US Army Corps
of Engineers
Alaska District

Environmental Assessment and Finding of No Significant Impact

Removal Action

Umiat Lake Drum Removal
Former Umiat Air Force Station
Umiat, Alaska

Defense Environmental Restoration Program
Formerly Used Defense Sites

May 2009

FINDING OF NO SIGNIFICANT IMPACT

The U.S. Army Corps of Engineers, Alaska District (Corps) is authorized to execute the Department of Defense Environmental Restoration Program, which provides the means to conduct removal actions designed to clean up hazardous materials and wastes and remove unsafe structures and debris from areas formerly used by the Department of Defense.

In accordance with the National Environmental Policy Act of 1969, as amended, the Corps prepared an environmental assessment (Public Notice ER-09-05, dated June 2009) for the following removal action:

Umiat Lake Drum Removal
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The primary objectives of the Umiat Lake removal action are to remove drums and incidental metallic debris, remove petroleum-contaminated soil, and collect soil, sediment, and surface water samples to facilitate site management decisions and ultimate site closure. The details of this removal action are described in the subject environmental assessment.

This removal action has been evaluated for its effects on several significant resources, including fish and wildlife, wetlands, threatened or endangered species, and cultural resources. No significant short-term or long-term adverse effects were identified.

This Corps removal action complies with a variety of environmental laws, including the National Historic Preservation Act, the Endangered Species Act, the Clean Water Act, and the National Environmental Policy Act. The completed environmental assessment supports the conclusion that the removal action does not constitute a major Federal action significantly affecting the quality of the human and natural environment. An environmental impact statement is therefore not necessary for the Umiat Lake drum removal action.

Reinhard W. Koenig
Colonel, Corps of Engineers
District Commander

6 Jul 09
Date

US Army Corps of Engineers
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_____ _____

Kevin J. Wilson
Colonel, Corps of Engineers
District Commander

Date

Environmental Assessment
for
Defense Environmental Restoration Program – Removal Action

Umiat Lake Drum Removal
Former Umiat Air Force Station
Umiat, Alaska

1.0 PURPOSE AND NEED FOR THE REMOVAL ACTION

1.1 Introduction

This removal action (RA) is a continuing effort by the Corps to eliminate risks to human health and local fish and wildlife resources in and around the Former Umiat Air Force Station (Figure 1). The primary objectives of this Umiat Lake RA are to remove drums and incidental metallic debris, remove petroleum-contaminated soil, and collect soil, sediment, and surface water samples to facilitate site management decisions and ultimate site closure.

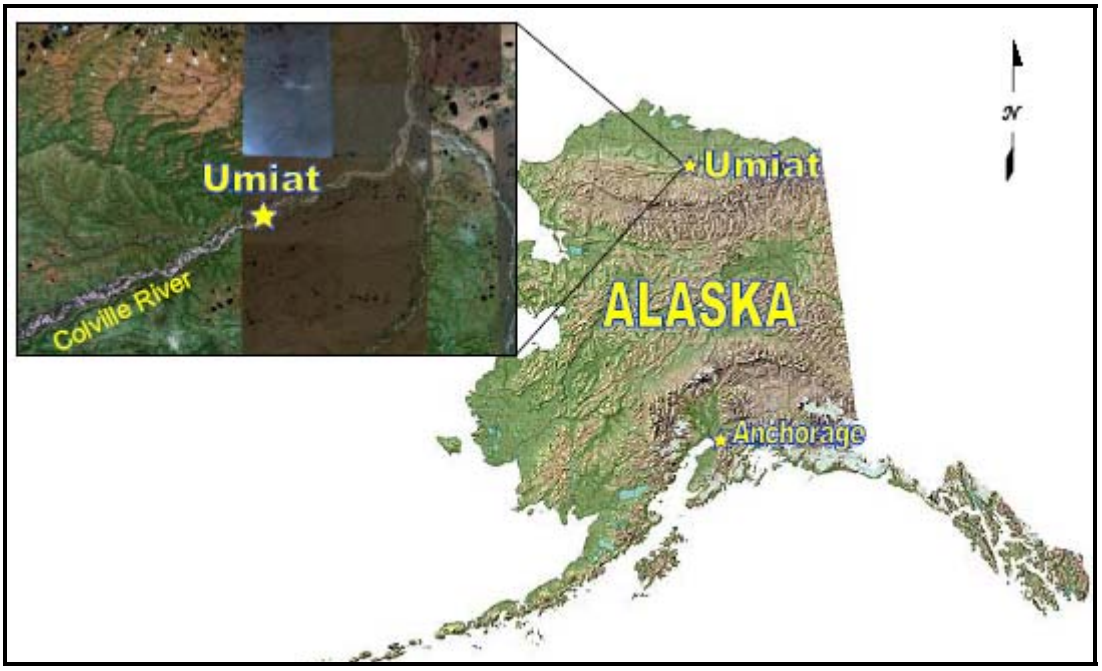


Figure 1. Location of the Former Umiat Air Force Station.

In August 1997, Ecology and Environment Inc. (E&E), in conjunction with field studies in the nearby Test Well No. 3 area, collected three sediment and three surface water samples from Umiat Lake, which were analyzed for diesel-range organics (DRO), residual-range organics (RRO), gasoline-range organics (GRO), volatile organic compounds (VOC), semivolatile

organic compounds (SVOC), pesticides, polychlorinated biphenyls (PCB), and metals. Surface water sample analyses excluded RRO but included total recoverable petroleum hydrocarbons (TRPH).
Their results indicated elevated petroleum levels (DRO, RRO, and GRO) in the sediment samples collected from the lake (E&E 1998).

In August 1998, E&E re-evaluated the lake water and sediment in Umiat Lake, sampling 10 sediment and surface water locations. Sediments were analyzed for VOCs and SVOCs, and surface water was analyzed for petroleum products (DRO and TRPH), VOCs, and SVOCs. The results for sediment indicated that nine of the 10 samples exceeded Alaska Department of Environmental Conservation (ADEC) screening criteria for DRO and RRO. In surface water, DRO was detected in six of the 10 samples exceeding the ADEC screening criteria (E&E 1999).

A 1998 geophysical study of a portion of Umiat Lake located buried ferrous debris in the lake bed. The survey revealed possible drum/debris locations along the east shore of the lake. The study could not determine the nature of the metal debris or total amount but identified 43 potential metal debris areas within 30 feet of the east shore of the lake. The report estimated that total weight of the metal debris could range from 2,000 to 20,000 pounds.

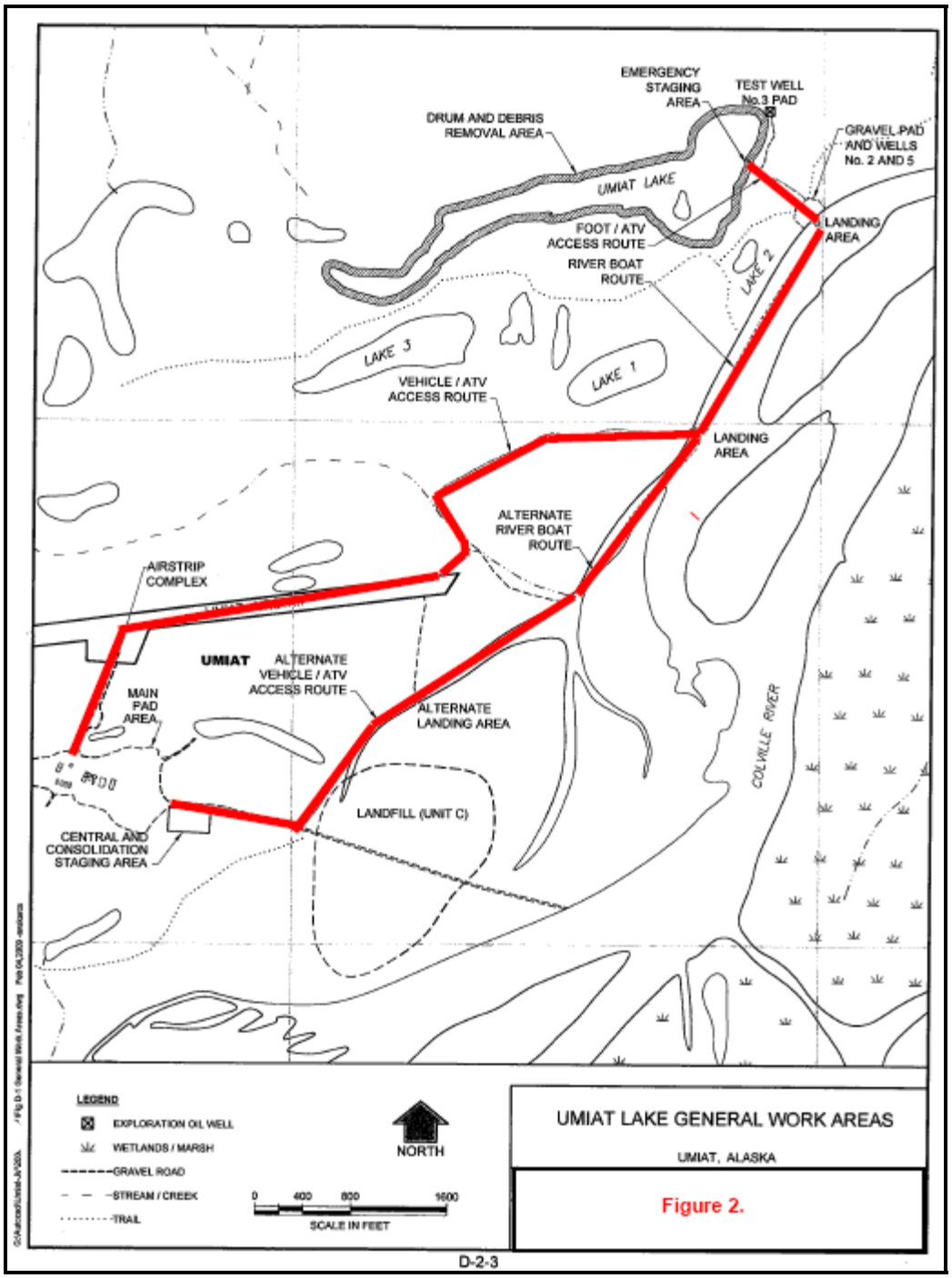
The ferrous debris, drums, and contaminants of concern emanating from the drums remain a present and future threat to human health and the ecological health of Umiat Lake unless removed.

1.2 Background

The Alaska District received funding under the Defense Environmental Restoration Program – Formerly Used Defense Sites (DERP-FUDS) to perform a RA at Umiat Lake, a freshwater body approximately 2 miles northeast of Umiat, Alaska (Figure 2).

Umiat was developed in 1945 by the U.S. Navy within Naval Petroleum Reserve Number 4 (now known as National Petroleum Reserve – Alaska). Between 1945 and 1954, the Navy installed 11 oil exploration wells there. The Umiat U.S. Air Force (USAF) Station, containing 8,000 acres, was obtained by transfer letter from the Department of the Navy to the Department of the Air Force in 1954. Five of the 11 wells installed by the Navy were outside of the 8,000-acre USAF site, and the other six were within the boundary of the 8,000-acre property. Test Well No. 3 was drilled adjacent to the northeast tip of Umiat Lake.

The USAF planned to construct an Aircraft Control and Warning Station at Umiat; however, actual construction of the facility was never implemented. The USAF utilized the site intermittently until 1959, when the site was transferred back to the Navy. In 1977, the site transferred to the U.S. Department of the Interior (DOI) as a result of Public Law 94-258, the



Naval Petroleum Reserve Act of 1976. The DOI later transferred a portion of the site, including the airfield and buildings, to the State of Alaska. At present, the State of Alaska owns 115 acres of the former Umiat military property, including the airfield. The surrounding lands are administered by the Bureau of Land Management (BLM).

Umiat Lake was likely used as a winter staging area during drilling of several of the test wells. Numerous drums appear to have been disposed of in the lake, likely from being abandoned in place and allowed to sink into the lake when it thawed during breakup. During a 2007 site visit, a helicopter fly-over of Umiat Lake was conducted. Several oily plumes could be seen on the surface of the water, and several metal drums were observed along the shore of the lake. Based on observations made during the site visit, it is assumed that the metal drums contain, or contained, petroleum product. It is also assumed that the oily plumes observed on the surface of the lake are the result of leaking submerged drums. The number of drums observed along the shore of Umiat Lake was estimated at approximately 30 to 50, and the potential for submerged drums in the lake is likely (USAED 2008a).

Environmental assessments have been completed for previous Corps DERP-FUDS removal actions at the former the Umiat USAF Station. One EA (Public Notice ER-97-22, June 19, 1997) was prepared for developing and operating a borrow site to produce gravel that was used to remediate a landfill in the Colville River floodplain. The Corps prepared two EAs (Public Notice ER-00-03, December 28, 1999 and Public Notice ER-01-02, November 6, 2000) for removal work at Test Wells Number 2 and 5. The most recent EA (Public Notice ER-09-02, January 9, 2009) was for a removal action at Test Well Number 9. In each case, the EA supported the conclusion that the respective removal action did not constitute a major Federal action significantly affecting the quality of the human and natural environment; therefore, preparing environmental impact statements were not necessary.

2.0 ALTERNATIVES

2.1 Alternative 1: No-Action

With the No-action alternative, no attempt would be made to remove drums and incidental metallic debris, to remove petroleum-contaminated soil, or to collect soil, sediment, and surface water samples to facilitate site management decisions and ultimate site closure.

2.2 Alternative 2: Removal Action[1]

Mobilization of personnel, equipment, and materials to the Umiat Lake site for removal activities is currently scheduled for July 2009, and all activities are anticipated to be completed by the end of September 2009. A variety of aircraft and air services, including Hercules, DC-6, Sky Van,

[1] Technical information about this removal action was obtained from: The majority of technical information in this environmental assessment (EA) came from the following document: *Work Plan: Umiat Air force Station, Umiat Lake Removal Action, Umiat, Alaska*. Draft-Final February 2009, Prepared by BCC-Jacobs Joint Venture, Anchorage, Alaska, Environmental Remediation Services, Contract No. W911KB-06-D-0008, Task Order No. 0012.

and Caravan types, would be used to maximize capacity and minimize costs. A helicopter would meet the crew in Umiat for movement of personnel, materials, and equipment to Umiat Lake. Daily access to Umiat Lake for field personnel and equipment would be by helicopter and, if necessary, by foot and riverboat on the Colville River (Figure 2). Lodging and meals would be located at the UIC Oilfield Services camp facilities. Site preparation for field operations includes the establishment of access routes to Umiat Lake and the construction of a waste staging pad area near the Umiat Airstrip. All project personnel, equipment, and supplies would be demobilized from the project site immediately upon project completion via chartered aircraft. Wastes and contaminated materials generated during the RA would be properly transported to a State of Alaska-permitted treatment facility.

The drum and metal debris proposed for removal are primarily located along Umiat Lake's southern and southeastern shoreline (Figure 2). The western end of the lake has a minor amount of material proposed for removal. For this aspect of the work, shoreline is defined as the land around the lake extending inland 50 feet from water's edge. The primary mode of transportation on and around Umiat Lake would be a motorized pontoon boat, small support motorboat, and helicopter. Divers, tenders, and support crew would work from the pontoon boat.

When a drum with contents is identified for removal, a skirted absorbent boom would be deployed in the water around the drum to provide spill containment. A poly liner would be slipped over any drum with contents and sealed for additional spill protection before the drum is over-packed. Using the pontoon boat and/or helicopter, over-packs would be transported to the designated staging area (Figure 2).

Small metal debris would be containerized in a poly over-pack for removal and, if necessary, floated to the surface by divers using a floatation device. Over-packs would be color coded to designate metal debris. Larger debris would be extracted from the lake using rigging and a helicopter or the pontoon boat, if necessary.

Visibly stained soil exceeding ADEC Method One, cleanup levels for diesel range organics would be removed from the shores of Umiat Lake. Excavation depths would not exceed the depth to permafrost or groundwater, and all contaminated soil would be excavated by hand into Super Sacks. Confirmation soil samples would be collected from the floor of each excavation to confirm clean boundaries. Packaged soil would be transported to the staging area by helicopter. Excavations would be backfilled, graded, and returned to preexisting conditions (to the extent practical) with an approved backfill source. Backfill would be transported to the excavation locations by helicopter. All contaminated soil would be shipped offsite to a permitted disposal facility.

3.0 EXISTING ENVIRONMENT

3.1 Site Description

Umiat Lake is at the former Umiat AFS, within the Colville River valley north of the Brooks Range in northern Alaska, approximately 120 miles southwest of Prudhoe Bay. Still existing at the former Umiat AFS is a main gravel pad, a 5,400-foot gravel airstrip, and an operations complex. The 115 acres of the main gravel pad and airstrip are elevated approximately 4 to 6 feet above the surrounding tundra. The remaining acreage, with the exception of a 15-acre former landfill located 0.5 mile east of the main pad area, is undeveloped.

Umiat Lake (elevation 325 feet) is a narrow, 1-mile-long freshwater lake approximately one mile to the northeast of the Umiat airfield. The lake is approximately 1,100 feet at its widest point and the depth of the lake varies from 3 feet in the west to approximately 7 feet in the east. In addition, a thick mat of plant material exists on the bottom of the lake. Umiat Lake is within Township 1S, Range 1W, Section 3 of the Umiat Meridian, and on USGS quad "Umiat B-4". The easternmost end of the lake is at the coordinates 69.3857 ºN, 152.0888 ºW.

3.2 Physical Environment

3.2.1 Physiography. The area around Umiat Lake is in the northern foothill section of Alaska's Brooks Range. Generally, the slope of the foothill area is to the north, with elevations ranging from 3,500 feet in the south to 400 feet in the north. Locally, major streams, such as the Colville River, have downcut through sedimentary units, producing high vertical bluffs.

3.2.2 Geology. The unconsolidated deposits in the Umiat Lake vicinity primarily consist of interbedded alluvial gravel, sand, and silt of Quaternary age. These deposits are 23 to 71 feet thick. The Quaternary alluvium at Umiat is overlain by an organic mat of unknown thickness and underlain by late Cretaceous sandstone, shales, and conglomerates associated with the uplift of the Brooks Range. The active layer is assumed to be approximately 2 to 3 feet thick in the undisturbed tundra; however, it is estimated to vary from 4 to 6 feet thick in the gravel pad areas. Permafrost is believed to extend to depths of 1,000 feet or more below ground surface (USACE 2000).

3.2.3 Hydrogeology and Surface Water Hydrology. Ground water occurs in three zones in the Umiat Lake area. The first zone consists of a shallow active layer above the permafrost during the summer. The second zone is ground water within thaw bulbs beneath lakes and rivers that are large enough to not freeze completely in winter. The third zone consists of deep bedrock aquifers beneath the permafrost. Ground-water flow in the first zone is most likely toward the east, draining into Seabee Creek and the Colville River; however, the flow may be discontinuous in some areas depending on factors such as permafrost depth and water uptake by the vegetation present at the station.

Besides occurring in area lakes, surface water occurs as rivers, streams, and shallow ponds. The major surface water feature is the Colville River, which is approximately 1,000 feet southeast of Umiat Lake. The mean annual surface water runoff for this area is approximately 1 cubic foot per second per square mile. Peak runoff into the river occurs from late May to early July and is approximately 10 cubic feet per second per square mile.

In winter, ungrounded ice thickness on Umiat's lakes ranges between 4.0 and 4.3 feet. Ungrounded ice thickness on the Colville River ranges between 4.0 and 8.0 feet, with an average thickness of approximately 5.5 feet. Winter flow in the Colville River's main channel is continuously replenished, and its static volume is estimated to be approximately 6.9 million gallons.

Seabee Creek flows north of the airstrip into the Colville River northeast of the runway. A small drainage channel sometimes described as an "unnamed creek" runs immediately west of the Test Well No. 9 site. This feature only occasionally contains water, primarily during spring when surface runoff from melting snow is at its peak.

Because of the shallow depth to permafrost around the Umiat AFS, which restricts infiltration of surface water and precipitation, there are many poorly drained, shallow wet areas including ponds, lakes, and former river channels that are partially filled with organic matter.

3.2.4 Climatology and Meteorology. Umiat is in the area defined as part of the Arctic Climatic Region. Climatic records indicate an average annual low temperature of 1.1 º F. The average temperature for July is 53.2 º F, with an average July high temperature of 64.5 º F. The average temperature in February falls to -24.4 º F.

The average annual precipitation for Umiat is 5.38 inches, 1.06 inches of which fall in August. Umiat also averages 33.7 inches of snowfall annually.

Prevailing winds blow westerly from November through April and easterly from May to October. The average annual wind speed is 6.9 miles per hour (USACE 2000).

3.3 Biological Resources

3.3.1 Vegetation. The region surrounding Umiat Lake is predominantly treeless and is vegetated with grasses and herbaceous plants that tolerate high soil moisture conditions. In general, the area is densely vegetated with 6- to 12-inch dwarf heath shrubs, dwarf birches, and willows, intermingled with herbaceous species and, in places, 3- to 8-foot-tall alders and willows. Vegetation is divided between the willow/alder and tundra plant communities. The willow/alder plant community is found in formerly disturbed areas, in surrounding water bodies, along the Colville River, and on gravel bars at the former Umiat AFS. Willows dominate the floodplain. The tundra plant community comprises heath tundra and dwarf shrubs. Sedge-grass

plant communities occur in poorly drained areas or around ponds and lakes (USACE 2000).

3.3.2 Fish and Wildlife. Large mammals found in the Umiat Lake area or that migrate through the area include moose, caribou, and brown bear. Moose found along the Colville River are at the northern extent of the species' range. The Teshekpuk Lake caribou herd migrates through the Umiat Lake area and is often seen in the vicinity. Brown bears travel nearby river corridors and feed in riparian habitats during spring and summer. Small mammals possibly inhabiting the area include hares, ground squirrels, collared lemmings, arctic shrews, arctic foxes, and mink. The Colville River corridor also provides important breeding and brooding habitats for numerous migratory birds, including Canada geese. The willow ptarmigan, rough-legged hawk, peregrine falcon, Savannah sparrow, and Lapland longspur are known to use all the habitat surrounding Umiat Lake. Peregrine falcons and rough-legged hawks may begin to nest along river bluffs as early as March (USACE 2000; BLM 2007).

Adjacent to Umiat Lake is the Colville River, which supports most species of freshwater and anadromous fish found in the Beaufort Sea drainages of Alaska. Pink and chum salmon spawn in the lower river, but are not known to occur in the river stretch adjacent to the Umiat area. Cisco, species of whitefish, grayling, burbot, arctic char, stickleback, and northern pike are among the other fish species present in the Colville, and several species are important in local subsistence and commercial economies.

Unlike Umiat Lake, nearby Runway and Floatplane lakes are shallow and freeze completely every winter. According to the State of Alaska, Division of Natural Resources, Division of Mining, Land and Water, Umiat Lake is "non-fish bearing." However, all the lakes support a freshwater invertebrate community. Seabee Creek is known to support arctic grayling (USACE 2000).

3.3.3 Special Aquatic Sites [40 CFR Part 230, Section 404(b)(1), Subpart E]. Special aquatic sites (SAS) are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. Wetlands in and around the removal action site are considered SAS. The site has not been delineated for wetlands but is presumed to be in wetlands for the purpose of this project.

3.3.4 Threatened and Endangered Species. No endangered or threatened species of plants or animals are known to inhabit the removal action area. The arctic peregrine falcon, which occurs in the area, was a federally listed threatened species but has been delisted. The spectacled eider is a threatened species known to occur on the North Slope; however, because this bird nests along the coast in the summer, it is not considered a species of concern for this project.

3.3.5 Essential Fish Habitat (50 CFR 600.905-930). The Magnuson-Stevens Fishery Conservation and Management Act requires Federal agencies to consult with the Secretary of

Commerce regarding any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH) identified under the Act. No EFH is identified at or near the project site; however, the Colville River does support anadromous fish.

3.4 Historical and Cultural Resources

There are 12 historic properties listed on the Alaska Heritage Resources Survey in and around Umiat. UMI-001 is a lithic scatter approximately 1 km east of Seabee Creek and 3 km northwest of Umiat. Another lithic scatter, UMI-006, is on a ridge approximately 800 meters west of Bearpaw Creek, just north of Umiat Lake. UMI-103, 104, 108-111, and 113 are the nearby Navy test wells. Properties UMI-116 through UMI-118 are the remains of the post-World War II oil exploration camp. UMI-116 is the camp itself, while UMI-117 is an engine generator building and UMI-118 is a non-directional beacon, both within the camp boundaries.

The area of potential effect (APE) for the proposed action includes access routes, Umiat camp, the areas adjacent to Umiat Lake, and material borrow sources. The only known historic properties within the APE are the camp facilities (UMI-116-118), Test Well No. 9 (UMI-113), Test Well No. 3 (UMI-108), and the lithic scatter north of the lake (UMI-006). Test Wells 2 and 5 were previously removed.

3.5 Land Use and Ownership

The State of Alaska Department of Transportation and BLM currently have jurisdiction over all areas of the Umiat AFS included in this investigation. The BLM manages the lands surrounding the former Umiat AFS. The Arctic Slope Regional Corporation also owns land near the project area and has selected other land as part of their regional entitlement. The State of Alaska leases portions of the station to FAA and private interests. The State of Alaska operates the 5,400-foot gravel public airstrip, one 500-gallon tank, and the vehicle maintenance shop at Umiat. Umiat Enterprises, Inc. leases and operates a commercial lodge and dining facility, commercial aviation fueling facilities, and a diesel-powered generator. GSI stores and operates geophysical exploration equipment and vehicles at the airstrip.

Umiat has a lodge (Umiat Enterprises, Inc.) but no banks, stores, schools, or churches. Umiat is served by a mail plane and has telephones, radio, and television. No public water, sewage, or electrical facilities exist. Individually owned diesel-powered generators serve electrical needs in the Umiat area.

The Federal Aviation Administration (FAA) currently owns and maintains navigational aids, four buildings, and one 500-gallon above ground storage tank at the Umiat airstrip. These facilities are installed on approximately 5 acres leased from the State of Alaska (USACE 2000).

3.6 Coastal Zone Management

Umiat Lake appears to lie outside of Alaska Coastal Zone boundaries, on federal lands legally excluded from the coastal zone. However, some project activities (particularly transportation on access routes to and from Umiat Lake) would occur within the coastal zone.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Alternative 1: No Action

Selecting this alternative would be contrary to the purpose and need of the removal action (i.e. the removal of drums and metallic debris from Umiat Lake and contaminated soil from its shoreline), but its inclusion and environmental analysis is required by 40 CFR Parts 1500-1508 (Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act).

No removal action at Umiat Lake would prevent excavations from disturbing vegetation, wetlands, and other terrestrial features. Umiat Lake would not experience incidents of increased turbidity and petroleum spills when drums and their contents and other metal debris are recovered and removed from the lake bottom. No motorboat use on the Colville River and Umiat Lake would prevent disturbing associated wildlife resources. No aircraft and helicopter use around the Umiat area would also avoid disturbing wildlife resources.

Current land uses at Umiat by the State of Alaska (operating the 5,400-foot gravel public airstrip, etc), Umiat Enterprises, Inc. (e.g. leases and operates a commercial lodge and dining facility, etc.), the FAA and others would be expected to continue. Environmental impacts associated with current uses also would be expected to continue, such as, disturbances to wildlife from surface transportation and aircraft and polluted air emissions from power-generating machinery. Day-to-day human activities at Umiat would continue to be a source of wildlife disturbance. Environmental impacts associated with proposed oil and gas exploration activities in and around the Umiat area would continue to occur.

In conclusion, selecting the No Action alternative would allow drum, metal debris and soil contamination to remain in and around Umiat Lake and continue to pose a potential threat to human and ecological health.

4.2 Preferred Alternative: Removal Action (Alternative 2)

The Corps identified resource categories potentially impacted by the proposed Umiat Lake removal action and determined the resource categories to be environmentally evaluated in further

detail in this environmental assessment. The following summaries the determination results:

Resource Categories	Determination	Basis of Determination
Physical Environment		
Terrestrial Resources	FAR	Clean up activities surrounding Umiat Lake would involve the excavation of diesel-contaminated soil.
Water Resources	FAR	All cleanup operations occurring on and around the perimeter of Umiat Lake could affect the lake's water quality. No water withdrawals are proposed.
Air Quality	NFAR	Air quality impacts from aircraft and boats used in the cleanup are likely to remain below applicable ambient air quality standards and increments. No on-site, combustible treatment of contaminated soil.
Biological Resources		
Mammals	FAR	Ground activities around Umiat Lake would primarily disturb small mammals.
Birds	FAR	Activities in and around Umiat Lake would disturb waterfowl and other bird species.
Fish	FAR	No fishery resources in Umiat Lake to be impacted by clean up activities. However, motorboat use on the Colville River, an anadromous water body, might occur to transport personnel from Umiat to Umiat Lake.
Threatened & Endangered Species	NFAR	No impacts expected.
Floodplains/Wetlands	FAR	The area surrounding Umiat Lake is considered wetland habitat and would experience some disturbances during clean up activities. Impact evaluation required under EO 11990 and EO11988.
Assorted Issues		
Historical and Cultural Resources	NFAR	Cultural and historical resources in the Umiat area are expected to remain unaffected based on location. Also, no impacts to paleontological resources expected, based on identified locations and *de minimus* surface disturbance.
Subsistence	NFAR	No subsistence activities are known to occur around Umiat Lake. However, large game could be deflected from areas of activity. Effects (if any) are expected to be short-term and minor.
Environmental Justice	NFAR	No disproportionately high and adverse human health or environmental effects to Nuiqsut residents has been identified for the proposed project

Resource Categories	Determination	Basis of Determination
Land Use	NFAR	No on-site disposal of waste is proposed. All waste generated by the clean up activities are expected to be flown out of Umiat to a state-approved waste facility. Current land use (e.g. aviation support, lodge operation, or subsistence hunting and fishing) would be improved by the removal action because contaminant sources would be permanently removed from the area.
Coastal Zone Management	NFAR	The Corps has determined that the proposed activity complies with and would be conducted in a manner consistent to the maximum extent practicable with the Alaska Coastal Management Program, including affected coastal district programs, i.e., the North Slope Borough Coastal District. This determination is based on the description of the proposed cleanup activity and assessment of its effect, and review of the Alaska Coastal Management Program. A copy of the environmental assessment has been provided to the State of Alaska Department of Coastal and Ocean Management (DCOM). The Corps has requested that DCOM concur with a *No Review Required Determination*, on the grounds that the project is very similar in scope to other Umiat-area cleanup actions that were granted a *No Review Required Determination* in the past based on their consistency with state and coastal district policies.

Key: **NFAR** - No Further Analysis Required. **FAR** - Further Analysis Required.

In summary, the resources categories to be analyzed in further detail in this EA are terrestrial, water, and biological (mammals, birds, fish, and floodplains/wetlands).

4.2.1 Effects on the Physical Environment.

4.2.1.1 Terrestrial Resources. The possible excavation of visibly stained soil exceeding ADEC Method One cleanup levels for diesel range organics from the shores of Umiat Lake would disturb surface features, including vegetation growing on the site. To mitigate potential impacts, all excavations would not involve mechanical devices and be performed by hand. In addition, all excavations would be backfilled, graded, and returned to preexisting conditions to the maximum extent possible. To avoid impacts from mechanical overland travel, all backfill material would be transported to the excavation sites by helicopter and daily access to Umiat Lake for field personnel and equipment would be by helicopter, and if necessary, by foot and riverboat on the Colville River.

4.2.1.2 Water Resources. Impacts to water quantity could result from drum removal, spills, and runoff from surface disturbances or removal of vegetation along the Umiat Lake shoreline. The

physical process of removing drums and their contents from Umiat Lake and its shoreline would disturb lake-bottom sediment, thereby causing an increase in turbidity. However, the resultant turbidity is expected to remain localized and short term. To provide spill containment, a skirted absorbent boom would be deployed in the water around any drum known to be containing residual petroleum products.

4.2.2 Effects on Biological Resources.

4.2.2.1 Mammals. The presence of field crews and the noise and movement of equipment would primarily displace small mammals (e.g. arctic fox, ground squirrels, voles and weasels) temporarily from the Umiat Lake area to adjacent similar habitat. Overall, the proposed project would not have long-term adverse impacts on the area's mammal populations.

4.2.2.2 Birds. Ground-nesting migratory birds would be at a high risk from being disturbed by the presence of field crews and the noise and movement of equipment. Activities on Umiat Lake would also temporarily disturb waterfowl and other bird species using the lake's open water and shoreline habitat. No long-term adverse impacts on the area's bird population would occur.

4.2.2.3 Fish. No fish or essential fish habitat exists in Umiat Lake to be disturbed by the cleanup operations. Motorboat use on the Colville River, an anadromous essential fish habitat water body, might occur to transport personnel from Umiat to Umiat Lake. However, using the Colville River to access the Umiat Lake area is *not likely to adversely affect* essential fish habitat, including anadromous fish streams or a federally managed fishery.

4.2.2.4 Floodplain and Wetlands. The area surrounding Umiat Lake is considered wetland habitat and would experience some disturbances during clean up activities. Impact evaluation required under EO 11990 and EO11988. The discharge of dredged and/or fill material in wetlands and other waters of the United States is subject to regulation pursuant to Section 404 of the Clean Water Act. The collection of samples would comply with the substantive requirements of the Department of the Army nationwide Permit Number 6 (Survey Activities). The activities associated with the removal of contaminated material in wetlands would comply with the substantive requirements of the Department of the Army Nationwide Permit Number 38 (Cleanup of Hazardous and Toxic Waste). Both Nationwide Permit Number 6 and 38 were issued pursuant to the December 13, 1996, Federal register, final Notice of Issuance, Reissuance, and Modification of Nationwide Permits (61 FR 65874), and the distribution of this document (i.e. EA) fulfills the "Notification" general condition for both Nationwide Permit Number 6 and Nationwide 38.

4.2.3 Cumulative and Residual Impacts

The major activities that have and continue to affect the fish and wildlife resources of the Umiat area are oil and gas exploration and the Corps' cleanup operations. To date, no recent exploration activities authorized by the BLM in the National Petroleum Reserve – Unit A

individually or in combination, have caused significant direct, indirect, or cumulative adverse impacts to the environment in the Umiat area (BLM 2008a). Residual impacts have been broadly evaluated for those areas considered for leasing, leased, and subsequently explored (BLM 2008b). The residual impacts include the: (1) temporary surface disturbance by winter drilling at well sites; (2) temporary increase in industrial activity affecting wintertime local tranquility and solitude; (3) temporary minor impacts to tundra from ice roads and pads and longer-term, but relatively minor, visual impacts from multiple green and/or brown trails along portions of the spur routes to ice pads and water supply lakes; (4) short-term visual and noise impacts of drill rig, camp, traffic, etc.; (5) temporary disturbance, with possible displacement of some wildlife, in the area while exploration activities are underway; (6) possible loss of some small mammals (e.g., lemmings, voles, and ground squirrels) due to ice road/pad construction and the hardened overland trail; and (7) temporary, localized, minor degradation of air quality and, possibly water quality (oxygen depletion, wastewater disposal, and spills) (BLM 2008a).

The Corps' evaluation of possible cumulative effects of past (e.g. Test Wells, 2, 5 and 9 and borrow site development), present (e.g. Umiat Lake) and reasonably foreseeable (e.g. Test Well 9 PCBs and landfill stabilization) clean up activities in and around the Umiat area is that direct, indirect, and cumulative impacts from the proposed action would be relatively minor and short-term, with no significant impacts foreseen. The residual impacts of the subject Corps activities are similar to those identified and evaluated by BLM for oil and gas exploration activities, particularly those associated with the temporary disturbance of wildlife resources and surface vegetation.

5.0 COORDINATION AND REGULATORY REQUIREMENTS

The Corps' past and present cleanup activities at Umiat were and will continue to be coordinated with the North Slope Borough and the following federal and state agencies:

U.S. Department of the Interior
Bureau of Land Management - Right-of-Entry and access permits
U.S. Fish and Wildlife Service – Threatened and endangered species and migratory birds
Federal Aviation Administration - Site access
U.S. Environmental Protection Agency - Clean Water Act

State of Alaska
Department of Environmental Coordination - Interim guidance for non-UST POL soil
Department of Fish and Game - Title 16
Department of Natural Resources
    Division of Mining, Land and Water
    Division of Coastal and Ocean Management - Coastal consistency determination
    Alaska State Historical Preservation Officer - Eligibility and affects determination
Department of Transportation and Public Facilities - Transportation of solid and hazardous waste

Input from the public and aforementioned federal and state agencies on the Umiat Lake removal action is also being solicited with the public release of this environmental assessment, via Public Notice ER-09-05, dated June 2009.

In addition, and at a minimum, the preparation of this environmental assessment complies with the following federal acts and Executive Orders:

Clean Water Act
Coastal Zone Management Act
Endangered Species Act
Executive Order 11988 Floodplain Management
Executive Order 11990 Protection of Wetlands
National Environmental Policy Act and implementing regulations
National Historic Preservation Act
Magnuson-Stevens Fishery Conservation and Management Act

6.0 SUMMARY AND CONCLUSIONS

To summarize, the Umiat Lake removal action would generate a limited amount of minor and short-term impacts on a localized area, with no foreseeable significant or adverse cumulative impacts. Excavating contaminated soil would necessarily destroy vegetation within the excavation footprint. Any wildlife inhabiting the immediate area around Umiat Lake would be temporarily displaced to similar adjoining habitat by the noise and movements of heavy machinery and field crews. Short-term increases in turbidity, in selected areas of Umiat Lake, are expected during the drum and metallic debris recovery process. In the long term, the Umiat Lake removal action would improve the overall quality of the project area's environment. Therefore, this environmental assessment supports the following conclusions: (1) the proposed removal action does not constitute a major Federal action significantly affecting the quality of the human environment; (2) preparation of an environmental impact statement is not necessary, and (3) signing a finding of no significant impact is recommended.

7.0 CITED LITERATURE AND REFERENCES

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8.0 PREPARER OF THIS DOCUMENT

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