SECOND FIVE-YEAR REVIEW REPORT FOR
CALLAHAN MINE SUPERFUND SITE
HANCOCK COUNTY, MAINE

APRIL 2021

Prepared by

U.S. Environmental Protection Agency
Region 1
Boston, Massachusetts

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Date

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LIST OF ABBREVIATIONS & ACRONYMS

BLL	Blood Lead Level
CAD	Confined Aquatic Disposal
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
ELCR	Excess Lifetime Cancer Risk
EPA	United States Environmental Protection Agency
EQM	Environmental Quality Management
ESD	Explanation of Significant Differences
FS	Feasibility Study
FYR	Five-Year Review
HHRA	Human Health Risk Assessment
IC	Institutional Control
IEUBK	Integrated Exposure Uptake Biokinetic
LOAEL	Lowest Observed Adverse Effect Level
MEDEP	Maine Department of Environmental Protection
MEDOT	Maine Department of Transportation
µg/dL	Microgram per Deciliter
mg/kg	Milligrams per Kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PCB	Polychlorinated Biphenyl
PRP	Potentially Responsible Party
RAG	Remedial Action Guideline
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
SL	Screening Level
TBC	To Be Considered
TSCA	Toxic Substances Control Act
WRP#3	Waste Rock Pile #3

I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the second FYR for the Callahan Mine Superfund site (the Site). The triggering action for this statutory review is the completion date of the previous FYR. The FYR has been prepared because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure.

The Site consists of three operable units (OUs). This FYR Report addresses OU1 and OU3. OU1 includes the cleanup of the arsenic, lead and thallium contamination in several residential properties along with the cleanup of the polychlorinated biphenyl (PCB) contamination in the former Mine Operations Area. OU3 includes the stabilization of the Tailings Impoundment and removal of sediments and soils from the salt marsh and southern portion of Goose Pond and placement of the excavated sediments and soils into an on-site confined aquatic disposal cell (former Mine Open Pit). OU3 will also include the final restoration of all areas disturbed under OU1 and OU3. This FYR Report does not address OU2. OU2 will address the groundwater contamination and waste rock outside the major waste areas (all areas not included in OU1 or OU3). OU2 is still in the investigation phase.

EPA remedial project manager Edward Hathaway led the FYR. Participants included EPA community involvement coordinator Darriel Swatts, Naji Akladiss (Maine Department of Environmental Protection, MEDEP) and Kirby Webster and Johnny Zimmerman-Ward from EPA FYR support contractor Skeo. The review began on 9/14/2020. Appendix A lists the documents reviewed for this FYR. Appendix B provides the Site's chronology of events.

Site Background

The Site is located on the northwestern side of Cape Rosier on Penobscot Bay in Brooksville, Maine (Figure 1). It includes a 120-acre property, about 75 acres of Goose Pond estuary and private properties that abut the former Callahan Mining Corporation property to the north, west and south. Zinc-copper sulfide ore deposits at the Site were discovered in 1880. The mine operated intermittently from the late 1800s to 1972, with the majority of the mining activity between 1968 and 1972. When the mine closed, Callahan Mining Corporation (Callahan) divested the property to individual landowners. The ore exploration from the 1940s to 1950s found the ore contained zinc, copper, lead, arsenic and cadmium. In the 1960s, the State of Maine passed legislation which permitted creating and constructing two dams in 1967 that were used to drain the 75-acre Goose Pond estuary and thereby allow open pit mining. Site-wide contamination generally includes hot spots with PCBs and widespread contamination of soil, groundwater, surface water and sediment resulting from the processing of the ore.

The Site currently includes a submerged open pit in the northern portion of Goose Pond, the former mine operations area, a series of waste rock piles and a tailings impoundment. The former Callahan Mining Corporation property is currently abandoned and unoccupied. Access is unrestricted, and the property is used for recreation activities, including hiking, rock collecting and all-terrain vehicle riding. There are no current plans to redevelop the site property or neighboring upland area to the west.

Goose Pond and Holbrook Island Sanctuary State Park are located immediately east of the former Callahan Mining Corporation property (Figure 2). A number of residences are located next to the former Callahan Mining Corporation property on Goose Falls Road, Cape Rosier Road and Old Mine Road.

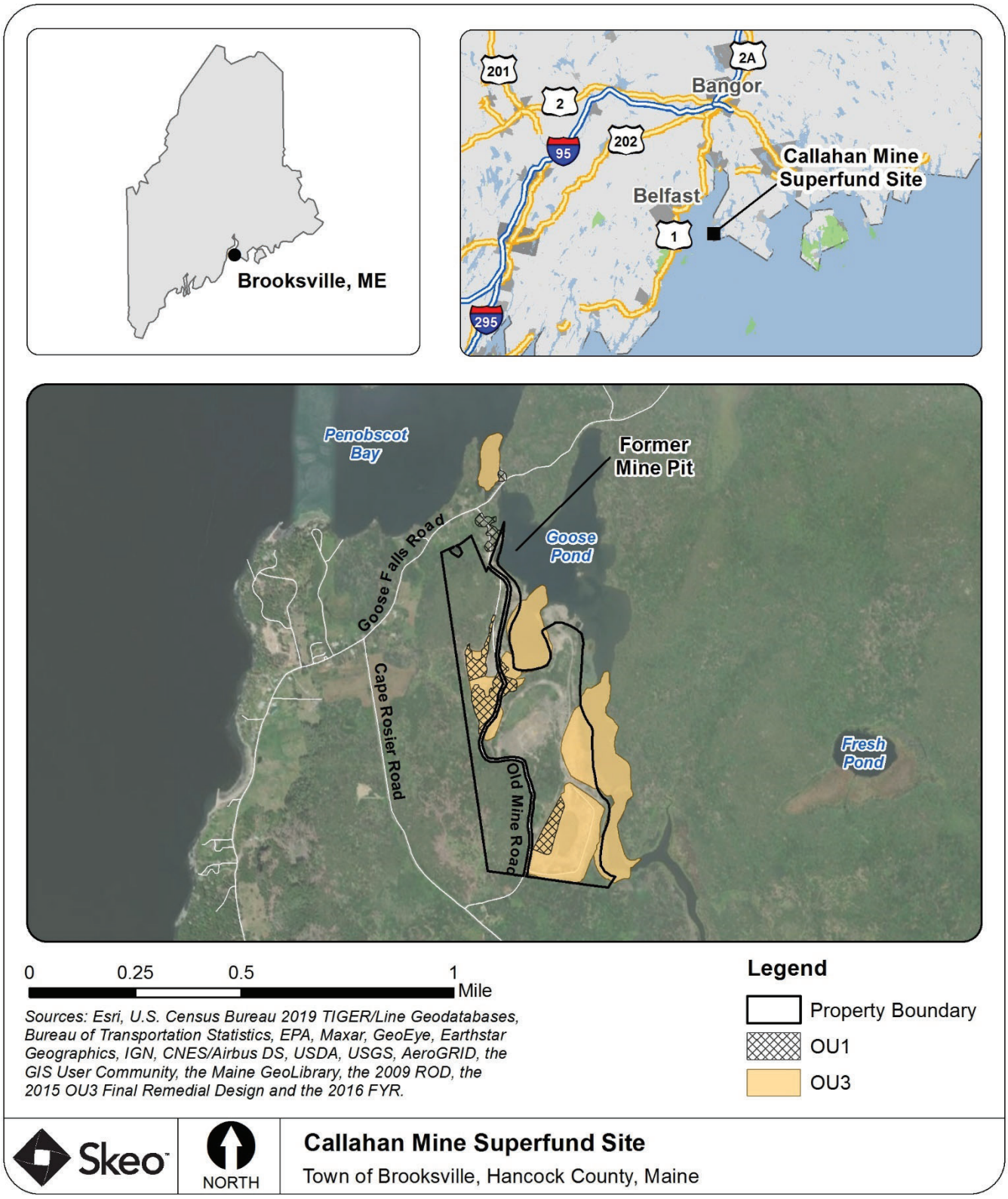
Goose Pond is the principal surface water feature at the Site. This tidal estuary empties to Penobscot Bay via

Goose Falls and Goose Cove. Goose Pond had a maximum depth of about 30 feet prior to the development of the mine. Its maximum depth is now about 13 feet, except at the location of the former mine pit, where the depth is about 300 feet. Overland flow of surface water typically develops rapidly at the former Callahan Mining Corporation property during steady rainfall events and downpours, resulting in large volumes of surface runoff directed to Goose Pond and Dyer Cove by drainage features at the Site. Residences on Cape Rosier are served by private wells. Evaluation of the water level measurements and elevation data indicates that groundwater occurs primarily in the bedrock with overburden groundwater occurring in a localized area in the Mine Operations Area. The existence of a permanent naturally saturated overburden occurs only at the Mine Operations Area. This is a result of the construction of an earthen berm built of waste rock material that was reportedly lined, or chinked, with clay or till.

FIVE-YEAR REVIEW SUMMARY FORM

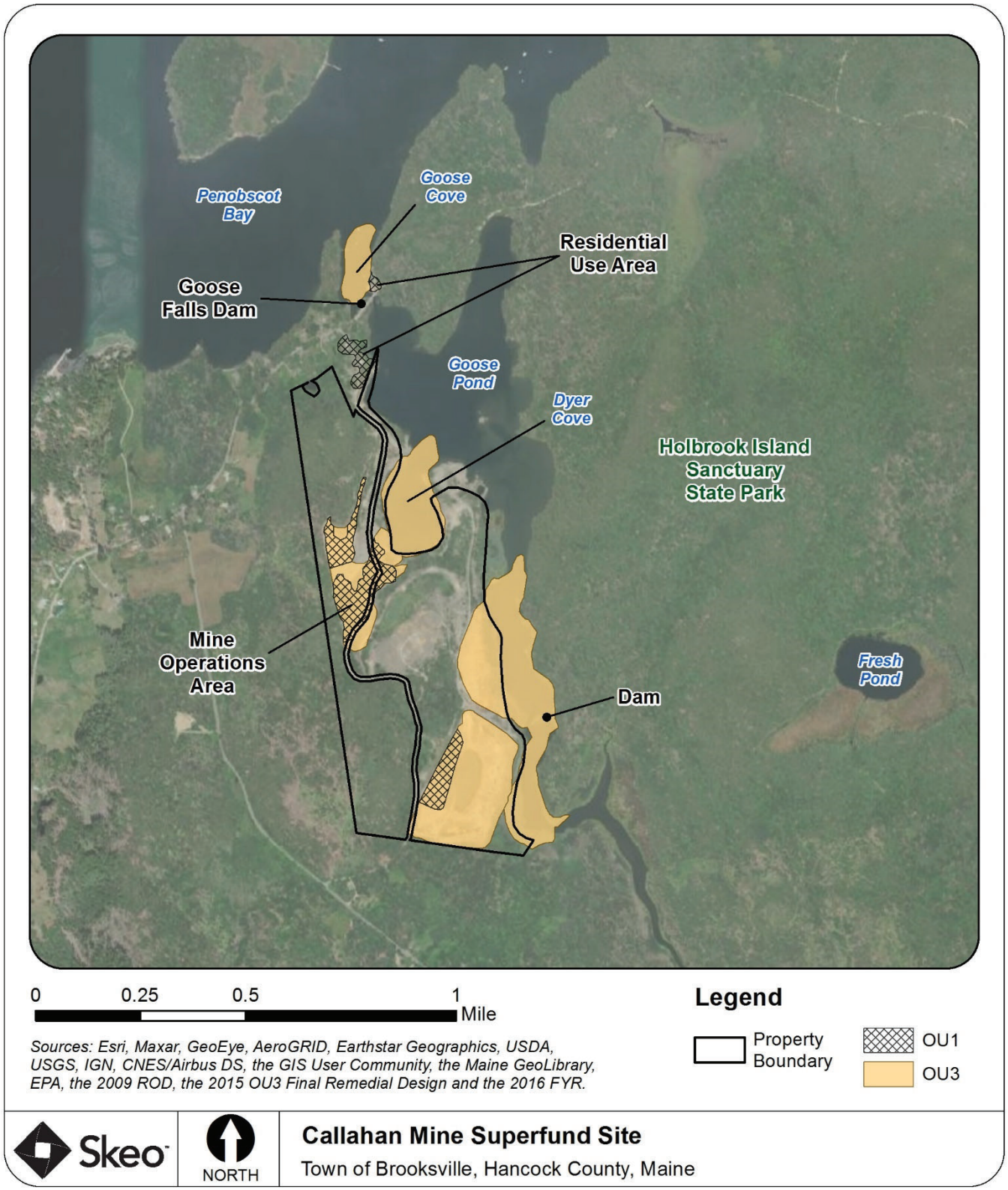
SITE IDENTIFICATION		
Site Name: Callahan Mine		
EPA ID: MED980524128		
Region: 1	**State:** ME	**City/County:** Brooksville/Hancock
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	**Has the Site achieved construction completion?** No	
REVIEW STATUS		
Lead agency: EPA		
Author name: Edward Hathaway		
Author affiliation: EPA Region 1		
Review period: 9/14/2020 - 3/31/2021		
Date of site inspection: 2/10/2021		
Type of review: Statutory		
Review number: 2		
Triggering action date: 4/18/2016		
Due date *(five years after triggering action date)*: 4/18/2021		

Figure 1: Site Vicinity Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure 2: Site Detail Map



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II. RESPONSE ACTION SUMMARY

Basis for Taking Action

The State led several investigations at the Site in 1974, 1975, 1987, 1995 and 1999. MEDEP conducted sampling in 1999. MEDEP collected samples from the soil, tailings impoundment, waste rock pile, sediment and surface water. The analytical results for these samples were used to associate hazardous substances with their sources and attribute hazardous substances to the Site.

EPA finalized the Site's listing on the Superfund program's National Priorities List (NPL) in September 2002.

EPA completed a human health risk assessment (HHRA) for OU1 in 2009. The HHRA evaluated all site media, including source area soil/waste, surface water, sediment, ambient air, biota tissue, groundwater and residential soil. The only pathways associated with unacceptable adverse human health effects were current and future exposure to contaminated soil in the Residential Use Area and current and future exposure to soil contamination in the former Mine Operations Area under current recreational and future residential land use. Surface water, sediment and biota were not identified as representing a threat to human health based on the data and assumptions in the OU1 HHRA. Human health threats from exposure to groundwater, biota, surface water, sediment and soil outside the delineated OU1 areas will be addressed as part of OU2.

The 2009 baseline ecological risk assessment found unacceptable risk for sediment-dwelling aquatic life, fish communities and birds from sediment in southern Goose Pond and the adjacent salt marsh and water discharging from the seeps adjacent to Waste Rock Pile #3 (WRP#3) and the Tailings Impoundment. These ecological risks will be addressed through the completion of the OU3 remedy.

Table 1 lists site contaminants of concern (COCs) by media.

Table 1: Site COCs, by Media

OU1	OU3		
Soil[a]	**Sediment[b]**	**Surface Water/Seeps[c,d]**	**Biota[c,d]**
Arsenic	Copper	Copper	Copper
Lead	Lead	Lead	Lead
Thallium	Zinc	Zinc	Zinc
PCBs			

Notes:

a. 2009 ROD, Table 57. Groundwater impacted by soil contamination will be addressed as part of OU2.
b. 2009 ROD, Table 58.
c. 2009 ROD, Decision Summary, Item 3. Overall Risk Assessment Conclusion – Basis for Response Action.
d. According to the 2009 ROD, remediating soil and sediment will remove the source of groundwater, surface water and biota contamination. Thus, the response actions are focused on soil and sediment and monitoring of surface water, seeps, sediment and biota.

Response Actions

Prior to EPA's involvement, limited reclamation and remedial work took place. Callahan led a reclamation program after the mining and milling operations ceased in 1972. Reclamation activities included:

- Draining of surface water from the tailings pond and seeding surface.
- Grading, seeding and planting of the waste piles.
- Blasting/pushing of the berms around the open pit into the pit. Other structures such as roads and other earthworks were regraded so as to not protrude from the surface of the reestablished Goose Pond.
- Partial removal of the upstream freshwater dam and reestablishment of Marsh Creek flow to Goose Pond.
- Flooding of the pit and Goose Pond by removing the sluice boards in the Goose Falls dam.
- Salvaging and reselling of mining and processing equipment.

- Partial demolition of buildings and equipment foundations.

The seeding and plantings on the waste rock piles and the tailings pile were largely unsuccessful due to lack of suitable soil in these areas. At that time there were no state standards requiring reclamation of mine sites. The current state law requiring full reclamation and environmental cleanup, the Maine Metallic Mineral Exploration, Advanced Exploration and Mining regulation, at 06-096 CMR Chapter 200, was not in existence when the mine closed.

In 1987, a contractor working for the property owner under MEDEP oversight removed four underground storage tanks near the metal shop from the Site.

In 2009, EPA issued the Site's Record of Decision (ROD) for OU1. At that time, EPA determined that additional investigation would be necessary to finalize a cleanup plan for groundwater and waste/soil outside of the OU1 ROD-defined source areas and created OU2. The OU2 remedial investigation/feasibility study (RI/FS) will continue until sufficient data are collected to develop a cleanup plan for those areas.

The OU1 ROD identified the following remedial action objectives:

- Protect current and future recreational visitors by preventing direct contact and incidental ingestion of site soils and waste material containing PCBs that represent a non-cancer threat with a hazard quotient greater than 1 and a cancer risk greater than 1×10^{-6} using the site-specific risk assessment assumptions for current and future recreational use.
- Protect current residents by preventing direct contact and incidental ingestion of site soils and waste material in the current Residential Use Area of the Site containing lead that would result in greater than 5% of the exposed population with a blood lead level above 10 micrograms per deciliter (µg/dL), or the Maine Solid Waste Lead Remediation Regulations, whichever is lower, using the site-specific risk assessment assumptions for current and future residential use.
- Protect current residents by preventing direct contact and incidental ingestion of site soils and waste material in the current Residential Use Area of the Site containing arsenic above background levels that represent a non-cancer threat with a hazard quotient greater than 1 and a cancer risk greater than 1.4×10^{-5} using the site-specific risk assessment assumptions for current and future residential use.
- Prevent exposure of biota to sediment, including the sediment/soil in the salt marsh, with concentrations of copper, lead or zinc that may represent a threat to insectivorous and piscivorous birds, fish and other aquatic organisms.
- Minimize acid rock drainage from mineralized waste rock and tailings that may act as a continuing source of copper, lead and zinc to groundwater, surface water and sediment.
- Stabilize the Tailings Impoundment berm to achieve acceptable stability criteria.
- Comply with all federal and state applicable or relevant and appropriate requirements, including achieving closure standards under state mining regulations.

In 2013, EPA issued an Explanation of Significant Differences (ESD) modifying the 2009 OU1 ROD, separating the OU1 ROD components into two OUs (OU1 and OU3). The cleanup actions relating to Residential Use Area soil, PCB contamination in the Mine Operations Area and Ore Pad waste rock, along with any other associated activities, remained part of OU1. EPA then designated the remaining components of the OU1 ROD (Tailings Impoundment, Waste Rock Piles, salt marsh and sediments) as OU3. OU2, as described in the 2009 ROD, will address all other areas and media at the Site where risks to human health or the environment are present that are not addressed by OU1 and OU3, including: sitewide groundwater contamination, soil/waste rock contamination outside of areas where a cover system is installed under OU3 or where the contamination was removed as part of OU1 or OU3, adjacent water supplies, surface water and sediment. OU2 also included an Early Action to implement land use restrictions on the former Callahan Mining Corporation property portion of the Site to prevent the installation of water supply wells and prevent residential development.

The 2009 OU1 ROD and 2013 ESD include the following remedy components:

OU1

- Excavation and off-site disposal of soil contaminated with PCBs exceeding site-specific PCB cleanup levels. PCBs with a concentration below 10 mg/kg may remain on site and be placed beneath the cover system for the Tailings Impoundment.
- Excavation and off-site or on-site disposal of any petroleum-contaminated soil commingled with CERCLA waste (PCB-contaminated soil exceeding site-specific PCB cleanup levels).
- Excavation of soil containing arsenic, lead and thallium exceeding site-specific cleanup levels in the Residential Use Area of the Site. The OU3 remedial design will determine whether the material will be placed beneath the Tailings Impoundment cover system or placed in the confined aquatic disposal (CAD) cell.
- Excavation and consolidation of Ore Pad and Mine Operations waste material at the Tailings Impoundment. The OU3 remedial design will determine whether the material will be placed beneath the Tailings Impoundment cover system or placed in the CAD cell.
- Installation of monitoring wells, if necessary, to assess Residential Use Area cleanup.
- Long-term operation, maintenance and monitoring, and FYRs.

OU3

- Excavation and subaqueous disposal of WRP#3 and Mine Operations Area source material in a CAD cell in the submerged former mine pit in Goose Pond.
- Construction of surface water diversions to reduce the amount of upslope runoff flowing onto and infiltrating the Tailings Impoundment.
- Installation of a low-permeability cover system to contain and isolate the Tailings Impoundment, including the PCB material beneath the temporary cover system (cover material to be quarried on site).
- Installation of a horizontal drain, or other drainage methods (e.g., vertical wells or drains), to facilitate the dewatering of the Tailings Impoundment and the collection and treatment of the discharge from the horizontal drain, or other drainage methods (e.g., vertical wells or drains), in a constructed wetland. It is possible that more measures, including a toe shear key or buttress, would be identified during the remedial design as a necessary component to stabilize the Tailings Impoundment.
- Dredging and subaqueous disposal of sediments exceeding the sediment cleanup levels from southern Goose Pond and the adjacent salt marsh into the CAD cell in the former mine pit.
- Mitigation, restoration and compensation for wetland impacts, including the dredging and subaqueous disposal of Dyer Cove and Goose Cove sediments that contain mine waste in the CAD cell in the submerged former mine pit, along with any other measures identified during the remedial design.
- Implementation of institutional controls to prevent disturbance to the components of the remedy and long-term monitoring of compliance with the restrictions.
- Installation of monitoring wells.
- Performance of long-term operation, maintenance and monitoring.
- Performance of FYRs to continue to evaluate potential human health and ecological risks due to exposure to contaminated waste material being managed on site.

OU3 also includes the final restoration of the Mine Operations Area and Ore Pad. The Mine Operations Area and Ore Pad will likely be disturbed as part of the OU3 on-site quarry, material storage and site management activities completed as part of the OU3 remedial action. In addition, it is possible that more material may be removed from the Mine Operations Area as part of OU3 to achieve the OU3 cleanup levels for arsenic and lead (based on recreational exposure). OU3 will include the final restoration of all areas disturbed under OU1 and OU3.

Table 2 and Table 3 list soil and sediment cleanup levels. For the Residential Use Area of the Site, the cleanup levels were set at a level that will be acceptable for residential exposure. For the OU1 cleanup areas within the former Callahan Mining Corporation property portion of the Site, the recreational use cleanup levels will be used

to determine the clean soil level within the limits of the source area removal for the Ore Pad, Mine Operations Area and WRP#3.

Table 2: OU1 and OU3 Soil Cleanup Levels

COC	Future Residential Use (for Residential Use Area)		Future Recreational Use (for Ore Pad, Mine Operations Area and WRP#3 within the former Callahan Mining Corporation property)	
	Cleanup Level (mg/kg)	Basis	Cleanup Level (mg/kg)	Basis
Arsenic	14	Background	30	Risk-management decision to accept 1 x 10^{-5} ELCR for arsenic
Lead	375	Maine State Safe Lead level and site-specific IEUBK model output for residential land use	700	Maine Remedial Action Guideline and site-specific IEUBK model output
PCBs	1	TSCA and site-specific risk basis allowing for unrestricted future use	1	TSCA and site-specific risk basis allowing for unrestricted future use
Thallium	15	Site-specific risk basis for noncancer exposure	NA	NA

Notes:
NA = not applicable for this COC
ELCR = Excess Lifetime Cancer Risk
IEUBK = Integrated Exposure Uptake Biokinetic
mg/kg = milligrams per kilogram
TSCA = Toxic Substances Control Act
Source: Table 57 of the 2009 ROD

Table 3: OU1 and OU3 Sediment Cleanup Levels

COC	Cleanup Level (mg/kg)	Basis
Copper	790	Ecological Effect – set at a level that would not exceed a lowest observed adverse effect level (LOAEL) of 1. The lower of LOAELs for great blue heron or spotted sandpiper.
Lead	710	Ecological Effect – set at a level that would not exceed a LOAEL of 1. The lower of LOAELs for great blue heron or spotted sandpiper.
Zinc	5,100	Ecological Effect – set at a level that would protect the benthic macroinvertebrate community from acute effects (mortality) based on a high dose-response value.

Source: Table 58 of the 2009 ROD

Status of Implementation

In August 2010, EPA entered into a settlement agreement with the State for the implementation of the remedial design of OU1 and OU3. The OU1 remedial design was completed in September 2010.

OU1

In September 2010, EPA entered into a cooperative agreement with MEDEP to allow MEDEP to become the lead for the implementation of the OU1 remedial action. The OU1 remedial action began in September 2010, with the start of on-site construction on April 21, 2011. It included:

- Off-site disposal of PCB-contaminated soil exceeding 10 mg/kg. On-site consolidation of PCB-contaminated soil below 10 mg/kg. The on-site PCB-contaminated soil was consolidated in a fenced area (stockpile) of the Tailings Impoundment and stabilized with a vegetative cover. PCB-contaminated soil was primarily excavated from the Mine Operations Area.
- Excavation of contaminated soil containing arsenic, lead and thallium above site-specific cleanup levels in the Residential Use Area consisting of five properties. Confirmation samples were collected and analyzed to ensure cleanup goals were met. Restoration of those five properties was also completed.
- Excavation of waste rock from the Ore Pad and Mining Operations Area and placement of the material at the Tailings Impoundment area. Excavation was considered complete when native soils or bedrock were encountered. Preliminary restoration of the Ore Pad area for OU1 included creation of a positive drainage area to stop soil transport to Dyer Cove. Final restoration of the Ore Pad will be done as part of OU3.
- Stabilization of the former Mine Operations Area and Tailings Impoundment.

The cleanup of the Residential Use Area was completed in 2011. The cleanup of the PCB contamination in the Mine Operations Area and Ore Pad waste rock was completed in September 2013. The entire OU1 remedial action was completed by the end of September 2013. MEDEP is responsible for all monitoring, maintenance and sampling activities associated with OU1.

OU3

OU3 has three phases. Phase 1 is the installation of a horizontal drain and passive treatment system. Phase 2 is the stabilization of the Tailings Dam and closure of the Tailings Impoundment. Phase 3 is the waste rock, sediment and salt marsh excavation and site restoration activities.

The remedial design for the Phase 1 and Phase 2 components of OU3 was completed in August 2015. The Basis of Design Report for the Phase 1 and Phase 2 remedial design includes the drawings, specifications and other project documentation. Tailings dam stabilization and construction of the Tailings Impoundment cover system are underway and scheduled for completion in 2021.

In 2015, EPA entered into a cooperative agreement with MEDEP to allow MEDEP to become the lead for the installation of the Phase 1 component of OU3 – the horizontal drain and passive treatment system. This activity was subject to an EPA Headquarters mining site consultation in August 2015. The horizontal drain and associated passive treatment system were completed in fall 2015.

In 2017, EPA and MEDEP finalized a settlement with the owner of the former Callahan Mining Corporation property, Smith Cove Preservation Trust, to provide access, allow use of the property, and require the implementation of the OU2 Early Action land-use restrictions. An environmental covenant was recorded in Book 6756, Pages 121-133 at the Hancock County Registry of Deeds on May 11, 2017 restricting: the use of groundwater, any activity that could adversely impact the cleanup actions, and future residential use on the property.

In 2018, the United States Army Corps of Engineers, via an interagency agreement with EPA, awarded a contract for the implementation of the OU3 Phase 2 Remedial Action to Environmental Quality Management (EQM). Tetra Tech was identified as a major subcontractor in the contract award. EQM and Tetra Tech are presently implementing Phase 2 construction efforts for OU3.

The remedial design for the Phase 3 component of OU3 (sediments, salt marsh soils, wetland restoration and site restoration) was completed in September 2019. The final OU3 Phase 3 design did not address WRP#3 due to

concerns relating to the placement of this material in the former mine pit. EPA and MEDEP are evaluating whether WRP#3 can be addressed as part of the Tailings Impoundment closure.

From May to July 2020, as part of OU3 Phase 2, an access road was built and a stone buttress was installed to stabilize the Tailings Impoundment toe. From July to November 2020, also as part of OU3 Phase 2, the height of the Tailings Dam was reduced to achieve a 1.5 factor of safety. As part of the Tailings Dam height reduction, tailings were relocated to create a stable grade for the reconfigured Tailings Dam. About 46,000 cubic yards of tailings and 53,000 cubic yards of dam rock were excavated and relocated as part of the 2020 construction efforts. The final cover system for the Tailings Impoundment is scheduled to be installed in 2021.

Institutional Control (IC) Review

The 2009 ROD identified the need for institutional controls to protect the components of the remedy (including Tailings Impoundment cover system, treatment wetland, monitoring well, and the CAD cell in the former mine pit). The 2013 ESD selected institutional controls as part of OU3. The 2013 ESD stated that "institutional controls compliant with 40 C.F.R. § 761.61(a)(8) will be implemented to prevent disturbance of the Tailings Impoundment as part of the OU2 Early Action and OU3 Remedial Action. The maintenance requirements in 40 C.F.R. § 761.61(a)(8) will be performed by the Maine DEP pursuant to the State Superfund Contract." In 2017, Smith Cove Preservation Trust recorded a Declaration of Environmental Covenant with Hancock County Registry of Deeds. Table 4 and Figure 3 show the Site's current institutional controls. Appendix F includes the Declaration of Environmental Covenant. The Declaration of Environmental Covenant includes the following activity and use limitations:

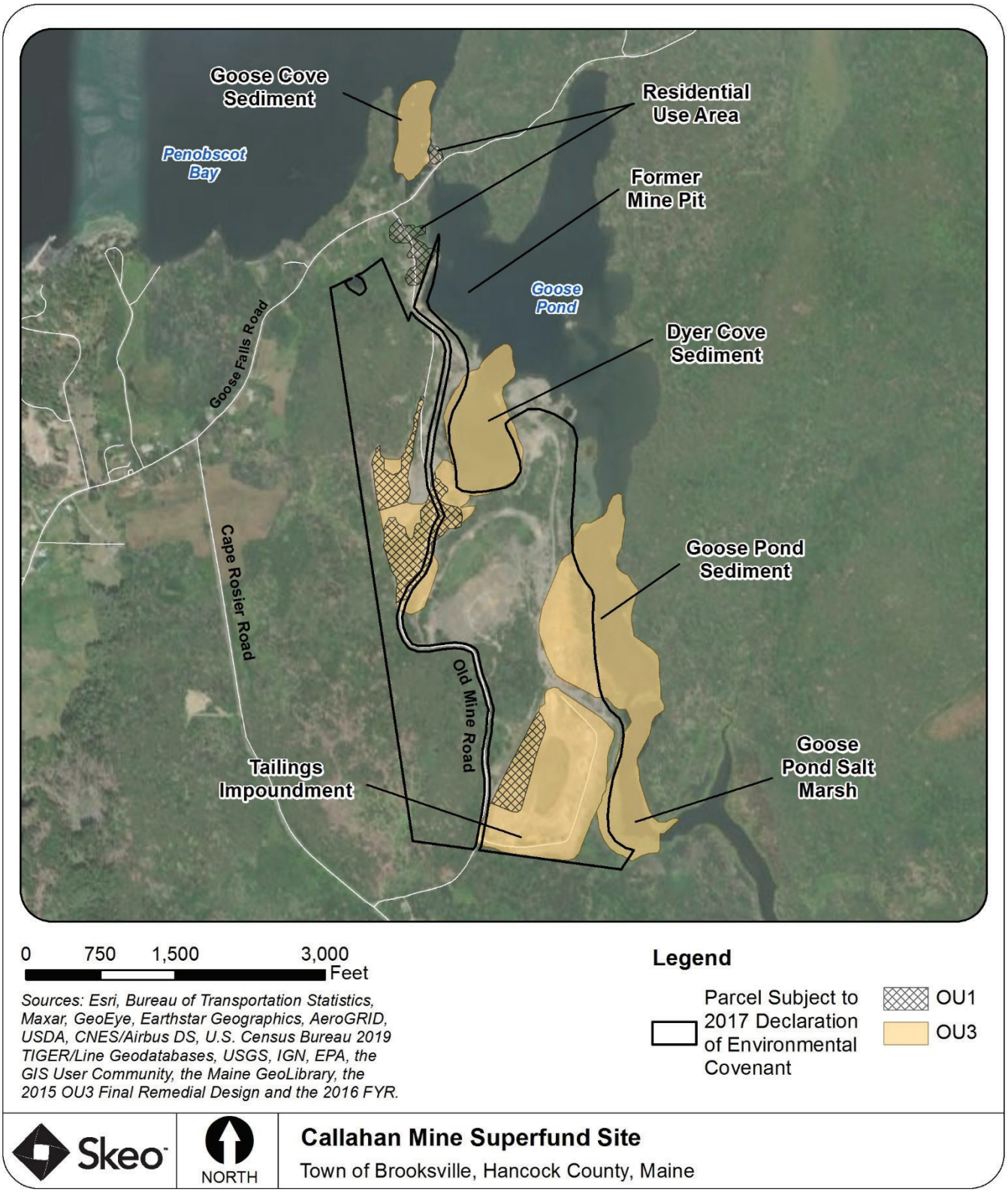
- Groundwater underlying the property shall not be extracted, consumed, exposed or utilized in any way, except for the limited purpose of extraction, treating and/or monitoring groundwater contamination levels in accordance with plans approved by MEDEP and EPA.
- No use or activity shall be permitted on the property unless otherwise provided, which may impede the construction or implementation of the environmental response project or which will disturb any of the remedial measures implemented for OU1, OU3 or subsequent operable units or damage any of the structures, equipment, machinery or other features of the cleanup installed at the Property in connection therewith. Specific remedial measures are identified in the Declaration of Environmental Covenant.
- No building for residential use shall be constructed on the property.
- Soil on the property shall not be dug or disturbed without MEDEP approval.
- Edible vegetables for human consumption shall not be grown in the soils on the property without MEDEP approval.
- Monitoring wells, survey controls points, or any other component of the environmental response project within the property or the buried components from the environmental response project shall not be destroyed, obstructed, tampered with, or otherwise disturbed.

The Site's decision documents did not identify the need for institutional controls for the Residential Use Area because cleanup goals were designated for unlimited use and unrestricted exposure.

Table 4: Summary of Implemented Institutional Control (IC)

Media, Engineered Controls, and Areas That Do Not Support Unlimited Use and Unrestricted Exposure Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date
Soil, Groundwater and Tailings Impoundment	Yes	Yes	See Figure 3	Prevent disturbance to the components of the remedy.	Declaration of Environmental Covenant May 11, 2017 Instrument # 2017006155 Book 6756, Pages 121-133

Figure 3: Institutional Controls Map



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Systems Operations/Operation and Maintenance (O&M)

The soil cleanup for the Residential Use Area is completed. No O&M activities are required for the Residential Use Area because the cleanup allow for unlimited use and unrestricted exposure of these properties.

The cleanup of the Ore Pad and former Mine Operations Area along with the PCB stockpile area in the Tailings Impoundment require inspections and maintenance. The former Mine Operations Area has a vegetative cover. The Ore Pad was left exposed and the final restoration of the Ore Pad will occur during the OU3 site restoration activities. MEDEP is responsible for periodic inspections to document that the sediment and erosion control measures are meeting best management practices. MEDEP is also responsible for periodic inspections of the stockpile area for the soil containing PCB contamination greater than 1 mg/kg but less than 10 mg/kg. Inspections are performed to document that the cover integrity has not been compromised. In 2015, with the completion of the horizontal drain and biochemical reactor, inspections, maintenance, and sampling activities were expanded to include these features.

There have been 27 documented site inspection events from August 2016 to May 2020. These inspections are documented in reports, and all work was performed pursuant to approved quality assurance project plans. The most recent of these site inspections was conducted on May 4, 2020 and is summarized in the Final Performance Assessment Summary Report, August 2020, prepared by Environmental Quality Management, Inc. and Tetra Tech for the U.S. Army Corp of Engineers. EPA has also performed 15 site inspections since 2015, with at least two per year except for 2017 when no site visits took place. The most recent inspections did not identify any major site issues. Vandalism of the site access gates is an ongoing issue that requires routine repair of the gates.

Because the Ore Pad and former Mine Operations Area final restoration and final closure of the PCB stockpile area are components of the OU3 remedial action, a comprehensive Long-Term Monitoring/Operation and Maintenance Plan will be developed as part of the completion documentation for the OU3 remedial action.

III. PROGRESS SINCE THE PREVIOUS REVIEW

This section includes the protectiveness determinations and statements from the previous FYR Report. The 2016 FYR did not identify any protectiveness issues.

Table 5: Protectiveness Determinations/Statements from the 2016 FYR Report

OU #	Protectiveness Determination	Protectiveness Statement
1	Protective	The remedy protects human health and the environment because direct contact with and incidental ingestion of arsenic, lead, and thallium contaminated soil in the Residential Use Area has been prevented by excavation of the soil above cleanup levels such allowing the Residential Use Areas to achieve unrestricted use. The remedy also currently protects human health and the environment because direct contact and incidental ingestion of PCB contaminated soil in the former Mine Operations Area above cleanup levels has been prevented by excavation and off-site disposal for the PCB contamination above 10 mg/kg or on-site consolidation and capping at the Tailings Impoundment of the PCB contamination below 10 mg/kg.
3	Will be Protective	The remedy for OU3 at the Callahan Mine site is expected to be protective of human health and the environment upon completion. All current human risks were addressed by the implementation of the OU1 remedy.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Community Involvement and Site Interviews

A public notice was made available by a press release, on 2/25/2021. Appendix C provides a copy of the press release. EPA also provided notice of the FYR in a public information update document that was posted to the EPA Callahan Mine website in December 2020. The public updated can be found at: https://semspub.epa.gov/work/01/100015978.pdf.

During the FYR process, interviews with the State (MEDEP and Maine Department of Transportation (MEDOT)), the Town of Brooksville and neighboring residents were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The interviews are summarized below. Completed interview forms are included in Appendix D.

Interviewees felt well-informed. MEDEP does not have any concerns about the contamination at the Site that are not being addressed by the current or planned cleanup actions. MEDEP responded that the EPA project manager has done a great job working with the State in managing the cleanup activities. MEDEP hopes that the capping of the Tailing Impoundment proceeds according to the plans and schedule. MEDOT believes technically-effective and cost-efficient actions are being undertaken at the Site. MEDOT feels that outreach performed by the EPA has been informative and adequate. The Town of Brooksville mentioned a concern about possible road damage from heavy trucking that is part of the ongoing process.

One interviewee expressed concern about whether the current cover system(s) and water diversion channels and controls are temporary. This interviewee wonders what level of disruption might be caused by the fall, winter and spring rains. This interviewee mentioned evidence of property trespass, including bon fires, littering and removal of entry gates and/or security chains. This interviewee hopes that any engineering controls, along with other relevant infrastructure and materials, and gated entry, are monitoring regularly. Another interviewee noted large piles of heavy clay-like mud deposited along the side of the road and wondering if it contains contaminants and if it does, if that is its final resting place.

Data Review

No data was collected during this FYR period that is pertinent to assessing the protectiveness of the OU1 remedy. Question B in the technical assessment evaluates the protectiveness of the OU1 cleanup goals. The OU3 remediation is being implemented, therefore, no data assessing the protectiveness of the remedy is available.

Site Inspection

In addition to the routine Site inspections performed at the Site by EPA and MEDEP, a FYR Site Inspection was performed on February 10, 2021. Site visit participants (Bill Phelan from the U.S. Army Corps of Engineers and Johnny Zimmerman-Ward and Kirby Webster from EPA FYR contractor Skeo) met at the southern access road to the Site, located near 1071 Cape Rosier Road. Participants parked by the southern edge of the Tailings Impoundment. They walked around the eastern perimeter of the Tailings Impoundment to WRP#3. The new access road on the south and east side of the Tailings Impoundment appeared to be in good condition, based on the view from above. Some erosion from winter weather was visible on the Tailings Impoundment. This will be regraded during the field activities this summer, which will include final stabilization of the tailings dam and installation of a cover system for the tailings impoundment. The tailings dam rock and buttress appeared stable. The fence around the PCB stockpile area was in good condition (located on the west side of the tailings impoundment). The Site had a light snow cover, with some ice from recent weather. Although trespassing has been an ongoing issue at the Site, there was no evidence of damage from trespassers. Participants drove from the Tailings Impoundment area north across the Site past the waste piles. They exited the Site through the north entrance off Goose Falls Road, going past the former mine pit and the adjacent affected neighborhood. The roads were in good condition. Heavy equipment was being delivered to the Site in preparation for spring construction work. Appendix E includes site inspection photos.

V. TECHNICAL ASSESSMENT

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

Question A Summary:

Yes. EPA identified the OU1 remedy components in the 2009 ROD and the 2013 ESD. OU1 included the cleanup of the arsenic, lead and thallium contamination in several residential properties along with the cleanup of the PCB contamination in the former Mine Operations Area. The excavation of 4,809 cubic yards of arsenic, lead and thallium contaminated soil from the Residential Use Area was completed in 2011. This material was placed on the Tailings Impoundment. Confirmation samples were collected and analyzed to ensure cleanup goals were met. Restoration of those 5 residential properties was also completed. No operation, maintenance or other activities are required for the residential properties because the cleanup allows for unlimited use and unrestricted exposure of these properties. The majority of the Residential Use Area was excavated to bedrock and clean fill was backfilled into the excavation. The residual concentration for lead for each of the residential properties was below the 2009 ROD cleanup level of 375 mg/kg and the average concentration for the soil remaining on each property is also lower than 200 mg/kg screening levels based on a blood lead level of 5 µg/dL.

The cleanup of the PCB contamination in the Mine Operations Area and Ore Pad waste rock was completed in September 2013. The excavation and off-site disposal of approximately 18,000 tons of PCB contaminated soil exceeding the site-specific cleanup level of 10 mg/kg and on-site consolidation and capping of about 15,000 tons PCB contaminated soil above 1 mg/kg and below 10 mg/kg was completed in 2013. The on-site PCB contaminated soil was consolidated in a fenced area of the Tailings Impoundment and was covered and stabilized with a vegetative cover. This area is part of the on-going OU3 cleanup for the Tailings Impoundment. Periodic inspections have been performed since 2013 to confirm that the fence and soil cover remain intact. The excavation of 21,542 cubic yards of waste rock from the Ore Pad and Mining Operations Area and placement of the material at the Tailings Impoundment was completed in 2013. This was an interim action to consolidate the source material at the Tailings Impoundment. The former Ore Pad material is being included in the cover system for the Tailings Impoundment. Final restoration of the Ore Pad area will be completed as part of OU3. The OU1 Remedial Action is documented in the *Remedial Action Complete Report for Operable Unit 1 Callahan Mine Superfund Site, Brooksville, Maine*. CES, Inc. September 2013.

The entire OU1 remedial action was completed by the end of September 2013. MEDEP is responsible for all monitoring, maintenance and sampling activities associated with OU1.The OU1 remedy is complete and functioning in accordance with the 2009 ROD and 2013 ESD.

EPA identified the OU3 remedy components in the 2009 ROD and the 2013 ESD. OU3 includes the stabilization of the Tailings Impoundment and removal of sediments and soils from the salt marsh and southern portion of Goose Pond and placement of the excavated sediments and soils into an on-site confined aquatic disposal cell (former Mine Open Pit). OU3 will include the final restoration of all areas disturbed under OU1 and OU3. The former Mine Operations Area and Tailings Impoundment were stabilized in 2013. Tailings dam stabilization and construction of the Tailings Impoundment cover system are underway and scheduled for completion in 2021. The design for the sediment and salt marsh component of the OU3 remedy was completed in September 2019. The remedy for OU3 is expected to be protective upon completion.

In 2017, institutional controls were recorded with Hancock County Registry of Deeds for the former Callahan Mining Corporation property where contamination remains above unlimited use and unrestricted exposure. The institutional controls prevent residential use, restrict groundwater use, and protect the remedial action.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives used at the time of the remedy selection still valid?

Question B Summary:

No. There have been changes in the EPA strategy addressing lead as well as potential standards, and to be considered (TBCs) since the 2009 ROD, as discussed below.

The changes as described below are not expected to alter the protectiveness of the remedy for OU1 because the remediation was completed and cleanup goals for the 2009 ROD were met. Additionally, the average soil lead concentration for OU1 following remediation is below 200 mg/kg and thus would also be protective of a target blood lead level of 5 µg/dl. The remedy for OU3 is in progress and is expected to be protective upon completion.

Changes in Standards and TBCs

New standards should be considered during the FYR process as part of the protectiveness determination. Under the NCP, if a new requirement is promulgated after the ROD is signed, and the requirement is determined to be an Applicable or Relevant and Appropriate Requirement, the new requirement must be attained only if necessary to ensure that the remedy is protective of human health and the environment.

EPA guidance states:

> "Subsequent to the initiation of the remedial action new standards based on new scientific information or awareness may be developed and these standards may differ from the cleanup standards on which the remedy was based. These new … [standards] should be considered as part of the review conducted at least every five years under CERCLA §121(c) for sites where hazardous substances remain on-site. The review requires EPA to assure that human health and the environment are being protected by the remedial action. Therefore, the remedy should be examined in light of any new standards that would be applicable or relevant and appropriate to the circumstances at the site or pertinent new [standards], in order to ensure that the remedy is still protective. In certain situations, new standards or the information on which they are based may indicate that the site presents a significant threat to health or environment. If such information comes to light at times other than at the five-year reviews, the necessity of acting to modify the remedy should be considered at such times." (See CERCLA Compliance with Other Laws Manual: Interim Final (Part 1) EPA/540/G-89/006 August 1988, p. 1-56.)

The State of Maine has one the statutory change since the 2016 FYR. Public Law 2019, chapter 201, §1 (AMD) impacted 22 MRS §1315, Definition 5-C. "Lead poisoning. 'Lead poisoning' means a confirmed elevated level of blood lead that is equal to or exceeds 5 micrograms per deciliter." This statutory change does not establish a specific media concentration but rather identifies the target risk level for a blood lead level that is considered unacceptable to the State of Maine. The impact of this change is discussed below in the Changes in Toxicity and Other Contaminant Characteristics section.

The State of Maine has also finalized the Maine Remedial Action Guidelines (RAGs) for Sites Contaminated with Hazardous Substances, Effective Date: October 19, 2018. The State of Maine requests that this guidance be considered when EPA is developing cleanup levels. These guidelines are not promulgated and specifically allow for site-specific risk assessment; as such the cleanup for the Site is consistent with these guidelines.

Changes in Toxicity and Other Contaminant Characteristics

Lead in Soil Cleanups

EPA continues to examine the science around lead exposure. Updated scientific information indicates that adverse health effects are associated with blood lead levels (BLLs) at less than 10 µg/dL. Several studies have observed

"clear evidence of cognitive function decrements in young children with mean or group BLLs between 2 and 8 µg/dL."

Based on this updated scientific information, EPA is including an evaluation of potential lead risks with a goal to limit exposure to residential and commercial soil lead levels such that a typical (or hypothetical) child or group of similarly exposed children would have an estimated risk of no more than 5% of the population exceeding a 5 µg/dL BLL. This is based on evidence indicating cognitive impacts at BLLs below 10 µg/dL. A target BLL of 5 µg/dL reflects current scientific literature on lead toxicology and epidemiology that provides evidence that the adverse health effects of lead exposure do not have a threshold.

EPA's 2017 Office of Land and Emergency Management memorandum "Transmittal of Update to the Adult Lead Methodology's Default Baseline Blood Lead Concentration and Geometric Standard Deviation Parameters" (OLEM Directive 9285.6-56) provides updates on the default baseline blood lead concentration and default geometric standard deviation input parameters for the Adult Lead Methodology. These updates are based on the analysis of the National Health and Nutrition Examination Survey 2009-2014 data, with recommended updated values for baseline blood lead concentration being 0.6 µg/dL and geometric standard deviation being 1.8.

Using updated default IEUBK and Adult Lead Model parameters at a target BLL of 5 µg/dL, site-specific lead soil screening levels (SLs) of 200 mg/kg and 1,000 mg/kg are developed for residential and commercial/industrial exposures, respectively.

Given the ongoing review of information, the above SLs are considered in this FYR for informational purposes.

The Residential Use Area OU1 component of the 2009 ROD is the only area of the Site where residential cleanup levels were established. The cleanup for the Residential Use Area was completed in 2011 and the average soil concentrations following cleanup are below both the 2009 ROD based cleanup level of 375 mg/kg and the current screening level of 200 mg/kg for residential use. As a result, the Residential Use Area cleanup level for lead does not need to be revised and the remedy remains protective. Based on this analysis, the Residential Use Area would be protective of a blood lead level of 5 µg/dl, which would be a target BLL based on updated scientific information and the State of Maine statutory change to the definition of "lead poisoning" (discussed above).

For the remaining areas of the Site that are part of OU3, a non-residential (i.e., recreational) scenario was assumed. The 2009 ROD cleanup level of 700 mg/kg is below the non-residential screening level of 1,000 mg/kg. EPA will continue to evaluate whether the cleanup level for the non-residential area is protective and whether the non-residential cleanup level is protective of a blood lead level of 5 µg/dl, which would be a target BLL based on updated scientific information and the State of Maine statutory changed to the definition of "lead poisoning" (discussed above).

Changes in Risk Assessment Methods

No changes in risk assessment methods have occurred since the previous FYR.

Changes in Exposure Pathways

There are no new routes of exposure as there have been no changes in land use or expected land use that would impact the protectiveness of the remedy. The only change is that land use controls have been implemented to prevent future residential use of the former Callahan Mining Corporation property at the Site.

Expected Progress Toward Meeting RAOs

The RAOs for the OU1 cleanup have been met and EPA expects to achieve the OU3 RAOs upon completion of the cleanup action.

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

No other information has come to light that could call into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the FYR:
OU1 and OU3

VII. PROTECTIVENESS STATEMENTS

Protectiveness Statement	
Operable Unit: 1	*Protectiveness Determination:* Protective
Protectiveness Statement: The OU1 remedy protects human health and the environment because direct contact with and incidental ingestion of arsenic, lead, and thallium contaminated soil in the Residential Use Area has been prevented by excavation of the soil above cleanup levels achieving unlimited use and unrestricted exposure of the Residential Use Area. The remedy also protects human health and the environment because direct contact and incidental ingestion of PCB contaminated soil in the former Mine Operations Area above cleanup levels has been prevented by excavation and off-site disposal for the PCB contamination above 10 mg/kg or on-site consolidation and capping at the Tailings Impoundment of the PCB contamination below 10 mg/kg.	

Protectiveness Statement	
Operable Unit: 3	*Protectiveness Determination:* Will be Protective
Protectiveness Statement: The OU3 remedy is expected to be protective of human health and the environment upon completion. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risks in these areas.	

VIII. NEXT REVIEW

The next FYR Report for the Callahan Mine Superfund site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

Callahan Mine Superfund Site. Brooksville, Maine. Regional Site Consultation Package. Tailings Dam Height Reduction and Tailings Relocation. July 2020.

Declaration for the Explanation of Significant Differences. Callahan Mine Superfund Site. Operable Units 1 & 3. Brooksville, Maine. U.S. Environmental Protection Agency – New England. September 2013.

Final Groundwater Sampling Report (April 2020 Sampling Event) Callahan Mine Superfund Site. Brooksville, Maine. Prepared by EQM and Tetra Tech for U.S. Army Corps of Engineers. October 2020.

First Five-Year Review Report for Callahan Mine Superfund Site. Brooksville, Maine. Hancock County. United States Environmental Protection Agency. April 18, 2016.

Record of Decision. Operable Unit 1. Callahan Mine Superfund Site. U.S. Environmental Protection Agency, EPA New England. September 30, 2009.

Remedial Action Completion Report for Operable Unit 1. Callahan Mine Superfund Site. Brooksville, Maine. CES Inc. September 2013.

APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

Event	Date
Mining operations conducted	Late 1800s to 1972
Two dams installed on site at Goose Pond	1960s
EPA placed Site on NPL	September 5, 2002
U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry completed Public Health Assessment	April 17, 2003
EPA began RI/FS	July 22, 2004
EPA signed Administrative Order by Consent to allow state to complete RI/FS	June 13, 2005
Maine Department of Transportation completed Phase I A of 2005 RI	June 2005
Maine Department of Transportation completed Phase I A of 2006 RI	2006
Maine Department of Transportation completed Phase I B of 2007 RI	2007
Maine Department of Transportation completed clam tissue/sediment bioavailability study	2008
Maine Department of Transportation completed OU1 RI/FS	July 2009
EPA signed the OU1 Record of Decision EPA established OU2 to address and investigate groundwater and waste/soil outside OU1-defined source areas	September 30, 2009
OU1 remedial design completed	September 23, 2010
OU1 remedial action construction activities began	April 11, 2011
EPA issued ESD for OU1 and OU3	September 20, 2013
OU1 remedial action completed	September 30, 2013
OU3 remedial design for Tailings Impoundment completed OU3 remedial design for sediment and waste rock placement in CAD cell is ongoing	July 1, 2015
OU3 remedial action began with installation of horizontal drain	July 2015
EPA signed Site's first FYR Report	April 18, 2016
Institutional controls recorded at Hancock County Registry of Deeds	May 11, 2017
OU3 tailings dam stabilization and Tailings Impoundment cover system cleanup initiated	2018
OU3 toe stabilization buttress component of tailings dam stabilization completed	July 2020
OU3 tailings dam height reduction and tailings relocation completed	2020

APPENDIX C – PRESS NOTICE

EPA United States Environmental Protection Agency

News Releases from Region 01

EPA to Review Cleanups at Seven New England Superfund Sites This Year

02/25/2021

Contact Information:
Dave Deegan (deegan.dave@epa.gov)
(617) 918-1017

BOSTON – The U.S. Environmental Protection Agency (EPA) will conduct comprehensive reviews of previously-completed cleanup work at seven National Priorities List (NPL) Superfund sites in New England this year. The sites, located in Connecticut, Maine, Massachusetts and New Hampshire, will undergo a legally-required Five-Year Review to ensure that previous remediation efforts at the sites continue to protect public health and the environment.

"Five-Year Reviews are designed to ensure that cleanup remedies continue to protect human health and the environment over time," **said EPA New England Acting Regional Administrator Deborah Szaro.** "These reviews also identify if changing circumstances or scientific understanding might require EPA to take additional actions at the site. By doing this work EPA provides assurance to community that health protection measures are adequate and working."

The Superfund program, a federal program established by Congress in 1980, investigates and cleans up the most complex, uncontrolled or abandoned hazardous waste sites in the country and works to facilitate activities to return them to productive use. EPA oversees Superfund studies and cleanups at 123 NPL sites across the six New England states. There are many phases of the Superfund cleanup process including considering future use and redevelopment and conducting post-cleanup monitoring of sites. EPA must ensure completed remedies continue to be protective of public health and the environment.

The Superfund sites where EPA will complete Five-Year Reviews in 2021 are listed below, and the web links provide detailed information on site status and past assessment and cleanup activity. Once the Five-Year Review is complete, its findings will be posted to the website in a final report.

Five-Year Reviews of Superfund sites in New England to be completed in 2021

Durham Meadows, Durham, Conn. www.epa.gov/superfund/durham
Callahan Mine, Brooksville, Maine www.epa.gov/superfund/callahan
Eastern Surplus, Meddybemps, Maine www.epa.gov/superfund/eastern
AMTL (Materials Technology Lab), Watertown, Mass.
www.epa.gov/superfund/amtl
Fort Devens - Sudbury Training Annex, Sudbury, Mass.
www.epa.gov/superfund/sudburyannex
Coakley Landfill, N. Hampton, N.H. www.epa.gov/superfund/coakley
Savage Municipal Water Supply, Milford, N.H. www.epa.gov/superfund/savage

More information on Superfund and other cleanup sites in New England:
https://www.epa.gov/cleanups/cleaning-new-england

LAST UPDATED ON FEBRUARY 25, 2021

APPENDIX D – INTERVIEW FORMS

Callahan Mine Superfund Site

Five Year Review

State and Local Authority Interview Questions:

Background: The U.S. Environmental Protection Agency (EPA) conducts regular checkups, called five-year reviews, on certain Superfund sites to make sure the cleanup continues to protect people and the environment. At any site where protection of the community and environment is dependent upon maintenance of engineering controls, EPA will inspect the site to make sure these engineering controls (cover systems, surface water diversion channels) are not damaged and are working properly. EPA will review completed, planned, and activity still in progress.

During the review, EPA studies information on the site, including the cleanup and the laws that apply, and inspects the site to make sure it continues to be protective.

1. Do you have any concerns about the contamination at the Callahan Mine site that are not being addressed by the current or planned cleanup actions?

No

2. Do you know of any Callahan Mine site conditions that may impact the protectiveness of the completed and planned cleanup activities?

No

3. Do you feel well informed about the site activities? If not, what would be the best way to keep you informed?

DEP is well informed and participate in all site activities.

4. Has EPA adequately addressed any concerns identified by your office (state or local government)?

Yes

5. Are there any issues that have not been addressed to your satisfaction? If so, please clarify?

Most if not all issues raised by the state have been addressed.

6. Do you have any other comments to offer regarding the cleanup actions at the Callahan Mine Superfund site?

EPA project manager has done a great job working with the state in managing the clean-up activities at the site. We have maintained a very good working relationship and effective communication that enabled us to move expeditiously to meet project schedule. I just hope that all remaining contractual issues are resolved in a timely manner so that capping of the tailing impoundment proceeds according to plans and schedule.

Callahan Mine Superfund Site
Five Year Review
Community Interview Questions:

Background: The U.S. Environmental Protection Agency (EPA) conducts regular checkups, called five-year reviews, on certain Superfund sites to make sure the cleanup continues to protect people and the environment. At any site where protection of the community and environment is dependent upon maintenance of engineering controls, EPA will inspect the site to make sure these engineering controls (cover systems, surface water diversion channels) are not damaged and are working properly. EPA will review completed, planned, and activity still in progress.

During the review, EPA studies information on the site, including the cleanup and the laws that apply, and inspects the site to make sure it continues to be protective. EPA seeks input from the local community and Town officials. As someone living close to the site, you may know about things that can help the review team decide if the remedy is still protective. Information about the Callahan Mine Site can be found at: **www.epa.gov/superfund/callahan**

1. Do you have any concerns about the contamination at the Callahan Mine site that are not being addressed by the current or planned cleanup actions?

MaineDOT believes technically-effective and cost-efficient actions are being undertaken at the Callahan Mine Superfund site to ensure human health and the environment are appropriately protected.

2. Do you know of any Callahan Mine site conditions that may impact the protectiveness of the completed and planned cleanup activities?

MaineDOT is unaware of any current site condition that would adversely affect the planned remedial activities.

3. Do you feel well informed about the Callahan Mine site activities? If not, what would be the best way to keep you informed?

Outreach performed by USEPA regarding the Callahan Mine Superfund site has been informative and adequate.

4. Do you have any other comments to offer regarding the cleanup actions at the Callahan Mine Superfund site?

MaineDOT looks forward to its continued collaboration with USEPA on this unique and interesting initiative.

Callahan Mine Superfund Site
Five Year Review
State and Local Authority Interview Questions:

Background: The U.S. Environmental Protection Agency (EPA) conducts regular checkups, called five-year reviews, on certain Superfund sites to make sure the cleanup continues to protect people and the environment. At any site where protection of the community and environment is dependent upon maintenance of engineering controls, EPA will inspect the site to make sure these engineering controls (cover systems, surface water diversion channels) are not damaged and are working properly. EPA will review completed, planned, and activity still in progress.

During the review, EPA studies information on the site, including the cleanup and the laws that apply, and inspects the site to make sure it continues to be protective.

1. Do you have any concerns about the contamination at the Callahan Mine site that are not being addressed by the current or planned cleanup actions?

No

2. Do you know of any Callahan Mine site conditions that may impact the protectiveness of the completed and planned cleanup activities?

No

3. Do you feel well informed about the site activities? If not, what would be the best way to keep you informed?

Ed has continued to try to keep us very informed.

4. Has EPA adequately addressed any concerns identified by your office (state or local government)?

Our only continuing worry has been the possible road damage and we are not sure at what point or if that can be addressed.

5. Are there any issues other that have not been addressed to your satisfaction? If so, please clarify?

No other than the fore mentioned roads. Residents have continued to have concerns about the damage to the town roads due to the heavy trucking that has part of this ongoing process.

6. Do you have any other comments to offer regarding the cleanup actions at the Callahan Mine Superfund site?

Wondering if there is possibly any avenue to address the concerns about our roads as the project continues.

Callahan Mine Superfund Site
Five Year Review
Community Interview Questions:

Background: The U.S. Environmental Protection Agency (EPA) conducts regular checkups, called five-year reviews, on certain Superfund sites to make sure the cleanup continues to protect people and the environment. At any site where protection of the community and environment is dependent upon maintenance of engineering controls, EPA will inspect the site to make sure these engineering controls (cover systems, surface water diversion channels) are not damaged and are working properly. EPA will review completed, planned, and activity still in progress.

During the review, EPA studies information on the site, including the cleanup and the laws that apply, and inspects the site to make sure it continues to be protective. EPA seeks input from the local community and Town officials. As someone living close to the site, you may know about things that can help the review team decide if the remedy is still protective. Information about the Callahan Mine Site can be found at: **www.epa.gov/superfund/callahan**

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- Do you have any concerns about the contamination at the Callahan Mine site that are not being addressed by the current or planned cleanup actions?

Are the current cover system(s)and water diversion channels and controls, currently in place at the tailings impoundment, temporary? To my untrained eye, it appears that a permanent cover has not yet been installed, and I wonder what level of disruption might be caused (ie surface soil erosion) by the fall, winter, and spring rains.

- Do you know of any Callahan Mine site conditions that may impact the protectiveness of the completed and planned cleanup activities?

Since the most recent work on site, I have discovered evidence of property trespass, including fire building, littering, and removal of entry gates and/or security chains. Inactivity on site will inevitably arouse renewed curiosity; I hope that any engineering controls, along with other relevant infrastructure and materials, and entry gated, are monitored regularly.

- Do you feel well informed about the Callahan Mine site activities? If not, what would be the best way to keep you informed?

I do feel well informed. The ideal would be a walking tour of the most recent work at the tailings impoundment.

- Do you have any other comments to offer regarding the cleanup actions at the Callahan Mine Superfund site.

No

Callahan Mine Superfund Site
Five Year Review
Community Interview Questions:

Background: The U.S. Environmental Protection Agency (EPA) conducts regular checkups, called five-year reviews, on certain Superfund sites to make sure the cleanup continues to protect people and the environment. At any site where protection of the community and environment is dependent upon maintenance of engineering controls, EPA will inspect the site to make sure these engineering controls (cover systems, surface water diversion channels) are not damaged and are working properly. EPA will review completed, planned, and activity still in progress.

During the review, EPA studies information on the site, including the cleanup and the laws that apply, and inspects the site to make sure it continues to be protective. EPA seeks input from the local community and Town officials. As someone living close to the site, you may know about things that can help the review team decide if the remedy is still protective. Information about the Callahan Mine Site can be found at: **www.epa.gov/superfund/callahan**

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1. Do you have any concerns about the contamination at the Callahan Mine site that are not being addressed by the current or planned cleanup actions?
   Last fall I was walking along the uphill road behind the tailings pile. I noticed large piles of heavy clay-like mud that had been deposited along the side of that road. Wondering if it contains contaminants and if so is that its final resting place?

2. Do you know of any Callahan Mine site conditions that may impact the protectiveness of the completed and planned cleanup activities?
   No

3. Do you feel well informed about the Callahan Mine site activities? If not, what would be the best way to keep you informed?

I do feel well informed and I feel that there are easily accessible resources should we have any concerns or questions.

4. Do you have any other comments to offer regarding the cleanup actions at the Callahan Mine Superfund site.

No other than everyone has been professional, agreeable and informative and the area has been left tidy and noise level has not been intrusive.

APPENDIX E – SITE INSPECTION PHOTOS

Tailings Impoundment, looking north

PCB stockpile area

Erosion on Tailings Impoundment

Southern end of Tailings Impoundment with new access road on south side (right of photo)

Goose Pond

New access road on east side of Tailings Impoundment

On-site work trailers and equipment near north entrance

Former mine pit area with homes in background

APPENDIX F – INSTITUTIONAL CONTROL

OR BK 6756 PGS 121 - 133
INSTR # 2017006155
HANCOCK COUNTY, ME

05/11/2017 01:05:56 PM
JULIE A. CURTIS
REGISTER OF DEEDS

DECLARATION OF ENVIRONMENTAL COVENANT

This DECLARATION OF ENVIRONMENTAL COVENANT is hereby declared and granted as of this ____ day of _____, 2016, by **SMITH COVE PRESERVATION TRUST,** a nonprofit corporation organized and existing under the laws of the State of Maine and with a principal address of c/o The Prentice-Hall Corporation System, Inc., Registered Agent, 45 Memorial Circle, Augusta, Maine 04330 ("Grantor"), to the **MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION** ("DEP" or "Holder") on the real property described below. This Declaration of Environmental Covenant ("Environmental Covenant") is an *Environmental Covenant* executed pursuant to the Maine Uniform Environmental Covenants Act ("UECA"), 38 M.R.S.A. §§ 3001-3013.

WHEREAS, Grantor is the owner of certain lots or parcels of land situated in the town of Brooksville, Hancock County, Maine, with improvements thereon, bounded and described in a deed from Robert S. Mant to Smith Cove Protection Association dated December 4, 1987, and recorded in the Hancock County Registry of Deeds in Book 1671, Page 326 (the "**Property**"). Smith Cove Protective Association (*a.k.a.* Smith Cove Protection Association) changed its name to Smith Cove Preservation Trust in 1988. A copy of the deed is attached as Exhibit A and a general depiction of the Property is shown on the map attached as Exhibit B.

WHEREAS, the Property is part of the former Callahan Mining Corporation property, contaminated portions of which are now part of the Callahan Mine Superfund Site (the "Site"), which the U.S. Environmental Protection Agency ("EPA"), pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act, as amended ("CERCLA"), 42 U.S.C. § 9605, proposed for inclusion on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 13, 2001 (F.R. Vol. 66, No. 178, pages 47612-47618). The Site was finalized on the NPL on September 5, 2002 (F.R. Vol. 67, No. 172, pages 56757-56765).

WHEREAS, in a Record of Decision, dated September 30, 2009, with the concurrence of DEP, EPA selected a remedial action for the first operable unit ("OU1") at the Site ("OU1 ROD"). The OU1 remedial action, which together with any other response actions, including any future operable units or any associated operation, maintenance, or monitoring activities, at the Site shall be hereinafter referred to as the "environmental response project." The OU1 ROD provides, in part, for the following actions:

- Installation of a Tailings Impoundment Cover System with stabilization measures, possibly including a toe shear key or buttress;
- Development of an on-site quarry to supply material for the Tailings Impoundment Cover System;
- Installation of a horizontal drain or other drainage methods (e.g., vertical wells or drains) within Tailings Impoundment, and passive treatment (or other treatment methods) of the discharge from the horizontal drain or other drainage methods (e.g., vertical wells or drains) in a constructed wetland;
- Dredging of Goose Pond and salt marsh sediment exceeding site-specific sediment cleanup levels identified in Table 58 of the OU1 ROD and subaqueous disposal in a

confined aquatic disposal ("CAD") cell in the submerged former mine pit in Goose Pond;

- Mitigation, restoration, and compensation for wetland impacts, including the dredging and subaqueous disposal of Dyer Cove and Goose Cove sediment that contains mine waste in the CAD cell in the submerged former mine pit, along with other measures that may be identified in remedial design;
- Establishment of institutional controls to protect the components of the remedy (including caps, treatment wetlands, monitoring wells, and the CAD cell);
- Installation of monitoring wells (if warranted);
- Long-term operation and maintenance, and monitoring, including long-term monitoring of the compliance with institutional controls;
- Five-year reviews.

WHEREAS, in a Memorandum re: Early Action for Operable Unit 2, dated September 30, 2009, with the concurrence of DEP, EPA selected an early action for the second operable unit ("OU2") at the Site ("OU2 Early Action"). The OU2 Early Action addresses, in part, the future potential threat from ingestion of groundwater and direct contact with contaminated soil/waste within the former Callahan Mine property portion of the Site. The OU2 Early Action includes the implementation of land use restrictions on the former Callahan Mine property portion of the Site to:

- Prevent the installation of water supply wells; and
- Prevent future residential use.

WHEREAS, in an OU1 and OU3 Explanation of Significant Differences ("ESD"), dated September 20, 2013, EPA documented the separation of the OU1 ROD components into two operable units, with the redefined OU1 to include the cleanup of the arsenic, lead, and thallium contamination in the Residential Use Area and the PCB contamination in the former Mine Operations Area. In addition, the ESD also redefined OU1 to include the removal of the waste rock from the Ore Pad Area in order to limit the contaminated run-off that drains into the former Mine Operations Area along with the consolidation of the contaminated material removed from the Ore Pad, Mine Operations Area, and Residential Use Area to the Tailings Impoundment for placement under the Tailings Impoundment Cover System. The ESD documented that the remaining components of the OU1 ROD shall be performed as part of OU3. OU3 includes stabilizing the Tailing Impoundment, excavation and removal of sediments and soils from the salt marsh and southern portion of Goose Pond and placement in an on-site CAD cell (former Mine Open Pit), and implementation of institutional controls to prevent disturbance of the components of the OU1 ROD remedy.

WHEREAS, the parties hereto have agreed that it is appropriate and necessary, pursuant to the UECA to (1) impose on the Property use restrictions as covenants that run with the land for the purposes of maintaining or enhancing the soil, air or water quality of the Property, protecting human health and the environment, and/or protecting the environmental response project that has been and will be performed at the Site; and (2) grant a permanent right of access over the Property to the Holder and to EPA for purposes of implementing, facilitating and monitoring the environmental response project and monitoring and enforcing the Environmental Covenant.

WHEREAS, the United States of America ("United States"), on behalf of EPA, the State of Maine, and Grantor entered into a Consent Decree to protect public health or welfare or the environment and to avoid difficult and prolonged litigation by allowing Grantor to provide valuable consideration to resolve its alleged civil liability under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607, and under the Maine Uncontrolled Hazardous Substance Sites Law, 38 M.R.S.A. §§ 1361-1371, subject to certain reservations of rights by the United States and the State of Maine ("Consent Decree").

WHEREAS, EPA, having an address at 5 Post Office Square, Boston, Suite 100, Mail Code: OSRR07-1, Boston, MA 02109-3912, has determined and approved and will continue to determine and approve the environmental response project, and is therefore an "agency," pursuant to the UECA, 38 M.R.S.A. § 3002(2).

WHEREAS, EPA therefore has the right of an agency to enforce this Environmental Covenant pursuant to the UECA, but this right is not an interest in real property.

WHEREAS, DEP is the only "holder" of this Environmental Covenant, as that term is defined in the UECA.

WHEREAS, DEP is therefore entitled to exercise the rights of a holder including enforcing this Environmental Covenant, pursuant to the UECA.

WHEREAS, Grantor wishes to cooperate fully with the Holder and EPA in the implementation of the environmental response project.

NOW, THEREFORE, Grantor **SMITH COVE PRESERVATION TRUST**, for and in consideration of the facts above recited and the covenants herein contained, and intending to create and be legally bound by a perpetual covenant running with the land, subject to the terms hereof, hereby declares, covenants and agrees as follows:

1. Declaration of Covenant: This instrument is an Environmental Covenant executed pursuant to the UECA.

2. Property: This Environmental Covenant concerns the Property as described herein.

3. Activity and Use Limitations: The following covenants, conditions, and restrictions apply to the use of the Property run with the land, and are binding on Grantor and Grantor's successors, successors in title and assigns in perpetuity, during their respective periods of ownership:

    a. Groundwater underlying the Property shall not be extracted, consumed, exposed, or utilized in any way, except for the limited purpose of extracting, treating, and/or monitoring groundwater contamination levels in accordance with plans approved by the Holder and EPA. Groundwater supply wells shall not be installed or utilized on any part of the Property, nor shall the hydrology of such groundwater be altered in any way.

b. No use or activity shall be permitted on the Property unless otherwise provided herein, which may impede the construction or implementation of the environmental response project or which will disturb any of the remedial measures implemented for OU1, OU3 or subsequent operable units or damage any of the structures, equipment, machinery, or other features of the cleanup installed at the Property in connection therewith. Such remedial measures include, without limitation: excavation of waste rock and soil and placement in a CAD cell; excavation of waste rock and soil and placement in the Tailings Impoundment; installation of surface water drainage controls; groundwater drainage controls; a cover system for the Tailings Impoundment; excavation and off-site disposal of PCB and petroleum contaminated soil; on-site containment of low-level PCBs; treatment systems; stormwater and sediment control structures; and the monitoring of air, ground water, surface waters, soil, sediment and biota. Such structures, equipment, machinery, and other features of the cleanup include, without limitation, horizontal wells, survey benchmarks, monitoring points, access roads, established vegetation, sediment and erosion control features, stormwater control features, treatment systems, Tailing Impoundment Cover System, and Tailing Impoundment stabilization measures

c. No building for residential use shall be constructed on the Property.

d. Soil on the Property shall not be dug or disturbed without DEP approval.

e. Edible vegetables for human consumption shall not be grown in the soils on the Property without DEP approval.

f. Monitoring wells, survey controls points, or any other component of the environmental response project within the Property or the buried components from the environmental response project shall not be destroyed, obstructed, tampered with, or otherwise disturbed.

4. Notice Requirement: Grantor, its successors and assigns, and all future owners and land users of the Property during the period of their respective ownership of the Property shall include in any instrument conveying any interest in any portion of the Property including but not limited to deeds, leases and mortgages, a notice, prior to such occupancy or activity, which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO A DECLARATION OF ENVIRONMENTAL COVENANT RECORDED IN THE HANCOCK COUNTY REGISTRY OF DEEDS ON _____, 2016 IN BOOK _____, PAGE _____, IN FAVOR OF AND ENFORCEABLE BY THE STATE OF MAINE AND THE UNITED STATES OF AMERICA.

Within thirty (30) days of the date any such instrument of conveyance is executed, such instrument shall be recorded in the Hancock County Registry of Deeds, and the grantor of

such instrument shall notify DEP and EPA in writing of such recording by delivery of a copy of the recorded instrument, duly certified by the Registry of Deeds.

5. Recording Requirement: Grantor shall cause this Environmental Covenant to be duly recorded in the Hancock County Registry of Deeds within thirty (30) days of the effective date of the Consent Decree, and shall, within thirty (30) days of the recording of this Environmental Covenant, notify DEP and EPA of the book and page at which it is recorded, and submit to DEP and EPA a certified copy of the recorded, signed Environmental Covenant date-stamped by the Register of Deeds.

6. Administrative Record: The environmental response project described in this Environmental Covenant is based on the Callahan Mine Superfund Site Administrative Record, which has been developed in accordance with Section 113(k) of CERCLA, and which is available for review at the Town Office in Brooksville, Maine, and at the United States Environmental Protection Agency, Region 1, OSRR Records Center, 5 Post Office Square, Boston, Massachusetts.

7. Right of Access to Property: Grantor, its successors and assigns, and all future owners and land users of the Property shall provide, without cost, access to the Property to the State of Maine and EPA, including their authorized employees, agents, representatives, and independent contractors, upon presentation of credentials, for the purposes of conducting visual inspections of the condition of the Property, monitoring and enforcing this Environmental Covenant, and implementing, facilitating and monitoring the environmental response project tasks/activities. Such environmental response project tasks/activities include, but are not limited to:

   - Taking soil, waste, sediment, building material or any other samples as may be determined necessary;
   - Survey;
   - Site visits;
   - Excavation of contaminated soil/waste material;
   - Placement of contaminated soil/waste material from the Residential Use Area onto the Tailings Impoundment or other suitable location;
   - Creation of a stockpile on the Tailings Impoundment;
   - Installation of a low-permeability cover system to contain and isolate the Tailings Impoundment (cover material to be quarried from the Property);
   - Excavating and permanently removing Borrow Material (earthen material, such as rock and/or soil encompassing overburden material such as topsoil, sand, silt, clay, gravel, cobbles, and boulders, that is obtained from a location for the sole purpose of providing materials to perform the environmental response project at the Site and that meets the specifications included in EPA or DEP approved design and planning documents, construction specifications and work plans for the environmental response project);
   - Excavating and permanently placing Spoils (any material, excluding Borrow Material, generated, removed, excavated, or otherwise obtained as a result of the implementation of the environmental response project at the Site);
   - Grading of waste rock and soil;

- Installation of sediment basins;
- Improvement of access roads;
- Installation of Site facilities;
- Excavation of soil/sediment material stockpile on, within and adjacent to Waste Rock Pile 1;
- Designing, implementing, monitoring, and performing operation and maintenance; and
- All other actions and activities related to the environmental response project.

8. Amendment or Termination by Consent: The terms and conditions herein may not be amended or terminated except by a written instrument duly executed by Grantor, the current owner of the Property at the time of the amendment or termination, and DEP and EPA or their successors in legal function, which instrument is duly recorded in the Hancock County Registry of Deeds, pursuant to the UECA. In the event that it no longer owns the Property, Grantor waives its right to consent.

9. Petition to Amend: Grantor or current owner of the Property may petition DEP and EPA to amend (including, without limitation to, remove) some or all of the covenants, restrictions, agreements and obligations herein. The burden is upon the party seeking DEP and EPA approval of the amendment or removal of a restriction to show that the restriction is no longer necessary to protect the public health and safety and the environment. DEP and EPA may agree to remove or amend restrictions that in the exercise of their sole discretion, DEP and EPA determine to be no longer necessary to protect the public health and safety and the environment. Any such amendment or termination of the Environmental Covenant must comply with the UECA, the provisions of this Environmental Covenant, the environmental response project, and all other applicable laws.

10. Transfer of Property: Grantor, its successors and assigns, and all future owners and land users of the Property shall notify DEP and EPA in writing prior to entering into a contract to transfer any interest in the property, or sixty (60) days before the transfer of any interest in the Property, whichever is earlier.

11. Duration and Binding Nature of Covenant: This Environmental Covenant and each and every covenant herein shall be a covenant running with the land in perpetuity and shall be binding on Grantor and its successors and assigns, including any transferee acquiring or owing any right, title or interest in the Property, and all those acting by, through, or under any of them forever. The term "transferee," as used in this paragraph, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, lessees, and lien holders. By the acceptance of a deed of conveyance of all or any part of the Property or any interest therein, whether or not the deed shall so express, all successors, assignees, and transferees shall be deemed to have accepted the Property subject to the restrictions contained herein and shall be deemed bound by, obligated to comply with, and otherwise subject to the restrictions herein and this Environmental Covenant.

12. Representation of Ownership and Encumbrances: By its execution hereof. Grantor hereby represents that it is the sole fee simple owner of the Property and that there are no mortgages, easements, or other encumbrances on the Property that would materially adversely affect the effectiveness or enforceability of this Environmental Covenant.

13. Identity of Holder of Environmental Covenant: DEP is the environmental agency with enforcement authority pursuant to the UECA, and is also the only holder of this Environmental Covenant granted by Grantor in this Environmental Covenant. The administrative record for the Property is located at DEP headquarters, whose mailing address is 17 State House Station, Augusta, ME 04333-0017, with a street address of the Ray Building, 28 Tyson Drive, Augusta, Maine. The administrative record is DEP's facility file for the Property. Additionally, EPA is an environmental agency with enforcement authority pursuant to the UECA. EPA maintains an administrative record for the Site. EPA's mailing address is 5 Post Office Square, Suite 100, Mail Code: OSRR07-1, Boston, MA 02109-3912.

14. Grant of Environmental Covenant Pursuant to Law: This Environmental Covenant grants an Environmental Covenant subject to the UECA and no defenses waived by the UECA may be raised in any action to enforce any of this Environmental Covenant.

15. Enforcement of Covenant: This Environmental Covenant shall be enforceable as authorized by the UECA. Any forbearance as to enforcement of any of the terms hereof shall not be deemed a waiver of the right to seek and obtain enforcement at any time thereafter as to the same violation or as to any other violations.

16. Inspection and Reporting: Grantor, its successors and assigns, and all future owners and land users of the Property shall conduct inspections of the Property annually for compliance with the terms of this Environmental Covenant, and shall report the results to DEP and EPA, the first such inspection to be conducted by June 30 following the date of recording of this Environmental Covenant, and a written report of the findings submitted to DEP and EPA within thirty (30) days after the inspection date.

17. Notice of Noncompliance: Grantor, its successors and assigns, and all future owners and land users of the Property shall provide written notice to DEP and EPA within ten (10) working days of discovery of any noncompliance with the terms of this Environmental Covenant.

18. Changes in Use: Grantor, its successors and assigns, and all future owners and land users of the Property shall notify DEP and EPA in writing thirty (30) days before any proposed change in the use of the Property or any proposed work that could affect any contamination on the Property subject to this Environmental Covenant.

19. No Limitation on Access: Nothing in this document shall limit or otherwise affect the Holder's or EPA's rights of entry and access provided by law or regulation.

20. Notices: Any notice required pursuant to this instrument shall be in writing and shall be sent by certified mail, return receipt requested, or by any commercial carrier as provides

proof of delivery, and shall be sent to the following addresses, or such other addresses as each entity may designate from time to time in a written notice to the other entities:

If to Grantor, to:

Smith Cove Preservation Trust
c/o The Prentice-Hall Corporation System, Inc., Registered Agent
45 Memorial Circle
Augusta, ME 04330

With a copy to:

Smith Cove Preservation Trust
c/o Sally N. Mills, Esq.
Hale & Hamlin, LLC
PO Box 729
4 State Street
Ellsworth, ME 04605

If to DEP, to:

David Wright, Director, Division of Remediation
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

If to EPA, to:

Edward Hathaway, Remedial Project Manager
U.S. Environmental Protection Agency, Region 1
5 Post Office Square
Suite 100, Mail Code: OSRR07-1
Boston, MA 02109-3912

21. General Provisions:

a. Governing Law: This Environmental Covenant shall be governed and interpreted in accordance with the laws of the State of Maine.

b. Liberal Construction: It is intended that this Environmental Covenant shall be construed liberally to protect the health and welfare of the public and the quality of the environment from the risk of adverse effects of exposure to hazardous substances or contaminants.

c. Effect of Failure to Provide Notice: The validity of this Environmental Covenant is not affected by any failure of Grantor or subsequent owners to provide notice as required in this Environmental Covenant.

d. Severability: If any part of this Environmental Covenant shall be decreed to be invalid by any court of competent jurisdiction, all of the other provisions hereof shall not be affected thereby and shall remain in full force and effect.

e. Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

IN WITNESS WHEREOF, Grantor has caused this Environmental Covenant to be signed by its duly authorized officers as of the day and year first above written.

GRANTOR SMITH COVE PRESERVATION TRUST,

By: _____ Witness: _____
JAMES BENENSON, JR.
Trustee for Smith Cove Preservation Trust Type or Print Name

STATE OF New York
Nassau COUNTY, ss. Date: 9/23, 2016

Then personally appeared the above-named James Benenson JR. in his/her capacity as Trustee and acknowledged the foregoing to be his/her free act and deed and the free act and deed of Smith Cove Preservation Trust.

Before me,

AHMAD ZAFAR
Notary Public - State of New York
NO. 01ZA6342622
Qualified in Nassau County
My Commission Expires May 23 2020

_____
NOTARY PUBLIC

Ahmad Zafar
Type or Print Name

By: _____ Witness: _____
JOHN V. CURCI
Trustee for Smith Cove Preservation Trust Type or Print Name

STATE OF _____
_____ COUNTY, ss. Date: _____, 2016

Then personally appeared the above-named _____ in his/her capacity as _____ and acknowledged the foregoing to be his/her free act and deed and the free act and deed of Smith Cove Preservation Trust.

Before me,

_____
NOTARY PUBLIC

_____
Type or Print Name

IN WITNESS WHEREOF, Grantor has caused this Environmental Covenant to be signed by its duly authorized officers as of the day and year first above written.

GRANTOR SMITH COVE PRESERVATION TRUST,

By: _____ Witness: _____
JAMES BENENSON, JR.
Trustee for Smith Cove Preservation Trust Type or Print Name

STATE OF _____
_____ COUNTY, ss. Date: _____, 2016

Then personally appeared the above-named _____ in his/her capacity as _____ and acknowledged the foregoing to be his/her free act and deed and the free act and deed of Smith Cove Preservation Trust.

Before me,

_____
NOTARY PUBLIC

_____
Type or Print Name

By: _____ Witness: Nancy S. Lenhart
JOHN V. CURCI Nancy S. Lenhart
Trustee for Smith Cove Preservation Trust Type or Print Name

STATE OF Ohio
Cuyahoga COUNTY, ss. Date: Sept 26, 2016

Then personally appeared the above-named John V. Curci in his/her capacity as Trustee and acknowledged the foregoing to be his/her free act and deed and the free act and deed of Smith Cove Preservation Trust.

Before me,

_____
NOTARY PUBLIC

Lee M Johnson
Type or Print Name

Lee M. Johnson
Notary Public for the State of Ohio
My Commission Expires 08/28/2017

ACKNOWLEDGED AND AGREED TO BY:
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL MERCER
Commissioner

STATE OF MAINE
KENNEBEC COUNTY, ss.

Date: 10/24/2016, 2016

Then personally appeared the above-named Paul Mercer, Commissioner Maine Department of Environmental Protection and acknowledged the foregoing instrument to be his/her free act and deed in his/her said official capacity and the free act and deed of the Maine Department of Environmental Protection.

Before me,

NOTARY PUBLIC

Ruth Ann Burke
Notary Public, State of Maine
My Commission Expires February 21, 2022

Type or Print Name

ACKNOWLEDGED AND AGREED TO BY:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Michael P. Kenyon, acting for
H. CURTIS SPALDING
Regional Administrator, Region 1

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF SUFFOLK

Then personally appeared the above-named Michael P. Kenyon of the U.S. Environmental Protection Agency this 28th day of September, 2016, and acknowledged to be his/her free act and deed in his/her said official capacity and the free act and deed of the U.S. Environmental Protection Agency.

Before me,

SUSAN J. SCHMIDT
Notary Public
Commonwealth of Massachusetts
My Commission Expires September 8, 2017

Susan J. Schmidt
NOTARY PUBLIC

Susan J. Schmidt
Type or Print Name

(13)

Ret: Hale + Hamlin
L.O.