PROPOSED PLAN FOR
DA115 – CONTAMINATED SOIL PILE
JOINT BASE ELMENDORF-RICHARDSON, ALASKA

U.S. Air Force Announces Proposed Plan

As the lead agency for remedial activities at DA115 on Joint Base Elmendorf-Richardson (JBER), the U.S. Air Force (USAF) is issuing this Proposed Plan pursuant to Section 117(a) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA); United States Code Title 42, Section 9617(a); and Code of Federal Regulations Title 40, Chapter 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan.

DA115 is located northwest of the Boniface Gate on the western edge of closed landfill LF008 on JBER-Elmendorf (Figure 1a). This Proposed Plan identifies removal of contaminated soil as the Preferred Alternative for DA115 and provides the reasoning for this preference.

The USAF, in consultation with the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC) regulators, will select a final remedy for the site after reviewing and considering all information submitted during the 30-day public comment period. The USAF may modify the Preferred Alternative or select another alternative presented in this Proposed Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on the alternatives presented in this Proposed Plan.

The selected remedy will be documented in a Record of Decision (ROD). The ROD will contain responses to public comments and will describe any changes to the Preferred Alternative presented in this Proposed Plan.

This Proposed Plan summarizes information that can be found in greater detail in the remedial investigation (RI) and feasibility study (FS) and other documents contained in the Administrative Record file, available online at https://ar.cce.af.mil/Search (search under Elmendorf AFB). The USAF encourages the public to review these documents to gain a better understanding of the site and remedial activities that have been conducted previously.

What Is Inside?

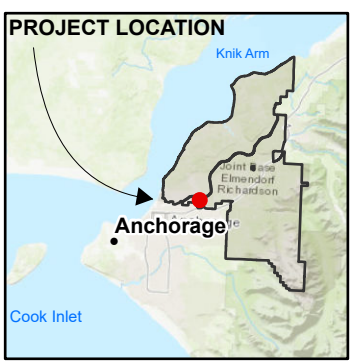
PUBLIC PARTICIPATION REQUESTED

A public comment period will remain open from 22 May 2026 through 22 June 2026 during which the USAF will accept written comments on the Proposed Plan. A comment form is provided, but you do not have to use the form to submit comments. Please send written comments via postal mail or email to the Air Force Civil Engineer Center (AFCEC) Alaska Operations Office. Environmental Community Relations Coordinator. Oral or written comments must be submitted (and mailed comments must be postmarked) by 22 June 2026.

AFCEC Alaska Operations Office
10471 20th Street, Suite 345
JBER, AK 99506
PACAF.AFCEC.ALASKA@us.af.mil
1-800-222-4137

The Proposed Plan for DA115 is available online at https://visualmedia.jacobs.com/DA115. Comments can also be submitted electronically from the web page. A public meeting is currently not planned; if desired, interest in a public meeting may also be expressed by email, website comments, or postal mail.

The Administrative Record provides complete documentation of previous efforts at DA115 that provide the basis for decision-making at the site for Aroclor 1260 and Trichloroethene in soil. Online, these resources are available at: https://ar.cce.af.mil/Search (search under Elmendorf AFB).



- Access Control Point
- DA115 Access Route
- Stream
- Fence
- Building
- Environmental Restoration Source Area
- JBER Installation Boundary

Sources
GIS Data: GeoBase 2020
Imagery: GeoBase, JBER_19jun2023_wgs84_utm6

Note:
Local groundwater flow direction is based on September, 2024 groundwater measurements.

1 inch = 500 feet

0 125 250 375 500
Feet

WGS 1984 UTM Zone 6N

N

DA115 PCB SOIL PILE LOCATION AND SURROUNDING AREA

JOINT BASE ELMENDORF-RICHARDSON, ALASKA

DATE:	PROJECT MANAGER:	FIGURE NO:
01 MAY 2026	K. MAHER	1a

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Site History and Background

JBER includes both the former Elmendorf Air Force Base (JBER-Elmendorf) and former Fort Richardson Army Post (JBER-Richardson), which together include approximately 74,000 acres adjacent to the Municipality of Anchorage, Alaska. The separate landfill site LF008, within which the DA115 soil pile was identified, was used for disposal of construction and demolition materials from 1965 to 1983 but has since been covered and is now closed. The origin of the debris and cover materials placed in landfill LF008 are unknown. ADEC has provided regulatory oversight of LF008. In 1988, ADEC conducted a site inspection, which also failed to detect any problems or contamination from the site, and recommended no further action at the site under the Resource Conservation and Recovery Act (RCRA). In February 2015, ADEC provided a letter to the Air Force agreeing LF008 can be closed. Current land use at DA115 is restricted because the area is within the runway clear zone. No residential facilities are located in the area or planned for development. Groundwater use is forbidden on JBER-Elmendorf. The land use is not anticipated to change due to the presence of a closed landfill underlying DA115 and because the site is within the runway clear zone.

Contamination at DA115 is attributed to 2 cubic yards of contaminated soil that had been deposited onto the ground surface (Exhibit 1). This contaminated soil pile was discovered in 2014 during a closed landfill inspection. A sample collected from the material indicated high levels of polychlorinated biphenyls (PCBs) and trichloroethylene (TCE). PCBs can refer to one or more of many commercial mixes known as aroclors. However, at DA115, the PCBs present above screening levels are exclusively a mixture known as Aroclor-1260. A brief timeline of activities related to DA115 appears in the following sections.

2014: An approximately 9-foot by 12-foot soil pile was identified during a routine LF008 landfill inspection. The pile was discovered east of the road leading to the landfill and north of the trees that cover the southwestern portion of LF008 and appeared recent. The source was unknown. A soil sample was collected, and multiple exceedances of the project screening levels were reported, prompting additional actions.

The soil pile and adjacent soils were removed in November 2014. Post-excavation confirmation sampling indicated that contamination remained in the surrounding surface soils. Maximum concentrations of 18,500 milligrams per kilogram (mg/kg) for Aroclor 1260 and 12 mg/kg for TCE were reported. Soil results also exceeded their respective screening levels at the time for metals (arsenic, cadmium, and lead), residual-range organics, additional volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). DA115 was established as a site to be evaluated under the CERCLA process.

Screening Levels vs. Cleanup Levels

The investigative process uses conservative screening levels to account for potential exposures to multiple contaminants that, in combination, can increase the effects on human health risk, be harmful to sensitive species, and to account for migration potential.

Once the nature and extent of contamination are well-understood, and if it is determined remedial action is needed to address an unacceptable risk, then chemical-specific preliminary remediation goals (PRGs) are identified. If available, legal standards determined to be Applicable or Relevant and Appropriate Requirements (ARARs) are identified as PRGs. If no ARAR is available, then a site-specific risk-based concentration is developed to meet the remedial action objectives (RAOs).

COC	Screening Level[1]	Cleanup Level[2]
Aroclor-1260	0.24	1[3]
TCE	0.41	4.9

[1]Screening levels are based on EPA regional screening levels for residential soil.

[2]Cleanup levels are based on Title 18 Alaska Administrative Code Chapter 75 human health cleanup level (for residential scenario).

[3] The Aroclor-1260 cleanup level is the "Total PCBs" cleanup level.

Units are in mg/kg.

2017-2018 Limited Field Investigation: Six surface soil (0 to 2 feet below ground surface [bgs]) sample locations and seven soil boring (extending beyond 2 feet bgs) locations were sampled (Figure 1b). Nine out of 10 surface samples in the area of the former soil pile contained Aroclor-1260 above the soil screening level of 0.24 mg/kg, most of which also exceeded the cleanup level of 1 mg/kg. The maximum detected Aroclor-1260 result was 760 mg/kg. Three samples were above the TCE screening level of 0.41mg/kg and the TCE cleanup level of 4.9 mg/kg extending to a depth of 9 feet bgs. Concentrations ranged up to 20 mg/kg.

Metals (arsenic, barium cadmium, lead, and vanadium), PAHs, and one pesticide (4,4'-dichloro-diphenyl-trichloroethane) were also identified above screening levels. Monitoring wells were installed in three soil boring locations (Figure 1b). Only arsenic and vanadium were identified above groundwater screening levels (EPA tapwater regional screening levels). These elements may

occur naturally above human health-based screening levels, but no background levels have been established for JBER-Elmendorf.

"Surface soil" includes soil from 0 to 2 feet bgs; "subsurface soil" is greater than 2 feet bgs. Sampling locations that extend below the surface interval are known as "soil borings."

2023-2024 RI/FS: Additional soil and groundwater sampling locations were evaluated to determine the nature and extent of contamination remaining at DA115, evaluate potential risks, and inform the development of remedial alternatives to address unacceptable risks. Initially, 12 surface soil sampling locations and six soil borings (with four completed as groundwater monitoring wells) were planned. Soil results indicated that contamination above screening levels was still present at the edges of the investigated area. As a result six surface soil samples were collected and seven more soil borings were installed as step-out locations as a follow-on field change.

Soil exceedances for Aroclor-1260 and VOC screening levels were common and highest beneath and adjacent to the former pile. As noted previously, other soil screening level exceedances were reported for PAHs, metals, and pesticides. Groundwater contained one PAH (1-methylnaphthalene), two metals (arsenic and cadmium), and the pesticides dieldrin and endrin above screening levels but not Aroclor-1260 or any VOCs. No groundwater exceedances appeared related to the soil contamination present at DA115 because nothing was detected in the water from the well directly below the former soil pile. Table 1 includes all RI and prior exceedances for Aroclor-1260 and TCE that are representative of soils remaining onsite.

Aroclor-1260 and TCE in soil were identified as contaminants of concern (COCs) due to the potential for unacceptable risk. TCE in soil shows the potential to migrate to groundwater due to its concentration, solubility, and characteristics of the soil and groundwater at DA115. However, TCE in groundwater decreased to below detectable levels from 2017 to 2024. Remedial technologies to address Aroclor-1260 and TCE in soil were evaluated and developed into three alternatives including a No Action alternative, a partial removal alternative that employs a cap and requires continued monitoring of the site, and a complete removal alternative that would restore DA115 to unlimited use and unrestricted exposure (UU/UE) conditions.

Exhibit 1. Pre- and post-removal soil pile (2014).

Cleanup Levels (mg/kg)	
Aroclor 1260	1
TCE	4.9
Based on ADEC Human Health cleanup levels	

Notes:

Local groundwater flow direction is based on September, 2024 groundwater measurements.

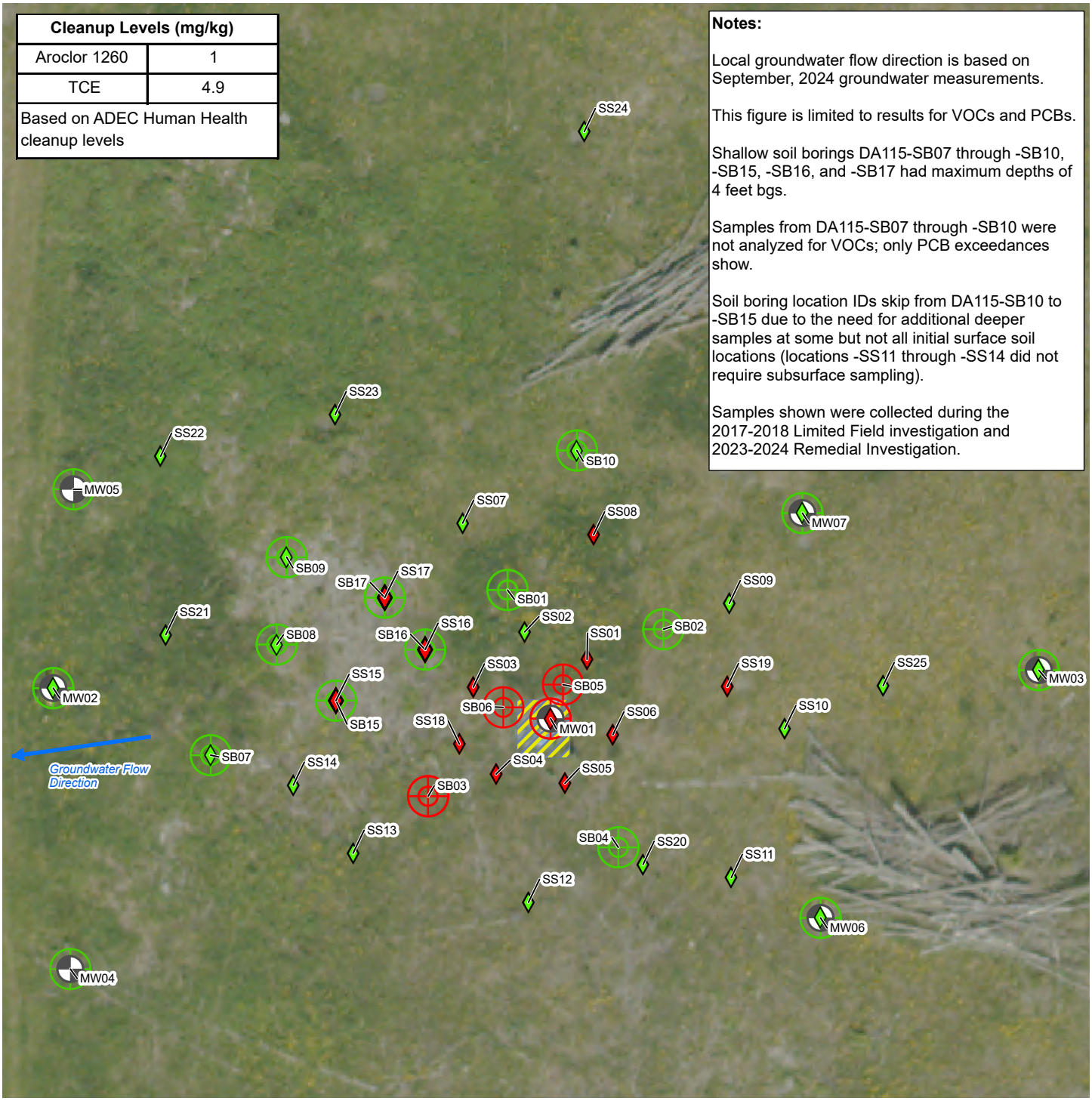
This figure is limited to results for VOCs and PCBs.

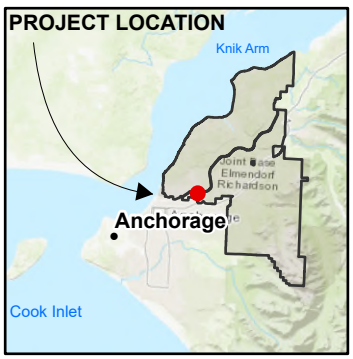
Shallow soil borings DA115-SB07 through -SB10, -SB15, -SB16, and -SB17 had maximum depths of 4 feet bgs.

Samples from DA115-SB07 through -SB10 were not analyzed for VOCs; only PCB exceedances show.

Soil boring location IDs skip from DA115-SB10 to -SB15 due to the need for additional deeper samples at some but not all initial surface soil locations (locations -SS11 through -SS14 did not require subsurface sampling).

Samples shown were collected during the 2017-2018 Limited Field investigation and 2023-2024 Remedial Investigation.





- Surface Soil Sample, Below Clean Up Levels
- Surface Soil Sample, Above Clean Up Levels
- Groundwater Monitoring Well
- Soil Boring, Below Clean Up Levels
- Soil Boring, Above Clean Up Levels
- Former Soil Pile Location

Sources
GIS Data: GeoBase 2020
Imagery: GeoBase, JBER_19jun2023

1 inch = 20 feet

0 5 10 15 20
Feet

WGS 1984 UTM Zone 6N

N

DA115 PCB SOIL PILE INVESTIGATION LOCATIONS

JOINT BASE ELMENDORF-RICHARDSON, ALASKA

DATE:	PROJECT MANAGER:	FIGURE NO:
22 DEC 2025	K. MAHER	1b

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Table 1. Soil PRG Exceedances Remaining at DA115 (TCE and Aroclor-1260)

Location	Depth (feet bgs)	Analyte[1]	Result (mg/kg)	PRG[2] (mg/kg)
2017 Post-Removal Confirmation Sampling (*within the excavation grid; individual points not shown*)				
LF008-S01	0.5	TCE	10.9	4.9
LF008-S02	0.5	TCE	12	4.9
LF008-S03	0.5	TCE	11.2	4.9
LF008-S04	0.5	Aroclor-1260	10,700	1
LF008-S05	0.5	Aroclor-1260	18,500	1
2017-2018 Limited Field Investigation				
DA115-SS01	0-2	Aroclor-1260	2	1
DA115-SS03	0-2	Aroclor-1260	760	1
DA115-SS04	0-2	Aroclor-1260	16	1
DA115-SS05	0-2	Aroclor-1260	2.9	1
DA115-SS06	0-2	Aroclor-1260	67	1
DA115-SB03	0-2	Aroclor-1260	9.1	1
DA115-MW01	0-2	Aroclor-1260	370 J	1
		TCE	20	4.9
	7-9	Aroclor-1260	12	1
2024 Remedial Investigation				
DA115-SS08	0-1	Aroclor-1260	16	1
DA115-SS15	0-1	Aroclor-1260	16.6	1
	1-2	Aroclor-1260	6.89 J	1
DA115-SS16	0-1	Aroclor-1260	427	1
	1-2	Aroclor-1260	173	1
DA115-SS17	0-1	Aroclor-1260	1.06 J	1
DA115-SS18	0-1	Aroclor-1260	323	1
	1-2	Aroclor-1260	2.71	1
DA115-SS19	0-1	Aroclor-1260	25.4 J	1
	1-2	Aroclor-1260	3.23	1
DA115-SB05	2-4	Aroclor-1260	28.4	1
	2-4	TCE	21.3 J	4.9
	4-6	Aroclor-1260	7.22	1
	4-6	TCE	21.2	4.9
	6-8	Aroclor-1260	9.16	1
	6-8	TCE	9.95	4.9
	8-10	Aroclor-1260	1.93 J	1
	10-12	Aroclor-1260	1.11	1

Table 1. Soil PRG Exceedances Remaining at DA115 (TCE and Aroclor-1260)

Location	Depth (feet bgs)	Analyte[1]	Result (mg/kg)	PRG[2] (mg/kg)
DA115-SB06	2-4	TCE	8.43 J	4.9
	4-6	TCE	10.8	4.9
	6-8	TCE	21.1 J	4.9
	8-10	TCE	21.5 J	4.9

[1] TCE and Aroclor-1260 were the only contaminants of concern identified for soil. A complete list of contaminants of potential concern evaluated in the risk assessment can be found in Appendix E, Table 4-2 of the DA115 RI/FS Report.
[2] PRGs are Human health cleanup levels from 18 AAC 75 (October 2023) and are based on a residential scenario.

Notes:

Samples shown were collected during the 2017-2018 limited field investigation and 2023-2024 RI.
The PRG for Aroclor-1260 is listed in 18 AAC 75 as "Total PCBs" and applies to any and all aroclor mixtures.
J = The result is considered estimated due to one or more quality control failures.

AAC = Alaska Administrative Code
ADEC = Alaska Department of Environmental Conservation
bgs = below ground surface
EPA = U.S. Environmental Protection Agency
FS = feasibility study
mg/kg = milligram(s) per kilogram
PCB = polychlorinated biphenyl
PRG = preliminary remediation goal
RI = remedial investigation
TCE = trichloroethylene

Site Characteristics

DA115 is wholly within a closed, covered landfill site (LF008) approximately 130 feet east and over 600 feet south of Ship Creek. An unmaintained road provides seasonal access. No buildings are located nearby, no workers access the site, and no training activities occur at the site. Partial source remediation previously occurred in 2014, including the removal of highly toxic or highly mobile principal threat wastes placed atop the landfill cover that would present a significant risk to human health or the environment.

WHAT IS A "CONTAMINANT OF CONCERN"?

A COC is a chemical released into the environment that is both related to site activities (not naturally occurring) and identified in a risk assessment as posing unacceptable risk to human health or the environment.

The USAF, ADEC, and EPA have identified Aroclor-1260 and TCE in soil as COCs that require remedial action for DA115. PCBs such as Aroclor-1260 were used for many industrial and commercial purposes and remain in the environment for long periods of time. Their manufacture and use have been banned since 1979. TCE is a highly volatile solvent that was commonly used as a degreaser for metal parts.

Soil

Exposure to soil contamination exceeding risk-based screening levels is possible at DA115. Aroclor-1260 and TCE above the screening levels are present in an area of less than 0.06 acre between 0 and 15 feet bgs (the depth considered for potential human health exposure) at concentrations that show potential for unacceptable risk. As further discussed in the risk assessment section, this plan considers soil as a current and potential future exposure medium of concern.

Groundwater

No COCs were identified for groundwater, and no currently complete groundwater exposure pathways exist. Because TCE in soil has the potential to migrate to groundwater if unaddressed, this plan considers groundwater as a potential future exposure medium of concern.

Scope and Role of the Action

This Proposed Plan will inform a second action to further address residual contamination at DA115. The first action, removal of the soil pile, was conducted in 2014 under a Hazardous Waste Support contract after the soil was determined to contain high levels of Aroclor-1260. The soil pile was not designated a "principal threat waste"

because of a lack of human receptors in the area where the soil pile was found.

Neither this Proposed Plan nor the Preferred Alternative are intended to address LF008, which is a separate, closed landfill site.

Summary of Site Risks

The risk assessment estimates what risks the site poses if no action were to be taken. Under CERCLA and its implementing regulations in the National Oil and Hazardous Substances Pollution Contingency Plan, human health and ecological risks posed by the site determine whether remedial action is needed. The risk assessment identifies the contaminants that may pose a threat and how humans or plants/animals could come in contact with them through contact with soil and water at the site. Risk is quantified by comparing the highest contaminant concentrations to screening levels, evaluating the potential for human health or ecological effects using probable exposure parameters and published toxicity values, and comparing cumulative results to the EPA cancer risk range and noncancer hazard index (40 Code of Federal Regulations [CFR] 300.430). Other important factors are considered such as whether contaminants are site-related, whether they have the potential to have stronger effects if other contaminants are present or bioaccumulate (build up in plant and animal tissue), and reasonable future use of the site (vapor intrusion into buildings). The residential scenario, although unlikely for this location, was included in the evaluations to determine what actions would be required for the site to be safe for any and all potential users. Industrial workers, construction workers, and visitors were also evaluated.

The ability of contamination at DA115 to cause cancer is reported as an excess lifetime cancer risk (ELCR) value and assumes a lifetime of exposure. Unacceptable risk of cancer means a greater than 1 in 10,000 chance that an individual will develop cancer over their lifetime, above the cancer rate that would occur in the general population. The non-carcinogenic hazard exposure to contaminants at DA115 was reported as a hazard index (HI).

HI is the ratio between the estimated intake of a chemical and the level at which no adverse health effects are expected to occur and compared to a threshold of 1 (where an HI greater than 1 represents an unacceptable noncancer risk). Results reported in Table 2 show that exposure to soil at DA115 presents a potential unacceptable cancer risk and noncancer hazard (values presented in **RED**). Primary contributors to cumulative risks are identified as Aroclor-1260 as the risk driver for cancer risk and TCE as the risk driver for noncancer hazards.

Health Effects of PCBs. PCBs such as Aroclor-1260 are man-made compounds that are no longer produced in the United States. Health effects associated with exposure to PCBs include acne-like skin conditions in adults and behavioral and immunological changes in children. PCBs are known to cause cancer in animals. PCBs are persistent, meaning that they do not break down easily in the environment and sorb strongly to soil particles.

Health Effects of TCE. Effects of TCE exposure range from dizziness headaches, sleepiness, incoordination, confusion, nausea, unconsciousness, and even death. TCE can affect multiple organ systems, cause kidney and possibly liver cancer, and potentially impact on fetal development (i.e., heart defects). TCE in soil may migrate to groundwater, although concentrations in groundwater have declined over time and were never above risk-based screening levels.

Ecological Risk. In addition to human health risk, Aroclor-1260 left unaddressed at DA115 may also affect ecological receptors such as birds, shrews, and other animals. PCBs are bioaccumulative. Low-level exposures over time cause concentrations to build up in plant and animal tissue over time. ADEC has established a process of determining ecological PRGs and 19 mg/kg was derived for Aroclor-1260 at DA115. Concentrations in soil exceed the ADEC ecological PRG.

Table 2. Summary of Site-Related Human Health Risks at DA115 (Residential Scenario)

Exposure[1]	EPA ELCR Risk Management Range	Calculated ELCR (age-adjusted)	EPA Noncancer HI/HQ Threshold	Calculated HQ (child)
Soil: Aroclor-1260[2]	--	4E-03	--	Not evaluated
Soil: TCE	--	2E-05	--	5
Soil –Total[3,4,5]	**1E-06 to 1E-04**	**4E-03**	**≤1**	**5**

[1] Values shown are for the most conservative soil exposure pathway (surface soil defined as 0 to 2 feet bgs shows greater risk than exposure to mixed-zone soil defined as 0 to 15 feet bgs) for the most conservative scenario (residential). Unacceptable risk was also found for current and future worker scenarios and these results are presented in the 2025 DA115 Remedial Investigation/Feasibility Study Report along with the exposure point concentration for each contaminant.

[2] The term PCBs applies to any and all aroclor mixtures. At DA115, the commercial mixture detected was almost exclusively Aroclor-1260.

[3] Includes contributions from all chemicals above conservative RI screening levels, except metals (naturally occurring) and petroleum hydrocarbons (which follow a different methodology for risk calculation and fall under a separate regulatory decision process).

[4] The maximum target-organ specific HI for the child receptor (most conservative) is presented.

[5] Total values shown in **RED** are above the upper bound of the cancer risk management range (1E-04) or noncancer risk threshold of 1.

Notes:
ELCR = excess lifetime cancer risk
EPA = U.S. Environmental Protection Agency
HI = hazard index
HQ = hazard quotient
TCE = trichloroethylene

Basis for Response Action

It is the current judgment of the USAF that the Preferred Alternative identified in this Proposed Plan (Alternative 3), or the other alternative with action (Alternative 2), is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment. Currently, soil contamination at DA115 does not allow for UU/UE because contamination is present above concentrations considered protective of human health.

Remedial Action Objectives

There are four site-specific remedial action objectives (RAOs) for DA115:

- Prevent current and future workers and hypothetical future residents from exposure to Aroclor-1260 in soil with concentrations in excess of 1 mg/kg through incidental ingestion, dermal contact, and inhalation.
- Prevent ecological exposure through direct contact with or ingestion of Aroclor-1260 in soil, with concentrations in excess of 19 mg/kg.
- Prevent current and future workers and hypothetical future residents from exposure to TCE in soil with concentrations in excess of 4.9 mg/kg through incidental ingestion, dermal contact, inhalation, and vapor intrusion in future buildings.
- Prevent migration of TCE to groundwater.

These RAOs incorporate chemical-specific ARARs as PRGs for soil. ARARs are requirements from federal and state environmental laws that must be met by the selected remedy. The numerical PRG serves as the performance criterion for remedial design and provides a benchmark to measure the effectiveness of an alternative.

The final RAOs to be achieved by the selected remedy will be defined in the ROD, at which point PRGs or other values will be specified as cleanup levels.

Any remedy that leaves contamination in place above levels allowing for unlimited use/unrestricted exposure is required to perform Five-Year Reviews, which is a process to reassess long-term protectiveness of human health and the environment regularly.

Summary of Remedial Alternatives

The 2024 FS evaluated general response and remedial process options to address soil at DA115, and narrowed down a list of appropriate technologies that were developed into remedial alternatives. The following options for addressing potential concerns were carried forward comparative analysis:

- **Alternative 1 (No Further Action)** is required for consideration by the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300.430) to serve as a baseline against which other options are compared.
- **Alternative 2 (Impermeable Cap, Limited Excavation, and Offsite Disposal with Land Use Controls [LUCs] and Groundwater Monitoring)** would include limited removal to reduce the magnitude of potential risk, containment of residual contamination to prevent both exposure and migration via installation of an impermeable cap (which uses a material that prevents rain from going through), and LUCs and monitoring to ensure that the remedy remains effective and protective over time.
- **Preferred Alternative 3 (Excavation and Offsite Disposal)** would remove Aroclor-1260- and TCE-contaminated soils above PRGs and dispose of them offsite at an appropriately permitted facility. Following the removal action, the site would be restored to UU/UE conditions.

Table 3 provides a more detailed summary of the alternatives and the estimated associated costs.

Table 3. Summary of Remedial Alternatives for Soil at DA115

Designation	Cost	Description
Alternative 1	$0	No further actions would be taken, and LUCs would not be employed. No Further Action is presented as a baseline for comparative analysis.
Alternative 2	$995,000	Limited removal of soil containing greater than 100 mg/kg Aroclor-1260 and collocated TCE-contaminated soil would precede the installation of an impermeable cap to prevent exposure and eliminate infiltration that may cause TCE to migrate to groundwater. LUCs to mitigate exposure potential and long-term monitoring to evaluate remedy effectiveness (e.g. cap inspections) and any changes in site conditions (LUC inspections and groundwater sampling) would be implemented. Five-Year Reviews would be required to ensure long-term protectiveness.
Alternative 3	$1,326,000	Aroclor-1260-contaminated soil above 1 mg/kg and TCE-contaminated soil above 4.9 mg/kg would be removed. The anticipated depth for removal is 3 feet bgs, except in the area around DA115-SB05, DA115-SB06, and DA115-MW01 where deeper exceedances are present and removal will advance to 13 feet bgs. Contaminated soil would be separated from uncontaminated soil, sampled to determine the degree of contamination, and shipped to a permitted facility in the contiguous United States for treatment and/or disposal.

Alternative 1: No Further Action

Capital Cost: $0
Annual Cost: $0
Net Present Value: $0
Construction Timeframe: None
Time to Achieve RAO(s): >30 years

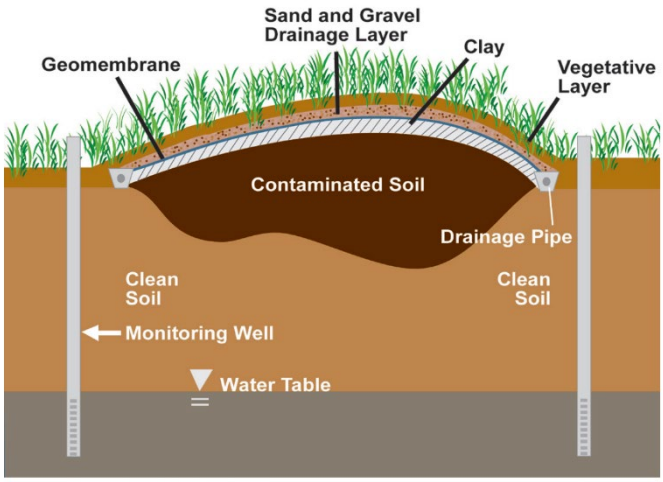
No Further Action means that no measures to prevent human or ecological exposure to contaminated soil above PRGs, remediate contaminated soil above PRGs, or manage the potential for contaminant migration to groundwater would be undertaken at DA115. Aroclor-1260 and TCE would remain above PRGs and RAOs would not be achieved within a reasonable timeframe.

Alternative 2: Impermeable Cap, Limited Excavation, and Offsite Disposal with LUCs and Groundwater Monitoring

Capital Cost: $639,000
Annual Operations Cost[1]: $48,400
Net Present Value[2]: $995,000
Construction Timeframe: 25 days
Time to Achieve RAO(s): >30 years

Alternative 2 involves removal and offsite disposal of soil containing greater than 100 mg/kg of Aroclor-1260 and collocated TCE-contaminated soil, which would be excavated and transported offsite for disposal at a hazardous waste landfill in the contiguous United States to comply with Toxic Substances Control Act (15 U.S.C. §2601 et seq.) regulations. Figure 2 illustrates Alternative 2. Remedy components include:

- Excavating to the proposed average depth of 1.5 feet would equate to approximately 40 bank (in place) cubic yards of soil. Removal will proceed until confirmation samples collected from the floor and sides of the excavation confirm that Aroclor-1260 are below 100 mg/kg. Samples from removed soils would also be collected to determine proper waste separation and disposal.
- Installation of an impermeable cap stretching beyond the excavation boundaries that would prevent exposure of both human and ecological receptors to residual Aroclor-1260 and TCE above PRGs, and also eliminate infiltration that may cause vertical migration of TCE in soil to underlying groundwater. The cap area is anticipated to be approximately 2,800 square feet and would be designed in accordance with Resource Conservation and Recovery Act Subtitle C regulations (40 CFR 260 through 273).
- Implementing enforceable LUCs to control site access and prevent activities that would disturb the remedy-in-place because Aroclor-1260 and TCE would remain in soil at DA115 above PRGs. LUCs such as dig restrictions and prohibitions on residential development would be documented in the JBER Environmental Restoration Program Atlas and in GeoBase.
- Annual monitoring of cap integrity and the performance of LUCs within the LUC boundary, as well as periodic groundwater sampling to identify whether the cap is effective in preventing potential future migration of TCE to groundwater and evaluate the need for any changes to the remedy over time.



Typical construction for a contaminated soil cap.
Source: Community Guide to Capping. EPA 542-F-21-005.

Five-year reviews are required to evaluate the effectiveness and protectiveness of the remedy-in-place over time. These evaluations typically review site inspections, groundwater sampling results, and correspondence with JBER personnel to determine if the remedy remains protective. Five-Year Reviews would continue to assess protectiveness until Aroclor-1260 and TCE are below PRGs, which would not be anticipated within 30 years.

[1] Assumes 30 years for the purpose of cost comparison.

[2] Net present value calculated using a real discount rate of 2.3% over 30 years (Office of Management and Budget [OMB] Circular A-94).

Cleanup Levels (mg/kg)	
Aroclor 1260	1
TCE	4.9
Based on ADEC Human Health cleanup levels	

Notes:

Local groundwater flow direction is based on September, 2024 groundwater measurements.

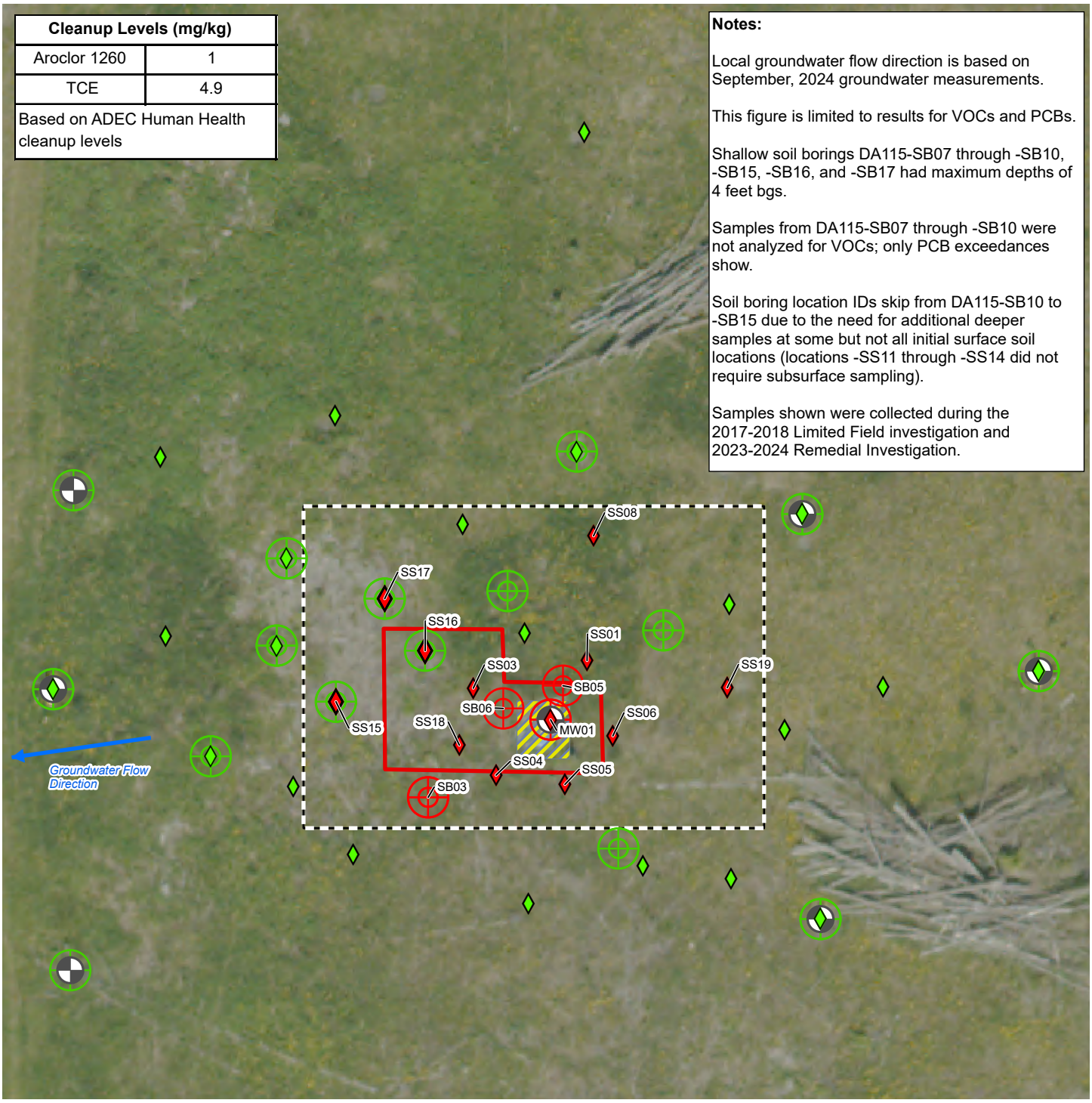
This figure is limited to results for VOCs and PCBs.

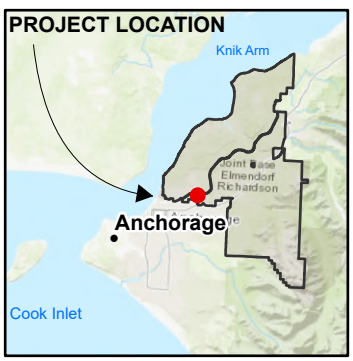
Shallow soil borings DA115-SB07 through -SB10, -SB15, -SB16, and -SB17 had maximum depths of 4 feet bgs.

Samples from DA115-SB07 through -SB10 were not analyzed for VOCs; only PCB exceedances show.

Soil boring location IDs skip from DA115-SB10 to -SB15 due to the need for additional deeper samples at some but not all initial surface soil locations (locations -SS11 through -SS14 did not require subsurface sampling).

Samples shown were collected during the 2017-2018 Limited Field investigation and 2023-2024 Remedial Investigation.





- Surface Soil Sample, Below Clean Up Levels
- Surface Soil Sample, Above Clean Up Levels
- Groundwater Monitoring Well
- Soil Boring, Below Clean Up Levels
- Soil Boring, Above Clean Up Levels
- Impermeable Cap
- Former Soil Pile Location
- Area of Soil Removal (>100 mg/kg of Aroclor-1260, to Average Depth of 1.5 feet bgs)

Sources
GIS Data: GeoBase 2020
Imagery: GeoBase, JBER_19jun2023

1 inch = 20 feet

0 5 10 15 20
Feet

N

WGS 1984 UTM Zone 6N

DA115 PCB SOIL PILE ALTERNATIVE 2

JOINT BASE ELMENDORF-RICHARDSON, ALASKA

DATE:	PROJECT MANAGER:	FIGURE NO:
22 DEC 2025	K. MAHER	2

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Alternative 3: Excavation and Offsite Disposal

Capital Cost: $1,326,000
Annual Cost: $0
Net Present Value: $1,326,000
Construction Timeframe: 15 days
Time to Achieve RAO(s): Upon completion of removal and disposal of the contaminated soil

Alternative 3 involves removal and offsite disposal of soil containing greater than 1 mg/kg of Aroclor-1260 and greater than 4.9 mg/kg of TCE-contaminated soil. These soils would be excavated to 3 feet bgs, except in the area around DA115-SB05, DA115-SB06, and DA115-MW01, where it will be removed to 13 feet. Containerized soil would be transported offsite for disposal to comply with Toxic Substances Control Act (15 USC Section 2601 et seq.) regulations. Figure 3 illustrates Alternative 3. Remedy components include:

- Excavating to the proposed depths would equate to approximately 405 bank (in ground) cubic yards of soil. Removal will proceed until confirmation samples collected from the floor and sides of the excavation confirm that Aroclor-1260 are below 1 mg/kg and TCE is below 4.9 mg/kg. Waste samples from removed soils would also be collected to determine proper waste separation and disposal.
- Once confirmation is received that the contamination has been removed, and the base of the excavation has either met RAOs or extended to a depth of up to 15 feet bgs (the depth to which safe excavation can be conducted), it would be backfilled with locally available material. This remedy is protective of groundwater. Remediation to the PRG for TCE will address areas with the highest potential to affect groundwater.
- No additional monitoring, inspections, Five-Year Reviews, or follow-up actions would be required because UU/UE conditions will have been met.

Evaluation of Alternatives

This section of the Proposed Plan describes the relative performance of each alternative against the nine criteria explained in Table 4, noting how each alternative compares to the other alternatives under consideration. The nine criteria fall into three groups: threshold criteria, primary balancing criteria, and modifying criteria, which are defined as follows:

- Threshold criteria are requirements that each alternative must meet in order to be eligible for selection.
- Primary balancing criteria are used to weigh major trade-offs among alternatives.
- Modifying criteria may be considered based on the FS phase to the extent that information is available, but they can be fully considered only after the public has had an opportunity to comment on the Proposed Plan.

It is the final balancing of trade-offs between alternatives that informs the selection of the final remedy. A discussion of the nine evaluation criteria as applied to DA115 begins below.

1. Overall Protectiveness of Human Health and the Environment

Alternative 1 (No Further Action) does not satisfy this threshold criterion because it does not address potential exposure pathways to current or future onsite workers or future residents (should land use change).

Alternatives 2 and 3 are protective of human health and ecological receptors in the specific areas they address. Alternative 2 mitigates exposure pathways by removing the most affected soil, capping the remaining soil, implementing LUCs, and inspecting and monitoring site conditions with overall protectiveness evaluations in Five-Year Reviews. However, only Alternative 3 will achieve UU/UE by removing soil contamination above PRGs.

Cleanup Levels (mg/kg)	
Aroclor 1260	1
TCE	4.9
Based on ADEC Human Health cleanup levels	

Notes:

Local groundwater flow direction is based on September, 2024 groundwater measurements.

This figure is limited to results for VOCs and PCBs.

Shallow soil borings DA115-SB07 through -SB10, -SB15, -SB16, and -SB17 had maximum depths of 4 feet bgs.

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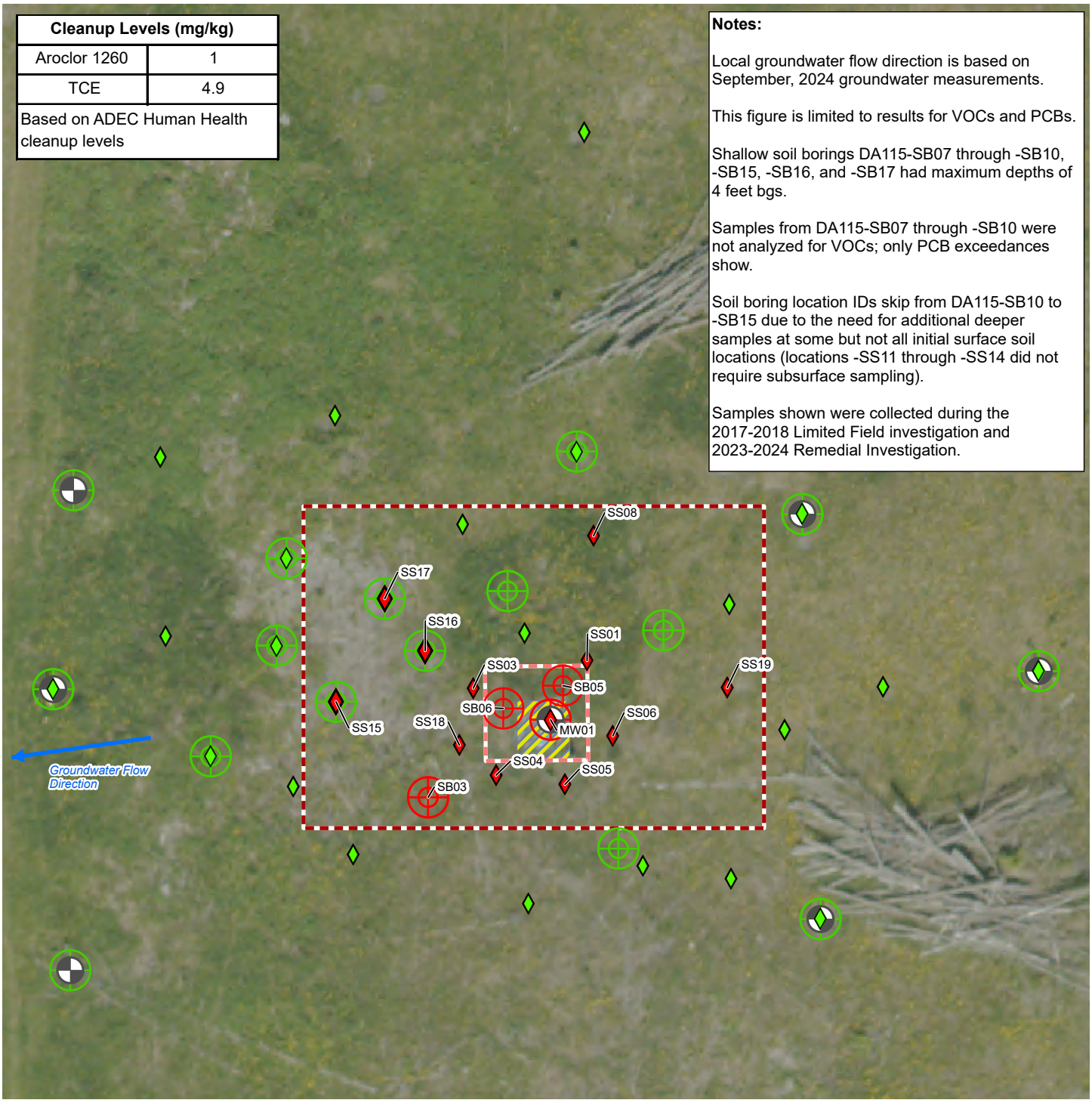
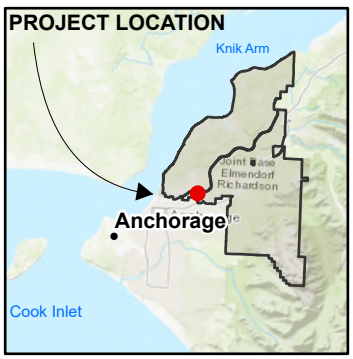
Soil boring location IDs skip from DA115-SB10 to -SB15 due to the need for additional deeper samples at some but not all initial surface soil locations (locations -SS11 through -SS14 did not require subsurface sampling).

Samples shown were collected during the 2017-2018 Limited Field investigation and 2023-2024 Remedial Investigation.





- Surface Soil Sample, Below Clean Up Levels
- Surface Soil Sample, Above Clean Up Levels
- Groundwater Monitoring Well
- Soil Boring, Below Clean Up Levels
- Soil Boring, Above Clean Up Levels
- Excavation to 3 feet
- Excavation to 13 feet
- Former Soil Pile Location

Sources
GIS Data: GeoBase 2020
Imagery: GeoBase, JBER_19jun2023

1 inch = 20 feet

0 5 10 15 20
Feet

WGS 1984 UTM Zone 6N

N

DA115 PCB SOIL PILE ALTERNATIVE 3

JOINT BASE ELMENDORF-RICHARDSON, ALASKA

DATE:	PROJECT MANAGER:	FIGURE NO:
22 DEC 2025	K. MAHER	3

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Table 4. Summary of Evaluation Criteria for Superfund Remedial Alternatives for DA115

Evaluation Criteria for Superfund Remedial Alternatives	
THRESHOLD CRITERIA	
1	**Overall Protectiveness of Human Health and the Environment** determines whether an alternative eliminates, reduces, or controls threats to public health and the environment**.**
2	**Compliance with ARARs** evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that pertain to the site, or provides justification for a waiver. Section 121(d) of CERCLA states that remedial actions on CERCLA sites must attain (or justify the waiver of) federal or more stringent state environmental standards, requirements, criteria, or limitations that are determined to be ARARs. Pursuant to EPA guidance, ARARs are generally classified into the following three categories: chemical-, location-, and action-specific ARARs.
PRIMARY BALANCING CRITERIA	
3	**Long-Term Effectiveness and Permanence** considers the ability of an alternative to maintain protection of human health and the environment over time.
4	**Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment** evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present. CERCLA has a statutory preference for treatment technologies in remedy selection.
5	**Short-Term Effectiveness** considers the length of time needed to implement an alternative and the risks to workers, residents, and the environment during implementation.
6	**Implementability** considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.
7	**Cost** includes estimated capital and annual operations and maintenance costs, and present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 to -30 percent.
MODIFYING CRITERIA	
8	**Regulatory Acceptance** considers whether EPA and ADEC agree with the USAF Preferred Alternative**.**
9	**Community Acceptance** considers whether the local community agrees with the USAF Preferred Alternative. Comments received on the Proposed Plan are an important indicator of community acceptance and will be included in the ROD**.**

Notes:

ADEC = Alaska Department of Environmental Conservation
ARAR = applicable or relevant and appropriate requirement
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
EPA = U.S. Environmental Protection Agency
ROD = Record of Decision
USAF = U.S. Air Force

2. Compliance with ARARs

ARARs identified for DA115 include, but are not limited to, those described in the next two paragraphs:

- **Applicable:** State of Alaska Oil and Other Hazardous Substances Pollution Control Regulations (Title 18 Alaska Administrative Code [AAC] Chapter 75.341) provides the chemical-specific PRGs for Aroclor-1260 and TCE in soil. 18 AAC 75.375 pertains to the need for LUCs when residual contamination is in excess of cleanup levels and the Uniform Environmental Covenants Act (Alaska Statute 46.04.300-390) contains provisions regarding the recording of a notice of activity and use limitations, which provides notice of residual contamination above cleanup levels and LUCs that have been implemented at the site.
- **Relevant and Appropriate:** The Resource Conservation and Recovery Act (40 CFR 268.35 and 263) and ADEC Soil Waste Regulations (18 AAC 60) oversee authorizations, inspections, compliance monitoring, and adherence to disposal regulations. DA115 is located entirely within LF008 boundaries, which are managed under the JBER Compliance Program and regulated by the ADEC Department of Solid Waste.

Alternative 1 would not comply with ARARs because no LUCs would be in place to prevent exposure to contaminants that remain onsite. Alternatives 2 and 3 would meet all ARARs identified for DA115.

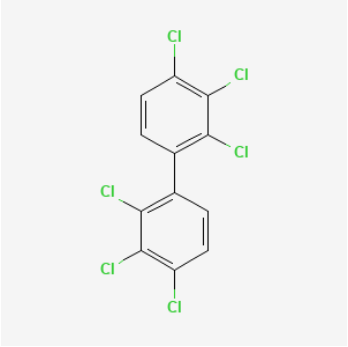
3. Long-Term Effectiveness and Permanence

Alternative 1 would be ineffective and lack permanence because the contaminated soil would remain onsite indefinitely, allowing human and ecological exposure. Alternative 2 would effectively protect both human and ecological receptors from contacting contaminated soil through cap maintenance and restrictions on invasive activities. No changes to infrastructure or site use would be permitted, and the potential for future exposures will have been addressed providing that LUCs are followed and enforced. Site conditions would be evaluated through inspections and monitoring. Protectiveness over time would be evaluated through the Five-Year Review process.

The soil removal proposed under Alternative 3 better complies with this criterion, because no operations or maintenance is required beyond the initial remedy implementation to ensure protectiveness.

4. Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment

Neither Alternatives 1, 2, nor 3 satisfy the statutory preference for treatment as a principal element. Alternative 1 (no action) would not include any actions, including any treatment. Four in situ treatment technologies were evaluated and dismissed in the FS due to the presence of Aroclor-1260 and TCE together.



Basic chemical structure of PCBs showing two benzene rings and strong carbon-chlorine bonds
Source: NIH.gov.

Few remedies would be effective for both contaminant types. PCBs such as Aroclor-1260 are persistent and nonvolatile. TCE is volatile and dissolves easily in water. Another factor was efficiency (cost and logistics) in setting up a mobile treatment system not readily available locally relative to limited size/soil volume (2,800 square feet, for a treatment/removal volume of 405 cubic yards).

5. Short-Term Effectiveness

Alternative 1 (no action) does not include any reduction of short-term exposures or access to contamination. Short-term exposures and public access can be reliably controlled while the implementation of Alternatives 2 or 3 are underway. DA115 is not located within or near a populated area.

6. Implementability

Alternative 1 would be easy to implement because no action is required. Alternatives 2 and 3 are both technically and administratively feasible. The LUCs, monitoring, inspections, and Five-Year Reviews proposed under Alternative 2 fit into existing basewide efforts. Experienced environmental personnel and waste management professionals are available locally for soil removal under Alternatives 2 and 3. Soil has previously been successfully removed from the site.

7. Cost

Alternative 1 has no cost to implement. The estimated total cost for Alternative 2 over a period of 30 years is $995,000 (including the capping activities and periodic costs for monitoring and Five-Year Reviews). Alternative 3 is more expensive, priced at $1,326,000, but can be completed in less than 1 year. Because the site would then be suitable for UU/UE, there would be no periodic costs for monitoring or Five-Year Reviews. The costs are proportional to the effectiveness of the remedy by achieving long-term effectiveness and permanence within a reasonable timeframe.

8. Regulatory Acceptance

Alternative 1 is not acceptable to ADEC or EPA.

ADEC and EPA expressed agreement with the USAF preference for Alternative 3 during FS review. Several other notable comments were received.

ADEC's concern for ecological receptors, specifically burrowing mammals, led to a re-design of the impermeable cap for Alternative 2 that has been captured in this Proposed Plan.

EPA shared ADEC's concern that the potential for migration to groundwater be addressed under the proposed remedial action. A groundwater protection RAO was added.

Any further regulatory input received in this Proposed Plan will be considered prior to remedy selection.

9. Community Acceptance

Community acceptance of the Preferred Alternative will be evaluated after the public comment period ends. All substantive comments will be taken into account for remedy selection and summarized in the ROD for the site.

Summary of Preferred Alternative

As lead agency, the USAF has identified Alternative 3 as the Preferred Alternative for addressing Aroclor-1260 and TCE in soil at DA115. This involves removing contaminated soil above PRGs and restoring the area to UU/UE conditions.

Alternative 3 was selected over the other alternatives because it passed the two threshold criteria and ranked equally as high or higher in the five primary balancing criteria. The Preferred Alternative will provide substantial risk reduction through source removal. It is consistent with the current land use, which is not expected to change in the foreseeable future, and would require no dedicated monitoring or review. Once Aroclor-1260 and TCE excavation confirmation sample results are below PRGs (currently defined as 1 mg/kg and 4.9 mg/kg, respectively), the USAF can discontinue any interim measures to secure the area and close out the site.

Based on information currently available, the USAF believes the Preferred Alternative (Alternative 3) meets the threshold criteria and provides the best balance of trade-offs among the other alternatives with respect to the balancing criteria. (Regulatory acceptance has been received; however, the modifying criteria will be considered following the public comment period.) The USAF expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA Section 121(b):

(1) Protect human health and the environment;
(2) Comply with ARARs;
(3) Be cost effective; and
(4) Use permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.

The Preferred Alternative is subject to change in response to public comment or new information and will not be selected for DA115 until the public has had the opportunity to comment.

Community Participation

The USAF provides cleanup information to the public through Community Environmental Board meetings, the Administrative Record, the JBER Environmental Restoration web page, and announcements published in community newspapers to encourage the public to gain a better understanding of the site and the remedial activities that have been conducted.

The dates for the public comment period and the locations of the Administrative Record files are provided on the front page of this Proposed Plan.

For further information on DA115, please contact:

Air Force Civil Engineer Center (AFCEC)
Alaska Operations
10471 20th Street, Suite 345
JBER, AK 99506
Email: PACAF.AFCEC.ALASKA@us.af.mil
1-800-222-4137

Glossary of Terms

Specialized terms used in this Proposed Plan are defined below:

Alaska Department of Environmental Conservation (ADEC) Cleanup Levels: Potential chemical-specific ARARs at a contaminated site.

Cleanup levels for chemicals in soil other than petroleum hydrocarbons are provided in Table B1 of 18 AAC 75.341(c) and include direct contact, inhalation, and migration to groundwater levels.

Administrative Record: The Administrative Record contains information such as reports, public comments, and correspondence related to contaminated sites that forms the basis for the selection of a response action. The Administrative Record makes information available to the public and is an important part of the public involvement process.

Applicable or Relevant and Appropriate Requirement (ARAR): Substantive requirements determined to be applicable or relevant and appropriate that, as such, the USAF must comply with when cleaning up contaminated sites, including state and federal laws and regulations.

Bioaccumulation: Increased concentrations of a chemical in an organism compared to the surrounding environment.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA): The federal law that establishes a program to identify, evaluate, and remediate sites where hazardous substances have been released to the environment and present an unacceptable risk to human health or the environment. CERCLA is also known as the Superfund Act.

Land Use Control (LUC): Both structural (e.g., fencing and signage) or legal mechanisms that protect property users and the public from existing site contamination (e.g., installation administrative controls such as construction and work request review approval processes and permitting requirements).

Real Discount Rate: Because the federal government has a different “cost of capital” than the private sector, it is generally appropriate to apply the "real" discount rates for federal facility sites. This value approximates the marginal pretax rate of return on an average investment adjusted to eliminate the effect of expected inflation for future year expenditures.

Remedial Action Objective (RAO): A general description of what a remedial action will accomplish. RAOs in combination with a review of ARARs are used to guide the selection of numerical cleanup levels and serve as the design basis for remedial alternatives.

Record of Decision (ROD): A public document that records and specifies the cleanup action selected for a site. Conditions for implementing the final remedial action and final cleanup standard are contained in the ROD and are signed by the USAF, the EPA, and the state.

Unlimited Use and Unrestricted Exposure (UU/UE): Unacceptable risk at the site has been addressed completely, and no further action is necessary to ensure protectiveness.

USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Proposed Plan for DA115 is important to the USAF. Comments provided by the public are valuable in helping select a final cleanup remedy for the site.

You may use the space below to write your comments, then fold and mail this form. Comments must be postmarked by DD Month 2026. You may submit comments to the USAF via email at the following address: PACAF.AFCEC.ALASKA@us.af.mil. In addition, oral comments may be submitted by calling 1-800-222-4137.

Name: _____

Address: _____

City: _____

State: _____ ZIP _____