



**PACIFIC AIR FORCES
REGIONAL SUPPORT CENTER**

JOINT BASE ELMENDORF-RICHARDSON, ALASKA

**EXPLANATION OF SIGNIFICANT
DIFFERENCES, PORT HEIDEN RADIO
RELAY STATION**

PORT HEIDEN, ALASKA

**FINAL
MAY 2017**

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**FINAL
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TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
ACRONYMS AND ABBREVIATIONS	iii
LEAD AGENCY ACCEPTANCE OF THE EXPLANATION OF SIGNIFICANT DIFFERENCES FOR THE PORT HEIDEN RADIO RELAY STATION	v
SUPPORT AGENCY ACCEPTANCE OF THE EXPLANATION OF SIGNIFICANT DIFFERENCES FOR THE PORT HEIDEN RADIO RELAY STATION	vii
1.0 INTRODUCTION	1-1
1.1 RECORD OF DECISION.....	1-1
1.2 SUMMARY OF CIRCUMSTANCES NECESSITATING AN EXPLANATION OF SIGNIFICANT DIFFERENCES.....	1-2
1.3 ADMINISTRATIVE RECORD	1-2
2.0 SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY	2-1
2.1 SOURCE AREAS.....	2-1
2.2 SELECTED REMEDY	2-2
3.0 BASIS FOR THE EXPLANATION OF SIGNIFICANT DIFFERENCES.....	3-1
3.1 SOIL QUANTITIES	3-1
3.1.1 Other Soil Contaminants of Concern	3-6
4.0 IMPACTS TO THE SELECTED REMEDY	4-1
4.1 INCREASED PCB-CONTAMINATED SOIL QUANTITIES	4-1
5.0 STATUTORY DETERMINATION.....	5-1
6.0 PUBLIC PARTICIPATION REQUIREMENTS	6-1
7.0 REFERENCES.....	7-1

FIGURES

Figure 1-1	Location and Vicinity Map	1-3
Figure 3-1	Radio Relay Station Site Overview.....	3-3

TABLE OF CONTENTS (Continued)

SECTION **PAGE**

TABLES

Table 3-1	Quantity of PCB-Contaminated Soil Disposed of from the RRS Site	3-6
Table 4-1	Comparison of Disposal Costs	4-2

APPENDIX

Appendix A	Correspondence
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ACRONYMS AND ABBREVIATIONS

ADEC	Alaska Department of Environmental Conservation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminant(s) of concern
cy	cubic yards
DSA	drum storage area
ESD	Explanation of Significant Differences
JBER	Joint Base Elmendorf-Richardson
mg/kg	milligrams per kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NVPH	Native Village of Port Heiden
PCB	polychlorinated biphenyls
POL	petroleum, oil, and lubricants
ROD	Record of Decision
RRS	Radio Relay Station
TSCA	Toxic Substances Control Act
USAF	United States Air Force

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**LEAD AGENCY ACCEPTANCE OF THE EXPLANATION OF SIGNIFICANT
DIFFERENCES FOR THE PORT HEIDEN RADIO RELAY STATION**

For the foregoing reasons, by my signature below, the United States Air Force approves the issuance of this Explanation of Significant Differences for the Port Heiden Radio Relay Station in Port Heiden, Alaska, and the changes stated therein.



JUAN A. ALVAREZ, Col, USAF
Deputy Director, Environmental Management Directorate

04 APR 2018
Date

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SUPPORT AGENCY ACCEPTANCE OF THE EXPLANATION OF SIGNIFICANT DIFFERENCES FOR THE PORT HEIDEN RADIO RELAY STATION

For the foregoing reasons, by my signature below, the Alaska Department of Environmental Conservation approves the issuance of this Explanation of Significant Differences for the Port Heiden Radio Relay Station in Port Heiden, Alaska, and the changes stated therein. This decision may be reviewed and revised in the future if new information indicates the site may pose an unacceptable risk to human health, safety, welfare, or the environment.



KIM DERUYTER, DSM/OA Section Manager Federal
Facilities Section, Contaminated Sites Program Alaska
Department of Environmental Conservation

16-Apr-2018
Date

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1.0 INTRODUCTION

Name: Port Heiden Radio Relay Station (RRS)
Location: Port Heiden, Alaska
Lead Agency: United States Air Force (USAF)
Support Agency: Alaska Department of Environmental Conservation (ADEC)

This Explanation of Significant Differences (ESD) documents changes to the remedy identified in the 2009 Record of Decision (ROD) and 2010 ESD for the Port Heiden RRS site owned by Alaska Peninsula Corporation, the USAF, and the State of Alaska, which is located in Port Heiden, Alaska (Figure 1-1). Additionally, a portion of Site Road passes through land owned by the City of Port Heiden. The publication requirements for this ESD are set forth by: §117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); U.S. Code Title 42, §9617(c); and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Code of Federal Regulations Title 40 §300.435[c][2][i]). This document will become publically available as part of the Port Heiden RRS Administrative Record. A public notice of availability and brief ESD description will be posted in the Alaska Dispatch News and Bristol Bay Times.

1.1 RECORD OF DECISION

The Port Heiden RRS ROD was signed by the USAF on 19 March 2009 and by ADEC on 27 March 2009 (USAF 2009). A previous ESD was published May 2010 and signed by both parties in June 2010 (USAF 2010a). The 2010 ESD identified two significant differences based on post-ROD data. These differences included the characterization of additional quantities of polychlorinated biphenyls (PCB)-contaminated soil significantly exceeding the ROD estimate of 7,000 , and that future soil removal actions are limited to the offsite transportation and disposal of PCB-contaminated waste at a permitted disposal facility (USAF 2010a).

1.2 SUMMARY OF CIRCUMSTANCES NECESSITATING AN EXPLANATION OF SIGNIFICANT DIFFERENCES

The NCP provides a process for any changes or differences identified after the ROD has been signed. These differences are classified in order of severity as non-significant/minor, significant, or fundamental. Site investigations and removal actions have been ongoing at the Port Heiden RRS since the 2009 ROD and 2010 ESD. Based on the data collected for all sites currently addressed in the ROD or 2010 ESD since the publication of the ESD, the only differences identified as significant and warranting the publication of this current ESD are:

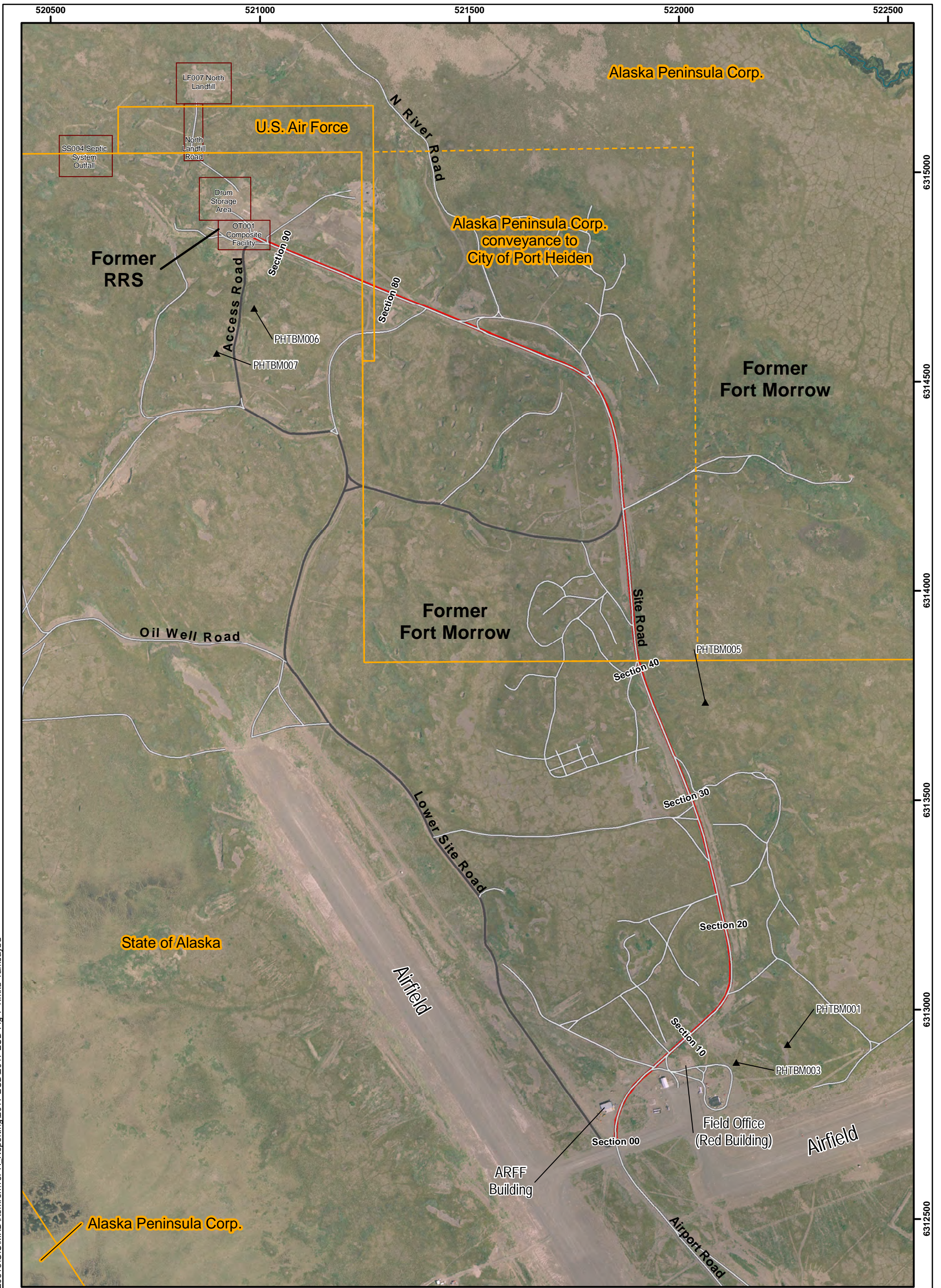
- Significant increases in PCB-contaminated soil quantity were identified.
- The increase in quantities of PCB-contaminated soil will result in increased overall costs.

These differences have arisen as additional site data have become available. Sampling to support the excavation, offsite transport, and disposal of PCB-contaminated soil has identified additional areas of PCB contamination that were not fully characterized during the Remedial Investigation/Feasibility Study. Although the total cost to dispose of these additional contaminated soils has increased, the disposal cost per ton has not changed significantly. The public could have reasonably anticipated these changes.

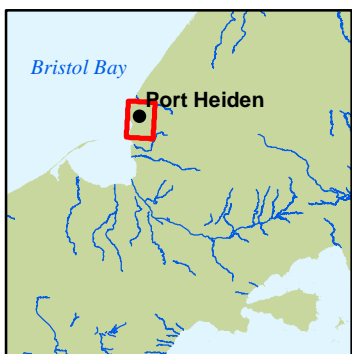
1.3 ADMINISTRATIVE RECORD

This ESD will be added to the Port Heiden RRS Administrative Record, maintained by the USAF at Joint Base Elmendorf-Richardson (JBER). The Administrative Record is open for public review and available online at afcec.publicadmin-record.us.af.mil/Search.aspx or by contacting the JBER Community Relations Coordinator as follows:

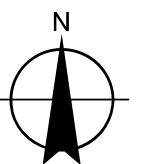
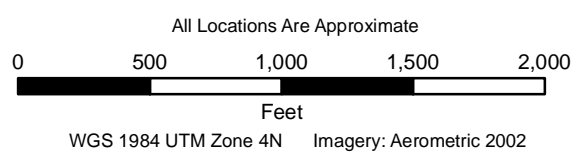
Air Force Community Relations Coordinator
Air Force Civil Engineer Center
10471 20th Street, Suite 340
Joint Base Elmendorf-Richardson, Alaska 99506-2200
907-552-4506 or 1-800-222-4137



P:\PortHeiden\2016 working field version\Backup 120815\GIS\MXD\Kemron\16PH_Reporting\2017 ESD\2017 ESD Fig 1-1.mxd ramsaybd



- ▲ Survey Control Point
- Alternate Roads
- Other Roads
- Site Road
- Land Ownership Boundary
- Approximate Ownership Boundary
- Areas of Interest



PROJECT OVERVIEW		
SITE ROAD SOIL REMEDIATION		
PORT HEIDEN, ALASKA		
	DATE: 17 MAR 2017	PROJECT MANAGER: L. EHRHARD
		FIGURE NO: 1-1

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2.0 SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY

Port Heiden, Alaska is the site of two former military installations:

- Fort Morrow – A World War II Army Air Corps airfield (environmental cleanup is administrated under the Formerly Used Defense Site Program)
- Port Heiden RRS – A White Alice Communications System site (accessed by Site Road), a portion of which is still owned by USAF

The former RRS site is located approximately 3.5 miles north of the Native Village of Port Heiden (NVPH) on the northern coast of the Alaska Peninsula. The RRS was constructed between 1955 and 1960 as a Distant Early Warning line radar station. The site remained active until 1981 (USAF 2010a).

2.1 SOURCE AREAS

Past activities resulting in potential environmental concerns at the Port Heiden RRS included road oiling, transformer use, improper disposal of contaminated waste, drum storage, the installation and use of underground storage tanks, and communications system operations. Site investigations, removal actions, and remedial activities were initiated as part of the Defense Environmental Restoration Program and have occurred at the Port Heiden RRS since an initial site inspection was completed in 1977. The ROD was published in 2009 and identifies the following CERCLA source areas (USAF 2009):

- Former Composite Building (OT001)
- Other Areas (Non-numbered) adjacent to OT001
 - Antenna Pads
 - Contaminated Soil Removal Areas
 - Drum Storage Area (DSA)
 - Focus Area (Antenna 4 or Pad Grid 4, east of the former composite building)
- Septic Tank and Septic System Outfall (SS004)
- Landfill and Debris Burial Areas (LF007 – North Landfill)
 - North Landfill Road
- Black Lagoon (WP002)
- Gray Lagoon (WP003)

- Petroleum, oil, and lubricants (POL) Tank farm (SS005)
- POL Pipeline (SS006)

Contaminants of concern (COCs) in soil identified in the ROD at these source areas include PCBs, benzo(a)pyrene, benzo(a)anthracene, dibenzo(a,h)anthracene, dieldrin, and heptachlor epoxide in soil, as well as trichloroethylene and benzene in groundwater (USAF 2009).

2.2 SELECTED REMEDY

The selected remedy in the ROD included washing PCB-contaminated soil that exceeded 10 milligrams per kilogram (mg/kg) with an alcohol-based solvent. The treated soil was then resampled and disposed of at a local permitted Class III landfill if PCB concentrations were less than or equal to 10 mg/kg. Soil with PCB concentrations that remained above 10 mg/kg after washing would be barged offsite for proper disposal at a permitted facility (USAF 2009).

In 2010, an ESD was published that updated the quantity of estimated PCB-contaminated soil and refined the selected remedy. The ROD states there were approximately 7,000 tons of PCB-contaminated soil. However, during the 2009 remedial action, approximately 9,200 tons of PCB-contaminated soil was disposed of in the local permitted Class III landfill and another 4,000 tons were estimated for further removal. The NVPH was no longer willing to accept additional contaminated soil, which was exhausting their landfill capacity and adding future long-term liability. As a result, the selected remedy for remedial actions was limited to excavation and offsite treatment/disposal of PCB-contaminated waste (USAF 2010a). This selected remedy remains unchanged.

3.0 BASIS FOR THE EXPLANATION OF SIGNIFICANT DIFFERENCES

The following section discusses the basis for this ESD. In general, the soil at Port Heiden weighs approximately 1 ton per cubic yard (cy). This correlation was made by evaluating field dates between 2012 and 2016. Throughout this section, certified disposal weights are reported if known, and estimated tonnage is reported to the nearest hundred tons.

3.1 SOIL QUANTITIES

Removal of PCB-contaminated soil was initiated in 2009 as part of the ROD Remedy Implementation (USAF 2010b). During this initial remedial action, soil was washed and disposed of in a local Class III permitted landfill. The quantity of PCB-contaminated soil estimated in the ROD was 7,000 tons. The 2010 ESD estimated that 9,200 tons of soil were excavated in 2009 and disposed of in the local Class III landfill (USAF 2010a). The 2010 ESD also estimated that an additional 4,000 tons of PCB-contaminated soil remained at the RRS.

During the 2009 RRS remedial action, a dump truck returning from the local landfill overturned while pulling onto the soft side-shoulder to allow another truck to pass. The cleanup from the accident uncovered PCB-contaminated soil up to 12 mg/kg in the roadway where PCB contamination was previously unexpected (USAF 2010b). Follow-up sampling for PCBs conducted during October 2010 and February 2011 detected PCB concentrations greater than 1 mg/kg in surface and subsurface soil along Alternate Road (also referred to as Access Road) and Site Road. The PCB-contaminated roadways likely originated from PCB-laden oil spread on the road for dust control during RRS operations, which had not previously been identified as a potential source in the ROD or 2010 ESD. Since the Alternate Road and Site Road were not identified as contaminated in the ROD or the 2010 ESD, the PCB-contaminated material removal related to these roadways will not be addressed in this ESD.

In 2011, the NVPH led a remedial action that resulted in the excavation and disposal of 923.14 tons of PCB-contaminated soil under a separate contract (USAF 2012). This soil was

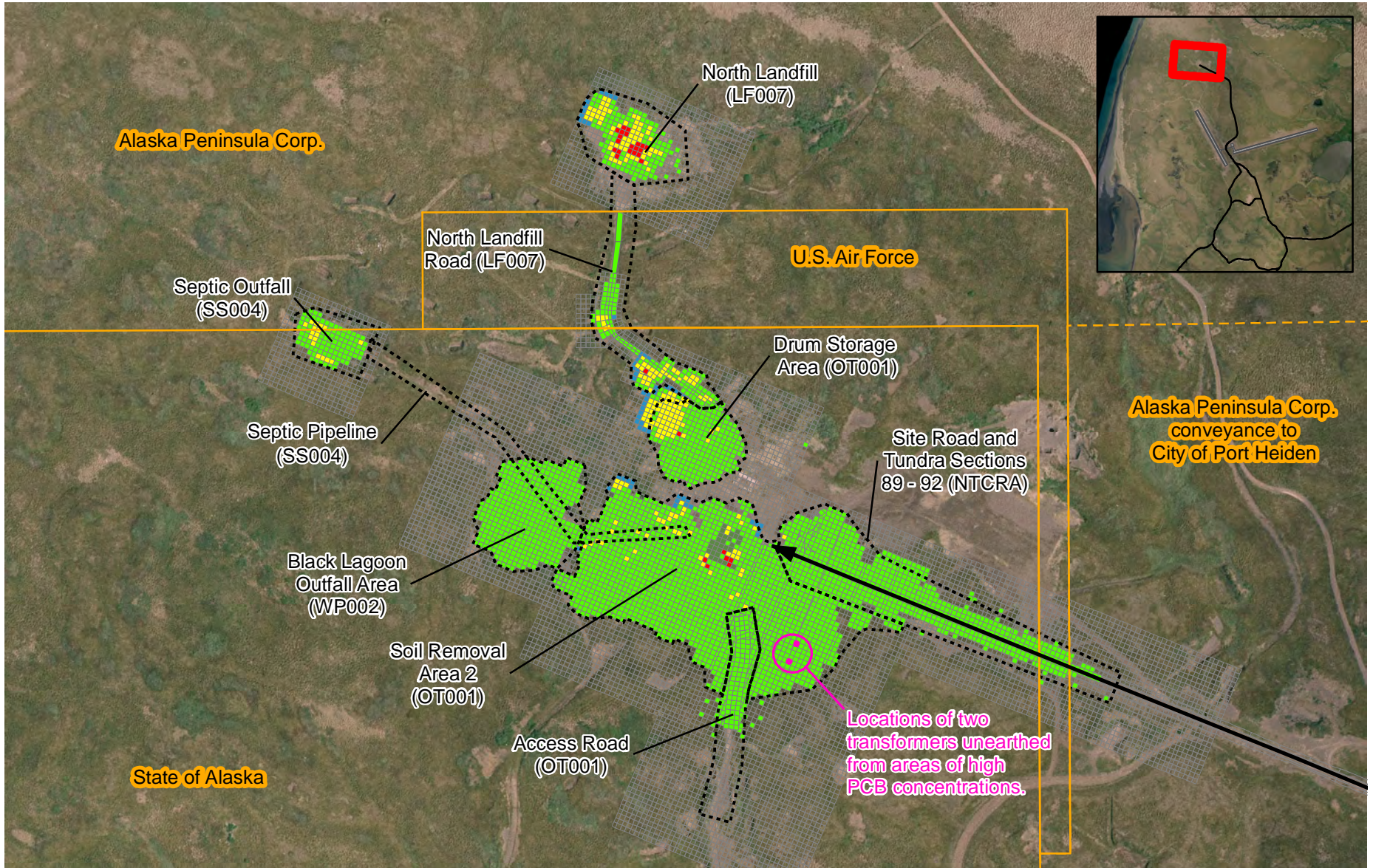
part of the remaining 4,000 tons estimated in the 2010 ESD. The soil was excavated from the DSA.

Between 2011 and 2016, various contracts under Jacobs, NVHP, Bethel Services LLC, KEMRON, and Ahtna removed contaminated soil from areas related to the Alternate Road and Site Road.

In 2014, excavation of PCB-contaminated soil resumed at the RRS. A total weight of 1,144.94 tons of non-Toxic Substances Control Act (TSCA) PCB-contaminated soil was containerized and barged offsite for disposal at permitted landfills; no TSCA soil from the RRS was disposed of. (USAF 2015). Per 40 CFR 761, TSCA soil refers to soil that has a PCB concentration at or above 50 mg/kg and requires the use of a Uniform Hazardous Waste Manifest. TSCA PCB-contaminated soil is disposed of at a RCRA-approved Subtitle C landfill and non-TSCA PCB-contaminated soil is disposed of at a RCRA-approved Subtitle D landfill. Both landfills are approved to accept CERCLA wastes.

During remedial and removal actions at the RRS and Site Road during 2015 and 2016, additional quantities of PCB-contaminated soil were identified outside the previously defined boundary of contamination. During the 2016 RRS remedial action, two electrical transformers were found in the southeast portion of the RRS where PCB concentrations were reported up to 4,010 mg/kg, the highest concentrations recorded to date at the RRS. The transformers are currently stored on site in overpack drums awaiting disposal during 2017 field activities; the surrounding soil has been disposed of in permitted landfills. During 2015, 2,157.11 tons of TSCA PCB-contaminated soil and 8,482.1 tons of non-TSCA PCB-contaminated soil were containerized and barged offsite for disposal at permitted landfills. During 2016, approximately 3,235 tons of TSCA PCB-contaminated soil and 8,896 tons of non-TSCA PCB-contaminated soil were containerized and barged offsite for disposal at permitted landfills.

P:\PortHeiden\2016_working\field_version\Backup_120815\GIS\MXD\Kemron\16PHL_Reporting\2017_ESD\2017_ESD\Fig 3-1.mxd_ramsayh



- Awaiting sample results
- 'Clean' Weston Backfill Grids
- Below Cleanup, <1 mg/kg
- non-TSCA, 1-50 mg/kg
- TSCA, >50 mg/kg

- Land Ownership Boundary
- Approx. Ownership Boundary
- Uncharacterized
- RRS Areas
- ▶ Site Road



All Locations Are Approximate

0 125 250 375 500
Feet

WGS 1984 UTM Zone 4N
Imagery: Aerometric 2002

RADIO RELAY STATION SITE OVERVIEW

RADIO RELAY STATION REMEDIATION
PORT HEIDEN, ALASKA



DATE:
26 APR 2017

PROJECT MANAGER:
L. EHRHARD

FIGURE NO.:
3-1

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Based on the known areas used for the estimation of 4,000 tons remaining in the 2010 ESD, a total of approximately 33,992.39 tons of PCB-contaminated soil were excavated and disposed of offsite between 2009 and 2016. At the completion of the 2016 field season, approximately 895 tons of containerized non-TSCA PCB-contaminated soil was staged onsite for transport and disposal in 2017. An additional estimated quantity of 2,450 tons of PCB-contaminated soil remains to be excavated at the RRS site. The locations of known in situ contamination are shown on Figure 3-1; these include the North Landfill and North Landfill Road (LF007), the septic outfall (SS004), and the former Composite Facility (OT001) (Soil Removal Area 2 and DSA). Table 3-1 summarizes the quantity of PCB-contaminated soil that was excavated and disposed of or is planned for excavation from the RRS site and subsites. Section 4.1 presents the impact to the selected remedy based on these changes.

**Table 3-1
Quantity of PCB-Contaminated Soil Disposed of from the RRS Site**

Date	Disposal Location¹	Quantity	Notes
2009	Local Class III Landfill	9,200 tons	Based on the estimate of 1 ton per cy Soil disposed in the local Class III landfill was not weighed
2010	None	None	-
2011	Offsite Subtitle C and Subtitle D Landfill	923.14 tons	-
October 2011 to September 2013	Offsite Subtitle C and Subtitle D Landfill	None	All removed and disposed PCBs were from associated roadways, which was not a known area when estimated remaining quantities were calculated in the 2010 ESD
September 2014	Offsite Subtitle C Landfill	1,144.84 tons	-
September 2015	Offsite Subtitle C or Subtitle D Landfill	10,639.21 tons	-
September 2016	Offsite Subtitle C or Subtitle D Landfill	12,100.1 tons	Based on field weights pending disposal facility certified weights
Total Disposed of to Date:		34,007.29 tons	Based on the estimate of 1 ton per cy
TBD – Estimated Quantity Containerized and Remaining Onsite	Offsite Subtitle C or Subtitle D Landfill	850 tons	Based on field weights from built-in loader scales, not certified weights
TBD – Estimated Quantity Remaining to be excavated	Offsite Subtitle C or Subtitle D Landfill	2,450 tons ²	-
Total Estimated Quantity of PCB-Contaminated Soil:		36,452.39 tons	Based on the estimate of 1 ton per cy

Notes:

¹Offsite disposal locations are the RCRA-approved Subtitle C landfill Chemical Waste Management of the Northwest (Arlington, OR), and the RCRA-approved Subtitle D landfill Columbia Ridge Landfill (Arlington, OR).

²Based on currently estimated tonnage of known contaminated grid cells plus an additional 30 percent for additional step-out exceedances

For definitions, please refer to the Acronyms and Abbreviations section.

3.1.1 Other Soil Contaminants of Concern

In accordance with the Port Heiden ROD, removal of PCB-contaminated soil was the first priority and it was understood that soil containing the other site COCs (pesticides and polycyclic aromatic hydrocarbons) may be collocated with the PCB-contaminated soil and, therefore, removed as part of the PCB remedial activities. Samples for the other site COCs

were collected in 2016 (USAF 2017) following the completion of the PCB-contaminated soil excavation at the OT001 Composite Facility (Soil Removal Area 2 and the DSA) and the LF007 North Landfill in accordance with the *2016 Removal Action Work Plan Addendum* (USAF 2016b). Four samples were collected from within a 500 square foot area surrounding the locations where exceedances were identified during the *Port Heiden Radio Relay Station Remedial Investigation/Feasibility Study* (USAF 2006).

At the OT001 Composite Facility site, only dieldrin exceeded the ROD cleanup level of 0.015 mg/kg, ranging from nondetect to 0.058 mg/kg; however, in all cases, the dieldrin concentrations were less than the ADEC Method Two, under 40-inch zone, direct contact cleanup level of 0.32 mg/kg (ADEC 2016). As specified in Section 2.17 of the ROD, dieldrin may exist in soil within the native tundra at concentrations exceeding groundwater protective levels (0.015 mg/kg). The tundra areas have high total organic carbon content and dieldrin is not anticipated to contaminate groundwater. Therefore, within the native tundra areas, soil will not be excavated to remove dieldrin unless the concentrations exceed the direct contact pathway value protective of human health (0.32 mg/kg) (USAF 2009). Based on these results, no additional excavation activities are required for the other soil COCs; however, one additional sample remains to be collected once PCB-contaminated soil excavation is complete. As stated in the ROD, a notice type of institutional control will be implemented (with land owners' consent) to control the use of soil containing residual concentrations of dieldrin above 0.0076 mg/kg (the current ADEC migration to groundwater cleanup level [ADEC 2016]) (USAF 2009).

At the LF007 North Landfill, only benzo(a)pyrene exceeded the ROD cleanup level of 0.49 mg/kg in one sample at a concentration of 1.4 mg/kg. The ROD states that additional excavation activities may be needed to remove the benzo(a)pyrene contaminated soil. During PCB-contaminated soil excavation at the LF007 North Landfill in 2016, PCB-contaminated soil volume was greater than anticipated and other potentially hazardous material was identified. Based on these observations made during excavation activities, the Work Plan (USAF 2016a) may need to be revised to provide procedures and sampling requirements as well as waste handling, transport, and disposal requirements for the other potentially

hazardous materials in the North Landfill. Currently, the Work Plan focuses primarily on PCB-contaminated soil.

4.0 IMPACTS TO THE SELECTED REMEDY

The following sections discuss impacts to the ROD-selected remedy based on the latest site data evaluation.

4.1 INCREASED PCB-CONTAMINATED SOIL QUANTITIES

The ROD-selected remedy was modified in the 2010 ESD from onsite treatment via soil washing and disposal in a local Class III landfill to offsite transportation and disposal of PCB-contaminated soil at permitted landfills. Based on data collected during the remedial activities from 2009 through 2016, quantities of PCB-contaminated soil significantly exceeded the revised amount of 13,200 tons presented in the 2010 ESD (USAF 2010a).

Between 2009 and 2016, approximately 37,990 tons of PCB-contaminated waste were excavated and disposed of at offsite permitted landfills. In addition, a total of 850 tons of PCB-contaminated soil were containerized and will be transported offsite and disposed in 2017. An estimated 1,610 tons of PCB-contaminated soil remain at the RRS site and associated areas for future excavation, which is anticipated for 2017.

The cost comparison presented in Table 4-1 summarizes the changes from the 2010 ESD to the present volume calculations for PCB-contaminated soil using an updated cost estimate of \$1,000 per ton.

**Table 4-1
Comparison of Disposal Costs**

ROD (2009)	ESD (2010)	ESD (2016)
<p>The quantity of PCB-contaminated soil to be removed was estimated to be 7,000 tons.</p>	<p>2009 remedial activities removed 9,200 tons of PCB-contaminated soil and estimated that an additional 4,000 tons remained to be removed for a total of 13,200 tons.</p>	<p>Between 2009 and 2016, approximately 33,992 tons of PCB-contaminated soil was removed from the RRS and associated areas. At the end of the 2016 field season, approximately 850 tons of material were containerized and staged for disposal. At minimum, an additional 1,610 tons of material is estimated to remain at the RRS site and associated areas; this is expected to be addressed during the 2017 field season.</p>
<p>Utilizing the 2009 remedy, a total of 7,000 tons of soil was anticipated to be washed and deposited in a local Class III landfill. The proposed cost was estimated to be \$6,871,834 in the 2009 ROD. The estimate for excavating the remaining 4,000 tons of PCB-contaminated soil and disposing of it at an offsite permitted facility was \$4,000,000 (\$1,000 per ton).</p>	<p>The remedy was refined after encountering excess quantities of contamination and limited local disposal options. 2009 remedial activities exceeded the estimated quantity of 7,000 tons presented in the ROD by 2,200 tons of soil. This resulted in a cost increase of approximately \$2,200,000 (\$1,000 per ton). According to the 2010 ESD, an additional 4,000 tons was expected to remain at the former RRS.</p>	<p>From 2011 through 2016, excavation and disposal of the estimated 33,992 tons of PCB-contaminated soil at permitted offsite facilities in the contiguous U.S. accounted for an estimated additional cost of \$33,992,000 (based on the estimated cost of \$1,000 per ton). At minimum, it is approximated that an additional 1,610 tons of PCB-contaminated soil remains at the former RRS and RRS subsites to be excavated, and an estimated 850 tons were excavated and containerized for future disposal. An estimated 2,460 tons remain to be disposed of at the former RRS. Removal and disposal is estimated to cost \$2,460,000. This is an increase of an estimated \$36,452,000 overall, which greatly exceeded the \$4,000,000 estimate presented in both the 2009 ROD and 2010 ESD.</p>

Note:
For definitions, refer to the Acronyms and Abbreviations section.

Although the cost for the offsite transport and disposal remedy is significantly higher than anticipated in the 2010 ESD, this remedy should remain unchanged due to Port Heiden’s remote location, the lack of feasible alternatives for treating and/or onsite disposal of PCB-contaminated soil, and the unacceptable risk to human health and the environment the contamination poses.

5.0 STATUTORY DETERMINATION

The selected remedies for the Port Heiden RRS, as stated in the ROD, 2010 ESD, and modifications herein, remain protective of human health and the environment under CERCLA §121, and all federal and state requirements that are applicable or relevant and appropriate to the remedial action. Remedial alternatives for PCB-contaminated soil are extremely limited; therefore, offsite transport and disposal should remain the selected alternative based on cost effectiveness.

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6.0 PUBLIC PARTICIPATION REQUIREMENTS

This ESD and Administrative Record for Port Heiden are available for public review as presented in Section 1.3. The ESD release notification will be distributed to the Bristol Bay Native Council and the NVPH, and posted in the Alaska Dispatch News and Bristol Bay Times, to satisfy the requirements in NCP §300.435(c)(2)(i).

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7.0 REFERENCES

- ADEC (Alaska Department of Environmental Conservation). 2016 (May). *Oil and Other Hazardous Pollution Control Regulations—Discharge Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances*. 18 AAC 75.
- USAF. (U.S. Air Force). 2006 (April). *Final Remedial Investigation/Feasibility Study (Final)*. Port Heiden RRS, Port Heiden, Alaska. Produced by Weston Solutions, Inc.
- USAF. 2009 (February). *Record of Decision for Port Heiden Radio Relay Station*. Port Heiden, Alaska.
- USAF. 2010a (May). *Explanation of Significant Differences for Port Heiden Radio Relay Station*. Port Heiden, Alaska.
- USAF. 2010b (June). *Final Report, Remedy Selection and Implementation, Demolition and Debris Removal (Final)*. Port Heiden RRS, Port Heiden, Alaska. Prepared by Weston Solutions, Inc.
- USAF. 2012 (July). *Final Site Characterization Report, Former Port Heiden Radio Relay Station*. Port Heiden, Alaska. Prepared by the Native Village of Port Heiden.
- USAF. 2015 (November). *Site Road PCB-Contaminated Soil Removal, 2013-2014 After-Action Report*. Prepared by Jacobs Engineering Group Inc.
- USAF. 2016a (May). *PCB-Contaminated Soil Excavation and Removal Action 2016 Work Plan, Former Radio Relay Station, Port Heiden, AK*. Prepared by Ahtna Engineering Services, LLC and Jacobs Engineering Group Inc.
- USAF. 2016b (July). *2016 Removal Action Work Plan Addendum, Port Heiden Former Radio Relay Station*. Prepared by Ahtna Engineering Services, LLC and Jacobs Engineering Group Inc.
- USAF. 2017 (April). *PCB-Contaminated Soil Removal Action 2016 Interim Data Report Port Heiden, Alaska (Draft)* Prepared by the Ahtna Corporation.

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APPENDIX A
Correspondence

From: [Howard, Louis R \(DEC\)](#)
To: [Rutkowski, Gregory](#)
Cc: [Roth, Pat](#); [MAUSER, RICHARD J GS-12 USAF PACAF 673 CES/AFCEC AFCEE/CZOP](#); [Kemron - Ehrhard, Lou](#); [Kemron - Mount, John](#); [McGovern, Kelly](#)
Subject: [Non-DoD Source] RE: 2017 Port Heiden Explanation of Significant Difference Comment-Responses - For Review
Date: Monday, May 15, 2017 3:34:56 PM

ADEC accepts the responses to its comments. Please finalize the document and provide an electronic version only on CD/DVD with signed cover letter-no hard copies are requested or desired by ADEC.

Louis Howard

Alaska Department of Environmental Conservation

Division of Spill Prevention and Response

Contaminated Sites Program

555 Cordova Street 2nd Floor, Anchorage AK 99501-2617

Office 907.269.7552 | FAX 907.269.7687

From: Rutkowski, Gregory [<mailto:Gregory.Rutkowski@jacobs.com>]
Sent: Friday, May 12, 2017 11:11 AM
To: Howard, Louis R (DEC) <louis.howard@alaska.gov>
Cc: Roth, Pat <Patrick.A.Roth@usace.army.mil>; richard.mauser@us.af.mil; Kemron - Ehrhard, Lou <lehrhard@kemron.com>; Kemron - Mount, John <jmount@kemron.com>; McGovern, Kelly <Kelly.McGovern@jacobs.com>
Subject: 2017 Port Heiden Explanation of Significant Difference Comment-Responses - For Review

Hi Louis,

Please find the attached responses to comments on the 2017 Explanation of Significant Differences for the Port Heiden RRS site. Let me know if you have any questions or concerns.

Thanks and have a good weekend!

Greg

Gregory Rutkowski, PMP

Jacobs | Project Manager

Direct 907.751.3372 | Cell 907.350.6742

Gregory.Rutkowski@Jacobs.com <<mailto:Gregory.Rutkowski@Jacobs.com>> | www.Jacobs.com
<<http://www.jacobs.com/>>

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THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

555 Cordova St
Anchorage, AK 99501
Main: 907-269-7552
Fax: 907-269-7687
www.dec.alaska.gov

File No: 2637.38.002.05

April 20, 2017

US Army Corps of Engineers
Alaska District CEPOA-ESP
Attn: Pat Roth
PO BOX 6898
JBER, AK 99506-0898

Re: Draft Explanation for Significant Differences (ESD) for Port Heiden RRS at Port Heiden, Alaska
dated March 2017

Dear Mr. Roth:

The Alaska Department of Environmental Conservation (ADEC) has received the ESD electronically on March 22, 2017 for review and comment. ADEC appreciates the opportunity to comment on the draft ESD, prior to publication, since there is no requirement to do so under CERCLA and the NCP¹. Please see attached comment form.

Sincerely,

Louis Howard
Environmental Program Specialist

Enclosure: Comment Form

cc: Kim DeRuyter via email

¹ Although not specifically required by CERCLA §121(f) and NCP §300.435(c)(2)(i), it is also recommended that the lead agency provide the support agency the opportunity to comment, and summarize the support agency's comments in the ESD (Sect. 7.3.2 EPA 540-R-98-031 OSWER 9200.1-23P July 1999).

Alaska Department of Environmental Conservation
Comments on the Draft Explanation of Significant Differences for Port Heiden RRS dated March 2017
Commenter: Louis Howard (ADEC), Comments Developed: April 20, 2017

Cmt. No.	Pg. & Line	Sec.	Comment/Recommendation	Response
1.	3-2	3.1	<p>Soil Quantities The text states: “During the 2016 RRS remedial action, two electrical transformers were found in the southeast portion of the RRS where PCB concentrations were reported up to 4,010 mg/kg, the highest concentrations recorded to date at the RRS.” Please add text describing what happened to the two transformers that were found and if the soil has been removed or is yet to be removed as part of this Explanation of Significant Differences (ESD).</p>	<p>Agree – The text will be amended as follows: “During the 2016 RRS remedial action, two electrical transformers were found in the southeast portion of the RRS where PCB concentrations were reported up to 4,010 mg/kg, the highest concentrations recorded to date at the RRS. The transformers are currently stored on site in overpack (drums) and awaiting disposal during the 2017 field activities and the surrounding soil has been disposed of in permitted landfills.”</p>
2.	19 of the PDF	Fig. 3-1	<p>Radio Relay Station Overview Please indicate to the reader on the figure where the two transformers were found with the highest PCB soil contamination levels recorded to date at the RRS.</p>	<p>Amended – Locations will be added to figure 3-1.</p>
3.	3-6 & 7	3.1.1	<p>Other Soil Contaminants of Concern Page 3-6 and 3-7 The text states: “Samples for the other site COCs were collected in 2016 following the completion of the PCB-contaminated soil excavation at the OT001 Composite Facility (Soil Removal Area 2 and the DSA) and the LF007 North Landfill in accordance with the 2016 Removal Action Work Plan Addendum (USAF 2016a). Four samples were collected from within a 500 square foot area surrounding the locations where exceedances were identified during the Port Heiden Radio Relay</p>	<p>Agreed – The reference has been added to the text and to the references section as shown below: “Samples for the other site COCs were collected in 2016 (USAF 2017a) following the completion of the PCB-contaminated</p>

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			<p>Station Remedial Investigation/Feasibility Study (USAF 2006).</p> <p>At the OT001 Composite Facility site, only dieldrin exceeded the ROD cleanup level of 0.015 mg/kg, ranging from nondetect to 0.058 mg/kg.”</p> <p>The text also states: “At the LF007 North Landfill, only benzo(a)pyrene exceeded the ROD cleanup level of 0.49 mg/kg in one sample at a concentration of 1.4 mg/kg. The ROD states that additional excavation activities may be needed to remove the benzo(a)pyrene contaminated soil.”</p> <p>Please include the name and date of the subsequent report/technical memorandum that documents the 2016 sampling efforts and results of the sampling.</p> <p>Be aware that the March 23, 2017 18 AAC 75 Table B1 Human Health level for benzo(a)pyrene is 0.20 mg/kg. If removal of contaminated soil is to the 0.49 mg/kg ROD cleanup level, then a review of the remedy’s protectiveness will be required for benzo(a)pyrene left in soil above 0.20 mg/kg (200 ug/kg) as part of the next Five-Year Review. This applies to all contaminants which are detected above the human health cleanup levels in Table B1 Method Two 18 AAC 75.341 (March 23, 2017).</p> <p>The text states: “Based on these observations made during excavation activities, the Work Plan (USAF 2016b) may need to be revised to provide procedures and sampling requirements, ...”</p> <p>ADEC concurs. Sampling for and reporting the full analytical suite of PAHs and pesticides (not just ROD COCs¹) will be necessary to ensure the cumulative risk² from the residual soil contamination at the site is</p>	<p>soil excavation at the OT001 Composite Facility (Soil Removal Area 2 and the DSA) and the LF007 North Landfill in accordance with the 2016 Removal Action Work Plan Addendum (USAF 2016a).”</p> <p>“USAF. 2017a (April). PCB-Contaminated Soil Removal Action 2016 Interim Data Report Port Heiden, Alaska (Draft) Prepared by The Ahtna Corporation.”</p> <p>Understood – The benzo(a)pyrene results were reviewed and other than the result of 1.4 mg/kg no results exceed the current Human Health cleanup level of 0.2 mg/kg.</p>

¹ Table 1-1 Soil Cleanup Levels: PCBs 1 mg/kg, dieldrin 0.015 mg/kg, heptachlor epoxide 0.2 mg/kg, benzo(a)pyrene, 0.49 mg/kg, benzo(a)anthracene 3.6 mg/kg and dibenzo(a,h)anthracene 0.49 mg/kg (ROD for Port Heiden Radio Relay Station February 2009). .

² If using method two or method three for determining the applicable soil cleanup levels as described in 18 AAC 75.340 and 18 AAC 75.341, or if applying the groundwater cleanup levels at Table C in 18 AAC 75.345, a responsible person shall ensure that, after completing site cleanup, the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one, reported to one

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			<p>protective of human health³ as required by 18 AAC 75. COPCs which will need to be used in the cumulative risk calculations can be determined using the maximum soil concentration of each contaminant at the site that exceeds one-tenth (1/10th) of the human health levels in Table B1 for the Under 40 Inch Zone (March 23, 2017). If no chemicals at the site exceed the 1/10th threshold, or only petroleum range contamination is present, cumulative risk does not need to be calculated for the site.</p>	<p>Understood – The RI identified PAHs and pesticides as COPCs and to verify that the new cleanup levels are met the full analytical suite will be analyzed during future sampling events. This data will be used in the upcoming 5-Year Review to evaluate the protectiveness of the selected remedy.</p>

significant figure, across all exposure pathways. Instructions for determining cumulative risk are provided in the department's Procedures for Calculating Cumulative Risk, dated September 15, 2016 and adopted by reference.

³ The “Human Health” exposure pathway is the cumulative exposure pathway through dermal contact, ingestion, and inhalation of volatile and particulate compounds from hazardous substances in the soil but excludes the vapor intrusion pathway of indoor air inhalation (Notes to Tables B1 and B2. 18 AAC 75 March 23, 2017).