

Former Mt. Tom Station Power Plant
200 Northampton Street
Holyoke, Massachusetts

Legacy Coal Combustion Residuals Surface Impoundment Applicability Report

ENGIE North America, Inc.
Houston, Texas

November 2024

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Section 1

Introduction

1.1 Purpose

On behalf of Mt. Tom Generating Company LLC ("MTGC"), a wholly owned indirect subsidiary of ENGIE North America, Inc., Tighe & Bond, Inc. ("Tighe & Bond") has prepared this Legacy Coal Combustion Residuals ("CCR") Surface Impoundment Applicability Report for the former MTGC facility (the "site"), located at 200 Northampton Street in Holyoke, Massachusetts.

This report has been prepared in accordance with the requirements of the Environmental Protection Agency ("EPA") CCR Legacy CCR Surface Impoundments and CCR Management Units ("CCRMU") Final Rule, published at 40 CFR § 257, Subpart D- *Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments*, in tandem with Amendment 89 FR 39099, finalized May 8, 2024 ("CCR Final Rule"). This Applicability Report has been prepared following a review of the historical operations and current conditions at the site. The review was conducted for the purpose of identifying Legacy CCR Surface Impoundments at the site.

The EPA defines a Legacy CCR Surface Impoundment as "...a CCR surface impoundment that no longer receives CCR but contained both CCR and liquids on or after October 19, 2015, and that is located at an inactive electric utility or independent power producer". Based on a review of the historical data for the site, the site Solid Waste Management Units ("SWMUs") identified as SWMU-8/Special Basin and SWMU-11/Bottom Ash Basin A can be considered as Legacy CCR Surface Impoundments (the "units"). Further information associated with these units is provided below.

1.2 General Site Description

Based on the City of Holyoke Assessors records, the site is located in an area zoned as "IG" (General Industry). The geographical location of the site is 42.281183 degrees north latitude and -72.605070 degrees west longitude. The Universal Transverse Mercator (UTM) coordinates are 697472.4 meters Easting and 4683773.9 meters Northing. A Site Location Map, a Priority Resources Map, an Orthophotograph, and a Site Plan depicting relevant features are provided as Figures 1, 2, 3, and 4, respectively, and are included in Appendix A.

The site is the location of a former coal-fired electrical generating station ("Mt. Tom Station") located at 200 Northampton Street "Route 5" in Holyoke, Hampden County, Massachusetts. The site is approximately 143 acres in size and is located adjacent to the western bank of the Connecticut River, where the river forms the eastern site boundary. Route 5 abuts the site to the west, with a railroad corridor that parallels the roadway immediately to the east. Historical key site features included the former electrical generation plant buildings on the northern portion of the site, a former coal storage location with runoff control area, and three former wastewater basins and associated treatment facility located south of the former generation plant building.

In accordance with the 2018 Massachusetts Department of Environmental Protection ("MassDEP") Administrative Consent Order (ACO-00002589) ("ACO") and corresponding CCR Surface Impoundment Applicability Report

regulatory approvals, the power plant and associated infrastructure and appurtenances have been demolished or abandoned in place. Ash from the combustion of coal and fuel oil has historically been deposited throughout portions of the site, generally south and west of the former generation facility infrastructure. Two traditional solid waste landfills are located at the site; a former municipal landfill that received solid waste from the City of Holyoke, and a former plant dump/landfill that received refuse and solid waste generated on-site. The only remaining structure is an electrical substation located to the east of the former generation plant building, which is currently operated by Eversource Energy. Additionally, overhead electrical distribution lines, owned and operated by South Hadley Electric Light Department, are present at the site. The lines originate from the substation structure and run south along the eastern portion of the site. At the northern side of Kennedy Brook, the lines cross the Connecticut River east into South Hadley. The lines are supported by ground-mounted pad supports and utility poles.

The southernmost portion of the site property was historically used for agriculture, but was developed as a photovoltaic solar and battery storage facility in 2016. This portion of the property is improved with multiple solar panels, battery storage, electrical distribution infrastructure and three electrical transformers. The land sides of the site are secure and surrounded by a six-foot tall chain link fence with locked gates. The property boundary along the Connecticut River is not fenced.

The site and surrounding areas are served by the municipal drinking water system. Sanitary waste from the site was historically managed by multiple on-site septic systems. Each septic system has been properly decommissioned and abandoned in accordance with applicable regulations. There is no municipal sewer service connection at the site. Electricity and communications utilities are provided to the site by the overhead distribution lines along Route 5. Additional private subsurface infrastructure was located across much of the northern portion of the site (north of Kennedy Brook), including underground electrical piping associated with the plant wastewater treatment facility and multiple stormwater structures/outfalls. With the exception of the existing municipal water connection line, subsurface infrastructure at the site has been removed or abandoned in place.

The site is abutted to the north by undeveloped forested land and the City of Easthampton. Residential dwellings are located south of the photovoltaic solar facility. Residential properties are located between 200 and 400 feet west of the photovoltaic facility, across Northampton Street. Additional commercial businesses are located to the west of the site, including a restaurant, hotel, union office, and the Holyoke Country Club.

1.3 Site Use History

Mt. Tom Station was constructed in the late 1950s and began operation as a coal-fired generation plant in 1960. From 1960 to 1983, fly ash, bottom ash, and oil ash were disposed of on-site. In 1970, the plant was converted to operate on fuel oil and was subsequently converted back to coal in 1981; whereas, from 1960 to 1970 CCR (fly ash and bottom ash) were generated as a result of coal-fired operations, and from circa 1971 through 1981 the plant operated on fuel oils and heavy oils, resulting in the generation of oil ash. Therefore, between 1960 and 1983, excluding the timeframe between 1971 and 1981, CCR from plant operations was disposed of on-site within unlined basins and impoundment areas south of the former generation plant. Active on-site ash filling/deposition ceased in 1983, and subsequent reporting indicates that CCR waste was

trucked off-site for disposal or beneficial re-use, including limited quantities of CCR that accumulated within the bottom ash basin until 2014.

In 1980, MassDEP entered into a memorandum of agreement with the site regarding waste water treatment. In 1981, MassDEP issued a temporary permit for groundwater discharges from on-site unlined waste water basins. In 2001, MassDEP declined to issue a final permit for the unlined basins. As a result, an ACO was issued for assessment of potential groundwater impacts from the unlined basins and ash placement areas. The ACO required the elimination of groundwater discharges from the existing unlined basins, Comprehensive Site Assessment ("CSA") activities, and development of a Correction Action Alternative Analysis and Corrective Action Design ("CAD") Plan. The physical closure of the unlined basins, ash, and solid waste landfill areas were identified and detailed within the CAD Plan. The ACO plans included the reconstruction and lining of previously unlined basins, which was completed in 2003.

The facility continued to operate as a coal-fired power plant through 2014, when it was permanently shut down due to system failures. As indicated above, from 2014 through 2022, the site underwent closure through plant demolition, environmental assessment, remediation, and ecological restoration in accordance with the MassDEP 2018 ACO (under MassDEP Release Tracking Number 1-20229) and is currently an unoccupied industrial property that is predominantly vegetated land, including mature forested areas. On-going activities across the site include periodic inspections to verify that site conditions are consistent with the 2022 Activity and Use Limitation ("AUL"), which was implemented as part of the Temporary Solution in accordance with the Massachusetts Contingency Plan ("MCP"). Additional site history has been provided in previous MassDEP regulatory submittals, which can be reviewed online at <https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=1-0020229>.

Section 2

Legacy CCR Surface Impoundment Information

2.1 Owner/Operator

The owner/operator of the Legacy CCR Surface Impoundment is:

Mt. Tom Generating Company, LLC
Eric De Caluwe President
1360 Post Oak Boulevard, Suite 400
Houston, Texas 77056
(731) 636-1399
eric.decaluwe@engie.com

2.2 Legacy CCR Surface Impoundment Identification

The following CCR units at the Mt. Tom facility were identified as Legacy CCR Surface Impoundments. Neither unit has been assigned a designation number by the State; however, as indicated above, decommissioning of plant infrastructure and associated environmental assessment and remediation efforts were conducted in accordance with the MassDEP 2018 ACO and the MCP. Several other SWMUs are present on the site that do not qualify as CCR Surface Impoundments.

2.2.1 SWMU-8/Special Basin

The subject Legacy CCR Surface Impoundment is known as SWMU-8 or the "Special Basin." The location of the Special Basin is depicted on Figure 4. It measures approximately 162-feet by 357-feet (approximately 58,012 square feet).

According to historical facility documents, the Special Basin was constructed in 1981 and was intended to function as part of the facility's industrial wastewater treatment plant ("IWWTP"). Reportedly, the IWWTP process was specifically designed so that virtually no fly ash was transported by water to the Special Basin, and fly ash that was collected by an electrostatic precipitator was trucked off-site for beneficial reuse. Therefore, only very small quantities of fly ash that originated from infrequent air heater washes and plant wash downs were transported by water to the lined Special Basin for on-site treatment. Otherwise, this unit handled wastewaters containing non-CCR solids and liquids from various plant operations. Special Basin effluent was processed in a wastewater treatment system discharging into the Sedimentation Basin (i.e., polishing basin) and subsequently discharged to the Connecticut River via a National Pollution Discharge Elimination System permit.

Pursuant to the 2018 MassDEP ACO, the liner at the Special Basin was removed in March 2020. This was completed for the purpose of achieving regulatory closure under the 2018 ACO and the MCP. In June 2017 and August 2019, prior to liner removal, an assessment was conducted on the contents of the Special Basin. In June 2017, using a boat, sediment thickness was gauged in eight locations throughout this basin. The average measured thickness of sediment material was calculated to be approximately 2.4-feet in depth. Based on the dimensions of the basin and the average sediment thickness, it was

estimated that the Special Basin contained approximately 5,200 cubic yards (cy) of saturated material¹. However, it was anticipated that once this material was dewatered, the actual volume of sediment/solids would decrease significantly.

In addition to the June 2017 assessment efforts, a comprehensive sampling event of the IWWTP basin sediment materials was completed during August 2019. Specifically, each basin was evaluated for the presence of solids (measurable sediment materials), and samples were collected for laboratory analysis from the Special Basin and the Bottom Ash A Basin (details of Bottom Ash A Basin further discussed below). Note that the Sedimentation Basin was observed to contain only a small amount of organic matter (leaf litter) observed above the basin liner. A Supplemental Phase II CSA with a corresponding updated Method 3 Human Health Risk Characterization ("HHRC") was prepared in September 2019. For the purposes of the HHRC approach, the site was evaluated as the "North Site" (industrial area) and "South Site" (formerly agricultural area). Other sub-areas of the site assessed included the coal storage area, the Bottom Ash Basin, the Special Basin, areas adjacent to a brook that traverses the "South Site", areas adjacent to the Connecticut River, areas adjacent to a public water supply distribution line, and an area sampled as background that contains lead above applicable regulatory thresholds.

As documented within the 2019 Supplemental Phase II CSA and the corresponding updated HHRC, a condition of No Significant Risk of harm to human health was determined to exist with respect to the individual Special and Bottom Ash A basin contents, in addition to the overall "South Site" conditions. Note that implementation of an AUL is required, because the updated HHRC performed as part of the MCP closure approach for the site relies on the assumption that an AUL is in place². The boundaries of the AUL are depicted on Figure 4. Further, as part of the MCP Release Abatement Measure ("RAM") efforts and the corresponding MassDEP approval of such, baseline (pre-liner removal) and post-liner removal groundwater monitoring was conducted until the MCP Comprehensive Remedial Response Actions ("CRRAs") were considered complete for the site. Based on the CRRAs conducted and the implementation of an AUL operation, maintenance, and monitoring ("OMM") program, it was determined that a Temporary Solution was achieved and no additional response actions were necessary to maintain a condition of No Substantial Hazard at the site. Further information associated with the Special and Bottom Ash A basins MCP CRRAs can be accessed at: <https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=1-0020229>.

IWWTP basin decommissioning activities were conducted by the on-site environmental contractor, Charter Contracting Company, LLC ("Charter") of Boston, Massachusetts. Charter used an excavator to strategically peel back and remove the liner system in sections, exposing the underlying sand bedding material. In accordance with the MassDEP-approved plan, the sediment materials which were present within the basin were left in place after the liner was removed. The liner material was transported off-site for proper disposal as a solid waste. Following removal of the liner, four test pits were advanced

¹ Note that this volume estimate is likely an overestimate since the sediment materials were completely submerged when they were measured in 2017.

² Refer to the September 2019 Supplemental Phase II CSA for the updated Method 3 HHRC and the corresponding conclusions associated with the evaluation of the contents of the Special and Bottom Ash A basins.

within the basin (one test pit within each basin quadrant) to further assess and document subsurface soil conditions beneath the basins. Each test pit was performed by Charter and observed by a Tighe & Bond Environmental Scientist. Each of the four test pits was advanced to between six and seven feet below the bottom of the basin, then backfilled with the spoils. Each test pit generally contained coal ash, soil, and solid waste (glass, brick, wood, and metal).

The Special Basin is secured on all sides by a dedicated chain link fence. The basin base and interior slopes have partially revegetated through natural succession since the 2020 liner removal activities. No standing water was observed in this basin during an October 9, 2024 inspection.

2.2.2 SWMU-11/Bottom Ash Basin A

The subject Legacy CCR Surface Impoundment is known as SWMU-11 or Bottom Ash Basin A. The location of Bottom Ash Basin A is depicted on Figure 4, and measures approximately 325-feet by 325-feet (approximately 105,625 square feet).

Bottom Ash Basin A was constructed as an unlined basin in circa 1980, in the approximate location of an area historically used for municipal solid waste landfilling. This basin was later lined in 2003, at the behest of MassDEP via an ACO. The basin functioned as part of the Mt. Tom facility's IWWTP. The unit received bottom ash and boiler slag from the 1980s through plant closure in 2014. Additionally, stormwater runoff from the uncombusted coal stockpile was sluiced into the unit.

Subsequently, and pursuant to the MassDEP 2018 ACO, the double liner system at Bottom Ash Basin A was removed in March 2020. This was completed for the purpose of achieving regulatory closure under the 2018 ACO and the MCP. In June 2017, prior to liner removal and consistent with the Special Basin, an assessment was conducted of Bottom Ash Basin A. At that time, the basin was generally dewatered and mostly accessible without use of a boat. The depth of the basin contents was measured at five locations throughout the unit, with an average calculated thickness of approximately 2.3-feet. Based on the dimensions of the unit, it was estimated that approximately 9,000 cubic yards of moist CCR was present above the liner at that time. In addition, and as indicated above in Section 2.2.1, supplemental assessment efforts were conducted as part of the basin closures, which resulted in the determination of a condition of No Significant Risk with respect to the individual Special and Bottom Ash A basin contents, and the overall "South Site" conditions, as described above.

As with the Special Basin, basin decommissioning activities were conducted by the on-site environmental contractor, Charter. Charter used an excavator to strategically peel back and remove the liner system in sections, exposing the sand bedding material. In accordance with the MassDEP-approved plan, the sediment materials which were present within the basin were left in place after the liner materials were removed. The liner material was transported off-site for proper disposal as a solid waste. Following removal of the liner, four test pits were advanced within the basin (one test pit within each basin quadrant) to further assess and document subsurface soil conditions beneath the basin. Each test pit was performed by Charter and observed by a Tighe & Bond Environmental Scientist. Each of the four test pits was advanced to between six and seven feet below the bottom of the basin, then backfilled with the spoils. Each test pit generally contained brown fine sand and silt with little to trace coal ash. Solid waste was not observed in the four test pits performed within Bottom Ash Basin A.

Section 2 Legacy CCR Surface Impoundment Information

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At present, Bottom Ash Basin A is secured on all sides by a dedicated chain link fence. The basin base and interior slopes have partially revegetated through natural succession since the 2020 liner removal activities. Standing water (stormwater runoff/precipitation) was observed within portions of this basin during an October 9, 2024 inspection.

Section 3 Certification

3.1 Owner/Operator Certification

Concurrent with entering this report into the Facility Operating Record, Mt. Tom Generating Company, LLC has notified the Agency of the establishment of the facility's CCR website at <https://www.epa.gov/coalash/forms/comment-submission-form-publicly-accessible-internet-sites-hosting-coal-combustion>.

Pursuant to requirements of the Final Rule, the owner/operator of the Legacy CCR Surface Impoundment makes the following Certification:

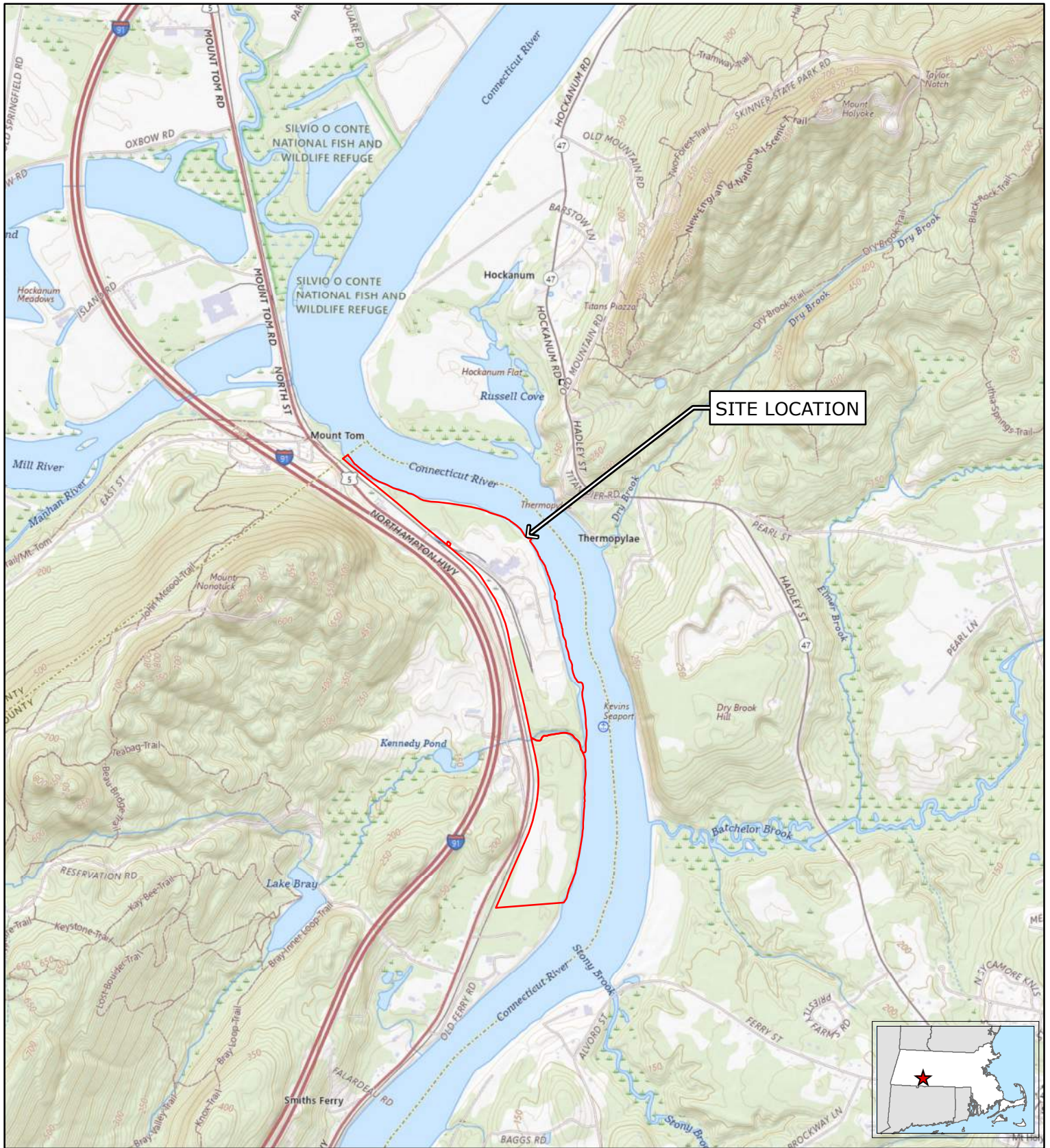
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

<p>Initial</p> <p>RT</p>	<p>DocuSigned by:</p> <p><i>Eric De Caluwe</i></p>	<p>12/9/2024</p>
<p>Signature of owner/operator</p>		<p>Date</p>

J:\G\G0682 GDF Mt. Tom\037 - Post Closure Compliance & CCR\06 - CCR\FINAL RULE COMPLIANCE REPORTS\Applicability Report\Mt. Tom CCR Applicability Report Final Text 11.5.2024.docx

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APPENDIX A



Legend

Property Boundary



Based on USGS National Map
Topo Basemap for Holyoke
Contour Interval Equals 10 Feet

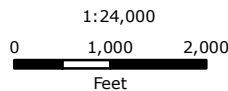
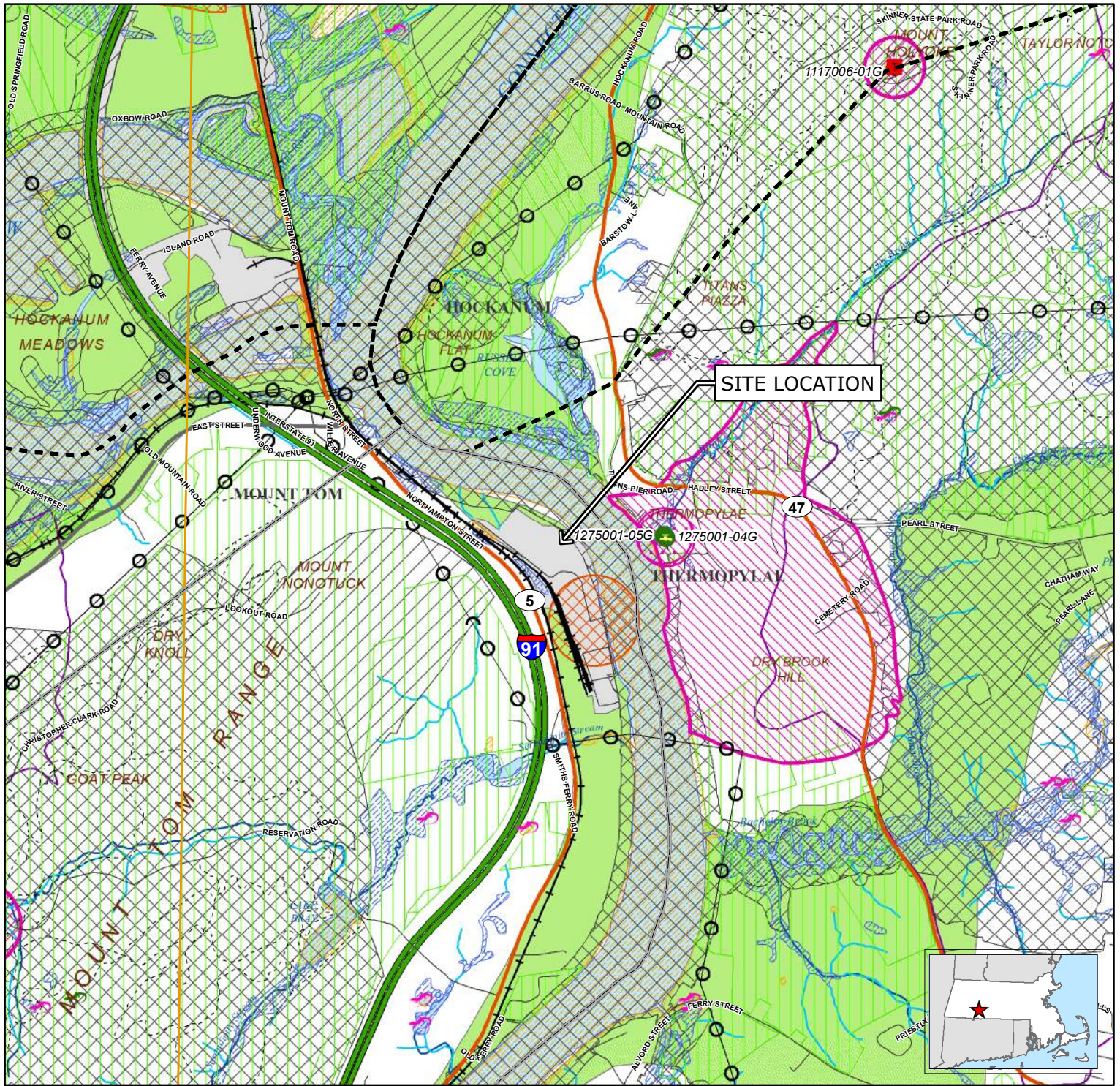


FIGURE 1 SITE LOCATION

Former Mt. Tom
Station Power Plant
200 Northampton Street
Holyoke, Massachusetts

October 2024





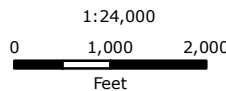
Legend

- NHESP Certified Vernal Pools
- NHESP Potential Vernal Pools
- Non-Landfill Solid Waste Sites
- Proposed Well
- Emergency Surface Water
- Community Public Water Supply - Surface Water
- Community Public Water Supply - Groundwater
- Non-Community Non-Transient Public Water Supply
- Non-Community Transient Public Water Supply
- Limited Access Highway
- Multi-Lane Highway, NOT Limited Access
- Other Numbered Route
- Major Road - Arterials and Collectors
- Minor Street or Road
- Aqueducts
- Hydrologic Connections
- Stream/Intermittent Stream
- Powerline
- Pipeline
- Track or Trail
- Trains
- Public Surface Water Supply Protection Area (Zone A)
- DEP Approved Wellhead Protection Area (Zone I)
- DEP Approved Wellhead Protection Area (Zone II)
- DEP Interim Wellhead Protection Area (IWPA)
- Protected and Recreational Open Space
- Solid Waste Landfill
- Area of Critical Environmental Concern (ACEC)
- NHESP Priority Habitats for Rare Species
- NHESP Estimated Habitats for Rare Wildlife
- EPA Designated Sole Source Aquifer
- Major Drainage Basin
- Sub Drainage Basin
- MassDEP Open Water
- MassDEP Inland Wetlands
- MassDEP Coastal Wetlands
- MassDEP Not Interpreted Wetlands
- Public Surface Water Supply (PSWS)
- Water Bodies
- Non-Potential Drinking Water Source Area - High Yield
- Non-Potential Drinking Water Source Area - Medium Yield
- Potentially Productive Medium Yield Aquifer
- Potentially Productive High Yield Aquifer
- County Boundary
- Municipal Boundary
- USGS Quadrangle Sheet Boundary

FIGURE 2 PRIORITY RESOURCES

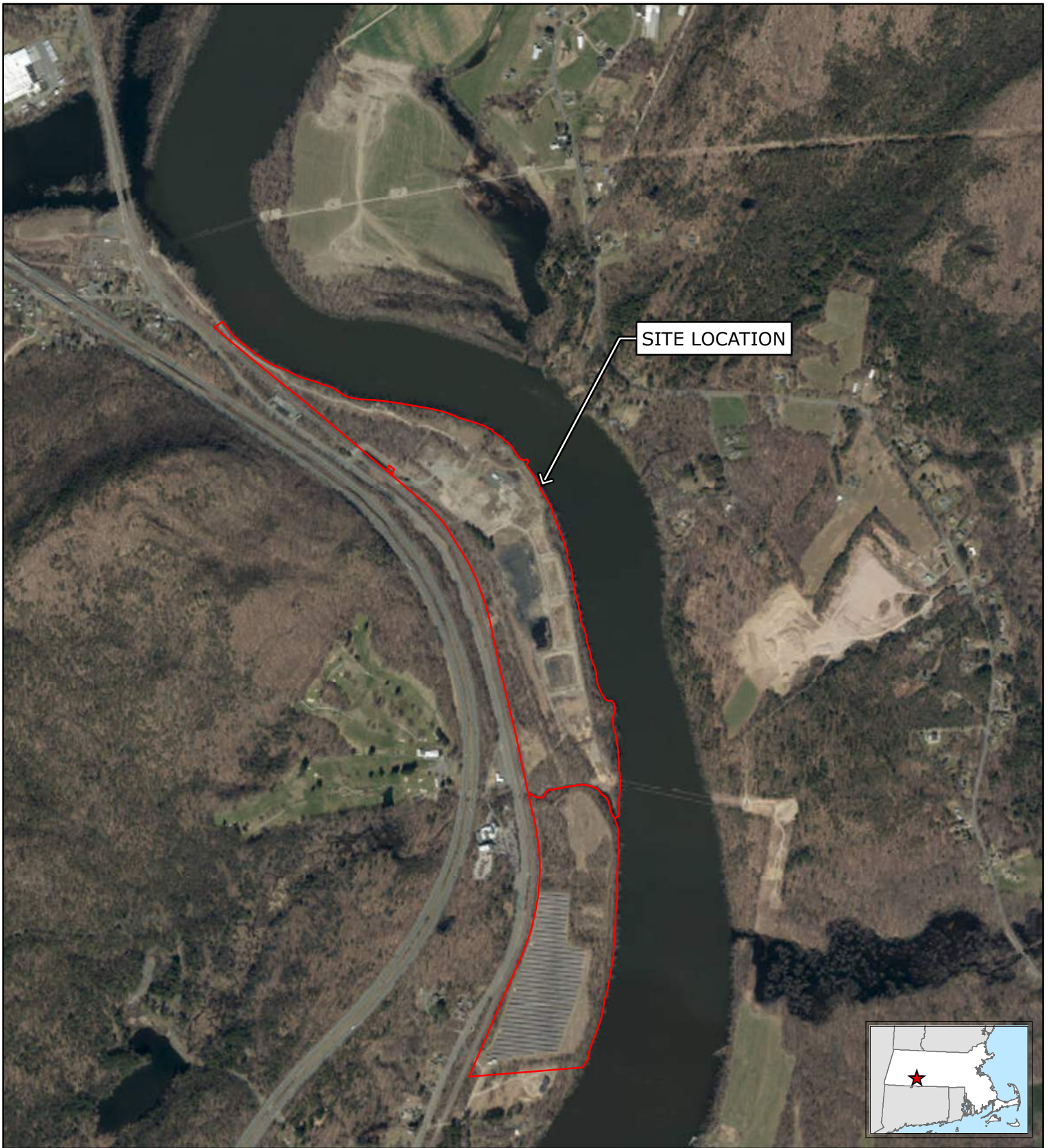
Former Mt. Tom
Station Power Plant
200 Northampton Street
Holyoke, Massachusetts

Data source: Bureau of Geographic Information (MassGIS),
Commonwealth of Massachusetts, Executive Office of Technology.
Data valid as of October 2024.



October 2024





Legend

 Property Boundary



Based on MassGIS Color Orthophotography (2023)

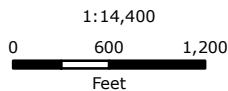
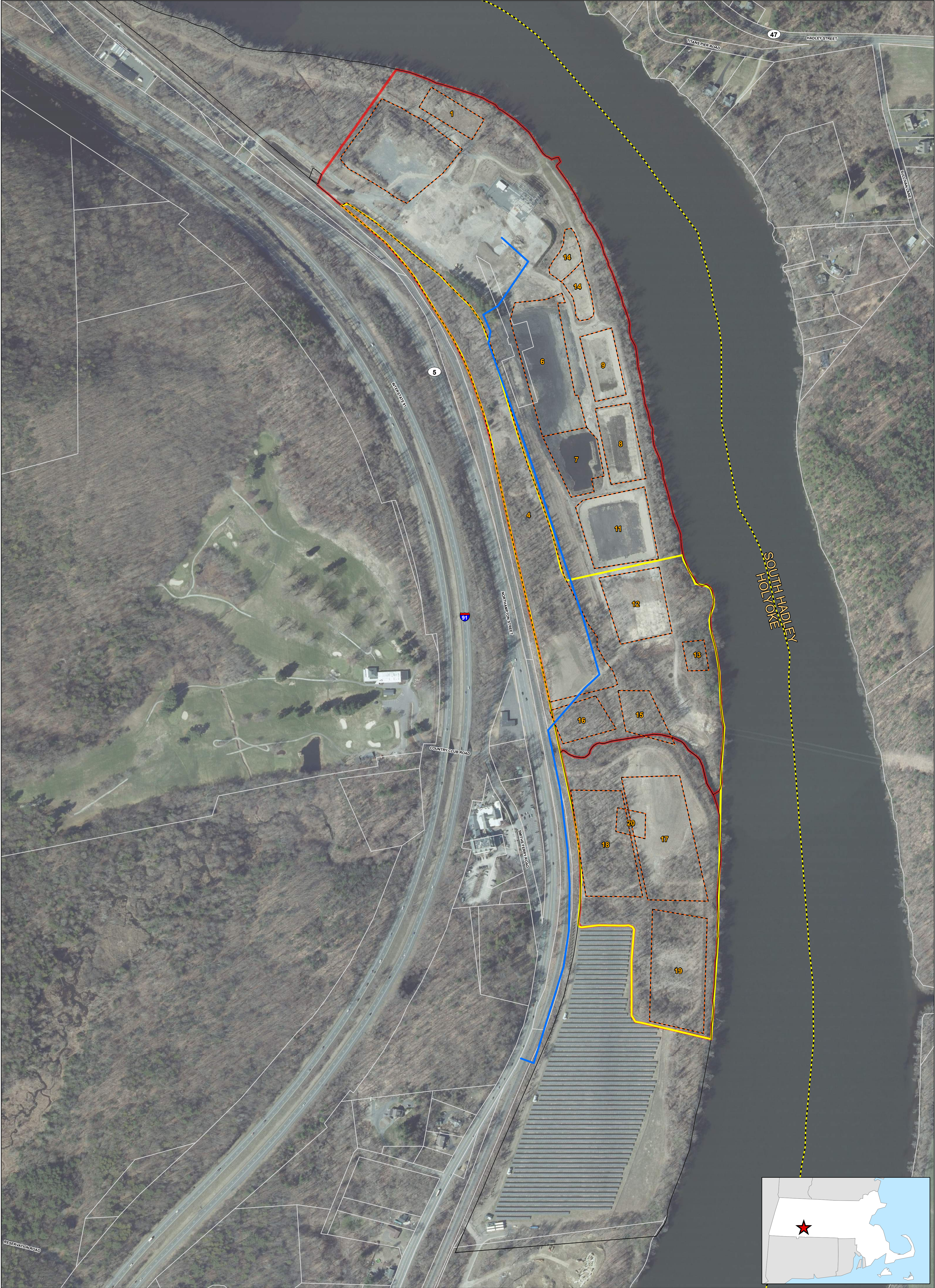


FIGURE 3 ORTHOGRAPH

Former Mt. Tom
Station Power Plant
200 Northampton Street
Holyoke, Massachusetts

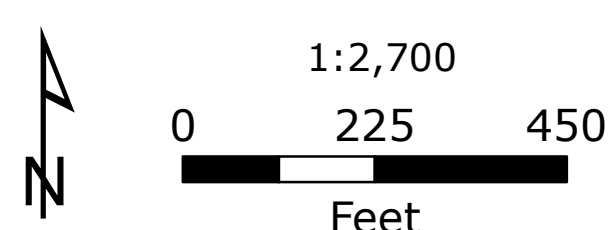
October 2024



- Legend**
- Existing Underground Water Utility
 - Site Parcels
 - Parcel Boundary
 - Vegetated Ash Areas
 - Solid Waste Management Unit Area (Approximate)
 - Approximate AUL Area
 - Municipal Boundary



1. Orthophoto provided by MassGIS, 2021.



**FIGURE 4
SITE PLAN**

Former Mt. Tom
Station Power Plant
200 Northampton Street
Holyoke, Massachusetts

November 2024

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