UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

MEMORANDUM

DATE: May 14, 2026

SUBJ: Request for a Removal Action at the Callahan Mine Site
Brooksville, Hancock County, Maine - **Action Memorandum**

FROM: Lina Takahashi, On-Scene Coordinator
Emergency Response and Removal Section II
LINA TAKAHASHI
Digitally signed by LINA TAKAHASHI
Date: 2026.05.14 08:56:41 -04'00'

THRU: Catherine Young, Acting Manager
Emergency Response and Removal Section II
CATHERINE YOUNG
Digitally signed by CATHERINE YOUNG
Date: 2026.05.14 18:11:04 -04'00'

Bryan Olson, Manager
Emergency Planning and Response Branch
Bryan Olson
Digitally signed by Bryan Olson
Date: 2026.05.14 19:37:57 -04'00'

TO: Bryan Olson, Director
Superfund and Emergency Management Division

I. PURPOSE

The purpose of this action memorandum is to request and document approval of the proposed removal action at the Callahan Mine Superfund Site, which is located in Brooksville, Hancock County, Maine and is listed on the Superfund National Priorities List (it consists of three operable units and is being addressed by the Superfund remedial program). For the purposes of this action memo, "the site" refers only to the residential use area within operable unit one (Old Mine Lane and Goose Falls Road). Hazardous substances present in drinking water wells, if not addressed by implementing the response actions selected in this action memorandum, will continue to pose a threat to human health and the environment. There are no nationally significant or precedent-setting issues associated with this site, and there has been no use of the On-Scene Coordinator's (OSC's) $200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MED980524128
SITE ID# : 017H
CATEGORY : Time-Critical

A. Site Description

1. Removal site evaluation

On August 26 and 27, 2025, the EPA remedial program conducted its annual sampling event at ten residential properties where drinking water may be impacted by acid mine drainage from the Callahan Mine Site. Samples were analyzed for total and dissolved metals, anions and cations, and per- and polyfluorinated alkyl substances (PFAS). The sampling data results from this sampling event are considered "estimates" because the samples were received by the EPA New England Regional Lab above required temperature. Nonetheless, the sampling results indicate high levels of PFAS in four private drinking water wells on four separate residential properties.

2. Physical location

The removal response is limited to the four residential properties on Goose Falls Road and Old Mine Road in Brooksville, Maine, upon which there are five individual residential structures. For the purpose of this Action Memorandum, EPA will use the intersection of Goose Falls Road and Old Mine Road as the site location.

Latitude: 44°21'12.8"N
Longitude: 68°48'36.0"W

3. Site characteristics

The site is approximately 7 acres of privately-owned residential properties. All homes impacted by elevated levels of hazardous substances in drinking water have private drinking water wells. Most of the homes are seasonal, with only one having year-round residents. Other residential properties abut the site to the east and west, and Goose Cove and the Bagaduce River to the north. Goose Falls and Goose Pond run through the residential area. South of the site is Goose Pond and the remainder of the Superfund remedial Callahan Mine Site.

The drinking water sampling at these residential properties detected levels of PFAS which exceed EPA's Removal Management Levels for residential tap water (2024). This was discovered during EPA's annual sampling event of wells in the area due to their inclusion in, or proximity to, the remedial Callahan Mine Site.

Based on EPA Region 1's Emergency Response Viewer, within a one-mile radius there are:

- 910 residents;
- Goose Pond; and
- Bagaduce River, which empties into Penobscot Bay.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

EPA's August 2025 sampling analysis found high levels of PFAS in drinking water wells on four residential properties at the site, including Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS). Both of these PFAS chemicals, PFOA and PFOS, are listed hazardous substances as defined by Section 101(14) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601(14), and 40 C.F.R. § 302.4. PFOA samples exceed EPA's Ingestion Removal Management Level for residential tap water (2024) by nearly 200%. Additionally, perfluorodecanoic acid (PFDA) was detected in the drinking water samples in excess of the EPA noncancer child ingestion limit for resident tap water, making it a "pollutant or contaminant" under CERCLA, 42 U.S.C. § 9601(33). As shown in the table below, the samples for all wells identified in this action exceed EPA's Ingestion Removal Management Levels (established under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA)). This data indicates there is an active release of PFAS into residential drinking water, creating a direct migration route of contamination to community members.

Compound	RL (ng/L)	Federal MCL (ug/L)	Carcinogenic Target Risk		Noncancer CHILD Hazard Index		Concentration (ug/L)			
			Ingestion SL (ug/L)	Dermal SL (ug/L)	Ingestion SL Child (ug/L)	Dermal SL Child (ug/L)	DWCA-27	DWCA-31	DWCA-33	DWCA-5
PFBA	4.0				60.0	690.0	0.038	0.046	0.006	0.049
PFPeA	2.0						0.063	0.074	0.009	0.099
PFBS	2.0				18.0	25,000.0	0.025	0.021	0.003	0.032
PFHxA	2.0				30.0	2,700.0	0.130	0.120	0.016	0.180
HFPO-DA	2.0	0.01			18.0	660.0	ND	ND	ND	ND
PFHpA	2.0						0.150	0.120	0.015	0.180
PFHxS	2.0	0.01			1.2	66.0	ND	ND	ND	ND
PFOA	2.0	0.004	0.00027	0.15	0.0018	1.1	0.400	0.380	0.037	0.440
PFNA	2.0	0.01			0.18	8.5	0.041	0.080	0.004	0.066
PFOS	2.0	0.004	0.2		0.006		0.008	0.022	ND	0.019
PFDA	2.0				0.00012		0.005	0.045	ND	0.026

	No MCL or RML Available (Nov 2024), respectively
	Above non-cancer ingestion RML
	Above Ingestion Carginogenic Risk

PFBA = Perfluorobutanoic acid
PFPeA = Perfluoropentanoic acid
PFBS = Perfluorobutanesulfonic acid
PFHxA = Perfluorohexanonic acid
HFPO-DA = Hexafluoropropylene oxide
PFHpA = Perfluoroheptanoic acid
PFHxS = Perfluorohexanesulfonic acid
PFOA = Perfluorooctanoic acid
PFNA = Perfluorononanoic acid
PFOS = Perfluorooctanesulfonic acid
PFDA = Perfluorodecanoic acid

RL = Reportable Limit
MCL = Maximum Contaminant Level
SL = Screening Level
ND = Non-detect
RML = Removal Management Level
DWCA - ## = Sampling identifier

Additionally, the residential well samples exceed the maximum contaminant levels for six PFAS chemicals established under the National Primary Drinking Water Regulations by EPA in 2024 (see 40 C.F.R. § 141). Maximum contaminant levels establish the highest level of a contaminant that is allowed in drinking water. All residential well samples exceed the PFOA maximum contaminant level (referred to

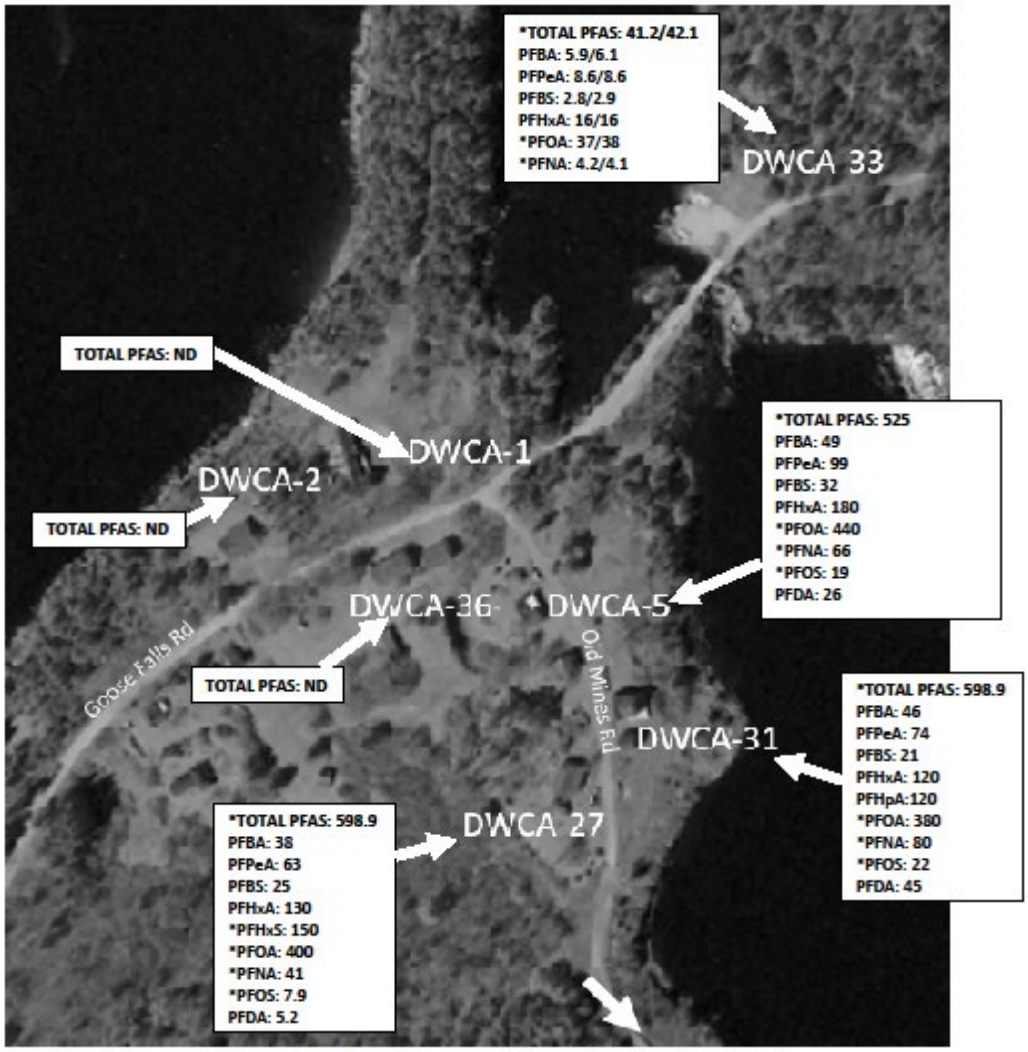
as an "MCL" in the table above), and three of the residential wells exceed maximum contaminant levels for PFOS, perfluorononanoic acid (PFNA), and the maximum contaminant level established for the mixture of perfluorobutanesulfonic acid (PFBS), perfluorohexane sulfonic acid (PFHxS), hexafluoropropylene oxide dimer acid (HFPO-DA), and PFNA.

5. NPL status

The Callahan Mine Superfund Site was added to the National Priorities List in September of 2002.

6. Maps, pictures and other graphic representations

Map Displaying PFAS Detections



Total PFAS is the sum of all PFAS MCL enforceable compounds (starred). All results are in ng/L.

Source: Residential Well Sampling at Callahan Mine Site Memorandum
Environmental Protection Agency, November 2025

B. Other Actions to Date

1. Previous actions

The site is a part of the larger Callahan Mine Superfund Site. The state of Maine was identified as a potentially responsible party at the remedial site and the Maine Department of Transportation entered into a settlement agreement with EPA to implement the remedial design of operable unit one, where the residential properties subject to this removal action are located.

As part of the EPA Remedial Action in 2010, soils contaminated with arsenic, lead, and thallium were excavated from the four residential properties relevant to this assessment. Following the excavation of the metals-contaminated soil, the residential properties were backfilled. The remediation and restoration of the Residential Use Area was completed in the Summer of 2011. For additional information regarding prior response activities, see the Remedial Action Completion Report for Operable Unit 1 Callahan Mine Superfund Site, September 2013.

2. Current actions

No current actions are being taken at the site.

C. State and Local Authorities' Roles

1. State and local actions to date

Neither the state of Maine, nor any other local entity, has taken any action regarding the detection of PFAS in the residential drinking water wells on the four residential properties subject to this removal action.

2. Potential for continued state/local response

The state of Maine is a responsible party for the remedial Callahan Mine Site and is obligated to pay ten percent towards the implementation of the remedial remedy, pursuant to the 2009 agreement. Thus, the Maine Department of Environmental Protection has agreed to perform the operation and maintenance of the site following the completion of work under this action memorandum.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The presence of PFAS in the drinking water wells on four residential properties constitutes a release or threat of release of hazardous substances into the environment that may present an imminent and substantial endangerment to public health or welfare. As described below, site conditions meet the general criteria for a removal action, as set forth in 40 C.F.R. §300.415(b)(1), in that "there is a threat to public health or welfare of the United States or the environment," and in consideration of the factors set forth in 40 C.F.R. §300.415(b)(2) as described below.

As stated above, PFOA and PFOS are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. 9601(14). For information on the adverse health effects related to PFAS chemicals, please refer to the linked Perfluoroalkyls contaminant fact sheet provided by the Agency for Toxic Substances and Disease Registry (ASTDR).

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

Sampling by the EPA Remedial Program in 2025 showed amounts of hazardous substances, including PFOA and PFOS, and pollutants or contaminants, including PFDA, in exceedances of 2024 tap water Removal Management Levels in four residential drinking water wells. This is a direct pathway of hazardous substances to human populations and poses an imminent threat to human health.

Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];

Sampling by the EPA Remedial Program in 2025 showed amounts of hazardous substances, including PFOA and PFOS, and pollutants or contaminants, including PFDA, in exceedances of 2024 tap water Removal Management Levels in four residential drinking water wells. This is a direct pathway of hazardous substances to human populations and poses an imminent threat to human health.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

This site is in Operable Unit 1 of the remedial Callahan Mine Site, for which the state of Maine is a responsible party. The remedial program is unable to address the contamination in the drinking water to prevent exposure to human populations. Maine Department of Environmental Protection does not have the resources at this time to perform the work required to prevent human exposure.

IV. ENDANGERMENT DETERMINATION

Actual releases of hazardous substances from this site, if not addressed by implementing the response action selected in this action memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. In accordance with OSWER Directive 9360.0-34 (August 19, 1993), an endangerment determination is made based on "appropriate Superfund policy or guidance, or on collaboration with a trained risk assessor," which is outlined and discussed in Section III above. "Appropriate sources include, but are not limited to, relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists." EPA relied on the latest available Removal Management Levels (2024) and the promulgated maximum contaminant levels (2024) for determining risk at the site.

PFAS exposure over a long period of time can cause cancer and other serious illnesses that decrease quality of life or result in death.[1] As described above, the August 2025 sampling data shows that PFAS chemicals are present in residential drinking water wells on four properties in levels exceeding EPA's Removal Management Levels. The levels also exceed several of EPA's maximum contaminant levels promulgated for PFAS chemicals. In addition to the exceedances of the federal standards, the ASTDR ToxFAQs for Perfluoroalkyl substances (linked above in section III of this Action Memorandum), in addition to other ASTDR publications,[2] supports EPA's endangerment finding.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed action will protect public health, welfare, and the environment. The goal of the removal action is to eliminate the direct contact threat by installation of a point-of-entry or point-of-use water filtration systems in the impacted residential homes. Once EPA has completed its work, the Maine Department of Environmental Protection has agreed to perform the operation and maintenance of the systems.

The specific removal activities will include, but are not limited to, the following:

- Conducting a site-walk with EPA contractors to determine appropriate equipment and personnel needed to perform the response;
- Providing bottled drinking water to residents in homes identified in this action memo as being contaminated with PFAS until the point-of-entry or point-of-use water filtration systems are installed and operating;
- Mobilizing personnel and equipment;
- Developing and implementing the following plans:
    - Site Specific Health and Safety Plan;
    - Sampling and Analysis Plan;
- Clearing vegetation and debris as needed;
- Conducting additional sampling, as needed, to better define extent and nature of hazardous substances and pollutants and contaminants;
- Installing point-of-entry or point-of-use water filtration systems that are effect in removal of contaminants of concern;
- Conducting follow-on sampling of installed filtration systems to ensure systems effectively reduce contamination below Removal Management Levels;
- Disposing of site-related hazardous materials at an EPA approved off-site disposal facility;
- Demobilizing personnel and equipment; and

[1] EPA, PFAS National Primary Drinking Water Regulation Fact Sheet, https://www.epa.gov/system/files/documents/2024-04/pfas-npdwr_fact-sheet_general_4.9.24v1.pdf.
[2] Agency for Toxic Substances and Disease Registry, July 2025. "How PFAS Impacts your Health: Health Effects." https://www.atsdr.cdc.gov/pfas/about/health-effects.html

- Repairing response related damage.

Additional investigation is required to determine the source of the PFAS contamination in the residential drinking water wells. The EPA remedial program, in coordination with Maine DEP will be performing additional soil sampling to evaluate the source of PFAS contamination. Results of that investigation will be handled under the EPA remedial program.

2. Community relations

The OSC will work with the assigned EPA Remedial Project Manager and Community Involvement Coordinator on all public relations activities, such as press releases, fact sheets, and public meetings, as a way of engaging the local community during the removal action. EPA will work closely with the community, state, town, and local businesses.

3. Contribution to remedial performance

The cleanup proposed in this action memorandum is designed to reduce the threat of PFAS in drinking water and its subsequent impacts to human health. The actions taken would be consistent with and will not impede any future responses.

4. Description of innovative technologies and sustainable approaches

Greener cleanup practices should be considered for all cleanup projects (in accordance with the December 23, 2013 Memorandum, updated August 2, 2016, issued by Office of Land and Emergency Management, as well as the Region 1 Clean and Greener Policy for Contaminated Sites). Greener cleanups use practices that lessen the environmental impacts of cleanup actions and maximize environmental and human benefit. Alternative technologies and sustainable approaches will be considered and used, as appropriate, throughout this removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Pursuant to 40 C.F.R. 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. Current identified ARARs include, but are not limited to, those listed below.

Federal ARARs:

Clean Water Act, National Pollutant Discharge Elimination System (NPDES), 40 C.F.R. Parts 122 – 125; 122.26: Establishes the specifications for discharging pollutants from any point source into the waters of the U.S. Also, includes storm water standards for construction sites over one acre. Removal activities will be managed to prevent stormwater discharge from the site.

Clean Water Act, 40 C.F.R. Sections 122.26(c)(ii)(C) and 122.44(k): NPDES regulations for storm water control and management.

National Primary Drinking Water Regulations (NPDWR), 40 C.F.R. Part 141: Establishes Maximum Contaminant Level for six PFAS contaminants, including PFOA, PFOS, PFNA, HFPO-DA (commonly referred to as Gen-X), PFHxS and PFBS.

State ARARS:

Resource Conservation and Recovery Act, Subtitle C: (40 C.F.R. Parts 260-262 and 264): Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure. Maine is delegated to administer RCRA through its state statute and regulations promulgated under it.

Resolve to Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants, S.P. 64 – L.D. 129: Establishes 20 ppt as the interim drinking water standard for six PFAS compounds, either individually or in combination:

- PFOA
- PFOS
- PFHxS
- PFNA
- Perfluoroheptanoic acid (PFHpA)
- Perfluorodecanoic Acid (PFDA)

The OSC will coordinate with state officials to identify additional state ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR that is identified in a timely manner.

6. Project schedule

EPA will start the cleanup as soon as possible after this action memorandum is signed. The work is expected to take no more than two weeks, contingent upon homeowner consent for access and availability.

B. Estimated Costs

COST CATEGORY		CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor[3]		$100,000
Interagency Agreement		$0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor[4]		$40,000
Extramural Subtotal		$140,000.00
Extramural Contingency	20%	$28,000.00
TOTAL, REMOVAL ACTION CEILING		**$168,000.00**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed action will increase public health risks as residents will have ingestion and dermal exposure to high levels of PFAS through their tap water.

VII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this site.

VIII. ENFORCEMENT ... For Internal Distribution Only

See attached Confidential Enforcement Strategy.

The total EPA costs for this removal action that will be eligible for cost recovery are estimated to be $168,000.00 (extramural costs) + $50,000 (EPA intramural costs) = $218,000.00 X 1.3393 (regional indirect rate) = **$291,967.40** [5].

[3] Emergency Rapid Response Services
[4] Superfund Technical Assistance and Response Team

[5]Direct Costs include direct extramural costs $168,000.00 and direct intramural costs $50,000. Indirect costs are calculated by using regional indirect rate in effect at time cost estimate is prepared and is expressed as a percentage of the 33.93% (effective January 6, 2025) x $291,967.40, consistent with EPA's full cost accounting methodology. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Callahan Mine Site in Brooksville, ME developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the site administrative record to be established.

Conditions at the site meet the National Contingency Plan Section 300.415 (b) (2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be $168,000.00.

Bryan Olson Digitally signed by Bryan Olson Date: 2026.05.14 19:38:35 -04'00'

APPROVAL:_____ DATE:_____