

Record of Decision
Part 2 – The Decision Summary

Excavation of Residential Use Area Surface Soil and Disposal in a CAD Cell in the Former Mine Pit

Surface soil exceeding the cleanup levels for residential exposure at residential lots along Old Mine Lane will be excavated to a depth at which cleanup level exceedances no longer occur, and will be disposed in the CAD cell in the former mine pit. The lots within the Residential Use Area that will be subject to the selected remedy are shown in Figures 15 and 19. If fill material is needed under the Tailings Impoundment cap, some material designated for disposal in the mine pit may be used under the cap. At the completion of the remediation, the area will be available for unrestricted residential use based on the lack of any CERCLA risk from soil contamination. Groundwater risks will be evaluated as part of OU2. The estimated volume of material to be removed in the Residential Use Area is 5,000 cubic yards. The disposal of the contaminated soil into the CAD cell and long-term monitoring of the protectiveness CAD cell will meet all applicable standards under the Clean Water Act and other identified ARARs for protecting the aquatic resources of Goose Pond.

Dredging of Sediment Hot Spots in Southern Goose Pond and the Adjacent Salt Marsh Sediment and Disposal in a CAD Cell in the Former Mine Pit

The sediments exceeding the cleanup levels, identified in Table 58 of this ROD, that are located in Southern Goose Pond and the adjacent salt marsh will be dredged and disposed in the CAD cell in the submerged former mine pit. An estimated volume of 52,000 cubic yards from Goose Pond and 23,000 cubic yards from the salt marsh of mine waste contaminated sediment will be dredged and disposed in the CAD cell in the submerged former mine pit. An additional 17,000 cubic yards of Dyer Cove and 10,000 cubic yards Goose Cove of mine waste contaminated sediments will also be dredged and disposed in the CAD cell in the submerged former mine pit as part of wetland mitigation activities. The OU1 FS assumed the use of a hydraulic dredge that pumps dredged material directly to the mine pit through high-density polyethylene piping. This will eliminate the need for on-shore handling, dewatering, and the construction of an upland confined disposal facility. A drop tube will be used to lower the actual discharge point and reduce entrainment of material in the upper portion of the water column. Silt curtains will be placed, as necessary, around the mine pit to reduce the potential for turbid water to migrate to other areas of Goose Pond. Proper selection and operation of dredge equipment, along with water quality monitoring will help minimize migration of suspended material from the dredge site. In addition, silt curtains will be used, as appropriate, to minimize migration of suspended material from the area being dredged. It may be necessary to manage water levels in Goose Pond to permit access by a dredge into the upper, shallow areas of the pond. Any negative impacts from maintaining water levels for an extended period during dredging operations will be evaluated and impacts mitigated, if necessary. The areas to be dredged in Goose Pond, the salt marsh, Dyer Cove, and Goose Cove are shown in Figure 19.

Dredged material will be placed below the mixing boundary in the former mine pit to prevent long-term contamination of surface water in the remainder of Goose Pond. Information gathered during the OU1 RI identified a mixing boundary within the 300-foot deep mine pit about 30 feet below mean sea level. Water below this boundary does not mix with the upper

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waters of Goose Pond. Source material placed below this boundary will not be expected to contaminate surface water in the remainder of Goose Pond. The available data indicate that the mine pit can hold up to 1,300,000 cubic yards of source material and dredged sediment without filling above the mixing boundary. **This is more than adequate to hold the estimated 101,000 cubic yards of sediment** and 347,000 cubic yards of source material and soil identified for disposal in the former mine pit. This volume will only fill the pit to an estimated depth of 120 feet below sea level. The estimated level of fill in the mine pit after implementation of the selected remedy for OU1 is shown in Figure 21. The disposal of contaminated sediments into the CAD cell and long-term monitoring of the protectiveness CAD cell will meet all applicable standards under the Clean Water Act and other identified ARARs for protecting the aquatic resources of Goose Pond.

Backfilling of dredged areas in Goose Pond is not planned. This is primarily because the mine waste has artificially filled Goose Pond and its removal will partially re-establish the pre-mine hydrology. The salt marsh, excavated or disturbed during remedial activities, will be restored and any permanent loss of area or function will be included in the wetland mitigation component of the cleanup.

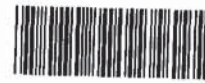
Mine Waste and Sediment Waste Disposal in the Submerged Former Mine Pit in Goose Pond

The submerged former mine pit in Goose Pond (the Pit), as a potential receiving area for confined aquatic disposal (CAD) cell of mining waste and contaminated sediments, was evaluated to verify compliance with the Clean Water Act (CWA) Section 404, potential for exceedances of CWA Water Quality Criteria (WQC) and protectiveness under CERCLA. For Superfund sites, as an ARAR, Section 404 of the CWA governs the placement of contaminants and pollutants into waters of the United States as an applicable regulatory requirement. Section 403 of the CWA, which governs placement of waste and pollutants into the ocean environment (specifically, the territorial sea, the water of the contiguous zone, or the oceans), is neither an applicable nor a relevant and appropriate requirement because data show that waste contaminants to be placed in the CAD cell will not leak into the bay and ocean waters of the United States.

The technical evaluation of the CAD cell made the following findings that are unique to the situation at the former Callahan Mine Pit and ensures that waste placement in the CAD cell will remain protective of human health and the environment and will comply with applicable, or relevant and appropriate requirements (ARARs).

Overarching Determination under CWA 404:

- The receiving water body is not deemed a special aquatic site under Clean Water Act 404, as defined in 40 C.F.R. § 230.3(q-1) and Subpart E of the “Section 404 (b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material” at 40 C.F.R. §§ 230.40-230.45.
- *Sufficient information is available to demonstrate that disposal in the CAD cell will comply with Clean Water Act 404.*



**U.S. ENVIRONMENTAL PROTECTION AGENCY
EPA NEW ENGLAND**

RECORD OF DECISION

OPERABLE UNIT 1

CALLAHAN MINE SUPERFUND SITE

SEPTEMBER 2009

Callahan Mine

S.4

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