

# **APPENDIX I**

DEC Contaminated Sites

Formerly Used Defense Site Correspondence and Guidance

## Summary of Contaminated Sites within 1,500 feet of the Proposed Project

Site Name	Hazard ID	Associated Community	Summary
City of Ouzinkie Former BIA Tank Farm	25768	Ouzinkie	Unknown amount of petroleum product spilled from tank farm. No site investigations other than a Phase 1 ESA has been completed.
Chignik Lake Tribal Council Old TF	3786	Chignik Lake	Unknown amount of petroleum product spilled from tank farm. No site investigation has been conducted.
Chignik Lake ANTHC Water Line Upgrade	26533	Chignik Lake	Unknown amount of petroleum product encountered during trenching. Shallow groundwater affected. No site investigation has been conducted.
Chignik Lake Fuel Transfer	3787	Chignik Lake	Unknown amount of petroleum product spilled from tanks. No site investigation has been conducted.
AT&T Alascom Cold Bay ES & Camp	1038	Cold Bay	Approximately 100 gallons of heating oil spilled. Shallow groundwater affected. Site assessment and remediation partially completed. Institutional controls in place so if contaminated soil is accessible, remediation should occur.
Cold Bay Frosty Fuel Return Pipeline Spill	1548	Cold Bay	Approximately 6,000 gallons of Jet fuel spilled from fuel line. Characterization report completed. Institutional controls in place so if contaminated soil is accessible, additional site characterization or cleanup may be necessary
Cold Bay Frosty Fuel Tank Farm	1570	Cold Bay	Unknown amount of petroleum product encountered in monitoring wells. Groundwater affected. Site assessment and remediation partially completed. A final characterization and groundwater monitoring report (2022) is last action listed.
ADOT&PF Cold Bay Airport	2461	Cold Bay	Unknown amount of petroleum product spilled from spills/leaks from piping, tanks and other sources. Further characterization and cleanup is needed.
Cold Bay RRS POL Tank Farm (ST05)	2834	Cold Bay	Unknown amount of petroleum product spilled in storage area and tanks. Groundwater affected. Current long-term monitoring is ongoing.
Cold Bay Fort Randall-E-West Runway	2863	Cold Bay	Unknown amount of aviation gas spilled from underground tanks. Groundwater affected. This site is managed under the FUDS program and DEC will keep this site open until all source areas in the FUDS program are closed.
FAA Cold Bay Station Bldg 101	25688	Cold Bay	Unknown amount of petroleum product leaked from tanks. All sites are actively being monitored and in-situ remediation has been developed at each site
FAA Cold Bay Station Bldg 102	25689	Cold Bay	
FAA Cold Bay Station Bldg 103	25690	Cold Bay	
FAA Cold Bay Station Bldg 104	25691	Cold Bay	
FAA Cold Bay Station Bldg 107	25692	Cold Bay	
FAA Cold Bay Station Bldg 139	25693	Cold Bay	
FAA Cold Bay Station Bldg 207	25694	Cold Bay	
FAA Cold Bay Station Bldg 208	25695	Cold Bay	
FAA Cold Bay Station Bldg 416	25697	Cold Bay	

## Summary of Contaminated Sites within 1,500 feet of the Proposed Project

FAA Cold Bay Station Bldg 601 Former ASTs	25698	Cold Bay	Unknown amount of petroleum product leaked from tanks. Groundwater not affected. A Cold Bay Site Investigation Release Report was completed in 2011. A site investigation is planned (as of 2021)
FAA Cold Bay Station Bldg 601 Dry Well	25699	Cold Bay	Unknown amount of petroleum product from an unknown source identified in 2011. A Cold Bay Site Investigation Release Report was completed in 2011. Site investigation has occurred but remediation has not been completed.
FAA Cold Bay Station Bldg 601 Floor Drains	25700	Cold Bay	Unknown amount of petroleum product and solvents from an unknown source identified under floor drains in 2011. A Cold Bay Site Investigation Release Report was completed in 2011. Site investigation has occurred but remediation has not been completed.
FAA Cold Bay Station Bldg 601 Gas Shed	25701	Cold Bay	Unknown amount of petroleum product from an unknown source identified from floor drain system. A Cold Bay Site Investigation Release Report was completed in 2011. Site investigation has occurred but remediation has not been completed.
FAA Cold Bay Station Flight Service Station	26032	Cold Bay	Unknown amount of petroleum product leaked from tanks. Groundwater not affected. Final site investigation approved in 2020. It was recommended that the contamination be allowed to naturally attenuate.
ADOT&PF Cold Bay Airport Facility UST #1	26184	Cold Bay	Unknown amount of petroleum product leaked from tanks. No groundwater was impacted (groundwater approximately 50 feet bgs). Institutional controls: Advance approval required to transport soil or groundwater off-site; Subsurface soil contamination is located beneath the shop building. When the building is removed and/or the soil becomes accessible, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan.
ADOT&PF Cold Bay Airport Maintenance Facility AST	26185	Cold Bay	Unknown amount of petroleum product leaked from tanks. No groundwater was impacted (groundwater approximately 50 feet bgs).
Peninsula Airways Cold Bay Airport Block 3 Lot 3B	26671	Cold Bay	Unknown amount of petroleum product leaked from tanks. Groundwater infiltrated the excavation at 4 to 4.5 feet below ground surface. A sheen was observed also on the groundwater
Cold Bay Frosty Fuels Tank Farm Dock Pipeline	26673	Cold Bay	Approximately 697 gallons fuel was released at the Cold Bay fuel dock adjacent to the waters of Cold Bay and in the supratidal zone. Groundwater impacted.
ADOT&PF Cold Bay Airport Abandoned Fire Station	27198	Cold Bay	Unknown amount of petroleum product leaked; PFOA found.
ADOT&PF Cold Bay Airport Sitewide PFAS	27764	Cold Bay	PFAS in both municipal wells located at the Cold Bay Water Treatment Plant. In 2023, water supply well now exceeded cleanup level. Six private water supply wells were sampled, one contained PFAS and PFOA constituents above the DEC Action Level.

**From:** O'Connell, Bill A (DEC)  
**To:** Emily Creely; Voigt, Alena D (DEC); Wood, Alyssa (DEC)  
**Subject:** RE: [EXT] RE: Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)  
**Date:** Friday, December 15, 2023 9:33:47 AM

Sounds good, just looking at the list of site I don't think any of them have been very well characterized but we should at least know where the contamination was first encountered.

Bill

**Bill O'Connell**  
Site Cleanup Manager  
ADEC Contaminated Sites Program  
(907) 269-3057

**From:** Emily Creely <ecreely@dowl.com>  
**Sent:** Friday, December 15, 2023 9:31 AM  
**To:** O'Connell, Bill A (DEC) <bill.oconnell@alaska.gov>; Voigt, Alena D (DEC) <alena.voigt@alaska.gov>; Wood, Alyssa (DEC) <alyssa.wood@alaska.gov>  
**Subject:** RE: [EXT] RE: Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)

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Thanks!

Also the project has buildouts in False Pass, Chignik Lagoon, Chignik Lake, Port Lions, Perryville and Ouzinkie. But by far Cold Bay is the site with the most to evaluate. The only other communities where we are within 1,500 of active/IC sites is Ouzinkie and Chignik Lake and these are those sites:

Site Name	Hazard ID	Status	Associated Community	Groundwater Contamination	Summary	Last Action	Approximate Distance to Project (ft)
City of Ouzinkie Former BIA Tank Farm	25768	Active	Ouzinkie	unknown	Unknown amount of petroleum product spilled from tank farm.	Phase 1 ESA has been completed.	0-50
Chignik Lake Tribal Council Old TF	3786	Active	Chignik Lake	unknown	Unknown amount of petroleum product spilled from tank farm.	No site investigation has been conducted.	0-50
Chignik Lake Fuel Transfer	3787	Active	Chignik Lake	unknown	Unknown amount of petroleum product spilled from tanks.	No site investigation has been conducted.	0-50
Chignik Lake ANTHC Water Line Upgrade	26533	Active	Chignik Lake	Yes	Unknown amount of petroleum product encountered during trenching. Shallow groundwater affected. No site investigation has been conducted.	??	150-200

I'm working through these now and I may end up needing more information about these sites (including the Phase 1 for #25768) and whether there is anything new lately I can use for the Chignik Lake sites.

Em

Emily Creely, PWS  
Environmental Specialist

**DOWL**

(907) 562-2000 | office  
(907) 865-1216 | direct

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**From:** O'Connell, Bill A (DEC) <bill.oconnell@alaska.gov>  
**Sent:** Friday, December 15, 2023 9:22 AM  
**To:** Emily Creely <ecreely@dowl.com>; Voigt, Alena D (DEC) <alena.voigt@alaska.gov>; Wood, Alyssa (DEC) <alyssa.wood@alaska.gov>  
**Subject:** RE: [EXT] RE: Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)

Thanks Emily, I'll let Alyssa and Alena respond on their sites but this information will be very helpful.

Bill

**Bill O'Connell**  
Site Cleanup Manager  
ADEC Contaminated Sites Program  
(907) 269-3057

**From:** Emily Creely <ecreely@dowl.com>  
**Sent:** Friday, December 15, 2023 9:19 AM  
**To:** O'Connell, Bill A (DEC) <bill.oconnell@alaska.gov>; Voigt, Alena D (DEC) <alena.voigt@alaska.gov>; Wood, Alyssa (DEC) <alyssa.wood@alaska.gov>  
**Subject:** RE: [EXT] RE: Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)

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Yes!

And kmz files.

Attached is the Cold Bay figure and kmz for the project and the DEC sites.

So again, the red line is our trench alignment (up to 3 feet bgs) and about every 200 feet will be a vault (5 feet bgs). The vaults are move-able somewhat so if we think 5 feet deep is problematic in some areas, I can work with the engineers to avoid some areas.

Again, that will take some focus but if that makes your life easier, I can dig in to that level.

Em

Emily Creely, PWS  
Environmental Specialist

**DOWL**

(907) 562-2000 | office  
(907) 865-1216 | direct

[dowl.com](http://dowl.com)

**From:** O'Connell, Bill A (DEC) <bill.oconnell@alaska.gov>  
**Sent:** Friday, December 15, 2023 9:16 AM  
**To:** Emily Creely <ecreely@dowl.com>; Voigt, Alena D (DEC) <alena.voigt@alaska.gov>; Wood, Alyssa (DEC) <alyssa.wood@alaska.gov>  
**Subject:** RE: [EXT] RE: Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)

Thanks Emily, do you have figures showing the proposed alignment?

Bill

**Bill O'Connell**  
Site Cleanup Manager

**From:** Emily Creely <[ecreely@dowl.com](mailto:ecreely@dowl.com)>  
**Sent:** Friday, December 15, 2023 9:13 AM  
**To:** O'Connell, Bill A (DEC) <[bill.oconnell@alaska.gov](mailto:bill.oconnell@alaska.gov)>; Voigt, Alena D (DEC) <[alena.voigt@alaska.gov](mailto:alena.voigt@alaska.gov)>; Wood, Alyssa (DEC) <[alyssa.wood@alaska.gov](mailto:alyssa.wood@alaska.gov)>  
**Subject:** RE: [EXT] RE: Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)

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Thank you!  
We have done quite a bit of geotech work out in Cold Bay and I was surprised how deep the groundwater was – then I was talking to our geologist about that region and its geology and it makes sense to me now. In one of our reports for work to the east of the runway the report said

"The subsurface conditions in Cold Bay are characterized by several hundred feet of outwash and morainal deposits and gravels mantled by silt and peat; no permafrost is known to exist in the general vicinity of the airport. Subsurface investigations to the east of the runway have underlying existing fill with loose, silty sand with organic material extending up to 10 feet below the existing grade. Below this layer is generally silty sand; groundwater was not encountered and dewatering during construction was not anticipated by the geotechnical report."

So for sites that our trenching is near but the contamination has been documented to be NOT in the groundwater, I figure we have BMPs in place but I wouldn't expect to hit anything at the depths we are hitting. Therefore I'm trying to write a report that pinpoints where, exactly, the possibility of encountering contamination is possible.

Essentially the more I can understand and explain the site conditions, the more targeted the plan can be.

Em

Emily Creely, PWS  
Environmental Specialist

**DOWL**  
(907) 562-2000 | office  
(907) 865-1216 | direct  
[dowl.com](http://dowl.com)

**From:** O'Connell, Bill A (DEC) <[bill.oconnell@alaska.gov](mailto:bill.oconnell@alaska.gov)>  
**Sent:** Friday, December 15, 2023 8:35 AM  
**To:** Emily Creely <[ecreely@dowl.com](mailto:ecreely@dowl.com)>; Voigt, Alena D (DEC) <[alena.voigt@alaska.gov](mailto:alena.voigt@alaska.gov)>; Wood, Alyssa (DEC) <[alyssa.wood@alaska.gov](mailto:alyssa.wood@alaska.gov)>  
**Subject:** [EXT] RE: Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)

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Hi Emily, we don't have groundwater characterization for PFAS in Cold Bay. I think the depth to GW is likely quite a bit deeper than your vault depth so I don't suspect dewatering would be an issue, but if so we would look at the specific alignment of the fiber optic trench then make some judgment calls on whether or not PFAS might be present.

Groundwater has also not been characterized at Haz ID 3786 so we would take the same approach there I would imagine.

Bill

**Bill O'Connell**  
*Site Cleanup Manager*  
ADEC Contaminated Sites Program  
(907) 269-3057

**From:** Emily Creely <[ecreely@dowl.com](mailto:ecreely@dowl.com)>  
**Sent:** Thursday, December 14, 2023 2:19 PM  
**To:** Voigt, Alena D (DEC) <[alena.voigt@alaska.gov](mailto:alena.voigt@alaska.gov)>; O'Connell, Bill A (DEC) <[bill.oconnell@alaska.gov](mailto:bill.oconnell@alaska.gov)>; Wood, Alyssa (DEC) <[alyssa.wood@alaska.gov](mailto:alyssa.wood@alaska.gov)>  
**Subject:** Proposed fiber optic project in Aleutians (Cold Bay, Chignik Lake)

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Good afternoon!

I'm overseeing the environmental compliance for a broadband project along the Aleutians and am working through the NEPA document and preparing for determining de-watering permits for the project and a contaminated site management plan. Also note, I am following the Technical Memorandum "Managing Petroleum-Contaminated Soil, Water, or Free Product during Public Utility and Right-of-Way Construction and Maintenance Projects."

The fiber optic cable will be trenched down to 3 feet bgs, with vaults (occurring every 200 feet or so) needing an excavation no deeper than 5 feet bgs.

With that said, I've screened everything down to the following sites either because site characterization hasn't occurred yet or because we are very close to it.

I don't know how to make this easy, but I'm hoping to determine if groundwater was documented as being impacted for the following sites. From there I can perhaps further narrow down which sites I need to really dig into (with your assistance). I suppose this is also an introduction to the fact that I'll need to coordinate with all of you over the next few months.

So long story short, can you tell me if it has been determined for these sites if groundwater was affected?

Site Name	Hazard ID	Status	Associated Community
ADOT&PF Cold Bay Airport Abandoned Fire Station	27198	Active	Cold Bay
ADOT&PF Cold Bay Airport Sitewide PFAS	27764	Active	Cold Bay
Chignik Lake Fuel Transfer	3787	Active	Chignik Lake
ADOT&PF Cold Bay Airport	2461	Active	Cold Bay
FAA Cold Bay Station Bldgs (9 sites)	25688-97	Active	Cold Bay
FAA Cold Bay Station Bldg 601 Dry Well	25699	Active	Cold Bay
FAA Cold Bay Station Bldg 601 Floor Drains	25700	Active	Cold Bay
FAA Cold Bay Station Bldg 601 Gas Shed	25701	Active	Cold Bay
Chignik Lake Tribal Council Old TF	3786	Active	Chignik Lake
Cold Bay Frosty Fuel Return Pipeline Spill	1548	Active	Cold Bay

Thank you in advance!

Also, I realize it's the holidays and you must be incredibly busy – that's sort of why I'm reaching out now to get the ball rolling. My goal is to have the CSMP by March/April and have the sites understood by February.

So I would like to be the rare requester who says 'I don't need this ASAP' and rather perhaps if we touch base in January that would be great.

Thoughts?

Em

Emily Creely, PWS  
Environmental Specialist

**DOWL**

(907) 562-2000 | office  
(907) 865-1216 | direct

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## Summary of Contaminated Sites within 1,500 feet of the Proposed Project

Cold Bay Fort Randall-Beach Seep	2859	Cold Bay	FUDS Site: Beach seeps site is referred to as the drum disposal area (DDA)/beach seep area (BSA) of FUDS and covers approximately 15 acres of land along the shoreline of Cold Bay. An approximate 300-foot long hydrocarbon seep is located on the beach at the base of the bluff which is south of the city dock and north of the East-West Runway. All known contaminant sources have been removed. Groundwater is affected. In 2017 approximately 89 gallons of diesel and water were released from a treatment system at the HVE shack when a failed centrifuge prevented the system from shutting off.
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**From:** [Ragle, Richard A CIV USARMY CEPOA \(USA\)](#)  
**To:** [Josh Grabel](#)  
**Cc:** [Flint, Rena B CIV USARMY CEPOA \(USA\)](#); [Pagemaster, Reg POA](#); [Craner, Jeremy D CIV USARMY CEPOA \(USA\)](#); [Baltz, Kelly J CIV USARMY CEPOA \(USA\)](#)  
**Subject:** RE: [EXT] RE: Cold Bay and Port Lions FUDS  
**Date:** Thursday, October 26, 2023 5:22:24 PM  
**Attachments:** [DSCN1297.JPG](#)  
[AK9799F2680\\_INSTAL\\_MAP\\_00\\_20151130.jpg](#)  
[AK9799F7088\\_INSTAL\\_MAP\\_00\\_20230718.jpg](#)

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Josh,

FUDS GIS Data is viewable at:

<https://ags03.sec.usace.army.mil/portal/apps/webappviewer/index.html?id=5a541ac5c0064c01a685a72f16854fbf>

FUDS GIS Data is downloadable at:

<https://geospatial-usace.opendata.arcgis.com/search?q=fuds>

Cold Bay

1. There is always a potential of UXO on historical military sites.
  - a. The 3R program should be part of daily safety briefings.
  - b. A local reported UXO to authorities just last week and is schedule for EOD response on 10/30.
2. FUDS Property Map is attached.
3. FUDS has not done any cleanup work, that I am aware of, in the areas indicated.
  - a. Your route appears to be going around the UST treatment project that FUDS is operating in the area.
4. The main bay at Cold Bay was used by the Navy as a Torpedo Range during or shortly after World War II.
5. The Cold Bay Defense Plan for the Airfield included a large number of gun emplacements. Several of which are near your activities, FUDS has not investigated them.
6. A 1944 Fire Control Installation Map of Cold Bay Harbor Defenses shows that there was a Subterranean Cable and a Submarine Cable along you proposed routes. (attached)

Port Lions

1. FUDS Property Map is attached.
2. FUDS has not done any work in the area indicated that I am aware of.

I am sorry but, unfortunately FUDS has no visibility on the USDA requirements that you are operating under.

Hope these details help in the execution of your project.

Richard

Richard Ragle  
FUDS Project Manager, Environmental and Special Programs Branch  
U.S. Army Corps of Engineers  
Alaska District  
CEPOA-PM-ESP  
PO BOX 6898  
JBER, AK 99506-0898  
Office: (907) 753-2683  
[Richard.A.Ragle@USACE.Army.Mil](mailto:Richard.A.Ragle@USACE.Army.Mil)

---

**From:** Josh Grabel <jgrabel@dowl.com>  
**Sent:** Wednesday, October 25, 2023 10:15 AM  
**To:** Ragle, Richard A CIV USARMY CEPOA (USA) <Richard.A.Ragle@usace.army.mil>; Craner, Jeremy D CIV USARMY CEPOA (USA) <Jeremy.D.Craner@usace.army.mil>; Baltz, Kelly J CIV USARMY CEPOA (USA) <Kelly.J.Baltz@usace.army.mil>  
**Cc:** Flint, Rena B CIV USARMY CEPOA (USA) <Rena.B.Flint@usace.army.mil>  
**Subject:** [Non-DoD Source] RE: [EXT] RE: Cold Bay and Port Lions FUDS

Richard, Jeremy, and Kelly,

The AU11 project will connect fiber optic to the premises in Cold Bay and Port Lions. Please see the most recent project description and figures attached of the proposed AU11 Project. Some of the distances are still being refined.

In Cold Bay, the project will come on shore and placement would generally occur within existing road rights-of-way (ROW) and/or existing disturbance when feasible.

Questions:

- I can't find a map in the Cold Bay- Fort Randall FUDS Program Management Action Plan. Do you have GIS boundaries I can use to overlay onto the fiber routes?
- Is there any risk to encountering UXO's or anything else that could pose an immediate threat to contractors? Or are these all inert or require triggering to be dangerous?
- In the past, USDA has required a hazard evaluation of the FUDS and any Remedial Investigation Feasibility Studies for the site. Is this something you could



provide?

Thanks,

Josh Grabel, PWS  
Environmental Specialist

**DOWL**

(907) 562-2000 | office  
(907) 865-1258 | direct

[dowl.com](http://dowl.com)

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**From:** Flint, Rena B CIV USARMY CEPOA (USA) <Rena.B.Flint@usace.army.mil>  
**Sent:** Tuesday, October 24, 2023 12:57 PM  
**To:** Josh Grabel <jgrabel@dowl.com>  
**Cc:** Ragle, Richard A CIV USARMY CEPOA (USA) <Richard.A.Ragle@usace.army.mil>; Craner, Jeremy D CIV USARMY CEPOA (USA) <Jeremy.D.Craner@usace.army.mil>; Baltz, Kelly J CIV USARMY CEPOA (USA) <Kelly.J.Baltz@usace.army.mil>  
**Subject:** [EXT] RE: Cold Bay and Port Lions FUDS

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Hi Josh,

Shane McCoy also reached out to me on this topic. Please do loop him in as well. Here's a couple resources to get you oriented. Kelly, Jeremy, and Richard are working on Cold Bay FUDS (see table below). Port Lions is a closed FUDS. I'll be your POC for Port Lions FUDS if needed.

- <https://www.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/FUDS-GIS/>
- <https://ags03.sec.usace.army.mil/portal/apps/webappviewer/index.html?id=5a541ac5c0064c01a685a72f16854fbf>
- <https://dec.alaska.gov/spar/csp/>
- <https://www.arcgis.com/apps/mapviewer/index.html?webmap=315240bfbaf84aa0b8272ad1cef3cad3>

COLD BAY - FORT RANDALL	PA/INPR	PA/INPR	Richard Ragle
COLD BAY - FORT RANDALL	Fort Randall POL Soil/Goundwater Cleanup	HTRW	Jeremy Craner
COLD BAY - FORT RANDALL	MP5 ENCAMPMENT AREA	CON/HTRW	Kelly Baltz
COLD BAY - FORT RANDALL	MP4 FUEL STORAGE AREA	CON/HTRW	Kelly Baltz

Richard, Jeremy, Kelly,

Josh and Shane with DOWL are working on a project for fiber optic internet connectivity in Cold Bay and looking to learn more about FUDS boundaries and prior/ongoing/future FUDS work.

Thanks,

Rena

Rena B. Flint  
Section Chief, Alaska Formerly Used Defense Sites Program Manager  
Environmental and Special Programs Branch  
U.S. Army Corps of Engineers

PO Box 6898  
2204 Talley Ave, Rm 200  
JBER, AK 99506  
907-753-5647, 907-201-3108  
[Rena.B.Flint@usace.army.mil](mailto:Rena.B.Flint@usace.army.mil)

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**From:** Josh Grabel <jgrabel@dowl.com>  
**Sent:** Friday, October 13, 2023 12:55 PM  
**To:** Flint, Rena B CIV USARMY CEPOA (USA) <Rena.B.Flint@usace.army.mil>  
**Subject:** [Non-DoD Source] Cold Bay and Port Lions FUDS

Rena,

I'm working with Emily Creely on AU-Aleutian II. I know you previously worked with her on the first project. I'm trying to track down the USACE project manager overseeing the FUDS for these two communities.

Can you point me in the right direction?

Thanks,

Josh Grabel, PWS  
Environmental Specialist

## Introduction

The purpose of this guide is to provide information about the military training activities that took place at the former Amaknak Military Facilities and to raise awareness of the explosive hazards that may exist at the range.

The former Amaknak Military Facilities were used from 1911 to 1952 for a variety of military activities. The site consists of the former Dutch Harbor Naval Operating Base and other facilities on Unalaska and Amaknak Islands. The U.S. Navy first established a communication facility in 1911 and a weather station in 1939. By 1942, the Navy had constructed a port and submarine and seaplane bases. During this same time, the U.S. Army built air and coastal artillery defense sites and support facilities. Most of the former Amaknak Military Facilities were either decommissioned or declared surplus by 1952. An area of the former Amaknak Military Facilities, known as Range Complex No. 1, has been identified through historical research and site visits as having potential explosive hazards. The munitions known or suspected to have been used at the property include medium caliber munitions and small arms ammunition.

Range Complex No. 1 is located on and in the surrounding waters of Unalaska Island in the Aleutian Islands chain of Alaska. The land is publicly and privately owned, and is used for commercial fishing, and residential and industrial purposes.

Because explosive hazards associated with military munitions from past military activities may remain on and in the surrounding waters of Range Complex No. 1, the U.S. Army Corps of Engineers recommends that landowners and visitors follow the **3Rs of Explosives Safety – Recognize, Retreat and Report.**



An example of a medium caliber munition

## Former Amaknak Military Facilities

### For More Information



**US Army Corps of Engineers.**

The U.S. Army Corps of Engineers is responsible for identifying, investigating and, when necessary, conducting an appropriate response to address contamination and military munitions resulting from past Department of Defense activities at Formerly Used Defense Sites, also referred to as FUDS.

For information about the former Amaknak Military Facilities, contact the FUDS Information Center by calling the toll-free number 1-855-765-FUDS (3837). For general information about the FUDS Program, visit [www.fuds.mil](http://www.fuds.mil).

### Follow the 3Rs of Explosives Safety

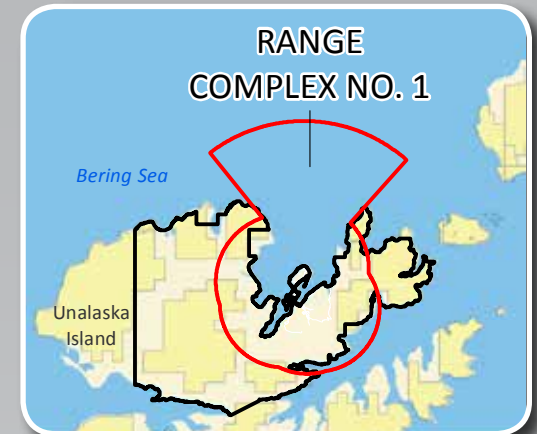


Visit the U.S. Army's Explosives Safety Education website:  
[3Rs.mil](http://3Rs.mil)

## 3Rs Safety Guide

### Former Amaknak Military Facilities

**Alaska  
Aleutians West**



### Range Complex No. 1

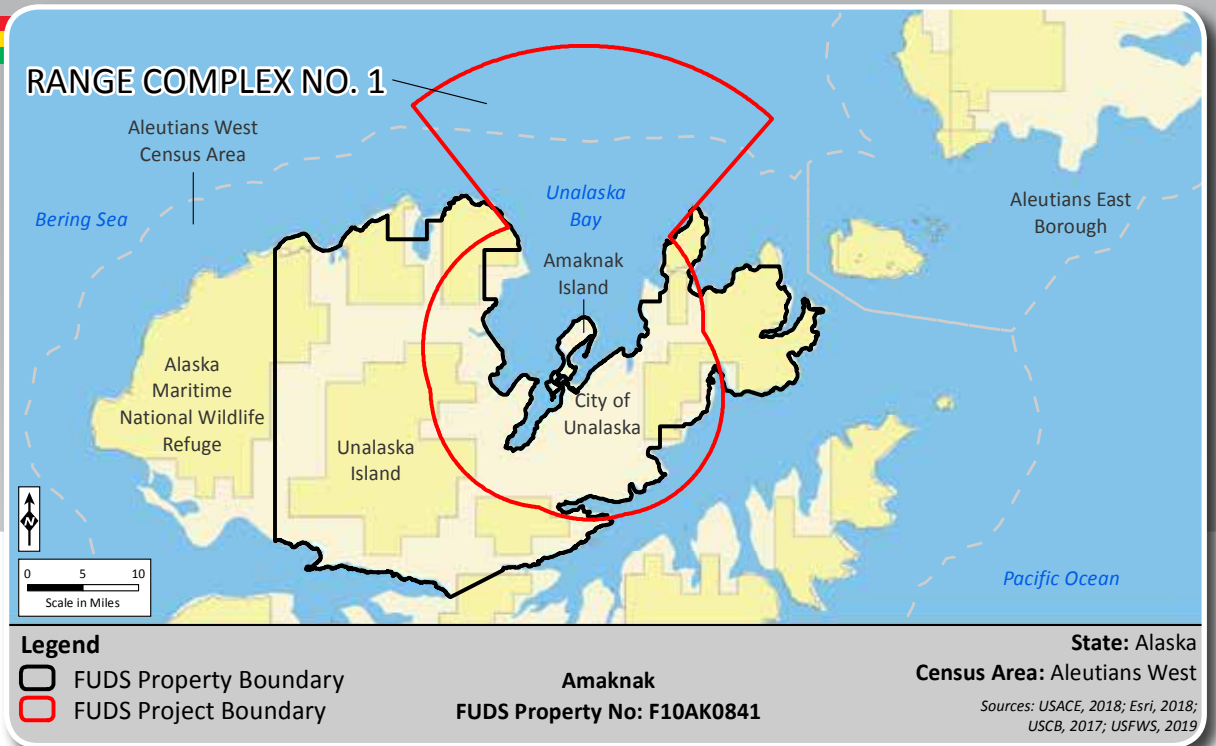


**US Army Corps of Engineers.**



Source: Library of Congress

Headquarters area of the former Naval Operating Base at Dutch Harbor, Unalaska Island, Alaska



## Frequently Asked Questions

**Q:** What types of potential hazards exist?

**A:** Military munitions, such as medium caliber munitions and small arms ammunition, were potentially used at the former Amaknak Military Facilities. The U.S. Army Corps of Engineers is unable to rule out the presence of munitions that may pose an explosive hazard.

**Q:** What do I do if I suspect I may have come across a military munition?

**A:** If you suspect you may have come across a military munition, the best way to ensure your safety is to follow the 3Rs of Explosives Safety: **R**ecognize – when you may have encountered a munition and that munitions are dangerous; **R**etreat – do not approach, touch, move or disturb it, but carefully leave the area; and **R**eport – call **911** and advise the police of what you saw and where you saw it.

**Q:** What are the findings of the work that the government has completed?

**A:** Historical research and site inspections indicate that military munitions were potentially used at these ranges, and some munitions may

remain on the property and in the surrounding waters of Range Complex No. 1. The U.S. Army Corps of Engineers has determined that further investigation is required for Range Complex No. 1 at the former Amaknak Military Facilities.

**Q:** What will be done next?

**A:** The U.S. Army Corps of Engineers will make explosives safety education material that is based on the 3Rs available to landowners and the community. Additionally, it will coordinate with landowners as it plans required response activities.

**Q:** Where can I get more information?

**A:** For more information, call the Formerly Used Defense Sites Information Center toll-free number 1-855-765-FUDS (3837). Additional information can be found by searching on the property name, Amaknak, in the Geographic Information System tool on the Formerly Used Defense Sites website at [www.fuds.mil](http://www.fuds.mil).

## Follow the 3Rs of Explosives Safety

**Recognize**

when you may have encountered a munition and that munitions are dangerous.

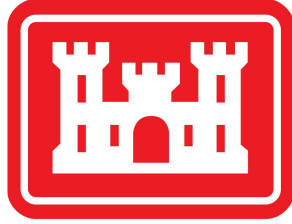
**Retreat**

do not approach, touch, move or disturb it, but carefully leave the area.

**Report**

call 911 and advise the police of what you saw and where you saw it.

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US Army Corps of Engineers  
BUILDING STRONG®

# COLD BAY - FORT RANDALL

Formerly Used Defense Sites Program Management Action Plan

Published by: U.S. Army Corps of Engineers, Environmental Programs

Data as of 2021 Annual Report to Congress

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# I. Statement of Purpose

## A. Management Action Plan

The Management Action Plan (MAP) is to outline the total multi-year environmental cleanup program for a Formerly Used Defense Site (FUDS) property. The plan will define the cleanup program requirements and propose a comprehensive approach and associated costs to conduct future investigations and response action at each cleanup site.

## B. Formerly Used Defense Sites Program

During the past two centuries, the Department of Defense (DOD) has used land throughout the United States to both train Soldiers, Airmen, Sailors and Marines, and test new weapons to ensure the nation's military readiness. As training and testing needs changed, DOD obtained property or returned it to private or public uses. When no longer needed, many of these properties were cleaned up according to the best practices available at the time and then transferred to other owners such as private individuals or federal, state, tribal, or local government entities.

Today, DOD is responsible for the environmental restoration (cleanup) of properties that were formerly owned by, leased to or otherwise possessed by the United States and under the jurisdiction of the Secretary of Defense prior to October 1986. Such properties are known as Formerly Used Defense Sites or FUDS. The U.S. Army is DOD's lead agent for the FUDS Program. The U.S. Army Corps of Engineers executes the FUDS Program on behalf of the U.S. Army and DOD. The U.S. Army and DOD are dedicated to protecting human health and the environment by investigating and, if required, cleaning up potential contamination or munitions that may remain on these properties from past DOD activities.

The scope and magnitude of the FUDS Program are significant, with more than 10,000 properties identified for potential inclusion in the program. Information about the origin and extent of contamination or munitions, land transfer issues, past and present property ownership, applicable laws and DOD policies must be evaluated before DOD considers a property eligible for Defense Environment Restoration Account funding under the FUDS Program. Environmental cleanup at FUDS properties is conducted under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

### **C. Installation Restoration Program (IRP)**

Installation Restoration Program (IRP) category projects include sites that require response actions to address releases of: (a) Hazardous substances and pollutants or contaminants; (b) Petroleum, Oil, and Lubricants (POLs); (c) Hazardous wastes or hazardous waste constituents; and (d) Explosive compounds released to soil, surface water, sediment, or groundwater as a result of ammunition or explosives production or manufacturing at ammunition plants.

The relative risk site evaluation (RRSE) framework is a methodology used by all DoD Components to evaluate the relative risk posed by a site in relation to other sites. It is a tool used across all of DoD to group sites into high, medium, and low categories based on an evaluation of site information using three factors: the contaminant hazard factor (CHF), the migration pathway factor (MPF), and the receptor factor (RF). Factors are based on a quantitative evaluation of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) hazardous substances, pollutants, or contaminants and a qualitative evaluation of pathways and human and ecological receptors in the four media most likely to result in significant exposure groundwater, surface water, sediment, and surface soils.

### **D. Military Munitions Response Program (MMRP)**

In 2001, DoD established the Military Munitions Response Program (MMRP). The MMRP addresses munitions response sites (MRSs) at Formerly Used Defense Site locations. MRSs are sites that are known or suspected to contain unexploded ordnance, discarded military munitions, or munitions constituents (MC). Through the MMRP, DoD complies with environmental cleanup laws, such as the Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund.

To prioritize funding and cleanup of MRSs that pose the greatest threat to safety, human health, and the environment, DoD uses the Munitions Response Site Prioritization Protocol (MRSP). The MRSP consists of three separate modules to evaluate hazards associated with explosives, chemical warfare materiel, MC, and other incidental environmental contaminants. The MRSP scores affect how DoD sequences MRSs for cleanup. In addition to relative risk, DoD considers other factors such as economic, programmatic, and stakeholder concerns, as well as reuse and redevelopment plans, when prioritizing sites for cleanup.

## II: Acronyms

<b>BD/DR</b>	Building Demolition and Debris Removal
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation, and Liability Act
<b>CHE</b>	Chemical Warfare Material Hazard Evaluation
<b>COMM/REL</b>	Community Relations
<b>CON/HTRW</b>	Containerized/Hazardous, Toxic and Radioactive Waste
<b>CTC</b>	Cost to complete
<b>CWM</b>	Chemical Warfare Material
<b>DD</b>	Decision Document
<b>DERP</b>	Defense Environmental Restoration Program
<b>DOD</b>	Department of Defense
<b>EE/CA</b>	Engineer Evaluation/Cost Analysis
<b>EHE</b>	Explosive Hazard Factor
<b>EP</b>	Evaluation Pending
<b>FFA</b>	Federal Facilities Agreement
<b>FUDS</b>	Formerly Used Defense Sites
<b>FUDSMIS</b>	Formerly Used Defense Sites Management Information System
<b>FS</b>	Feasibility Study
<b>HQDA</b>	Headquarters, Department of the Army
<b>HHE</b>	Health Hazard Evaluation
<b>IAG</b>	Interagency Agreement
<b>IRA</b>	Interim remedial action
<b>IRP</b>	Installation Restoration Program
<b>LTM</b>	Long Term Management
<b>MAP</b>	Management Action Plan
<b>MMRP</b>	Military Munitions Response Program
<b>MMRP/CWM</b>	Military Munitions Response Program/Chemical Warfare Materials
<b>MRSPP</b>	Military Munitions Site Prioritization Protocol
<b>NKSH</b>	No Known or suspected Hazard
<b>NLR</b>	No Longer Required
<b>NPL</b>	National Priorities List
<b>PA</b>	Preliminary Assessment
<b>PA/INPR</b>	Preliminary Assessment/Inventory Project Report
<b>PCO</b>	Project Closeout
<b>PN</b>	Preliminary Negotiations
<b>QA</b>	Quality Assurance
<b>RA</b>	Remedial Action
<b>RA-C</b>	Remedial Action-Construction
<b>RA-O</b>	Remedial Action-Operations
<b>RAB</b>	Restoration Advisory Board
<b>RC</b>	Response Complete



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<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RD</b>	Remedial Design
<b>RmA-C</b>	Removal Action-Construction
<b>RmD</b>	Removal Design
<b>RI/FS</b>	Remedial Investigation/Feasibility Study
<b>RIP</b>	Remedy in Place
<b>ROD</b>	Record of Decision
<b>RRSE</b>	Relative Risk Site Evaluation
<b>SI</b>	Site Investigation
<b>TAPP</b>	Technical Assistance for Public Participation
<b>TRC</b>	Technical Review Committee

### III. Property Information

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**FUDS Number:** F10AK0845

**FFID:** AK09799F708800

**Name:** COLD BAY - FORT RANDALL

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#### A. Property Description

Cold Bay is located within the boundaries of the 519,000 acre Fort Randall and is located near the tip of the Alaska Peninsula. The geodetic location of Cold Bay Air is approximately 55N12' latitude and 162W45' longitude. Access to this site is by Commercial air or by boat. Improvements were abandoned in place. The current land owners of the Fort Randall property with approved FUDS projects include Alaska DOT, University of Alaska, Anchorage, and USFWS. King Cove Corporation and other private landowners make the remainder of the property ownership.

FDE Supplement #1 - Signed July 1984 - Total Navy withdrawal 1,003,568 acres.

#### B. Locale

**City:** COLD BAY

**State:** AK

**Latitude:** 55.2075

**Longitude:** -162.7283

**Congressional District:** 00

**Size (Acreage):** No acreage reported

#### C. Organization

**Division:** Pacific Ocean Division

**District:** Alaska District

**Phone:** 907-753-2520

#### Current Owners:

Type	Name
Fedag	USFWS
Fish and Wildlife Service	Located within Alaska Peninsula NWR; Project is within Izembeck NWR.
Local	Aleutians East Borough

State	Alaska DOT&PF. Unable to re-establish ROE in 2019.; STATE Current owner of the Beach Seeps site is the Univeristy of Alaska; State of Alaska Department of Transportation
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**D. National Priorities List Status**

The National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.

**National Priorities List (NPL) Status:** Not on the NPL

### E. Project Summaries

The below table outlines all projects that have been identified on this FUDS property. The table provides information on the category of project, the legal driver, the RRSE or MRSP score that is used for prioritization, the total funding for the project, the status of work on the project, and the actual or anticipated remedy in place and response complete dates.

Project Number	Category	Name	Legal Driver	RRSE	MRSP	Status	RIP	RC
0	PA/INPR	PA/INPR Funding				Complete		
01	CON/HTR W	FORT RANDALL CLEAN-UP	CERCLA			Complete	09/2006 Actual	09/2006 Actual
02	HTRW	Fort Randall POL Soil/Goundwater Cleanup	State	Not Required		Underway	09/2008 Actual	09/2040 Scheduled
03	CON/HTR W	Drum Burial Area	State			Complete	06/2016 Actual	06/2016 Actual
04	MMRP	SMALL ARMS RANGE 1	CERCLA		EP	Future	09/2039 Scheduled	09/2039 Scheduled
05	CON/HTR W	MP5 ENCAMPMENT AREA	State			Underway	09/2030 Scheduled	09/2030 Scheduled
06	CON/HTR W	MP4 FUEL STORAGE AREA	State			Underway	09/2030 Scheduled	09/2030 Scheduled
10	CON/HTR W	UST #1 Groundwater Plume	State			Future	09/2032 Scheduled	09/2041 Scheduled

## IV. Cleanup Program Summary

### A. Historic Activity

The Cold Bay / Fort Randall FUDS consists of approximately 2,200 square miles (1,411,250 acres) in the Aleutians East Borough on the Alaskan Peninsula between Bristol Bay to the north and the Pacific Ocean to the South. Military ownership in the Cold Bay area began with a land withdrawal by the U.S. Navy in 1929 for the establishment of a Naval Reservation; however, DoD activity in the Cold Bay region did not really begin until the 1940s. Construction of an airfield at Cold Bay began in September 1941, with the Army activating Fort Randall in January 1942. The Navy commissioned Cold Bay Naval Airfield in July 1942 and changed the airfield to a naval auxiliary air facility (NAAF) in April 1943. A hospital and backup unpaved runway were constructed south of Russel Creek as well as Navy housing and associated infrastructure.

Throughout 1942, the Army flew combat missions and patrol flights in response to the threat of a Japanese attack in the Aleutians. The Army Air Forces Naming Board renamed the Fort Randall airfield Thornbrough Army Air Field (AAF) in February 1943. The installation had approximately 10,000 troops on site at times during operation in 1942 and 1943. However, in October 1943 the War Department greatly reduced forces at the airfield.

The Navy decommissioned NAAF Cold Bay on 7 November 1944, and turned necessary services over to the Army. In 1945, Cold Bay participated in the Project Hula Lend Lease program with the Russian Navy, which trained Russian naval personnel and transferred U.S. Navy vessels to the Soviet Navy.

An Army Air Force detachment maintained Thornbrough AAF in a caretaker status and served transient aircraft through 1946. The Army transferred Thornbrough AAF to the Air Force in 1947; the installation was redesignated as Thornbrough Air Force Base (AFB) in March 1948. Thornbrough AFB served as a support base for aircraft in the Korean War. Thornbrough AFB was inactivated on 1 September 1953 and redesignated as the Cold Bay Recreation Camp in 1956. The Alaskan Air Command (AAC) discontinued the recreation camp in 1962.

In January 1959, the Department of Defense (DoD) established a Distant Early Warning (DEW) Station at Cold Bay, designated Cold Bay Air Force Station (AFS), with the activation of the 714th Aircraft Control and Warning Squadron (ACWS). In March of

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1959, Cold Bay AFS was redesignated Cold Bay DEW Station. The Air Force also constructed the Cold Bay ACS Communication Site. The Air Force owned the transmitter site between 1960 and 1961 and the receiver site between 1959 and 1974.

The Cold Bay runway is now used by the Federal Aviation Administration as an emergency stop for planes traveling from the U.S. to Europe and Asia. The Airport is owned and managed by the Alaska Department of Transportation and Public Facilities.

## V. Installation Restoration Program (IRP)

### A. IRP Summary

Inception of IRP: 07/1996

Projects Identified: 6

Projects at Response Complete: 2

Remedy-in-Place (RIP): 09/2032

Response Complete (RC): 09/2041

IRP completion (including LTM): 09/2041

### B. IRP Schedule

#### Project Schedule

Project No	Category	Site Type	Status	Response Complete
01	CON/HTRW	Building Demolition/Debris Removal	Complete	09/2006 Actual
02	HTRW	Contaminated Ground Water	Underway	09/2040 Scheduled
03	CON/HTRW	Underground Storage Tanks	Complete	06/2016 Actual
05	CON/HTRW	POL (Petroleum/Oil/Lubricants) Lines	Underway	09/2030 Scheduled
06	CON/HTRW	POL (Petroleum/Oil/Lubricants) Lines	Underway	09/2030 Scheduled
10	CON/HTRW	Contaminated Ground Water	Future	09/2041 Scheduled

#### Phase Schedule

Project No	Phase	Phase Type	Status	Start	End
01	SI	Remedial Response	Complete	07/1998	09/1998
01	RD	Remedial Response	Complete	07/1996	09/2000
01	RA-C	Remedial Action	Complete	07/1997	09/2006
01	LTM	Remedial Response	Complete	04/2010	09/2010
02	RI/FS	Remedial Response	Complete	07/1997	09/2005
02	RD	Remedial Response	Complete	07/1997	03/2006
02	RA-C	Remedial Action	Complete	07/1998	09/2008
02	RA-O	Remedial Action	Underway	07/1998	09/2040
02	LTM	Remedial Response	Complete	07/1998	09/2006
03	RmD	Removal Action	Complete	10/2011	09/2014
03	RmA-C	Removal Action	Complete	10/2013	06/2016

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05	RI/FS	Remedial Response	Underway	10/2012	09/2028
05	RmD	Removal Action	Future	09/2029	10/2029
05	RmA-C	Removal Action	Future	10/2029	09/2030
06	RI/FS	Remedial Response	Underway	04/2013	09/2028
06	RmD	Removal Action	Future	09/2029	10/2029
06	RmA-C	Removal Action	Future	10/2029	09/2030
10	RD	Remedial Response	Future	10/2028	09/2029
10	RA-C	Remedial Action	Future	10/2030	09/2032
10	RA-O	Remedial Action	Future	10/2033	09/2041

**Five-Year Review**

**Status:** No Reviews Planned

**C. Project Descriptions**

Please see **Appendix I** for detailed IRP project descriptions



**D. Costs**

**Funding To Date\* (\$K):** \$48,934

**2021 Funding (\$K):** \$3,525

**CTC (\$K):** \$29,529

Project No	Phase	Status	< 2021	2021	2022	2023	2024	2025	2026	2027 +
01	SI	Complete								
01	RD	Complete								
01	RA-C	Complete								
01	LTM	Complete								
02	RI/FS	Complete								
02	RD	Complete								
02	RA-C	Complete								
02	RA-O	Underway								
02	LTM	Complete								
03	RmD	Complete								
03	RmA-C	Complete								
05	RI/FS	Underway								
05	RmD	Future								
05	RmA-C	Future								
06	RI/FS	Underway								
06	RmD	Future								
06	RmA-C	Future								
10	RD	Future								
10	RA-C	Future								
10	RA-O	Future								

\*Past costs are approximate and not inflated to reflect current year fiscal dollars.

= phase funded

## VI. Military Munitions Response Program (MMRP)

### A. MMRP Summary

**Inception of MMRP:** 07/1996

**Projects Identified:** 1

**Projects at Response Complete:** 0

**Remedy-in-Place (RIP):** 09/2039

**Response Complete (RC):** 09/2041

**MMRP completion (including LTM):** 09/2041

### B. MMRP Schedule

#### Project Schedule

Project No	Category	Site Type	Status	Response Complete
04	MMRP	Small Arms Range	Future	09/2039 Scheduled

#### Phase Schedule

Project No	Phase	Phase Type	Status	Start	End
04	SI	Remedial Response	Future	09/2036	10/2036
04	RI/FS	Remedial Response	Future	09/2039	10/2039

#### Five-Year Review

**Status:** No Reviews Planned

### C. Project Descriptions

Please see **Appendix II** for detailed MMRP project descriptions

**D. Costs**

**Funding To Date\* (\$K): \$0**

**2021 Funding (\$K): \$0**

**CTC (\$K): \$1,891**

Project No	Phase	Status	< 2021	2021	2022	2023	2024	2025	2026	2027 +
04	SI	Future								
04	RI/FS	Future								

\*Past costs are approximate and not inflated to reflect current year fiscal dollars.

= phase funded

## VII. Community Involvement

Since 1993, the Department of Defense (DOD) has supported the development, implementation, and maintenance of the Restoration Advisory Board (RAB) program. Through the RAB program, communities provide input into the decision - making process of DOD's environmental cleanup program. A RAB is a group, equally co - chaired by a DOD representative and a community member, that serves as a forum for exchange of information between government officials and members of the local community on property cleanup issues. In addition to regular RAB meetings, a combination of activities may be conducted to enhance this process. Such activities may include coordinating installation site tours or providing interactive presentations with the use of cleanup technology models. Members of a RAB may include local citizens and representatives of the U.S. Environmental Protection Agency (EPA) and state, local, and tribal governments. The RAB team should reflect the diverse interests of the community and help identify possible issues associated with an installation's environmental cleanup program. RABs provide a link between the community and cleanup decision makers, and should complement other community involvement activities, such as holding public meetings, distributing informative mailings to the public on installation cleanup activities, and establishing local information repositories.

In fiscal year 1998 (FY98), DOD continued to build trust with local communities surrounding military installations by strengthening the RAB program and making new resources available; including the implementation of the Technical Assistance for Public Participation (TAPP) program. The TAPP program was designed to help community members of RABs and TRCs better understand the scientific and engineering issues underlying their properties' environmental cleanup activities. Under TAPP, the installation may contract for an independent technical consultant to advise the RAB on a specific project, which must be identified in the TAPP application. Typical projects may involve reviewing proposed remedial technologies, interpreting health and environmental effects data, or reviewing cleanup documents.

**Reason RAB not Established:** The community has expressed no sufficient, sustained interest in a RAB

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**APPENDIX I**  
**IRP Project Descriptions**

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## 1. Identification

---

**Project ID:** 01

**Project Name:** FORT RANDALL CLEAN-UP

**Legal Driver:** CERCLA

**Closeout**

**RIP Date:** 09/2006 Actual

**RC Date:** 09/2006 Actual

---

## 2. Project Description

Four USTs were located adjacent to the Cold Bay airport runway and over 500 crushed drums were found in a drum disposal area located on University of Alaska land within 100 yard of the ocean.

## 3. Restoration History

The project will be closed out in FY11

## 4. Cleanup/Exit Strategy

No cleanup/exit strategy reported.

## 5. Status

**RRSE:** RC- 09/2006

### Phases

Phase	Status
SI	Complete
RD	Complete
RA-C	Complete
LTM	Complete

## 1. Identification

---

**Project ID:** 02

**Project Name:** Fort Randall POL Soil/Groundwater Cleanup

**Legal Driver:** State

**Closeout**

**RIP Date:** 09/2008 Actual

**RC Date:** 09/2040 Scheduled

---

## 2. Project Description

The Cold Bay / Fort Randall FUDS consists of approximately 2,200 square miles (1,411,250 acres) in the Aleutians East Borough on the Alaskan Peninsula. The city of Cold Bay (70.9 square miles) is located on the west side of Cold Bay, approximately 625 air miles southwest of Anchorage. The military use of the FUDS was predominantly within the city of Cold Bay and outside of Cold Bay within the Izembek and Alaska Peninsula National Wildlife Refuges operated by the USFWS.

The topography of the Cold Bay / Fort Randall FUDS property can generally be described as rolling, treeless tundra. The area contains numerous lakes, ponds, and swamps and is bounded by Izembek Lagoon and the Bering Sea to the northwest and Cold Bay and the Pacific Ocean to the southeast. Pavlof Volcano is located approximately 35 miles northeast of Cold Bay, while the Shishaldin Volcano is located approximately 60 miles southwest of the town. Frosty Peak, a dormant stratovolcano, is located approximately 10 miles southwest of Cold Bay. Willow and alder brush can be found in most of the creek valleys at low altitudes. Grass valleys are abundant and moss covers much of the remaining ground. The Cold Bay / Fort Randall FUDS property is dominated by coastal deposits consisting of interlayer marine and alluvial sediments of terrestrial origin made of silt and sand. Additionally, the local geology is comprised of glacial drift and moraine materials consisting of clay, silt, sand, gravel, cobbles, and boulders which are deposited throughout the area.

## 3. Restoration History

Activities conducted under Project F10AK084501 were focused in three areas: the Drum Disposal Area / Beach Seep Area, the Stapp Creek Area, and the East-West Runway.

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The 1985 debris cleanup conducted on the FUDS property removed a 210,000-gallon aboveground storage tank (AST) and demolished structures at the Beach Seep Area and removed multiple 25,000-gallon USTs from the Stapp Creek Area.

Jacobs Engineering Group, Inc. installed five monitoring wells around the Beach Seep Area in 1996 and 1997. Terrasat, Inc. conducted a geophysical survey at the Drum Disposal Area / Beach Seep Area in 1999 and identified anomalies that suggested the presence of metal below the ground surface. In 1998 and 1999, clean-up activities removed a total of 2,267 55-gallon drums and 578 feet of 4 diameter pipe from the Drum Disposal Area / Beach Seep Area. Geophysical surveys conducted during a 2002 Remedial Investigation by Jacobs Engineering Group, Inc. confirmed that no sources of contamination remained in the Drum Disposal Area / Beach Seep Area.

Clean-up activities at the Stapp Creek Area removed 15 25,000-gallon USTs in 1997 and one more in 2006. Approximately 20 feet of 8 diameter pipeline were removed from the area in 1998. Clean-up activities at the East-West Runway included removing four 25,000-gallon USTs and 225 drums in 1999; two more 25,000-gallon USTs were removed in 2006. Jacobs Engineering Group, Inc. installed and sampled four groundwater monitoring wells at the East-West Runway in 2007 and an additional three groundwater monitoring wells in 2008. One of the monitoring wells installed in 2008 was damaged and subsequently decommissioned.

As of 2011, no known CON/HTRW remained in the Project F10AK084501 area. USACE Alaska District officially closed out Project F10AK084501 on 11 March 2011. Jacobs Engineering Group, Inc. installed and sampled an additional seven groundwater monitoring wells in 2013 at the East-West Runway to assess the extent of any groundwater contamination downgradient of the former UST locations.

A high-vacuum extraction (HVE) remediation system was installed in 1998 at the Drum Disposal Area / Beach Seep Area where fuel was seeping out of the bluff. Between 1998 and 2006, the contractor removed and thermally treated approximately 13,500 cubic yards of contaminated soil during multiple removal actions. In 2007 Jacobs Engineering installed a bioventing system and added a soil vapor extraction (SVE) modification to the HVE system. SVE treatment goals were met in 2014 and the SVE activities were discontinued. The HVE and bioventing systems continue to operate and a groundwater monitoring program is in place to evaluate cleanup progress.

The Drum Burial Area (F10AK085403) was fully remediated in 2014 when BSI-TLI removed 1,853 tons of soil and drums from two trenches and tar from the surface. Four groundwater wells were sampled and results were below cleanup levels. Restoration of

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the Drum Burial Area is complete.

In 2013, 3 projects were added after a historical photograph analysis done by AGC. A small arms range (F10AK084504), fuel storage area at Milepost 4.0 Frosty Road (F10AK0854056), and an Army encampment at Milepost 5.0 Frosty Road (F10AK084505) were added as projects. A site investigation was completed of the Milepost 4 Fuel Storage Area and Milepost 5.0 Encampment in October 2015.

The current known FUDS impacts that require additional remedial action include groundwater and soil contamination at the Beach Seeps/Drum Disposal Area and the East-West Runway (02).

**4. Cleanup/Exit Strategy**

"Project is currently in the Remedial Action Operation (RA-O) phase. Currently operating a groundwater treatment system with the objective of minimizing petroleum-oil-lubricant (POL) beach seeps. Optimization studies underway to improve treatment system and capture more POL product from the subsurface. Conducting groundwater and beach seep monitoring. Continue operation of treatment system and implement optimization strategies. RA-O phase, utilizing the insitu remediation systems, will continue for the next 15 years or until the seeps onto the beach/ocean has stopped.

FY21: optimization of the HVE system including the installation of energy saving submersible pumps have been installed and are being operated intermittently (to save on energy costs) to capture product. Product and groundwater being pumped and treated with the HVE system. Other study, analysis, and optimization in progress. Bioventing system operation and optimization also continues. Coordination with the CX has been ongoing and will continue into the future. Plan to continue to operate the HVE and Bioventing system utilizing optimization practices. Plan to continue to collect site specific data in order to further optimize the systems.

Exit strategy includes planning and coordination with regulators. Plan to update exit strategy and continue to implement optimization practices to speed up cleanup. "

**5. Status**

**RRSE:** Not Required

**Phases**

Phase	Status
-------	--------

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RI/FS	Complete
RD	Complete
RA-C	Complete
RA-O	Underway
LTM	Complete

## 1. Identification

---

**Project ID:** 03

**Project Name:** Drum Burial Area

**Legal Driver:** State

**Closeout**

**RIP Date:** 06/2016 Actual

**RC Date:** 06/2016 Actual

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## 2. Project Description

Two areas were identified with asphalt at the surface just to north of Lake Burns called Asphalt Seep #1 and #2 during the Cold Bay RI (01 project). Asphalt Seep #1 contained pooled asphalt in hummocks of tundra vegetation that became viscous in the summer. Asphalt Seep #2 (AS#2) contained buried drums in two trenches (together these trenches were called Bury Pit #1) defined by geophysics and had small chunks of asphalt on the surface as well as two pools of asphalt that appeared to have leaked from drums on the surface. The number of buried drums is currently estimated at over 4,000 in Bury Pit #1. In 2014, BSI-TLI conducted a removal action at the Drum Burial Area that included removal of contaminated soil and drums from two trenches at Bury Pit #1 and asphalt from Asphalt Seep #1 and #2. The removal action included the removal, transportation, and disposal of 1,853 tons of waste.

## 3. Restoration History

The SI investigated Bury Pit #1, containing two parallel trenches containing buried drums. The RI further investigated the trenches and asphalt seeps area where asphalt is pooled on the surface using geophysics and no buried metal was detected beneath the asphalt seeps.

A site visit was performed in June 2012 to determine current status of the asphalt seeps. A geophysical investigation was performed during the site visit to define the complete horizontal extent of the buried drums. The asphalt seeps were inspected. A removal action was completed in 2014 of the burial trenches and asphalt seeps. Four groundwater wells were installed and groundwater results were above cleanup levels. The groundwater wells were decommissioned in 2015. No further action is required.

## 4. Cleanup/Exit Strategy

Project closeout complete.

**5. Status**

RRSE: RC- 06/2016

**Phases**

<b>Phase</b>	<b>Status</b>
RmD	Complete
RmA-C	Complete

## 1. Identification

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**Project ID:** 05

**Project Name:** MP5 ENCAMPMENT AREA

**Legal Driver:** State

**Closeout**

**RIP Date:** 09/2030 Scheduled

**RC Date:** 09/2030 Scheduled

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## 2. Project Description

Location of former encampment southwest of the Cold Bay Airport at 634033.56/1440905.61W. Grassy, hummocky tundra with small lakes located north of headwaters of a tributary to Russell Creek. Site includes maintenance garages, mess halls, warehouses, fuel storage. Brown bears and wolves have been seen in the area and safety for site visitors is therefore a concern.

## 3. Restoration History

A brief site visit was conducted in 2014 by USACE and USFWS but the area was not inspected in detail. No obvious hazardous debris was seen. A site visit and archeological investigation were conducted 2015. A remedial investigation was conducted in 2016. The remedial investigation determined contamination remains in the surface including DRO, RRO, 1,1,2,2-Tetrachloroethane, TCE, 1,2,4-Trimethylbenzene, p-Isopropyltoluene, PAHs, PCBs, and metals. Additional investigation of nature and extent of CoCs is needed for PCBs, DRO, and a dump site. It is unknown if groundwater is impacted.

## 4. Cleanup/Exit Strategy

Conduct a Phase II and III Remedial Investigation to investigate nature and extent of contamination identified in the Phase I Remedial Investigation. CoPCs are DRO, RRO, 1,1,2,2- Tetrachloroethane, TCE, p-Isopropyl toluene, 1,2,4-Trimethylbenzene, PAHs, metals, and PCBs. If COPCs are confirmed above cleanup levels from HTRW CoPCs, delineate a new HTRW project and proceed under CERCLA for risk assessment, and address POL contamination under the existing CON/HTRW project where POL is not co-mingled with HTRW contamination. Media of concern are soil, groundwater, sediment, and surface water.

**5. Status**

**RRSE:**

**Phases**

<b>Phase</b>	<b>Status</b>
RI/FS	Underway
RmD	Future
RmA-C	Future

## 1. Identification

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**Project ID:** 06

**Project Name:** MP4 FUEL STORAGE AREA

**Legal Driver:** State

**Closeout**

**RIP Date:** 09/2030 Scheduled

**RC Date:** 09/2030 Scheduled

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## 2. Project Description

Located southwest of the Cold Bay Airport at 55.165448, -162.728407 . Grassy, hummocky tundra with small lakes located north of headwaters of a tributary to Russell Creek. Historic maps indicate part of the site was formerly used as a fuel storage area. Multiple depressions of various sizes are present that were created by the military. Depressions thought to be used for walled tents are dispersed across the area. A concrete foundation associated with a former warehouse is present.

## 3. Restoration History

A site visit was conducted by USACE and USFWS (the landowner) in 2014. No obvious sources of contamination were evident. A SI was conducted in Fall 2015. An archeological survey was conducted in 2015. An RI was conducted in 2016. Surface soil contamination found during the RI included DRO, RRO, VOCs, PAHs, and metals at multiple locations. A phase II RI is needed to further delineate the nature and extent of contamination and to evaluate completed pathways in more detail. It is unknown if groundwater is impacted.

## 4. Cleanup/Exit Strategy

Conduct a Phase II and III Remedial Investigation to investigate nature and extent of contamination identified in the Phase I Remedial Investigation. CoPCs are DRO, RRO, chloroform, PCE, PAHs, and metals. If COPCs are confirmed above cleanup levels from HTRW CoPCs, delineate a new HTRW project and proceed under CERCLA for risk assessment, and address POL contamination under the existing CON/HTRW project where POL is not co-mingled with HTRW contamination. Media of concern are soil, groundwater, sediment, and surface water.

**5. Status**

**RRSE:**

**Phases**

<b>Phase</b>	<b>Status</b>
RI/FS	Underway
RmD	Future
RmA-C	Future



## 1. Identification

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**Project ID:** 10

**Project Name:** UST #1 Groundwater Plume

**Legal Driver:** State

**Closeout**

**RIP Date:** 09/2032 Scheduled

**RC Date:** 09/2041 Scheduled

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## 2. Project Description

A groundwater Avgas plume was discovered associated with UST#1, located east of the Cold Bay Runway and north of the ADOT&PF Fire Suppression Facility. Groundwater depth is approximately 35 feet with product sporadically present in some monitoring wells. The plume direction is toward the Cold Bay School (to the east) but groundwater in wells adjacent to the school did not exceed cleanup levels in 2013. The site is considered industrial as it is located adjacent to the runway and fire fighting building. The FAA formerly used the site for an administration building (the "K" Building). A second groundwater plume has been identified northeast of the UST#1 source area that is assumed to be a diesel source associated with the former weather balloon launching building that was operated until the early 1970's by the National Weather Service (tenant to CAA/FAA).

As of 2019, unable to re-establish ROE with AKDOT&PF. Coordinating with CAA/FAA to determine eligibility. Working with funds Program Manager to document newly acquired historical information that demonstrates past use by CAA and additional fuel tank observed in use at the site. As of 2021, continue to work this project through our admin process.

## 3. Restoration History

The EWR site originally covered approximately 100 acres and included underground fuel pipeline, valve pits, and storage tanks along the EWR and to the north along the North-South Runway. Remedial investigations indicated that the aviation gasoline (AvGas) pipeline and associated features were decommissioned and that the only apparent sources of contamination were historical releases of AvGas from Underground Storage Tanks (USTs) #1 and Valve Pit N, which are all located at the northwest extent of the pipeline. The valve pit was re-located, UST#1 removed, and contaminated soil

removed to the water table. Contaminated soil was thermally treated. UST#2 was left in-place since only smear zone contamination was encountered. An Ultraviolet Optical Screening Tool (UVOST) investigation was conducted to delineate residual contamination. Monitoring wells have been installed to monitor the condition of the local groundwater. Light non-aqueous phase liquid has been observed in some wells. Groundwater analytical results indicate two separate contaminant plumes exist at the site: a GRO plume and a DRO plume. Lead has also been detected above cleanup levels in groundwater in this vicinity.

2002 Remedial investigation was conducted. Determined that the only remaining sources of contamination were from historical releases from UST#1, and Valve Pit N.

2006 Remedial action activities were conducted. Valve Pit N was relocated and associated contaminated soil removed. UST#1 was removed and contaminated soil excavated beneath UST#1 was excavated and removed to the water table. No contamination was found beneath UST#2.

2007 Groundwater wells installed near former UST#1 and UST#2. Determined the direction of plume migration but did not delineate extent.

2008 Additional groundwater wells were installed and sampled downgradient of UST#1 to characterize the nature and extent of contamination and to monitor the groundwater contamination plume. UVOST investigation was conducted to delineate extent of contamination in soil. LNAPL removed using hand bailing and fuel absorbent filter socks.

2008 to current LNAPL removed using hand bailing and fuel absorbent filter socks.

2013 Additional wells were installed and subsurface soil samples collected for analysis to further characterize the nature and extent of contamination.

2014 to current Scheduled groundwater monitoring and product removal using fuel absorbent socks and ongoing hand bailing.

#### **4. Cleanup/Exit Strategy**

POL groundwater plume. Evaluate contaminated groundwater trends, select remedy. Delineated site from Coldbay-02. Groundwater plume was not covered by the original decision for the Coldbay-02.

As of 2019, unable to re-establish ROE with AKDOT&PF. Coordinating with CAA/FAA to determine eligibility identified an as-built drawing containing a UST associated with the weather balloon filling station. Aerial photos determined timing to be from post-military use by the National Weather Service. Gathered historical data and INPR

Revision is in being developed. Plan to transfer liability of this site to the National Weather Service. As of 2021, still working the internal admin process.

## 5. Status

### RRSE:

#### Phases

Phase	Status
RD	Future
RA-C	Future
RA-O	Future

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**APPENDIX II**  
**MMRP Project Descriptions**

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## 1. Identification

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**Project ID:** 04

**Project Name:** SMALL ARMS RANGE 1

**Legal Driver:** CERCLA

**Closeout**

**RIP Date:** 09/2039 Scheduled

**RC Date:** 09/2039 Scheduled

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## 2. Project Description

Four small arms range with known locations were identified during the 2015 Preliminary Assessment (PA) and the 2012 Historical Photographic Analysis (HPA) of the Cold Bay-Fort Randall Formerly Used Defense Site (FUDS). One small arms range was depicted on historical maps and confirmed on aerial imagery, while three small arms ranges were identified during the aerial imagery analysis.

## 3. Restoration History

A site visit was performed in April 2014 by USACE and USFWS personnel. No environmental hazards were observed. The only remnants of the small arms range are the gravel access road which is overgrown with brush, the clearing, and a low berm next to a trench that was likely used to simulate firing from a foxhole.

## 4. Cleanup/Exit Strategy

Assess for lead/metals contamination.

## 5. Status

### MRSP

MRSP: 09	EHE: No Known or Suspected Hazard	CHE: No Known or Suspected Hazard	HHE:
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### MRSP Army Quality Assurance (QA) Panel Review

Result: Approved	Date: 1/27/2015
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### Media

No media
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**Munitions**

Type: Small arms
Source of Hazard: Former small arms range
Location: Small arms (regardless of location)

**CWM**

**Phases**

Phase	Status
SI	Future
RI/FS	Future