
No Department of Defense Action Indicated Report

Hazardous, Toxic, or Radioactive Waste
(HTRW)

Project # F10AK084401

Juniper Creek Site

North Slope, Alaska

September 2011



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1.0 INTRODUCTION

The Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) authorizes the cleanup of contamination resulting from past military activities at sites no longer owned by the Department of Defense (DOD). A hazardous, toxic, and radioactive waste (HTRW) project was authorized at the Juniper Creek site in 1984 after completing a Finding of DOD Responsibility assessment. Results from the assessment indicated that the Juniper Creek site was impacted by an old supply cache containing a significant quantity of fuel drums, assorted petroleum barrels, and other miscellaneous debris resulting from prior military activities.

The HTRW project at the Juniper Creek site is being recommended for closure and No DOD Action Indicated (NDAI) status based on the results of a site inspection completed by Jacobs Engineering Inc. in 2009. Results of the site inspection indicate that the majority of drums, barrels, and miscellaneous debris no longer remain at the site. A total of three drums were discovered during the inspection. A containerized-hazardous, toxic, and radioactive waste (CON-HTRW) project remains open to address remaining drums at the site. The CON-HTRW project will also be used to address debris and contamination, if any, associated with the former supply cache at the Juniper Creek site.

The United States Army Corps of Engineers (USACE) is an agent for the Department of Defense and has been assigned the responsibility of coordinating activities at Formerly Used Defense Sites. This No DOD Action Indicated (NDAI) report is issued by the United States Army Corps of Engineers, Alaska District (Alaska District); the lead agency for the Juniper Creek FUDS.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site Location and Features

Juniper Creek is located near the North Slope of Alaska at 69°32'58"N latitude and 147°30'50"W longitude in Section 9, Township 2N, Range 19E, Umiat Meridian, Alaska (see Figure 1). The Juniper Creek site, sometimes referred to as Fin Creek, sits on a bench above and approximately 200 yards away from Juniper Creek, just below its confluence with Fin Creek. The site is surrounded by numerous streams, rivers, and drainages. Terrain near the site is hilly, predominantly covered by tundra, grasses, and shrubs. The tundra is underlain by permafrost.

Access to the Juniper Creek site is generally limited to summer months for travel by air. A landing strip is located approximately four miles from the site; direct access to the site by air would be accomplished by helicopter. A "cat train" or other snow travel vehicle could directly access the site upon snow fall and freeze up of the adjacent streams, rivers, and drainages. It is possible that an aircraft equipped with landing skis could also fly directly to the site during the winter months.

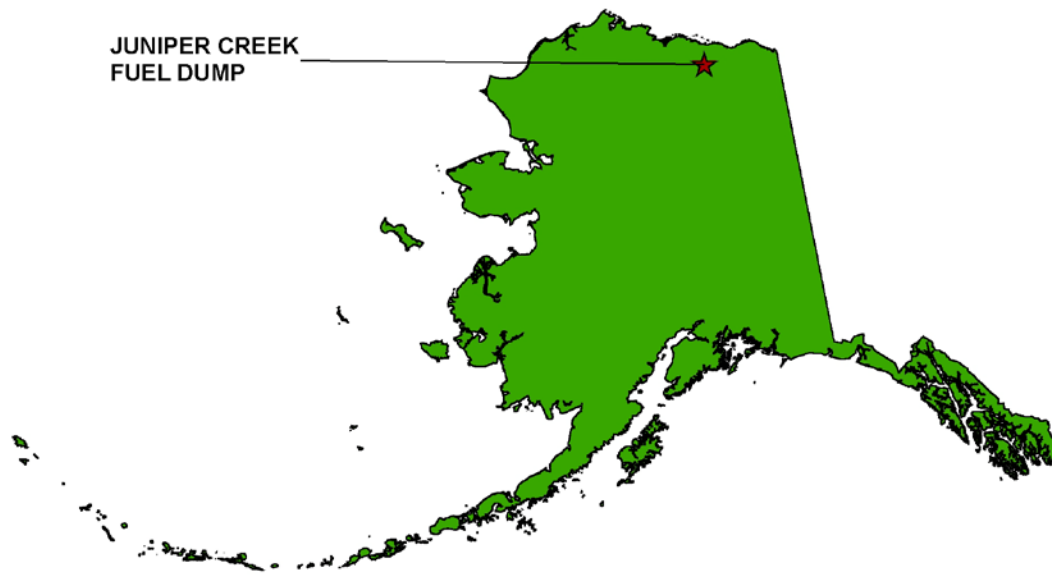


FIGURE 1. Site Location

2.2 History

The Juniper Creek site was historically used as a staging area for the United States Navy between 1952 and 1953. Arctic Contractors, a civilian oil exploration subcontractor for the Navy, utilized the site as part of the Naval Petroleum Reserve oil exploration program. Specifically, the site housed materials for a seismic survey crew working in the area during the winter of 1952 -53. The Navy had intended to drill an exploratory well at the nearby Shaviovik well site until the termination of the Naval Petroleum Reserve oil exploration program in 1953. Upon termination of the program, an equipment “cat train” recovery was accomplished at the Juniper Creek site and several other supply cache areas along the North Slope. However, significant quantities of petroleum products, lumber, and cement were abandoned at the Juniper Creek site.

In 1960, an order which had withdrawn the North Slope from public lands to permit oil exploration in support of the war effort, Public Land Order #82, was rescinded. This effectively transferred land management of the Juniper Creek site to the Bureau of Land Management (BLM).

In 1969, the BLM authorized the Colorado Oil and Gas Company to drill several exploratory oil wells on the North Slope, one of which was at the Shaviovik well site. Soon thereafter, upon completion of the exploratory wells, the company filed for bankruptcy and their equipment remained at the Shaviovik and other exploratory well sites until it was removed by Miller & Miller Co., auctioneers in 1976. It is unknown whether any of the supplies were salvaged from the cache at the Juniper Creek site.

The State of Alaska was conveyed ownership of the Juniper Creek Site and surrounding lands in 1974. The current land manager is the Department of Natural Resources (DNR).

3.0 REMEDIAL ACTIVITIES

Several site investigations and at least one cleanup action took place at the Juniper Creek site between 1982 and 2009.

1982 Alaska Department of Environmental Conservation (ADEC) Site Investigation

According to a 1982 site visit report prepared by Jeff Mach of the ADEC, an estimated 2,200 55-gallon drums were present at the site in one large pile. Approximately 1,700 of the drums were full of petroleum products labeled as aviation gasoline, diesel fuel, lubricating oil, and antifreeze. The remaining drums were empty. The full drums appeared to have been stacked in an orderly manner; however, settlement in the tundra had caused a portion of the drums to collapse. Drums at the bottom of the pile were deteriorated and multiple others were damaged, resulting in localized oil pollution in the immediate vicinity of the drum pile. Oil did not appear to have migrated to Juniper Creek at the time of the investigation. A total of 18 crates of hardened cement, a bulldozer track, and some scattered lumber pieces were also identified. No sampling was reported to have taken place during this investigation (DOD, 1984).

1985 USACE DOD Environmental Cleanup

This cleanup action included the removal of all barrels containing liquids and the skimming/siphoning/absorption/containment of uncontained, puddled, and/or pooled petroleum, oil, and/or lubricants (POLs) for transport and disposal. In addition, solid wastes and limited amounts of residual POLs that could not be contained and transported for disposal were to be burned onsite (Quadra, 1984). According to the 1996 Juniper Creek Fuel Dump Closure Report, this field effort was contracted to the Walsky Construction Company of Anchorage, Alaska. Field activities began on 28 March 1985 and continued through July of that year. The report indicates that 2,133 crushed/empty drums were taken to the North Slope Borough Landfill, while an additional 1,533 crushed/empty drums were taken to the Fairbanks North Star Borough Landfill. Approximately 62,871 gallons of fuel, 240 gallons of motor oil, and 19 gallons of anti-freeze were recovered and either beneficially reused or disposed of (USACE, 1996). Based on the ADEC Contaminated Sites Database, File Number 300.38.188, Site Name “Juniper Creek Drill Site Fuel Dump”, approximately 100 barrels were remaining on the site after the 1985 USACE DOD Environmental Cleanup. Soils were not tested or removed and there was no evidence of vegetative stress or residents in the area (ADEC, 2011).

1997 Superfund Technical Assessment & Response Team (START) Preliminary Assessment/Site Inspection (PA/SI)

START personnel completed a site visit on June 30, 1997 as part of the PA/SI. This report verified that the main drum pile and four small drum piles surrounding the main pile had been removed, along with the lumber, cement, and bulldozer track. Areas of stressed vegetation and stained soil (100 to 150 square feet) accompanied by petroleum odors were reported at two of the former drum piles. The site visit identified a drum pile (50 to 100 drums) and other debris approximately 1/8 mile to the east of the site on the west bank of Juniper Creek. A debris dump approximately 300 feet north of the site, a drum pile located 200 feet west and adjacent to a dry oil exploration hole, and several drums on a nearby bluff and on a trail leading to the dry hole were also identified. The condition of the drums ranged from crushed and mangled to intact and full with unknown contents, although several drums were labeled as petroleum products. Attachment A includes a figure of

drum locations noted during the 1997 START PA/SI (Figure 2). No samples were collected during this effort (E&E, 1997).

2009 Jacobs Engineering Site Inspection

The 2009 Site Inspection indicated that most of the material identified in 1982 was apparently removed during the 1985 USACE DOD Environmental Cleanup. Three drums were identified onsite; one drum was labeled as containing anti-icing fluid and was located near the bluff and creek. Two drums were standing upright on the top of the small hill approximately ¼ mile to the east of the first drum. The single drum was the only one investigated and was found to be intact and frozen, likely containing a moderate amount of liquid. The drums are believed to be of military origin and are consistent with material previously removed from the site. Attachment A includes a figure showing the locations of the drums identified during the inspection (Figure 6-1). No samples were collected during this effort (JE, 2009).

Data gathered during the 2009 Jacobs Engineering Site Inspection did not account for the drum pile (50 to 100 drums) or debris dump reported during the 1997 START PA/SI. In the event that these impacts are still present at the Juniper Creek site, they will be addressed under the CON-HTRW project.

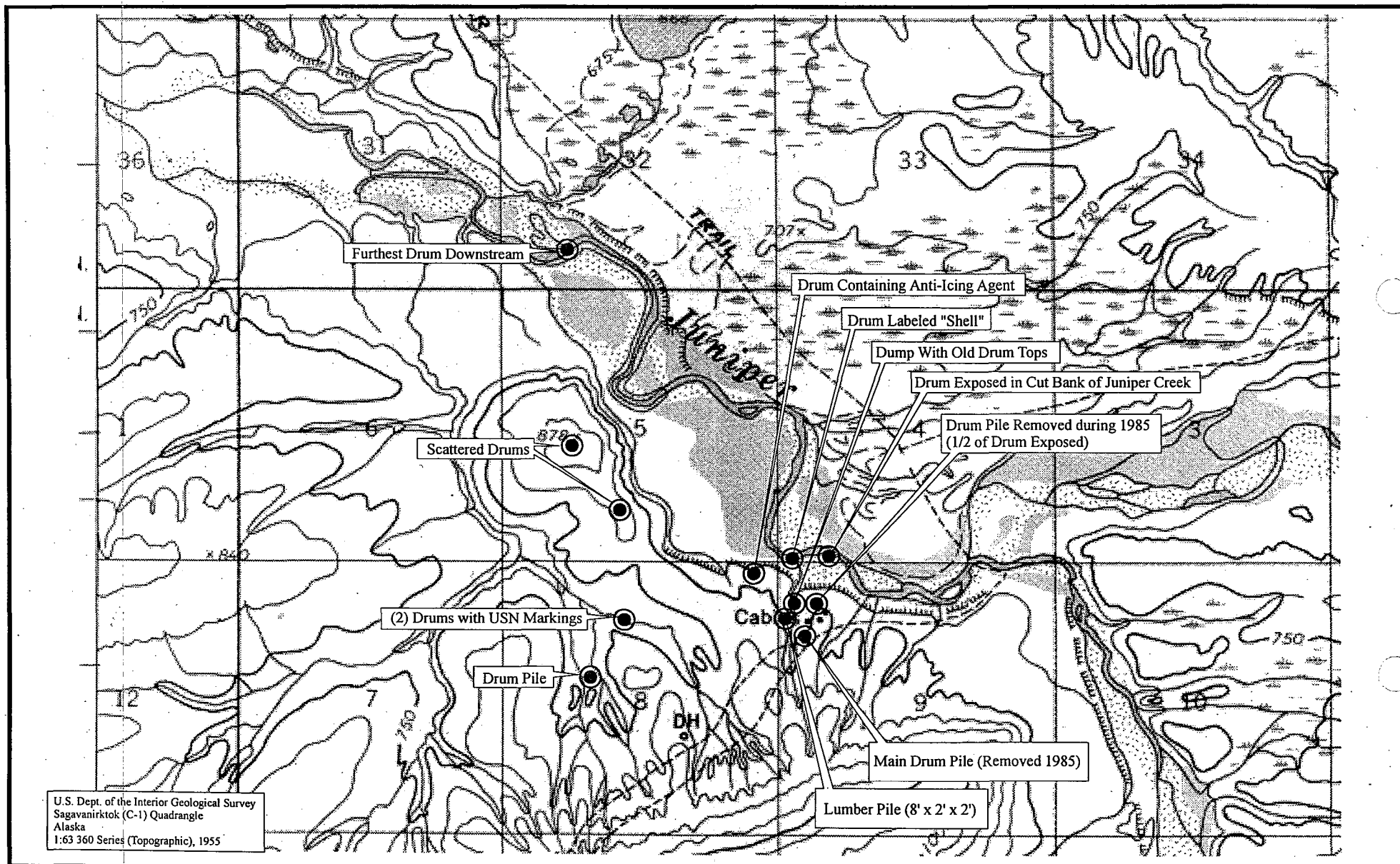
4.0 SUMMARY OF REMEDY

The site remedy consisted of cleanup of drums, barrels, and miscellaneous debris. The remedy for this HTRW project is protective of human health and the environment because the sources of contaminants have been significantly reduced. No Further Department of Defense Action Indicated has been determined for the area of concern. The remaining drums and any debris or contamination associated with the former supply cache will be addressed under the CON-HTRW project (F10AK084400) for the Juniper Creek site. Funding has been programmed for fiscal years 2012 and 2013 for the CON-HTRW project.

5.0 REFERENCES

- Alaska Department of Environmental Conservation (ADEC), 2011. Contaminated Sites Database, Cleanup Chronology Report for Juniper Creek Site Fuel Dump, Multiple Authors, Accessed 30 June 2011 through 1 July 2011. http://www.dec.state.ak.us/spar/csp/search/IC_Tracking/Site_Report.aspx?Hazard_ID=869
- Department of Defense (DOD), 1984. Environmental Restoration Defense Account Finding of DOD Responsibility – Prudhoe Bay, Alaska. FIIP # F10AK084400. May.
- Ecology and Environment, Inc. (E&E), 1997. Juniper Creek Fuel Dump Preliminary Assessment Site Inspection Trip Report. Prepared for U.S. Environmental Protection Agency, Region 10, Superfund Technical Assessment and Response Team. FIIP # F10AK084401_01.09_0500_a. September.
- Jacobs Engineering Inc. (JE), 2009. Final Site Inspection Report, Formerly Used Defense Sites Preliminary Site Inspections, Brownlow Point, Nuvagapak Point DEW Line Station, Jago River Drum Site, Lake Peters, and Juniper Creek, North Slope, Alaska. FIIP # F10AK084400_01.09_0500_a. December.
- Quadra Engineering, Inc. (Quadra), 1984. DOD Environmental Cleanup Juniper Creek, Alaska Design Analysis. FIIP # F10AK084401_02.21_0500_a. June.
- United States Army Corps of Engineers (USACE), 1996. Juniper Creek Fuel Dump Closure Report. FIIP # F10AK084401_02.22_0500_p. February.

Attachment A – Historical Site Figures



ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

JUNIPER CREEK FUEL DUMP Juniper Creek, Alaska



Scale: 1" - 1/2 Mile

Figure 2

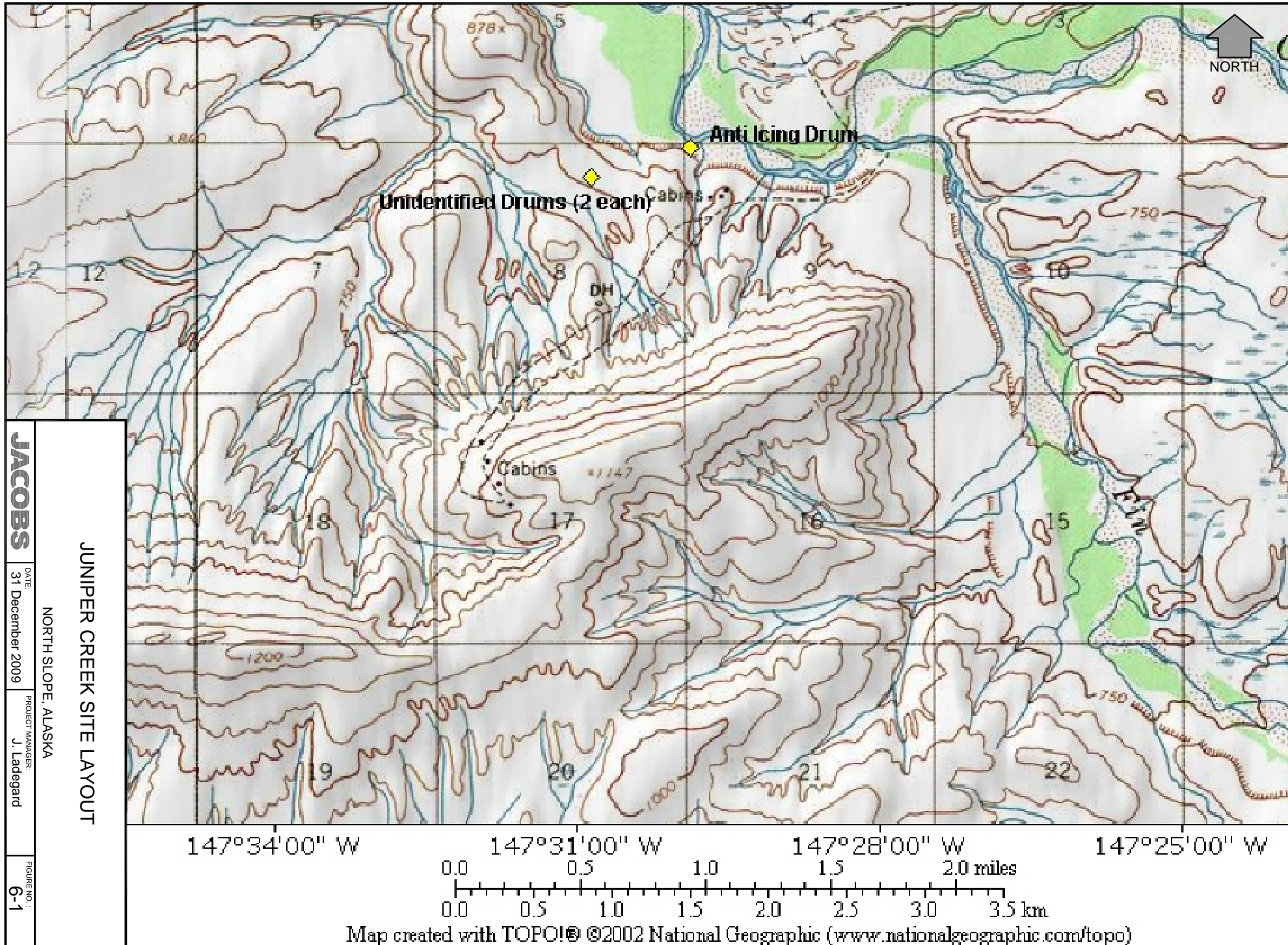
SITE FEATURE MAP

Drawn:
MRE

Date
8/11/97

Job No.
BB1301SIT0

Dwg.No.
BB1301F2



**DECLARATION OF PROJECT CLOSURE DECISION
And
NO DEPARTMENT OF DEFENSE ACTION INDICATED
For
FORMERLY USED DEFENSE SITE HTRW PROJECT
JUNIPER CREEK (F10AK084401)
NORTH SLOPE, ALASKA**

STATEMENT OF BASIS

Authority for the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) for Hazardous Toxic Radiological Waste (HTRW) projects is derived from the Defense Environmental Restoration Program, 10 USC 2701-2707. The decision to close out this HTRW project is based on the 1999 No Department of Defense Action Indicated (NDAI) determination recorded in the Formerly Used Defense Site Management Information System (FUDSMIS) and the results of a site inspection completed by Jacobs Engineering, Inc. in 2009. The September 2011 NDAI report summarizes this information.

SITE DESCRIPTION AND HISTORY

Juniper Creek is located near the North Slope of Alaska at 69°32'58"N latitude and 147°30'50"W longitude in Section 9, Township 2N, Range 19E, Umiat Meridian, Alaska. The Juniper Creek site, sometimes referred to as Fin Creek, sits on a bench above and approximately 200 yards away from Juniper Creek, just below its confluence with Fin Creek. The site is surrounded by numerous streams, rivers, and drainages. Terrain near the site is hilly, predominantly covered by tundra, grasses, and shrubs. The tundra is underlain by permafrost.

The Juniper Creek site was historically used as a staging area for the United States Navy between 1952 and 1953. Arctic Contractors, a civilian oil exploration subcontractor for the Navy, utilized the site as part of the Naval Petroleum Reserve oil exploration program. Specifically, the site housed materials for a seismic survey crew working in the area during the winter of 1952 -53. The Navy had intended to drill an exploratory well at the nearby Shaviovik well site until the termination of the Naval Petroleum Reserve oil exploration program in 1953. Upon termination of the program, an equipment "cat train" recovery was accomplished at the Juniper Creek site and several other supply cache areas along the North Slope. However, significant quantities of petroleum products, lumber, and cement were abandoned at the Juniper Creek site.

DESCRIPTION OF THE SELECTED REMEDY AND IMPLEMENTATION

The site remedy consisted of a large cleanup effort, undertaken in March 1985 and continuing through July 1985. The cleanup included the removal of 3,666 drums and miscellaneous debris consisting of scattered lumber, 18 crates of cement, and a bulldozer track. Approximately 62,871 gallons of fuel, 240 gallons of motor oil, and 19 gallons of anti-freeze were disposed of and/or beneficially reused during the effort. According to the 2009 Site Inspection Report completed by Jacobs Engineering, Inc., only 3 drums remain at the site. The remaining drums and any contamination associated with the former supply cache at the Juniper Creek site will be addressed under the CON-HTRW project (F10AK084400). The remedy for this HTRW project

is protective of human health and the environment because the sources of contaminants have been significantly reduced.

The Department of Natural Resources (DNR) is the current landmanager for the Juniper Creek site. Mr. Bruce Sackinger is the point of contact and has been notified of this decision.

DECLARATION

In accordance with the Defense Environmental Restoration Program for Formerly Used Defense Sites, the U.S. Army Engineer District, Alaska, has completed all HTRW activities at the Juniper Creek FUDS (F10AK084401), North Slope, Alaska. This Declaration of Project Closure Decision supports the conclusion that all known sources of HTRW have been remediated. No further HTRW actions are required by the DOD at this project location. This decision may be reviewed and modified in the future if any new information becomes available which indicates the presence of eligible HTRW that may cause a risk to human health or the environment. All removal activity requirements that remain at the Juniper Creek site will be accomplished under the CON-HTRW project (F10AK084400).

This Declaration of Project Closure Decision has been prepared and approved by the undersigned in accordance with the FUDS Program Policy, Engineer Regulation (ER) 200-3-1, May 10, 2004.

_____ Date _____

Reinhard W. Koenig
Colonel, Corps of Engineers
District Commander

The State of Alaska, through the Department of Environmental Conservation agrees this HTRW project closure is consistent with state cleanup requirements as long as the remaining drums and associated contamination are addressed under the Juniper Creek CON-HTRW project. The decision may be reviewed and modified in the future if information becomes available that indicates the presence of contaminants or waste that may cause unacceptable risk to human health or the environment.

_____ Date _____

John Halverson

DOD Cleanup Unit Manager

Alaska Department of Environmental Conservation