwater at the Colonie FUSRAP Site; the analysis included the characteristics of the impacted water bearing zone, the nature and extent of groundwater contamination, and potential routes of exposure, and it has concluded that the only exposure pathway that is potentially complete, or may reasonably become complete in the future, is vapor intrusion of VOCs for future onsite urban residents. Accordingly, the TCG concentrations for groundwater are based on vapor intrusion COCs and not drinking water standards. Since there is no viable current or future exposure pathway for consumption of the groundwater, given the lack of groundwater use, there is no potential harm to either human health or the environment through groundwater consumption. Therefore, it is not necessary to establish TCG concentrations based on drinking water standards.

2.5 Remaining Contamination

Residual Soil Contamination

Existing metals contamination remains in site soils, whereas the radionuclides of concern have been removed. The remaining metals contamination is limited to small areas in the shallow subsurface and some portions of the deeper subsurface (greater than 12 feet in depth). The shallow subsurface areas were not excavated during the removal action due to the presence of semi-permanent physical obstructions, including high voltage power line support poles, a rail line, and a fire hydrant and water main. Deep subsurface soils were

not removed; removal was not authorized in the 2001 Action Memorandum, as there is no complete exposure pathway to those soils.

The small areas in the shallow subsurface with remaining contamination are FSSUs 104, 109, 124, and North Lawn. Three of these four small areas are addressed by this SMP; Unit 109 does not pose an unacceptable risk and is not subject to an Environmental Easement. The results of the January 2013 post removal action sampling indicate that the layer of contamination at each of these shallow subsurface locations is less than a few feet thick. A brief summary of each FSSU location is provided below:

- Survey Unit 104 (1.82 feet depth): arsenic, 85.4 mg/kg (cleanup goal 7.4 mg/kg). The sample was between active power poles. Additional vertical and horizontal excavation would impact power pole support soils.
- Survey Unit 124 (5.3 feet depth): copper, 2450 mg/kg (cleanup goal 1912 mg/kg) and lead, 734 mg/kg (cleanup goal 450 mg/kg). The sample was adjacent to an active power pole. Additional vertical and horizontal excavation would impact the power pole support soils.
- North Lawn (3.9 feet depth): copper, 4340 mg/kg (cleanup goal 1912 mg/kg) and lead, 3370 mg/kg (cleanup goal 450 mg/kg). The sample was adjacent to the main fire hydrant for commercial and residential properties along Central Avenue. The local fire chief stated that full-time access to the hydrant was required, and additional excavation would impact the stability of the hydrant.
- Survey Unit 109 (2.4 feet depth): arsenic, 10.5 mg/kg (cleanup goal 7.4 mg/kg) and lead 630 mg/kg (cleanup goal 450 mg/kg). The sample was on the property boundary adjacent to an active rail line. Additional excavation would impact the rail support soils. This unit is not subject to Environmental Easement because there is no unacceptable risk associated with the remaining contamination.

Soil sample results for six locations in deeper subsurface soils (shallowest is 12 feet below ground surface) were greater than the metals cleanup goals for soil less than 9 feet below ground surface. The six locations are confined to a single portion of the Site where past NL landfill operations in the former Patroon Lake occurred. These deep subsurface soils were not removed because there is no complete exposure pathway to those soils. The removal action confirmatory sample results are shown on Figure 3. The results of the January 2013 post-removal action sampling indicate that the layer of contamination at each

of these deep subsurface locations ranges from less than a few feet thick to thickness greater than 10 feet.

Residual Groundwater Contamination

COCs were detected in groundwater during the 12 groundwater monitoring events conducted between November 2010 and April 2017. VOC results for PCE, TCE, cDCE, and VC from the April 2017 sampling event are shown in Figure 5. VOC results are summarized for each monitoring well during the monitoring period as follows:

- MW-08S: This upgradient well had no detections of VOCs during the monitoring period.
- MW-30S: One VOC (PCE) exceeded its TCG of 5.5 µg/L two times during the monitoring period, the last of which was during the August 2012 event at a concentration of 6.0 µg/L. No exceedances of the TCG for PCE were recorded for the last four monitoring events, which ranged from 1.5 to 3.9 µg/L between August 2015 and April 2017.
- MW-32S: Both PCE and TCE have exceeded respective TCGs during the monitoring period. PCE exceeded its TCG (5.5 µg/L) four times, the last of which was during the August 2015 event with a concentration of 11µg/L. TCE once exceeded its limit of 18 µg/L during the period at a concentration of 19µg/L in August 2012. Well MW-32S has been removed from the monitoring program is no longer sampled.
- MW-34S: VC is the one VOC that has not met its TCG (1.4 µg/L) during the monitoring period. Overall, VC ranged from 1.1 to 3.4 µg/L with two recent non-exceedances of the TCG in March 2016 and April 2017.
- MW-37S: This well had no exceedances of TCGs during the monitoring period. Concentrations of cDCE have increased somewhat, yet they remain well below the TCG for cDCE. Consistently low concentrations of PCE, TCE, and VC were detected, and all were below TCGs during the monitoring period.

- MW-41S: PCE is the one VOC of the four that exceeded its TCG (5.5 µg/L) during the monitoring period for this well. The PCE limit has been exceeded during each monitoring event, ranging from 14 to 39 µg/L during those events, while ranging from 14 to 25 µg/L over the last four events. The remainder of the VOCs were below their respective TCGs. PCE concentrations have decreased over time similar to the three other VOCs, but they remain 1 order of magnitude above the TCG for PCE.
- MW-42S: There were no exceedances of TCGs for this well during the monitoring period. Similar to well MW-37S, cDCE concentrations have increased but remain well below the TCG for cDCE; consistent low levels of PCE, TCE, and VC are all below their respective TCGs during the monitoring period.
- MW-44S: This well was installed in July 2015 and has been sampled four times to date. PCE concentrations exceeded the TCG of 5.5 µg/L during the last three monitoring events, with concentrations of 13 µg/L, 15 µg/L, and 18 µg/L, respectively for March 2016, August 2016, and April 2017. PCE has displayed slowly increasing concentrations since the well's installation; so have TCE and cDCE, even though both are well below their TCGs. VC has remained nondetected during each of the four monitoring events for this well.

3.0 INSTITUTIONAL CONTROL PLAN

3.1 General

Since residual contamination exists at specifically delineated areas of the Site, ICs are required for these areas to protect human health and the environment. This IC Plan describes the procedures for the implementation and management of all ICs. The IC Plan is one component of the SMP and is subject to revision by the NYSDEC.

This plan provides:

- A description of all ICs on the Site.
- The basic implementation and intended role of ICs.

- A description of the key components of the ICs set forth in the Environmental Easement.
- A description of the controls to be evaluated during each required inspection and periodic review.
- A description of plans and procedures to be followed for implementation of ICs, such as the implementation of the EWP (as provided in Appendix B) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site.
- Any other provisions necessary to identify or establish methods for implementing the ICs required by the site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

ICs are required by the RODs to prevent future exposure to residual contamination. The residual contamination poses no unacceptable risk to a future worker, but it does pose risk to a future resident. Adherence to the ICs on the Site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The Easement Area boundaries are shown on Figure 2. The Easement Area metes and bounds descriptions are provided in Appendix D. The residual contamination at the Site will not pose an unacceptable threat to human health and the environment provided the following ICs are employed:

1. The Soil Easement Areas, as further identified in Appendix D, Schedule A, may be used for Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).
2. No digging or excavation shall be permitted in the Soil Easement Areas without prior written approval of DOE and NYSDEC.
3. Vegetable gardens and farming are prohibited in the Soil Easement Areas.
4. The use of groundwater underlying the Site, as described in Appendix D, Schedule B, 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 NYSDEC.
5. The potential for vapor intrusion must be evaluated for any buildings designed for occupancy on the Site, as described in Appendix D, Schedule B, and appropriate actions to address exposures must be implemented
6. Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP.
7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.

8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.
9. Maintenance, monitoring, inspection, and reporting of any physical component of the remedy shall be performed as defined in this SMP.

3.3 Criteria for Termination of Groundwater Monitoring

The Groundwater ROD specifies that cleanup will be achieved when COC concentrations are below TCGs over four consecutive quarters, but these events no longer occur quarterly. LM will evaluate the effectiveness of monitored natural attenuation and to provide statistical justification for altering sampling frequencies or ceasing monitoring.

3.4 Monitoring Wells Associated with Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue until residual groundwater concentrations are found to be consistently below the TCGs or have become asymptotic at an acceptable level over an extended period. If monitoring data indicate that monitoring for natural attenuation may no longer be required, a proposal to discontinue the groundwater monitoring activities will be submitted by the Owner.

4.0 MONITORING AND SAMPLING PLAN

4.1 Long term monitoring will be performed by the Owner using the guidance and procedures developed and approved by the DOE Office of Legacy Management.

4.2 Site-wide Inspection

Site-wide inspections will be performed annually by the Owner. During these inspections, an inspection form will be completed as provided in Appendix E – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage.
- General Site conditions at the time of the inspection.
- Confirm that Site records are up to date.

Inspections of all physical components of the Site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the

SMP schedule, regardless of the frequency of the Periodic Review Report (PRR). The inspections will determine and document the following:

- Compliance with requirements of this SMP and the Environmental Easement.
- If Site records are complete and up to date.

Reporting requirements are outlined in Section 6.0 of this plan.

5.0 OPERATION AND MAINTENANCE PLAN

The site remedy does not rely on any mechanical systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

6.0 REPORTING REQUIREMENTS

This section describes reports and plans that will be submitted to NYSDEC for review and approval. For each submittal, 30 days will be allowed for NYSDEC responses.

6.1 Site Management Reports

All site management inspection and monitoring events will be recorded on the appropriate site management form provided in Appendix E.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format to the NYSDEC and DOE in accordance with the requirements of Table 2 below and summarized in the PRR.

Table 2: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Site Management Reports	Annually by Owner
Periodic Review Report	Every 5 years

***Note:** The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period
- Name, company, and position of person(s) conducting monitoring/inspection activities
- Description of the activities performed
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet)
- Any observations, conclusions, or recommendations
- A determination as to whether contaminant conditions have changed since the last reporting event.

6.2 Periodic Review Report

The Owner will review the Site and ICs as part of a PRR and will be submitted to the Department. If the Site is subdivided into separate parcels with different ownership, a single PRR will be prepared that addresses the Site described in Appendix D – Environmental Easement. The report will be prepared in accordance with NYSDEC’s DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the PRR. The report will include:

- Identification, assessment and certification of all ICs required by the remedy for the Site.
- Results of the required annual site inspections.
- All applicable site management forms and other records generated for the Site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A site evaluation, which includes the following:
 - The compliance of the remedy with the requirements of the site-specific RODs.
 - Any new conclusions or observations regarding site contamination based on inspections.
 - Recommendations regarding any necessary changes.
 - The overall performance and effectiveness of the remedy.

6.2.1 Certification of Institutional Controls

Following the last inspection of the reporting period, a qualified environmental professional (QEP) (as defined in 6 NYCRR 375-1.2) will prepare and include in the PRR, the following certification as per the requirements of NYSDEC DER-10:

“For each IC identified for the Site, I certify that all of the following statements are true:

- *The inspection of the Site to confirm the effectiveness of the IC required by the remedial program was performed under my direction.*
- *The IC employed at this Site is unchanged from the date the control was put in place, or last approved by the Department.*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment.*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control.*
- *Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.*
- *Use of the Site is compliant with the Environmental Easement.*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program and generally accepted engineering practices.*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name - TBD], of [business address - TBD], am certifying as [Owner/RP or Owner’s/RP’s Designated Site Representative - TBD] and I have been authorized and designated by all Site owners/remedial parties to sign this certification] for the Site.”

At the end of each certifying period, as determined by the NYSDEC, the following certification will be provided to the Department:

“For each IC identified for the Site, I certify that all of the following statements are true:

- *The IC employed at this Site is unchanged from the date the control was put in place, or last approved by the Department.*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment.*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control.*
- *Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.*
- *Use of the Site is compliant with the Environmental Easement.*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name - TBD], of [business address - TBD], am certifying as Owner or Owner’s Designated Site Representative - TBD] and I have been authorized and designated by all Site owners to sign this certification for the Site.”

6.3 Corrective Measures

If an institutional or engineering control fails, the Owner will propose follow-up actions to correct the deficiencies. If such failure is identified, a Corrective Measures Work Plan will be submitted to NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by NYSDEC. However, nothing in this section shall limit or otherwise affect DOE’s rights to take response actions under CERCLA, the NCP, or another federal law, whether DOE is Owner or not, pursuant to FUSRAP.

7.0 REFERENCES

6 NYCRR (New York Code of Rules and Regulations) Part 375. *Environmental Remediation Programs*.

40 CFR (Code of Federal Regulations) Section 300. *National Oil and Hazardous Substances Pollution Contingency Plan*.

42 USC (United States Code) Section 9601. *Comprehensive Environmental Response, Compensation, and Liability Act*.

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NYSDEC (New York State Department of Environmental Conservation), DER-10. "Technical Guidance for Site Investigation and Remediation," Division of Environmental Remediation, May 3, 2010.

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USACE (U.S. Army Corps of Engineers), 2003. *Final Groundwater Remedial Investigation Report*, U.S. Army Corps of Engineers New York District, July.

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USACE (U.S. Army Corps of Engineers), 2013. *Colonie FUSRAP Site Main Site Soils Remedial Investigation Summary Report*, U.S. Army Corps of Engineers New York District, September.

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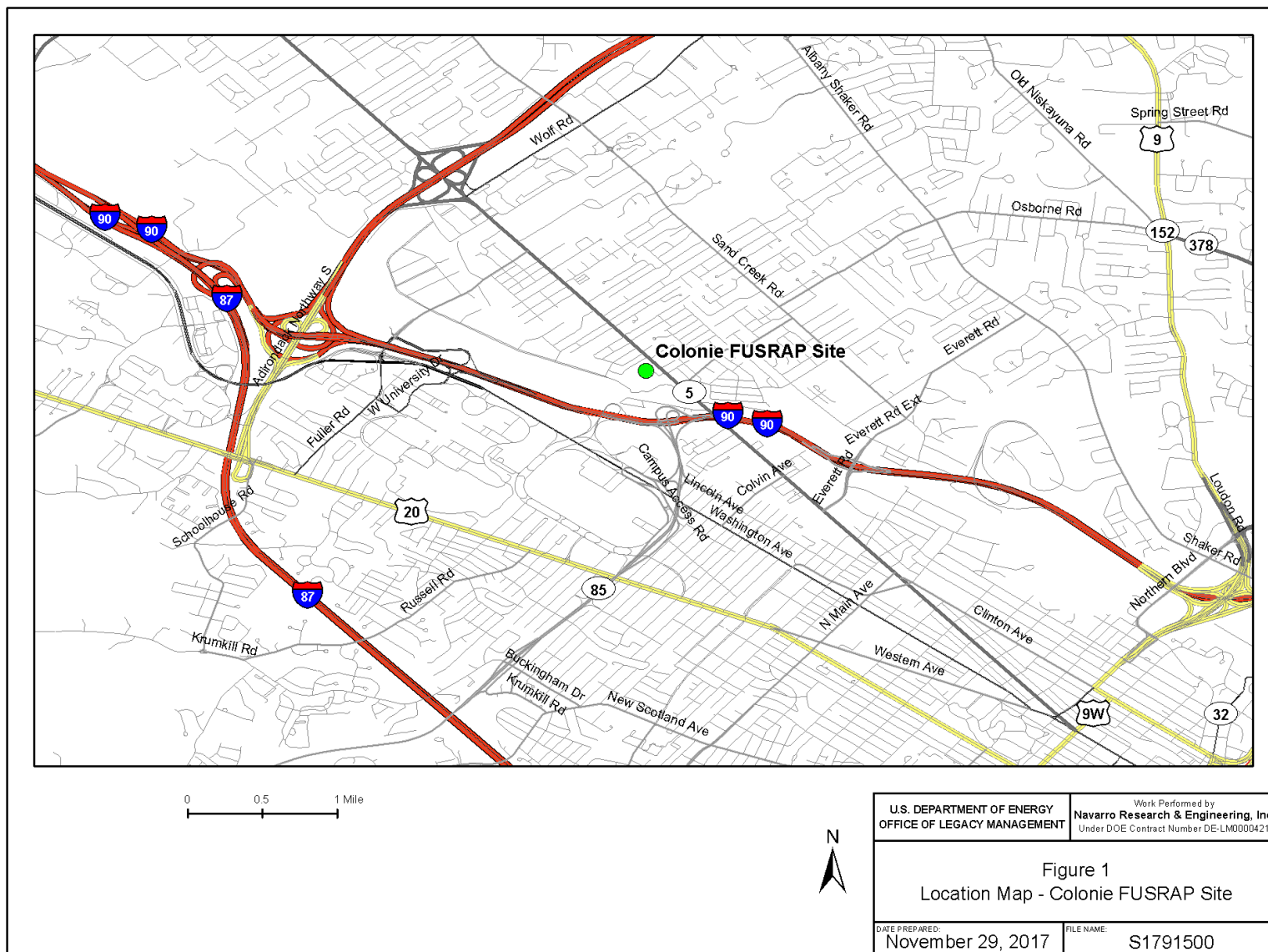
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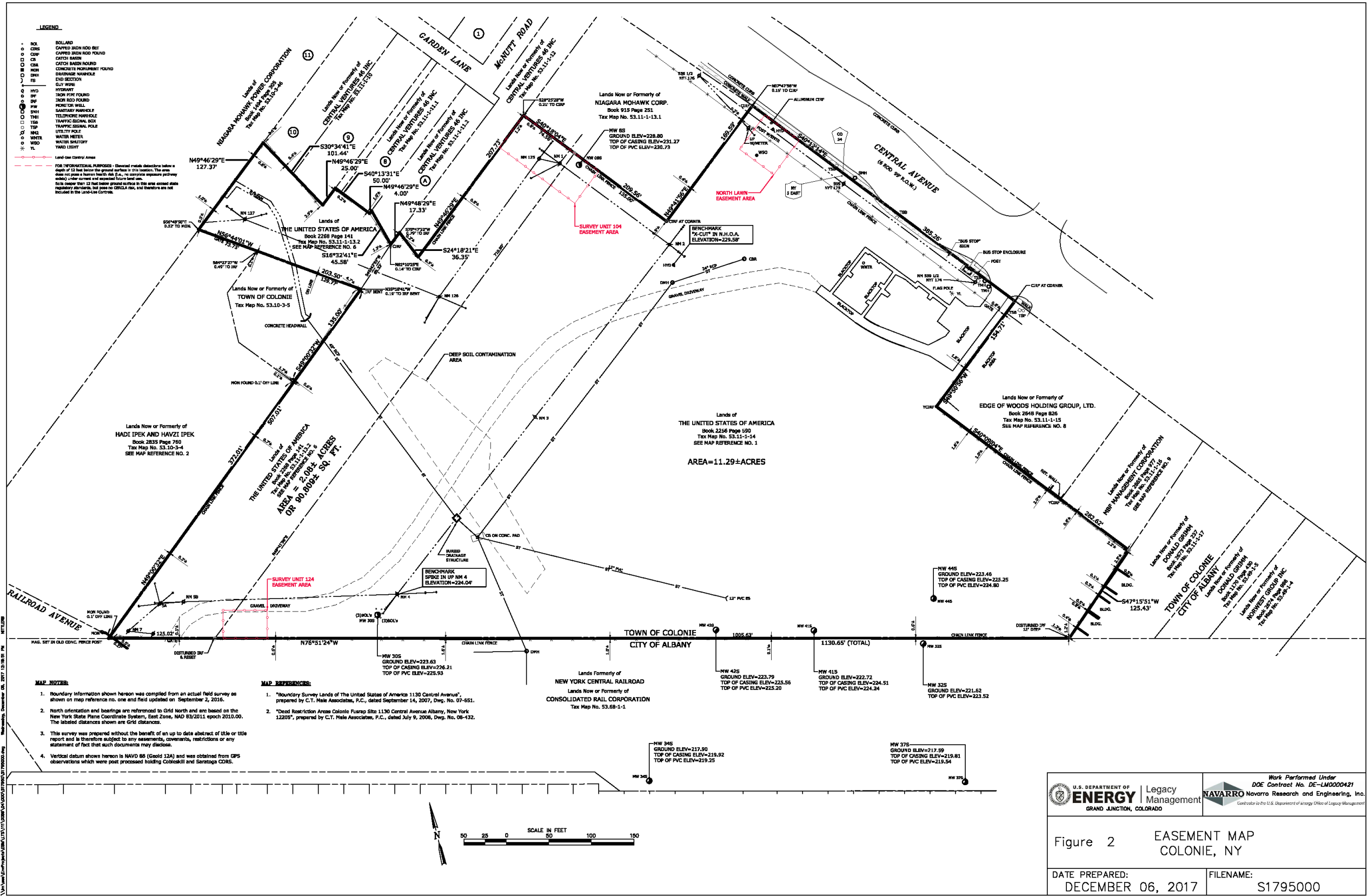
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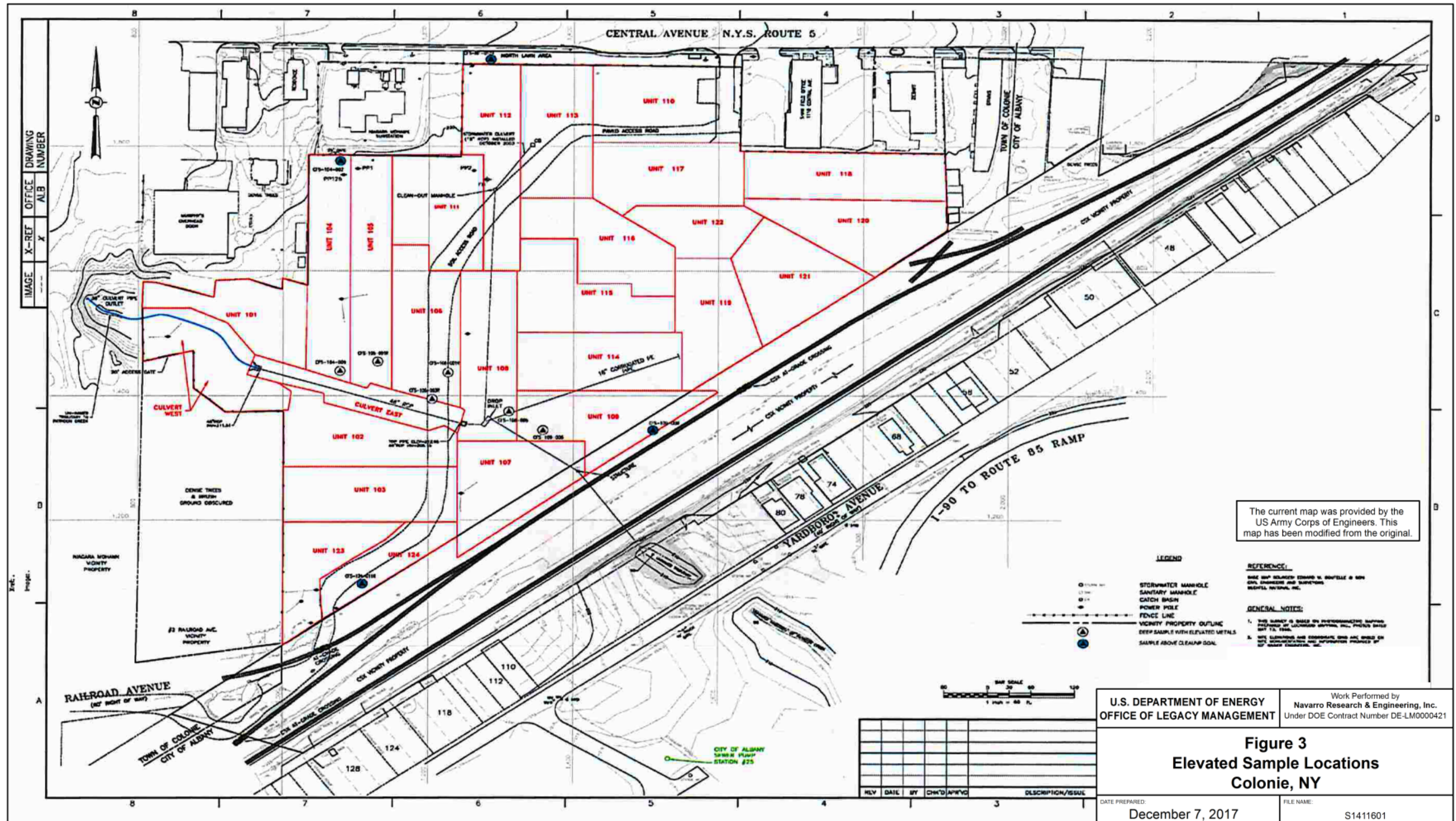
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FIGURES

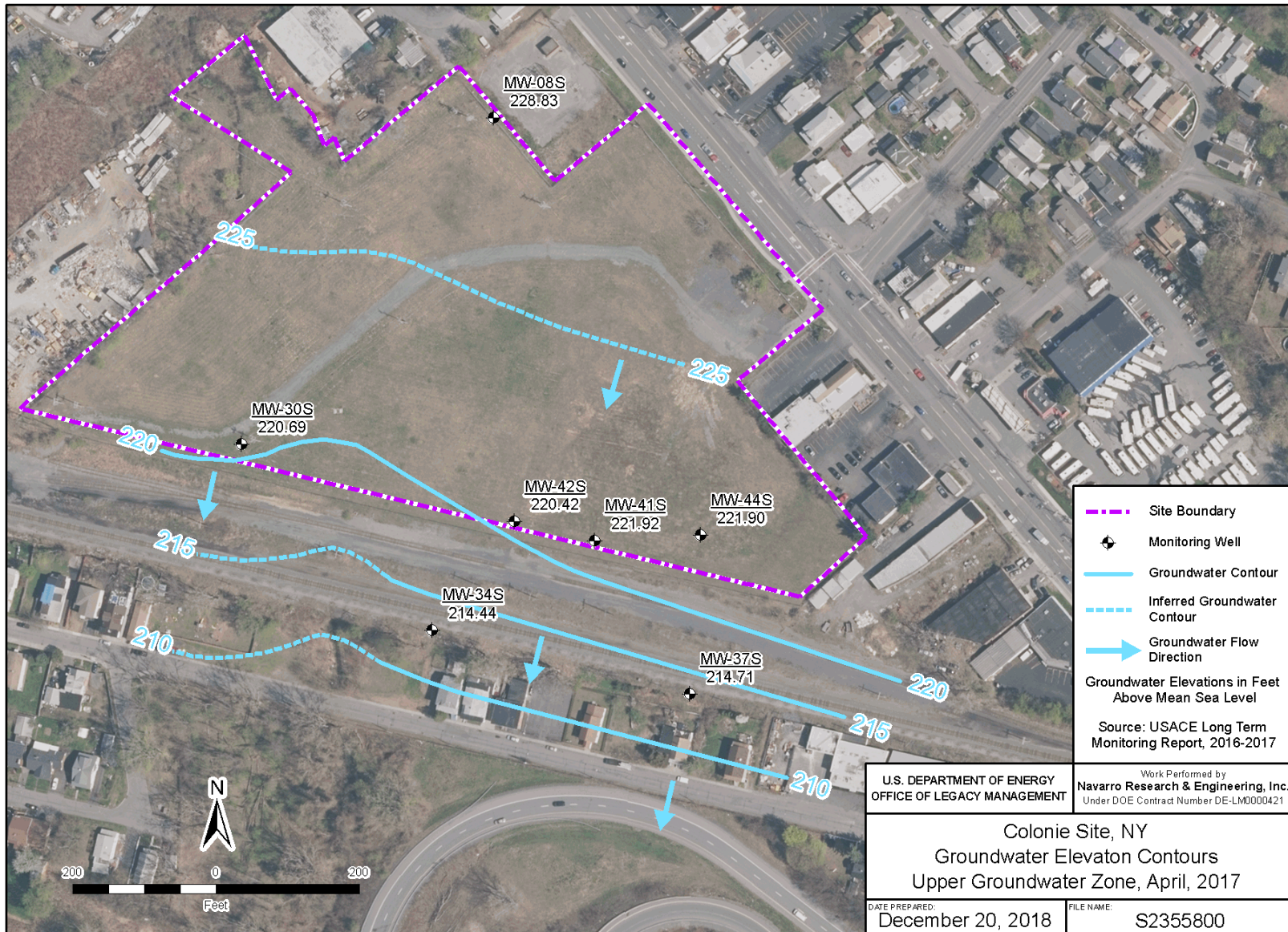


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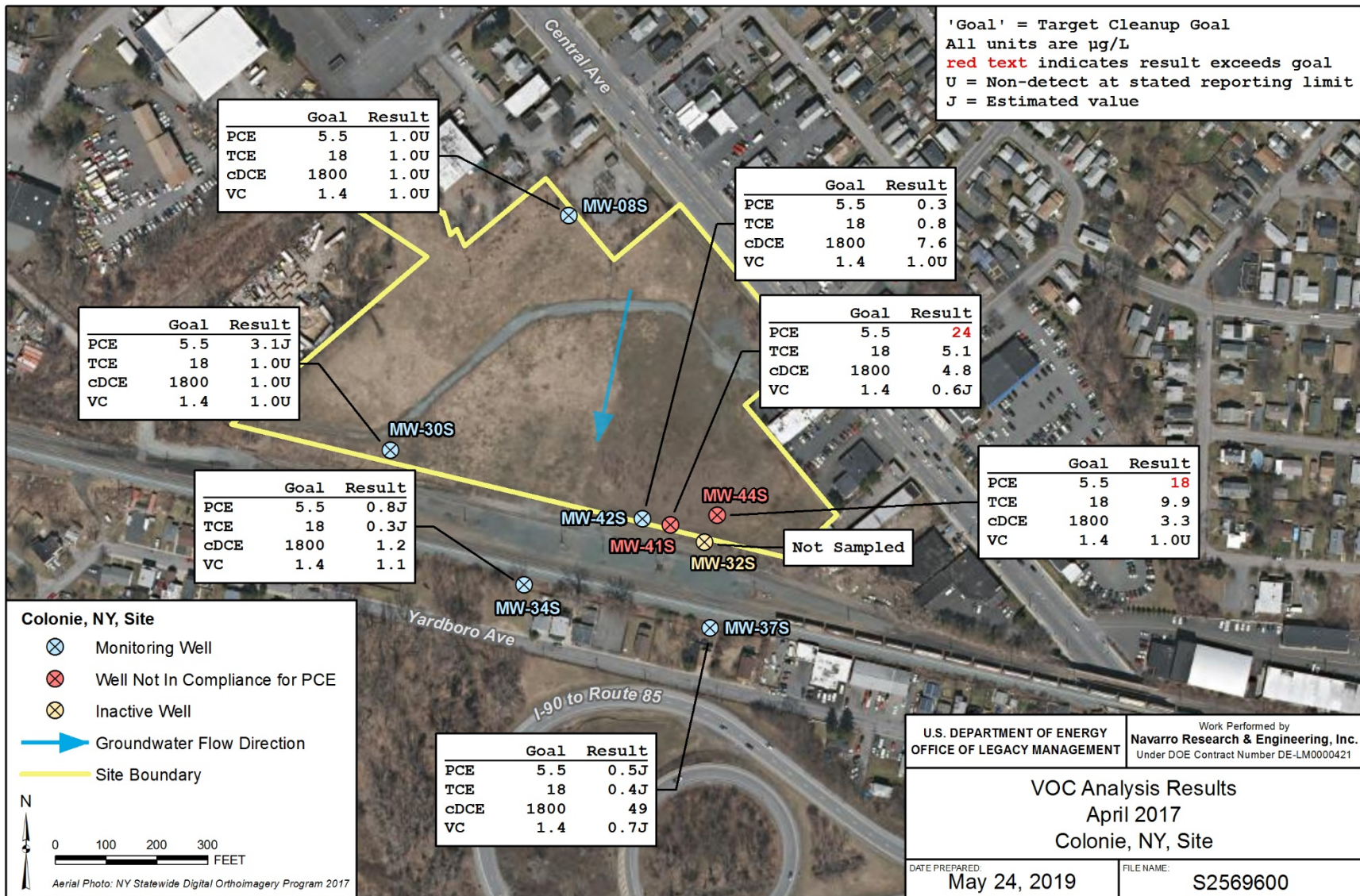




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APPENDIX A – LIST OF SITE CONTACTS

Name	Phone / Email Address
Site Owner: DOE – Office of Legacy Management	970-248-6070 or 877-695-5322 (emergency contact numbers)
Site Owner’s Representative: Darina Castillo (DOE)	720-377-3824 Darina.Castillo@lm.doe.gov
DOE Realty Officer: David McNeil	303-410-4827 David.McNeil@lm.doe.gov
RP Representative: James T. Moore (USACE)	917-790-8230 James.T.Moore@usace.army.mil
NYSDEC DER Project Manager: John Abunaw	518-402-8776 John.Abunaw@dec.ny.gov
NYSDEC Regional HW Engineer: Andrew Fleck	518-357-2045 Andrew.fleck@dec.ny.gov
QEP: Carl Young, P.G. (Navarro Research and Engineering, Inc.)	410-816-4029 Carl.Young@lm.doe.gov

APPENDIX B – EXCAVATION WORK PLAN (EWP)

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination in, on or under the Soil Easement Areas, as identified in Schedule A, (with the exception of emergency utility work), the Owner or their representative will notify the NYSDEC. Table B-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of Site-related contact information is provided in Appendix A.

Table B-1: Notifications

Name	Phone / Email Address
Site Owner: DOE – Legacy Management	970-248-6070 or 877-695-5322 (emergency contact numbers)
Site Owner’s Representative: Darina Castillo (DOE)	720-377-3824 Darina.Castillo@lm.doe.gov
DOE Realty Officer: David McNeil	303-410-4827 David.McNeil@lm.doe.gov
RP Representative: James T. Moore (USACE)	917-790-8230 James.T.Moore@usace.army.mil
NYSDEC DER Project Manager: John Abunaw	518-402-8776 John.Abunaw@dec.ny.gov
NYSDEC Regional HW Engineer: Andrew Fleck	518-357-2045 Andrew.Fleck@dec.ny.gov
QEP: Carl Young, P.G. (Navarro Research and Engineering, Inc.)	410-816-4029 Carl.Young@lm.doe.gov

Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact the Soil Easement Area.
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of

concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling.

- A schedule for the work, detailing the start and completion of all intrusive work.
- A summary of the applicable components of this EWP.
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120.
- A copy of the contractor's health and safety plan, in electronic format.
- Identification of disposal facilities for potential waste streams.
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

B-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a QEP during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil.

B-3 SOIL STAGING METHODS

Soil stockpiles will be and continuously encircled with a berm and/or silt fence. Flow barriers, such as straw bales, will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained with the Owner and available for inspection by the NYSDEC.

B-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The Owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements within the Easement Area will be investigated by the QEP. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Soil Easement Area will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements).

A truck cleaning area will be operated on-site, as appropriate. The QEP will be responsible for ensuring that all outbound trucks will be cleaned at the truck cleaning area before leaving the Easement Area until the activities performed under this section are complete. Truck cleaning waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the Easement Area shall be inspected daily for evidence of off-site soil tracking.

The QEP will be responsible for ensuring that all egress points for truck and equipment transport from the Easement Area are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Soil Easement Areas will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be used. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks loaded with materials will exit the vicinity of the Soil Easement Areas using only the approved truck routes. This is the most appropriate route and takes into account:

- (a) limiting transport through residential areas and past sensitive sites;
- (b) use of city mapped truck routes;
- (c) prohibiting off-site queuing of trucks entering the facility;
- (d) limiting total distance to major highways;
- (e) promoting safety in access to highways; and
- (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the Easement Area.

Egress points for truck and equipment transport from the Soil Easement Areas will be kept clean of dirt and other materials during remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

B-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the Soil Easement Areas will be managed as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6 NYCRR Part 360) and Federal regulations. If disposal of material from the Soil Easement Areas is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan

will be made to the NYSDEC. Unregulated off-site management of materials from the Soil Easement Areas will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, construction and demolition (C/D) recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6 NYCRR Part 360-1.2. Material that does not meet Unrestricted Soil Cleanup Objectives (SCO) is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

B-7 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

B-8 FLUIDS MANAGEMENT

All liquids to be removed from the Soil Easement Areas, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge

and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the Easement Area, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a State Pollutant Discharge Elimination System (SPDES) permit.

B-9 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Soil Easement Areas will be approved by the QEP and will be in compliance with provisions in this SMP prior to receipt at the Easement Area. A Request to Import/Reuse Fill or Soil form, which can be found at <http://www.dec.ny.gov/regulations/67386.html>, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards will be determined as needed. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Soil Easement Areas, will not be imported onto the Soil Easement Areas without prior approval by NYSDEC. Solid waste will not be imported onto the Soil Easement Areas.

Trucks entering the Soil Easement Areas with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

B-10 STORMWATER POLLUTION PREVENTION

Barriers and straw bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or straw bales will be installed around the entire perimeter of the construction area.

B-11 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results

provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

B-12 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site. If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and New York State Department of Health (NYSDOH) will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the PRR.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

B-13 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive work within the Soil Easement Areas will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, non-vegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

B-14 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

APPENDIX [C]
RESPONSIBILITIES of
OWNER and REMEDIAL PARTY

Responsibilities

The responsibilities for implementing the Site Management Plan (SMP) for the Colonie FUSRAP Site (the Site), NYSDEC Site Number 4-0126-00200/00005, are divided between the Site Owner and the Remedial Party (RP), as defined below. The Owner is currently listed as: Department of Energy Office of Legacy Management (the Owner).

Solely for the purposes of addressing inaccessible contamination and based upon the facts related to the Colonie Main Site Soil Operable Unit and the remedial program being carried out, the term RP refers to the USACE.

Nothing on this page shall supersede the provisions of an Environmental Easement, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (Title 42 *United States Code* Section 9601 et seq. [42 USC 9601 et seq.]), the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Title 40 *Code of Federal Regulations* Section 300 et seq. [40 CFR 300 et seq.]), the Atomic Energy Act (42 USC 2011 et seq.), or other legally binding document that affects rights and obligations relating to the site.

Site Owner's Responsibilities:

- 1) The Owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.
- 2) In accordance with a periodic time frame determined by the NYSDEC, the Owner shall periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement remain in place and continue to be complied with. The Owner shall provide a written certification in the Site's PRR certification to NYSDEC and provide a copy to DOE.
- 3) In the event the site is delisted from the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites, the Owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.
- 4) The Owner shall grant access to the Easement Area to NYSDEC and its agents for the purpose of assuring compliance with the SMP. The Owner shall grant access to the Federal Government (DOE, USACE, and their successors) to the Easement Area as deemed necessary by the Federal Government to ensure compliance with the Environmental Easement.

- 5) The Owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the Owner shall notify DOE and the NYSDEC in accordance with the timeframes indicated in Section 1.3 – Notifications.
- 6) In the event some action or inaction by the Owner adversely impacts the site, the Owner must (i) notify DOE and the NYSDEC in accordance with the time frame indicated in Section 1.3 – Notifications; and (ii) coordinate the performance of necessary response actions with the RP.
- 7) The Owner must notify DOE and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new Owner of the site property. 6 NYCRR Parts 375-1.11 and 375-1.9(f) contain notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation’s Site Control Section. Notification requirements for a change in use are detailed in Section 2.4 of the SMP. A 60-Day Advance Notification Form and Instructions are found at <http://www.dec.ny.gov/chemical/76250.html>.
- 8) If NYSDEC determines that an update of the SMP is necessary, the Owner shall update the SMP and obtain final approval from NYSDEC.
- 9) Prior to a change in use that impacts the remedial system or requirements or responsibilities for implementing the SMP, the Owner shall submit an amended SMP to NYSDEC for approval.

Remedial Party Responsibilities

- 1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes in the Soil Easement Areas. The RP has completed remediation in accordance with CERCLA and the NCP; therefore, no further remedial action is anticipated.
- 2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting in an easement area. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.
- 3) Before accessing the site property to undertake a specific activity in an easement area, the RP shall provide the Owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the Owner, upon the

Owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

- 4) The RP shall notify the NYSDEC and the Owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at <http://www.dec.ny.gov/chemical/76250.html>.
- 5) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the Easement Areas may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the Department to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

APPENDIX D – ENVIRONMENTAL EASEMENT



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 #: R2020-10607
 Receipt#: 20200389736
 Clerk: JH
 Rec Date: 06/12/2020 02:25:17 PM
 Doc Grp: D
 Descrip: DEED, EASEMENT
 Num Pgs: 14
 Rec'd Frm: DEPT OF ENERGY

Recording:	
Cover Page	5.00
Recording Fee	85.00
Cultural Ed	14.25
Records Management - Coun	1.00
Records Management - Stat	4.75
TP584	5.00
Sub Total:	<u>115.00</u>
Transfer Tax	
Transfer Tax - State	0.00
Sub Total:	<u>0.00</u>
Total:	<u>115.00</u>

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

***** Transfer Tax *****
 Transfer Tax #: 6155
 Transfer Tax
 Total: 0.00

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

Record and Return To:

FEDEX/VAIL NAZZARO

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

THIS INDENTURE made this 17 day of April, 2020, between The United States of America, acting by and through the Department of Energy (DOE) Office of Legacy Management, having an office at 2597 Legacy Way, Grand Junction, Colorado (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; and

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 1130 Central Avenue (New York State Route 5) in the City of Albany, 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: 53.11-1-13.2 and 53.11-1-14, being the same as that property conveyed to Grantor by the two deeds (1) an Indenture dated February 28, 1984 and recorded in the Albany County Clerk's Office in Liber 2256 and Page 590; and, (2) an Indenture dated August 28, 1984 recorded in the Albany County Clerk's Office in Liber 2268 and Page 141.

WHEREAS, the property subject to this Environmental Easement comprises of (1) three geographically separated soils areas which total approximately 9387 square feet +/- of the real property (the "Soil Easement Areas"); and (2) a sitewide easement for use of groundwater. These areas are more fully described in the Environmental Easement Survey dated September 2, 2016 prepared by CT Male Associates, which will be attached to the Site Management Plan. The Soil Easement Area legal descriptions are attached hereto as Schedule A, and the boundary description

for the site which contains a groundwater restriction is attached hereto as Schedule B; and

WHEREAS, the Easement Areas are part of the Colonie Formerly Utilized Sites Remedial Action Program (FUSRAP) Site (Site) pursuant to the Energy and Water Development Appropriations Act of 1984. In 1997, the authority for executing FUSRAP response actions was transferred the U.S. Army Corps of Engineers (USACE), and required responses actions are performed in accordance with the provisions of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") (42 USC 9601 et seq.), the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") (40 CFR 300 et seq.); and the Atomic Energy Act (42 USC 2011 et seq.);

WHEREAS, with respect to groundwater use, in the Colonie FUSRAP Site Record of Decision, Colonie Site Groundwater, dated April 2010, and the Department concurred with, the response actions for the Site ("CERCLA response actions"), which provided for monitored natural attenuation with land use controls as the Selected Remedy for the Site, which would be implemented under an Environmental Easement;

WHEREAS, in the Final Colonie FUSRAP Site, Colonie Main Site Soils, Record of Decision, dated March 2015, the USACE selected, and the Department concurred with, the response actions for the Site ("CERCLA response actions"), which provided for land use controls as the Selected Remedy for the Site, which would be implemented under an Environmental Easement;

WHEREAS, the Department accepts this Environmental Easement to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Easement Area 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 an Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Easement Area 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 Easement Area 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 Controls. The following controls apply to the use of the Easement Areas, run with the land, are binding on the Grantor and its assigns and are enforceable in law or in equity against the Owner of the Easement Areas, any lessees or any person using the Easement Areas. These controls and requirements are also listed in the Department approved Site Management Plan (SMP) and made part of this Environmental Easement.

- A. 1. The Soil Easement Areas, as further identified in Schedule A, may be used for Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).
2. No digging or excavation shall be permitted in the Soil Easement Areas without prior written approval of DOE and NYSDEC.
3. Vegetable gardens and farming are prohibited in the Soil Easement Areas.
4. The use of groundwater underlying the Site, as described in Schedule B, 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 NYSDEC.
5. The potential for vapor intrusion must be evaluated for any buildings designed for occupancy on the Site, as described in Schedule B, and appropriate actions to address exposures must be implemented
6. Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP.
7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.
8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.
9. Maintenance, monitoring, inspection, and reporting of any physical component of the remedy shall be performed as defined in this SMP.

B. The Soil Easement Areas shall not be used for residential use as defined by 6 NYCRR 375-1.8(g)(2)(i) which means that these areas cannot be used for single-family homes; the raising of livestock; or producing animal products for human consumption. The above-stated institutional controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. Grantor or its assigns must provide all persons who acquire any interest in the Easement Areas a true and complete copy of the SMP that the Department approves for the Easement Areas and all Department-approved amendments to that SMP.

D. Grantor and its assigns covenant and agree that until 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 Easement Area 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.

E. Grantor and its assigns covenant and agree 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 Easement Area.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the site 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 and its assigns all rights as fee Owner of the Easement Area not granted herein including:

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

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Easement Areas, by operation of law, by deed or by indenture, subject and subordinate to this Environmental Easement.

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor (including but not limited to DOE and the U.S. Army Corps of Engineers), Grantee, or any affected local government, as defined in ECL Section 71-3603, against the Owner of the Easement Area, 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. Grantee shall notify Grantor and the Owner of the Easement Areas of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Owner can cure such breach or suspected breach and give Owner 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 Owner 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.

C. 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. Federal Authority. Nothing in this document shall limit or otherwise affect Grantor's rights of entry or access or Grantor's authority to take response actions under CERCLA, the NCP or other federal law.

7. 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 Easement Area by referencing the following information:

Albany County, NYSDEC Site Number 4-0126-00200/00005, [Cooperative Agreement], and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to: Site Number: 4-0126-00200/00005
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

And if to Grantor: DOE Office of Legacy Management
2597 Legacy Way
Grand Junction, CO 81503
ATTN: Realty Officer

And if to USACE: U.S. Army Corps of Engineers
Program and Project Management Division
26 Federal Plaza New York, NY 10278-0090

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

8. 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.

9. 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.

10. 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.

11. Grantor's Opportunity to Review and Comment. The Grantee shall provide Grantor and USACE with a notice of, and a reasonable opportunity to review and comment upon, requested approvals or actions under this Environmental Easement including, without limitation, request for Amendment pursuant to Paragraph 8 hereof and Extinguishment pursuant to Paragraph 9 hereof.

12. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

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

The United States of America, acting by and through the Department of Energy (DOE) Office of Legacy Management

By: David P. McNeil

Print Name: DAVID P McNEIL

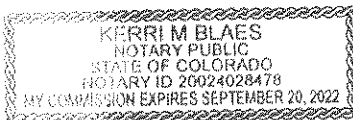
Title: REAL ESTATE CONTRACTING OFFICER Date: 4/6/20

Grantor's Acknowledgment


STATE OF COLORADO)
) ss:
COUNTY OF JEFFERSON)

On the 6th day of April, in the year 2020, before me, the undersigned, personally appeared David P. McNeil, 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.

Kerri M. Blaes
Notary Public - State of Colorado



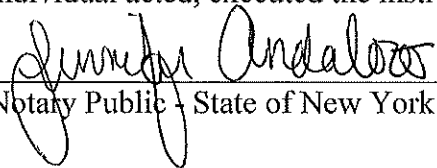
THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: 
Michael J. Ryan, Director
Division of Environmental Remediation

Grantee's Acknowledgment

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

On the 17th day of April, in the year 2020, before me, the undersigned, personally appeared Michael J. Ryan, 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

JENNIFER ANDALORO
Notary Public, State of New York
No. 02AN6098246
Qualified in Albany County 21
Commission Expires January 14, 2021

SCHEDULE "A" SOIL EASEMENT AREA DESCRIPTION

Survey Unit 124

Lands of the United States of America

Town of Colonie, County of Albany, State of New York

Area: 1,716 ± Square Feet of Land

All that certain tract, piece or parcel of land situate in the Town of Colonie, County of Albany, State of New York lying generally Southwest of Central Avenue and Northerly of lands formerly of New York Central Railroad lands now or formerly of Consolidated Rail Corporation and generally Southeast of Railroad Avenue, and being more particularly bounded and described as follows:

Commencing at the point of intersection of the division line between the lands of the United States of America as described in Book 2268 of Deeds at Page 141 and Book 2256 of Deeds at Page 590 on the Southeast and the lands now or formerly of Hadi Ipek and Havzi Ipek as described in Book 2835 of Deeds at Page 760 on the Northwest with the division line between the lands of the United States of America on the north and the lands formerly of the New York Central Railroad lands now or formerly of Consolidated Rail Corporation on the South; thence from said point of commencement along the first mentioned division line North 76 degrees 51 minutes 24 seconds West 134.91 feet to the point or place of beginning and runs thence from said point of beginning through the said lands of the United States of America as described in Book 2268 of Deeds at Page 141 and Book 2256 of Deeds at Page 590 the following (3) courses: 1) North 13 degrees 08 minutes 36 seconds, East 33.00 feet to a point; 2) South 76 degrees 51 minutes 24 seconds East 52.00 feet to a point; and 3) South 13 degrees 08 minutes 36 seconds West 33.00 feet to a point on the division line between said lands of the United States of America on the North and the said lands now or formerly of Consolidated Rail Corporation on the South; thence North 76 degrees 51 minutes 24 seconds West along the last mentioned division line 52.00 feet to the point or place of beginning and containing 1,716± square feet of land. Subject to any covenants, easements or restrictions of records.

SCHEDULE "A" SOIL EASEMENT AREA DESCRIPTION, continued

**North Lawn Easement Area
Lands of the United States of America
Town of Colonie, County of Albany, State of New York
Area: 2,500 ± Square Feet of Land**

All that certain tract, piece or parcel of land situate in the Town of Colonie, County of Albany, State of New York lying Southwest of Central Avenue and generally Southeast of McNutt Road, and being more particularly bounded and described as follows:

Beginning at a point on the Southwesterly road boundary of Central Avenue (99-foot-wide right of way), said point being situate South 40 degrees 12 minutes 14 seconds East as measured along said Southwesterly road boundary of Central Avenue, a distance of 18.51 feet from its point of intersection with the division line between the lands of the United States of America as described in Book 2256 of Deeds at Page 590 on the Southeast and the lands now or formerly of the Niagara Mohawk Power Corporation as described in Book 915 of Deeds at Page 251 on the Northwest and runs thence from said point of beginning along said southwesterly road boundary of Central Avenue South 40 degrees 12 minutes 14 seconds East 50.00 feet to a point; thence through the said lands of the United States of America as described in Book 2256 of Deeds Page 590 the following three (3) courses: 1) South 49 degrees 47 minutes 46 seconds West 50.00 feet to a point; 2) North 40 degrees 12 minutes 14 seconds West 50.00 feet to a point; and 3) North 49 degrees 47 minutes 46 seconds East 50.00 feet to the point or place of beginning and containing 2,500± square feet of land. Subject to any covenants, easements, or restrictions of records.

SCHEDULE "A" SOIL EASEMENT AREA DESCRIPTION, continued

Survey Unit 104

Lands of the United States of America

Town of Colonie, County of Albany, State of New York

Area: 5,171 ± Square Feet of Land

All that certain tract, piece or parcel of land situate in the Town of Colonie, County of Albany, State of New York lying generally Southwest of Central Avenue and generally Southeast of McNutt Road, and being more particularly bounded and described as follows:

Beginning at the point of intersection of the division line between the lands of the United States of America as described in Book 2268 of Deeds at Page 141 and Book 2256 of Deeds at Page 590 on the Southwest and the lands now or formerly of the Niagara Mohawk Power Corporation as described in Book 915 of Deeds at Page 251 on the Northeast with the division line between the said lands of the United States of America on the Southeast and the lands now or formerly of TJM Enterprises of Albany, LLC as described in Book 2943 of Deeds at Page 543 on the Northwest and runs thence from said point of beginning along the above first mentioned division line South 40 degrees 18 minutes 04 seconds East 74.56 feet to a point; thence through the said lands of the United States of America the following two (2) courses: 1) South 49 degrees 41 minutes 56 seconds West 47.00 feet to a point; and 2) North 40 degrees 18 minutes 04 seconds West 110.06 feet to a point on the division line between the said lands of the United States of America on the Southeast and the said lands now or formerly of TJM Enterprises of Albany, LLC on the Northwest; thence North 49 degrees 46 minutes 29 seconds East along the last mentioned division line 47.00 feet to the point or place of beginning and containing 5,171± square feet of land. Subject to any covenants, easements or restrictions of records.

SCHEDULE "B" PROPERTY DESCRIPTION
Lands of the United States of America
1130 Central Avenue
Town of Colonie, County of Albany, State of New York
Area: 11.29 ± Acres of Land

All that certain tract, piece or parcel of land situated, lying and being in the Town of Colonie, County of Albany, State of New York, lying Southwest of Central Avenue, and being more particularly bounded and described as follows:

BEGINNING at the point of intersection of the Southwesterly boundary of Central Avenue 99 foot-wide right-of-way with the division line between the lands of The United States of America as described in Book 2256 of Deeds at Page 590 on the Northwest and the lands now or formerly of Edge of Woods Holding Group, Ltd. as described in Book 2648 of Deeds at Page 826 on the Southeast and runs thence from said point of beginning South 49 deg. 50 min. 56 sec. West along the above mentioned division line 154.71 feet to the point of intersection of the common division line between the lands of The United States of America on the Southwest and the lands now or formerly of Edge of Woods Holding Group, Ltd. as described in Book 2648 of Deeds at Page 826 and lands now or formerly of MBF Management Corporation as described in Book 2865 of Deeds at Page 977 on the Northeast; thence South 40 deg. 09 min. 04 sec. East along the above last mentioned common division line 282.62 feet to the point of intersection of the division line between the lands of The United States of America on the Northwest and the lands now or formerly of Donald Grimm as described in Book 2673 of Deeds at Page 237 on the Southeast; thence South 47 deg. 15 min. 51 sec. West along the above last mentioned division line 125.43 feet to the point of intersection of the division line between the lands of The United States of America on the North and the lands formerly of New York Central Railroad lands now or formerly of Consolidated Rail Corporation on the South said division line being the municipal division line between the Town of Colonie on the North and the City of Albany on the South; thence North 76 deg. 51 min. 24 sec. West along the above last mentioned division line 1,130.65 feet to the point of intersection of the common division line between the lands of The United States of America as described in Book 2268 of Deeds at Page 141 on the Southeast and the lands now or formerly of Hadi Ipek and Havzi Ipek as described in Book 2835 of Deeds at Page 760 and lands now or formerly of the Town of Colonie on the Northwest; thence North 49 deg. 00 min. 32 sec. East along the above last mentioned common division line 507.01 feet to its intersection with the common division line between the lands of The United States of America as described in Book 2268 of Deeds at Page 141 on the Northeast and the lands now or formerly of the Town of Colonie and lands now or formerly of Hadi Ipek and Havzi Ipek on the Southwest; thence North 56 deg. 44 min. 01 sec. West along the above last mentioned common division line 203.50 feet to its intersection with the division line between the lands of The United States of America on the Southeast and the lands now or formerly of Niagara Mohawk Power Corporation as described in Book 1494 of Deeds at Page 305 on the Northwest; thence North 49 deg. 46 min. 29 sec. East along the above last mentioned division line 127.37 feet to the point of intersection of the division line between the lands of The United States of America as described in Book 2268 of Deeds at Page 141 on the Southwest and the lands now or formerly of Central Ventures 46 Inc. on the Northeast; thence along the above last mentioned division line the following seven (7) courses: 1) South 30 deg. 34 min. 41 sec. East 101.44 feet to a point; 2) thence North 49 deg. 46 min. 29 sec. East 25.00 feet to a point; 3) thence South 40 deg. 13 min. 31 sec. East 50.00 feet to a point; 4) thence North 49 deg. 46 min. 29 sec. East 4.00 feet to a point; 5) thence South 16 deg. 32 min. 41 sec. East 45.58 feet to a point; 6) thence North 49 deg. 48 min. 29 sec. East 17.33 feet to a point; and 7) thence South 24 deg. 18 min. 21 sec. East 36.35 feet to its intersection with the division line between the lands

of The United States of America on the Southeast and the lands now or formerly of Central Ventures 46 Inc. on the Northwest; thence North 49 deg. 42 min. 29 sec. East along the above last mentioned division line 207.73 feet to a point at the intersection of the division line between the lands of The United States of America as described in Book 2268 of Deeds at Page 141 and Book 2256 of Deeds at Page 590 on the Southwest and the lands now or formerly of Niagara Mohawk Power Corporation as described in Book 915 of Deeds at Page 251 on the Northeast; thence South 40 deg. 18 min. 04 sec. East along the above last mentioned division line 209.56 feet to the point of intersection of the division line between the lands of The United States of America on the Southeast and the lands now or formerly of Niagara Mohawk Power Corporation on the Northwest; thence North 49 deg. 41 min. 56 sec. East along the above last mentioned division line 169.59 feet to the intersection with the above mentioned Southwesterly boundary of Central Avenue; thence South 40 deg. 12 min. 14 sec. East along the Southwesterly boundary of Central Avenue 385.26 feet to the point or place of beginning and containing 11.29 acres of land, more or less.

APPENDIX E – SITE MANAGEMENT FORMS

I. COLONIE SITE INFORMATION		
Date of Inspection:	Type of Inspection (site walk, windshield):	
General Site Conditions:	Inspection Team Names/Affiliation (print):	
Weather/Temperature:		
Deed Holder: DOE		
If the property is owned by the DOE, is it currently leased?	Yes	No
Site Records, Inspections, and Reports up to date?	Yes	No
<ol style="list-style-type: none"> 1. The Soil Easement Areas, as further identified in Schedule A of the Easement, may be used for Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv). 2. No digging or excavation shall be permitted in the Soil Easement Areas without prior written approval of DOE and NYSDEC. 3. Vegetable gardens and farming are prohibited in the Soil Easement Areas. 4. The use of groundwater underlying the Site, as described in Appendix D of the Easement, Schedule B, 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 NYSDEC. 5. The potential for vapor intrusion must be evaluated for any buildings designed for occupancy on the Site, as described in Appendix D, Schedule B, and appropriate actions to address exposures must be implemented. 6. Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in this SMP. 7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP. 8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP. 9. Maintenance, monitoring, inspection, and reporting of any physical component of the remedy shall be performed as defined in this SMP. 		
Agency or company conducting the inspection: _____		
Primary Inspector _____		
Name	Title	Phone No.
Signature	Date	

Use the following to document current changed site conditions, include as Attachments:
 Photographs Maps Other (sketches, etc.)

II. INSTITUTIONAL CONTROLS (ICs)

**If deficiencies are noted, the locations should be documented on a site map and photographed.*

1. Property Use:

Are all ICs being complied with?	Yes	No
Soil Easement Areas disturbed in any manner?	Yes	No
Changes in Site Conditions?	Yes	No
Is there any Gardening or Farming?	Yes	No
Is the property used for industrial purposes?	Yes	No
Is the property used for commercial purposes?	Yes	No
Is the property currently vacant?	Yes	No
Any evidence of new construction?	Yes	No

Remarks: _____

2. Soil Conditions:

Is there any evidence of digging or soil excavation?	Yes	No
Authorization/Permit #: _____		
Any signs of dumping, staining, or vegetative stress?	Yes	No

Remarks: _____

3. Real Property Assets:

Do any property assets need maintenance?	Yes	No
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Remarks: _____

III. EVALUATION OF INSTITUTIONAL CONTROLS (ICs)

1. Implementation and Enforcement:

Site conditions imply ICs have been properly implemented.

Yes No

Site conditions imply ICs are fully enforced.

Yes No

Remarks: _____

2. Observations, Conclusions, Recommendations (including changes needed and overall performance and effectiveness of the remedy):

Remarks: _____