Separation of the OU1 ROD components into two operable units with the re-defined OU1 consisting of the: lead and arsenic cleanup of the Residential Use Area; waste rock removal from the Ore Pad and portions of the former Mine Operations Area; and cleanup of the PCB contamination within the former Callahan Mine property. OU3 consists of the remaining components of the OU1 ROD

In 2010, EPA decided to separate the OU1 ROD components into two operable units to expedite the cleanup of the arsenic, lead, and thallium contamination in the Residential Use Area and the PCB contamination in the former Mine Operation Area. The design for several components of the OU1 ROD, particularly the final Tailings Impoundment cover system, the sediment dredging and waste rock excavation, confined aquatic disposal (CAD) cell, and the wetland restoration were expected to require several years for completion, whereas EPA believed the design for the cleanup of Residential Use Area and Mine Operation Area could be completed in much less time. To avoid delaying the cleanup for the areas where a current unacceptable human health threat was identified, EPA created two operable units. The areas identified for remedial action in the 2009 OU1 ROD are shown in Figure 1. The revised OU1 area and the revised OU3 area is show in Figure 2.

The components of the OU1 ROD associated with the cleanup of the arsenic, lead, and thallium contamination in the Residential Use Area and the PCB contamination in the former Mine Operations Area remained part of the re-defined OU1. In addition, the removal of the waste rock from the Ore Pad Area was also included in OU1 because the run-off from this drains into the former Mine Operations Area. OU1 also includes the consolidation of the contaminated material that is 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 revised OU1 includes the following major components:

- Pre-design investigations and studies;
- Excavation and off-site disposal of soil contaminated with PCBs exceeding site-specific PCB cleanup levels. PCBs with a concentration below 10 ppm may remain on-site and be placed beneath the cover system to be installed 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 Residential Use Area of the Site is expanded to include one additional property. The excavated material may be placed 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;
- 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 Area cleanup;
- Long-term operation and maintenance, and monitoring; and five-year reviews.

The remaining components of the OU1 ROD have been designated as OU3. OU3 also includes the final restoration of the Mine Operations Area and Ore Pad area. 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 performed as part of the OU3 Remedial Action. In addition, it is possible that additional 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.

The selected remedy for the newly-created OU3 includes the following major components:

- Pre-design investigations and studies;
- Excavation and subaqueous disposal of Waste Rock Pile-3 and Mine Operations Area source material in a confined aquatic disposal (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 from 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 additional measures, including a toe shear key or buttress would be identified during 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 other measures that may be identified in 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 and maintenance, and monitoring; and
- Performance of five-year reviews to continue to evaluate potential human-health and ecological risks due to exposure to contaminated waste material being permanently managed on-site.

DECLARATION FOR THE
EXPLANATION OF SIGNIFICANT DIFFERENCES
CALLAHAN MINE SUPERFUND SITE
OPERABLE UNITS 1 & 3
BROOKSVILLE, MAINE
SEPTEMBER 2013

Site Name and Location

Callahan Mine Superfund Site
Brooksville, Hancock County, Maine
MED980524128
Site ID No: 0101028
Operable Units 1 & 3

Lead Agency

United States Environmental Protection Agency

Support Agency

Maine Department of Environmental Protection

Statement of Purpose

This decision document sets forth the basis for the determination to issue the attached Explanation of Significant Differences (ESD) for Operable Units 1 and 3 at the Callahan Mine Superfund Site (Site). The U.S. Environmental Protection Agency (EPA) developed this decision document after consulting with the Maine Department of Environmental Protection (Maine DEP). The Maine DEP's letter of concurrence is provided as Attachment A to this ESD.

Statutory Basis for Issuance of the ESD

Pursuant to Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. § 9617(c), and the National Contingency Plan (NCP) at 40 C.F.R. § 300.435(c)(2)(i), if EPA determines that the remedial action being undertaken at a site differs significantly from the Record of Decision (ROD) for that site, EPA shall publish an Explanation of Significant Differences and the reasons such changes are being made. According to 40 C.F.R. § 300.435(c)(2)(i), and EPA guidance (Office of Solid Waste and Emergency Response (OSWER) Directive 9200.1-23-P, July 1999), an Explanation of Significant Differences, rather than a ROD Amendment, is appropriate where the adjustments being