

Callahan Mine Superfund Site

Monthly Update

May 2021



The United States Environmental Protection Agency (EPA) and Maine Department of Environmental Protection (MEDEP) continue their efforts to complete the cleanup of the Callahan Mine Superfund Site. The United States Army Corps of Engineers (USACE) was retained by EPA to implement the cleanup work and to provide technical and administrative management of the contract and contractor. The work is being performed by Environmental Quality Management, Inc. (EQM) and their subcontractor TetraTech EC, Inc. (wholly referred to in this document as the EQM Team). Current effort focuses on stabilization of the Tailings Dam, Waste Rock Pile #3 (WRP#3), and installation of cover system on the Tailings Impoundment.

The EQM Team performed development and investigation fieldwork during 2018 and 2019 to finalize the plan to address the Tailings Impoundment. Onsite construction activities commenced in April 2020 and continued to the scheduled winter-shutdown in December 2020. Work completed during 2020 stabilized the Tailing Dam and Impoundment and included: construction of a toe buttress and access road along the east and south side of the impoundment; lowering of the rock Tailings Dam; tailings excavation/regrading to shape the Tailings Impoundment for the final cover system; and, installation of geotechnical monitoring instrumentation. Engineering technical support and planning initiated during the winter shutdown period enabled the EQM Team to hit the ground running early in 2021 with focus on installation of the Tailings Impoundment cover system and stabilization of WRP#3.

Major Activities During May 2021:

- Produced 21,082 tons of 3" minus rock from existing WRP# 1 materials.
- Segregated/stockpiled oversized rock and fines.
- Sampled processed rocks for density testing, and sieve analysis.
- Continued inspection/repair/ maintenance of interim drainage features and erosion/sediment controls.
- Abandoned geotechnical and monitoring wells located on the Tailings Impoundment.
- Completed geo-synthetic cover materials lay down yard to prepare for cover system materials deliveries and staging.

- Initiate final excavation, placement, and grading of Tailings Impoundment for cover system installation during Summer 2021.

Major Activities Anticipated During June 2021:

- Finalize rock processing activities operations.
- Continue inspection/repair/maintenance of the drainage features and erosion/sediment controls.
- Receive, inspect, and stage cover system materials.
- Continue final excavation, placement, and grading of Tailings Impoundment.
- Begin installation of Tailings Impoundment cover system.
- Submit draft plans for stabilization of WRP#3.

Overview of General Work Activities
• Maintained site and project administrative, management, and technical support functions.
• Implemented Accident Prevention & Site Health and Safety plans according to USACE EM 385-1 guidelines.
• Performed construction QC inspection/testing according to plan using the USACE 3-Phase Inspection process.
• Monitored and controlled effectiveness of dust control measures during rock processing.
• Conducted geotechnical stability and consolidation monitoring (remote and manual) and reporting.
• Repaired/maintained/upgraded the stormwater erosion and sediment controls.
• Collected/reported photo documentation of the site and work activities.
• Prepared/submitted daily progress, production, and QC reports.
• Continued engineering technical support and planning action to maintain forward construction path/schedule.

Rock Crushing/Screening – Processing and Operations
• Processed and stockpiled 21,082.4 tons (16,683.5 cubic yards) of rock – 5/1 to 5/31/21.
• The total amount of processed rock is 41,866.7 tons (32,148 CY's).
• Collected/tested samples of protection layer rock for density and QC sieve analysis to verify gradation specifications.



Photo 1. View of sample collection for testing at the rock processing plant.
(see attached Figure E-1 for location of processing area)

Maintenance & Repair of the Stormwater Management Controls
• Inspected the interim erosion and sediment controls on the Tailings Impoundment.
• Repaired/maintained the controls that sustained erosion damage during the 2020/2021 winter shutdown.
• Enhanced stormwater conveyance channels and upgraded/repared the erosion controls.
• Continued crest main drainage swale work, and road repairs throughout the site using ¾” reject fines.
• RF Jordan vactor truck team completed the tailings sediment removal.
• Gorilla-Snot (synthetic copolymer dispersion) applied to control dust and prevent erosion.



Photo 2 (group). Views of RF Jordan removing tailings sediment from toe of the East access road and along access road drainage features.

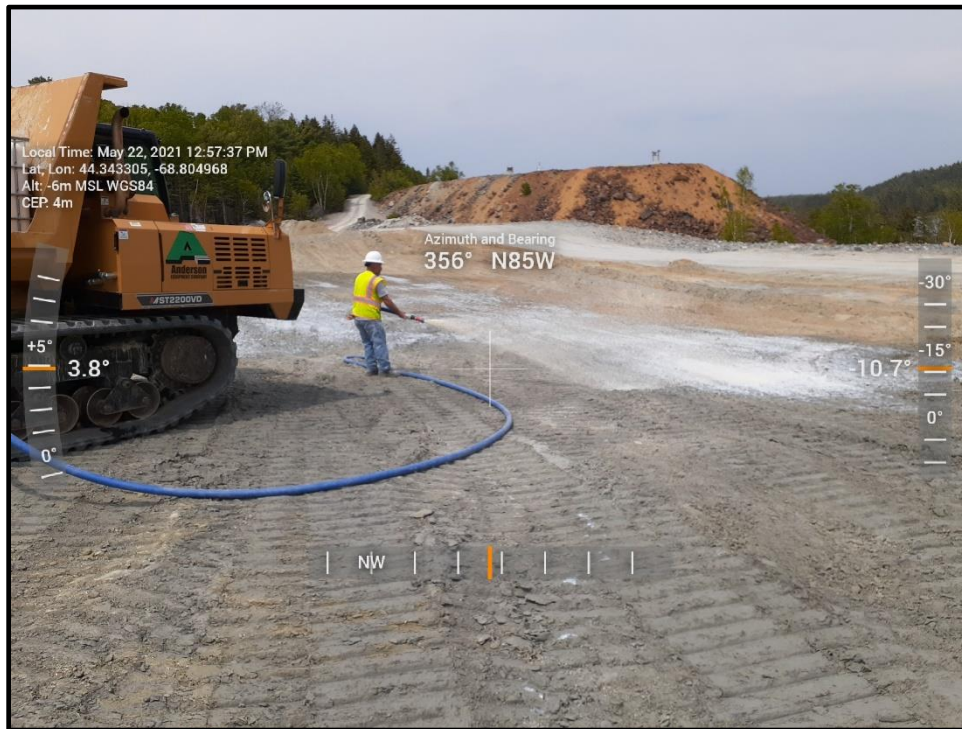


Photo 3. EQM team regraded tailings materials and applied Gorilla-Snot to control future erosion.

Preparation of Tailings Impoundment for Cover System

- Completed the geosynthetics laydown area with 3/4-inch reject fines.
- Completed SW corner: placed geo-fabric and geo-grid, then placement of the 3/4" reject fines (FCR-024).
- Western ore pad slope excavation of tailings and placement of 36" rock completed.
- Began finalization work on the Tailing Impoundment surface: excavation, placement, and grading of tailing for the cover system placement.



Photo 4 (group). Views of Western Ore Pad slope during 36" rock placement.

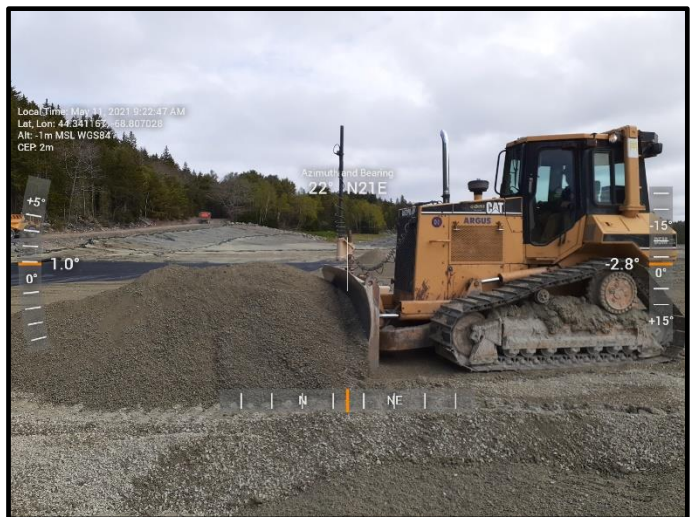


Photo 5 (group). Views of Southwest corner geo-grid and fines placement as surface stabilization.



Photo 6. Views of geotechnical and well abandonment on top of the Tailings Impoundment with New England Boring Contractors.

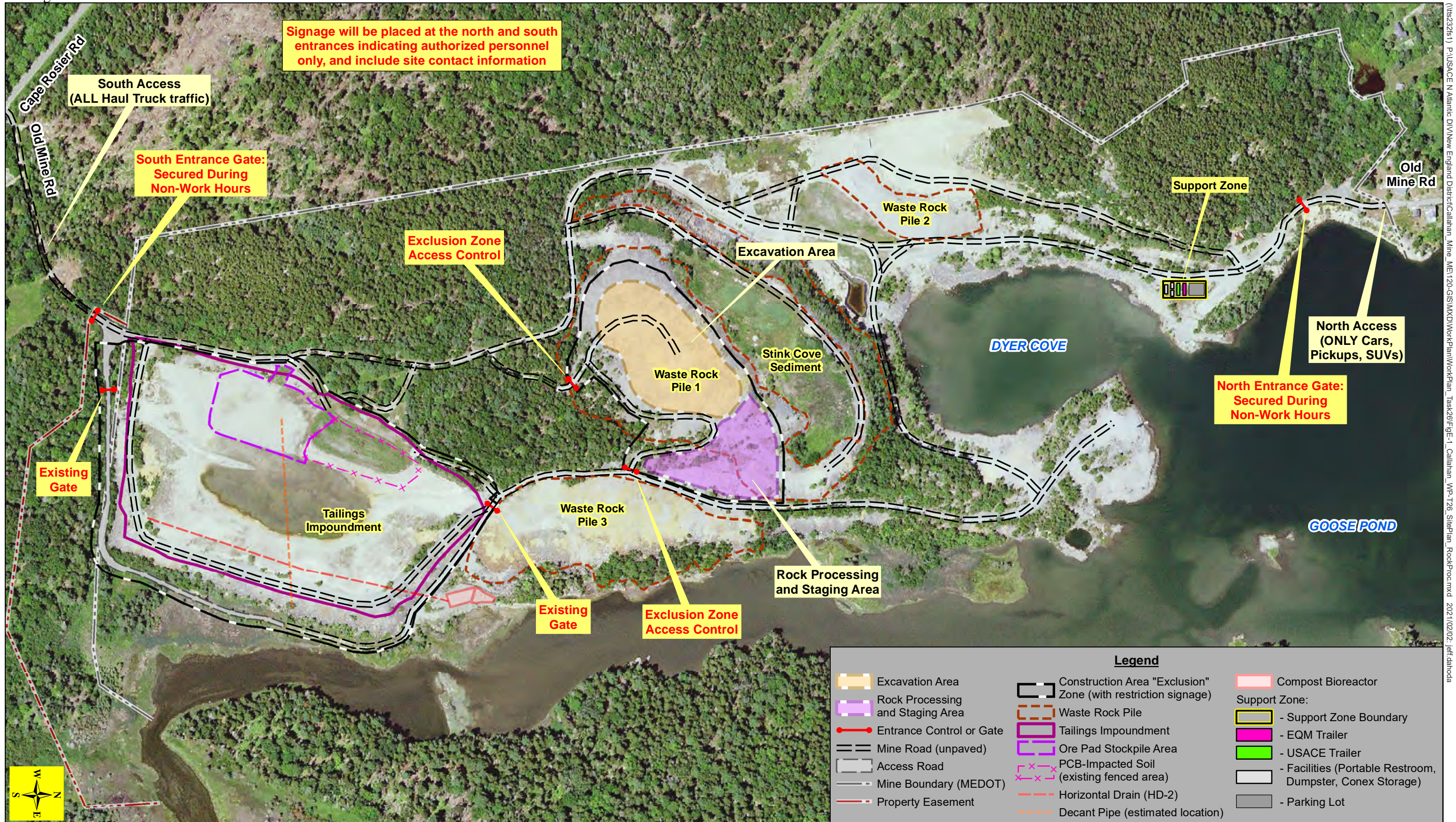
If you have any questions, concerns, or comments, please contact Edward Hathaway of USEPA at hathaway.ed@epa.gov. Additional information regarding the Callahan Mine Superfund Site can be found at the EPA Callahan Mine website: www.epa.gov/superfund/callahan.

The Wildlife within Callahan Mine Superfund Site

Q: Why did the porcupine cross the Tailings Impoundment?



A: To get to the other side!



1 INCH = 300 FEET (SCALE AT 17" X 11")
 SCALE IN FEET
 0 300 600
 NAD 1983 STATE PLANE MAINE EAST
 FIPS 1801 FEET
 Creator: JPD / Checked: LAM / Approved: MAP

NOTES:
 1) Note that north is oriented to the RIGHT.
 2) Imagery from the USDA National Agriculture Imagery Program (NAIP), 1-m resolution, 07/20/2018, via the ArcGIS Image Server.

ACRONYMS:
 EQM = Environmental Quality Management, Inc.
 MEDOT = Maine Department of Transportation
 PCB = polychlorinated biphenyl
 USACE = U.S. Army Corps of Engineers
 USDA = U.S. Department of Agriculture

PREPARED FOR:

 US Army Corps of Engineers
 New England District

PREPARED BY:

 EQM
 AN AIRC INDUSTRIAL COMPANY
 DESIGNED BY: J. DAHODA

TITLE: WORK PLAN - TASK 26		
SITE PLAN - ROCK PROCESSING		
PROJECT: CALLAHAN MINE SUPERFUND	PROJECT NO.: 106-47160001	FIGURE: Figure E-1
LOCATION: BROOKSVILLE, MAINE	DATE: 02/02/2021	

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