

**FIELD INVESTIGATION REPORT
OCEAN CAPE RADIO RELAY
FORMERLY USED DEFENSE SITE
YAKUTAT, ALASKA
SITE NO. F10AK074700**

**Contract No. DACA85-91-D-0003
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1. INTRODUCTION

Pursuant to the United States Army Corps of Engineers, Alaska District, (Corps) Contract No. DACA85-91-D-0003, Delivery Order No. 0032, the Corps tasked Ecology and Environment, Inc., (E & E) to investigate formerly used defense sites at various locations in Alaska under the Defense Environmental Restoration Program (DERP) of the United States Department of Defense (DoD). This field investigation report (FIR) presents the historical research, findings of a site reconnaissance, and analytical sample results at the former Ocean Cape Radio Relay site, Yakutat, Alaska (site No. F10AK074700).

DERP was established to investigate, clean up, or remove hazards left at a site by a DoD agency. DERP categorizes hazards as hazardous and toxic waste (HTW), ordnance and explosive waste (OEW), building demolition and debris removal (BD/DR), and radiological wastes. In order for DERP to fund a cleanup or investigation, the site and hazards must meet DERP eligibility requirements (Corps 1990).

The field investigation at the former Ocean Cape Radio Relay site was conducted to identify and categorize DERP-eligible hazards and to identify potential public health and environmental hazards related to DoD use of the site. This FIR is based on data derived from available files, literature pertaining to the site, interviews with local officials and site workers, and an E & E site visit on April 18, 1994.

Three potential areas of concern were identified at the Ocean Cape Radio Relay site: the water pump house area, the maintenance garage, and the fuel storage area. These areas are described in Section 4.

Section 2 contains figures and details background information on the site, including physiography and facts about historical use. Section 3 describes the logistics of traveling to and sampling at Ocean Cape. Section 4 presents the field observations and describes the

sampling and chemical analysis results. Section 5 discusses those hazards that potentially qualify for DERP-funded investigation or cleanup. Findings and Determination of Eligibility (FDE) is Appendix A. Records of correspondence during the field investigation are Appendix B, a photographic log and photograph location map are in Appendix C, and field notes are Appendix D. A BD/DR project summary sheet is Appendix E, a cost appraisal for DERP-funded investigation and cleanup is Appendix F, United States Environmental Protection Agency (EPA) Form 2070-12 is Appendix G, a preliminary cost appraisal for HTW is Appendix H, and OEW risk assessment sheets are Appendix I.

2. SITE DESCRIPTION AND BACKGROUND INFORMATION

This section describes the location, physical setting, and historic use of the former Ocean Cape Radio Relay site.

2.1 SITE DESCRIPTION

The former Ocean Cape Radio Relay site consists of 244.83 acres. The site is 5 miles from the City of Yakutat at the end of Pt. Carrew Road (see Figure 2-1). The United States Public Land Survey coordinates for the property are as follows: Section 29, Township 27S, Range 33E, Copper River Meridian (United States Geological Survey 1989).

United States Air Force (USAF) improvements at the former Ocean Cape Radio Relay site consisted of the following structures: eight industrial buildings; 17 miscellaneous support facilities, including water and fuel storage tanks; fuel and water pipelines; four 60-foot Tropo antennas; access road; a bridge; and utility lines. The majority of these structures were removed during a 1984 Yakutat Environmental Restoration Defense Account debris cleanup and site restoration design (Corps 1984). The remaining structures on site include the water storage tank, water pump house, gasoline tank, maintenance garage, bulk diesel fuel oil storage tank, fuel pump house, and fuel pipelines. These structures were not removed during the 1984 Corps removal per request of the current property owner, Yak-Tat Kwaan, Inc. (see Figure 2-2).

2.1.1 Geographic Setting

The site is within the Tongass National Forest on the Phipps Peninsula approximately 5 miles west of Yakutat. Yakutat is northwest of the Alaska panhandle, approximately 210 miles northwest of Juneau. The site is bordered to the southwest by the Gulf of Alaska, to

the northwest by Yakutat Bay, to the northeast by muskeg land and Monti Bay, and to the southeast by the Ankau Saltchucks. Virgin forests, clear-cut forests, and the St. Elias Mountains border the site vicinity to the north and east.

2.1.2 Demography

Approximately 671 permanent residents live in Yakutat (Alaska Department of Community & Regional Affairs Community Data Base 1994). Yakutat's economy depends heavily on fishing and fish processing. Five thousand to 7,000 seasonal residents visit the area for commercial fishing and recreation (United States Forest Service [USFS] 1994).

One recreational facility, Cannon Beach Campground maintained by USFS, is 5.5 miles southeast of the former Ocean Cape Radio Relay site.

2.1.3 Regional Geology

The City of Yakutat is situated on unconsolidated Quaternary glacial outwash deposits. Yakutat is on the Yakutat foreland, a gently sloping outwash plain between the St. Elias Mountains and the Gulf of Alaska. The outwash plain and associated moraine, lacustrine, and alluvial sediments were deposited during repeated cycles of glacial advance and retreat by the Malaspina Glacier 500 to 600 years ago (Yehle 1979).

Outwash deposits slightly inland from Yakutat Bay are subdivided into coarse-grained and fine-grained. The coarse-grained outwash deposits consist of sandy gravel to silty gravel. The outwash deposits begin near the outermost terminal moraines near Yakutat Bay and extend inland approximately 2 miles, ending near the Yakutat Airport (Yehle 1979). The deposits vary in thickness from 3 to 23 feet (Holmes 1994).

Terminal moraine deposits form curvilinear ridges that parallel the general alignment of shores along Yakutat Bay. The primary material in the moraine deposits is glacial till consisting of granule- and pebble-laden silt and sand, with some cobbles, clay, and boulders. The estimated maximum thickness of moraine deposits is 220 feet (Holmes 1994).

Tertiary sedimentary rocks beneath the surficial deposits range in depth from 175 feet below ground surface (BGS) southeast of Yakutat Airport to 300 feet BGS in Yakutat.

2.1.4 Groundwater

The region's main water bearing zones occur in unconsolidated Quaternary glacial outwash deposits. Groundwater in the Yakutat area occurs within 10 feet of ground surface (Yehle 1979). Sufficient subsurface information is unavailable to determine whether this shallow aquifer is confined or whether confining layers exist. City wells, described below, are screened at intervals ranging from 72 to 82 feet BGS and 157 to 171 feet BGS. Based on these screen intervals and depths, more than one aquifer may be in this region. Groundwater flow direction at the former Ocean Cape Radio Relay site is unknown.

The city is served by a municipal water system that is supplied by two wells. The well that serves as the main water supply for Yakutat is approximately 324 feet deep and has screened intervals from 157 to 171 feet and 205 to 210 feet (Holmes 1994). The main well is approximately 5.5 miles northeast of the site and 1 mile northeast of the City of Yakutat. The second well, located in the City of Yakutat and 5 miles east of the site, serves Yakutat as a backup well. This backup well is approximately 82 feet deep with the screened interval at 72 to 82 feet (Holmes 1994).

2.1.5 Surface Water

Although Ocean Cape is near the shore of the Gulf of Alaska, a shoreline ridge, which forms a topographic high along the western boundary of the site, directs surface water runoff to north and south portions of the site. No rivers or drainage ditches flow through the site, nor are muskeg ponds present on site.

2.1.6 Ecology

The main terrestrial vegetative community in the Yakutat area is coastal western hemlock-Sitka spruce forest. The coastal forest consists of three plant communities: true forest, grass-sedge meadows, and muskeg. The community surrounding the site consists of true forest. The dominant tree species in the true forest are western hemlock, Sitka spruce, Alaska cedar, and western red cedar. Understory vegetation is represented by alder shrubs and moss. Muskeg and bog plant communities are interspersed throughout the forest near the site (Hart Crowser, Inc. [HC] 1990).

Terrestrial mammals frequently seen in the area include brown bear, black bear, moose, Sitka blacktail deer, wolves, fox, beaver, red squirrel, and flying squirrel.

The Yakutat area also is a concentration area for waterfowl and shorebirds in spring and fall, and four seabird nesting colonies are within 15 miles of the site. Bird species in the area include trumpeter swan, bald eagle, great blue heron, blue grouse, Steller's jay and ptarmigan (HC 1990).

Ankau Creek and Ankau Saltchuck, located within 1 mile of Ocean Cape, are important habitat areas for king crab, Dungeness crab, tanner crab, clams, and shrimp (USFS 1994).

2.1.7 Climate

Yakutat lies within the maritime climatic zone, which is characterized by heavy precipitation, cool summers, and mild winters.

A climatological summary for the Yakutat area for the periods from 1923 to 1926, 1940 to 1968, and 1977 to 1987 identified mean temperatures ranging from 18.1°F in January to a maximum of 47.7°F in July. However, average temperatures range from 17°F to 35°F in winter and 43°F to 60°F in summer. Temperature extremes ranged from a low of -22°F in January 1952 to a high of 86°F in August 1957 (Leslie 1989).

The mean annual precipitation for the Yakutat area is 139.20 inches, while the mean annual snowfall totals 207.7 inches. June is usually the driest month in the area, with a mean monthly precipitation of 6.14 inches. The greatest amount of rainfall is received in October, with the mean monthly precipitation recorded at 20.88 inches (Leslie 1989). The two-year, 24-hour maximum rainfall in the Yakutat area is 5 inches (Miller 1963).

Prevailing winds blow from the east to southeast at an average velocity of approximately 10 miles per hour (Leslie 1989).

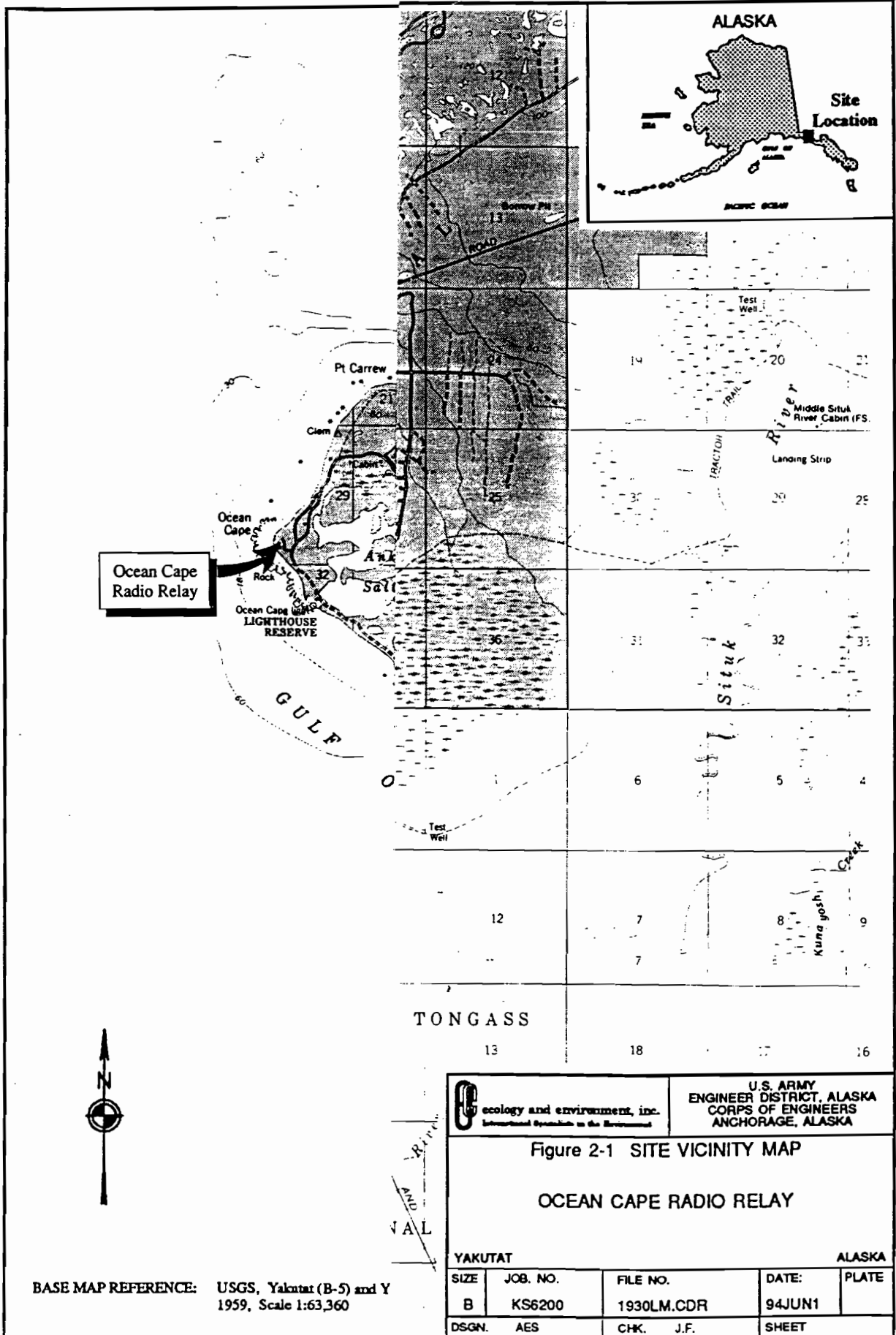
2.2 SITE HISTORY

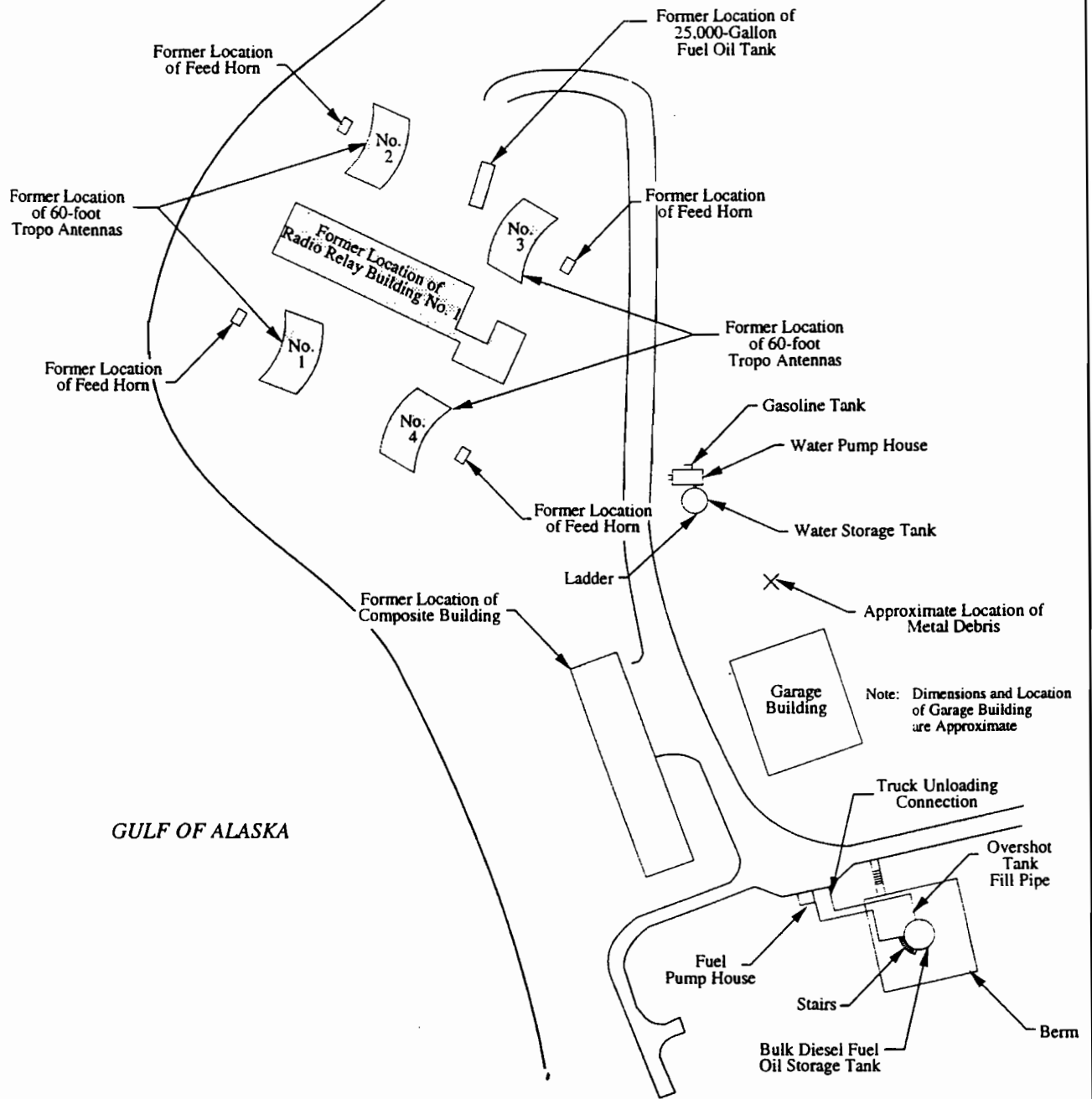
USAF acquired three tracts of land from the USFS, Bureau of Land Management (BLM), and the State of Alaska Division of Lands, totaling 244.83 acres between 1960 and 1968 for the former Ocean Cape Radio Relay site. USAF used the site from 1960 to 1974 for a tropospheric communications station as part of the Ballistic Missile Early Warning System (BMEWS) of the White Alice Communications System (WACS). The site originally was designated as Ocean Cape Air Force Station and redesignated as Ocean Cape Radio Relay

on July 6, 1960. The site served as a radio link between BMEWS sites at Cape Yakataga and Hoonah. Some of the former USAF area improvements are shown in Figure 2-2.

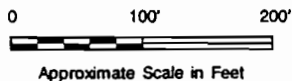
USAF terminated operation of the BMEWS portion of WACS in June 1974. Between June 1974 and June 1976, the site was leased to RCA Alaska Communications, Inc., (RCA) which took over operation of the WACS A Route. RCA discontinued use of the site in 1976, following construction of a new satellite earth station nearby.

The former Ocean Cape Radio Relay site was declared excess to USAF requirements in 1976 and the property was transferred to BLM in 1977. The area was withdrawn in 1971 for selection pursuant to the Alaska Native Claims Settlement Act and conveyed to Yak-Tat Kwaan, Inc., the Yakutat native village corporation, in 1983. Yak-Tat Kwaan, Inc., remains the owner of the site (surface estate). Details presented in the FDE include dates of acquisition, ownership, and transference, and a brief site history (see Appendix A).





Note: Dimensions and Location of Garage Building are Approximate



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	Figure 2-2 SITE MAP			

FORMER OCEAN CAPE RADIO RELAY SITE

YAKUTAT			ALASKA	
SIZE	JOB. NO.	FILE NO.	DATE:	PLATE
A	KS6200	1913SM.CDR	94JUN1	
DSGN.	AES	ecology and environment	SHEET	

3. LOGISTICS

This section describes the logistics of the field investigation and sampling effort at the former Ocean Cape Radio Relay site. This information is provided to decrease the time spent in planning future trips to this location.

3.1 SITE VISIT LOGISTICS

3.1.1 Schedule and Personnel

The field team traveled to Yakutat on April 17, 1994. Field team members were Janet Kaps, E & E team leader; Jacqueline Foster, E & E site safety officer and sampler; and Colt Denfeld and Maureen Cochrell, Corps representatives. Correspondence relevant to logistics is in Appendix B.

3.1.2 Transportation and Lodging

One daily commercial flight to Yakutat from Anchorage is available on Alaska Airlines.

Lodging for E & E team members and Corps representatives was provided by Glacier Bear Lodge, (907) 784-3202. Other lodging in the area can be arranged with Yakutat Lodge, (907) 784-3232.

A rental vehicle was obtained through Situk Leasing, the only car rental agency in Yakutat. Because of the site's location, travel along a poorly maintained dirt road is required. Use of a two-wheel drive vehicle to access the site during summer would be sufficient; however, a four-wheel drive or all-terrain vehicle would be more appropriate during fall, winter, and spring.

3.1.3 Site Access

E & E requested written permission from Yak-Tat Kwaan, Inc., personnel to access and collect samples on their property. A letter of permission was obtained (see Appendix B).

The site is accessible by a two-wheel drive vehicle; however, the bridge across Ankau Creek, which must be crossed to access the site, is in poor condition, and signs posted read, *Pass at own risk.*

3.2 SAMPLING LOGISTICS

3.2.1 Surface Soil Sample Collection Methods

Surface soil samples were collected using disposable stainless steel spoons and a dedicated trowel. Surface soil was placed into disposable aluminum mixing bowls; thoroughly homogenized; and placed in the appropriate-size, pre-labeled, laboratory-precleaned sample jars. Surface soil was collected from the top 6 inches of soil. Gasoline-range organic (GRO) and volatile organic compound samples were placed in jars before homogenization. All samples were sealed immediately after collection and cooled with ice to 4° C for preservation.

3.2.2 Sample Transportation

Sample transportation for this field investigation consisted of packing samples in an ice-filled cooler containing vermiculite and securing the cooler with custody seals. The samples were shipped to Anchorage by Alaska Airlines air freight service. An E & E representative picked up the samples and re-iced, repacked, and resecured the coolers with custody seals. The samples then were shipped to the appropriate laboratories by Federal Express from Anchorage.

Samples were sent to the project laboratory, Columbia Analytical of Kelso, Washington, and to the quality assurance (QA) laboratory, CENPD-PE-GT-L of Troutdale, Oregon.

3.2.3 Investigation-Derived Waste

Investigation-derived waste (IDW) was separated from general waste and placed in double garbage bags. The IDW, which was flown to Anchorage for storage in E & E's warehouse, will be delivered to the Corps for disposal.

4. INVESTIGATION SUMMARY

4.1 FIELD OBSERVATIONS

On April 18, 1994, E & E and two Corps representatives performed a site reconnaissance and collected samples at the former Ocean Cape Radio Relay site. The site reconnaissance focused on the five areas of concern previously identified. The following sections discuss field observations, and photographs of the areas identified and described in this section, along with a photographic log and photograph location maps, are in Appendix C. Field notes are Appendix D.

4.1.1 Water Pump House Area

The water pump house area consists of a pump house building, gasoline tank, and an above-ground water storage tank. The water storage tank, constructed of steel, is a 22 feet in diameter and 26 feet tall. The water storage tank was empty at the time of the reconnaissance. An unsecured, 24-inch-diameter shell manhole door is on the southwest side of the tank, and a ground-accessible ladder extends to the top (see photograph No. 1). The north side of the water storage tank is connected to a 20-by-10-foot water pump house (see photograph No. 2). The pump house, which is constructed of concrete walls and foundation and a steel roof, is an unsecured building. The pump house contains a wellhead in the southwest corner, a small water storage tank, a pump motor, electrical boxes, and numerous valves (see photograph Nos. 3 and 4). A 30-by-36-inch gasoline tank is in a concrete bulkhead along the north side of the water pump house. The tank is surrounded by 12 inches of sand on all sides and is covered with water (see photograph Nos. 5 and 6). This gasoline tank may have been the fuel source for the pump motor. No fuel odor was noted near the gasoline tank, and no fuel sheen was noted on the water surface covering the gasoline tank.

4.1.2 Maintenance Garage

An approximately 80-by-100-foot maintenance garage building is south-southeast of the water storage tank (see Figure 2-2). The maintenance garage is constructed of a concrete foundation, corrugated steel exterior walls and roof, and plywood interior walls. The maintenance garage has two secured wooden bay doors, one approximately 15 by 10 feet and the other approximately 15 by 20 feet (see photograph No. 7). The access door on the north side of the garage building is absent. Three floor drains in the concrete floor were noted. Discolorations in concrete surrounding the floor drains were noted. Samples associated with the floor drains were not collected because of the sampling media (see photograph No. 8). One floor drain is approximately 4 feet from a sink. The sink and a work bench are the only remaining structures inside the maintenance garage. Visible staining was not observed on ground surface outside the maintenance garage.

A small pile of metal debris, which appears to have been electrical equipment, was noted in an open area between the garage building and the water storage tank (see photograph No. 9).

4.1.3 Fuel Storage Area

The fuel storage area consists of an aboveground diesel fuel oil storage tank, fuel pump house, and associated fuel pipelines. The diesel fuel oil storage tank is 30 feet high, 27 feet in diameter, and surrounded by a 5-foot-wide berm (Corps 1960). Circular stairs are attached to the west side of the tank and extend from ground surface to the top of the tank (see photograph No. 10). A 24-inch-diameter, steel, bolted, shell manhole door also is on the west side of the tank. A valve connected to a yellow-and-black-striped pipeline is north of the shell manhole door at the bottom of the tank. No stained soil was noted beneath the valve or the pipeline. A surface soil sample was collected at this location. This pipeline extends north into the berm, exits the berm to the southeast of the pump house, and enters the fuel pump house on the south side (see Figure 2-2).

An overshot tank fill pipe extends from the top of the fuel tank down the exterior of the tank to the truck unloading connection (Corps 1960; see Figure 2-2). No stained soil was noted along this pipeline or associated valves; however, a petroleum odor was detected near a valve at the elbow adjacent to the tank and at the truck unloading connection. A surface soil sample was collected beneath the elbow of the overshot tank fill pipe and beneath the truck

unloading connection. The field team noted a sign that reads *Danger Liquid Fuel Pipeline* in a stand of trees immediately southwest of the truck unloading connection (see photograph No. 11).

The fuel pump house, which is approximately 80 feet northwest of the bulk diesel fuel oil storage tank, is constructed of concrete and is approximately 14 by 10 feet. A secured door is on the north side of the building. A 2-inch pipeline and valve enter the west side of the fuel pump house. A sign above the pipeline at this location reads *Danger Liquid Fuel Pipe Line Water Draw Off* (see photograph No. 12). The 1960 Corps maps indicate that this pipeline extended to a 25,000-gallon fuel oil tank, which is no longer present. A 200-by-300-foot gravel pad remains at the former location of the four 60-foot Tropo antennas, four feed horns, radio relay building No. 1, and the 25,000-gallon fuel oil tank. No staining or fuel odor is present at this location.

A panoramic view of the former Ocean Cape Radio Relay site is shown in photograph Nos. 13 and 14.

4.1.4 Radio Relay Building

The former location of the Radio Relay building was identified during the site reconnaissance. This building, along with associated support structures, was removed during the 1984 Yakutat Environmental Restoration Defense Account debris cleanup and site restoration effort (Corps 1984). No evidence of contamination was noted associated with the building's former location.

4.1.5 Composite Building

The former location of the composite building was identified during the site reconnaissance. This building was removed during the 1984 Yakutat Environmental Restoration Defense Account debris cleanup and site restoration effort (Corps 1984). No evidence of contamination was noted associated with the building's former location.

4.2 SAMPLE LOCATIONS AND CHEMICAL ANALYSIS RESULTS

Following is a summary of the analytical results for samples collected at the former Ocean Cape Radio Relay site on April 18, 1994. Five surface soil samples were collected at three locations in the fuel storage area. No other area at the site contained evidence of

contamination. A sample summary is presented in Table 4-1, and sample locations are noted on Figure 4-1.

A triplicate soil sample was collected at one sample location to satisfy sample QA/quality control requirements. Two of the triplicate samples were sent to the project laboratory, and one was sent to the QA laboratory. Table 4-2 lists the analytical results. Table 4-3 summarizes regulatory or toxicity action levels for contaminants of concern. Concentrations in Table 4-2 that exceed action levels in Table 4-3 are highlighted. Sample locations referenced below are noted on the sample location map (see Figure 4-1).

Overall, the sample analytical data are acceptable. However, all total recoverable petroleum hydrocarbon (TRPH) results are considered estimated (J) because the matrix spike was diluted out because of high concentrations of fuel in the samples. The precision and accuracy of the analytical method could not be determined. The diesel-range organic (DRO) results for sample Nos. 94OCW001SL and 94OCW004SL are considered estimated because the extraction efficiency of the analytical method could not be determined because of required dilutions of the samples. The DRO results for sample Nos. 94OCW002SL, 94OCW003SL, and 94OCW005SL are considered estimated because the matrix spikes were diluted out because of high concentrations of fuel in the samples. The project laboratory quantified organic components that eluted in the gasoline range as gasoline. However, the chromatogram of these components did not match the typical gasoline fingerprint. The GRO results for sample Nos. 94OCW001SL, 94OCW002SL, and 94OCW003SL are accepted as estimated.

All samples were analyzed for TRPH (EPA Method 418.1), GRO (Alaska Department of Environmental Conservation [ADEC]-modified EPA Method 8015), and DRO (ADEC-modified EPA Method 8100) content. The sample results in Table 4-2 indicate that the majority of the TRPH detected in the samples is attributable to DRO content. Therefore, action levels presented in Table 4-3 are limited to GRO and DRO. According to the 1991 ADEC *Interim Guidance for Non-UST (Underground Storage Tank) Contaminated Soil Cleanup Levels*, the action level for soil contaminated with GRO is 50 milligrams per kilogram (mg/kg), and for DRO, 100 mg/kg for a Level A cleanup, the most conservative level. Action levels for Level D cleanup, the least conservative level, are 1,000 mg/kg for GRO and 2,000 mg/kg for DRO.

Sample No. 94OCW001SL was collected beneath the truck unloading connection east of the fuel pump house (see photograph No. 15). Stained soil was not noted; however, a

slight petroleum odor was detected beneath the truck unloading connection. GRO was detected below the ADEC action level (28 J mg/kg), and DRO was detected above all ADEC matrix cleanup levels (26,000 J mg/kg).

Sample Nos. 94OCW002SL, 94OCW003SL, and 94OCW004SL were triplicate samples collected beneath the valve north of the shell manhole door of the bulk diesel fuel oil storage tank (see photograph No. 16). Stained soil was not noted; however, a slight petroleum odor was detected. These samples contained GRO at concentrations ranging from not detected to 53 J mg/kg. GRO was detected above the ADEC matrix cleanup level (53 J mg/kg) in sample No. 94OCW003SL. DRO was detected at concentrations above all ADEC matrix cleanup levels, ranging from 4,370 J mg/kg to 7,400 J mg/kg.

Sample No. 94OCW005SL was collected from beneath the elbow of the overshot tank fill pipe of the bulk diesel fuel oil storage tank (see photograph No. 17). Stained soil was not noted; however, a slight petroleum odor was detected. The sample did not contain detectable levels of GRO, but DRO was detected above ADEC matrix cleanup Levels A and B (697 J mg/kg).

Total contaminated soil is estimated to cover 7,000 square feet. The depth of contamination is unknown.

9

Table 4-1			
SAMPLE SUMMARY			
FORMER OCEAN CAPE RADIO RELAY SITE			
YAKUTAT, ALASKA			
Sample Number	Matrix	Location	Laboratory Analysis
94OCW001SL	Soil	Truck unloading connection	GRO, DRO, TRPH
94OCW002SL	Soil	Bulk diesel fuel oil storage tank valve north of shell manhole door	GRO, DRO, TRPH
94OCW003SL	Soil	Bulk diesel fuel oil storage tank valve north of shell manhole door	GRO, DRO, TRPH
94OCW004SL	Soil	Bulk diesel fuel oil storage tank valve north of shell manhole door	GRO, DRO, TRPH
94OCW005SL	Soil	Bulk diesel fuel oil storage tank beneath overshot tank fill pipe elbow	GRO, DRO, TRPH

Key:

DRO = Diesel-range organic.

GRO = Gasoline-range organic.

TRPH = Total recoverable petroleum hydrocarbon.

Table 4-2

**ANALYTICAL RESULTS FOR SOIL SAMPLES
FORMER OCEAN CAP RADIO RELAY SITE
YAKUTAT, ALASKA
(mg/kg)**

Sample Number	94OCW001SL	94OCW002SL	94OCW003SL	94OCW004SL(QA)	94OCW005SL
Replicate Samples	—	94OCW003SL	94OCW002SL	94OCW002SL	—
	—	94OCW004SL(QA)	94OCW004SL(QA)	94OCW003SL	—
Approximate Depth	6-inches	6-inches	6-inches	6-inches	6-inches
Date	4-18-94	4-18-94	4-18-94	4-18-94	4-18-94
TRPH	26,000 J	5,100 J	4,400 J	5,790 J	500 J
GRO	28 J	45 J	53 J	ND(110)	ND(5)
DRO	26,000 J	5,900 J	7,400 J	4,370 J	697 J

Note: Shaded areas denote concentrations above action levels. Values in parentheses indicate detection limits.

Key:

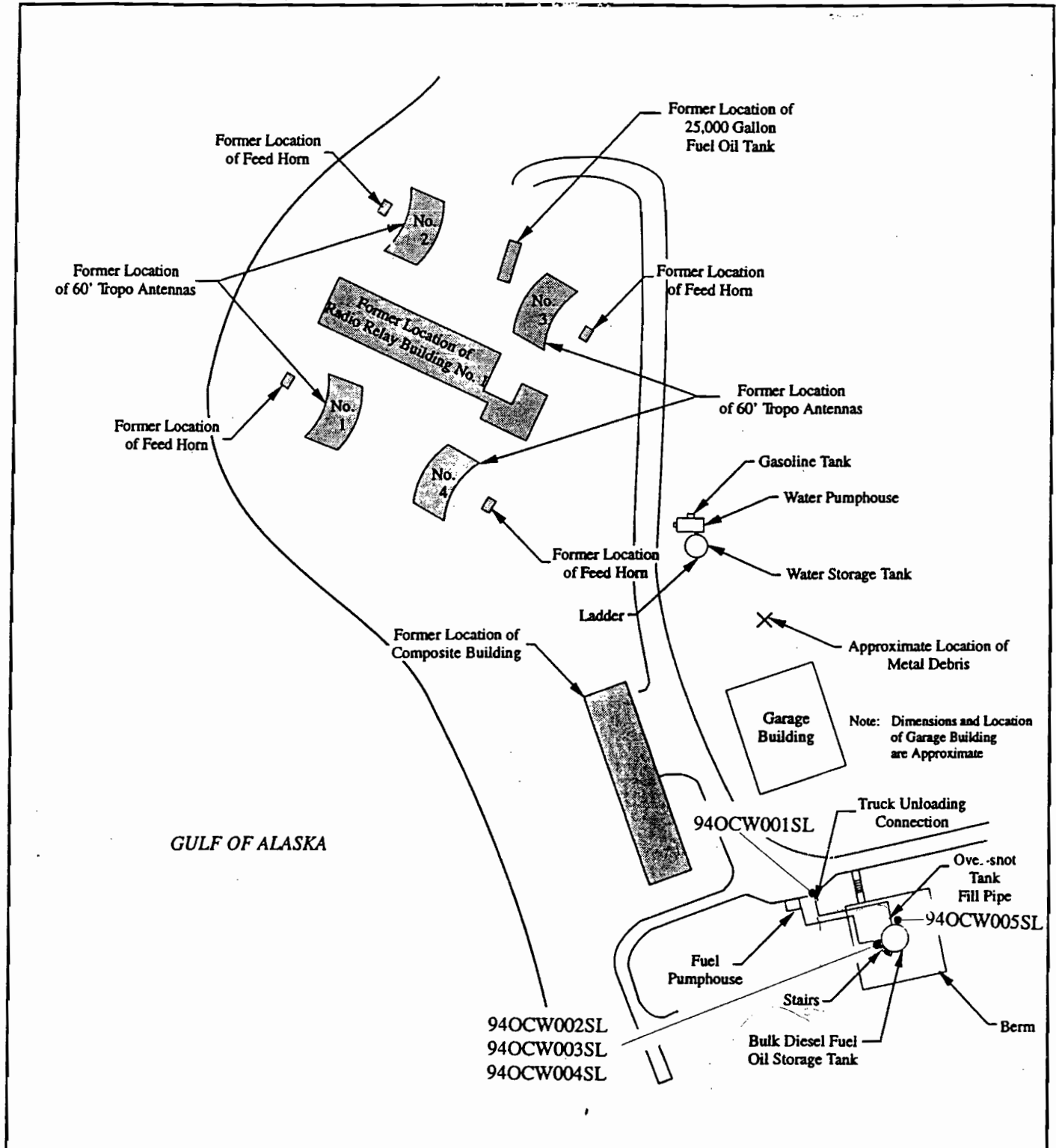
- DRO = Diesel-range organics.
- GRO = Gasoline-range organics.
- J = Estimated concentrations below detection limit.
- mg/kg = Milligrams per kilogram.
- ND = Not detected above values in parentheses.
- QA = Quality assurance.
- TRPH = Total recoverable petroleum hydrocarbons.

<p style="text-align: center;">Table 4-3</p> <p style="text-align: center;">CONTAMINANTS OF CONCERN—ACTION LEVELS IN SOILS</p> <p style="text-align: center;">FORMER OCEAN CAPE RADIO RELAY SITE</p> <p style="text-align: center;">YAKUTAT, ALASKA</p> <p style="text-align: center;">(mg/kg)</p>	
Contaminant	Action Level
Gasoline-range petroleum hydrocarbons	50 ^a
Diesel-range petroleum hydrocarbons (diesel No. 2, kerosene, and jet fuel)	100 ^a

^a Alaska Department of Environmental Conservation, July 17, 1991, *Interim Guidance for Non-UST Contaminated Soil Cleanup Levels*. Matrix score sheet Level A was chosen as the most conservative cleanup level. A matrix score sheet was not completed.

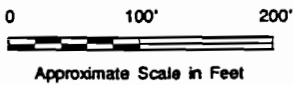
Key:

mg/kg = Milligrams per kilogram.
 UST = Underground storage tank.



GULF OF ALASKA

Note: Dimensions and Location of Garage Building are Approximate



ecology and environment, inc. <small>International Specialists in the Environment</small>	U.S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA			
	Figure 4-1 SAMPLE LOCATION MAP OCEAN CAPE RADIO RELAY			

YAKUTAT				ALASKA
SIZE	JOB. NO.	FILE NO.	DATE:	PLATE
A	KS6200	1913SM.CDR	94JUN1	
DSGN.	AES	CHK. J.F.	SHEET	

5. AREAS POTENTIALLY QUALIFIED FOR DERP-FUNDED INVESTIGATION OR CLEANUP

5.1 BUILDING DEMOLITION/DEBRIS REMOVAL

To qualify for DERP-funded removal, debris must represent a hazard at the time of transfer from DoD to another party. USAF declared the former Ocean Cape Radio Relay site excess in June 1976, and the property was transferred to BLM in May 1977. Yak-Tat Kwaan, Inc., the current owner, obtained the property in December 1983, pursuant to the Alaska Native Claims Settlement Act. The structures remaining at the site were left at the request of Yak-Tat Kwaan, Inc., during the 1984 Corps removal.

Areas that present potential hazards at the former Ocean Cape Radio Relay site are the ground accessible ladder attached to the water storage tank and the ground-accessible spiral stairs attached to the bulk diesel fuel oil storage tank. However, since structures were left on site per Yak-Tat Kwaan, Inc.'s, request, the site does not qualify for BD/DR project funding.

A completed BD/DR project summary sheet is Appendix E. EPA Form 2070-12, Part 3, Description of Hazardous Conditions and Incidents, is Appendix F.

5.2 HAZARDOUS AND TOXIC WASTE

Based on available data, three identified areas of concern qualify for HTW project funding. Recommendations for additional investigation are presented:

- Sample the well inside the water pump house for petroleum hydrocarbon contamination;
- Sample the subsurface soil near the floor drains in the maintenance garage; and

- Determine the extent of fuel contamination associated with the fuel storage area.

Based on real estate records, the entire site qualifies for DERP-Formerly-Used Defense Sites consideration; however, RCA may be considered a potentially responsible party if it beneficially used portions of the site where contamination is discovered. The estimated costs to further delineate soil contamination are in Appendix G.

5.3 ORDNANCE AND EXPLOSIVE WASTE

No OEW was discovered at the former Ocean Cape Radio Relay site. A completed OEW risk assessment sheet is Appendix H.

6. REFERENCES

- Alaska Department of Community & Regional Affairs Community Data Base, 1994, *Community Profile of Yakutat*, Yakutat, Alaska, February 1.
- Ecology and Environment, Inc., 1992, *Environmental Compliance Investigation Report for the Yakutat Air Navigation Station, Yakutat, Alaska*.
- Hart Crowser, Inc., 1990, *Preliminary Assessment Yakutat Airport and Associated Facilities, Yakutat, Alaska*, (draft final report), revised February 1991, Anchorage, Alaska.
- Holmes, W., 1994, *Environmental Overview and Hydrogeologic Conditions at Yakutat, Alaska*, United States Geological Survey, Anchorage, Alaska. Open file report (draft), March 1, 1994.
- Leslie, L., 1989, *Alaska Climate Summaries*, second edition, Alaska Climate Center Technical Note No. 5, Arctic Environmental Information and Data Center, University of Alaska, Anchorage, Alaska.
- Miller, J.F., 1963, Technical Paper No. 47, *Probable Maximum Precipitation and Rainfall Frequency Data for Alaska*, United States Weather Bureau, Washington, DC.
- United States Army Corps of Engineers, 1990, memorandum regarding Defense Environmental Restoration Program Formerly Used Defense Site policy guidance, Washington, DC.
- United States Army Corps of Engineers, Alaska District, 1984, *Yakutat Environmental Restoration Defense Account Debris Cleanup and Site Restoration*, Yakutat, Alaska.
- _____, 1960, *Ocean Cape A.F.S., Alaska Rearward Communications Facilities*, February 18, 1960.
- _____, n.d., Findings and Determination of Eligibility.
- United States Forest Service, 1994, *Subsistence Shellfish Regulations Summary Southeast Alaska—Yakutat Area*, handout, revised July 1987.

United States Geological Survey (USGS), 1989, Topographic Map 1:63360, Yakutat
Quadrangle, Alaska.

Yehle, L.A., 1979, *Reconnaissance Engineering Geology of the Yakutat Area, Alaska, with
Emphasis on Evaluation of Earthquakes and Other Geologic Hazards*, USGS,
Professional Paper 1074.

APPENDIX A

FINDINGS AND DETERMINATION OF ELIGIBILITY

**DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY**

**Ocean Cape Radio Relay Site
Yakutat, Alaska**

Site No. F10AK074700

FINDINGS OF FACT

1. Ocean Cape Radio Relay Site, containing 244.83 acres, was acquired for the Department of the Air Force as follows: Tract A, containing 78.60 acres within the North Tongass National Forest, was obtained from the U.S. Forest Service (USFS) by Memorandum of Understanding (MOU) dated 22 January 1960. Tract B, containing 69.27 acres, was obtained from the Department of the Interior, Bureau of Land Management (BLM), by 44LD513 notation dated 3 February 1967, as amended 20 February 1968 and 16 July 1968. Tract A was merged into Tract B by the 44LD513 notation which superseded the USFS MOU. Tract 100P, containing 96.96 acres of tidelands, was obtained from the State of Alaska, Division of Lands (ADL), by Use Permit dated 3 March 1960. The site was originally designated as Ocean Cape Air Force Station and redesignated as Ocean Cape Radio Relay Site on 6 July 1960.
2. The site was used by the U.S. Air Force from 1960 to 1974 for a tropospheric communications station as part of the Ballistic Missile Early Warning System (BMEWS) of the White Alice Communications System (WACS). The facility served as a radio link between BMEWS sites at Cape Yakataga and Hoonah, Alaska. Improvements constructed by the Air Force consisted of eight industrial buildings and 17 miscellaneous support facilities including an access road and bridge, utility lines, pipelines, water and fuel storage tanks, and four 60' billboard antennas. Tract 100P was used for gravel removal. The Air Force terminated operation of the BMEWS portion of the WACS in June 1974. Between June 1974 and June 1976, the site was leased to RCA Alaska Communications, Inc., (RCA) which took over operation of the WACS "A" Route. RCA discontinued use of the site in June 1976 following construction of a new satellite earth station nearby.
3. Ocean Cape Radio Relay Site was declared excess to Air Force requirements in June 1976 and was disposed of by relinquishment to the BLM on 11 May 1977. The ADL tidelands permit previously expired on 3 March 1961. Subject to the 44LD513 reservation for military use, the area was withdrawn in 1971 for selection pursuant to the Alaska Native Claims Settlement Act. The former site lands were conveyed to Yak-Tat-Kwaan, Inc., the Yakutat Native village corporation, by Interim Conveyance 761 dated 7 December 1983. Current owner of the site (surface estate) remains Yak-Tat-Kwaan, Inc.

copy

Site No. F10AK074700

DETERMINATION

Based on the foregoing Findings of Fact, the site has been determined to be formerly used by DOD. It is therefore eligible for the Defense Environmental Restoration Program - Formerly Used Defense Sites, established under 10 USC 2701 et seq.

Date

**ERNEST J. HARRELL
Major General, USA
Commanding**

APPENDIX B

CORRESPONDENCE

FILE YAKUTAT
Ocean Cape



ecology and environment, inc.

840 K STREET, ANCHORAGE, AK 99501, TEL. (907) 257-5000
International Specialists in the Environment

May 6, 1994

Mr. Colt Denfeld
Alternate Contracting Officer's Representative
Corps of Engineers, Alaska District
CENPA-EN-EE-AI
P.O. Box 898
Anchorage, Alaska 99506-0898

Contract No. DACA85-91-D-0003, Delivery Order No. 0032, Inventory Project Reports for Formerly Used Defense Sites, Alaska

Dear Mr. Denfeld:

This letter summarizes a site visit conducted by Ecology and Environment, Inc., (E & E) at the Ocean Cape White Alice Site (Site No. F10AK074700), Yakutat, Alaska, on April 18, 1994. More detailed information, including photographs and figures, will be included in the Field Investigation Report prepared for the site. The E & E field team, Janet Kaps and Jacqueline Foster, was accompanied by Colt Denfeld and Maureen Cochrell from the U. S. Army Corps of Engineers, Alaska District (Corps).

All buildings associated with the White Alice site had been demolished and removed before the site visit except for the following: a water pumphouse with associated above-ground water tank, a garage building, and a fuel pumphouse with associated above-ground fuel tank. Petroleum odors were noted during the site visit near valve joints adjacent to the fuel pumphouse and tank. Surface soil samples were collected beneath each of the three valve joints where the petroleum odor was noted.

The following table summarizes the analyses requested for samples collected from the site.

Analyses for Samples Collected At Ocean Cape White Alice Site			
Location	Number of Samples	Matrix	Analyses ^a
Valve joint near fuel pumphouse	1	Soil	TRPH, GRO, DRO
Valve joint adjacent to fuel tank, on west side	3 (triple volume collected for QA/QC)	Soil	TRPH, GRO, DRO
Valve joint adjacent to fuel tank, on north side	1	Soil	TRPH, GRO, DRO

^a TRPH = total recoverable petroleum hydrocarbons; GRO = gasoline-range organics; DRO = diesel-range organics.

Mr. Colt Denfeld
May 6, 1994
Page 2

Project samples were sent to Columbia Analytical in Kelso, Washington. Quality assurance samples were sent to the North Pacific Division Lab in Troutdale, Oregon.

Prior to the site visit, E & E contacted the current site owner, Yak-Tat Kwaan, Inc., by mail to ask for permission to access the sites and collect samples. While in Yakutat, E & E interviewed representatives from Yak-Tat Kwaan, Inc. Copies of letters sent to and received from the property owner, along with a summary of the interview conducted while in Yakutat, are included as attachments to this letter. E & E is currently in the process of confirming information obtained by the Corps regarding when buildings at the White Alice were demolished and removed from the site. E & E hopes to clarify this issue in the Field Investigation Report.

Please do not hesitate to call Janet Kaps or Jackie Foster at 257-5000 if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Louise Flynn FOR".

Louise Flynn
Project Manager

Attachments



ecology and environment, inc.

840 K STREET, ANCHORAGE, AK 99501, TEL. (907) 257-5000
International Specialists in the Environment

March 29, 1994

Mr. Donald G. Bremnar
President, Yak-Tat Kwaan Inc.
P. O. Box 416
Yakutat, Alaska 99689

Dear Mr. Bremnar:

The United States Army Corps of Engineers (Corps) has contracted Ecology and Environment, Inc. (E & E) to investigate land formerly owned or used by the Department of Defense (DOD). The purpose of this investigation is to determine the existence of unsafe debris, ordnance, and hazardous or toxic waste left by DOD that qualify for cleanup or restoration under the Defense Environmental Restoration Program (DERP) (Public Law 98-212).

Records show that Yak-Tat Kwaan Inc. owns portions of two of the sites currently under investigation. One site is located at the Ocean Cape White Alice site and the other site is the former Yakutat Air Force Base.

E & E requests written permission to enter these sites during the third or fourth week of April 1994. Two representatives from E & E and representatives from the Corps plan to conduct a two-day investigation of the Ocean Cape White Alice site and a three-day investigation of the former Yakutat Air Force Base site. The investigation will consist of observing the condition of any remaining DOD structures, photographing the site, and collecting a maximum of four samples in areas showing signs of distressed vegetation, sheens on water, or any other indications of possible contamination. Samples will be collected with hand tools only.

If you have any questions regarding this investigation please contact me at (907) 257-5000.

Sincerely,
ECOLOGY AND ENVIRONMENT, INC.

Janet Kaps
Environmental Scientist

JK:jk



April 7, 1994

Ecology and Environment, Inc.
Attn. Janet Kaps
840 K Street
Anchorage, AK 99501

RE: Ecology and Environment letter to YKI, dated March 29, 1994

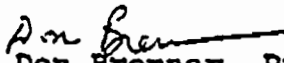
Dear Janet:

Yak-tat Kwaan, Inc. has no objection to your company doing this investigation on our RCA property. However, we have three stipulations prior to your work taking place:

1. That YKI will not assume any liability for any of your employees as a result of your doing work on our lands.
2. That your employees stop by our office in Yakutat prior to going out to the work site or on arrival to Yakutat.
3. That YKI receives a copy of the findings of your investigation.

If you have any questions please call our office at 784-3488.

Sincerely,


Don Bremner, President
YAK-TAT KWAAN, Inc,

cc: files

CONTACT REPORT

MEETING (X) TELEPHONE ()

PERSON CONTACTED: Don Stewart
TITLE: Ranger, United States Forest Service (USFS)
PHONE: (907) 784-3359
CONTACT PERSON: Janet Kaps, Ecology and Environment, Inc. (E & E)
Jacqueline Foster, E & E
DATE: April 18, 1994

SUMMARY:

Mr. Stewart showed E & E the materials he had in his files for the Yakutat Former Air Force Base and the former Ocean Cape Radio Relay site. Materials consisted of United States Geological Survey topographic maps dated 1981, the 1984 United States Army Corps of Engineers report, and a five-page report that included a map entitled *Yakutat Landing Field*. During the meeting, Mr. Stewart provided us with the following information about the Yakutat Former Air Force Base:

- He heard rumors indicating that the military buried debris and waste while in Yakutat;
- One of the Yakutat Former Air Force Base Quonset huts, not included in the 1984 Corps removal effort, was used by USFS for equipment storage;
- Former Air Force drums may be located at the southeast end of the Yakutat airport runway;
- An amphibious personnel carrier and two cannons are at Cannon Beach Park; and
- Four former gun emplacements are between Ocean Cape and Pt. Carrew. The gun emplacements are evidenced by concrete, doughnut-shaped bases.

To clarify reference made to a dump 16 miles outside Yakutat in the 1984 Corps removal report, Mr. Stewart indicated that he was unaware that a dump existed. He indicated that the city landfill, 2.5 miles outside Yakutat, was probably the dump used to dispose of materials during the Corps removal effort.

Ecology and Environment, Inc.

RECORD OF COMMUNICATION

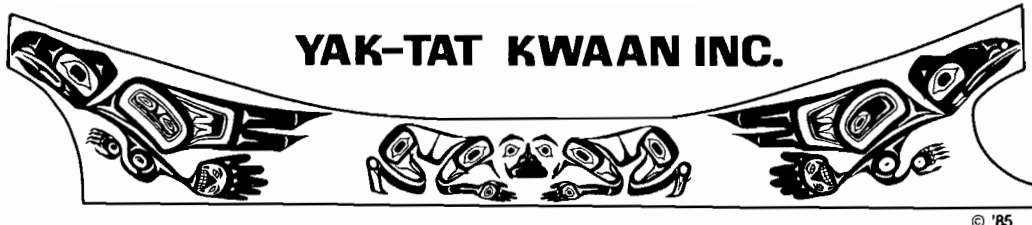
Conversation with: John Hawk	Date: May 25, 1994
Address: United States Forest Service	Time: 1503
Telephone Number: (907) 784-3359	Originator Placed Call: []
Subject: Tourists in Yakutat	Originator Received Call: [X]

Discussion:

Ballpark estimate from 5,000 to 7,000 tourists pass through Yakutat yearly for hiking, fishing, and skiing.

Follow up Action:

Originator's Signature:



August 15, 1994

1. colt → coord w/PM for reply
2. PM → add to W.P. ??

Wayne Rowe ^{8/23}
Chief Environmental Branch
Alaska District Corps of Engineers
P.O. Box 898
Anchorage, AK 99516-0898

Subject: Preliminary Environmental Study on Ocean Cape White Alice Site

Dear Mr. Rowe:

We at Yak-tat Kwaan would like to thank the Corps of Engineers for all the efforts by the Corps to bring the site into its natural state prior to development by the Department of Defense during the Cold war.

As a follow-up on discussions with your staff officer, Colt Denseld and Marvin Adams on August 10, 1994, please accept this letter as a formal request from Yak-tat Kwaan, Inc. to receive a copy of the above-mentioned study.

We were informed by Mr. Denseld that there appears to be Diesel fuel contamination at the former Ocean Cape White Alice Site. Frankly, this is of great concern to us since the village Corporation is planning a future hotel/ lodge operation on the site, and currently there is a culture camp in the vicinity with numerous children in the area. Without a doubt this newly-discovered contamination at the Ocean Cape site would cause a delay in developing our future project.

As you are probably aware this is valuable property for us, not only in a monetary sense, but it also has a culturally-rich, historic value to our elders and tribe. The site was a major trading location for our tribes; and eventually when the Russians arrived, they set up a fort to trade with the Natives.

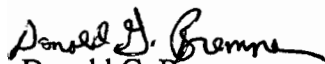
The next issue that needs to be addressed is the Ankau Bridge. As you may be aware, the bridge was built by the Department of Defense in order to access the Ocean Cape Site. Currently the bridge poses a safety hazard to the public, and only one vehicle is allowed to cross at a time. Looking across from east to west on the bridge, there is a noticeable sag in the bridge. Also the guard rail is rotting out, and a vehicle could easily go off the bridge. The decking has rotted away and will need to be removed.

Wayne Rowe
August 15, 1994
Page 2

Unfortunately, there seems to have been an oversight with regards to the bridge during the demolition of the White Alice Site, because it should have been included in the inventory for removal. I reviewed a document from the Bureau of Land Management regarding the condition of the bridge dated in 1987, and it appears to conflict with the current condition of the bridge.

I hope this letter will assist you in addressing our concerns. In the past our working relationship with the Corps of Engineers has been very positive, and we sincerely hope that this will continue while we work to resolve the above-mentioned issues. We thank you for your prompt attention on this matter and look forward to working with you.

Sincerely,


Donald G. Bremner
President,

DGB/mla

cc: File

APPENDIX C

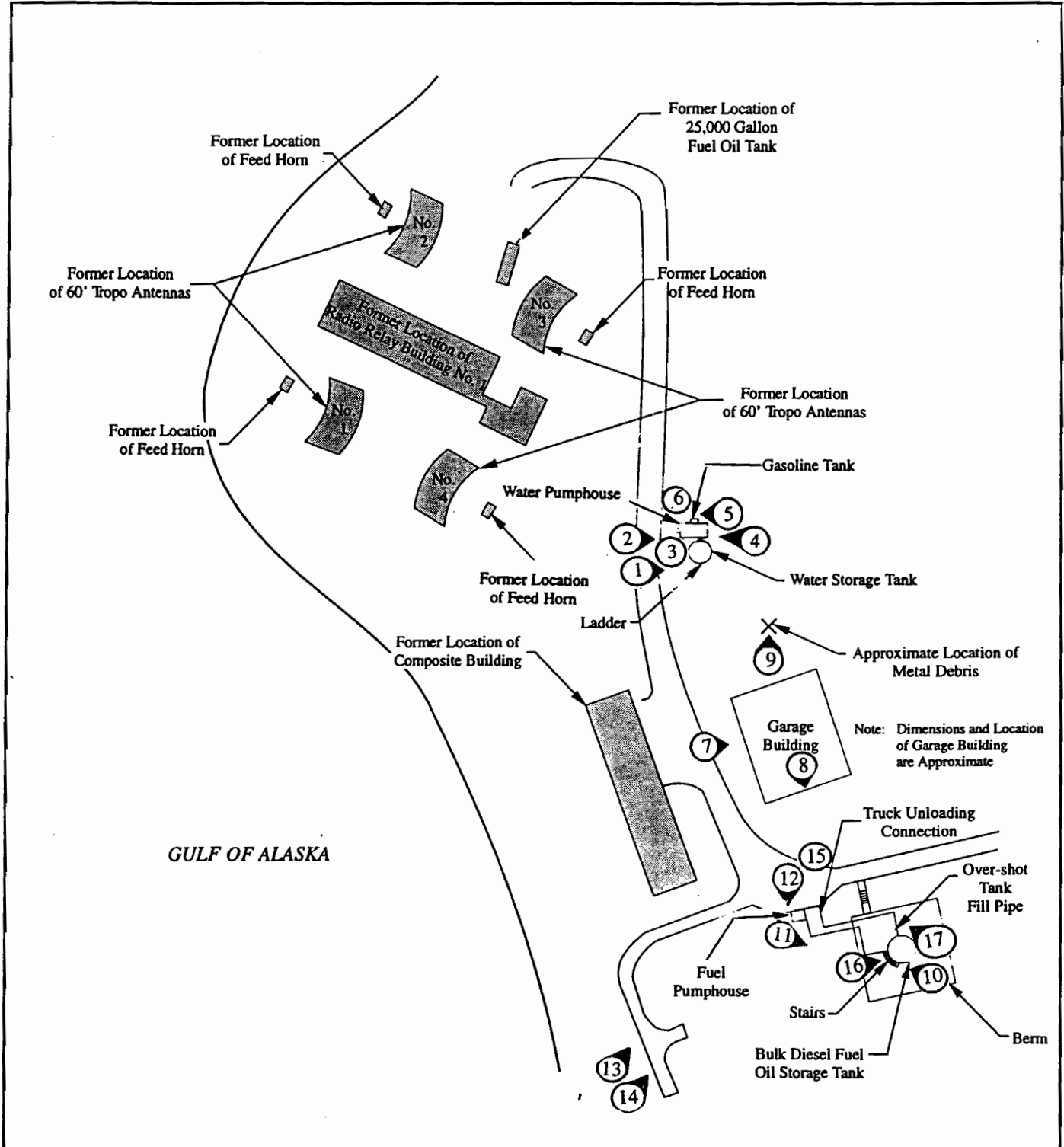
**PHOTOGRAPH LOG
AND PHOTOGRAPH LOCATION MAP**

Table C-1						
PHOTOGRAPHIC LOG						
FORMER OCEAN CAPE RADIO RELAY SITE						
YAKUTAT, ALASKA						
Photo	Roll	Frame	Date	Time	Direction	Description
1	1	9	4-18-94	0905	E	Water storage tank with ladder on south side of tank
2	1	4	4-18-94	0854	E	Water pump house connected to water storage tank
3	1	3	4-18-94	0846	—	Well head in southwest corner of water pump house
4	1	2	4-18-94	0844	W	Interior of water pump house
5	1	6	4-18-94	0858	W	Gasoline tank covered by 6 inches standing water
6	1	5	4-18-94	0856	—	Close-up of gasoline tank covered by 6 inches of standing water
7	1	11	4-18-94	0913	E	Southwest side of garage building with two bay doors closed
8	1	29	4-18-94	1119	S	Sink on south wall within garage building; floor drain approximately 3 feet in front of sink, water staining
9	1	10	4-18-94	0909	N	Metal debris, possibly electrical equipment, between water storage tank and garage building
10	1	16	4-18-94	0929	NW	Spiral stairs on west side of bulk diesel fuel oil storage tank
11	1	18	4-18-94	0946	SE	Sign <i>Danger Liquid Fuel Pipeline</i> associated with truck unloading connection, sign in stand of trees
12	1	13	4-18-94	0917	S	Valve, on west side of pump house, labeled <i>Danger Liquid Fuel Pipe Line Water Draw Off</i>
13	3	2	4-18-94	1201	NE	Panoramic view of garage building and water storage tank
14	3	1	4-18-94	1200	NE	Panoramic view of bulk diesel fuel oil storage tank, fuel pump house, and garage building
15	1	19	4-18-94	1034	—	Location of sample No. 94OCW001SL beneath truck unloading connection
16	1	20	4-18-94	1054	E	Collection of sample Nos. 94OCW002SL, 94OCW003SL, and 94OCW004SL beneath valve north of shell manhole door
17	1	22	4-18-94	1058	NW	Location of sample No. 94OCW005SL beneath elbow of overshot tank fill pipe

Key at end of table.

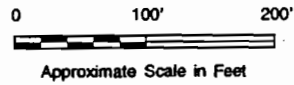
Key:

- = Not applicable.**
- E = East**
- N = North.**
- NE = Northeast.**
- NW = Northwest.**
- S = South.**
- SE = Southeast.**
- W = West.**



GULF OF ALASKA

Note: Dimensions and Location of Garage Building are Approximate

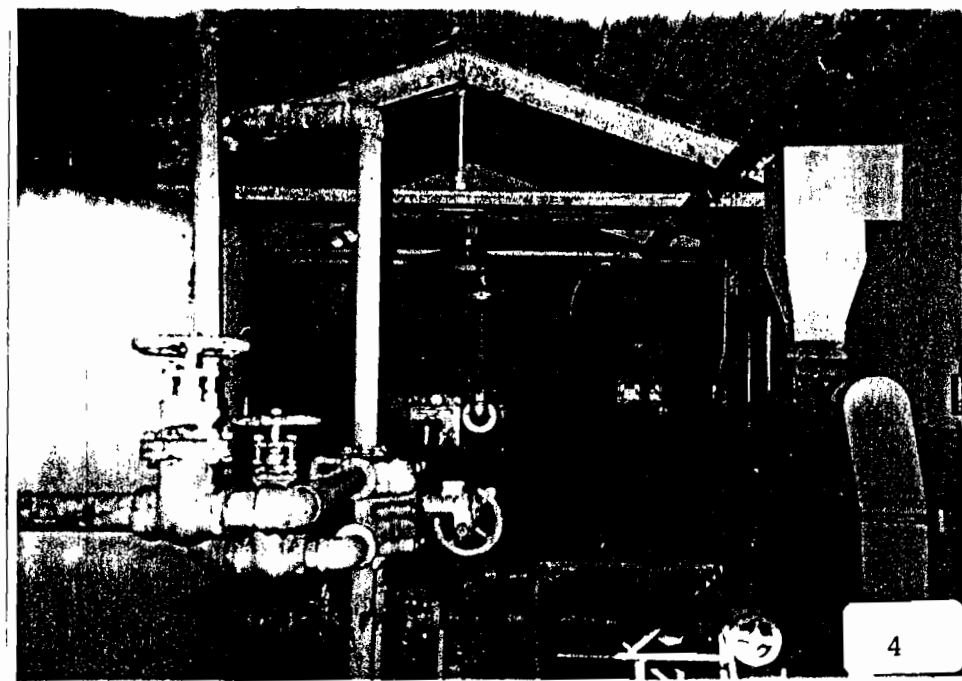
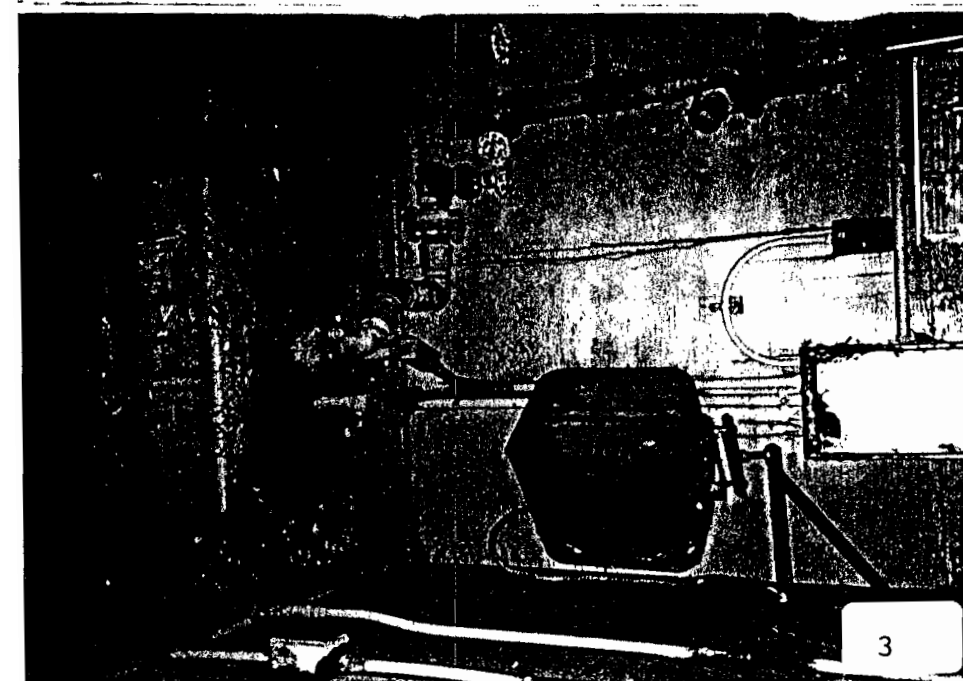
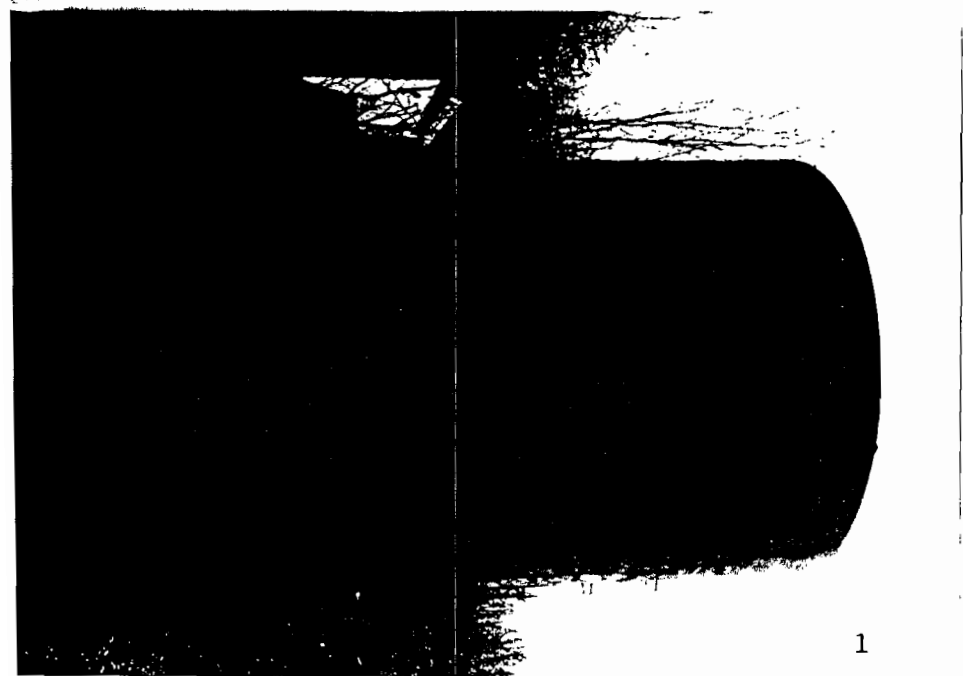


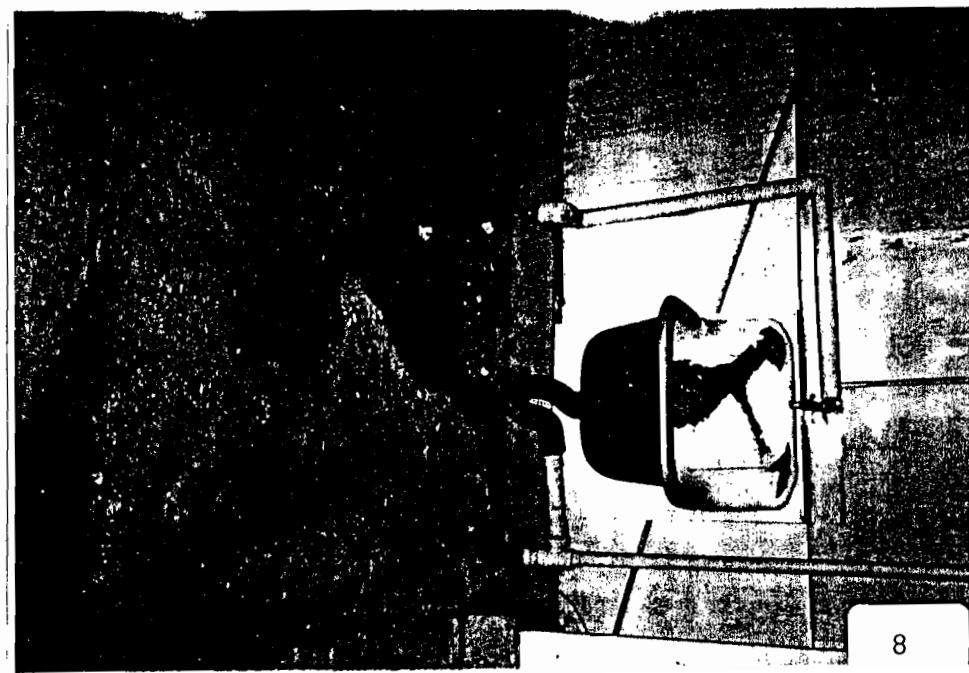
ecology and environment, inc. International Specialists in the Environment

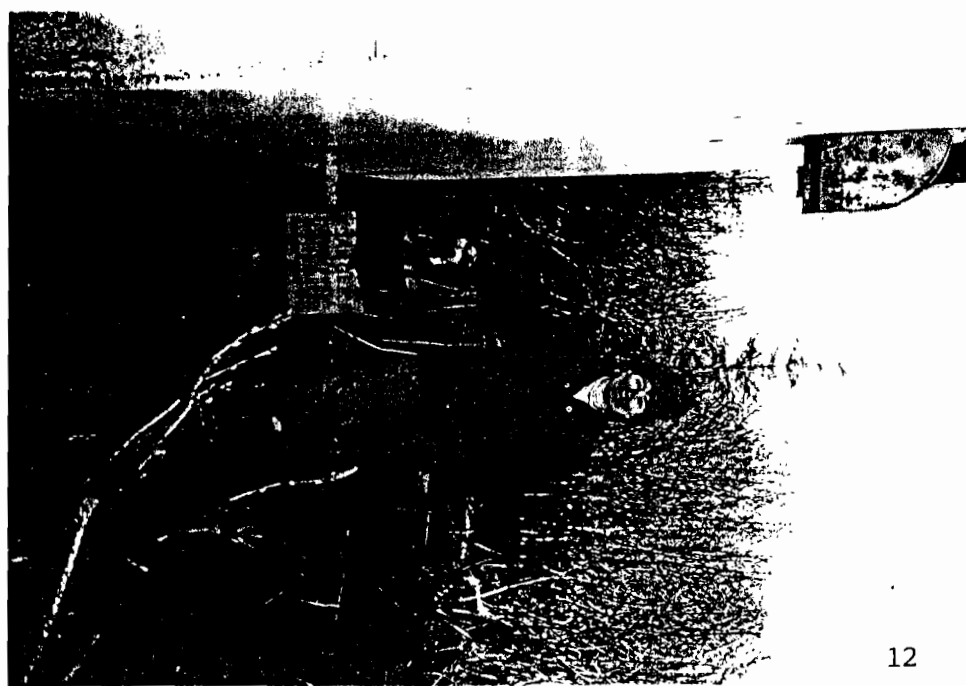
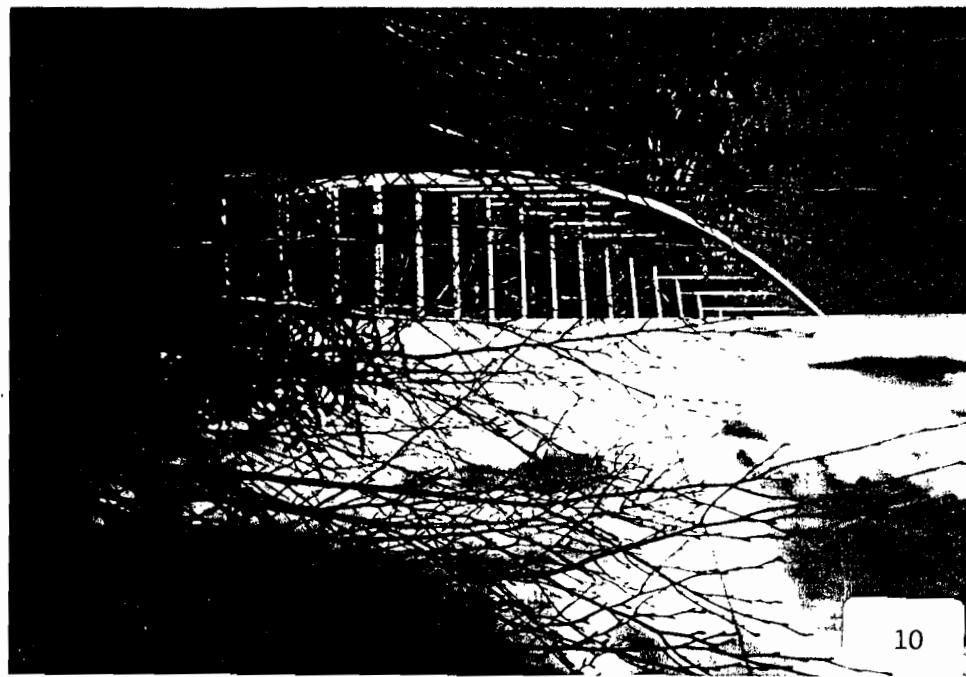
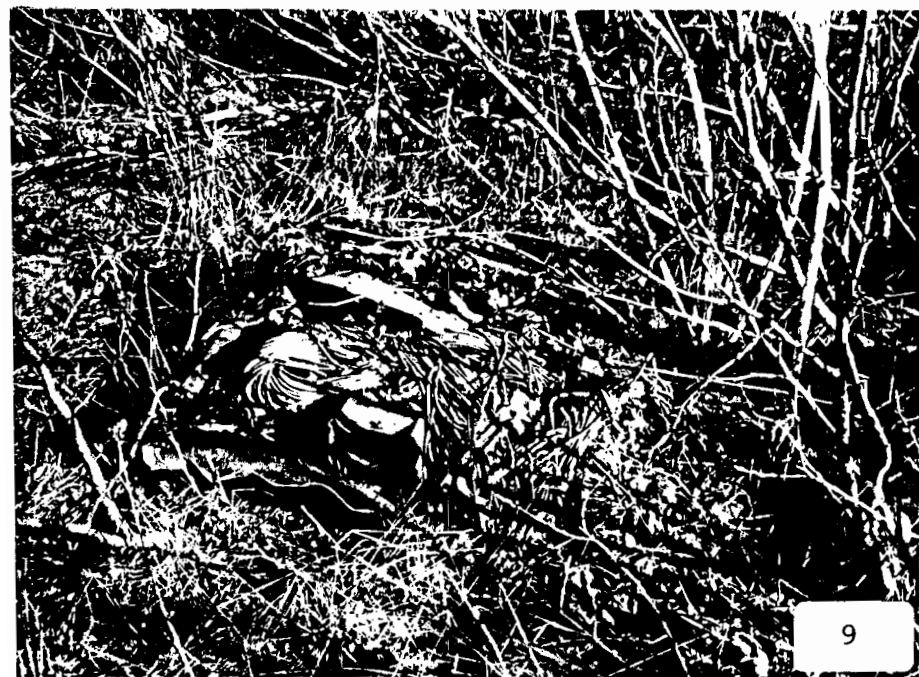
U.S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA

Figure C-1 PHOTOGRAPH LOCATION MAP
OCEAN CAPE RADIO RELAY

YAKUTAT			ALASKA	
SIZE	JOB. NO.	FILE NO.	DATE:	PLATE
A	KS6200	1913SM.CDR	94JUN1	
DSGN.	AES	CHK. J.F.	SHEET	





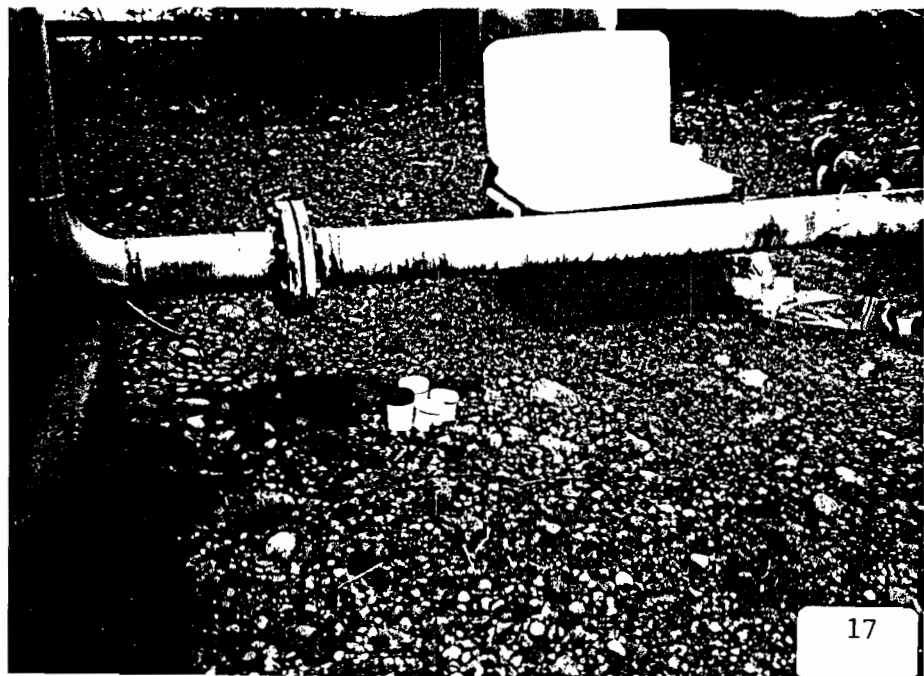




13



14



APPENDIX D

FIELD LOGBOOK

2

Tank appears to have been a water tank. Pump station adjacent to the tank still remains. A concrete corridor connect the structures. Pump station still contains equipment. Door on the east side was open.

Paperwork in pump station - APCO turbine - type pumps.

"Ocean Cape AFS - Aurora H-5 Water Pump"

Well located in Southwest corner of building.

Paperwork - Ocean Cape Fire Pump Pipe Diagram.

Paperwork - "Ocean Cape AFS Barton #211, Indicating Pressure Switch".

On north side of building there is concrete housing for a small tank - approx

3

55-gallon. The majority of the tank is covered with sand and approximately six inches of standing water. No petroleum odor evident near tank. Frisk Lay corn chip bag inside pump station. Aluminum beverage cans noted surrounding large tank and pump station.

0910 Electrical debris box noted north of garage building.

0915 Garage building empty inside. Floor drain present.

heavy vegetation exists on the 0920 Pump house - on west side there is a water draw off valve. Sign "Danger Liquid Fuel Pipe Line Water Draw off".

Small building approximately 15 x 15 feet makes up pumphouse.

Intake valve on east side of pumphouse. Stained soil at

4

or below end of pipe.
Large tank on southeast
area of pump house.

A berm surrounds
tank. Pipes lead to and
from tank.

Stained soil with
slight odor below valve
on west side of tank.

Sturdy lead to the top
of the tank on the west
side. Rubber was used as

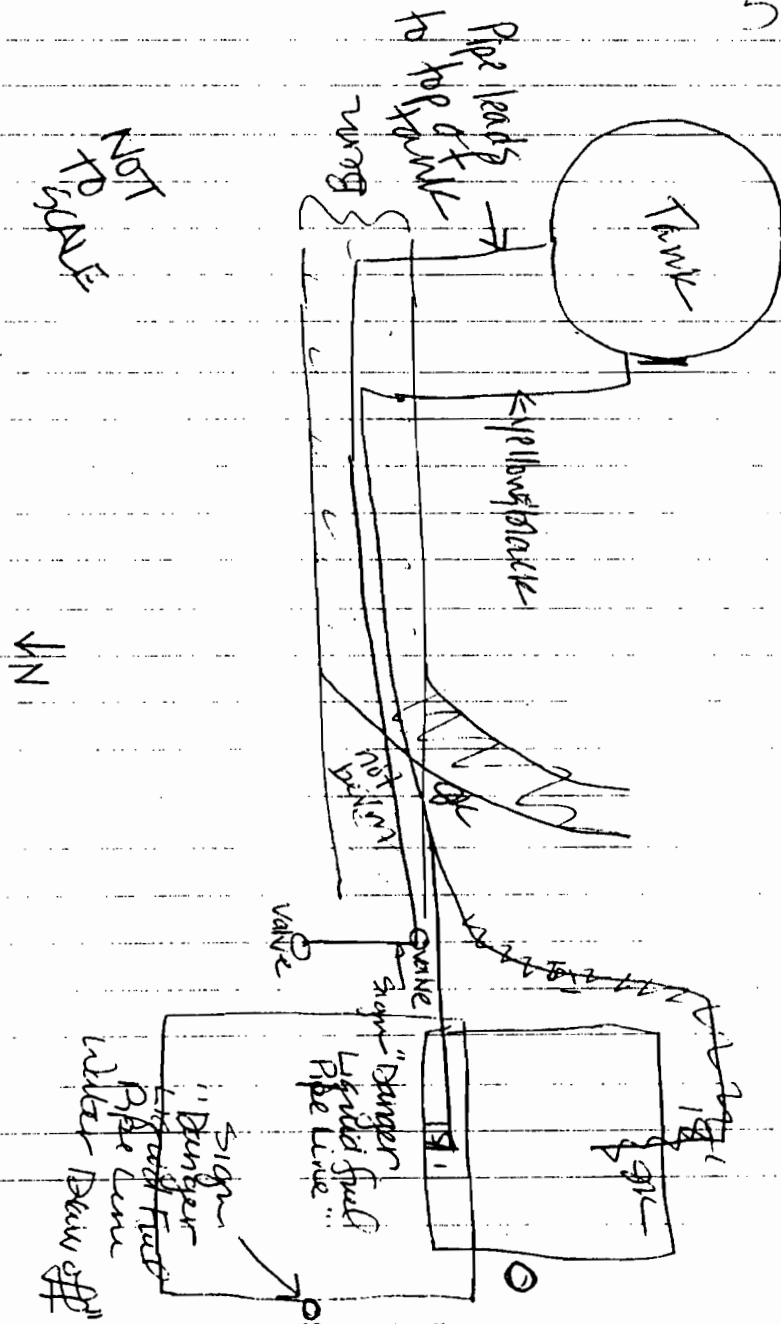
seal on the circular
access door above valve
on west side. Two pipes
lead to tank: western pipe
leads to valve near access
door. Eastern pipe, at
center of tank leads to top of
tank.

Western pipe appears to have
been marked yellow and black.

Pipes go into berm and come
out at pump house.

Yellow & black pipe leads into

5



6

pumphouse with 90° angle.
Water draw-off pipe
leads to east side
outside of pumphouse.

Oil residue noted on the
valve portion, apparent
stained soil also evident.

Ocean Cape Samples =

001 GRO
DRO
TRPH

002 GRO, DRO, TRPH

003 "

004 "

005 GRO, DRO, TRPH

006 TRPH

PCB only

VOCs

GRO

DRO

RCRA Metals

Do not have
enough 202
jars for
VOC analysis.
Will collect
later.

7

1032 completed jar
preparation. OVA on,
bleed set at 1 ppm.
0940

sample location # 1 is
on ~~west~~ east side of
pumphouse, beneath valve.
Analysis GRO, DRO, TRPH.
No odor evident during

sample collection. OVA
did not read above background.
1034 940001 SL

sample location # 2 valve
on west side of tank.

No odor evident during sample
collection. OVA did not register
above ~~of~~ background.

Tripled sample location.
sample nos. 002, 003, 004.
Depth of sample collection
approximately 3 inches.

1035 940001 002 SL

940001 003 SL

940001 004 SL

8

Sample locations & tasks
most pipe that runs up
lane!

1100 94 Newberry St.

Allison G. & PKM/BMT
Photos taken at all three
sample locations -

He also evidently did not
above background.

1125 Inside garage
building. Three floor
drains. Photo taken
of floor drain.

Colt and Laureen decided
no sample necessary

outside of garage
building. Revisually
noted OOL will not be
collected here.

1145 Left Ocean Cape.

1220 Lunch break

1215 Lunch break over

1330 Call Yak-Tat Kwana, Inc.

Don Plemmer not

in town

784-3335

9

Located on left side
behind airplane frame -
tan colored. Pass
crossroads on side
street; School crossing
121 building.

Jay Karsunsky, Office
Manager.

Tina - contact

1333 KFS Don Stewart
784-3359

Located by airport
see sign turn right
OK to

1335 City Manager - 784-
3323 Caid Hill

Beth M. Kibben - City
Planner.

Carl does not have

information re: history.


He does not have information
about the site. Beth (Planner)
says Area is outside of previous
city limits; not many maps.

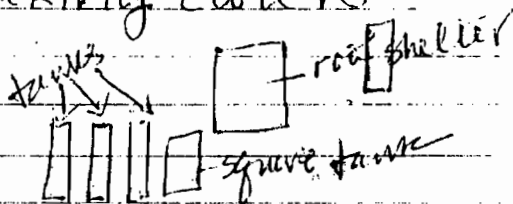
28

1000 Met with Don Bremner
Maps of DERP investigation
21' x 36'; better photos
than the copies were
better

Full tank farm
contains 3 ASTs &
6 ASTs in a shelter
structure.

looking uphill

0 0 0  - 2 tanks, ^{with} 3 rows
side by side under roofed shelter.
looking down.



Future Plans of Ocean Cape:
Lodge was in the
plan that is why still
there. Garage building
is storage for lodge & f
but it.

29

Mareen mentioned that water
tank circular access door
open and stairs on tank
may be hazard. Not much of
a document from Don
Bremner.

MAP INFO: Area 6, Map C-8

Barrel Dump @ Quartermaster
Loop. North of Disconnected
Dum Dump.

: Area 10, Map C-12

barrel dump 25' x 25'
on Ocean Cape Road
in shallow pond. Photo
shows approximately 30 drums.
: Area 3, Map C-5 incident
near airport.

4/18 Disconnected Dum Dump to
be called Barrel Pit Dum Dump;
drum dump north of this
is Quartermaster Loop Dum
Dump; drum dump in Area 10
will be called Area 10 Dum Dump.

30

Ocean Cape AFS

Rearward Communication
POL System3,100 Barrel Tank & Misc
Details24 inch diameter shell
manhole"Bulk Diesel Fuel Oil Storage
Tank"

Maps indicate small structure
on side of water pump house,
was location of fuel pit.

contained "gasoline tank
with 12 inches ~~stand~~ sand
on all sides, top and
bottom". Size of tank

~~unknown~~. Size of
tank described as
30 inches diameter and
36 inch long tank

Water Storage Tank dimensions
22 feet diameter, 26 feet
high.

31

1145 Leave Yak-Tat Kwarr, Inc.
office for hotel.

Possibility of more samples
to be collected. Need to
call office and let
Bill know to call Pam
& Kevin at labs.

1200 faxed note to Bill
re. message I left with
Mary Reed re. possibility
of more samples.
Lunch break

1230 Jackie and I made
sure we had appropriate
equipment & changed
into rain gear

1300 leave hotel for Quartermaster
Loop Drum Dump search.

1330 Drive up Quartermaster
Loop. Car would not go full
distance. Walk to drum
dump area.

1450 We have been into the
area and have not found
drums. Metal debris, two

APPENDIX E

BUILDING DEMOLITION AND DEBRIS REMOVAL PROJECT SUMMARY SHEET

OCEAN CAPE WHITE ALICE
F10AK074700

BD/DR PROJECT SUMMARY SHEET CHECKLIST

True or False

1. F The title transfer document which conveyed the site from DOD or GSA specifically requires the Government to restore the site. (If true, provide details under Project Eligibility.)
2. I An owner, subsequent to DOD usage has not been compensated by the Government in lieu of site restoration. (If false, provide details under Policy Considerations.)
3. I The title transfer document which conveyed the site from DOD or GSA does not absolve the Government from site restoration. (If false, provide details under Policy Considerations.)
4. I USACE can obtain a right of entry to the site. (If false, provide details under Policy Considerations.)
5. I The site has not been owned by a private interest since DOD usage. (Address under Policy Considerations regardless of whether true or false.) Yak-Tat Kwaan, Inc. (native corporation)
6. I Execution of the project would not primarily benefit private interests. (If false, provide details under Policy Considerations.)
7. Hazard(s) (Specify under Project Eligibility):
 - a. Structural.
 - b. Cave-in or engulfment.
 - c. X Climbing.
 - d. Drowning.
 - e. Other.
8. I The hazard(s) resulted from DOD activities. (Provide details under Project Eligibility regardless of whether true or false.)
9. I The hazard(s) resulted from military activities rather than civil works activities. (If false, provide details under Policy Considerations.)

APPENDIX F

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY FORM 2070-12

SITE: OCEAN CAPE WHITE ALICE
 PROJECT NUMBER: F10AK074700

POTENTIAL HAZARDOUS WASTE SITE
 PRELIMINARY ASSESSMENT
 PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION: Contaminated soil was detected on site, however, analysis of groundwater was not conducted, therefore it is unknown if groundwater is contaminated. The potential to detect contaminated groundwater is expected to be low.

01 B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION: Stained soil was noted on site. The potential for contaminants in the soil to reach surface water appears to be low due to the distance and slope between staining and surface water.

01 C. CONTAMINATION OF AIR 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION:
 Air contamination is not expected on site.

01 D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION:
 There are no known fire/explosive conditions on site.

01 E. DIRECT CONTACT 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION: Stained soil was noted on site. The site is located at the end of a 5 mile dirt road from downtown Yakutat. There are no permanent residents on site. Direct contact is expected to be low.

01 F. CONTAMINATION OF SOIL 02 OBSERVED (DATE 4/18/94) POTENTIAL ALLEGED
 03 AREA POTENTIALLY AFFECTED Approx. 7,000 sq. feet 04 NARRATIVE DESCRIPTION: Contamination has been detected in soil beneath valves associated with a diesel fuel oil tank.

01 G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION: There are currently no drinking water sources on site. A formerly used well, water storage tank, and associated pumphouse remain on site. These structures do not appear to be operational.

01 H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 WORKERS POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION
 There are no workers on site.

01 I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
 03 POPULATION POTENTIALLY AFFECTED 0 04 NARRATIVE DESCRIPTION
 Based on the remoteness of the site, the potential for population exposure/injury is expected to be low.

APPENDIX G

PRELIMINARY COST APPRAISAL FOR HAZARDOUS AND TOXIC WASTE

Table G-1				
PRELIMINARY COST APPRAISAL FOR HAZARDOUS AND TOXIC WASTE FORMER OCEAN CAPE RADIO RELAY SITE YAKUTAT, ALASKA				
Item	Description	Estimated Quantity/Unit	Unit Cost (\$)	Estimated Cost (\$)
Prefield work	Information review	1 lump sum	2,500	2,500
	Sampling analysis plan	1 lump sum	25,000	25,000
	Quality assurance project plan	1 lump sum	10,000	10,000
	Health and safety plan	1 lump sum	5,000	5,000
Fieldwork	Mobilization/demobilization: Air cargo shipping from Anchorage to Yakutat for transport of equipment and material	1 trip	1,000	1,000
	Equipment standby during transport	1 day	300	300
	Crew travel time round-trip from Anchorage	1 day	2,000	2,000
	Transport by commercial air from Anchorage to Yakutat for crew of two (round-trip)	2 trips	325	650
	Hazardous and toxic waste investigation: Surface soil sample collection	1 day	2,500	2,500
	Subsurface soil sample collection using portable hand auger	1 day	2,500	2,500
	Groundwater well samples	1 day	2,500	2,500
	Operating costs: Lodging in Yakutat: hotel \$75/day; crew of two	3 days	225	450
	Rental car	3 days	55	165
	Per diem for crew of two \$58/day	3 days	115	348
Postfieldwork	Final report preparation	1 lump sum	30,000	30,000
Subtotal estimated direct cost				85,000
(other direct costs 10%)				8,500
Total estimated direct cost				93,500
(contractor overhead 30%)				28,000
Subtotal				121,500
(contractor profit 10%)				12,150
Total contract cost				133,650
Escalation 1%				1,350
Supervision and Administration 8.5%				11,360
Contingency 25%				33,400
Total owner cost				180,000

APPENDIX H

ORDNANCE AND EXPLOSIVE WASTE RISK ASSESSMENT SHEET

B. Pyrotechnics (For munitions not described above.)

	VALUE
Munition (Container) Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
Flares, Signals, Simulators	4
Pyrotechnics (Select the largest single value)	N/A
What evidence do you have regarding pyrotechnics?	_____

C. Bulk High Explosives (Not an integral part of conventional ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Compositions A, B, C, Teteryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
High Explosives (Select the largest single value)	N/A
What evidence do you have regarding bulk explosives?	_____

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid or Liquid Propellants	6
Propellants	N/A
What evidence do you have regarding bulk propellants?	_____

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF OEW HAZARD
(Circle all values that apply)

A. Locations of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations.	4
Inside walls, ceilings, or other parts of Buildings or Structures.	3
Subsurface	2
Location (Select the single largest value)	_____
What evidence do you have regarding location of OEW?	_____

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, parks, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1
Distance (Select the single largest value)	_____
What are the nearest inhabited structures?	_____

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility; or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Accessibility (Select the single largest value)	_____
Describe the site accessibility.	_____

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0
Site Dynamics (Select largest value)	_____
Describe the site dynamics.	_____

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

- RAC 1 Imminent Hazard - Expedite INPR - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.
- RAC 2 High priority on completion of INPR - Recommend further action by CEHND.
- RAC 3 Complete INPR - Recommend further action by CEHND.
- RAC 4 Complete INPR - Recommend further action by CEHND.
- RAC 5 Recommend no further action. Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

No OEW exists on site. No further action is recommended at the Ocean Cape White Alice site.

FILE YAKUTAT
Ocean Cape

REVIEW COMMENTS

PROJECT: Ocean Cape Radio Relay
DOCUMENT: Field Investigation Report

LOCATION: Yakutat, AK

U.S. ARMY CORPS OF ENGINEERS CENPA-EN-EE-TE		DATE: July 12, 1994 REVIEWER: Maureen Cochrell PHONE: 753-2804	Action taken on comment by: _____		
Item No.	Drawing Sht. No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	DESIGN OFFICE C - correction made (If not, explain)	Back check by: (Initials)
1		<p>General Comments: The field investigation report adequately addresses the site visit and sampling that was performed. However, I disagree with the recommendations in Section 5.0. Since Yat-Tat-Kwaan, Inc. requested that the structures remain on site, the site does not qualify for BD/DR project funding. Please provide reference for this information.</p> <p>Please provide raw laboratory data in an appendix.</p>			
2	Sec 1.0	<p>Move the last sentence in the first paragraph to the beginning of the paragraph. Revise to say "This field investigation report (FIR) presents the historical research and finding of a site reconnaissance and chemical sampling activities"</p> <p>Include a summary of the scope of work somewhere between the introduction and the background information.</p> <p>Include the following sentence in the introduction "Five potential areas of concern were identified at the Ocean Cape Radio Relay site based on historical records review, site inspection, and interviews with Yakutat residents that are knowledgeable about the site. These areas include (insert list) (see Figures 1-)."</p> <p>Change the location of the figure from section 2.0 to 1.0.</p>			
3	Sec 2.1, para two, pg 2-1	<p>Are you sure the tank on the west side of the pump house contained gasoline? I thought the engine in the pump house was diesel powered? Please confirm.</p>			

**REVIEW
COMMENTS**

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LOCATION: Yakutat, AK

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4	Sec 2.1.1	Revise to read "The site is located within the Tongass National Forest on the Phipps Peninsula approximately five miles west of Yakutat, Alaska. Yakutat is located northwest of the Alaska panhandle, approximately 210 miles northwest of Juneau. The site is bordered to the southwest by the Gulf of Alaska, to the northwest by Yakutat Bay, to northeast by muskegy land and Monti Bay, and to the southeast by the Ankau Saltchucks. Virgin forests, clear cut forests, and the St. Elias Mountains border the site vicinity to the north and east."			
5	Sec 2.1.2, para 1	Check reference regarding ARCO Alaska having oil and gas operations in Yakutat. I do not believe ARCO is operating in the Yakutat area any longer . Delete this sentence.			
6	Sec 2.1.3, pg 2-3, para 1	Clarify the description of coarse-grained deposits in accordance with Unified Soil Classification System. What is granule sand? What is a silty, cobble gravel? Revise to say "The coarse-grained deposits consist of sandy gravel to _____" Give a range.			

REVIEW COMMENTS

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7	Sec 2.1.4, pg 2-3, para 4	<p>Move first sentence to the geology section. Revise to say "The city of Yakutat is situated on unconsolidated Quaternary glacial outwash deposits." Delete the part about being near the mouth of Yakutat Bay, this is already mentioned in the geographic setting section.</p> <p>Revise the second sentence to say "The region's <i>main water bearing zones occur in</i> unconsolidated <i>Quaternary glacial</i> outwash deposits."</p> <p>Show the pump house well location on the figure and provide pertinent well details including depth to water and screened interval. Since this well is located in close proximity to the "gasoline" tank, it should be sampled.</p> <p>Based on the screen intervals presented and the depth to the unconfined aquifer, it appears that there is possibly more than one aquifer in the region. Revise the groundwater section to reflect this data.</p> <p>Is the groundwater that occurs at ten feet bgs confined or unconfined?</p> <p>The report indicates that sufficient subsurface information regarding confining layers is not available, but below there is very specific data regarding well depths and screen intervals. Are the boring logs available for these wells? If so, can confining layer information be extracted?</p>			

REVIEW COMMENTS

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8	Sec 2.1.5, pg 2-3	Explain topographic barrier (divide?). Surface water runoff is probably to either side of the shoreline ridge that forms a topographic high along the western boundary of the site. Therefore, surface water runoff is probably toward the large water bodies to the west and the Ankau estuary to the east. Revise this section.			
9	Sec 2.2	Site history is incomplete. Who did the USAF acquire the site from? Was the site virgin land when the site was acquired? Delete second to the last sentence in paragraph one. This information is repeated from section 2.1. Which buildings and what portion of the site did RCA Alaska Communications use from 1974 to 1976? What happened to all the buildings? Doesn't the Corps '84 report have more data than is presented. Please revise this section.			
10	Sec 3.0	Thank you for the logistics section. Please put this section in an appendix. Please mention that a 2-wheel drive vehicle is probably sufficient for work performed during summer months, but 4-wheel drive and/or all terrain vehicle would be more appropriate during the fall, winter, and spring seasons.			

REVIEW COMMENTS

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11	Sec 4.1, pg 4-1	<p>Delete the second paragraph. Replace with an introduction. How about "On (date), E&E and two Corps representatives performed a site reconnaissance and chemical sampling program. The site reconnaissance primarily concentrated on the five areas of concern previously discussed in section 1.0. The following sections discusses the field observations, historical data, and chemical sampling that was performed for each area of concern."</p> <p>Include all the areas so that there are five subsections. If you didn't find any debris or evidence of contamination just say so.</p> <p>The entire site qualifies for DERP-FUDS based on real estate records. However, RCA Alaska Communications may be considered a PRP if they beneficially used portions of the site where contamination is discovered (for example, the bulk fuel storage tank). This type of discussion should be inserted in the report and summarized in the conclusions if RCA is a PRP.</p>			
12	Sec 4.1.1, pg 4-1	<p>Change the name of the area from "Water Storage Tank Area" to "Pump House Area". Delete the first three sentences and revise to say "The pump house area consists of a pump house building, gasoline tank, and an aboveground water storage tank. The water storage tank is 26-feet tall and 22-feet in diameter. An unsecured, 24-inch shell manhole door is located on the southwest side of the tank, and a ground-accessible ladder extends to the top (see photograph No. 1). ..."</p> <p>An engine was present in the pump house. Please include in the description of the pump house and verify whether it was diesel or gasoline powered engine.</p>			

**REVIEW
COMMENTS**

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Item No.	Drawing Sht. No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	DESIGN OFFICE C - correction made (If not, explain)	Back check by: (Initials)
13	Sec 4.1.2, pg 4-2	<p>Change the name of the area from "Garage Building" to "Maintenance Garage". Describe the floor in the garage.</p> <p>Identify the floor drains as a potential source of contamination and state why they were not sampled.</p> <p>Delete the second paragraph in this section. Add a sentence at the end of the first paragraph in this section to say "Visible staining was not observed on the ground surface outside the maintenance garage building."</p>			

**REVIEW
COMMENTS**

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DOCUMENT: Field Investigation Report

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Item No.	Drawing Sht. No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	DESIGN OFFICE C - correction made (If not, explain)	Back check by: (Initials)
14	Sec 4.1.3, pg 4-2, 4-3	<p>Provide historical data on the fuel storage area.</p> <p>Revise first paragraph to say "The fuel storage area consists of an aboveground diesel fuel storage tank, fuel pump house, and associated fuel pipelines. The diesel fuel storage tank is 30-feet high, 27-feet in diameter, and surrounded by a 5-foot wide berm (Corps 1960). Circular stairs that are attached to the side of the tank extend from the ground surface to the top of the tank."</p> <p>I was surprised by the concentrations detected at the diesel AST. I didn't remember smelling any petroleum odor or elevated PID readings. Please confirm this olfactory observation and revise if necessary.</p> <p>Can you confirm that the 25,000-gallon fuel oil tank is no longer present? Are you referring to the tank near the former antennas on the bluff or some other tank. Was this 25K-gallon tank a UST or AST? Revise figure to show whether a tank is a UST or AST.</p> <p>Add subsections 4.1.4 and 4.1.5 in order to describe the antenna and radio relay building area and the composite building area, respectively.</p>			
15	Sec 4.2.1	The EPA test methods are not mentioned anywhere in the report. Please provide here and on table 4-2.			
16	Table 4-3	Please provide a completed ADEC matrix score sheet. Use the most conservative estimate for parameters that are unknown. Reference score sheet in text also.			
17	Sec 5.1	See General Comments above.			

REVIEW COMMENTS

PROJECT: Ocean Cape Radio Relay
DOCUMENT: Field Investigation Report

LOCATION: Yakutat, AK

U.S. ARMY CORPS OF ENGINEERS CENPA-EN-EE-TE		DATE: July 12, 1994 REVIEWER: Maureen Cochrell PHONE: 753-2804	Action taken on comment by: _____		
Item No.	Drawing Sht. No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	DESIGN OFFICE C - correction made (if not, explain)	Back check by: (Initials)
18	Sec 5.2	<p>Delete this paragraph and replace with " Based on the available data, three areas of concern were identified that qualify for HTW project funding. Recommendations for additional investigation are presented below.</p> <ul style="list-style-type: none"> ● Sample the pump house well for petroleum hydrocarbons. ● Sample the subsurface near the floor drains in the maintenance garage for commonly found contaminants. ● Determine the extent of diesel fuel contamination surrounding the diesel fuel storage tank and the pipeline corridors." 			