Pike Hill Copper Mine Superfund Site EE/CA Public Hearing – August 23, 2022



Pike Hill Copper Mine Meeting Agenda

Introduction

Presentation of proposed cleanup plan

Public Hearing

• All comments should be provided during the public hearing portion of the meeting.

Pike Hill Copper Mine - Introduction

- The Pike Hill Copper Mine Superfund Site (Site) was placed on the EPA National Priorities List (NPL), also known as the Superfund list, in 2004
- The Pike Hill Copper Mine Superfund Site includes three separate mines along with the impacted areas of Pike Hill Brook and Cookville Brook Tributary #4 including downstream wetland areas.
- The Site is considered eligible for the National Register of Historic Places triggering the requirements of the National Historic Preservation Act.
 - Mining activities from 1846-1919.
 - Material brought to Elizabeth Mine in 1940s and 1950s.
- The Site hosts the largest known concentration of statethreatened eastern small-footed bats in Vermont and is historic habitat for the federally threatened northern longeared bat.



Pike Hill Copper Mine Superfund Site Site Description

The Pike Hill Copper Mine Superfund Site contains three sub-areas.

- Eureka Mine and Union Mine:
 - Drain to Pike Hill Brook watershed.
 - About 81,000 cubic yards of mine waste material extending over about 13 acres.
 - Underground workings (shafts and adits) and old foundations.
 - The section of Pike Hill Brook immediately downstream of the waste rock piles contains mine waste.
- Smith Mine:
 - Drains to a tributary of Cookville Brook.
 - About 0.5 miles south of the other mines.
 - There are three small waste piles over about 1 acre containing about 4,000 cubic yards of waste material.
 - Underground workings (shaft and adit).



PIKE HILL BROOK

Union Mine

Smith Mine 🛠

Eureka Mine 🗙

COOKVILLE BROOK TRIBUTARY #4

Red and Pink line show stream segments that are listed as impaired waters by the VT DEC

R

Red line:

- contaminant concentrations consistently exceed standards,
- the water is acutely toxic to fish, and

Cook 1400

the benthic and fish communities are severely depleted and fails state criteria.

Pink line:

- contaminant concentrations periodically exceed standards, and
- the benthic and fish communities are less healthy when compared to reference locations and fails state criteria.



East Corinth

Pike Hill Copper Mine Superfund Site – Cleanup Alternatives

EPA developed an Engineering Evaluation and Cost Analysis (EE/CA) to identify and cleanup alternatives to address the impacts to Pike Hill Brook and a tributary of Cookville Brook.

- Alternative 1: Excavation and on-site consolidation/capping of mine waste in one or more containment cells, with in-place (referred to as "in-situ") stabilization of select areas of mine waste.
- Alternative 2: Excavation and off-site disposal of mine waste with in-situ stabilization of select areas of mine waste.
- Both alternatives would require some degree of long-term inspections and maintenance, known as Post-Removal Site Control.

Pike Hill Copper Mine Superfund Site – Cleanup Alternatives

Activities that are included in both Alternative 1 and Alternative 2:

- Survey and layout.
- Historic resource documentation and data recovery to address impacts to historic resources.
- Clearing about 9 acres, construction of staging areas and establishment of erosion controls/stormwater management features.
- Excavation of approximately 65,000 cubic yards of mine waste over about 11 acres.
- In-situ stabilization of mine waste in close proximity to the bat habitat (adding organic and alkalinity to buried waste material) over about 3.5 acres.

Pike Hill Copper Mine Superfund Site – Cleanup Alternatives

Activities that are included in both Alternative 1 and Alternative 2:

- On-site access road construction.
- Off-site (Town Road) improvements.
- Confirmation soil sampling.
- Restoration of areas disturbed by the cleanup, including wetland creation and the
 restoration of the segment of Pike Hill Brook that will be excavated to address impacts to
 wetlands and waterways.
- Each alternative would require about 2-3 years to perform the construction and restoration activities.

Alternative 1: Excavation and on-site consolidation/capping of mine waste with in-situ stabilization of select areas of mine waste

Activities that are unique to Alternative 1:

- Additional clearing and erosion/stormwater controls for the containment cell.
- Installation of cover system over the containment cell (about 3-4 acres).
 - Bedding layer
 - Geomembrane
 - Drainage net
 - Protective soil or stone layer
 - Topsoil, is soil cover
- An estimated 5,000 truck loads would be necessary to implement Alternative 1.
- \$18 million.

Alternative 2: Excavation and off-site disposal of mine waste with in-situ stabilization of select areas of mine waste

• Activities that are unique to Alternative 2:

- Transportation of 65,000 cubic yards of mines waste to an off-site disposal facility.
- An estimated 6,700 truck loads would be necessary to implement Alternative 2.
- \$28 million









AREA OF POTENTIAL EFFECT

PIKE HILL COPPER MINE POTENTIAL HAUL ROUTE

Eureka and Union Mine

Road Access to Mine for Truck Traffic

- Most likely route is RT25 Brook Road Richardson Road.
- Traffic Plan will be developed.
- Major focus will be safety and minimizing inconvenience to locals.
- EPA will work with Town officials and local residents to address any road improvements that may be required in advance of the hauling and make repairs that may be necessary during and after hauling.
- The plan does not include paving of the Town roads.
- Any changes to Town roads must be approved by Town Officials.



Pike Hill Copper Mine Superfund Site – Recommended Cleanup Alternative

- Why does EPA recommend implementing Alternative 1?
 - A cleanup action is needed because the Site represents a severe ongoing ecological threat as documented by multiple lines of evidence (surface water concentrations, benthic community studies, fish community studies, and toxicity testing).
 - The proposed Alternative 1 cleanup action would:
 - Achieve the Removal Action Objectives identified in the EE/CA and Fact Sheet;
 - Greatly reduce acute impacts to aquatic organisms;
 - Reduce contaminant loading to downstream wetlands area; and
 - Be the Least Environmentally Damaging Practicable Alternative to protect wetland and aquatic resources (as required under the federal Clean Water Act).
 - Alternative 1 was determined to be the most cost-effective cleanup approach to achieve the Removal Action Objectives.
 - A similar cleanup approach was successful at Elizabeth Mine and has been designed for the Ely Copper Mine.

Other Activities associated with this cleanup:

- Maintenance and inspections of the engineered cover system and other components of the NTCRA will be performed by the State of Vermont as Post-Removal Site Control.
 - The estimated annual cost is \$25,000/year.
 - The Post-Removal Site Control will be included in the Site-wide long-term monitoring, maintenance, and inspections once a final remedial action is selected for the Site.

- Public Comment:
 - EPA is seeking your comments regarding the EE/CA, the recommended cleanup approach, and the determination that the cleanup alternative recommended in the EE/CA and Fact Sheet is the Least Environmentally Damaging Practicable Alternative for protecting streams and wetlands on-site and downstream.
 - 30-day public comment period for the EE/CA, fact sheet and administrative record began August 3, 2022 and extends to September 2, 2022.
 - The EE/CA, fact sheet and administrative record as available for review at: www.epa.gov/superfund/pikehill
 - You can provide comments at the hearing (Aug 23) or email/mail comments to EPA prior to the end of the comment period.
 - Email: <u>hathaway.ed@epa.gov</u> or
 - mail: Edward Hathaway, Project Manager, USEPA Region 1, 5 Post Office Square, Suite 100, Mailcode: 07-1, Boston, MA 02109

Pike Hill Copper Mine Superfund Site – Next Steps

- After the Public Comment Period:
 - After EPA reviews and considers all of the comments received, an Action Memorandum will be developed to document the cleanup approach, which will include EPA's written responses to all of the substantive comments received.
 - Following the Action Memorandum, EPA would develop a detailed design for the cleanup. This would include the traffic plan.
 - The design phase could require 1-2 years.
 - The actual cleanup work may not begin until 2024/2025 or later.
 - EPA will also be performing investigations to support the NTCRA and to evaluate the extent of groundwater, surface water, and sediment cleanup to determine if additional cleanup actions may be necessary.
 - These investigations could begin in October 2022.

US EPA Contacts:

Edward Hathaway, Project Manager USEPA Region 1 5 Post Office Square, Suite 100 Mailcode: HBT Boston, MA 02109 (617) 918-1372 Hathaway.ed@epa.gov

Darriel Swatts, Public Affairs Specialist / Community Involvement Coordinator US EPA, Region 1 5 Post Office Sq. Suite 100 Mail Code: ORA01-3 Boston, MA 02109-3912 Office: 617-918-1065 Cell: 857-329-3740 Fax: 617-918-0617 Email: swatts.darriel@epa.gov

Vermont ANR Contacts:

John Schmeltzer, Co-Site Project Manager Sites Management Section VT DEC 103 South Main Street, West Office Building Waterbury, VT 05671-0404 tel: 802-241-5620

john.schmeltzer@vermont.gov

Graham Bradley, PhD, Co-Site Project Manager Sites Management Section VTDEC 103 South Main Street, West Office Building Waterbury, VT 05671-0404 tel: 802-622-4129 grahame.Bradley@vermont.gov

- End of presentation.
- EPA can answer clarifying questions.
- Please hold all comments for the public hearing to follow.
- EPA does not respond to comments during the hearing.
- EPA will develop a formal response to comments.