MSP FUSRAP Site FOSET Middlesex, NJ Public Notice

PUBLIC NOTICE

United States Department of Energy (USDOE) Finding of Suitability for Early Transfer (FOSET) of the Middlesex Sampling Plant FUSRAP Site in Middlesex, New Jersey

WHY THIS NOTICE: The United States Department of Energy (USDOE) intends to transfer a portion of the Middlesex Sampling Plant (MSP) Formerly Utilized Sites Remedial Action Program (FUSRAP) Site at 239 Mountain Avenue in Middlesex, New Jersey to the Borough of Middlesex. This notice is to make the public aware of this transfer and provides availability of the Finding of Suitability for Early Transfer (FOSET) documents for this transfer. The FOSET supports the USDOE's proposal to transfer approximately 4.018 acres of the northern portion of the MSP, to the Borough of Middlesex. The FOSET parcel is bordered to the east by residential properties, to the north by a commercial property and railroad property, to the west by a former auto salvage yard, and to the south by the remainder of the MSP property. The FOSET is available for public review and comment from February 20th to April 5th, 2023.

WHAT IS PROPOSED:

The proposed property transfer will be conducted according to Section 120 (h)(3) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), deferring the CERCLA covenant warranting that all remedial actions necessary to protect human health and the environment have been taken. Following the 45-day public comment period, the USDOE will respond to public comments, modify the FOSET or its proposal to transfer if appropriate, and prepare a Covenant Deferral Request Package for the property. This package will be submitted to the Governor of the State of New Jersey, who may approve this request if the Governor determines the property is suitable for transfer. Once all necessary remedial actions have been taken on the property, the USDOE will execute and deliver the CERCLA covenant to the property owner. The property proposed for early transfer and covenant deferral are described in the FOSET.

WHERE TO FIND PROJECT DOCUMENTS: Additional documents providing information on the environmental condition of the property are listed in the FOSET. These documents are available online at the weblinks provided below or may be viewed at the following location:

Weblinks

https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.docdata&id=0202755

https://www.nan.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/487433/fact-sheet-middlesex-sampling-plant-nj/

https://www.energy.gov/lm/fusrap-program-further-resources

Viewing:

Middlesex Public Library 1300 Mountain Avenue, Middlesex, New Jersey

Please submit written comments on the FOSET by email to FUSRAPinfo@lm.doe.gov or by mail to the following address:

US Department of Energy

11035 Dover Street, Ste: 600, Westminster, CO 80229

Att: Middlesex Sampling Plant FOSET

Please include your name and mailing address or email address with your comments so a response to your comment can be sent to you.

FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET)

FOR MIDDLESEX SAMPLING PLANT, MIDDLESEX, NEW JERSEY

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Acronyms

CDR Covenant Deferral Request
CEA Classification Exception Area

CERCLA Comprehensive Environmental Response Compensation and Liability Act

COC Contaminant of Concern CT carbon tetrachloride

cy cubic yards

DPW Department of Public Works

ECP Environmental Condition of Property
EPP Environmental Protection Provision
FOSET Finding of Suitability for Early Transfer
FOST Finding of Suitability for Transfer

FUSRAP Formerly Utilized Sites Remedial Action Program

FYR Five Year Review

GSA General Services Administration
HPT health physicist technicians
ISCR In Situ Chemical Reduction

LUC Land Use Controls

MCL Maximum Contaminant Level

mg/kg milligram per kilogram

MNA Monitored Natural Attenuation
MSP Middlesex Sampling Plant
NCP National Contingency Plan
NJAC New Jersey Administrative Code

NJDEP New Jersey Department of Environmental Protection

NPL National Priorities List

OU Operable Unit

PAH Polycyclic Aromatic Hydrocarbons

PCB Polychlorinated Biphenyls PRAR Post Remedial Action Report

ROD Record of Decision
SU Survey Unit
TCE trichloroethene

USACE United States Army Corps of Engineers

U.S.C United States Code

USDOE United States Department of Energy

USEPA United States Environmental Protection Agency

UST Underground Storage Tank

UXO unexploded ordnance

VOC Volatile Organic Compound

WRA Well Restriction Area

FINDING OF SUITABILITY FOR EARLY TRANSFER (FOSET) MIDDLESEX SAMPLING PLANT MIDDLESEX, NEW JERSEY

1.0 PURPOSE

The purpose of this Finding of Suitability for Early Transfer (FOSET) is to document the environmental suitability of a portion of the Middlesex Sampling Plant (MSP) site for transfer consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(h)(3) and U.S. Department of Energy (USDOE) guidance. In addition, the FOSET includes the CERCLA Notice, Covenant, and Access Provisions and other Deed Provisions and the Environmental Protection Provisions (EPPs) necessary to protect human health or the environment after such transfer.

2.0 INTRODUCTION

On August 13, 2019, the Borough of Middlesex, Middlesex County, New Jersey (the Borough) submitted a Proposal requesting that USDOE transfer a portion of the Middlesex Sampling Plant site to the Borough. USDOE is currently working in collaboration with the Borough, the U.S. Environmental Protection Agency (USEPA), and the New Jersey Department of Environmental Protection (NJDEP) on this proposed transfer using the U.S. General Services Administration (GSA) authorities (41 Code of Federal Regulations [CFR] 102) and CERCLA.

When a federal agency transfers to a non-federal person or entity real property on which hazardous substances are known to have been released or disposed of or stored for one year or more, the government deed transferring such property must contain a covenant warranting that all remedial action necessary to protect human health and the environment has been taken before the date of transfer. 42 United States Code (U.S.C.) § 9620(h)(3)(A). However, CERCLA § 120(h)(3)(C) sets forth the conditions under which the USEPA Administrator (with the concurrence of the Governor for property on the National Priorities List (NPL)) or the Governor (if the property is not on the NPL) may defer the covenant that all necessary remedial action has been taken. In such cases, once the United States has completed all remedial action, it must issue a warranty that satisfies that covenant requirement. A transferee of property conveyed under § 120(h)(3)(C) also receives assurances at the time of transfer that all necessary remedial action will be taken in the future by the transferring federal agency.

The MSP was listed on the NPL as the Middlesex Sampling Plant (USDOE) (ID number NJ0890090012) on January 19, 1999. Accordingly, the USEPA Administrator with concurrence from the Governor of New Jersey may defer the CERCLA covenant requirement if: (1) the property is suitable for transfer based on its intended use and the intended use is consistent with protection of human health and the environment; (2) the deed or other agreement for transfer of the property contains certain provisions relating to future remediation and provides for any necessary restrictions on the use of the property to ensure the protection of human health and the environment; (3) the public has had an opportunity to comment on the proposed transfer; and, (4) the deferral and transfer will not substantially delay any necessary response actions at the property.

3.0 DISCUSSIONS

This FOSET documents the environmental suitability of the northern portion (4.018 acres) of the MSP site for transfer prior to completion of all response actions. This portion of the site is referred to throughout this document as the FOSET Parcel. In Enclosure 6, Enclosure 7, and the quitclaim deed, this FOSET Parcel is referred to as the "Property".

This FOSET presents or references information that serves as the basis for this finding of suitability for early transfer under CERCLA Section 120(h)(3), 42 U.S.C. § 9620(h)(3), as well as information necessary for providing the deed notices and covenant deferral required by CERCLA. Enclosure 6, Access Provisions and Land Use Restrictions (Deed Covenant) provides the text of those deed notices, the CERCLA covenant deferral, and CERCLA-required access provisions. These protections and provisions are discussed in further detail in the remainder of the FOSET.

In accordance with 42 U.S.C. § 9620(h)(3)(C), this FOSET documents the suitability of the FOSET Parcel for transfer prior to completion of all remedial actions. This FOSET will identify environmental factors associated with the proposed property transfer and satisfy statutory and regulatory requirements addressed herein. This FOSET is one part of an overall property transfer process intended to facilitate the timely and efficient reuse of the FOSET Parcel while maintaining protection of human health and the environment throughout the transfer, cleanup, and redevelopment processes. The Borough has indicated that the intended potential use of the FOSET Parcel will include Office of Emergency Management and Department of Public Works (DPW) support facilities. The proposed use is further discussed in Section 4.4. This proposed property transfer prior to the completion of all response actions, with the appropriate land use controls, is consistent with protection of human health and the environment. The FOSET Parcel will be subject to land use controls at the time of transfer.

3.1 Finding of Suitability for Early Transfer

Transfers of property by federal agencies occurring before all response actions on the property have been taken are commonly referred to as "Early Transfers." The FOSET Parcel found suitable for Early Transfer by this FOSET includes roughly four (4) acres of property within the MSP site, portions of which are contaminated by hazardous substances. All remedial actions for soils on the FOSET Parcel are complete. The FOSET parcel is to be remediated by the use of groundwater treatment and monitoring as presented in the Groundwater Record of Decision (ROD) (USACE 2021), following the transfer as further discussed and referenced herein.

3.2 Notices

For property on which any hazardous substances were stored for one year or more, known to have been released, or known to have been disposed, CERCLA Section 120(h)(3)(A)(i), requires that each deed transferring such property to a non-federal entity must contain a notice

of the following: the type and quantity of the hazardous substances; the time at which the storage, release, or disposal took place; and a description of any remedial actions taken. The Deed will include these notices as set forth in the Deed Covenant.

3.3 Deed Covenant

The Deed Covenant presents notices, agreements, access provisions, assurances, and other provisions to be filed as part of the deed to ensure protection of human health and the environment and to preclude any interference with ongoing or completed remediation activities. The clauses applicable for the FOSET Parcel Deed Covenant are discussed throughout this FOSET. The Deed Covenant is included as Enclosure 6.

3.4 CERCLA Covenant

CERCLA Section 120(h)(3)(A)(ii) requires the deed to contain a covenant warranting that all response actions necessary to protect human health and the environment have been taken prior to transfer and that the United States shall implement any additional response actions necessary after the transfer date. A summary description of remedial actions taken to date is contained in the Deed Covenant. In accordance with CERCLA Section 120(h)(3)(A)(ii), any additional remedial action found to be necessary after the date of transfer shall be conducted by the United States.

3.5 Covenant Deferral

For NPL sites, CERCLA Section 120(h)(3)(C)(i) allows the USEPA Administrator, with concurrence from the Governor of the State in which the Federal facility is located, to defer the above referenced covenant requirement until such time as all response actions have been completed. For this FOSET Parcel, the USDOE will submit a Covenant Deferral Request (CDR) to the USEPA Administrator and request concurrence from the Governor of New Jersey.

Such deferral request is based upon a determination that:

- The property is suitable for transfer for the use intended by the transferee, and the intended use (as identified in Section 4.4) is consistent with protection of human health and the environment;
- The deed or other agreements proposed to govern the transfer between the United States and the recipient of the property contains the assurances set forth in CERCLA §120(h)(3)(C)(ii), including assurances that:
 - provide for the necessary restrictions on the use of the property to ensure the protection of human health and the environment;
 - provide that there will be restrictions on use necessary to ensure that required remedial investigations, response actions, and oversight activities will not be disrupted;
 - provide that all necessary response actions will be taken and identify the

schedules for investigation and completion of all necessary response actions as approved by the appropriate regulatory agency; and

- provide that the Federal agency responsible for the property subject to transfer will submit a budget request that adequately addresses schedules for investigation and completion of all necessary response actions, subject to congressional authorization and appropriations.
- The Federal agency that requests the deferral has provided notice, by publication in a newspaper of general circulation in the vicinity of the property, of the proposed transfer and of the opportunity for the public to submit, within a period of not less than 30 days after the date of the notice, written comments on the suitability of the property for transfer; and
- The deferral and transfer of the property will not substantially delay any necessary response actions at the property.

4.0 PROPERTY DESCRIPTION AND INTENDED REUSE

4.1 Middlesex Sampling Plant FOSET Parcel Description

The MSP site consists of approximately 9.6 acres (approximately 3.9 hectares) at 239 Mountain Avenue in the Borough of Middlesex, Middlesex County, New Jersey, approximately 18 miles southwest of Newark, New Jersey. The site is federal government-owned. It is currently undeveloped, vacant land covered with vegetation and zoned for industrial use (see Enclosure 1, Figure 7). The site was listed on USEPA's NPL as the Middlesex Sampling Plant (USDOE) (ID number NJ0890090012) on January 19, 1999. The site and various adjacent properties have been remediated over time by either USDOE or the U.S. Army Corps of Engineers (USACE). Middlesex County tax maps identify the site as Block 318 Lot 1.01 and Block 319 Lot 45 (Enclosure 1, Figure 3 and 4).

The portion of the site covered by this FOSET is identified as the area north of the line shown on Enclosure 1, Figure 5, hereafter referred to as the "FOSET Parcel." The FOSET Parcel is approximately 4.018 acres in size. The actual real estate bounds of the FOSET Parcel have been surveyed and recorded in the draft deed. See Enclosure 1, Figure 6 for the FOSET Parcel survey. The FOSET Parcel is bordered to the east by residential properties, to the north by a commercial property and railroad property, to the west by a former auto salvage yard, and to the south by the remainder of the MSP site. The site is fenced, and public access is restricted. The environmental condition of the southern parcel was documented by issuing a Finding of Suitability for Transfer (FOST) which was signed in March 2020.

4.2 Middlesex Sampling Plant FOSET Parcel History

During 1943, the federal government leased and eventually took possession (via condemnation proceedings) of the land to establish the MSP. The MSP supported both the Manhattan Engineering District and U.S. Atomic Energy Commission nuclear weapons development. The MSP was initially utilized to mechanically process, assay, and package uranium ores to support the Manhattan Engineering District and was operated until February 18, 1955. At this time, the duties and responsibilities were completely transferred to the Sampling Plant at the Feed Materials Production

Center at Fernald, Ohio. Toward the end of MSP operations (1952–1954) and to a much lesser extent, the site was also utilized to mechanically process, assay, and package beryllium ores. After MSP operations ended, the site was used to store containers holding materials containing uranium and thorium (1955–1968).

In 1968, the GSA transferred the site to the U.S. Department of the Navy. The site served as a U.S. Marine Corps reserve training center from 1969 to 1979 before it was placed in the custody of USDOE in 1980. USDOE completed numerous investigations and removal actions at adjacent properties and the site throughout the 1980s and 1990s. USACE undertook responsibility for remedial actions in 1997 under the Formerly Utilized Sites Remedial Action Program (FUSRAP). In 1999, USEPA placed the site on the CERCLA NPL of sites with hazardous substances, pollutants, or contaminants, and remediation is being performed in accordance with CERCLA. The FOSET Parcel is subject to a 2009 Federal Facility Agreement between USEPA and USACE. USACE completed a CERCLA Remedial Investigation for soils in 2004. The soils Proposed Plan was issued for public comment, and the soils ROD was signed in 2005. USACE design and remedial activities included excavation of soil and debris contaminated with radioactive and chemical materials between 2006 to 2009. Based on this remedial action, the FOSET Parcel soils have been remediated to an unrestricted use level. From 2009 until the present, USACE has been addressing groundwater at the site in accordance with CERCLA. As reported in the groundwater Feasibility Study (USACE 2017a), sampling has demonstrated that uranium levels in groundwater at all well locations on the FOSET Parcel are below levels requiring remediation and continue to decline. Volatile organic compounds (VOCs) are present in the groundwater in the shallow bedrock aguifer and are being addressed as outlined below in Section 4.3, 6.1 and 6.2

4.3 Current Middlesex Sampling Plant FOSET Parcel Status

The soils remedial action is complete and achieved an unrestricted release standard in accordance with the soils ROD. All buildings were demolished, and debris was removed from the site. No buildings remain onsite. Groundwater under the FOSET Parcel flows in overburden (deposits consist of artificial fill, unconsolidated sediments [clayey fine sands to silty sands]) and underlying bedrock aquifers. The overburden aquifer flow is separated from the bedrock aquifer by extremely weathered bedrock where silts and clays have tended to plug or fill the fractures, which reduces the flow down into the bedrock aquifer. Groundwater samples from the overburden and shallow bedrock aquifers have been collected at the MSP site from the early 1980s to 2016. The contaminants identified in the groundwater as Contaminants of Concerns (COCs) were natural uranium, carbon tetrachloride (CT), tricholoroethene (TCE), and chloroform. Enclosure 1, Figure 9 shows the MSP-related CT, TCE, and chloroform plumes.

As stated in the groundwater ROD (USACE 2021), the groundwater remedial activities at the FOSET Parcel are Treatment with In-situ Chemical Reduction (ISCR), Monitored Natural Attenuation (MNA), and Land Use Controls (LUC).

ISCR technologies will be used to treat the VOCs present in the groundwater situated in the fractured bedrock within Unit B on site at the source area, see Enclosure 1, Figures 9 and 10. This treatment will eventually remediate VOCs emanating from the site source area, thereby reducing the long-term chlorinated VOC mass flux from the source area feeding the off-site portion of the plume and isolating groundwater with low concentrations of VOCs in the downgradient portion of the plume. MNA will be applied to the on-site VOCs not influenced by active treatment, the downgradient portion of the VOC plume, and to any residual uranium present in the overburden groundwater. A LUC, in the form

of a groundwater Classification Exception Area (CEA) and Well Restriction Area (WRA) established by the NJDEP, will be utilized in areas of groundwater contamination present at the site until cleanup goals are achieved. Because this remedy will result in contaminants that remain above cleanup levels that allow for unlimited use and unrestricted exposure during the MNA period, Five Year reviews will be required under CERCLA to evaluate the protectiveness of the remedy, as further discussed in Section 12.3.

To effectuate transfer of the property, the United States of America plans to execute a Deed with the Borough of Middlesex, herein referred to as "Transferee" for purposes of this FOSET. Conveyance of the FOSET Parcel by Deed is contingent on approval and concurrence of the CDR as sought by this FOSET. The Deed facilitates the conveyance of the FOSET Parcel prior to completion of all environmental response actions. Upon conveyance of the USDOE's title by the GSA to the Borough, herein referred to as the "Grantee," the FOSET Parcel will be under the exclusive control of Grantee effective as of the closing date, subject to easements, covenants, and conditions of the Deed.

4.4 Intended Reuse

The intended reuse of the FOSET Parcel is for Emergency Management and Department of Public Works support facilities. Both operations will be managed by the Borough's Department of Public Works (DPW) and would function as part of the overall DPW facility. Transfer of the southern parcel of the MSP for the DPW was addressed in 2020 under a FOST. This proposed use of the FOSET Parcel for a public use facility is contingent on the Environmental Protection Provisions (EPPs) identified in Enclosure 7 being met.

4.5 Land Use Restrictions

Future land use on the FOSET Parcel will be restricted under land use controls, Deed Restrictions and EPPs as described herein; these include:

- 1. Property Use. The property use must comply with local zoning requirements.
- 2. The Grantee, for itself, its successors, and assigns, covenants and agrees not to access or use, or allow access to or use of the groundwater underlying the Property (FOSET Parcel) for any purpose without the prior written approval of USDOE, USEPA and NJDEP. Monitoring wells shall not be disturbed without prior written permission from the USDOE, USEPA and the NJDEP.
- 3. Excavation and Land Disturbance Restriction No excavation activities shall occur on the FOSET Parcel including, but not limited to, digging, drilling, or any other excavation or disturbance of the surface or subsurface without prior written approval from the USDOE, NJDEP and USEPA, except as provided for, and in accordance with, a remedial action plan approved by the USEPA and NJDEP.
- 4. Construction Limitations Requirements have been established for future buildings and structures to be constructed with engineered barriers to minimize vapor intrusion, unless Grantee can demonstrate and gain written approved by the GRANTOR, NJDEP and USEPA, that such a barrier or other mitigation system is not needed for a specific building.
- 5. Also, buildings and structures (including storage tanks) may not be built on the FOSET Parcel without USDOE, USEPA and NJDEP's written approval until such time as the remedy is deemed protective by virtue of meeting the remedial action objectives as determined by the

USEPA.

6. A CEA/WRA is in place and managed by NJDEP. This CEA/WRA suspends designated aquifer uses for the term of the CEA /WRA (until cleanup goals are achieved). The property owner shall follow all applicable conditions of the CEA/WRA.

The soil cleanup, which consisted of the excavation and offsite disposal of contaminated soils, was completed, and the soils have been remediated to an unrestricted use level. No institutional controls are required for the soils. During any redevelopment, all work will be conducted in a manner that protects human health and the environment and in accordance with all applicable federal, state, and local regulations.

5.0 ENVIRONMENTAL DOCUMENTATION (SOURCE MATERIALS)

This FOSET is a result of thorough analysis of the extensive information contained in the Administrative Records for Operable Unit (OU) 1 and OU2 of the MSP site. A determination of the environmental condition of the FOSET Parcel was made based upon the following primary documents and supplemented by additional documents that are listed in Enclosure 2. USACE received concurrence from USEPA and NJDEP on the completion of the soils remedial action by approval of the September 2010 *Final Post Remedial Action Report, Soils Operable Unit 1, Middlesex Sampling Plant, Middlesex, New Jersey* (USACE 2010). These concurrence letters are referenced in Enclosure 2.

- Groundwater Operable Unit Remedial Investigation Report, Middlesex Sampling Plant, Middlesex, New Jersey (USACE 2005a)
- Soils Operable Unit, Record of Decision, Middlesex Sampling Plant, Middlesex, New Jersey. New York District, Formerly Utilized Sites Remedial Action Program (USACE 2005b)
- Final Post Remedial Action Report, Soils Operable Unit 1, Middlesex Sampling Plant, Middlesex, New Jersey (USACE 2010), hereafter referred to as the Post Remedial Action Report (PRAR)
- Final Feasibility Study Report, Groundwater Operable Unit, Middlesex Sampling Plant FUSRAP Site, Middlesex, New Jersey (USACE 2017a)
- Groundwater Investigation Technical Memorandum, Middlesex Sampling Plant, Middlesex, New Jersey (USACE 2017b)
- Final Proposed Plan, Groundwater Operable Unit OU2, Middlesex Sampling Plant, Middlesex, New Jersey, August 2020, (USACE 2020)
- Record of Decision, Groundwater Operable Unit OU2, Middlesex Sampling Plant, Middlesex, New Jersey, Final, August 2021, (USACE 2021)

6.0 ENVIRONMENTAL CONDITION OF MIDDLESEX SAMPLING PLANT FOSET PARCEL

As defined by American Society for Testing and Materials Standard 5746-98, "Standard Classification of Environmental Condition of Property Area Types," discrete areas, referred to as parcels, were classified into one of seven standard environmental condition of property (ECP) area types (categories). Classifications are assigned both on the basis of the type of chemical releases (hazardous substances or petroleum) found at the properties and the status of the properties' cleanup activities. A brief description of the ECP categories is presented below:

- ECP Category 1-An area or parcel of real property where no release, or disposal of hazardous substances or petroleum products or their derivatives has occurred (including no migration of these substances from adjacent properties).
- ECP Category 2 An area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred.
- ECP Category 3 An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.
- ECP Category 4- An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken.
- ECP Category 5- An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred and removal or remedial actions, or both, are under way, but all required actions have not yet been taken.
- ECP Category 6-An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred, but required response actions have not yet been initiated.
- ECP Category 7-An area or parcel of real property that is unevaluated or requires additional evaluation.

The FOSET Parcel is both an ECP Category 4 and ECP Category 6 site. It is a Category 4 with respect to the soils and a Category 6 with respect to the groundwater.

CERCLA remedial actions were completed to address hazardous substance contamination of the soils at the site, including the FOSET Parcel. The soil cleanup, which consisted of the excavation and offsite disposal of contaminated soils, was completed, and the soils have been remediated to an unrestricted use level. No institutional controls are required for the soils.

Uranium was initially identified as a concern in overburden groundwater. However, after the soil remediation was completed in 2008, the uranium levels in the groundwater declined below levels requiring remediation and are expected to continue to decline (USACE 2017a). Groundwater remediation for volatile organic compounds in the shallow bedrock aquifer will be conducted for the FOSET Parcel.

The site (including the FOSET Parcel) was declared excessed on November 15, 2019 by USDOE and will be made available to be conveyed pursuant to GSA authorities. Remediation of soils is complete, and groundwater contaminants beneath the FOSET Parcel require a remedial action. Therefore, a FOSET pursuant to CERCLA § 120(h)(3) is the appropriate mechanism to transfer the FOSET Parcel.

The following sections summarize the known environmental conditions, evaluations, and investigations completed to date at the FOSET Parcel.

6.1 Environmental Remediation Sites

The site is being addressed by USACE and USDOE under FUSRAP, which is conducted in accordance with CERCLA. There are currently two OUs associated with the site.

Operable Unit 1 addressed soils, buildings, and debris on the site (9.6 acres) as well as the south drainage ditch area adjacent to the site. The OU1 COCs were uranium and its daughter products, lead, and polycyclic aromatic hydrocarbons (PAHs).

Enclosure 3 provides the volume of contaminated soils excavated and the final disposition of contaminated soils as well a list of performance results compared to the remedial action objectives. Enclosure 4 provides information on historic hazardous substances release and associated remedial actions. On September 21, 2010, USEPA approved the PRAR, which documented completion of OU1 including remediation of soils to a level allowing the area to be used for unrestricted use related to soils.

Operable Unit 2 is currently addressing groundwater beneath the site. The groundwater contamination associated with OU2 impacts the FOSET Parcel. The removal of the contaminated media addressed in OU1 remediation has resulted in the removal of potential sources that may further impact the groundwater (USACE 2017a). ISCR technologies will be used to treat the VOC compounds present in groundwater situated in the fractured bedrock within Unit B on site at the source area, see Enclosure 1, Figures 9 and 10. This treatment is expected to eventually eliminate VOCs emanating from the site source area, thereby reducing the long-term chlorinated VOC mass flux from the source area feeding the off-site portion of the plume and isolate groundwater with low concentrations of VOCs in the downgradient portion of the plume. MNA will be applied to the on-site VOCs not influenced by active treatment, the downgradient portion of the VOC plume, and to any residual uranium present in the overburden groundwater. A LUC, in the form of a groundwater CEA/WRA has been established by NJDEP for areas of groundwater contamination present at the site where contamination exceeds groundwater quality standards until cleanup goals are achieved. Because the remedy will result in contaminants that remain above cleanup levels that allow for unlimited use and unrestricted exposure during the MNA period, the remedial action will be reviewed at least once every five years until cleanup goals are attained (Groundwater ROD, USACE 2021).

6.2 Storage, Release, or Disposal of Hazardous Substances

During OU1 remedial excavation activities, approximately 4,454 in situ cubic yards (CY), or 7,781 tons, of chemically (PAHs and lead) impacted waste was excavated and disposed of at a properly permitted, offsite disposal facility. See Enclosures 3 and 4 for information related to the excavation and disposal as well as the documented historic release of these substances. The entire site was released for unrestricted use with regard to soil contamination (Enclosure 3, Table 1b). USACE received concurrence from USEPA and NJDEP on the completion of the soils remedial action by approval of the PRAR (USACE 2010). These concurrence letters are referenced in Enclosure 2.

Remediation of groundwater for VOCs is the subject of the OU2 Groundwater ROD. The contaminants identified in the groundwater as chemicals of concern at the MSP site are VOCs consisting of CT, TCE, and chloroform in bedrock groundwater; and uranium in the overburden groundwater. See Enclosures 3 and 4 for information related to the historic release of these substances. Concentrations of uranium in groundwater were significantly reduced after soil impacted with uranium and other radionuclides was removed from MSP during the OU1 remedial action in 2008.

Although uranium concentrations in the overburden groundwater have not exceeded the USEPA maximum contaminant level (MCL) for drinking water since 2012, uranium in groundwater will continue to be monitored.

6.3 Petroleum and Petroleum Products

During remedial excavation activities, the government encountered two 1,893-liter (550-gallon) underground storage tanks (USTs). See Enclosure 1, Figure 8. One UST (UST #1) was likely associated with the former administration building; the other (UST #2) was near the former garage building. Both USTs contained No. 2 heating oil. The government contracted to remove and dispose of the UST contents, oversee UST removal, obtain and analyze post excavation soil samples, and prepare a UST closure report.

Heating oil tank #1 was removed on November 29, 2006, with the tank structure and the associated contaminated soils disposed of offsite on January 5, 2007. Heating oil tank #2 was removed on January 17, 2007, with the tank structure and the associated contaminated soils disposed of offsite by January 31, 2007. The Underground Storage Tank Removal Remedial Action Report was prepared on July 17, 2007 (PRAR, Appendix H) (USACE 2010).

Waste generated during the UST removal included approximately 1,135 liters (300 gallons) of residual petroleum product from UST #1 and 5,299 liters (1,400 gallons) of residual petroleum product and petroleum-impacted water collected from the tank contents and associated excavation for UST #2. Additionally, approximately 77 U.S.-short tons of petroleum contaminated soil comingled with radiologically impacted soils was generated.

All petroleum liquid wastes were disposed of at Clean Water of New York. The impacted soils were subsequently disposed of offsite as part of the shipments of other radiologically impacted soils generated from the OU1 remedial activities (Enclosure 5).

Post excavation soil samples were collected and analyzed from each UST excavation as part of the UST closure effort. The analytical results indicated that total petroleum hydrocarbons concentrations ranged from non-detected to a maximum of 52 milligrams per kilogram (mg/kg).

A follow-up priority pollutant+40 analysis of a sample collected during the UST #2 removal yielded a concentration of 52 mg/kg, which was within NJDEP compliance limits for all parameters.

NJDEP approved a "No Further Action" classification of the former UST sites for the soils based on the UST closure activities and the analytical results for the soil samples collected post UST removal and as a result of NJDEP acceptance of the OU1 PRAR. Impact to groundwater resulting from the release of UST contents was evaluated as part of the site groundwater OU2 activities and petroleum compounds were not identified as COCs.

6.4 Polychlorinated Biphenyls (PCBs)

There is no evidence that PCB-containing equipment is located or was previously located on the FOSET Parcel. PCBs were not identified as COCs during the OU1 CERCLA screening process.

6.5 Asbestos

Asbestos was not identified as a COC during the OU1 CERCLA screening process. Pre demolition inspections of buildings verified the presence of vinyl asbestos floor tiles and pipe insulation in the administration building and transite wall panels within the garage. All buildings on the site have been demolished as part of the OU1 remedial action and debris disposed of at properly permitted or licensed offsite disposal facilities; therefore, asbestos-containing materials are not present on the site. See Enclosure 3 for material disposition.

6.6 Lead-Based Paint

All buildings on the site have been demolished as part of the OU1 remedial action and debris disposed of at offsite, properly permitted or licensed offsite disposal facilities. Lead was identified as a COC during the OU1 CERCLA screening process; however, this was not due to the presence of lead-based paint. The soil remediation addressed all areas identified as impacted by lead as documented in the PRAR (USACE 2010).

6.7 Radiological Materials

Remedial activities for OU1 included excavating and shipping 41,231 in situ CY, or 79,098 tons, of radiologically impacted soil and debris to an appropriately permitted or licensed offsite disposal facility (Enclosure 3).

The demolition of buildings resulted in the removal of 45 tons of building material and construction debris that was combined with the radiologically contaminated soils waste stream. Additionally, all subsurface debris was considered radiologically contaminated, and it was combined with the soils waste stream for disposal.

The entire site was released for unrestricted use with regard to soil contamination (Enclosure 3, Table 1b). USACE received concurrence from USEPA and NJDEP on the completion of the soils remedial action through their approval of the PRAR (USACE 2010). These concurrence letters are referenced in Enclosure 2.

6.8 Radon

Radon was not identified as a COC during the OU1 or OU2 CERCLA screening process. All buildings on the site have been demolished as part of the OU1 remedial action and debris disposed of at properly permitted or licensed offsite disposal facilities. See Enclosure 3 for material disposition. As no radiological materials such as contaminated building debris or soil above an unrestricted use criterion remains at the site, site related radon will not be a concern in buildings constructed at the site in the future.

6.9 Munitions and Explosives of Concern

The term "Munitions and Explosives of Concern" means military munitions that may pose unique explosives safety risks, including: (1) unexploded ordnance (UXO), as defined in Title 10

United States Code Section 101(e)(5) (10 U.S.C. §101[e][5]); (2) discarded military munitions, as defined in §10 U.S.C. 2710(e)(2); or (3) munitions constituents (e.g., 2,4,6-trinitrotoluene, hexahydro-1,3,5-trinitro-1,3,5- triazine), as defined in §10 U.S.C. 2710(e)(3) present in high enough concentrations to pose an explosive hazard. During OU1 remedial excavation activities of radiologically impacted soils, a small cache of blank small arms ammunition was unearthed (see Enclosure 1, Figure 8, for the location). The blank ammunition was removed and subsequently disposed of as noted below.

After consultation with a senior UXO technician, it was determined that the blank ammunition could be safely handled by MSP health physics technicians (HPTs). The HPTs removed gross contamination from the surface of the munition cartridges and rinsed them with water. All waste soils and water generated during this activity were addressed as part of the ongoing chemical and radiological soil remedial activities at the site. The cartridges were placed in Marinelli sampling containers (to ensure a reproducible geometry) for gamma spectrometry analysis and then analyzed at the onsite gamma-spectrometry laboratory. Analytical data indicated the cartridges did not contain radioactive isotopes above background levels established for the site.

Approximately 0.07 cubic meter (2.5 cubic feet) of blank munitions were disposed of through Clean Harbors and sent to their Colfax, Louisiana, facility (USEPA ID number LAD981055791).

6.10 Other Property Conditions

Lead and PAH contamination existed in the FOSET Parcel soils prior to OU1 remedial actions. Approximately 4,454 CY of PAH and lead impacted soils were excavated from the site and disposed of offsite at a properly permitted disposal facility (Allied Waste, Niagara Falls, New York). See Enclosure 3. The entire site was released for unrestricted use with regard to soil contamination (Enclosure 3, Table 1b). USACE received concurrence from USEPA and NJDEP on the completion of the soils remedial action through their approval of the PRAR (USACE 2010). These concurrence letters are referenced in Enclosure 2.

As discussed in section 6.2, groundwater at the FOSET Parcel is contaminated with VOCs consisting of CT, TCE, and chloroform that presents an unacceptable risk to human health or the environment. USACE is in the process of addressing this contamination as part of the OU2 remedial effort.

Other than as referenced herein or in the attached background material, there are no other known conditions on the FOSET Parcel that present an unacceptable risk to human health and the environment. In accordance with CERCLA Section 120(h)(3)(A)(ii), any additional remedial action found to be necessary after the date of transfer shall be conducted by the United States.

7.0 ADJACENT PROPERTY CONDITIONS

The area within 0.8 kilometer (0.5 mile) of the FOSET Parcel is a mixture of residential homes, commercial and industrial properties, and undeveloped land. The fractured bedrock aquifer under adjacent properties within 0.5 mile to the north of the FOSET Parcel is currently being addressed under the OU2 CERCLA process.

The Borough of Middlesex, occupying an area of approximately 4 square miles, has seen a slight

increase in population from 13,055 people in 1990 to 13,635 people in 2010 (U.S. Census Bureau 2010).

Volatile organic contamination in groundwater is ubiquitous in industrial areas such as the surrounding properties to the MSP. There is a groundwater plume from a neighboring property that has entered the Property. That plume is being addressed by the neighboring landowner.

7.1 Environmental Conditions on Surrounding Properties

The Middlesex Municipal Landfill Site (MML) is approximately 0.5 mile from the FOSET Parcel and is being addressed by USACE and USDOE under the FUSRAP program for radiological concerns and by the Borough of Middlesex and NJDEP for chemical concerns (see Enclosure 1, Figure 1).

The east side of the FOSET Parcel borders residential homes and small businesses. The west side borders a former auto body salvage yard. The property to the south of the FOSET Parcel consists of the remainder of the MSP site and further south of marshy land and fields primarily owned by the Borough and includes the south drainage ditch, which carries surface water runoff from the site to the Mosquito Control Ditch, which eventually flows into Main Stream. The FOSET parcel contains a wetland of approximately 0.013 acres. As part of the regrading of the site after soils remediation, a drainage feature was installed in the area and has now been designated a wetland in the February 2021 Middlesex Sampling Plant Wetland Delineation prepared by USACE (USACE 2021). The FOSET Parcel is a subdivision in the northern portion of the MSP site (Enclosure 1, Figure 5).

A total of 48 parcels surrounding the MSP site are divided into various Phases. These parcels are listed in Enclosure 8 and can be referenced to the tax maps in Enclosure 1.

Phase 1 properties included 5 properties (5 parcels) that were remediated by USDOE removal actions in 1980. These properties were certified and released for unrestricted use by NJDEP in 1986. USACE review of the certification docket for these Phase 1 properties finds that the residual contamination meets the requirements of the OU1 ROD.

Phase 2 properties consist of 29 properties (over 35 parcels) that were remediated in 1981 and 1982 by USDOE. USACE review of all Phase 2 properties in 2017-2018 found that for all 29 properties, the residual contamination meets the requirements of the OU1 ROD.

Phase 3 consists of 2 properties (1 parcel) that includes the MSP main site and the drainage ditch. These properties were remediated by USACE in 2006-2008 to meet the requirements of the OU1 ROD.

There are 7 additional properties (7 parcels) referred to as Phase 4 properties. The USACE investigated these properties in 2017-2018 and found that at all but one (1), the residual contamination met the requirements of the OU1 ROD. The one property that did not meet these standards, 305 Bound Brook Road, was partially addressed by USACE in 2020 by a Time Critical Removal Action. This property, consisting of a gas station, is located approximately 1.5 miles from the MSP site. Additional remedial action may be necessary to address contamination on the developed portion of the property. This additional remediation will not impact the FOSET Parcel.

Based on the findings presented in the groundwater investigation report (USACE 2005a) and

the results of the risk assessments completed for the MSP site (USACE 2005a), surface water and sediment do not pose unacceptable risks. Therefore, as documented in the OU2 ROD, surface water and sediments do not require further evaluation (USACE 2021).

The former auto body salvage yard (245 Mountain Ave) located to the west of the FOSET Parcel is currently being addressed for potential soil and groundwater contamination resulting from salvage activities. This work is being conducted under the oversight of a NJDEP Licensed Site Remediation Professional with review by the NJDEP Site Remediation and Waste Management Program.

Other than as set forth in this section, there are no known conditions on property adjacent to the FOSET Parcel that present potential risks to human health and the environment on the FOSET Parcel. The locations of previously addressed adjacent properties are shown in Enclosure 1, Figure 3.

8.0 ENVIRONMENTAL REMEDIATION AGREEMENTS

The FOSET Parcel is subject to a 2009 Federal Facility Agreement between USEPA and USACE. In addition, the FOSET Parcel is part of the NPL site listed on January 19, 1999. The FOSET Parcel will remain part of the NPL site listing after transfer. The deed will include a provision reserving the USDOE's obligation to conduct remediation activities, if necessary, in the future (see Enclosure 6).

9.0 REGULATORY/PUBLIC COORDINATION

The community has been an active participant throughout the CERCLA process. During the public comment period for the soils Proposed Plan (OU1), USACE received comments from the regulators and the public which were addressed in the ROD Responsiveness Summary and accordingly incorporated into the ROD (USACE 2005b). USACE received concurrence from USEPA and NJDEP on the completion of the soils remedial action through their approval of the PRAR (USACE 2010). These concurrence letters are referenced in Enclosure 2. Community participation during development of the OU2 Proposed Plan and ROD was actively encouraged. During the public comment period for the groundwater Proposed Plan (OU2) (USACE 2020), USACE received comments from the regulators and the public which were addressed in the ROD Responsiveness Summary and were incorporated into the ROD (USACE 2021).

A Responsiveness Summary addressing any comments on this FOSET will be included in the final document as an attachment.

10.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE

USDOE NEPA regulations identify classes of actions that USDOE has determined do not individually or cumulatively have a significant effect on the human environment (categorical exclusions). A categorical exclusion from further NEPA review may be applied to the real property actions listed below so long as the regulatory requirements of 10 CFR 1021.410 are met.

USDOE has determined that the transfer of the FOSET Parcel meets the NEPA categorical exclusion for A1 Routine USDOE Business Actions and B1.24 Property Transfers as stated below.

"Transfer, lease, disposition, or acquisition of interests in personal property (including, but not limited to, equipment and materials) or real property (including, but not limited to, permanent structures and land), provided that under reasonably foreseeable uses (1) there would be no potential for release of substances at a level, or in a form, that could pose a threat to public health or the environment and (2) the covered actions would not have the potential to cause a significant change in impacts from before the transfer, lease, disposition, or acquisition of interests."

11.0 RESPONSE ACTION ASSURANCES

As part of the Early Transfer, CERCLA §120(h)(3)(C)(ii) requires that the deed transferring the property to Transferee contain the following assurances:

- Provide for any necessary restrictions on the use of the Property to ensure the protection of human health and the environment (see Section 11.1);
- Provide that there will be restrictions on use necessary to ensure that required remedial investigations, response actions, and oversight activities will not be disrupted (see Section 11.2);
- Provide that all necessary response actions will be taken and identify the schedules for investigation and completion of all necessary response actions as approved by the appropriate regulatory agency (see Sections 11.3 and 11.4); and
- Provide that the US Government will submit a budget request to the Director of the Office of Management and Budget that adequately addresses schedules for the investigation and completion of all necessary response action, subject to congressional authorizations and appropriations (see Section 11.5).

11.1 Protection of Human Health and the Environment

Future response actions to be taken at the FOSET Parcel are assured by the requirements of the transfer documentation including the Deed between USDOE and Grantee. Additionally, as a part of the transfer, the USDOE will impose deed restrictions, covenants, and access provisions upon the FOSET Parcel, including a general prohibition against use of the groundwater.

The Deed transferring the FOSET Parcel to Grantee will contain the notices, restrictions, and covenants to ensure the protection of human health and the environment as described below. The content of these provisions is provided in the Deed Covenant. While these deed restrictions and covenants are intended to run with the land in perpetuity, the Deed will contain provisions for their removal or modification by Grantee upon a demonstration by additional investigation and/or remediation that removal or modification of the restrictions or covenants is appropriate (as discussed in Section 11.4). USDOE, NJDEP and USEPA concurrence will be required to remove restrictions.

The restrictions and covenants on use are presented in Enclosures 6 and 7 and summarized in Section 4.5.

11.2 Access and Assurances of Non-Disruption

Section 120(h)(3)(A)(iii) of the CERCLA requires that USDOE insert "a clause granting the

United States access to the property in any case in which remedial action or corrective action is found to be necessary after the date of such transfer." To fulfill this requirement, USDOE has inserted a deed clause assuring perpetual access to the FOSET Parcel for any required remedial or corrective action. This clause provides the primary mechanism assuring that potential future response actions performed by the government will not be prevented or disrupted. This clause will also provide access for the State of New Jersey. The Deed transferring the FOSET Parcel will contain additional notices, restrictions, and covenants to ensure that any required investigations, response actions, and oversight activities will not be disrupted, including the following:

Non-Disturbance Clause –Neither Property owners, nor their successors and assigns shall disrupt or prevent any required environmental response.

Non-Obstruction Clause – Neither Property owners, nor their successors and assigns shall construct buildings or structures without prior written approval of USDOE, USEPA, and NJDEP, until such time as the remedy is deemed protective by virtue of meeting the remedial action objectives. Any buildings constructed shall have engineered vapor barriers unless the Property owners otherwise demonstrate to and gain approval of USDOE, USEPA and NJDEP that such a barrier or other mitigation system is not needed for a specific building.

Non-Interference Clause – The establishment and operation of any hazardous waste facility on the FOSET Parcel is prohibited without the prior express written permission of the USDOE, USEPA, and NJDEP.

11.3 Response Action Assurance Execution

Following transfer of the FOSET Parcel, future response actions to be taken at the FOSET Parcel are assured by the requirements of the transfer documentation, including the Deed between USDOE and Grantee.

Certain specific assured response actions for the FOSET Parcel are described in more detail in the OU2 groundwater ROD (USACE 2021). These response actions include but are not limited to the following categories or activities:

Groundwater Remedies

- Groundwater treatment for remediation of groundwater in excess of groundwater protection standards.
- Continued groundwater monitoring and reporting;

Institutional Controls

Selected Remedy:

- Establishment of a CEA/WRA for groundwater;
- Construction worker warning signs

EPP/deed:

• Requirement that buildings and structures may not be built on the FOSET Parcel without written permission from the USDOE.

- Deed restrictions preventing use of site groundwater; and requirements for vapor mitigation systems in all new buildings determined to be at risk from vapor intrusion unless otherwise demonstrated as not needed to the satisfaction of NJDEP
- Deed restriction that monitoring wells shall not be disturbed without prior written permission from the USDOE and the NJDEP.
- Excavation and land disturbance restrictions

11.4 Response Action Schedule

The OU2 ROD addressing groundwater on the FOSET Parcel was finalized in September 2021. Accordingly, the schedule for response actions to be taken on the FOSET Parcel is being developed. Treatment is expected to require at least 2 rounds of injections over 2 years and monitoring for at least 30 years. The schedule demonstrates that the proposed covenant deferral and transfer of the property will not delay the necessary response actions at the property. After USDOE transfers ownership of the FOSET Parcel to Transferee, the scheduling decisions for response actions and any modifications thereof will be made by USACE in consultation with USEPA and NJDEP.

Further, in compliance with CERCLA § 120(h)(3)(C)(iii), when all response actions necessary to protect human health and the environment with respect to any hazardous substance remaining on the FOSET Parcel or portion of the property on the date of transfer have been taken, the United States shall execute and deliver to the owner or owners of the FOSET Parcel an appropriate document containing a warranty that all required remedial action has been completed to satisfy the requirement of CERCLA § 120(h)(3)(A)(ii)(I).

A tentative outline of scheduled completion dates for the response action as follows:

- Remediation Design/Remedial Action Work Plans (FY2022/23)
- Operations and Maintenance Plan (FY2024)
- Remedy in Place (FY2026) -, 2- year treatment begins
- MNA (FY2028) Groundwater monitoring begins

11.5 Financial Assurance

The USDOE hereby provides assurance that the Federal agency responsible for the Property subject to transfer will submit a budget request that adequately addresses schedules for investigation and completion of all necessary response action for which the USDOE's potentially responsible under CERCLA as amended, subject to congressional authorizations and appropriations. Any requirement for the payment of funds by the United States or any agency thereof is subject to the availability of appropriated funds, and no provision shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. 1341, or other statute.

11.6 Approach to Future Environmental Protection

The USDOE intends to take certain steps to structure the transfer of the FOSET Parcel to foster protection of human health and the environment and the eventual remediation of the

FOSET Parcel, all of which will be determined by the requirements of the transaction documents. These steps include:

- Inclusion of deed restrictions and environmental protection provisions in the Deed for the FOSET Parcel. These are discussed in Section 11.1.
- The protections and land use controls discussed in Section 12 below will be applicable to the FOSET Parcel.

12.0 ENVIRONMENTAL PROTECTION PROVISIONS AND LAND USE CONTROLS

During and following response actions at the property, USACE, USDOE, NJDEP, and USEPA will implement or ensure implementation of land use controls to assure that the FOSET Parcel's use is consistent with the nature and extent of the contamination present.

These controls will consist of three independently enforced mechanisms, providing redundant protections for human health and the environment. These mechanisms are:

- NJDEP Classification Exception Area for groundwater;
- Deed Restrictions (and associated periodic inspections) with EPPs, and
- USEPA CERCLA five-year reviews (FYR) in accordance with 40 CFR Part 300.430(f)(4)(ii).

12.1 NJDEP Classification Exception Area

The NJDEP divides groundwater into classes based on groundwater use. Each class has its own chemical, physical, and biological standards. When a local groundwater area does not meet the standards, but is being monitored or treated, the State can issue an exception to the classification. The exception provides notice that there is groundwater pollution in a localized area and suspends all designated groundwater use in each CEA/WRA during the life of the CEA/WRA.

The CEA/WRA for the FOSET Parcel and the surrounding area impacted by groundwater contamination is in place.

12.2 Deed Restrictions and Environmental Protection Provisions

On the basis of the above information and other environmental studies and reports, and in consideration of the intended use of FOSET Parcel, certain terms and conditions are required for the proposed transfer. These terms and conditions are set forth in the enclosed Deed Covenant (Enclosure 6) discussing the CERCLA Covenant, access provisions and other Deed notices and the EPPs. These covenants, access provisions, and Deed restrictions for the FOSET Parcel are discussed throughout this FOSET.

12.3 USEPA CERCLA Five Year Reviews

The National Contingency Plan (NCP), 40 CFR Part 300.430(f)(4)(ii) states: "If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above

levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less than every five years after the initiation of the selected remedial action." Accordingly, FYRs generally are required by CERCLA or program policy when hazardous substances remain on site above levels that permit unlimited use and unrestricted exposure. FYRs provide an opportunity to evaluate the implementation and performance of a remedy to determine whether it remains protective of human health and the environment. Generally, reviews are conducted as a matter of policy for sites where the remedial action will not leave hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure, but require five years or more to complete. A policy review is triggered by the date that construction is completed at a site and is repeated every succeeding five years so long as future uses remain restricted. USEPA retains responsibility for determining the protectiveness of the remedy.

Because the OU2 remedial action will take longer than 5 years and results in contaminants remaining on site above cleanup levels that permit unlimited use and unrestricted exposure, the remedial action will need to be reviewed at least once every five years until cleanup goals are attained. In the event findings from a FYR determine that the cleanup levels will not be met in what is determined by USACE and the USEPA to be a "reasonable timeframe" the remedy may be modified. The modification of the remedy would involve the preparation either of an Explanation of Significant Differences or a ROD amendment. During the inspection portion of the FYR, a USEPA site inspection checklist will be completed. The implementation of the remedial alternative would be considered complete when the long-term average concentrations of the contaminants at each individual well do not exceed the ROD cleanup levels for three consecutive sampling events.

13.0 FINDING OF SUITABILITY FOR EARLY TRANSFER DECLARATION

Based on the above information, I conclude that all USDOE requirements to reach a Finding of Suitability for Early Transfer of the FOSET Parcel of the Middlesex Sampling Plant Site have been met. Based on the assurances provided, the proposed use of the FOSET Parcel for the uses identified herein satisfies all regulatory requirements and is consistent with protection of human health and the environment, subject to inclusion of the notifications in this document.

In accordance with CERCLA Section 120(h)(3), USDOE requests a deferral of the covenant requirements until such time when all response actions have been completed. The deferral and transfer of the FOSET Parcel will not substantially delay any necessary response actions at the property. Such deferral request is based upon a determination demonstrated in this FOSET that:

- The property is suitable for transfer for the use intended by the transferee, and the intended use is consistent with protection of human health and the environment;
- The deed or other agreements proposed to govern the transfer between the United States and the recipient of the property contains the assurances set forth in CERCLA §120(h)(3)(C)(ii), including assurances that:
 - provide for the necessary restrictions on the use of the property to ensure the protection of human health and the environment;
 - provide that there will be restrictions on use necessary to ensure that required remedial investigations, response actions, and oversight

activities will not be disrupted;

- provide that all necessary response actions will be taken and identify the schedules for investigation and completion of all necessary response actions as approved by the appropriate regulatory agency; and
- provide that the Federal agency responsible for the property subject to transfer will submit a budget request that adequately addresses schedules for investigation and completion of all necessary response actions, subject to congressional authorization and appropriations.

Finally, the hazardous substance notification (Enclosure 4, Table 2) shall be included in the deed as required under CERCLA Section 120(h). When all response action necessary to protect human health and the environment with respect to any substances remaining of the FOSET Parcel on the date of transfer have been taken, the United States shall execute and deliver to the transferee an appropriate document containing a warranty that all such response actions have been taken.

Carmelo Melendez EngD, PE, PMP - Director Office of Legacy Management (LM-1) U.S. Department of Energy

14.0 ENCLOSURES

Enclosure 1 Figures Including Tax Maps

Fig 1 Site Location

Fig 2 Aerial View of the Site

Fig 3 Tax Maps

Fig 4 Tax Map Showing the Site

Fig 5 Site and FOSET Parcel

Fig 6 FOSET Parcel Survey

Fig7 Borough of Middlesex Zoning

Fig 8 Survey Units Legacy Building Foundations, Underground Storage Tanks, and

Blank Ammunition Locations

Fig 9 Extent of Ground Water Contamination

Fig 10 GroundwaterWell Locations

Enclosure 2 Environmental Documentation

Enclosure 3 Tables 1a and 1b—Description of OU1 Remedial Wastes Streams, Disposition, and Remedial Action Objectives Compliance; Table 1c-Description of OU2 Remedial wastes and Proposed Preferred Alternative

Enclosure 4 Table 2—Notification of Hazardous Substance Storage, Release, or Disposal

Enclosure 5 Table 3—Notification of Petroleum Product Storage, Release, or Disposal

Enclosure 6 CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions

Enclosure 7 Environmental Protection Provisions

Enclosure 8 Middlesex Sampling Plant Vicinity Property Inventory

Enclosure 1

Figures Including Tax Maps

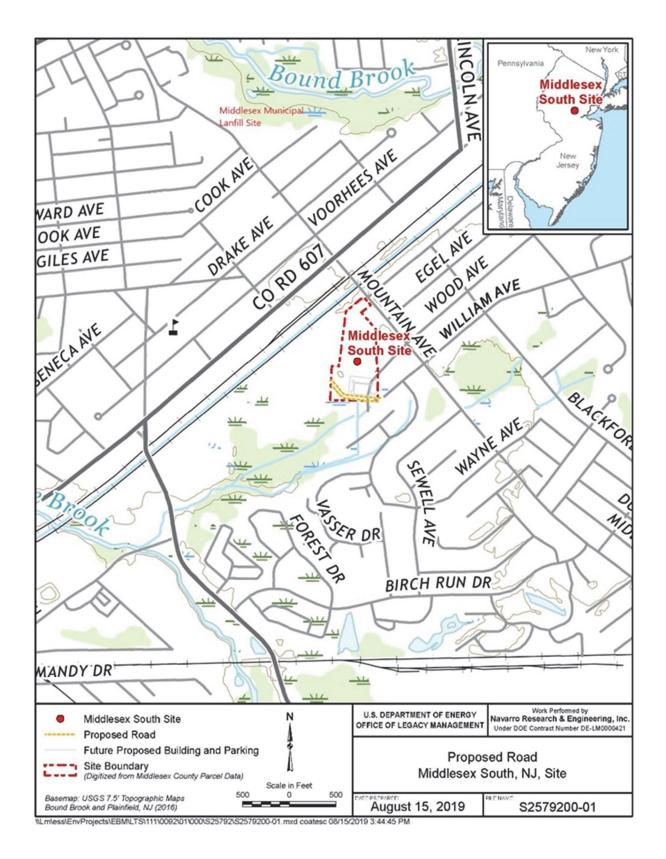
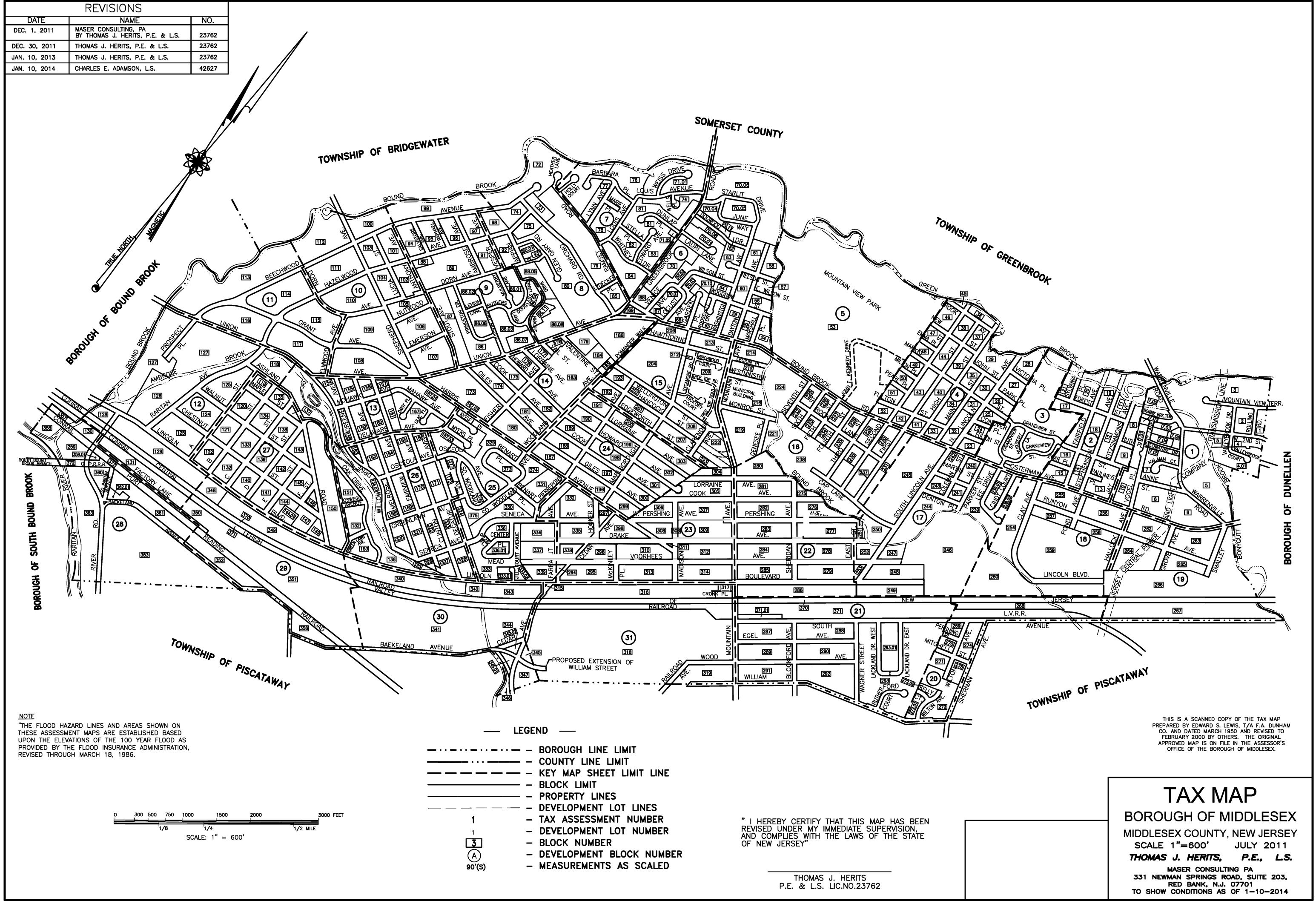


Figure 1. Site Location



Figure 2. Aerial View of the Site



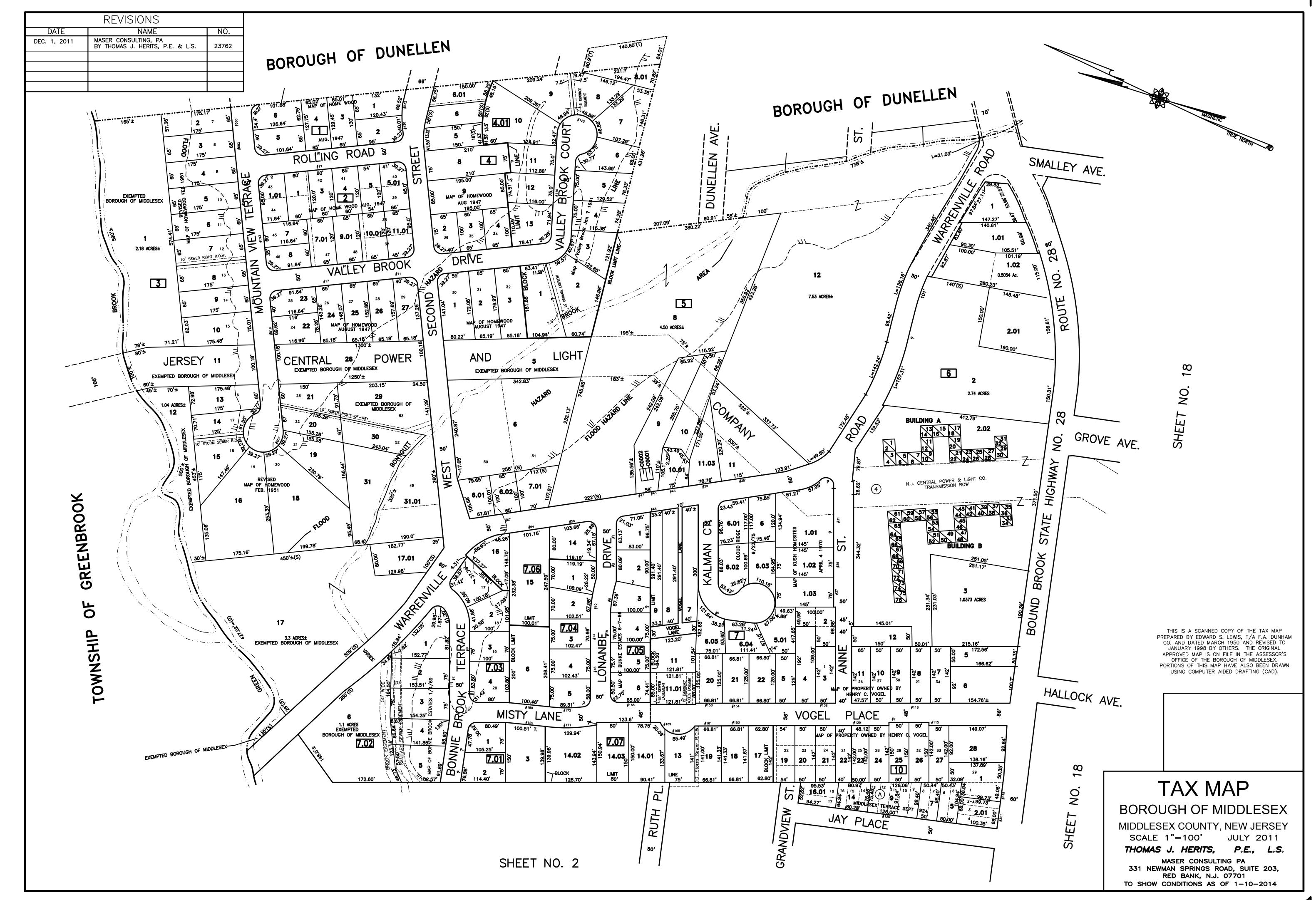
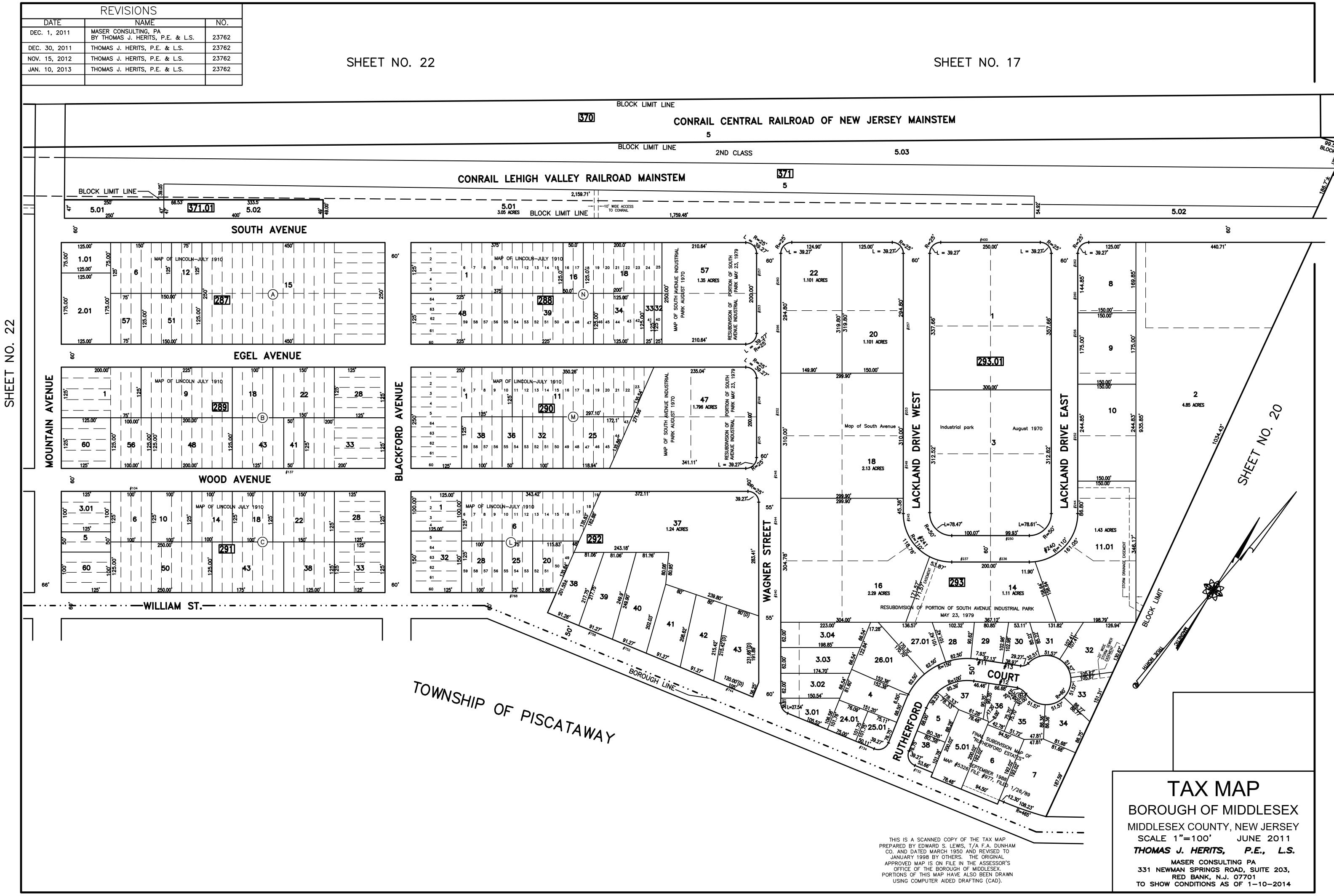
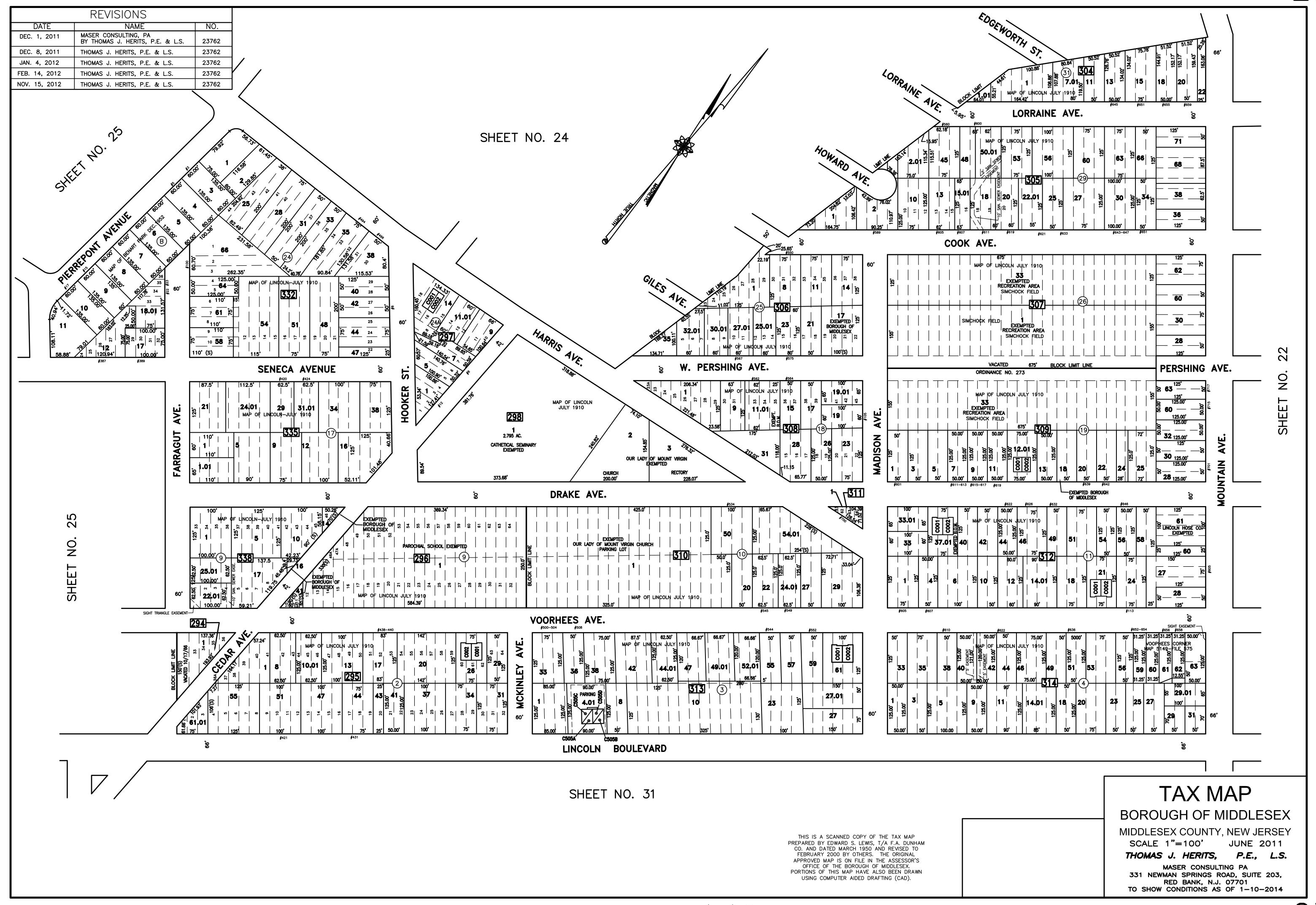


Figure 3 (cont) - Tax Maps

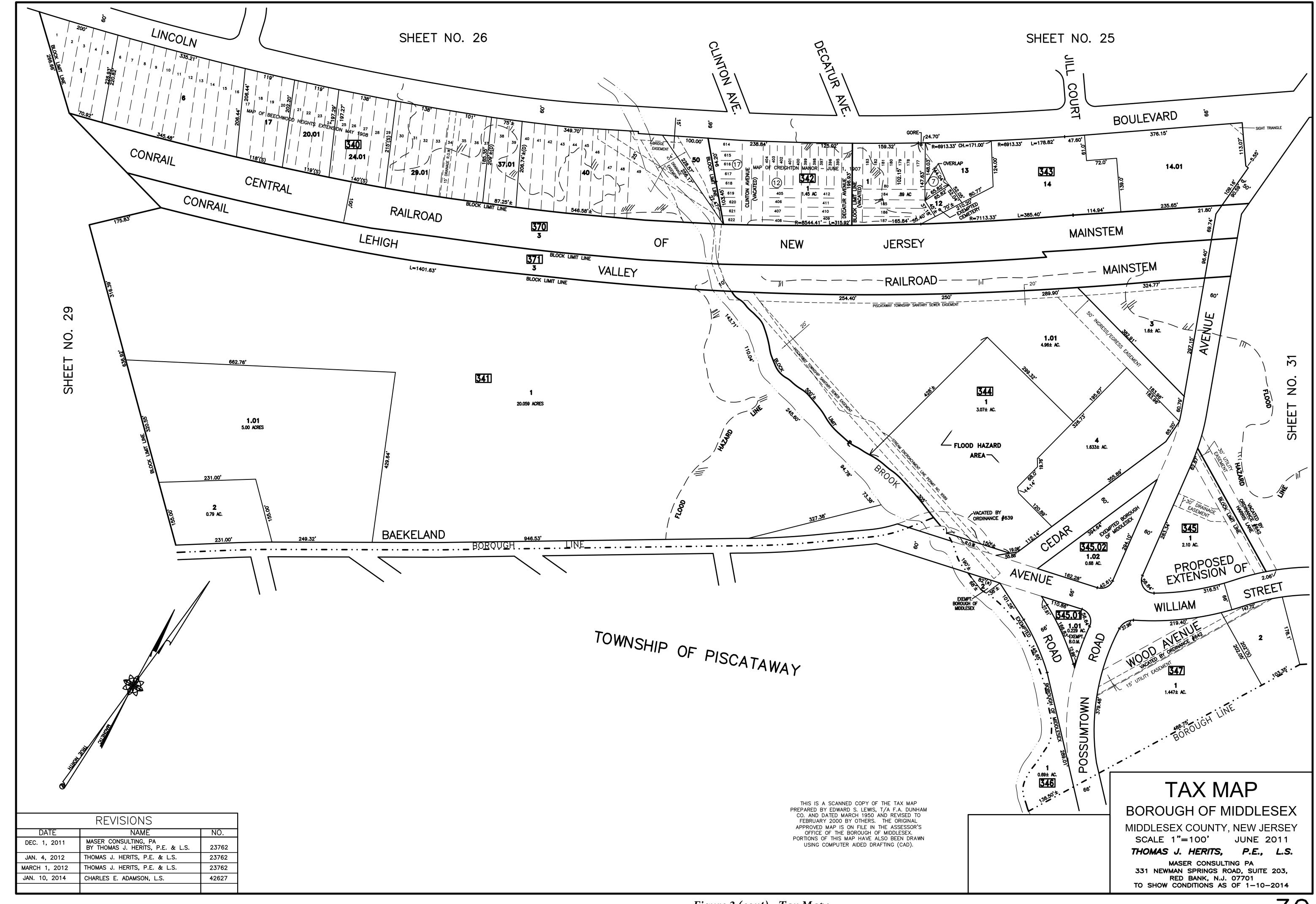
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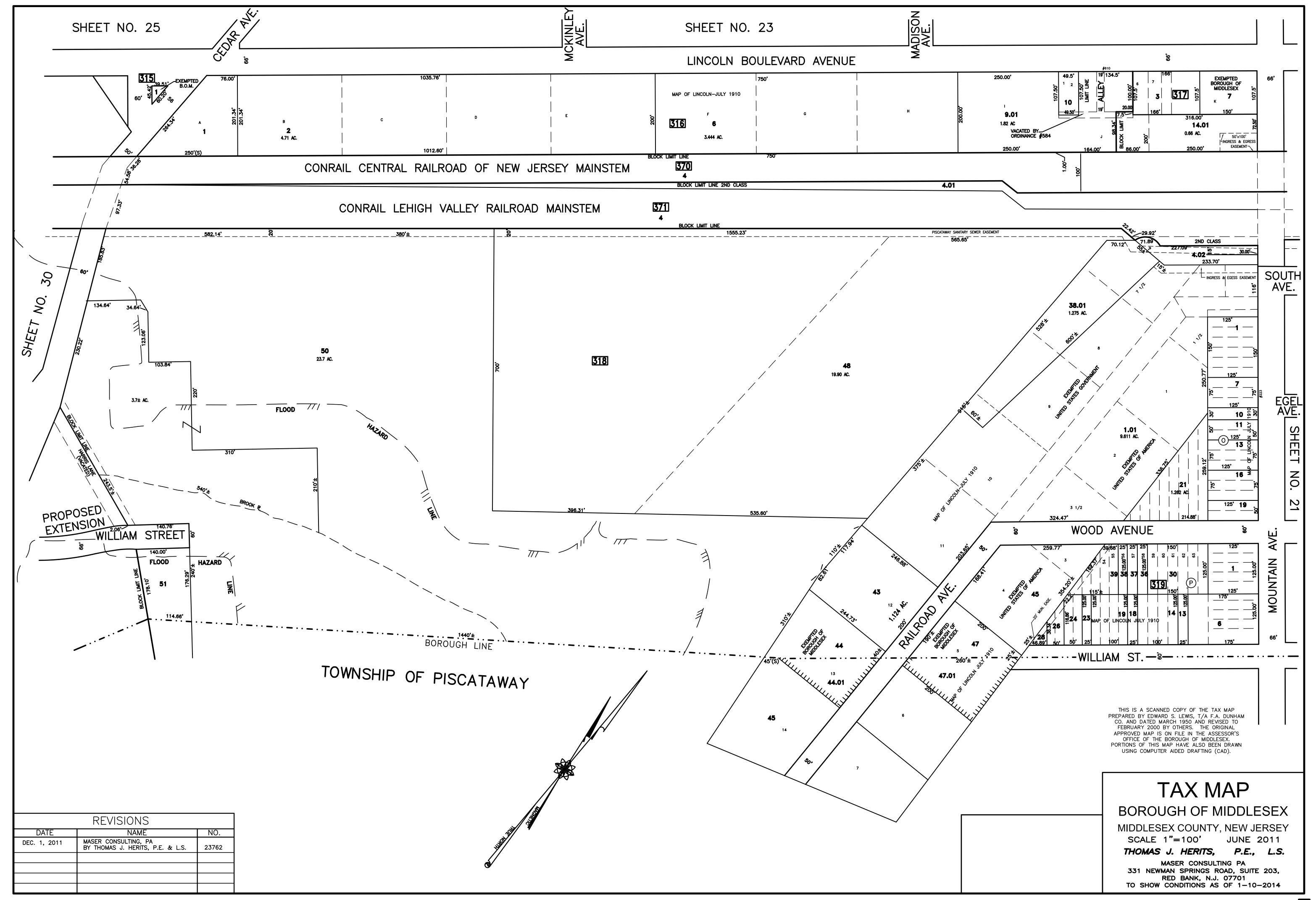


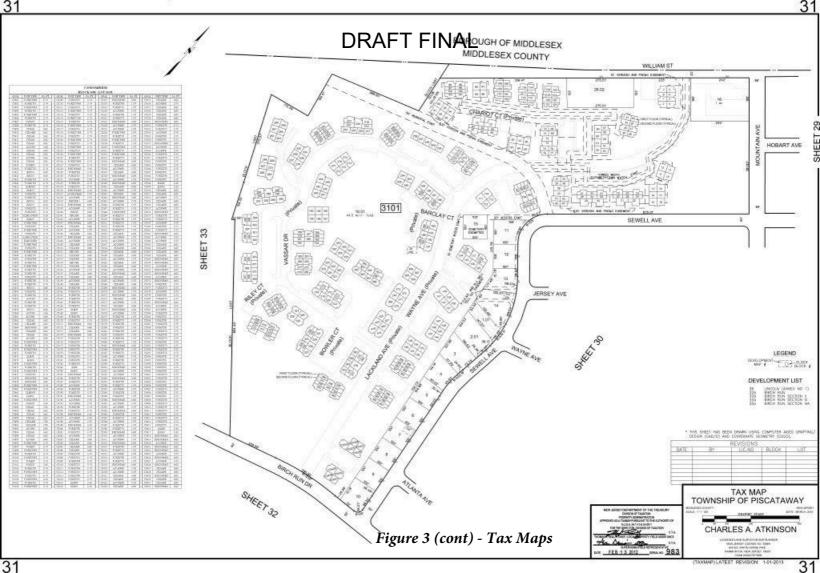


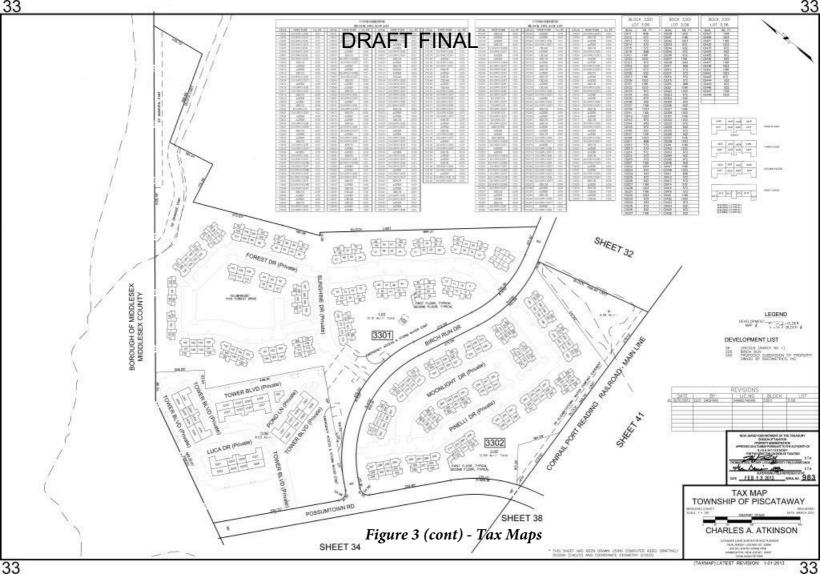


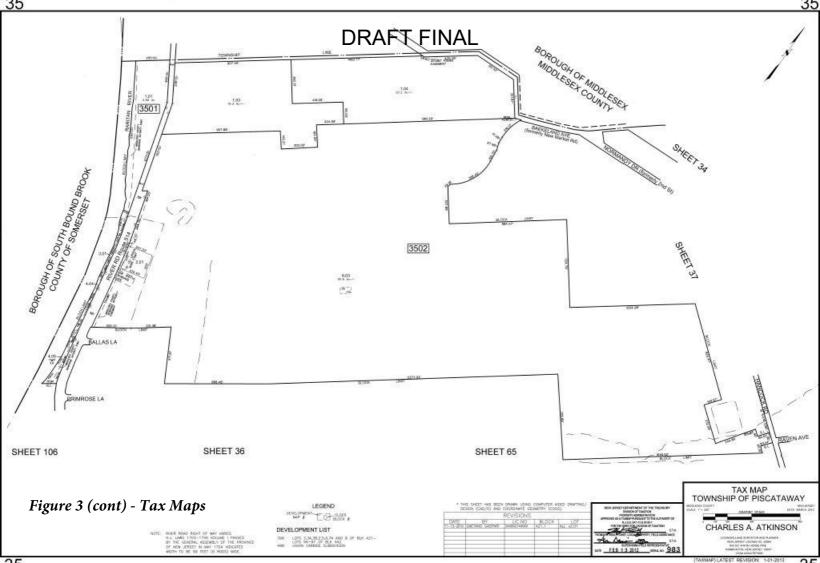












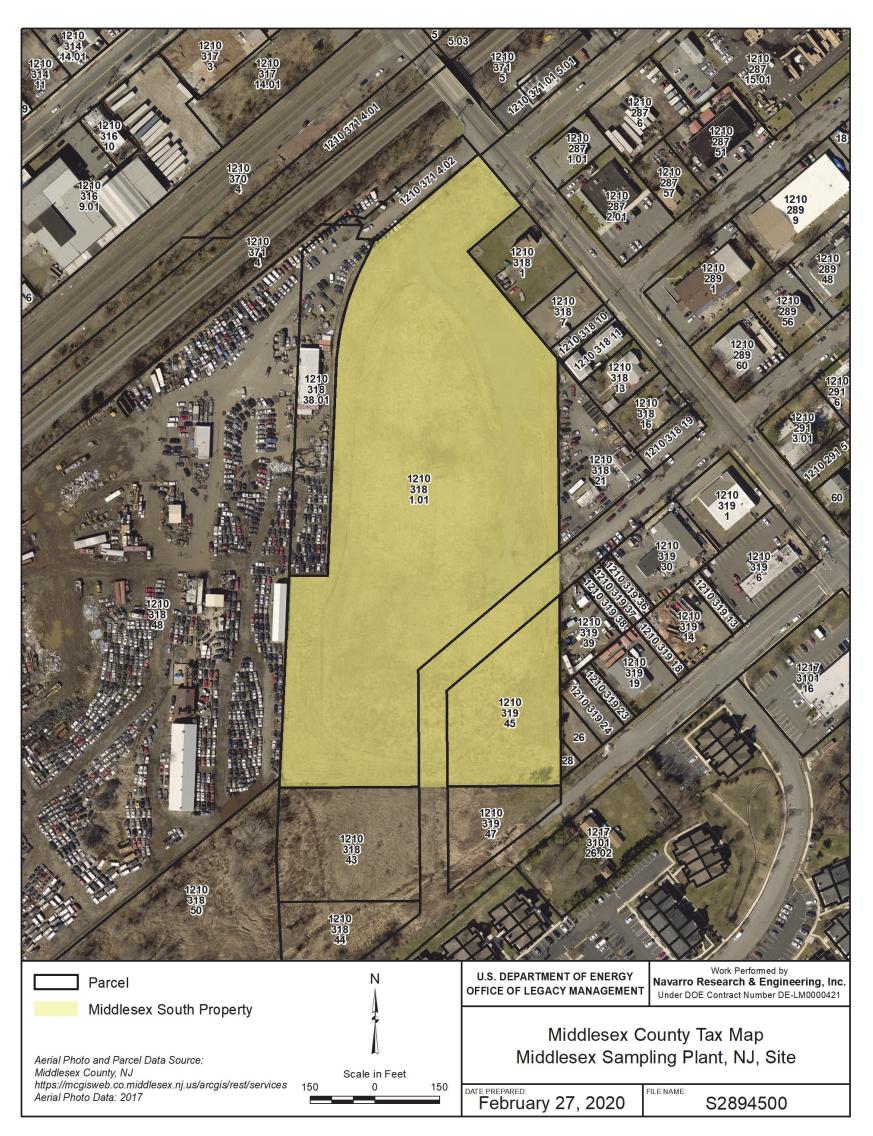
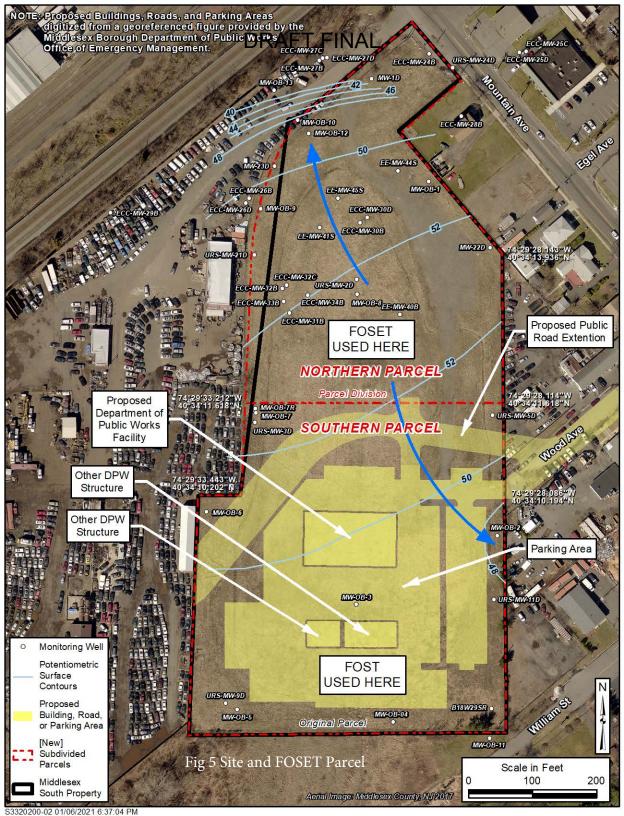


Figure 4. Tax Map Showing the Site



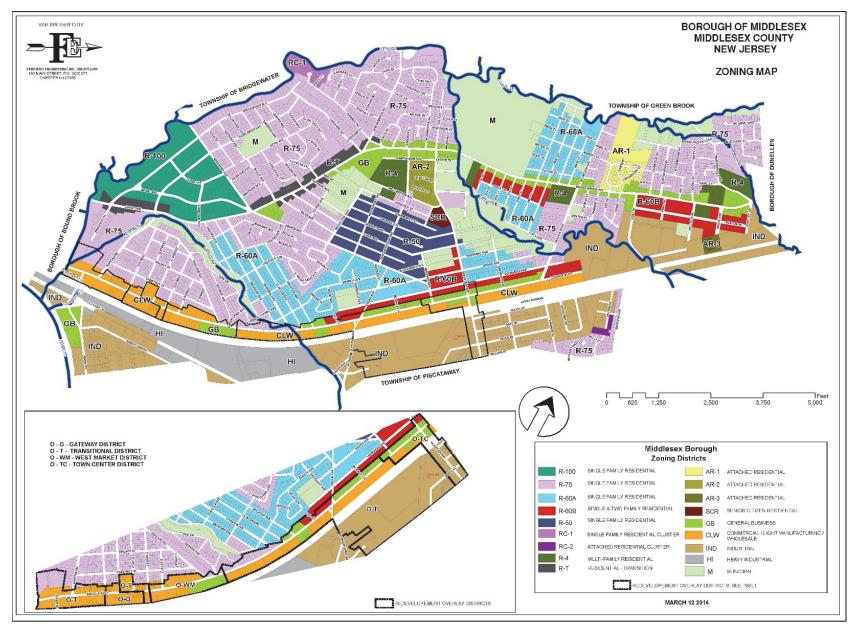


Figure 7. Borough of Middlesex Zoning

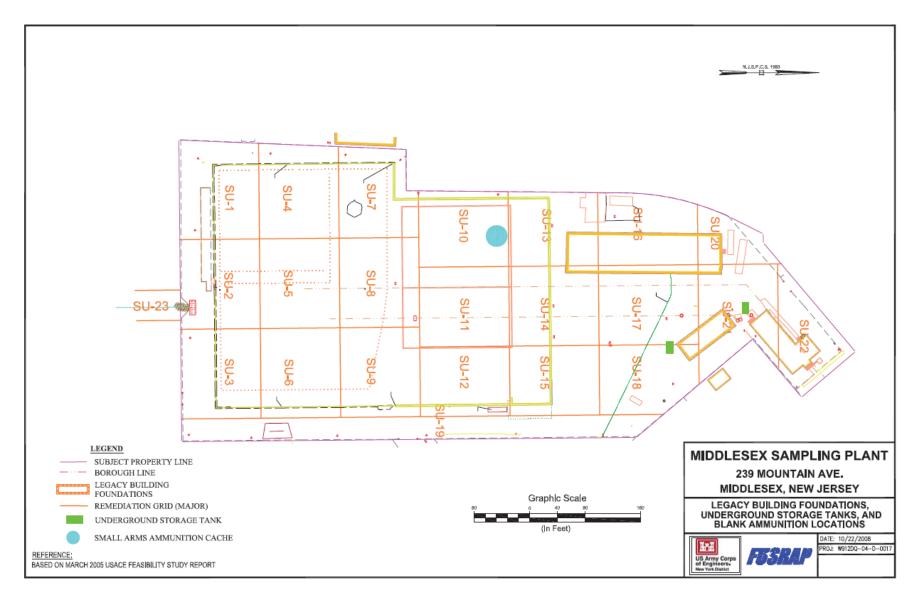


Figure 8. Survey Units Legacy Building Foundations, Underground Storage Tanks, and Blank Ammunition Locations

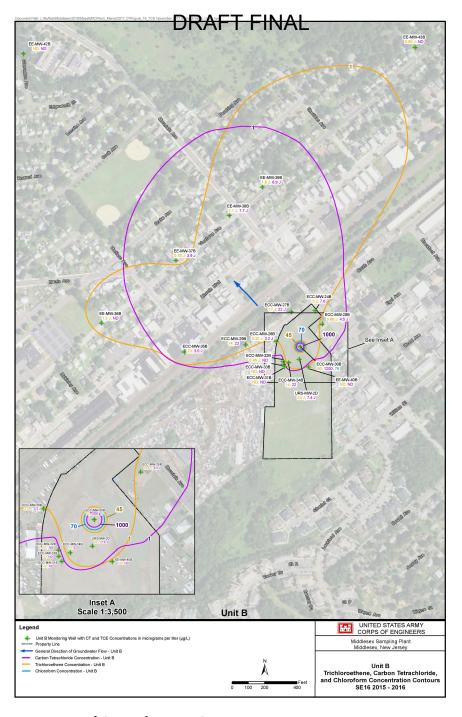


Figure 9. Extent of Ground Water Contamination

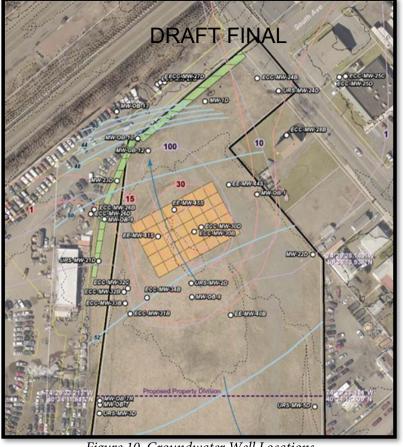


Figure 10. Groundwater Well Locations

Enclosure 2

Environmental Documentation

10 CFR 770. "Transfer of Real Property at Defense Nuclear Facilities for Economic Development," *Code of Federal Regulations*.

10 CFR 1021.410. "Application of Categorical Exclusions (Classes of Actions That Normally Do Not Require EAs or EISs)," *Code of Federal Regulations*.

10 USC 101. "Definitions," United States Code.

10 USC 2710. "Inventory of Unexploded Ordnance, Discarded Military Munitions, and Munitions Constituents at Defense Sites (Other Than Operational Ranges)," *United States Code*.

AEC (U.S. Atomic Energy Commission), 1974. *Radiation Survey Report of the Middlesex Landfill Site*, USAEC-NRN-7406, Washington, D.C.

ANCO Environmental Services Inc., 2007. *Underground Storage Tank Closure Report*, Middlesex Sampling Plant, Middlesex, New Jersey.

ECC (Environmental Chemical Corporation), 2000. *Interim Pile Removal Closure Report*, Middlesex Sampling Plant, Middlesex, New Jersey, November.

ECC (Environmental Chemical Corporation), 2006a. *Closure Report for Building Demolition*, Middlesex Sampling Plant, Middlesex, New Jersey, November.

ECC (Environmental Chemical Corporation), 2006b. *Contractor Quality Control Plan (CQCP)*, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, July.

ECC (Environmental Chemical Corporation), 2006c. *Final Status Survey Plan (FSSP)*, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, December.

ECC (Environmental Chemical Corporation), 2006d. *Project Management Plan (PMP)*, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, July.

ECC (Environmental Chemical Corporation), 2006e. *Radionuclide and Chemical Data Quality Management Plan: Part 1: Quality Assurance Project Plan (QAPP), and Part II: Field Sampling Plan (FSP)*, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, July.

ECC (Environmental Chemical Corporation), 2006f. *Remedial Action Work Plan (RAWP)*, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, July.

ECC (Environmental Chemical Corporation), 2006g. *Site Safety and Health Plan*, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, July.

- ECC (Environmental Chemical Corporation), 2006h. *Soil and Erosion Control Plan*, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, July.
- ECC (Environmental Chemical Corporation), 2006i. Storm Water Management, Soil Erosion and Sediment Control Plan, Formerly Utilized Site Remedial Action Program Soils Operable Unit, Middlesex Sampling Plant, Middlesex, New Jersey, July.
- ECC (Environmental Chemical Corporation), 2007. *Drainage and Grading Plan*, Middlesex Sampling Plant, Middlesex, New Jersey, December.
- EPA (U.S. Environmental Protection Agency), 1988. *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERLCA*, EPA 540 G-89 004, U.S. Environmental Protection Agency.
- EPA (U.S. Environmental Protection Agency), 1990. *National Oil and Hazardous Substances Pollution Contingency Plan*, Final Rule, FR Vol. 55, No. 46, U.S. Environmental Protection Agency, March 8, available from U.S. Government Printing Office, Washington, D.C.
- EPA (U.S. Environmental Protection Agency), 1996. Test Methods for the Evaluation of Solid Waste, SW-846.
- EPA (U.S. Environmental Protection Agency), 2000a. *Close-out Procedures for National Priorities Sites*, EPA-540-R-98-016, January.
- EPA (U.S. Environmental Protection Agency), 2000b. *Multi-Agency Radiation Site Survey and Investigation Manual (MARSSIM)*, U.S. Environmental Protection Agency, U.S. Department of Energy, U.S. Department of Defense, and U.S. Nuclear Regulatory Commission, NUREG-1575 and EPA 402-R-97-016 Rev 1, August.
- EPA (U.S. Environmental Protection Agency), 2010. "Re: Soils OU 1 Closure Certification; Middlesex Sampling Plant, Middlesex, New Jersey," letter from Angela Carpenter (EPA) to Allen Roos (USACE), September.
- EPA (U.S. Environmental Protection Agency) and USACE (U.S. Army Corps of Engineers), 2009. US EPA Region II and US Army Corp of Engineers Federal Facilities Agreement Under CERCLA Section 120 Administrative Docket No.: CERCLA-02-2009-2040 for the Middlesex Sampling Plant (USDOE Site), September.
- NJAC (New Jersey Administrative Code), 1997a. New Jersey Technical Requirements for Site Remediation, 7:26E, New Jersey Administrative Code.
- NJAC (New Jersey Administrative Code), 1997b. *Soil Remediation Standards for Radioactive Materials*, 7:28-12, New Jersey Administrative Code.
- NJDEP (New Jersey Department of Environmental Protection), 1998. Revised Guidance Document for the Remediation of Contaminated Soil. New Jersey Department of Environmental Protection, Trenton, New Jersey, January.

NJDEP (New Jersey Department of Environmental Protection), 2000. New Jersey Department of Environmental Protection Requirements for Data Acceptance, Trenton, New Jersey, January.

NJDEP (New Jersey Department of Environmental Protection), 2010. "Remedial Action Report Approval Re: Draft Final Post Remedial Action Report for Soils OU-I Remedial Action Middlesex Sampling Plant 239 Mountain Ave Middlesex Borough, Middlesex County SRP Pl# G00000016 Activity Number Reference: RPC00000I," letter from Donna Gaffigan (NJDEP) to Helen Edge (USACE), June 29, 2010.

NRC (U.S. Nuclear Regulatory Commission), 1974. *Termination of Operating Licenses for Nuclear Reactors*, Regulatory Guide 1.86, June.

NRC (U.S. Nuclear Regulatory Commission), 1998. *Minimum Detectable Concentration With Typical Radiation Survey Instruments for Various Contaminants and Field Conditions*, NUREG-1507, June.

ORNL (Oak Ridge National Laboratory), 1977. *Radiological Survey of the Middlesex Sampling Plant*, Final Report, DOE/EV-005/1, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

ORNL (Oak Ridge National Laboratory), 1980. *Radiological Survey of the Middlesex Municipal Landfill Site*, Middlesex, New Jersey, DOE/EV-005/20, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

OSWER (Office of Solid Waste and Emergency Response), 2000. *Close-out Procedures for NPL Sites*, Directive 9320.2-09A-P, January.

USACE (U.S. Army Corps of Engineers), 1997. Engineering Evaluation/Cost Analysis for the Removal of the Middlesex Municipal Landfill Waste Pile at the Middlesex Sampling Plant, CCN 160071, U.S. Army Corps of Engineers.

U.S. Census Bureau, 2010. 2010 Census of Population and Housing, U.S. Department of Commerce, Economics and Statistics Administration.

USACE (U.S. Army Corps of Engineers), 1999. Engineering Evaluation/Costs Analysis for the Removal of the Vicinity Property Interim Storage Pile at the Middlesex Sampling Plant, U.S. Army Corps of Engineers.

USACE (U.S. Army Corps of Engineers), 2001. CENWK-EC-EF Data Quality Evaluation Guidance, U.S. Army Corps of Engineers, May.

USACE (U.S. Army Corps of Engineers), 2003a. *Kansas City District Data Quality Evaluation Guidance*, Middlesex Sampling Plant, Middlesex, New Jersey, U.S. Army Corps of Engineers, May.

USACE (U.S. Army Corps of Engineers), 2003b. *Safety and Health Requirements Manual*, EM 3851-1, November 3.

- USACE (U.S. Army Corps of Engineers), 2004a. *Groundwater Operable Unit, Draft Remedial Investigation Report*, Middlesex Sampling Plant, Middlesex, New Jersey, U.S. Army Corps of Engineers, May.
- USACE (U.S. Army Corps of Engineers), 2004b. *Soils Operable Unit, Final Remedial Investigation Report*, Middlesex Sampling Plant, Middlesex, New Jersey, U.S. Army Corps of Engineers.
- USACE (U.S. Army Corps of Engineers), 2004c. *USACE Radionuclide Data Quality Evaluation Guidance for Alpha and Gamma Spectroscopy*, Middlesex Sampling Plant, Middlesex, New Jersey, U.S. Army Corps of Engineers.
- USACE (U.S. Army Corps of Engineers), 2005a. *Groundwater Operable Unit Remedial Investigation Report, Middlesex Sampling Plant, Middlesex, New Jersey*, U.S. Army Corps of Engineers.
- USACE (U.S. Army Corps of Engineers), 2005b. Soils Operable Unit, Record of Decision for the Middlesex Sampling Plant Site, Middlesex, New Jersey, U.S. Army Corps of Engineers, September.
- USACE (U.S. Army Corps of Engineers), 2010. Final Post Remedial Action Report: Soils Operable Unit 1 Middlesex Sampling Plant Middlesex, New Jersey, U.S. Army Corps of Engineers, August.
- USACE (U.S. Army Corps of Engineers), 2017a. Final Feasibility Study Report Groundwater Operable Unit OU2: Middlesex Sampling Plant FUSRAP Site Middlesex New Jersey, U.S. Army Corps of Engineers, October.
- USACE (U.S. Army Corps of Engineers), 2017b. Groundwater Investigation Technical Memorandum, Middlesex Sampling Plan, Middlesex, New Jersey, U.S. Army Corps of Engineers.
- USACE (U.S. Army Corps of Engineers), 2020. Final Proposed Plan, Groundwater Operable Unit OU2, Middlesex Sampling Plant, Middlesex, New Jersey, August 2020, U.S. Army Corps of Engineers.
- USACE (U.S. Army Corps of Engineers), 2021. *Middlesex Sampling Plant Wetland Delineation*, U.S. Army Corps of Engineers, February.
- USDOE (U.S. Department of Energy), 1998. CERCLA Requirements Associated with Real Property Transfers, DOE EH-413-9808, April.
- USDOE (U.S. Department of Energy), 2005. Cross-Cut Guidance on Environmental Requirements for DOE Real Property Transfers (Update), DOE/EH-413/9712.
- USDOE (U.S. Department of Energy), 2019. NEPA Categorical Exclusion Determination Form, Construction Easement and Property Transfer at the FUSRAP Middlesex South, New Jersey Site, October.

Enclosure 3

Tables 1a and 1b—Description of OU1 Remedial Wastes Streams, Disposition, and Remedial Action Objectives Compliance

Table 1c — Description of OU2 Remedial Wastes and Proposed Preferred Alternative

Table 1a. OU1 Waste Streams and Disposition

Waste Type	Volume	Weight	Disposal Facility
Radiological Waste (Soil and Debris Including Building Debris and Petroleum Contaminated Soils)	31,510 in situ m ³ (41,231 CY)	7.23 × 10 ⁷ kg (79,687 tons)	US Ecology Idaho, Inc. PO Box 400 20400 Lemley Rd Grand View, Idaho 83624
Regulated Radiological Waste (Soil and Debris)	10 ex situ m³ (13.3 CY)	16,846 kg (18.57 tons)	Energy Solutions, LLC Clive Disposal Site (Bulk Waste Facility) Interstate 80, Exit 49 Clive, Utah 840029
Small Arms Blank Cartridge Waste	0.07 ex situ m³ (2.5 cu ft)	90.72 kg (200 lbs)	Clean Harbors, Colfax, LLC 3763, Highway 471 Colfax, Louisiana 71417
Chemically Impacted Waste (Soil and Debris)	3,405 in situ m³ (4,454 CY)	7.24 × 10 ⁶ kg (7,984 tons)	Allied Waste Niagara Falls Landfill 56 th Street and Niagara Falls Blvd Niagara Falls, New York 14304
Asbestos Containing Material from Building Demolition	800 ft ² of tile and an undocumented ft ² wall panels, 100 linear feet of pipe insulation	n/a	Girard Point Landfill Philadelphia, PA (insulation/wall panels) US Ecology Idaho, Inc. PO Box 400 20400 Lemley Rd Grand View, Idaho 83624 (tiles/wall panels)
Non-Hazardous/ DOT Combustible Liquid Waste Oil (UST Contents)	6,435 ex situ liters (1,700 gallons)	n/a	Clean Water of New York 3249 Richmond Terrace Staten Island, NY 10303
Waste Water from Impacted Survey Units	5,159,134 ex situ liters (1,362,899 gallons), pre-treated on site and compliantly discharged	n/a	Middlesex County Utilities Authority (MCUA) 2571 Main Street Sayreville, New Jersey 08872

Abbreviations: ft² = square feet kg = kilograms m³ = cubic meters

n/a = not applicable

Table 1b. OU1 Performance Results Compared with Remedial Action Objectives

Remedial Action Objectives	Performance Results
Soil excavation to an unrestricted use cleanup level as identified in the MSP Soils OU-1 ROD. Offsite disposal of the excavated radiologically and chemically impacted soils at licensed and permitted facilities.	45,698 in situ CY, or 86,879 tons, of radiological and to a much lesser extent petroleum contaminated material (soils and debris) were removed from the site and disposed offsite at a licensed/permitted disposal facility. Remedial activities for OU-1 included the excavation and shipment of approximately 41,244 in situ CY, or 79,705 tons, of radiologically impacted soil and debris and approximately 4,454 in situ CY, or 7,781 tons, of chemically impacted waste.
Demolition, removal, and offsite disposal of contaminated former storage pads and below-grade structures at licensed and permitted facilities.	Legacy building foundations, drainage structures, and the settling basin were also removed during excavation and shipped with contaminated soil to offsite disposal facility. Volumes included with soil volume above.
Certification of the property for unrestricted use with regards to soils.	Upon completion of excavation activities and prior to backfilling of each survey unit, an FSS of the twenty-three Class 1 impacted SUs was performed in accordance with MARSSIM protocol. The MARSSIM FSS Null Hypothesis was "rejected" for all SUs, which means that remaining soils in all SUs are below the cleanup criteria for radionuclides. Analytical results of final status chemical and lead samples were compared directly to the cleanup criteria for each of the individual PAH/metal constituents. All chemical and metal samples results were well below the cleanup criteria for each of the five PAHs and lead. Following the completion of remediation activities, the site was backfilled with certified clean backfill and was topped and seeded to restore established final grade per final grading levels as required by the contract and approved by the Borough of Middlesex. All soils met MSP Soils OU-1 ROD criteria, which allows for unrestricted use of the site.
Minimize potential health hazards to personnel performing the remedial action.	The Site Safety and Health Plan (ECC 2006h) was followed. Contamination control methods were successfully implemented to avoid personnel contamination events or intakes above established limits.

Abbreviations:

FSS = final status survey MARSSIM = Multi-Agency Radiation Survey and Site Investigation Manual

Table 1C Description of OU2 Remedial Wastes and Proposed Preferred Alternative

Media	Contaminants	Proposed Remedy
Media Groundwater	Carbon tetrachloride, chloroform (a breakdown product of carbon tetrachloride), and trichloroethene	As stated in the Proposed Plan (USACE 2020) the proposed groundwater remedial activities at the FOSET PARCEL are Treatment with In-situ Chemical Reduction (ISCR), Monitored Natural Attenuation (MNA), and Land Use Controls (LUC). ISCR technologies are proposed to treat the Volatile Organic Compounds (VOC) present in groundwater situated in the fractured bedrock within Unit B on site at the source area. This treatment would eventually eliminate VOCs emanating from the site source area, thereby reducing the long-term chlorinated VOC mass flux from the source area feeding the off-site portion of the plume and isolate groundwater with low concentrations of VOCs in the downgradient portion of the plume. MNA would be applied to the on-site VOCs not influenced by active treatment, the downgradient portion of the VOC plume, and to any residual uranium present in the overburden groundwater. An LUC, in the form of a groundwater Classification Exception Area (CEA) would be utilized in areas of groundwater contamination present at the site until cleanup goals are achieved. Because this alternative would result in contaminants that remain above cleanup levels that allow for unlimited use and unrestricted exposure during the MNA period, the remedial
		action would need to be reviewed at least once every five years until cleanup goals are attained.

Enclosure 4

Table 2—Notification of Hazardous Substance Storage, Release, or Disposal

Table 2. Notification of Hazardous Substance Release, Storage, or Disposal

Area	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions
Site	PAHs	PAH contamination is assumed to have originated prior to government activities at the site. PAHs are ubiquitous and associated with asphalt. Releases are assumed to have occurred when the site was used to manufacturer asphalt paints (1910–1943).	OU1 remedial actions addressed PAH contamination.
Site	VOCs	The release area for carbon tetrachloride, chloroform (a breakdown product of carbon tetrachloride), and trichloroethene appears to be limited to a small sump that was located in the former Process Building. This sump was used to dispose of wastewater and may have been used for the disposal of nonwater residuals, although site records do not indicate the use of solvents as part of site operations.	OU2 remedial action will address VOC contaminated groundwater.
Site	Uranium and its daughter products	Site history indicates potential releases to soils as early as 1943 and throughout the duration of MSP operations (1943–1955).	OU1 remedial actions addressed uranium and its daughter products contamination.
Site	Lead	The release area for lead appears to be limited to a small sump that was located in the former Process Building. This sump was used to dispose of wastewater and may have been used for the disposal of nonwater residuals, although site records do not indicate the use of lead as part of site operations.	OU1 remedial action addressed lead contamination at the property.

Abbreviation: VOC = volatile organic compound

Enclosure 5

Table 3—Notification of Petroleum Product Storage, Release, or Disposal

Table 3. Notification of Petroleum Product Storage, Release, or Disposal

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Action Description
SUs 18 and 21	#2 Fuel Oil	A "No Further Action" classification of the former UST sites was requested for the soils based on the UST closure activities and the UST removal analytical results.	During remedial excavation activities, the government encountered two 1,893-liter (550-gallon) USTs. One UST (UST #1) was in SU 21 and was likely associated with the former administration building; the other (UST #2) was in SU 18. USTs and associated soils were removed and disposed of with radiologically impacted soil waste stream as part of OU1.

Enclosure 6

CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions

Enclosure 6 CERCLA Notice, Covenant, and Access Provisions and Other Deed Provisions

The following CERCLA Covenant and Access Provisions, along with the Other Deed Provisions, will be placed in the deed in a substantially similar form to ensure protection of human health and the environment and to preclude any interference with ongoing or completed remediation activities.

Property Covered by Notice, Description, Access Rights, and Covenants Made Pursuant to Section 120(h)(3)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. Section 9620(h)(3)(A))

For the Property, the Grantor provides the following notice, description, and covenants and retains the following access rights:

Notices:

Pursuant to section 120(h)(3)(A)(i)(I) and (II) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. § 9620(h)(3)(A)(i)(I) and (II)), available information regarding the type, quantity, and location of hazardous substances and the time at which such substances were stored, released, or disposed of, as defined in section 120(h) is provided in Enclosure 4, attached hereto and made a part hereof.

Description of Remedial Action Taken, if Any, Pursuant to Section 120(h)(3)(A)(i)(III) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. § 9620(h)(3)(A)(i)(III)):

Pursuant to section 120(h)(3)(A)(i)(III) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. § 9620(h)(3)(A)(i)(III)), a description of the remedial actions taken or planned, if any, on the Property is provided in Enclosure 3, Tables 1a thru 1c, attached hereto and made a part hereof.

Covenant Pursuant to Section 120(h)(3)(A)(ii) and (B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. \S 9620(h)(3)(A)(ii) and (B)):

The CERCLA response actions are not complete at the Property. The Covenant required under 120(h)(3)(A)(ii) and (B) of CERCLA is deferred until all response actions are complete. When remedial actions have been completed or when the approved remedy for the site has been implemented and is operating properly, the USDOE shall provide a document to the transferee stating that all remedial action has been taken in satisfaction of CERCLA §120(h)(3)(A)(ii)(I). Any additional remedial action found to be necessary after the date of this deed shall be conducted by the United States, pursuant to CERCLA § 120(h)(3)(A)(ii)(II).

Access Rights Pursuant to Section 120(h)(3)(A)(iii) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. § 9620(h)(3)(A)(iii)):

Pursuant to section 120(h)(3)(A)(iii) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. § 9620(h)(3)(A)(iii)), the United States retains and reserves a perpetual and assignable easement and right of access on, over,

under and through the Property, to enter upon the Property in any case in which an environmental response action or corrective action is found to be necessary on the part of the United States, without regard to whether such environmental response action or corrective action is on the Property or on adjoining or nearby lands. Such easement and right of access includes, without limitation, the right to perform any environmental investigation, survey, monitoring, sampling, testing, drilling, boring, coring, test-pitting, installing monitoring or pumping wells or other treatment facilities, response action, corrective action, or any other action necessary for the United States to meet its responsibilities under applicable laws and as provided for in this instrument. Such easement and right of access shall be binding on the GRANTEE and its successors and assigns and shall run with the land. The easement and right of access reserved to the United States may be exercised by USDOE, USACE, USEPA, the New Jersey Department of Environmental Protection (NJDEP), their agents, contractors, and employees for the purposes of implementing, monitoring, or demonstrating compliance with the groundwater remedy.

In exercising such easement and right of access, the United States shall provide the GRANTEE or its successors or assigns, as the case may be, with reasonable notice of its intent to enter upon the Property and exercise its rights under this clause, which notice may be severely curtailed or even eliminated in emergency situations. The United States shall use reasonable means, but without significant additional costs to the United States, to avoid and to minimize interference with the GRANTEE'S and the GRANTEE'S successors' and assigns' quiet enjoyment of the Property. At the completion of any work, the work site shall be reasonably restored. Such easement and right of access includes the right to obtain and use utility services, including water, gas, electricity, sewer, and communications services available on the Property at a reasonable charge to the United States. Excluding the reasonable charges for such utility services, no fee, charge, or compensation will be due the GRANTEE, nor its successors and assigns, for the exercise of the easement and right of access hereby retained and reserved by the United States.

In exercising such easement and right of access, neither the GRANTEE nor its successors and assigns, as the case may be, shall have any claim at law or equity against the United States or any officer, employee, agent, or contractor of any tier of the United States based on actions taken by the United States or its officers, employees, agents, or contractors of any tie pursuant to and in accordance with this clause. Provided, however, that nothing in this paragraph shall be considered a waiver by the GRANTEE, its successors and assigns, of any remedy available to them under the Federal Tort Claims Act. In addition, the GRANTEE, its successors and assigns, shall not interfere with any response action or corrective action conducted by the GRANTOR on the Property.

NOTIFICATION OF HAZARDOUS SUBSTANCE STORAGE, RELEASE, OR DISPOSAL

The GRANTEE is hereby provided with the summary of the storage, release, or disposal of hazardous substances on the Property set forth in Enclosure 4 and made a part hereof. Said summary is based on the best information available to the USDOE and believed to be correct but no warranty as to completeness or accuracy is provided with respect thereto.

NOTIFICATION OF PETROLEUM OR PETROLEUM PRODUCT STORAGE, RELEASE, OR DISPOSAL

The GRANTEE is hereby provided the summary of the storage, release, or disposal of petroleum or petroleum products on the Property set forth in Enclosure 5 and made a part hereof. Said summary is based on the best information available to the USDOE and believed to be correct but

no warranty as to completeness or accuracy is provided with respect thereto.

"AS IS" CONDITION OF PROPERTY

The GRANTEE, in accepting this Deed, acknowledges and attests that it has inspected, is aware of, and accepts the condition of the Property. It is understood and agreed that the Property is conveyed 'as is' and 'where is' and, without any representation, warranty or guarantee of any kind or nature, express or implied, including, without limitation, any representation, warranty or guarantee as to quantity, quality, character, condition, size, or kind, or that the same is in any particular condition or fit to be used for any particular purpose. The GRANTEE, in accepting this Deed, acknowledges that the GRANTOR has made no representation or warranty concerning the condition of the Property that has not been fully set forth in this Deed.

Nothing in this "As Is" provision shall be construed to modify or negate the GRANTOR'S obligation under the "Covenant Pursuant to Section 120(h)(3)(A)(ii) and (B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C.§§ 9620(h)(3)(A)(ii) and (B))" or any other statutory obligations.

INDEMNIFY AND HOLD HARMLESS

To the extent authorized by New Jersey law, the GRANTEE, for itself, its successors and assigns, covenants and agrees to indemnify and hold harmless the GRANTOR, its officers, agents, and employees from (1) any and all claims, damages, judgments, losses, and costs, including fines and penalties, arising out of the violation of the notices, covenants, conditions, and restrictions in this deed by the GRANTEE, its successors and assigns, and (2) any and all claims, damages, judgments, losses, and costs arising out of, or in any manner out of GRANTEE and/or its subcontractors, successors and assigns use and/or operations to be performed on, at, under or through the Property after the date of conveyance, including any claim predicated upon on any condition caused by GRANTEE, its subcontractors, successors and assigns, including but not limited to exposure to asbestos and lead based paint or other conditions, occurring on any portion of the Property after the date of the conveyance.

The GRANTEE, for itself, its successors and assigns, covenants and agrees that the GRANTOR shall not be responsible for any costs associated with modification or termination of the notices, covenants, conditions, and restrictions in this deed including, without limitation, any costs associated with conditions caused by GRANTEE, its subcontractors, successors and assigns, including but not limited to additional investigation or remediation of asbestos, lead-based paint, or other condition on any portion of the Property.

Nothing in this "Indemnify and Hold Harmless" provision shall be construed to modify or negate the GRANTOR'S obligations under the "Covenant Pursuant to Section 120(h)(3)(A)(ii) and (B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §§ 9620(h)(3)(A)(ii) and (B))" or any other statutory obligations.

POST-TRANSFER DISCOVERY OF CONTAMINATION AND RELEASE If a release or threatened release of a hazardous substance is discovered on the Property after the date of conveyance herein, any response action or corrective action found to be necessary shall be

conducted by the GRANTOR except to the extent that the GRANTEE, its successors or assigns are a potentially responsible party with respect to such Property (42 U.S.C. 9620(h)(3)). At the time of the discovery, the GRANTEE or it successors or assigns shall immediately secure the site and notify the GRANTOR of the existence of the release or threatened release of the hazardous substance, and the GRANTEE or it successors or assigns shall not further disturb or allow the disturbance of such hazardous substances without the prior written permission of the GRANTOR.

The GRANTEE, for itself, its successors and assigns, as part of the consideration for the conveyance of the Property, hereby releases the GRANTOR from any liability or responsibility for any claims arising solely out of the release or threatened release of any hazardous substance on the Property occurring after the date of the conveyance. However, this "Post-Transfer Discovery of Contamination and Release" provision shall not affect the GRANTOR'S responsibilities to conduct response actions or corrective actions that are required by applicable laws, rules and regulations, or the GRANTOR'S obligations under the "Covenant Pursuant to Section 120(h)(3)(A)(ii) and (B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. § 9620(h)(3)(A)(ii) and (B))."

ENVIRONMENTAL PROTECTION PROVISIONS

The GRANTEE shall neither transfer the Property, lease the Property, nor grant any interest, privilege, or license whatsoever in connection with the Property without including the Environmental Protection Provisions set forth in Enclosure 7, attached hereto and made a part hereof, and shall require the said provisions be included in all subsequent deeds, easements, transfers, leases, or grant of any interest, privilege, or license in, of, on, or to the Property or any portion thereof.

SCHEDULE

A tentative outline of scheduled completion dates for the OU2 response action is as follows:

- Remediation Design/Remedial Action Work Plans (FY2022/23)
- Operations and Maintenance Plan (FY2024)
- Remedy in Place (FY2026) 2- year treatment begins
- MNA (FY2028) Groundwater monitoring begins

Enclosure 7
Environmental Protection Provisions

Enclosure 7 Environmental Protection Provisions

The following conditions, restrictions, and notifications are summarized in a similar form in the OU2 Final Record of Decision for the Site. These conditions, restrictions and notifications will be included in a substantially similar form in the deed to ensure protection of human health and the environment and to preclude any interference with ongoing or completed remediation activities on the Property.

1. LAND USE RESTRICTIONS

- **A.** Restrictions on Use of Property: The Department of Energy has undertaken careful environmental study of the Property and concluded that the land use restrictions set forth below are required to ensure protection of human health and the environment. The GRANTEE, its successor and assigns, shall not undertake nor allow any activity on or use of the Property that would violate the land use restrictions contained herein. The Property must comply with local zoning requirements.
 - (1) Groundwater Restriction. The GRANTEE is hereby informed and acknowledges that the groundwater under the Property is contaminated. Contamination in groundwater is widespread across the entire property. Contaminants of Concern are natural uranium, carbon tetrachloride, trichloroethene, and chloroform.

The GRANTEE, for itself, its successors and assigns, hereby covenants and agrees not to access or use, or allow access to or use of the groundwater underlying the Property for any purpose without the prior written approval of the United States Department of Energy and the New Jersey Department of Environmental Protection. For the purpose of this restriction, "groundwater" shall have the same meaning as in section 101(12) of the CERCLA. Notwithstanding the foregoing, the following activities and impacts shall be permissible and shall not violate the aforesaid restriction if conducted in compliance with all applicable laws and regulations: (i) dewatering solely because of incidental contact with groundwater from construction and/or improvements on the Property; (ii) incidental pumping of groundwater associated with preventing moisture from entering a sub-grade structure (i.e., sump pump); and (iii) groundwater monitoring wells solely for the purpose of performing environmental sampling and/or monitoring.

A land use control in the form of a groundwater Classification Exception Area (CEA) and Well Restriction Area (WRA) established by the NJDEP will be utilized in areas of groundwater contamination present at the Property and surrounding area where contamination exceeds groundwater quality standards until cleanup goals are achieved. This CEA/WRA suspends designated aquifer uses for the term of the CEA/WRA. The GRANTEE shall follow all applicable conditions of the CEA/WRA.

(2) Access Restriction. The GRANTEE covenants and agrees for itself, its successors and assigns, forever, that it shall not impede or deny access to the Property provided to persons performing remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, including DOE, USEPA, USACE, the State of New Jersey, and their employees, representatives and contractors thereof, to the extent

necessary to protect human health and the environment until such time as all remedial action necessary has been taken with respect to the Property, or a portion thereof, and this covenant has been modified or terminated, as appropriate, in accordance with the provisions of this Deed.

- (3) Excavation and Land Disturbance Restriction. The GRANTEE covenants and agrees for itself, it successors and assigns, forever, that it shall not conduct or permit any other person to conduct any excavation activities on the Property including, but not limited to, digging, drilling, or any other excavation or disturbance of the surface or subsurface without prior written approval from the GRANTOR, except as provided for, and in accordance with, an excavation or land disturbance plan approved by the GRANTOR, USEPA and NJDEP. Any proposed excavation or land disturbance plan must ensure that activities do not impede the groundwater remedy.
- (4) Notice of Groundwater Monitoring Wells. The GRANTEE is hereby informed and does acknowledge groundwater wells are on or to be installed on the Property. The locations of these monitoring wells are shown on maps included in Enclosure 1 and Attachment 1 to the EPPs. The GRANTEE shall not disturb or permit others to disturb the monitoring wells located on the Property without prior written approval from the GRANTOR, USEPA and the New Jersey Department of Environmental Protection. Upon the GRANTOR's determination that a well is no longer necessary, the GRANTOR will close such well at the Federal Government's sole cost and expense in accordance with applicable laws, regulations, and ordinances.
- (5) Notice of Ongoing Response Actions. The United States is currently addressing groundwater beneath the site under Operable Unit 2 (OU2). The groundwater contamination associated with OU2 impacts the Property. The GRANTEE, for itself, its successors and assigns, hereby covenants and agrees not to disrupt or prevent any required environmental response.

The establishment and operation of any hazardous waste facility on the Property is prohibited without the prior express written permission of the Grantor.

- (6) Non-Obstruction Clause. The GRANTEE, for itself, its successors and assigns, hereby covenants and agrees not to construct buildings or structures without the prior written approval from the GRANTOR, USEPA and NJDEP until such time as the remedy is deemed protective by virtue of meeting the remedial action objectives as determined by the USEPA.
- (7) The GRANTEE, for itself, its successors and assigns, hereby covenants and agrees that neither Property owners nor their successors and assigns shall construct buildings or structures without prior written approval of USDOE, USEPA, and NJDEP, until such time as the remedy is deemed protective by virtue of meeting the remedial action objectives. Any buildings constructed shall have engineered vapor barriers unless the Property owners otherwise demonstrate to and gain approval of USDOE, USEPA and NJDEP that such a barrier or other mitigation system is not needed for a specific building.

- B. Modifying or Terminating the Restrictions. Nothing contained herein shall preclude the GRANTEE, its successors or assigns from undertaking, in accordance with applicable laws and regulations and without any cost to the GRANTOR, such action as would be necessary to allow access to or use of the groundwater underlying the Property. Prior to any such use of the groundwater restricted under the paragraph above, the GRANTEE shall consult with and obtain the approval of the GRANTOR. Upon the GRANTEE's obtaining the approval of the GRANTOR, the GRANTOR agrees to prepare and execute an instrument modifying or terminating, as appropriate, the land use restriction set forth herein. The recordation of any such instrument in the land records of Middlesex County, New Jersey shall be the responsibility of the Property owner and shall be accomplished at no additional cost to the Federal Government.
- **C. Submissions.** The GRANTEE, its successors and assigns shall submit any requests for modification or termination of the restrictions set forth herein to the GRANTOR and the USEPA and NJDEP, by first class mail, postage prepaid, addressed as follows:

If to the GRANTOR:
U.S. Department of Energy
2597 Legacy Way
Grand Junction, CO 81503

With a copy to:

U.S. Army Engineers District, New York 26 Federal Plaza, Room 16-504 (CENAN-RE-M) New York, NY 10278

If to the US Environmental Protection Agency:
Adriana Morocho
Remedial Project Manager
SPB-Federal Facilities Section
U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, NY 10007
(212) 637-4418

If to the NJDEP:

Bureau of Case Management 401 East State Street PO Box 420, Mail Code 401-05F Trenton, NJ 08625-0429

2. ENVIRONMENTAL COVENANTS, CONDITIONS, AND RESTRICTIONS BINDING AND ENFORCEABLE. The notices, covenants, conditions, and restrictions set forth herein are binding on the GRANTEE, its successors and assigns, shall be included in subsequent deeds conveying the Property or any portion thereof or interest therein, shall run with the land, and are forever enforceable by the United States and the State of New Jersey Department of Environmental Protection (hereinafter referred to as the "NJDEP")

- **3. NON-DISTURBANCE CLAUSE.** The GRANTEE covenants and agrees for itself, its successors, and assigns, forever, not to disrupt or allow the disruption of required remedial investigations, response action and oversight activities.
- 4. REMEDIATION SCHEDULE. The GRANTOR hereby provides assurance that the remediation schedule will be coordinated with the GRANTEE and in coordination with USEPA. In accordance with the covenant deferral authority requirement of CERCLA 120(h)(3)(C)(ii)(III), all necessary response actions will be taken under a schedule for investigation and completion of all necessary response actions that will not substantially delay any such response action at the Property. Changes to the schedule, when developed, may be required as a result of unforeseen circumstances including, but not limited to, the identification of additional sampling requirements; discovery of additional contamination on the Property; unanticipated conditions during field work efforts; and additional review and revision of documentation such as reports, work plans, and designs.
- 5. REMEDIATION BUDGET. The GRANTOR hereby provides assurance that the Federal agency responsible for the Property subject to transfer will submit a budget request that adequately addresses schedules for investigation and completion of all necessary response actions for which the GRANTOR is potentially responsible under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, subject to congressional authorizations and appropriations. Any requirement for the payment of funds by the United States or any agency thereof is subject to the availability of appropriated funds, and no provision shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. 1341, or other statute.

Enclosure 8

Middlesex Sampling Plant Vicinity Property Inventory

Middlesex Sampling Plant FUSRAP Site Vicinity Property Inventory

Parcel #	Phase	Property
1	2	Middlesex, Block 318, Lot 1
2	2	Middlesex, Block 318, Lots 7
3	2	Middlesex, Block 318, Lot 10
4	2	Middlesex, Block 318, Lots 11
5	2	Middlesex, Block 318, Lots 13
6	2	Middlesex, Block 318, Lots 16
7	2	Middlesex, Block 318, Lots 19
8	1	Middlesex, Block 318, Lot 21
9	2	Middlesex, Block 319, Lots 36
10	2	Middlesex, Block 319, Lots 37
11	2	Middlesex, Block 319, Lot 38
12	2	Middlesex, Block 319, Lots 39
13	2	Middlesex, Block 319, Lots 18, 19
14	2	Middlesex, Block 319, Lots 23, 24
15	2	Middlesex, Block 319, Lots 26, 28
16	2	Piscataway, Block 3101, Lots 40-43
17	2	Piscataway, Block 3101, Lots 44-50
18	2	Middlesex, Block 319, Lot 47
19	2	Piscataway, Block 3101, Lot 16.01
19A	2	Piscataway, Block 3101, Lot 16.01
20	2	Middlesex, Block 318, Lot. 43
21	2	Middlesex, Block 318, Lots 44
22	2	Piscataway, Block 396, Lots 17-18

22A	2	Piscataway, Block 396, Lots 1-16
22B	2	Piscataway, Block 412, Lots 1-14
23	2	Middlesex, Block 318, Lot 50
23A	2	Piscataway, Block 413, Lot 1
23B	2	Middlesex, Block 345, Lot 1
24	2	Middlesex, Block 318, Lots 48, 38.01, 4.02
25	2	Middlesex, Block 371, Lot 4
26	1	Piscataway, Block 185, Lot 1
27	1	Middlesex, Block 298, Lots 1-3
27A	1	Middlesex, Block 310, Lot 1-19, 33-49
28	2	Middlesex, Block 318, Lot 50
29	2	Middlesex, Block 345.02, Lot 1.02
30	2	Middlesex, Block 344, Lot 1 and Lot 4
31	2	Middlesex, Block 371.01, Lot 5.01
32	1	Middlesex, Block 287, Lot 1.01
33	2	Middlesex, Block 287, Lot 2.01
DA/34	2	Middlesex, Block 319, Lot 13, 14
35	4	Middlesex Block 10, Lot 28
36	4	Piscataway, Union Carbide, Block 3502, Lot 1.04
37	4	Middlesex, Block 345, Lot 1.02
38	4	Middlesex, Willow Lake (aka Lake Creighton)
39	4	Middlesex, 756 Drake Ave, Block 283, Lot 28
40	4	Middlesex, Block 289, Lot 1
41	4	Middlesex, Block 289, Lot 60
None	3	Middlesex, MSP and Drainage Ditch, Block 318, Lot 1.01, 45, 38.01