

Environmental Assessment

1 INTRODUCTION

Title: Wainwright Short Range Radar Site Remedial Action-Cleanup

NEPA Document #: DOI-AK-F010-2011-0038-EA

Type of Action: National Petroleum Reserve-Alaska Permit Amendment

Proposed Location: USS 5252, Sec. 03-06, T. 14 N., R. 31 W., Umiat Meridian
Sec. 01-03, T. 14 N., R. 32 W., Umiat Meridian
USS 5252, Sec. 19, 29-34, T. 15 N., R. 31 W., Umiat Meridian
Sec. 25, 26, 34-36, T. 15 N., R. 32 W., Umiat Meridian

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BLM Case File: FF095666

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Date Prepared: 27 July 2011

1.1 Background

The Wainwright Short Range Radar Station (SRRS), which was originally constructed in 1953 as a Defensive Early Warning (DEW) Line Station, occupies approximately 248 acres of gravel on 1,518 acres of land. The station contained a 25-module train, rotating radar, warehouse, garage, and fixed petroleum, oil, and lubricant (POL) tanks. The module train included the sanitary wastewater treatment facility, the potable water treatment facility, diesel power generators, radar equipment (including a radome), recreational facilities, dining facilities, and an incinerator. The DEW Line Station was closed in 1989, and in 1994 it was converted to an unmanned SRRS. The USAF closed the SRRS in 2008.

The U.S. Air Force (USAF) is the agency responsible for managing these facilities and indicates that the sites are in need of environmental clean-up and abandonment. The current right-of-way

for the site was established in 1986 to manage for continued radar and defense monitoring. “Upon termination of the grant, structures and buildings shall be removed and the land rehabilitated to the satisfaction of the Arctic Area Manager”, and “[a]ll trash and debris associated with operations under this grant must be removed to an approved solid waste disposal site.” The current proposed action is part of the USAF’s on-going process in meeting this stipulation.

Under the USAF Environmental Restoration Program (ERP), environmental investigations have been conducted at the Wainwright SRRS starting with a Phase I Installation Assessment and Records Search in 1980 and 1981. The primary investigations consisted of Remedial Investigation (RI)/Feasibility Study (FS) was conducted in 1993 and 2007. A limited RI was also performed in 2009 to fill data gaps necessary to plan cleanup. The Draft Proposed Plan for Four ERP Sites at Wainwright SRRS was released in January 2010 that identified the USAF preferred cleanup option. Community feedback on remedy alternatives was solicited and a public meeting held in Wainwright on 28 January 2010.

An interim removal action (DOI-BLM-LLAKF010-2010-0009-EA) was performed – partially by the applicant - in 2010 to remove contaminated soil and solid waste contained within or emanating from LF006 landfill, remove asbestos containing material (ACM) from LF005 landfill, investigate the contents of LF005 to obtain closure in compliance with Alaska Department of Environmental Conservation regulation 18 AAC 60, and remove diesel tanks and a gravel pad along the Chukchi coast north of town.

1.2 Purpose and Need for Action and Decision to be Made

The purpose of the proposed action is to authorize the applicant to conduct additional remedial actions at the site under contract to the USAF. The need for the proposed action is for the federal government to reduce risks to human health and the environment, and for the USAF to comply with their NPR-A Right-of-Way. If the proposed action is not undertaken, the site will remain in current status with the risk of environmental degradation due the presence of hazardous wastes and soils. The BLM will decide whether to amend the existing NPR-A permit to the applicant, and if so, under what terms and conditions, not to exceed three years.

1.3 Scoping and Issues

The USAF has gone through a lengthy planning and public participation process in addressing remediation needs at the Wainwright SRRS through regular Resource Advisory Board meetings and project specific meetings. In November 2009, the USAF released the Final Feasibility Study Report for Four Sites at the Wainwright SRRS, which included the Module Train Area (SS004) and Garage Area (SS007). On 28 January 2010, the USAF held a public meeting in Wainwright to seek public comments addressing the Final Feasibility Study Report for Four Sites at the Wainwright SRRS.

The proposed action is within the scope of the planning documents covering the northwest NPR-A planning area, as discussed in the:

- Northwest National Petroleum Reserve-Alaska, Integrated Activity Plan/Environmental Impact Statement, 2003, Volume 2, Section 5; and
- Biological Opinion for Bureau of Land Management for the Northern Planning Areas of the National Petroleum Reserve-Alaska, July 2008.

The BLM Arctic Field Office has identified the following issues and concerns after reviewing the proposal in Table 1-1.

Table 1: Issues Considered in Evaluating Impacts

Issue Considered	Determination¹	Basis of Determination (See Note)
Air Quality	Minimally Impacted	Protections provided by: State of Alaska Air Non-Point and Mobile Program and regulations [18 Alaska Administrative Code (AAC) 50]
Cultural Resources	Potentially Affected	Protections provided by: NHPA, Section 106 Effects mitigated through 2005 Memorandum of Agreement (MOA) between USAF and Alaska State Historic Preservation Officer (SHPO)
Subsistence	Potentially Affected	Protections provided by: Alaska National Interest Lands Conservation Act (ANILCA)
Environmental Justice	Potentially Affected	Protections provided by: EO 12898
Waste (Hazardous/Solid)	Potentially Affected – basis for proposed action	Protections provided by: CERCLA, Resource Conservation and Recovery Act, Toxic Substance Control Act (TSCA), Occupational Safety and Health Act, 18 AAC 30, 60, 62, 63, 72, and 75
Water Resources	Minimally Affected	Protections provided by: Clean Water Act (CWA), Safe Drinking Water Act
Flood Plains/Wetlands and Riparian Zones	Minimally Affected	Protections provided by: EO 11988, EO 11990
Invasive, Non-native Species	Not Present	
Native American Religious Concerns	Not Present	
Recreation	Minimally Impacted	There are currently no permitted recreation activities in the vicinity of the proposed action.
Public Health	Minimally Impacted	
Sociocultural Systems	Minimally Impacted	
Vegetation	Minimally Impacted	
Visual Resource Management	Minimally Impacted	

Issue Considered	Determination¹	Basis of Determination (See Note)
Wild & Scenic Rivers	Not Present	
Wilderness	Not Present	
ACECs	Not Present	
Threatened & Endangered Species (T&E)		
Eiders	Potentially Affected	Protections provided by: Section 7 of the Endangered Species Act (ESA) (J)
Polar Bears	Potentially Affected	Protections provided by: Section 7 of the ESA (J)
Fish	Minimally Impacted	Protections provided by: Magnuson-Stevens Act
non-T&E birds	Minimally Impacted	Protections provided by: EO 131186
non-T&E mammals	Minimally Impacted	

¹**Explanation of Determinations** (USDOI BLM, 2008)

Potentially Affected: The proposed action or alternative could result in potential impacts to resource or issues to the level that additional mitigation may be required, or there is a need to evaluate potentially significant issues.

Minimally Impacted: Resources or issues would not be affected to a degree requiring further analysis because either the expected impacts from the proposed action and alternative would be minimal, or standard protections (e.g., Stipulations from overriding BLM plans or other legal protections) would reduce impacts. Minimally impacted resources or issues will not be analyzed further in this EA.

Not Present: Resources or issues are not expected to be affected by the proposed action or alternatives because activities would occur at a different time or place. Resource or issues not present will not be analyzed further in the EA.

The proposed action was announced on the BLM Arctic Field Office NEPA Register on 20 July 2011. (http://www.blm.gov/ak/st/en/info/nepa/fdo_nepa_register/arctic_nepa_reg.html).

2 PROPOSED ACTION AND ALTERNATIVES

2.1 Description of Proposed Action

The applicant's proposal is based upon the following documents:

- Plan of Operations – Remedial Action Cleanup, Wainwright SRRS, Alaska, June 2011
- Work Plan, Remedial Action Cleanup, Wainwright SRRS, Alaska, July 2011
- Waste Management Plan, Remedial Action Cleanup, Wainwright SRRS, Alaska, July 2011
- Site Specific Safety and Health Plan, Remedial Action Cleanup, Wainwright SRRS, Alaska, June 2011

The applicant proposes to remove, stage, store and transport a variety of materials – including asbestos and hazardous wastes and PCB contaminated gravel – for permanent disposal, as described in the following activities described below.

2.1.1 Relocation of Above Ground Diesel Storage Tanks

Two (2) – 40,000 gallon skid-mounted above ground storage tanks (AST) would be relocated from Wainwright SRRS to Barter Island Long Range Radar Station (LRRS) for future use. In April 2011 the tanks were emptied and moved to the Tupkak barge landing site for temporary staging and are awaiting transport by barge to Barter Island LRRS during summer 2011.

2.1.2 Asbestos and Hazardous Waste Removal and Disposal

All Asbestos Containing Material (ACM), loose/flaking PCB paint, and regulated/hazardous waste (including, but not limited to thermostats, florescent light bulbs, light ballasts, oil cans, solvents, fire extinguishers, batteries, and fluids from tanks and generators) present at Building Facility Number 1 – Aircraft Control and Operations Dew Line (also known as the Module Train), Building Facility Number 2 – Vehicle Maintenance Shop, Facility Number 3 – Warehouse Supplies and Equipment Base, Facility 3001 – Base Supplies and Equipment, Facility 3021 – Base Supplies and Equipment, and Facility 9995 – Shed would be abated and waste materials packaged and manifested for transport, secured, and staged at the radar site during Summer 2011. The materials will be removed via a landing craft to a barge in August 2011 – if the work is completed in time – or moved to the Tupkak Bar barge landing site in April 2012 where they would be secured and staged until transported by southbound barge to disposal facilities. ACM abatement includes removal and disposal of vermiculite present between each dividing walls of the Module Train. All asbestos abatement activities will be performed in accordance with all applicable federal, state, and local environmental statutes and regulations.

2.1.3 Contaminated Soil and Buried Fuel Pipeline Removal

Removal and disposal/treatment of a minimum of 189 cubic yards (cy) of petroleum and PCB contaminated gravel/sediment/sludge or other contaminated material above approved cleanup levels at ERP Sites SS004 (Module Train) and SS007 (Garage) include the following:

SS004 (Module Train)

PCB Contaminated Soil – Approximately 35 cy of PCB contaminated soil with concentrations above 1 mg/Kg would be excavated, placed in supersacks, manifested for transport, secured, and staged in an available building such as the garage at the radar site pending transport. The materials would then be transported via ice road to a temporary staging site on a liner at the Tupkak Bar barge landing site during April 2012, and then picked in the summer barge season in late July or early August 2012 to for transportation to a permitted landfill in the lower 48 for disposal. The contaminated soil is located on the north and south sides of the module train, surrounding the stairs and a transformer stand.

RRO Contaminated Soil – Approximately 9 cy of residual range organics (RRO) contaminated soil with concentrations above 13,700 md/Kg from a drum spill area southwest of the module

train would be excavated and transported for disposal to an off-site permitted Treatment Storage and Disposal Facility (TSDF).

SS007 (Garage)

SS007 Garage – Approximately 87 cy of mixed contaminated soil (PCB contaminated soil with concentrations above 1 mg/Kg and diesel range organics (DRO) contaminated soil above 12,500 mg/Kg) located underneath the garage would be excavated and transported for disposal to a permitted landfill in the lower 48.

SS007 POL Hut – Approximately 10 cy of RRO contaminated soil with concentrations above 13,700 mg/Kg would be excavated from an area at the former POL Hut north of the garage building and properly disposed at an off-site TSDF.

SS007 Base Supplies and Equipment Building – The extent of PCB contaminated would be further characterized near the Base Supplies and Equipment Building. The building would be relocated out of the sampling and cleanup area (building is on skids). Additional sampling would be performed to delineate the extent of contamination to verify all soils with PCBs above 1mg/Kg are removed. Approximately 20 cy of PCB contaminated soils would be excavated and disposed at a landfill permitted to accept the waste.

SS007 Culvert – Approximately 28 cy of high-level DRO contaminated soil (greater than 12,500 mg/Kg) and RRO contaminated soil (13,700 mg/Kg) would be excavated from an area surrounding and at the outfall of a culvert beginning underneath the garage and emptying at the edge of the gravel pad west of the garage building. The excavated material would be disposed at an off-site TSDF.

Abandoned Fuel Pipelines – Approximately 560 linear feet of buried fuel pipelines that connected the diesel tanks (two 40,000-gallon ASTs) to the Technical Services Building would be removed and shipped offsite. Any residual fuel or petroleum contaminated water would be removed and containerized, the water treated, and fuel recycled for energy recovery offsite, if possible; otherwise, the containers would be transported and disposed of at an offsite TSDF. All remaining pipelines outside of buildings and tanks would be capped and excess metal would be prepared (i.e. banded and palletized) for offsite shipment.

2.1.4 PCB Sampling (Site LF006)

Approximately 20 sediment samples would be collected in the lagoon area around the old landfill located on the edge of the lagoon connected to the Wainwright Inlet south of the installation boundary (LF006) and analyzed for PCBs in order to evaluate impacts to subsistence ice fishing in this area.

2.1.5 Disposal and Site Restoration

Contaminated soils will be packaged and manifested for disposal at the job site, staged at the barge landing during April 2012 when an ice road is available, then picked up in the summer barge season for transportation to disposal facilities. Equipment will return to Wainwright on ice roads. Asbestos abatement equipment and the vacuum excavation unit will be moved back to Wainwright by boat, flown to Fairbanks in late August 2011 then trucked to points to origin. Excavation sites will be backfilled and contoured as soon as the extent of excavation is reached. The excavations are all on roadways or gravel pads and will remain unvegetated.

2.1.6 Schedule

Work to be conducted during 2011 will begin in late July and may continue through October 2011. Work in 2012 will be limited to transporting waste materials from Wainwright SRRS to the barge landing in April and barging and disposal of wastes in August–November, 2012. If all removal activities at the SRRS are not completed in 2011, they will be conducted in the summer of 2012. All activities for the proposed action will be completed by December 2012.

2.2 No Action Alternative

Under the No Action Alternative, contamination would remain on site. Ongoing responses would likely be needed in order to maintain compliance with state and federal regulations, resulting in increased costs to the USAF. This alternative does not meet the project need of disposing or treating contaminated soil and surface water in order to prevent contamination from entering the environment

Table 2: Summary of Actions

	No Action	Proposed Action
Acres Affected	Site left in current status	Clean up on ~ 268 acres
Contaminated gravels	All left on site as is, until further plans can be made	Remove and transport offsite ≥ 189 cy for permanent disposal
PCB contaminated gravels	All left on site as is, until further plans can be made	Remove and transport offsite ≥ 142 cy for permanent disposal
DRO/RRO contaminated gravels	All left on site as is, until further plans can be made	Remove and transport offsite ≥ 47 cy for permanent disposal
Asbestos containing materials	All left on site as is, until further plans can be made	Remove and transport offsite for permanent disposal
Fuel tanks	All left on site as is, until further plans can be made	2 moved to Barter Island for future use
Fuel pipelines	All left on site as is, until further plans can be made	Remove and transport offsite all pipe for permanent disposal
PCB Sampling	No confirmation samples from LF006 where PCB contaminated materials existed to assist evaluate if local fisheries are being affected	20 samples in LF006 to assist evaluate if local fisheries are being affected

2.3 Description of Options Considered but Eliminated from Detailed Study

The USAF evaluated cleanup options to address contamination at Wainwright SRRS areas. The cleanup options were evaluated to compare the alternatives and select the preferred cleanup option. Two key criteria, “overall protection of human health and the environment” and “compliance with regulations” were threshold criteria that must be met in order for a cleanup option or alternative to be considered. Long-term on-site remediation through landfarming or the development of a monofill do meet the above criteria, but does not meet the USAF desire to permanently leave the site with as little liability as possible.

2.4 Conformance

This EA conforms and is tiered to the following laws, regulations, policies, decisions and opinion:

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended;
- Toxic Substance Control Act (TSCA) of 1976, as amended;
- Occupational Safety and Health Act (OSHA) of 1970, as amended;
- National Historic Preservation Act (NHPA) of 1966, as amended;
- Endangered Species Act (ESA) of 1973, as amended;
- Alaska National Interest Lands Conservation Act (ANILCA) of 1980, as amended;
- Naval Petroleum Reserves Product Act (NPRPA) of 1976, as amended;
- Executive Order (EO) 11988: Floodplain Management;

- EO 11990: Protection of Wetlands;
- EO 12898: Environmental Justice
- Record of Decision, Northwest NPR-A, IAP/EIS, January 22, 2004;
- Biological Opinion for BLM for the Northern Planning Areas of the NPR-A, July 2008;
- Record of Decision for the Wainwright SRRS Interim Removal Action Environmental Assessment (DOI-BLM-LLAKF010-2010-0009-EA), February 2010;
- Record of Decision, National Petroleum Reserve-Alaska Right-of-Way at the Wainwright and Lonely Defense Early Warning (DEW)-Line Sites, Environmental Assessment (DOI-BLM-AK-023-2009-0013-EA; LLAKF01000-2009-0013; LLAKF01000-2009-0013-EA), April 16, 2009; and
- Alaska Administrative Code (AAC) Title 18 Chapter 75, Oil and Other Hazardous Pollution Control Regulations - Discharge Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances.

3 AFFECTED ENVIRONMENT

Environmental characteristics of the general project area have been extensively described in the documents listed below, to which this analysis is tiered:

- Northwest National Petroleum Reserve-Alaska, Integrated Activity Plan/Environmental Impact Statement, Volume 1, Section 3;
- Biological Opinion for Bureau of Land Management for the Northern Planning Areas of the National Petroleum Reserve-Alaska, July 2008;
- USAF Integrated Natural Resources Management Plan and Appendices, Alaska Radar System, Alaska, Short and Long Range Radar Sites, 2007;
- Wainwright SRRS Interim Removal Action Environmental Assessment (DOI-BLM-LLAKF010-2010-0009-EA), February 2010; and
- National Petroleum Reserve-Alaska Right-of-Way at the Wainwright and Lonely Defense Early Warning (DEW)-Line Sites, Environmental Assessment (DOI-BLM-AK-023-2009-0013-EA; LLAKF01000-2009-0013; LLAKF01000-2009-0013-EA), 16 April 2009

3.1 Cultural Resources

Historic Cold War Resources

The Wainwright DEW station (WAI-082) has been recommended as eligible for listing on the NRHP as an element of the DEW System. The entire DEW System has been determined eligible for listing on the NRHP under Criterion A and Criteria Consideration G for its association with events important in the history of the Cold War and the history of the development of the state of Alaska according to the Final Historic building Inventory and Evaluation for DEW System (USAF, 1999).

There are nine recorded buildings and/or structures at Wainwright. Seven of the nine properties were constructed during the DEW period of significance (1953-1969). DEW System facilities include a 25-module building train with rotating radar, support buildings, and fuel storage tanks

(WAI-00123), a vehicle maintenance shop (WAI-00124), a supply and equipment warehouse (WAI-00125), and a supply and equipment shed (WAI-00126). In addition to the extant facilities, the Wainwright road system (WAI-00083), airfield (WAI-00084), and gravel pad system (WAI-00085) are still intact. The two remaining buildings (WAI-00127 and WAI-00128) are supply and equipment sheds that post date the DEW System (USAF, 1999), (USAF, 2000). Past investigations have shown that historic sites are extremely vulnerable because they almost always lie on the surface. Therefore, it is safe to assume that the 1900s-era military development in the Wainwright SRRS area has likely impacted any cultural resources present in the vicinity of the sites. The presence of cultural resources at the site today is unlikely.

Paleontological Resources

The North Slope is rich in important paleontological resources. However, most of these are deeply buried, and those that are known are often subject to unauthorized collection. Because the Wainwright SRRS landfill sites were heavily used by the military, located near an occupied village, and easily accessible by humans, it is unlikely that any exposed paleontological resources remain onsite. However, it is possible that at the boundary of previously disturbed soil such as at the edges of the landfills paleontological resources are still present in native soil deposits. The Arctic Slope Regional Corporation manages the subsurface resources at the village of Wainwright. The most complete listing of recent Alaskan Musk Ox skeletons (Bee and Hall, 1956) are from the Arctic Slope west of modern day Wainwright, which indicates that significant fossil resources may be present around Wainwright (ADF&G, 1991).

3.2 Subsistence

Subsistence can be defined as “hunting, fishing, and gathering for the primary purpose of acquiring traditional food” (USDOI BLM, 2008). Subsistence activities are a culture base and provide a sense of identity to the Inupiat people. Subsistence resources supply not only nutritional value, but are also used for clothing, tools, and transportation. Cultural and family ties are preserved through obtaining, sharing, and bartering such resources (USDOI BLM, 2008). There is a wide range of species hunted throughout the year in the NPR-A region for local subsistence purposes. These include whale, seal, walrus, bear, birds, caribou, furbearers, small mammals, and fish. Subsistence hunting within the village of Wainwright area in March consists primarily of hunting or trapping furbearers, small mammals, polar bears, seals, and/or whales. During April, birds, eggs, and grizzly bears are hunted. In August, seals, polar bears, caribou, grizzly bears, and fish (fresh and marine) are the primary species used for subsistence in this region.

3.3 Environmental Justice

Environmental justice is an initiative that culminated with President Clinton’s 1994 EO 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”. This executive order’s intent was to promote fair treatment to people of all races, so no person or group of people bears a disproportionate share of the negative environmental impacts from the country’s domestic and foreign programs.

As documented in the 2003 BLM IAP/EIS, the Inupiat is recognized Alaska Native minorities group (the Barrow community consisting of 64% Alaska Native or part Native) and thus afforded protection relative to EO 12898. Scoping meetings held during the preparation of the 2003 BLM IAP/EIS identified several concerns that would be germane to this project: the need to protect subsistence areas, cleaning up contaminated sites, and preventing fish contamination from contaminated sites.

3.4 Wastes (Hazardous/Solid)

A variety of past uses at the site have resulted in environmental contamination. The USAF has investigated and remediated past sources of contamination through the ERP. Past activities potentially resulting in contaminant releases are as follows:

- Spills during transfer of fuels in and out of storage tanks;
- Leaks from fuel lines, tanks, or drums;
- Spills or leaks of fuel, lubricants, or solvents during vehicle and equipment maintenance activities;
- Spill or leaks from transformers or other electrical equipment containing PCBs; and
- Disposal of wastes and other discarded material containing hazardous substances.

The USAF conducted RI/FS in 1993 and 2007 to investigate locations that had potential for environmental contamination based on historical activities or use. Soil, sediment, and water samples were collected at identified sites and analyzed for appropriate compounds based on the site conditions and suspected contaminants of concern (COC). The sampling results were screened for ADEC Method Two cleanup levels for the Arctic Zone, which are protective of unrestricted site use, including residential site use. A brief description of the 2007 RI findings and recommendations are summarized below.

The primary contaminants encountered during investigations at Wainwright SRRS are diesel range organics (DRO), gasoline range organics (GRO); polynuclear aromatic hydrocarbons (PAH); PCBs; petroleum, oil, and lubricants (POL) residual range organics (RRO); semi-volatile organic compounds (SVOCs) metals; and volatile organic compounds (VOCs). Most of these contaminants are the result of fuel or oil spills. The PCBs were contained in transformer fluids and paints used at the facility.

The presence of contaminated soils, abandoned pipelines, ACM, and PCB paint has driven the proposed action. Only trained personnel outfitted with proper personal protective equipment will be conducting excavation, removal, and remediation work.

3.5 Threatened and Endangered Species

Threatened, endangered, and candidate species occurring in the project area are shown in Table 3.

Table 3: Protected Species Occurring in Project Area

Species	Status	Occurrence
Bowhead whale	Endangered	Chukchi & Beaufort Seas
Polar bear	Threatened	Wainwright area
Spectacled eider	Threatened	Wainwright area
Steller's eider	Threatened	Wainwright area
Yellow-billed loon	Warranted but precluded from listing	Arctic coastal plain
Bearded seal	Proposed Threatened	Bering, Chukchi & Beaufort Seas
Ringed seal	Proposed Threatened	Arctic Basin incl. Bering Sea
Pacific walrus	Petition to List as Threatened or Endangered	Bering & Chukchi Seas

(USFWS, 2010)

The polar bear, spectacled eider, and Steller's eider are listed threatened species and are known to occur in the Barrow area (USFWS, 2010). The yellow-billed loon was listed as a candidate species in 2009 and has been observed on or near Wainwright SRRS (USAF, 2007). On December 3, 2010, the National Oceanic and Atmospheric Administration (NOAA) Fisheries announced a proposal to list the ringed seal and bearded seal as threatened (NOAA, 2010). Ringed seals are found in the Arctic Basin (including the Bering Sea) and throughout most of its range, the Arctic ringed seal does not come ashore. The bearded seal occurs in the Bering, Chukchi and Beaufort Seas where areas where seasonal sea ice occurs over relatively shallow waters. The Pacific walrus occurs in the continental shelf waters of the Bering and Chukchi seas and in low numbers in the Beaufort Sea. On September 10, 2009 the USFWS initiated a status review of the Pacific walrus to determine if listing was warranted (USFWS, 2009) however it is currently not listed.

Eiders

Both the spectacled eider and Alaska-breeding population of the Steller's eider are listed as threatened under the federal ESA however the USFWS has not designated critical habitat on the North Slope for either species (USFWS, 2010).

In Alaska, Steller's eiders breed almost exclusively on the Arctic Coastal Plain (ACP). Nesting on the ACP mainly occurs in tundra wetlands near Barrow, AK, northeast of the project area, although Steller's eiders also occur at very low densities on the ACP outside of the Barrow Triangle area. Although no Steller's eider nests were observed during five ground-based eider nest surveys at Wainwright SRRS between 1994 and 2007, a group of four Steller's eider hens were observed in shallow-water wetland habitat adjacent to the radar facilities in late June 2007 (OASIS Environmental, Inc., 2008). Based on the timing of the observation, these hens could have been failed breeders or non-breeders staging in the area prior to fall migration.

The North Slope-breeding population of spectacled eiders nest at variable densities across the ACP. Based on recent data from the ACP aerial survey (2007–2010; USFWS Alaska Region

Migratory Bird Management, unpublished data), densities of breeding spectacled eiders in the Wainwright area are low (<0.03 birds/km²) with higher concentrations occurring to the east and southwest of Wainwright. However, the USFWS expects the probability of encountering spectacled eiders would be higher in preferred habitat compared to the region overall, including high value spectacled eider nesting habitat identified within the boundaries of Wainwright SRRS (Schick, et al., 2004). Additionally, observations of two spectacled eider nests, one in 2003 and another in 2006, and individual spectacled eiders, have been reported from the Wainwright SRRS (Schick, et al., 2004, Frost, et al., 2006).

Polar Bears

The polar bear is listed as a threatened species (range wide) under the Endangered Species Act. The project area is located within the range of polar bears, approximately 4 miles (6.4 km) inland from the Chukchi Sea however; Wainwright and the Wainwright SRRS lie outside the designated critical habitat for polar bear.

Polar bears have been seen using riverbanks and shore-fast ice for maternity dens during between October and April in areas throughout the NPR-A coastal region, primarily east of Barrow. The polar bear population which includes the Alaskan Chukchi Sea coast within its range dens primarily in Russia. Male and barren female polar bears do not occupy dens. No den has been recorded in the vicinity of Wainwright or Wainwright SRRS are, but sightings of non-denning polar bears have been reported offshore near the village of Wainwright (USDOI BLM, 2003). Polar bears also occur along the coast in the fall open water period in August and September.

4 ENVIRONMENTAL IMPACTS

This section provides the evaluation of direct, indirect, and cumulative environmental impacts of the proposed action. This EA is tiered from the following documents with a more in-depth discussion of potential effects:

- Northwest National Petroleum Reserve-Alaska, Integrated Activity Plan/Environmental Impact Statement, 2003, Volume 2, Section 5;
- Biological Opinion for Bureau of Land Management for the Northern Planning Areas of the National Petroleum Reserve-Alaska, July 2008;
- Wainwright SRRS Interim Removal Action Environmental Assessment (DOI-BLM-LLAKF010-2010-0009-EA), February 2010; and
- National Petroleum Reserve-Alaska Right-of-Way at the Wainwright and Lonely Defense Early Warning (DEW)-Line Sites, Environmental Assessment (DOI-BLM-AK-023-2009-0013-EA; LLAKF01000-2009-0013; LLAKF01000-2009-0013-EA), April 16, 2009

Impacts to issues specifically identified in Section 1.3 for further analysis in this EA are discussed below.

4.1 Cultural Resources

The no action alternative would have no effect on cultural and paleontological resources because no additional visitors or site workers would visit the site and no excavation would be done.

The proposed action could result in disturbance to undiscovered archaeological sites encountered during soil excavation operations. Although no cultural resources are likely to be present at the site according to the USAF 2006 Integrated Cultural Resource Management Plan for Distant Early Warning (DEW) System, Alaska, all site employees will be oriented to the Cultural Resources Protection Plan prior to conducting work at the site. Site employees will be trained to identify and avoid any cultural resources encountered during the project activities. The Cultural Resources Protection Plan would outline the procedures to be followed in the event that cultural resources are discovered. Following these procedures will ensure that even if cultural resources are discovered, no significant impacts to cultural resources will occur as a result of this action.

A 2005 MOA between the USAF and the Alaska SHPO mitigates the adverse effects of environmental restoration and demolition activities on DEW System facilities including Wainwright SRRS, satisfying the requirements of taking into account the effects of the Environmental Restoration of former DEW sites on historic properties and compliance with Section 106 of the NHPA (USAF, 2006).

Because the work at the site associated with the Proposed Action Alternative will only effect previously disturbed material such as existing pads and roadways, there will be no impact to paleontological resources.

4.2 Subsistence

Under the no-action alternative, the USAF would not remediate the Wainwright SRRS and continued risk to human health and environment would remain from continued exposure of contaminants to subsistence resources. No activity would occur within the subsistence use areas for the community of Wainwright, therefore, no potential displacement of resources from the area would occur.

The Proposed Action Alternative over the long term will result in a positive effect to subsistence resources. Over the short term, the Proposed Action Alternative may temporarily impact furbearer and small mammal hunting and trapping due to the possibility of the temporary displacement of these animals during removal activities, including equipment noise and human presence in the immediate Wainwright SRRS area and along the road to the barge landing site at Tupkak Bar.

Barge transportation is required for disposal of contaminated materials in September, which may affect some hunting or fishing activities. Any displacement or disruption in subsistence activities would be temporary. Although the work will occur during active fishing, hunting, and trapping seasons, the work should not have a significant effect on these activities because there are hunting, trapping, or fishing harvest periods which extend outside of the fieldwork season for every species listed.

4.3 Environmental Justice

The no action Alternative would not remedy contamination or cleanup debris however the continued exposure to local populations or subsistence resources is not disproportionate to minority, low income, or tribal populations.

The proposed action will have the following temporary negative effects including temporary noise to users of the site (however, not be audible to the village), temporary air quality impacts in the vicinity of the site, and temporary visual effects. These impacts would not be disproportionate to minority, low income or tribal populations. The removal of contamination and debris and potential increase in local employment during implementation would benefit all populations.

All stakeholders, regardless of race, have been involved in the planning process. Their concerns have been addressed and minority, low income or tribal populations are not being asked to take on an unequal proportion of the environmental impacts of this action. In addition, the proposed action serves to remove contaminated soil, hazardous materials, and solid waste from the area instead of leaving it there to negatively impact the local population.

4.4 Wastes (Hazardous/Solid)

The no action alternative would result in wastes and materials remaining in the land and waters and continue to pose a risk to human health and the environment. Current or future exposure to contaminated media consisting of surface soil would remain.

The act of removing and transporting PCB, DRO and RRO contaminated gravels from the site as proposed pose little threat to human health and safety, and environmental quality because these actions are planned and will be conducted in accordance with numerous federal and state laws and regulations, as referenced in Section 2.4. The health and safety of site workers will be protected by strict adherence to the proposed action's safety plan. The health and safety of a person that is not a site worker may be higher because they will lack adequate personal protective equipment. This can be mitigated by controlling site access and placing signage around the site. The removal of the contaminated gravels will improve environmental quality at the site, thereby lessening threats to human health and safety through direct and/or indirect pathways.

The super-sacks containing the contaminated soils could fall off during transportation and spilling on the ground. The probability of such an event is seldom and the severity is minimized because the transportation will be on an ice road. Spilling materials on ice roads does occur but is easily cleaned up given that the material is not mobile and easily identifiable on the white/clear ice. Any snow/ice that comes into contact with the contaminated material is also removed and transported with the rest of the cleaned up materials.

Hazardous materials could be flooded during break-up or during a summer flood event at Tukpak Bar. This threat is mitigated given the successful design features from last year's removal actions that are being followed this year. The staged materials will be located at the barge landing area on Tukpak Bar that has been used for many years as the elevation is higher than the surrounding area protecting it from flood waters.

Removal and transportation of the asbestos containing materials poses little threat to human health and safety and environmental quality because this action is planned and will be conducted in accordance with governing federal laws, as referenced in Section 2.4. The health and safety of site workers will be protected by strict adherence to the proposed action's safety plan. The health and safety of a person that is not a site worker may be higher because they will lack adequate personal protective equipment. This can be mitigated by controlling site access and placing signage around the site. The removal of these materials will improve the environmental quality of the buildings which will improve human health and safety factors of the site for future actions.

The removal and transportation of the fuel tanks and pipelines pose little threat to human health and safety, and environmental quality. Any fuel in the tanks and pipelines were and will be removed and disposed according to federal and state regulations, and possibly be reused based upon testing results. The fuel tanks will be transported to Barter Island LRRS empty and reused there rather than be disposed of in a local or regional landfill. The fuel pipeline will be removed and disposed of according to state regulations. The removal and transportation of the fuel tanks and pipelines from the site will improve human health and safety, and environmental quality.

Additional sampling for PCB's at the LF006 excavated site – conducted in the spring of 2010 – poses little threat to human health and safety, and environmental quality. The handling of sample materials is planned and will be conducted in accordance with federal and state regulations as outlined in the approved sampling plan. This action will also ensure that widespread contamination of PCB's will be minimized, because if higher levels are found, additional clean up actions would be implemented.

The removal, transportation and permanent disposal of contaminated materials and hazardous wastes will improve the environmental quality of the site and ultimately improve human health and safety for people who may access the site or ingest wildlife that may access the area.

4.5 Threatened and Endangered Species

The USAF conducted informal consultation with the USFWS pursuant to section 7 of the ESA for the proposed cleanup activities at Wainwright SRRS and the record is included in Appendix B. According to the USFWS, available data indicate very low use of the Wainwright area by breeding Steller's eiders and extremely low likelihood that they would nest or rear broods in the action area concluding that adverse effects to breeding Steller's eiders will be discountable. Non-breeding eiders may occasionally occupy the tundra wetlands surrounding Wainwright SRRS facilities; however, the Service expects that these birds would move to a perceived safe distance from project operations anticipating adverse effects to non-breeding eiders to be insignificant because they would be experienced at a minimal level where take would not occur. Because expected effects to Steller's eiders would be discountable or insignificant, the Service concluded that the proposed action is not likely to adversely affect Steller's eiders.

The Service also expects the proposed activities would have an insignificant effect on spectacled eiders because 1) all work will be restricted to the existing hardened footprint of the facilities, 2) individuals that nest near the site are likely to be tolerant of or habituated to disturbance from daily activities that occurred during the nest initiation period, 3) summer work will begin late in incubation when hens are least likely to abandon their nests, and 4) broods or non-breeding eiders that enter the area can easily move to a perceived safe distance in response to local disturbances. Accordingly the Service concluded that the proposed action is not likely to adversely affect spectacled eiders.

The project area is located within the range of polar bears, approximately 4 miles (6.4 km) inland from the Chukchi Sea. Activities related to transport of waste materials are scheduled to occur in April 2012 when females may be denning or have recently emerged from their dens. Historical reports of several terrestrial maternal dens have occurred within 50 km (31 miles) of Wainwright. Although historical data indicate that polar bears may occasionally use the terrestrial habitat near Wainwright for denning, the Service anticipates the likelihood of encountering a den or female with cubs of the year during transport of waste materials in April 2012 to be very low. They also expect that non-denning polar bears will occasionally enter the developed coastal areas in the vicinity of Wainwright and could be subject to disturbance from proposed activities.

To minimize the risk of negative human–bear interactions and respond to potential encounters with polar bears, all operations will follow the Olgoonik Development LLC Polar Bear Avoidance Plan (June 2011) and the USAF Polar Bear Interaction Management Plan, May 2008 (Ohms 2008). Given that polar bears are not known to regularly use the terrestrial habitat immediately surrounding the project area and that risks associated with polar bear encounters will be managed by following the human–polar bear interaction plans, the Service expects that effects to polar bears will be minimized to such an extent that take will not occur. The Service therefore expects that adverse effects to polar bears would be insignificant and concluded that the proposed action is not likely to adversely affect polar bears.

In summary, the USFWS determined the proposed activities are not likely to adversely affect listed eiders or polar bears. There is no designated critical habitat for listed eiders or polar bears within the project area.

4.6 Cumulative Effects

Cumulative impacts result from the incremental addition of past, present, and reasonably foreseeable actions. Each action may be individually minor by itself, but when added to others could become significant over a period of time. The time frame for the proposed action for the project area is from the 1950's to thirty years into the future, assuming that the relatively low level of activity and management would remain at about the same level as present. Due to the limited scope and intensity of the proposed action, potential effects to the geographic area would be limited within one mile of the proposed use areas.

The 2003 Northwest NPR-A IAP/EIS, Volume 1, Section 4.F analysis of cumulative effects is incorporated by reference. Past, present and future impacts in the region include infrastructure use at the site and in the village of Wainwright, oil and gas exploration, recreation and subsistence activities.

Additional past, present, and future activities in the area include recreation, subsistence, research and monitoring. While the level of such activities may increase slightly within the next thirty

years, there are no development proposals that would substantially add to the current levels. The incremental addition of the proposed action would be short-term and dispersed, which should not add to increased cumulative effects.

The proposed action is not anticipated to result in increased incremental cumulative effects to the identified issues in this EA due to the remoteness of the portion of the area where the activity would occur and the low impact levels associated with the activity. The sites have been previously disturbed by human activity and the proposed action would result in decreased long-term impacts to subsistence, environmental justice, wastes (hazardous/solid), polar bears, and eiders.

The proposed action is not likely to result in adverse cumulative effects to cultural sites because the ground disturbing activities are limited to the gravel pad, which there are no cultural sites located. Nevertheless, much of the project site has been disturbed by decades of past human activities so the risk of damaging undiscovered archaeological sites is relatively small.

The proposed action will improve environmental justice cumulative effects by removing contaminated materials from the community to permanent disposal sites, and by the applicant being a local company that hires locally.

Past, present and future removal actions will continue to decrease the cumulative effects of hazardous and non-hazardous wastes and fuels at the site and in the area.

The proposed action is not likely to adversely affect listed eiders or polar bears because the activities would be short term and dispersed in relation to the size and remoteness of the region. Nevertheless, some combination of oil and gas exploration, subsistence activities, clean-up activities, and research and monitoring activities by scientists, industry, and agency personnel may cumulatively cause incremental increases in disturbance to listed species. There would be no incremental increase in human activity with the no action alternative. The proposed action will likely improve habitat for listed species and other wildlife by removing contaminated materials from the area.

The proposed action is a small part of a larger, overall effort by the USAF to clean up the entire SRRS. Additional future actions will occur at the site as guided by the Draft Proposed Plan for Four ERP Sites at Wainwright SRRS, as released by the USAF in January 2010, and a future decision record. The proposed action will allow additional cleanup activities at the site to occur as it permanently removes some of the environmental contaminants from the site.

4.7 Mitigation and Monitoring

4.7.1 Mitigation

Mitigation strategies generally include the following Best Management Practices (BMPs), which are presented in the preferred order for implementation, and were established in accordance with CEQ regulations.

- Avoid the impact altogether by stopping or modifying the proposed action.
- Minimize impacts by limiting the degree of magnitude of the action and its implementation.
- Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
- Reduce or eliminate the impact over time through use of preservation and maintenance operations during the life of the action.
- Compensate for the impact by replacing resources or providing substitute resources.

This EA has determined that mitigation is not required to avoid or compensate for significant impacts. However, the USAF has identified BMPs to minimize impacts to the environment and reduce health and safety risks. Additionally, the USAF follows standard construction BMPs (such as silt fencing and hay bales) to help minimize movement of materials from construction sites, and has a Spill Control and Countermeasures Plan in place to minimize the risks of spills and associated impacts.

4.7.1.1 Cultural Resources

All operations shall be conducted in such a manner as not to cause damage or disturbance to any historical or archaeological sites and artifacts. The Antiquities Act (1906), Archaeological Resources Protection Act (1979), Federal Land Policy and Management Act (1976), and general United State property laws and regulations, all prohibit the appropriation, excavation, injury, or destruction of any historic or prehistoric ruin or monument, or any other object of antiquity situated on lands owned or controlled by the United States (16 U.S.C. 470; 16 U.S.C. 432; 43 U.S. 1733(a); 18 U.S.C. 1361; 18 U.S.C. 641; 43 CFR 8365.1). Such items include both prehistoric stone tools and sites, as well as historic log cabins, remnants of such structures, refuse dumps, and other such features. Should any such site be discovered during the course of field operations, the permittee should avoid impacting such materials, and will immediately notify the Authorized Officer, who will contact a qualified cultural resource specialist to evaluate the discovery, take action to protect or remove the resource, and allow operations to proceed.

4.7.1.2 Wastes (Hazardous/Solid)

Public notice will be given that the site is closed to access due to ongoing cleanup actions of hazardous wastes. Public notice is to included, but not limited to, the local community and filing a Notice to Airmen (NOTAMS) with the U.S. Federal Aviation Administration (FAA). Visual indicators will be placed at the site indicating that it is closed to access; i.e. signs around the gravel pad, along the road, and large "X" markers on the runway and heli-pad.

BMP's developed specifically for the proposed action includes the following:

- Material handling and waste management,
- Sanitary and septic waste management,
- Equipment/vehicle fueling and maintenance practices,
- Spill prevention controls and countermeasures,
- Training,
- Preservation of existing vegetation, and
- Threatened and endangered species protection.

4.7.1.3 Eiders

All work will be conducted within the hardened footprint of the site. No activities will occur on undisturbed tundra. In order to allow listed eiders in the vicinity of the project site to habituate to local disturbance or move from the site, Olgoonik Specialty Contractors, LLC staff walked the perimeter of the project area 1–2 times per day at distances of 75 m and 175 m from the facility since June 16, 2011 (i.e. during the nest initiation period).

Polar Bears The permittee will abide by Polar Bear Interaction Guidelines document..

The USAF will manage risks associated with polar bear encounters by following USAF and the applicant's human-polar bear interaction and avoidance plans and safety training.

4.8 Summary of Environmental Consequences

The proposed action is likely to result in no adverse impacts or only minor short-term adverse impacts to, subsistence activities, environmental justice, and eiders and polar bears as listed threatened species. The proposed action will ultimately result in improving the overall quality of the area's environment, prevent future releases of contamination, and protect human health and safety.

5 CONSULTATION AND COORDINATION

5.1 Agencies, Organization and Persons Consulted

Public notification of this EA will be on file at the BLM Arctic Field Office and posted on the BLM Arctic Field Office NEPA Register. A summary of the USAF's public participation activities is provided in Section 1.6. USAF consulted with the Alaska SHPO and federally-recognized tribes and signed a 2005 MOA with the SHPO in satisfaction of its NHPA Section 106 responsibilities. The USAF conducted informal consultation with the USFWS pursuant to section 7 of the ESA. The USFWS determined the proposed action not likely to adversely affect listed eiders or polar bears on July 11, 2011. A record of the consultation is included in Appendix C.

5.2 List of Preparers

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Stacey Fritz, Anthropologist, BLM
Mike Kunz, Archeologist, BLM
Debbie Nigro, Wildlife Biologist, BLM

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Appendix A – Figures

Figure 1 Wainwright SRRS Excavation Locations

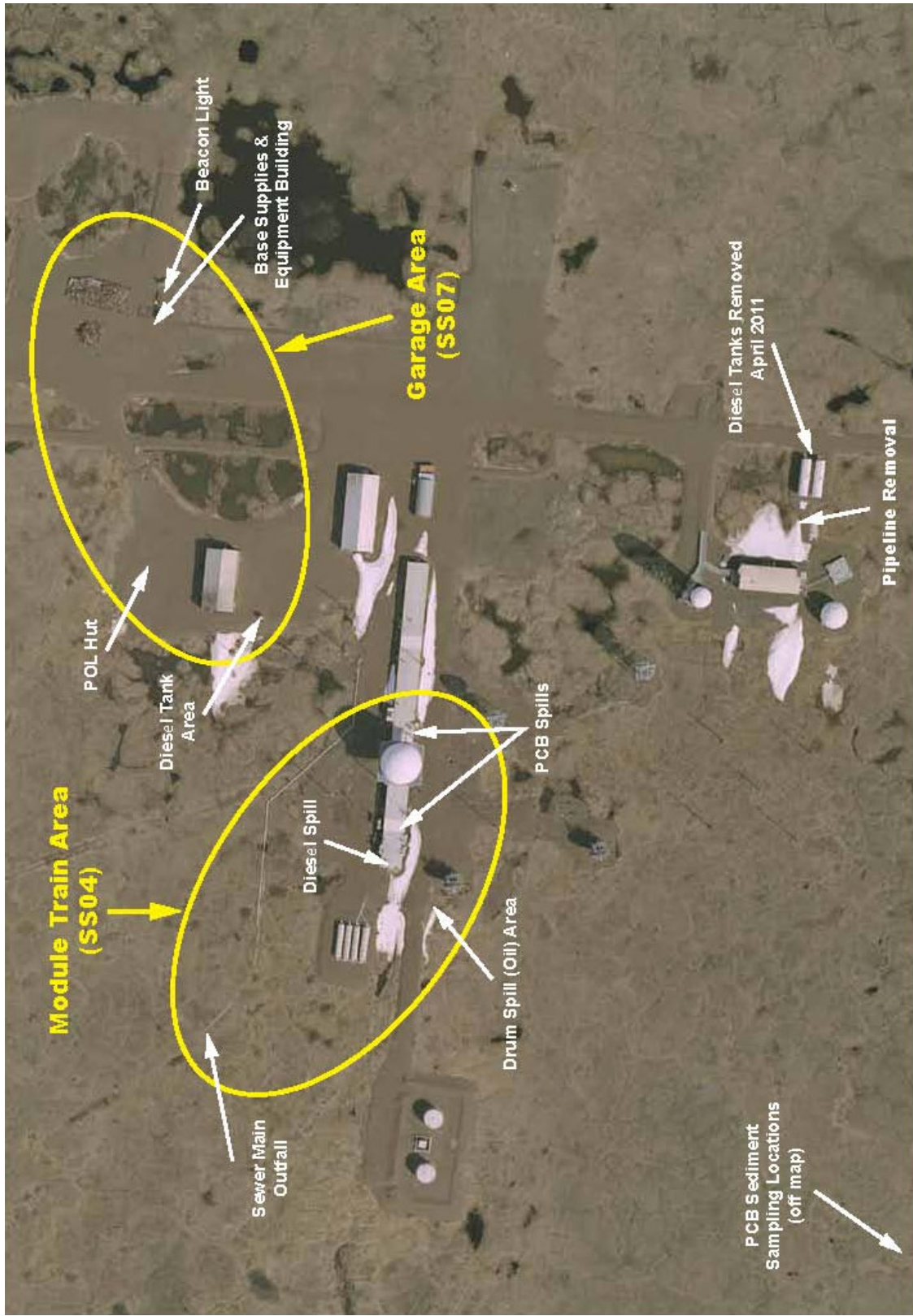


Figure 2 Asbestos Abatement Locations

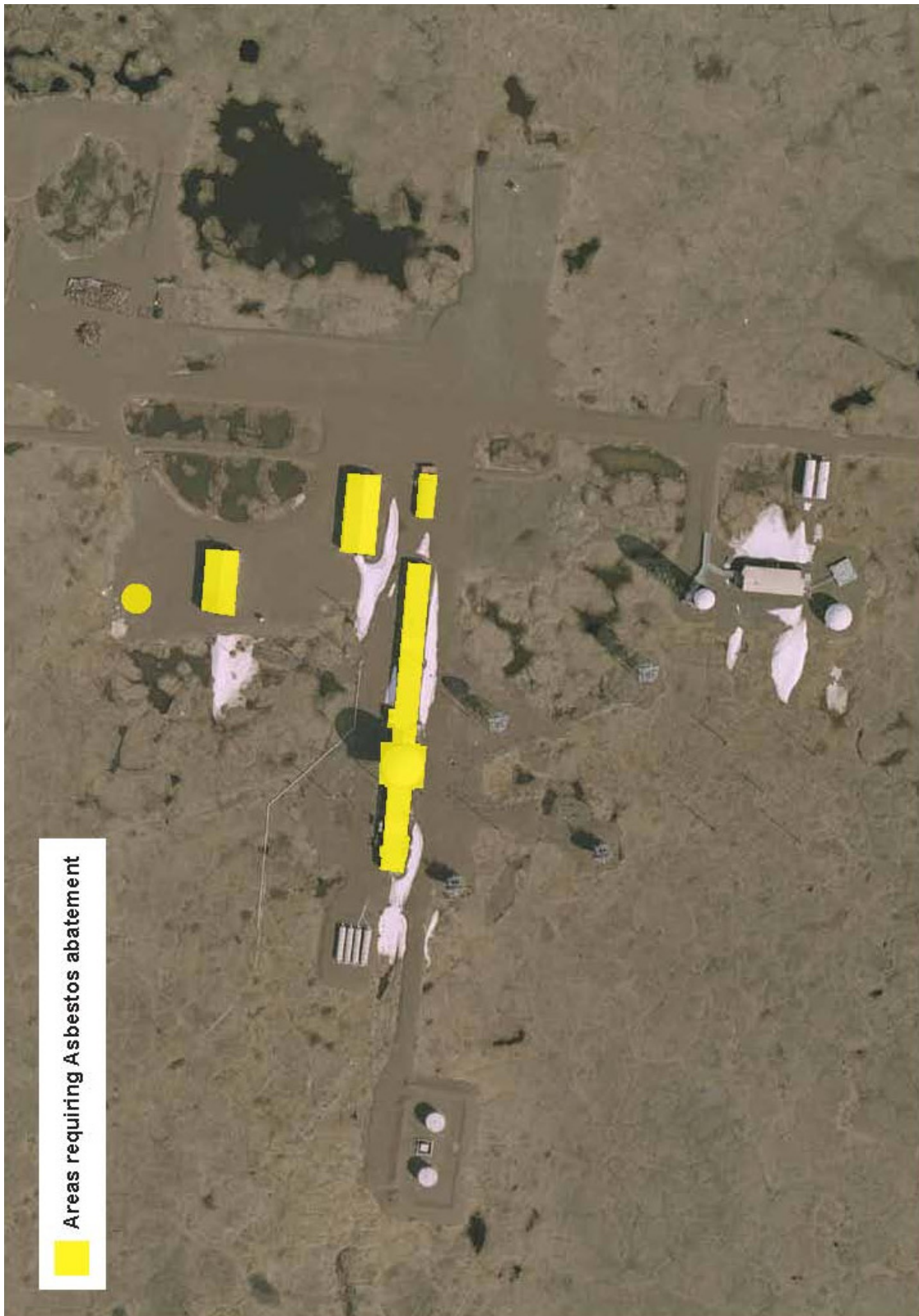


Figure 3 PCB Sediment Sampling Locations

