



DRIFTWOOD BAY RRS ALASKA

ADMINISTRATIVE RECORD COVER SHEET

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**UNITED STATES AIR FORCE
611TH AIR SUPPORT GROUP
611TH CIVIL ENGINEER SQUADRON
ELMENDORF AFB, ALASKA**

**FINAL MANAGEMENT ACTION PLAN
DRIFTWOOD BAY RADIO
RELAY STATION, ALASKA**

DECEMBER 29, 1997

**FINAL MANAGEMENT ACTION PLAN
DRIFTWOOD BAY RADIO RELAY STATION, ALASKA**

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Prepared for

United States Air Force
611th Air Support Group
611th Civil Engineer Squadron
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LIST OF ACRONYMS AND ABBREVIATIONS

ADEC	Alaska Department of Environmental Conservation
AE	Architect and Engineering
AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
AOC	Area of Concern
AST	Above-Ground Storage Tank
AVGAS	Aviation Gasoline
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, (as amended)
611 CES	611 th Civil Engineer Squadron
CFR	Code of Federal Regulations
3 CONS	3 rd Contracting Squadron
DDT	Dichlorodiphenyltrichloroethane
DERP	Defense Environmental Restoration Program
DEW-Line	Distance Early Warning
DRO	Diesel-Range Organics
EPA	Environmental Protection Agency
ERP	Environmental Restoration Program
°F	degrees Fahrenheit
GRO	Gasoline-Range Organics
HQ PACAF	Headquarters Pacific Air Force
IRP	Installation Restoration Program
MAP	Management Action Plan
MOGAS	Leaded Vehicle Gasoline
NFRAP	No Further Response Action Planned
NPL	National Priorities List
OU	Operable Unit
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Inspection
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil, and Lubricant
ppm	parts per million
RA	Remedial Action
RAB	Restoration Advisory Board
RFP	Request for Proposal
RI/FS	Remedial Investigation/Feasibility Study
RPM	Remedial Project Manager
RRS	Radio Relay Station
SARA	Superfund Amendments and Reauthorization Act

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

SI	Site Inspection
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act (as amended)
USACE	U.S. Army Corps of Engineers
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WACS	White Alice Communication System
WIMS-ES	Work Information Management System - Environmental Subsystem

FINAL MANAGEMENT ACTION PLAN DRIFTWOOD BAY RADIO RELAY STATION, ALASKA

1.0 INTRODUCTION

This Management Action Plan (MAP) for Driftwood Bay Radio Relay Station (RRS) is intended to be a strategic document integrating the Environmental Restoration Program (ERP) into a series of response actions intended to protect human health and the environment. Due to the dynamics inherent in the strategic planning process, the MAP represents a "snapshot" in time, requiring periodic updating to remain useful. This MAP does the following:

- Describes the environmental response objectives, the MAP purpose, and a brief history of the installation (Chapter 1);
- Identifies all known contaminated sites; environmental condition of property; real property; off-base facilities and properties; and non-Air Force tenants (Chapter 2);
- Summarizes the status of the Installation Restoration Program (IRP); regulatory agreements (if applicable); IRP Sites; Areas of Concern (AOCs); and community relations program (Chapter 3);
- Describes the installation-wide strategy for environmental restoration through definition of zones (including current scope of removal and remedial activities associated with or to be completed for each), and contracting and hiring strategy (Chapter 4); and
- Provides a master schedule of planned and anticipated activities to be performed throughout the duration of the ERP (Chapter 5).

1.1 *Environmental Response Objectives*

The objectives of the ERP are as follows:

- Protect human health by minimizing or eliminating potential human exposure to environmental contaminants;
- Protect the environment by ensuring that wildlife, vegetation, subsistence activities, and the Alaska Maritime National Wildlife Refuge are not affected by the contamination and cleanup activities at Driftwood Bay RRS;
- Comply with existing statutes and regulations;

- Conduct all IRP activities in a manner consistent with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA),
- Establish priorities for environmental restoration activities based on studies conducted at Driftwood Bay RRS and input from concerned citizens;
- Develop, screen, and select Remedial Actions (RAs) that reduce human health and ecological risks when regulatory levels are exceeded; and
- Initiate required removal actions to control, eliminate, or reduce risks to manageable levels.

1.2 MAP Purpose, Updates, and Distribution

1.2.1 MAP Purpose

The MAP is a dynamic document. It provides a summary of the base history, current conditions, and how those conditions relate to human health. It provides a strategy to protect human and ecological health where it may be threatened.

The MAP summarizes the status of Driftwood Bay RRS IRP and the comprehensive strategy for all ERP activities. The MAP explains the installation's response action approach which ensures continued progress and implementation of scheduled activities.

1.2.2 Map Update

The MAP will be updated at a minimum of once per year. The Remedial Project Manager (RPM) has the options of:

- Marking changes in the MAP as they occur;
- Updating the MAP when there are major changes in the program; or
- Conducting a formal annual review and update.

1.2.3 MAP Distribution

The Draft MAP distribution was as follows:

- RPM, three copies;
- Headquarters Pacific Air Force (HQ PACAF), one copy;

- Alaska Department of Environmental Conservation (ADEC), one copy; and

The Final MAP distribution will be as follows:

- RPM, four copies;
- HQ PACAF, one copy;
- ADEC, one copy;
- Administrative Record, one copy; and
- Information Repository, one copy.

1.3 *Brief History of Installation*

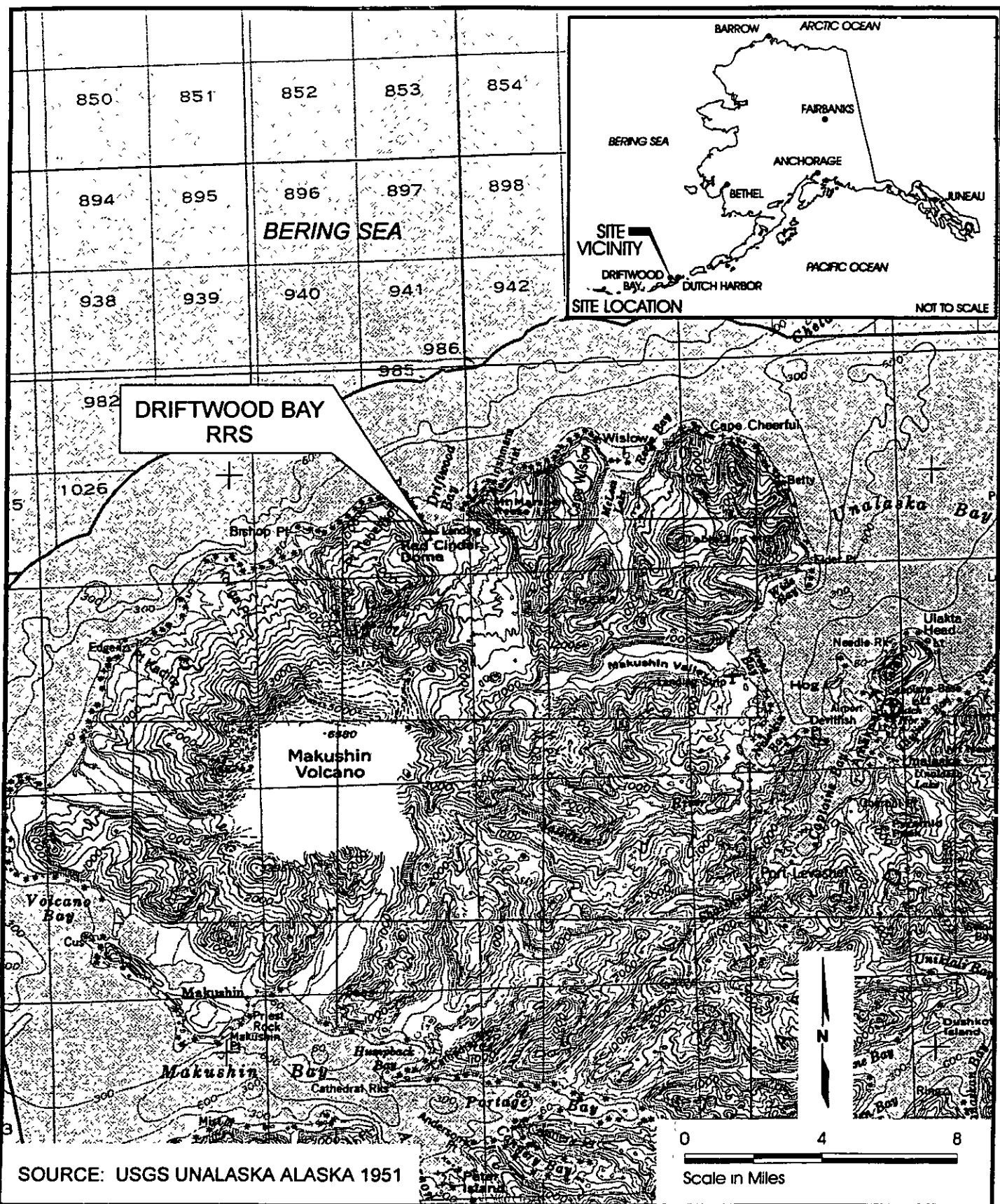
The Driftwood Bay RRS is situated on approximately 115 acres, on the north side of Unalaska Island. The legal description is Section 6, Township 27 South, Range 119 West, Seward Meridian. Driftwood Bay RRS is accessible only by air or sea.

1.3.1 Environmental Setting

Physical Setting. Driftwood Bay RRS is located at Driftwood Bay on the north side of Unalaska Island; part of the Aleutian Island chain, extending southwest of the Alaska Peninsula (Figure 1-1). It has a cold maritime climate, with annual temperatures ranging from minus 8 degrees Fahrenheit (°F) to 80°F. The average summer temperature between June and August is 50°F, and the average winter temperature between November and February is 34°F. Average annual precipitation is 58 inches; with up to 50 inches of snow and 33 inches of rain falling in the winter months.

The primary Driftwood Bay RRS facility is located on a hillside approximately 1,275 feet above mean sea level. The airstrip is located in a valley south of Driftwood Bay, approximately 2 miles east of Driftwood Bay RRS. The Petroleum, Oil and Lubricant (POL) tanks were located near the beach, approximately 3,000 feet northeast of the airstrip. A fuel pipeline connected the POL tanks to Underground Storage Tanks (USTs) at the main Driftwood Bay RRS.

Unalaska Island is predominantly composed of volcanic rock. Prominent topographical features on the island include the Makushin Volcano - located approximately 6 miles southeast of Driftwood Bay RRS, and Red Cinder Dome - located approximately 1 mile southeast of the facility. The hydrogeology of Driftwood Bay RRS area is currently unknown. Two major surface water sources within the Driftwood Bay RRS facility are Humpy and Snoffy Creeks.



TITLE:

VICINITY MAP

DRIFTWOOD BAY RRS, ALASKA

PROJECT NO

A-8501-00

FIGURE NO

1-1

Land Use and Demographics. Driftwood Bay RRS is approximately 13.5 miles northwest of the community of Unalaska. No individuals live within 4 miles of the facility. Land use within the Driftwood Bay RRS area appears to be limited to recreational fishing in Humpy Creek.

Ecosystems. The Driftwood Bay RRS area has three terrestrial habitat types; alpine, moist, and wet tundra. The coastal area provides habitat for numerous fish, bird, and sea mammal populations. Humpy Creek is a documented spawning habitat for pink salmon.

1.3.2 Past Operations

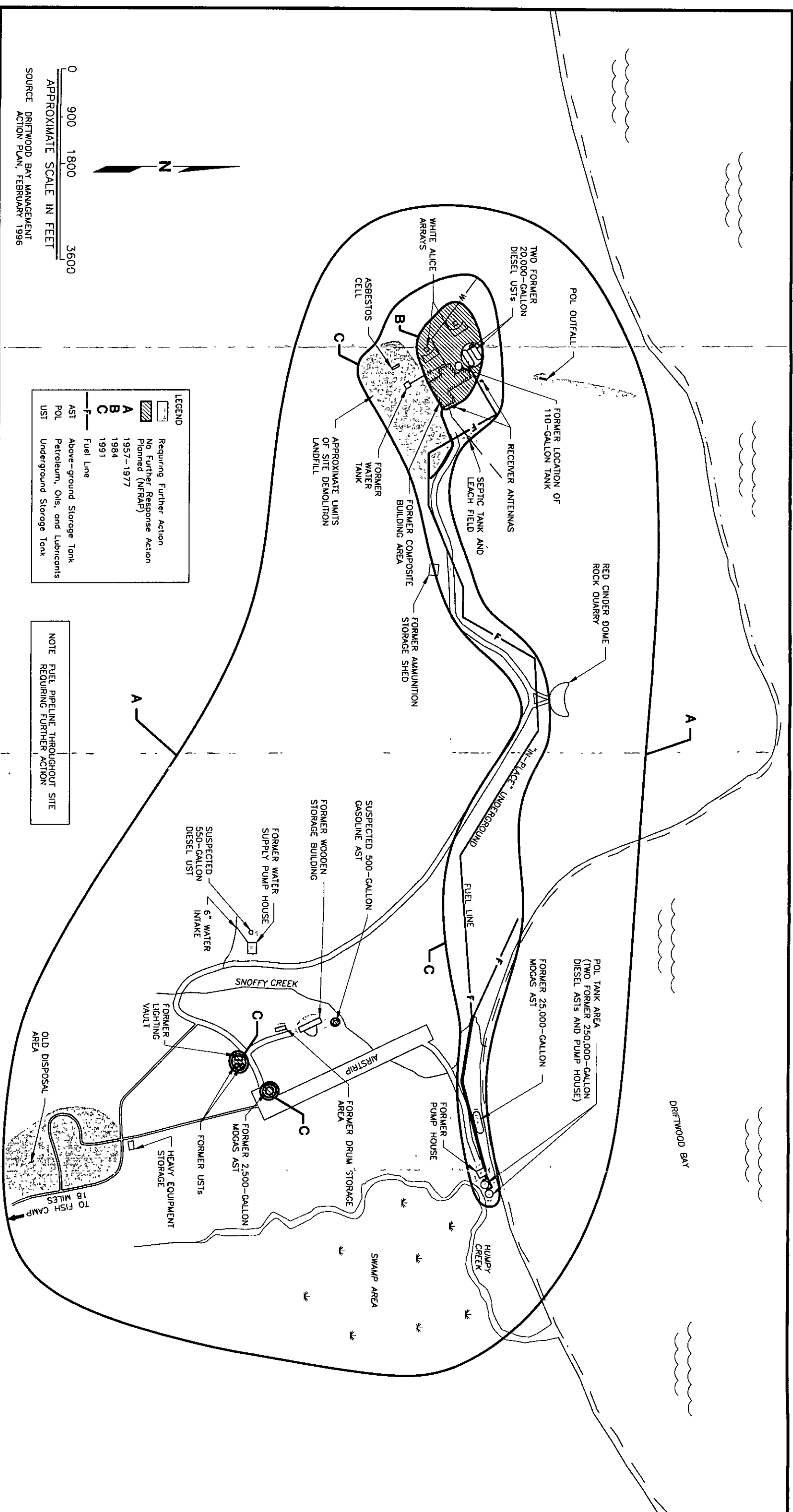
Driftwood Bay RRS was initially one of 18 Distant Early Warning (DEW-Line) stations constructed in Alaska between 1950 and 1959. Driftwood Bay RRS was made operational in 1961 to provide reliable communications for the DEW-Line station. Originally known as White Alice Communications System (WACS) facilities, the Alaska Air Command redesignated WACS facilities as RRSs in 1969. Driftwood Bay RRS was deactivated in 1977 and all facility buildings and structures were demolished or removed in 1991.

The installation consisted of a Composite Building with dormitories, office space, storage space, a vehicle maintenance shop, and equipment for standby power generation; two Billboard Antennas and Feed Horns (White Alice Arrays); and two Receiver Antennas. A POL distribution facility with above-ground fuel storage tanks was located east of Driftwood Bay RRS. A fuel pipeline extends from the POL tanks to the RRS area. An Airstrip, a wooden Maintenance Building, a Water Supply System, and an Airstrip Lighting Vault were located approximately 3 miles southeast of Driftwood Bay RRS. An Old Disposal Area is located 1 mile south of the airstrip.

Knowledge about site-specific operation activities is limited and based on available historical records, remaining structures, and activities commonly practiced at similar facilities. Past operations at Driftwood Bay RRS are summarized in Table 1-1. The locations of activities known or believed to involve hazardous substances and petroleum are shown on Figure 1-2.

**TABLE 1-1 HISTORY OF INSTALLATION OPERATIONS
DRIFTWOOD BAY RRS**

Period	Types Of Operations	Weapon System	Hazardous Substance Activity	Map Ref. (Fig 1-2)
1957 to 1977	Defense Communication Network and DEW-Line System	None	Landfill; AVGAS, MOGAS, diesel fuel, and heating oil storage; maintenance and machine shops (solvents, oils, and antifreeze); power generation with batteries (lead acid, nickel cadmium, and lithium); transformers (Polychlorinated Biphenyls [PCBs]); clearing of vegetation (herbicides 2,4-d and 2,4,5-t); pesticide control (Dichlorodiphenyltrichloroethane [DDT], chlordane, lindane, dieldrin, parathion, and Warfarin); asbestos insulation, wallboard, and shingles; road oiling.	A
1977	RRS Deactivation	None	Materials/activities described above no longer in use.	A
1984	Interim Removal Action	None	Removal of PCB-contaminated fluids and equipment.	B
1991	Facility Demolition	None	Demolition of RRS buildings and other installation structures; landfilling of demolition debris and asbestos material on site; on-site treatment and disposal of petroleum-impacted soil.	C



**LOCATION OF PAST HAZARDOUS
SUBSTANCES AND PETROLEUM
ACTIVITIES**

DRIFTWOOD BAY RRS, ALASKA

PROJECT NO:

A-8501-00

FIGURE NO

1-2

2.0 CONDITION OF PROPERTY

Areas that have been identified through the IRP process for restoration activities have been divided into two types: IRP Sites and AOCs. IRP Sites are "official areas" that have been identified in the IRP process through the Work Information Management System - Environmental Subsystem (WIMS-ES) and are regulated by federal and/or state agencies. AOCs are areas which require further investigation before being classified as a IRP Site. Driftwood Bay RRS has 1 IRP Site and 11 AOCs.

IRP Sites are further managed within Operable Units (OUs) or zones to ensure optimal field management and technical data collection efforts. OUs and zones are further discussed in Chapter 4.

2.1 *Installation-Wide Source Discovery and Assessment Status*

In 1984, PCB-contaminated equipment and fluids were removed from Driftwood Bay RRS by the Air Force and shipped to Elmendorf Air Force Base (AFB). POL drums were also removed from Driftwood Bay RRS by the Air Force.

In 1985, Ocean Technology, Ltd., conducted an installation-wide Site Inspection (SI) for the U.S. Army Corps of Engineers (USACE; Air Force, 1985). Composite soil samples and water samples were collected from the Composite Building vicinity, the Airstrip vicinity, and the POL Tank Area. In addition, fuel samples were collected from two USTs at the Composite Building, drums near the Airstrip, and from the POL tanks to test for hazardous materials (Air Force, 1986).

In 1988, Ocean Technology, Ltd., collected additional fuel samples from tanks, drums, and surface water and analyzed them for PCBs, pesticides, metals, asbestos, and flashpoint.

A Preliminary Assessment (PA) of Driftwood Bay RRS installation was conducted in 1993 (Air Force, 1994). The assessment identified possible historical uses of hazardous substances and petroleum products at the facility, past investigative and remediation activities, potential contaminant pathways, and potential receptors of these contaminants. Although no documented spill information was found, historical disposal/management practices for similar sites indicated several areas where hazardous substances or petroleum products might have been used.

A supplementary Preliminary Assessment/Site Inspection (PA/SI) was conducted in June 1995 (Air Force, 1996a). Discrete soil samples and additional water samples were collected and analyzed. Twelve areas were identified where hazardous substances or petroleum products might have been stored, released to the environment, or disposed of on site. One area has been designated an IRP Site, the Former Composite Building Area (OT001), and the remaining 11 areas are considered AOCs. The IRP Site and AOCs are identified below:

- 3, 4 • OT001 Former Composite Building Area (includes White Alice Arrays, Composite Building, and two Former 20,000-gallon Diesel USTs),
- 6 • AOC01 Former Composite Building Landfill;
- 7 • AOC02 Septic Tank and Leach Field;
- 6 • AOC03 Composite Building POL Outfall;
- 7 • AOC04 Former Water Supply Pump House;
- 5 • AOC05 Former Airstrip Lighting Vault;
- 2 • AOC06 Former Drum Storage Area;
- 4 • AOC07 Former Airstrip Automotive Gasoline (MOGAS) Tank;
- 7 • AOC08 Old Disposal Area;
- 6 • AOC09 POL Tank Area;
- 6 • AOC10 Fuel Pipeline Area; and
- 1 • AOC11 Former USTs.

Six of the 12 areas (the Former Composite Building Area [OT001], the Former Composite Building Landfill [AOC01], the Composite Building POL Outfall [AOC03], the Former Drum Storage Area [AOC06], the POL Tank Area [AOC09], and the Fuel Pipeline Area [AOC10]) were determined to contain contaminants at concentrations above preliminary action levels and may require further investigation and/or remedial action. Two AOCs, the Former Airstrip Lighting Vault (AOC05) and the Former Airstrip MOGAS Tank (AOC07), were determined to contain contaminants at concentrations below preliminary action levels. One area, the Old Disposal Area (AOC08), is not considered sufficiently

evaluated to determine if contaminants are present. One area, the Septic Tank and Leach Field (AOC02), was not field screened or sampled and may require further investigation. Two of the 12 areas (the Former Water Supply Pump house [AOC04] and the Former USTs [AOC11]) were determined not to contain contaminants.

Based on the results of the PA/SI, decisions will be made regarding site closure, further investigation, or implementation of appropriate removal actions at specific sites.

Table 2-1 provides a list of project deliverables for the Driftwood Bay RRS. The list identifies each site and AOC examined as part of the deliverable.

**TABLE 2-1 PROJECT DELIVERABLES
DRIFTWOOD BAY RRS**

Phase	Deliverable Title	Sites Examined (WIMS-ES ID)	Date	Contractor
PA/SI	Environmental Assessment - Driftwood Bay	Site-wide (OT001)	1985	Ocean Technology, Ltd.
PA/SI	Environmental Assessment - Driftwood Bay	Site-wide (OT001)	1986	Ocean Technology, Ltd.
PA	Preliminary Assessment - Driftwood Bay	Site-wide (OT001)	1994	CH2M Hill
PA/SI	Preliminary Assessment/Site Inspection - Driftwood Bay RRS	Site-wide (OT001)	1996	EMCON Alaska, Inc.

Notes

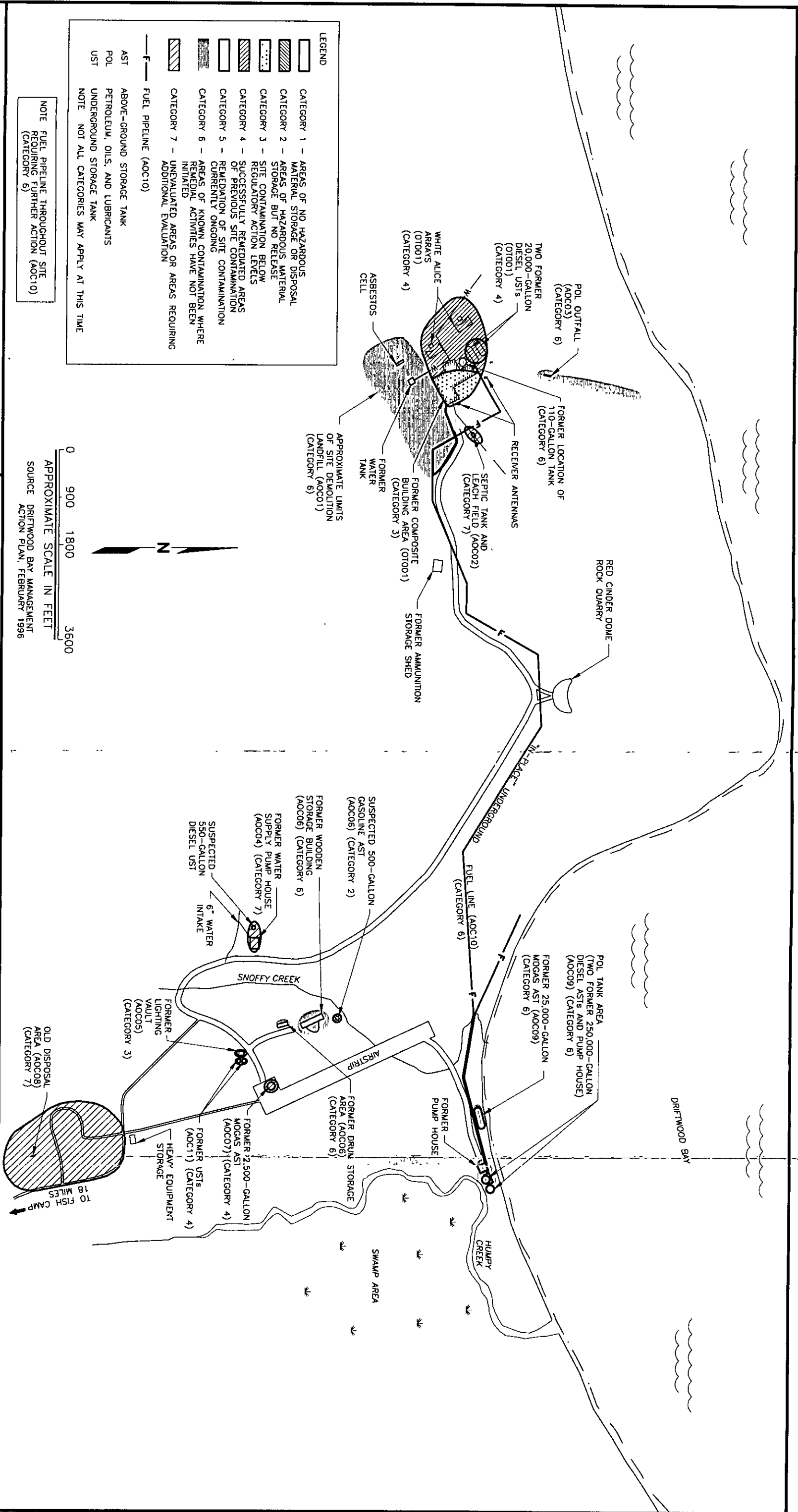
PA = Preliminary Assessment

PA/SI = Preliminary Assessment/Site Inspection

WIMS-ES = Work Information Management System - Environmental Subsystem

2.2 Environmental Condition of Property

In order to assess the progress of ongoing environmental restoration, identify areas where further response may be required, and to facilitate reuse planning and property transfers an environmental condition of property map has been created (Figure 2-1). All areas at Driftwood Bay RRS have been assigned to one of seven environmental condition of property categories based on site characterization and remediation efforts to date. The seven categories and the areas associated with each are as follows:



Category 1. Areas where no storage, release, or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas). All Air Force property at Driftwood Bay RRS that is not characterized as an IRP Site or an AOC is currently included in this category based on available information

Category 2. Areas where storage, release, or disposal of hazardous substances or petroleum products has occurred (but no release, disposal, or migration from adjacent areas has occurred). A portion of the Former Drum Storage Area (AOC06) is believed to have been used for fuel storage, but no visual evidence of contamination was found during the 1995 PA/SI.

The Former Drum Storage Area is divided into three subareas: the drum storage area proper, the former wooden storage building area, and the former 500-gallon emergency MOGAS Above-Ground Storage Tank (AST) area. Only storage is suspected at the subarea where a 500-gallon emergency gasoline AST was noted north of the drum storage area on a 1963 Air Force site layout plan. No evidence of the tank was found during 1985, 1991, and 1995 field visits, and no signs of visible contamination were observed in the area.

Category 3. Areas where storage, release, or disposal of hazardous substances or petroleum products has occurred, but at concentrations that do not require removal or RA. Contaminants at the Airstrip Lighting Vault (AOC05) and the eastern portion of the Former Composite Building Area (OT001) were detected below action levels during the 1995 PA/SI.

Category 4. Areas where storage, release, or disposal of hazardous substances or petroleum products has occurred, and all RAs necessary to protect human health and the environment have been taken. The Former Airstrip MOGAS AST (AOC07), the western portion of the Former Composite Building, excluding the northwest corner of the Former Composite Building, but including the White Alice Arrays and Former USTs (OT001) and the Former UST Sites (AOC11) are areas where all remedial action necessary to protect human health and the environment has been taken.

Category 5. Areas where storage, release, or disposal of hazardous substances or petroleum products has occurred, but all RAs have not yet been taken. There are no areas at Driftwood Bay RRS in Category 5.

Category 6. Areas where storage, release, or disposal of hazardous substances or petroleum products has occurred, but required response initiatives have not yet been implemented. During the 1995 PA/SI contaminants above action levels were detected at the northwest corner of the Former Composite Building,

the Composite Building Landfill (AOC01), the Composite Building POL Outfall Area (AOC03), portions of the Former Drum Storage Area, the POL Tank Area (AOC09), and the Fuel Pipeline Area (AOC10).

Category 7. Areas that are unevaluated or require additional evaluation. Two AOCs are unevaluated or require further evaluation. The Septic Tank And Leach Field (AOC02) have never been evaluated for possible disposal of hazardous substances or petroleum products. The other area requiring further evaluation is the Old Disposal Area (AOC08). Soil and water samples collected in the area were below preliminary action levels, but since the extent of the disposal area and the nature of the wastes disposed of at the site are unknown, further evaluation is recommended. The Former Water Supply Pump House (AOC04) is believed to have been used for fuel storage, but no evidence of contamination was found during the 1995 PA/SI; however, further evaluation is scheduled in 1999.

Installation areas and individual sites were categorized for inclusion in one of the above seven categories by:

- Review of real property records, land use maps, and aerial photographs to identify historical land uses;
- Review of IRP studies and field investigations to identify areas where the presence (or absence) of contamination had been confirmed;
- Review of recorded chain-of-title documents to assess whether any prior uses could reasonably contribute to existing environmental concerns;
- Review of installation areas where industrial operations occurred; solid and hazardous wastes were stored, disposed, or released; and hazardous material storage sites; and
- Review of records from industrial shops, supply stores, and fire departments.

2.3 Real Property

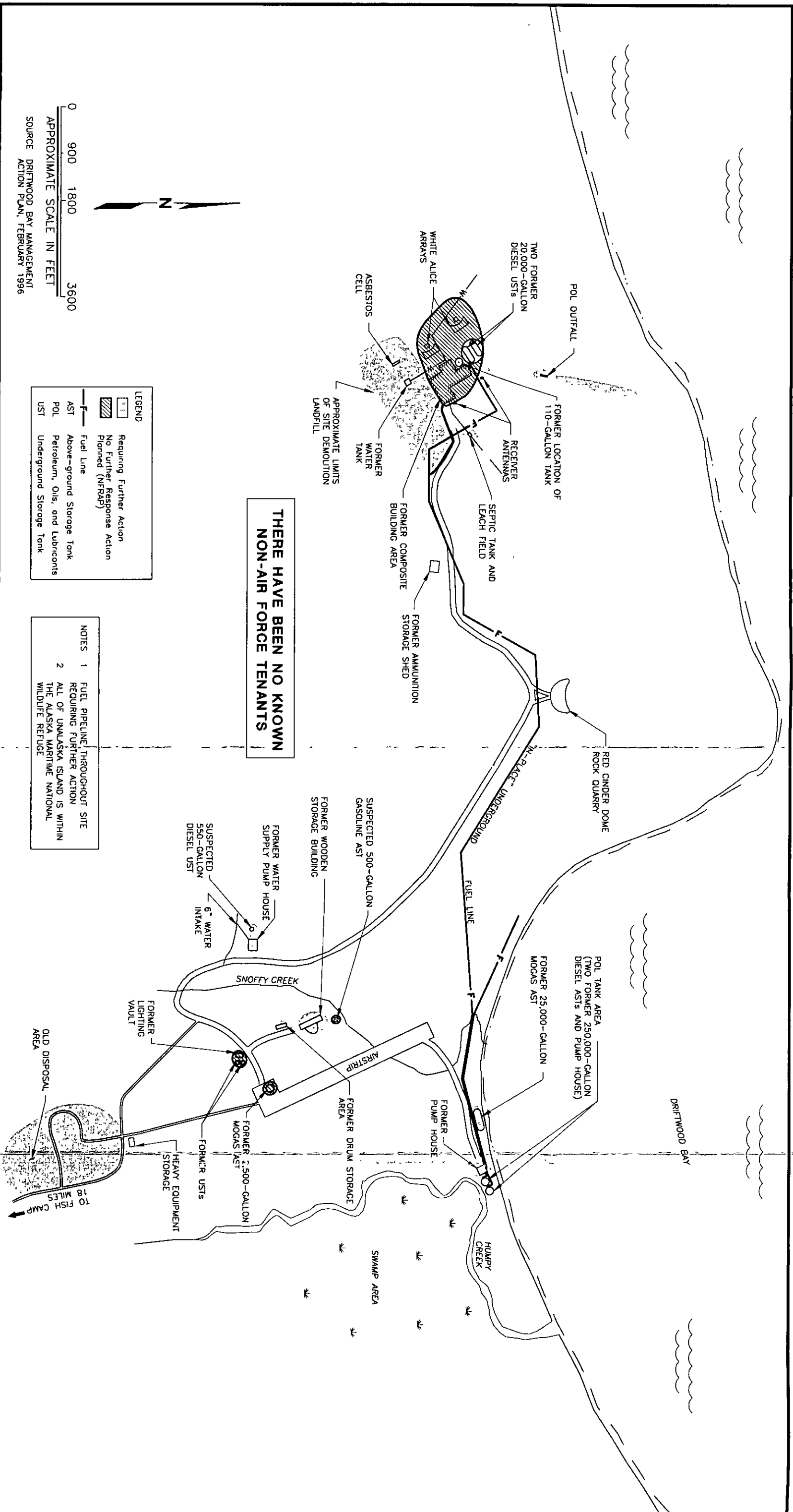
Off-base properties associated with former RRS operations include the Fuel Pipeline Corridor, the POL Tank Area, and the Airstrip (Table 2-2). Figure 2-2 shows historical locations of non-Air Force tenants. None of these properties

**TABLE 2-2 REAL PROPERTY RECORDS
DRIFTWOOD BAY RRS**

Description	Active (Y/N)	Owner/Operator	Facility No./ Parcel (see Figure 2-1)	Quantity	Dates of Operation	Date Acquired	Remarks/ Restoration Sites
POL Tank Area	N	Air Force		23.0 acres	1961 to 1977	1961	AOC09
Fuel Pipeline and Road Corridor	N	Air Force	91260	126 acres	1957 to 1977	1957	AOC04 and AOC10
Airstrip and Drum Storage Areas	N	Air Force	1103	194.9 acres	1958 to 1977	1958	AOC05, AOC06, AOC07, AOC08, and AOC11.

are currently in use, as the Driftwood Bay RRS was deactivated in 1977, and all buildings and structures were removed in 1991. Historically, the fuel pipeline was used to transport fuel from the POL Tank Area to the USTs at the Composite Building (RRS proper), and the POL Tank Area was used for storage of fuel. Historical uses in the airstrip area included a drum storage area and fuel storage, in addition to its obvious function as an airstrip.

The Old Disposal Area and Red Cinder Dome rock quarry are not on Air Force property, but they were off-base areas used by the Air Force.



3.0 RESTORATION PROGRAM STATUS

This section provides a summary of environmental response activities at Driftwood Bay RRS, including the status of existing regulatory agreements and the status of ongoing restoration activities and restoration-related compliance activities.

Currently, Driftwood Bay RRS is not listed on or proposed for inclusion on the National Priority Listing (NPL) in accordance with the National Contingency Plan (Title 40 Code of Federal Regulations [CFR], Part 300). Driftwood Bay RRS has not been scored by the Environmental Protection Agency (EPA) using the Hazard Ranking System. However, Driftwood Bay RRS is required by Air Force policy to comply with the following restoration-related environmental laws and regulations:

- CERCLA Section 120 (as amended by SARA), which establishes a framework for responding to releases of hazardous substances, pollutants, or contaminants in all media at all installations.
- Executive Order 12580 and the statutory provisions of the Defense Environmental Restoration Program (DERP), of which the IRP is a subcomponent.
- All applicable federal and state statutes and regulations that govern environmental restoration activities and conditions.

No determination has been made regarding selection of final remedial actions for Driftwood Bay RRS installation. When final RAs have been selected, the Decision Document will be updated.

3.1 *Summary of Regulatory Agreements*

Environmental response activities at Driftwood Bay RRS installation are currently being conducted in compliance with the Air Force IRP, CERCLA, and applicable state of Alaska requirements. No regulatory agreements specific to Driftwood Bay RRS are currently in effect.

3.2 *Restoration Sites and Areas of Concern*

One of the 12 Driftwood Bay RRS areas identified during the PA/SI has been classified as an IRP Site (OT001). The remaining 11 areas are designated as AOCs 01 through 11. The IRP Site and 11 AOCs are summarized in Table 3-1 and shown on Figure 3-1

TABLE 3-1 IRP SITE AND AREA OF CONCERN SUMMARY
DRIFTWOOD BAY RRS

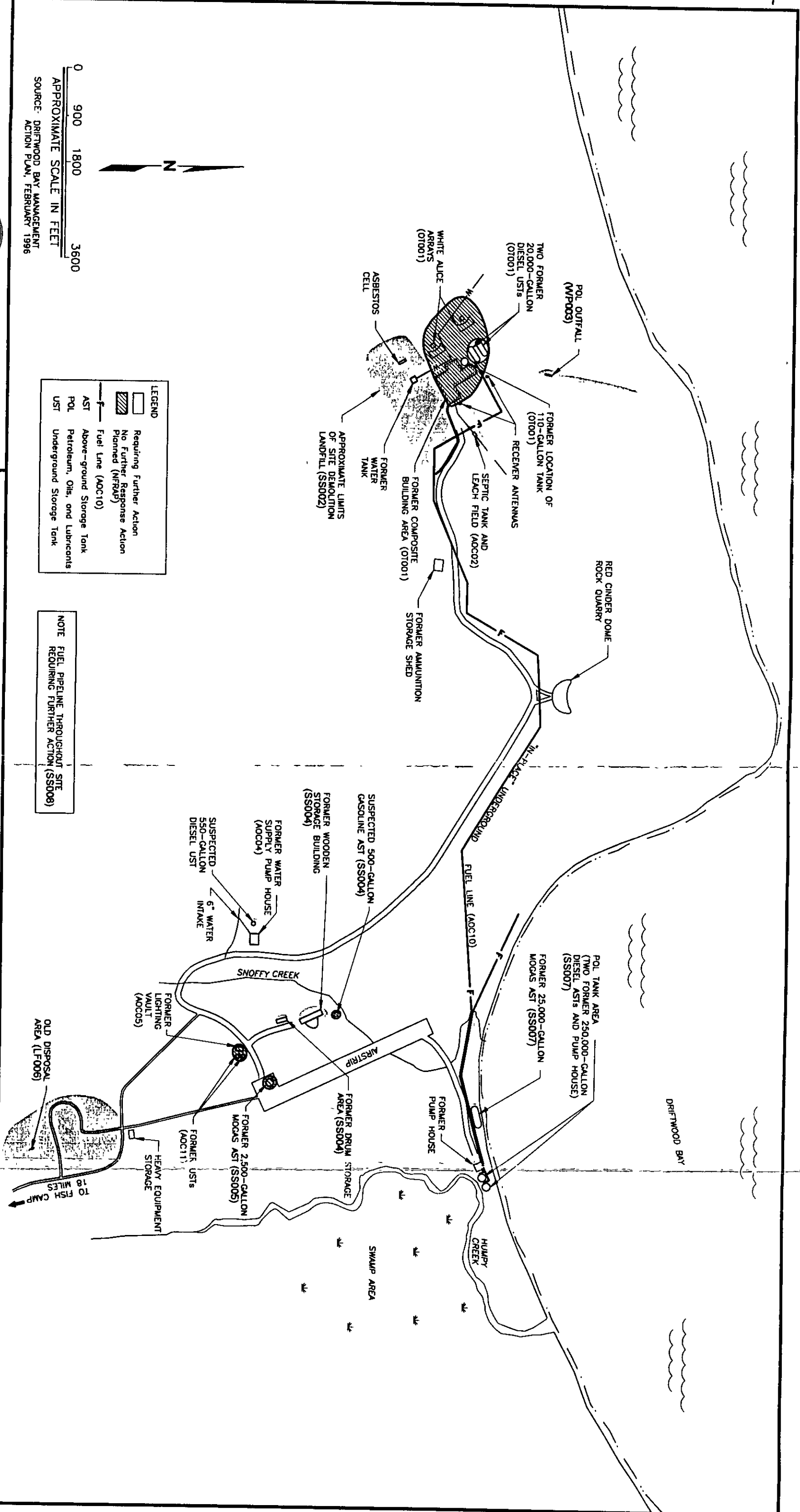
WIMS-ES Site ID	Alias	Description	Materials of Concern	Date of Operation	Status	Regulatory Mechanism	Relative Risk Site Evaluation	Completed and Ongoing Early Action	Environmental Condition of Property Category
OT001	Former Composite Building Site	RRS Composite Building and White Alice Arrays.	Structures contained asbestos material, PCB contaminated fluids and materials	1961 to 1977	PA/SI	IRP TSCA	Low	PCB materials shipped off site in 1984 Asbestos material transported to AOC01 in 1991	3, 4, 6
AOC01	Composite Building Landfill	RRS Installation Landfill, Demolition Debris Disposal Area	Demolition debris, asbestos material, and petroleum- impacted soil	1989 to 1991	PA/SI	IRP ADEC (18 AAC 60)	Low	Capped with soil in 1991	6
AOC02	Septic Tank and Leach Field	Underground Septic Tank and Outfall Area for RRS facility	Gray water outfall, sewage	1961 to 1977	PA/SI	IRP	NE		7
AOC03	Composite Building POL Outfall	Outfall from RRS Composite Building	POL wastes from composite building	1961 to 1977	PA/SI	IRP ADEC (18 AAC 75)	Low		6
AOC04	Former Water Supply Pump House Site	RRS Former Water Supply; contained a small building and diesel UST	On-site UST may have contained fuel	1961 to 1977	PA/SI	IRP	NE	Demolished in 1991	7

TABLE 3-1 IRP SITE AND AREA OF CONCERN SUMMARY (Continued)
DRIFTWOOD BAY RRS

WIMS-ES Site ID	Alias	Description	Materials of Concern	Date of Operation	Status	Regulatory Mechanism	Relative Risk Site Evaluation	Completed and Ongoing Early Action	Environmental Condition of Property Category
AOC05	Airstrip Lighting Vault	Former concrete lighting vault site	USTs located adjacent to the vault probably contained fuel, possibly PCB equipment	1961 to 1977	PA/SI	IRP TSCA ADEC (18 AAC 78)	Low	Demolished in 1991	3
AOC06	Drum Storage Area	Former unlined drum storage area and wooden storage shed location	POL	1961 to 1977	PA/SI	IRP ADEC (18 AAC 75)	Low	Wooden shed demolished in 1991 No drums remain	2, 6
AOC07	Airstrip MOGAS Tank	Former 2,500- gallon AST site	MOGAS	1961 to 1977	PA/SI	IRP ADEC (18 AAC 75)	Low	Tank removed in 1991	4
AOC08	Old Disposal Area	Debris and drums	Solid waste, drums, potentially other waste.	1961 to 1977	PA/SI	IRP ADEC (18 AAC 60)	Low		7
AOC09	POL Tank Area	Former site of two POL ASTs and Fuel Pumphouse	POL	1961 to 1977	PA/SI	IRP ADEC (18 AAC 75)	Low	Tanks and soil removed in 1991 and placed in AOC01	6

TABLE 3-1 IRP SITE AND AREA OF CONCERN SUMMARY (Continued)
DRIFTWOOD BAY RRS

WIMS-ES Site ID	Alias	Description	Materials of Concern	Date of Operation	Status	Regulatory Mechanism	Relative Risk Site Evaluation	Completed and Ongoing Early Action	Environmental Condition of Property Category
AOC10	Fuel Pipeline	Two-inch buried fuel line, extending between OT001 and AOC09	POL	1961 to 1977	PA/SI	IRP ADEC (18 AAC 75)	Low	The fuel line still exists	6
AOC11	Former USTs Site	One 1,000-gallon UST, one 750- gallon UST, and one 250-gallon UST at AOC11	POL	1961 to 1977	PA/SI	IRP ADEC (18 AAC 78)	NE	Tanks excavated and removed in 1991. Soil thermally treated on site.	4



0 900 1800 3600
APPROXIMATE SCALE IN FEET
SOURCE: DRIFTWOOD BAY MANAGEMENT
ACTION PLAN, FEBRUARY 1996

LEGEND

- Requiring Further Action
- ▨ No Further Response Action Planned (NFRAP)
- Fuel Line (AOC10)
- AST Above-ground Storage Tank
- POL Petroleum, Oils, and Lubricants
- UST Underground Storage Tank

NOTE
FUEL PIPELINE THROUGHOUT SITE
REQUIRING FURTHER ACTION (SS008)



TITLE
**MAP OF IRP SITES AND AOCs
UNDER INVESTIGATION**
DRIFTWOOD BAY RRS, ALASKA

PROJECT NO: A-8501-00
FIGURE NO: 3-1

IRP activities to date have consisted of source discovery and assessment through the PA/SI process and early removal action to eliminate known hazardous substances from the site. The following source discovery, assessment, and RAs have occurred:

- In 1991, installation buildings, structures, and ASTs were demolished. All USTs were excavated and removed. Resulting demolition debris and asbestos materials were landfilled at the site demolition landfill located south of the Former Composite Building (AOC01). Following UST removal, approximately 30 cubic yards of petroleum-contaminated soil was excavated and thermally treated on-site. An unknown amount of petroleum-impacted soil was also landfilled at the site demolition landfill.
- The Airstrip Lighting Vault (AOC05) housed generators and electrical equipment on site during facility operations. The generators were removed during 1991 site demolition activities. A soil sample was collected during the 1995 PA/SI and tested for PCBs and pesticides. Analyses did not detect any contaminants.
- The Former Airstrip MOGAS Tank (AOC07) location has been evaluated for PCBs, Gasoline-Range Organics (GRO), Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), and lead during past investigations. Prior to removal of the MOGAS tank, an investigation for PCBs in 1985 indicated PCB contamination below the Toxic Substances Control Act (TSCA) regulatory guidance level of 10 parts per million (ppm). The tank was removed during 1991 demolition activities, and sampling was conducted. During the 1995 PA/SI, a soil sample was collected and analyzed for GRO, BTEX, and lead. GRO and BTEX were not detected, and the lead concentration of 3 ppm was below the preliminary action level of 400 ppm.
- The Former Composite Building Area (OT001) has been evaluated for PCBs, Total Petroleum Hydrocarbons (TPH), GRO, Diesel-Range Organics (DRO), and metals during past investigations. All materials and equipment containing PCBs were removed in 1984 by the Air Force. Samples collected and analyzed during the 1985 SI and the 1995 PA/SI indicated no PCB contamination above the TSCA guidance level of 10 ppm. All other analytes were below the preliminary action levels in all areas except the northwest corner of the building where a 110-gallon tank was located.
- Two 20,000-gallon diesel USTs were reportedly located northwest of the Composite Building (OT001). Fuel samples were collected from both tanks during the 1985 site inspection and analyzed for metals and PCBs. Analytical results indicate the fuel did not contain hazardous waste. Both

tanks were listed for removal but only one tank was located and removed during the 1991 demolition activities. Site investigation activities were conducted during the 1991 removal activities, including laboratory analyses for TPH, BTEX, and Volatile Organic Compounds (VOCs). Although information such as field notes or reports was not available to correlate analytical results from the 1991 activities to specific sample locations, the analytical results indicate that contaminant concentrations in any impacted soil remaining at these locations were below the most stringent ADEC cleanup concentrations (Level A) for TPH and BTEX. VOCs were not detected.

- Three USTs were formerly located near the lighting vault, west of the south end of the airstrip (AOC11). The USTs were removed from the area and site inspections were conducted during 1991 demolition activities. Information such as field notes or reports was not available to correlate analytical results from the 1991 activities to specific sample locations; however, analytical results did not exceed the most stringent ADEC cleanup concentrations (Level A) for TPH and BTEX, except in samples from the contaminated soil stockpile before thermal treatment. VOCs were not detected.
- At the Composite Building location (OT001), contamination was detected near the northwest corner where a 110-gallon tank was formerly located. A soil sample collected from this location during the 1995 PA/SI had a DRO concentration of 1,300 ppm.
- At the Composite Building Landfill (AOC01), one sample was collected during the 1995 PA/SI and analyzed for TPH, DRO, GRO, PCBs, pesticides, and metals. DRO was detected at 550 ppm and TPH was detected at 16,000 ppm. GRO, PCBs, and pesticides were not detected, and the metals concentrations were below preliminary action levels.
- The Composite Building POL Outfall Area (AOC03) has visibly stained soil. A soil sample was collected during both the 1985 site inspection and 1995 PA/SI. The 1995 sample was analyzed for DRO, GRO, TPH, PCBs, metals, and VOCs. Analytical results from 1995 indicated a DRO concentration of 75,000 ppm, a GRO concentration of 609 ppm, and a TPH concentration of 120,000 ppm. Metals and VOCs were also detected, but at levels below preliminary action levels. PCBs were not detected.
- At the Former Drum Storage Area (AOC06), samples analyzed during the 1995 PA/SI indicate contamination requiring further response at two areas, the former wooden storage building and the former drum storage area proper. DRO analytical results were above 1,000 ppm at both locations.

- The POL Tank Area (AOC09) has petroleum contamination above preliminary action levels at the former pump house and former diesel tank locations. All samples collected during the 1995 PA/SI were analyzed for DRO and had detected concentrations above 8,000 ppm.
- The Fuel Pipeline Area (AOC10) consisted of two pipelines, one transported fuel from barges to the POL tanks, and one transported fuel from the tanks to the two 20,000-gallon USTs at the Composite Building (OT001). The two pipelines followed the same corridor, diverging near Snoffy Creek. In 1984, Air Force personnel drained or burned off the fuel in the pipeline. During 1991 demolition activities, most of the above-ground portions of the pipeline were cut, removed, and placed in the Composite Building Landfill (AOC01). Three samples were collected during the 1995 PA/SI and analyzed for DRO. All samples had a detectable DRO concentration, but only one sample had a concentration that exceeded preliminary action levels.

3.3 **Community Relations Program**

Involving the public in the IRP decision-making process is required by 40 CFR 300 (CERCLA and SARA) for NPL sites. Although Driftwood Bay RRS is not on the NPL, the Air Force is committed to keeping the community informed of activities, investigations, and cleanup schedules at the site.

The 611th Civil Engineer Squadron (611 CES) is conducting a comprehensive community involvement effort to inform and involve the public in the environmental decision-making process. Community relations activities include the following:

Management Action Plan (MAP). This MAP is made available to the public in order to provide a summary of all restoration activities in one document. If anyone is interested in obtaining additional information, the MAP provides references to the appropriate document.

Restoration Advisory Board (RAB). RABs provide a forum for discussion and exchange of information between federal/state agencies and the community regarding the cleanup. The RAB plays an important role in the decision making process. A RAB has not been formed for Driftwood Bay RRS.

Administrative Record. An Administrative Record has been established in the 611 CES offices on Elmendorf AFB. The Administrative Record contains the information that has been used to support Air Force decision-making and is accessible to the public.

Information Repository. A file containing newspaper clippings and community relations documents relating to proposed plans and response actions for all of the IRP Sites is maintained by the 611 CES Community Relations Coordinator at Elmendorf AFB.

Updated Mailing List. A mailing list of interested parties is maintained and updated regularly by the Air Force Community Relations Coordinator. These mailing lists are used to provide interested parties with copies of the newsletters, fact sheets, public notices, and to announce public meetings that pertain to the environmental issues at the various installations.

Fact Sheets and Newsletters Fact sheets and newsletters are distributed as changes occur in the restoration program or when proposed plans require public comment.

Public Meetings. The Air Force hosts open houses and public meetings when proposed plans have been distributed for comment. Topics of concern at these meetings often include the environment; human health in general; subsistence; fishing; hunting; tourism; property values; groundwater quality; and contaminated drinking water.

1-800 Hotline. A 1-800 number to the 611 CES Community Relations Coordinator was established in May of 1995. The line provides immediate access to the 611 CES for questions and information relating to environmental activities at 611 CES sites. The telephone number is 1-800-222-4137.

4.0 RESTORATION PROGRAM STRATEGY

The purpose of this section is to summarize the installation-wide environmental restoration strategy at Driftwood Bay RRS.

Zones and OUs are boundaries designed to organize and define areas of environmental investigation. The purpose of establishing these investigative areas is to group multiple sites into a related geographical area. These groupings enable the RPM to combine information and develop detailed maps and conceptual models.

For relatively large areas having multiple contaminant migration pathways, widely separated geographical areas, and mutually exclusive remediation activities the ability to focus restoration efforts in smaller management units can be very effective. Typically, the smaller the installation, the fewer the number of zones and OUs that will be designated. Usually OUs are only assigned at sites regulated under CERCLA. There are no OUs at Driftwood Bay RRS.

4.1 Zone Designation

The current scope of environmental investigation activities at Driftwood Bay RRS installation has not required organization by zones. Investigation activities are currently being implemented on an installation-wide basis as a single investigative unit.

If investigative activities become sufficiently complex, the IRP Sites may be organized into multiple zones.

4.2 Site Strategy

The preferred management tool is to use site designations in place of an OU under a non-NPL management strategy. In general, sites are typically discrete and managed within the IRP process.

4.3 Ongoing and Planned Removal Actions

During FY99, RI/FS work will be conducted at the Former Composite Building Area (OT001), the Composite Building Landfill (AOC01), the Septic Tank and Leach Field (AOC02), the Composite Building POL Outfall (AOC03), the Former Water Supply Pump House Site (AOC04), the Drum Storage Area (AOC06), the Old Disposal Area (AOC08), the POL Tank Area (AOC09), and the Fuel Pipeline (AOC10). The RI/FS work will include searching the area near the Former Composite Building for the 20,000-gallon diesel UST that was not located during

the 1991 demolition activities. The requirement for further remedial action will be evaluated following completion of these reports.

4.4 Contracting and Hiring Strategy

The 611 CES has three primary contracting mechanisms available, the 3rd Contracting Squadron (3 CONS) at Elmendorf AFB, the USACE, and the Air Force Center for Environmental Excellence (AFCEE).

3 CONS is part of the 3rd Wing at Elmendorf AFB. Available services include open-end Architect and Engineering (AE) Services contracts, small purchases, competitive bids for removal action contractors, 8(a) contracts, and Request for Proposals (RFPs) with technical evaluation. Title II inspection services are also available. Two contracting personnel are dedicated to provide support to environmental contracts.

The USACE Alaska District Office at Elmendorf AFB offers open-end AE contracts, competitive bidding, 8(a) contracts, and RFPs with technical evaluation. Inspection during construction activities is provided by the USACE or through Title II services.

AFCEE also offers open-end AE contracts, competitive bidding, 8(a) contracts, and RFPs with technical evaluation. Inspection during construction activities is provided through Title II services. The AFCEE Headquarters are in Texas, but there is an Alaska office at Elmendorf AFB. Government and contract employees oversee design and remediation activities. The contracting office is located at Brooks AFB in San Antonio, Texas.

Contracts are awarded based on company qualifications. Consideration is also given to Alaskan businesses, small and disadvantaged businesses, and use of local hire.

5.0 ENVIRONMENTAL RESTORATION SCHEDULE

This section presents Driftwood Bay RRS Master Schedule of anticipated environmental restoration activities. A Master Schedule of projected restoration activities is presented on Figure 5-1.

5.1 *Environmental Restoration Program*

Remedial Investigation/Feasibility Study (RI/FS) work at Driftwood Bay RRS is programmed for 1999. The master schedule of restoration and restoration-related compliance activities is based on anticipated response actions and a response action timetable that is considered feasible. The Air Forces ability to implement environmental response actions established by the master schedule depends on the following factors:

- The nature and extent of contamination;
- Successful completion of data collection; and
- Availability and timeliness of funding.

5.2 *Response Schedules*

RI/FS work is scheduled for the Former Composite Building Site (OT001), the Composite Building Landfill (AOC01), the Septic Tank and Leach Field (AOC02), the Composite Building POL Outfall (AOC03), the Drum Storage Area (AOC06), the Old Disposal Area (AOC08), the POL Tank Area (AOC09), and the Fuel Pipeline (AOC10) during 1999. Required responses will be determined based on the results of the 1999 RI/FS. The site is currently scheduled to be closed in 2003.

There are currently no plans to excess Driftwood Bay RRS. Demolition and site restoration will be accomplished by the USACE under the DERP.

WIMS-ES Site ID	Alias	Most Recent Activity	1997				1998				1999				2000				2001				2002				2003			
			I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	Driftwood Bay RRS	PA/SL (1996)																												
OT001	Former Composite Building Site	PA/SL (1996)																												
AOC01	Former Composite Building Landfill	PA/SL (1996)																												
AOC02	Septic Tank and Leach Field	PA/SL (1996)																												
AOC03	Composite Building POL Outfall	PA/SL (1996)																												
AOC04	Former Water Supply House	PA/SL (1996)																												
AOC05	Former Airstrip Lighting Vault	PA/SL (1996)																												
AOC06	Former Drum Storage Area	PA/SL (1996)																												
AOC07	Former Airstrip MOGAS Tank	PA/SL (1996)																												
AOC08	Old Disposal Area	PA/SL (1996)																												
AOC09	POL Tank Area	PA/SL (1996)																												
AOC10	Fuel Pipeline Area	PA/SL (1996)																												
AOC11	Former UST's	PA/SL (1996)																												

Legend

- RI Remedial Investigation
- FS Feasibility Study
- PA Preliminary Assessment
- SI Site Inspection
- NFRAP No Further Response Action Planned
- II Specific Quarter of year
- * Proposed Activity



TITLE

MASTER SCHEDULE
DRIFTWOOD BAY RRS, ALASKA

PROJECT NO

A-8501-00

PICTURE

5-1

6.0 REFERENCES

Air Force. 1963. *Basic Layout Plan. Driftwood Bay Air Force Station, Alaska.* 2 Sheets.

Air Force. 1985. *Defense Environmental Restoration Account.* Prepared by Ocean Technology, Ltd.

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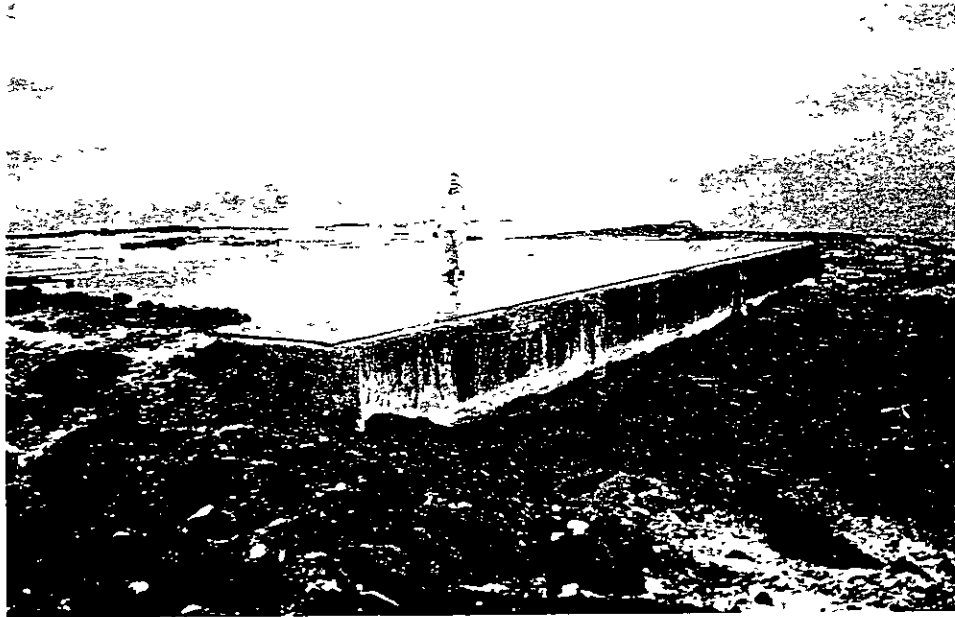
Air Force. 1994. *Preliminary Assessment-Driftwood Bay.* Prepared by CH2M Hill.

Air Force. 1996a. *Preliminary Assessment/Site Inspection, Driftwood Bay Radio Relay Station, Unalaska, Alaska.* Prepared by EMCON Alaska, Inc. January.

Air Force. 1996b. *Management Action Plan (MAP), Driftwood Bay Radio Relay Station, Unalaska Island, Alaska.* Prepared by EMCON Alaska, Inc. February.

APPENDIX A
SITE PHOTOGRAPHS

PHOTOGRAPHIC LOG



Photograph #1
East side of the former composite building foundation



Photograph #2
The northern extent of the landfill ends at the south side of the composite building

PHOTOGRAPHIC LOG (Continued)



Photograph #3

Sample location of 95DWD001SO at the left stake Sample location of 95DWD005SO at the right stake The ATV in the background is at the foundation of the former composite building

PHOTOGRAPHIC LOG (Continued)



Photograph #4

Location of sample 95DWD002SO at the former north feedhorn foundation Gretchen in background is at the former composite building foundation

PHOTOGRAPHIC LOG (Continued)



Photograph #5

The asbestos cell area is subsiding The asbestos warning sign has fallen over



Photograph #6

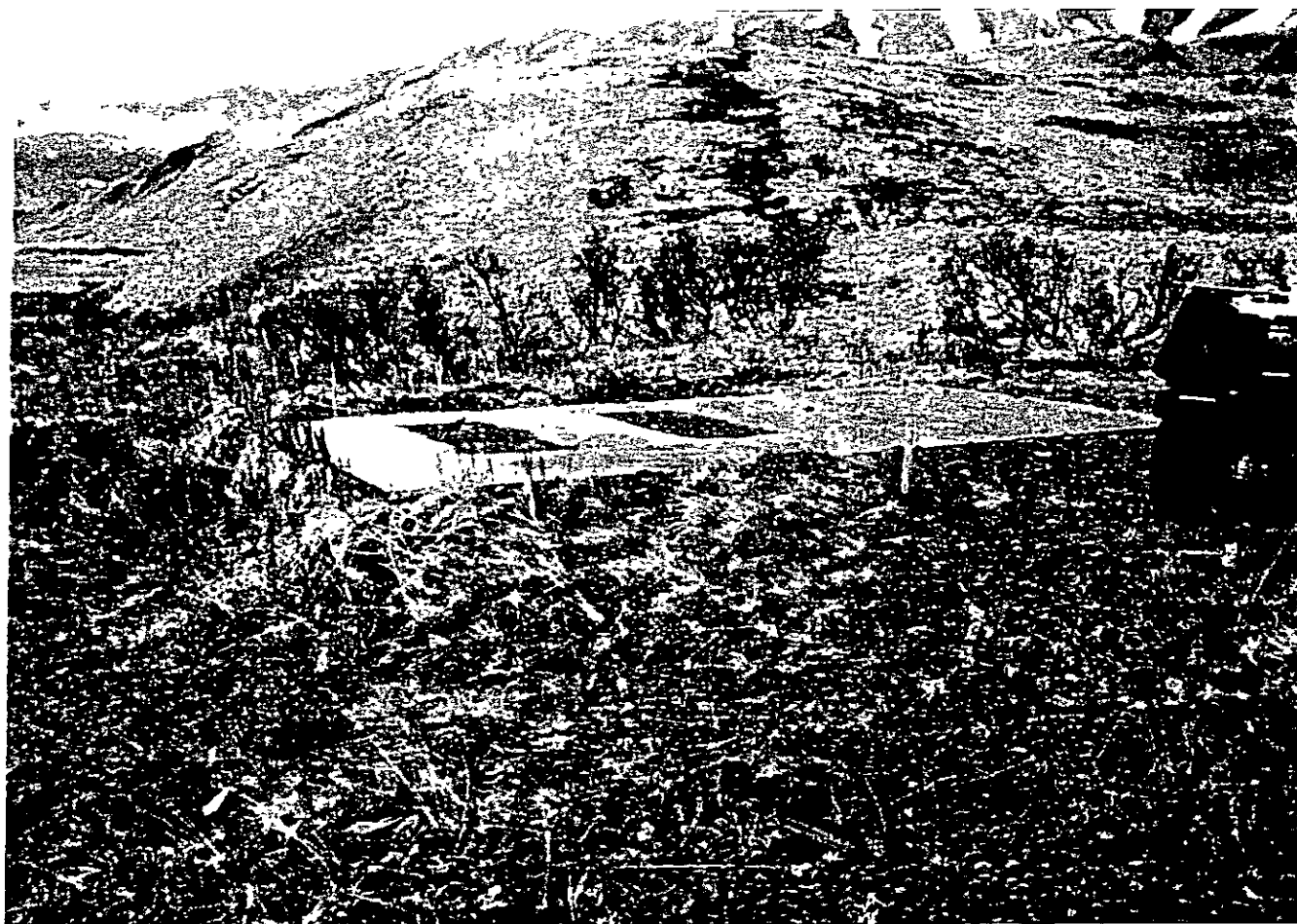
Sample location of 95DWD008SO near the southeast corner of the former composite building foundation

PHOTOGRAPHIC LOG (Continued)



Photograph #7
Location of sample 95DWD008SO

PHOTOGRAPHIC LOG (Continued)



Photograph #8

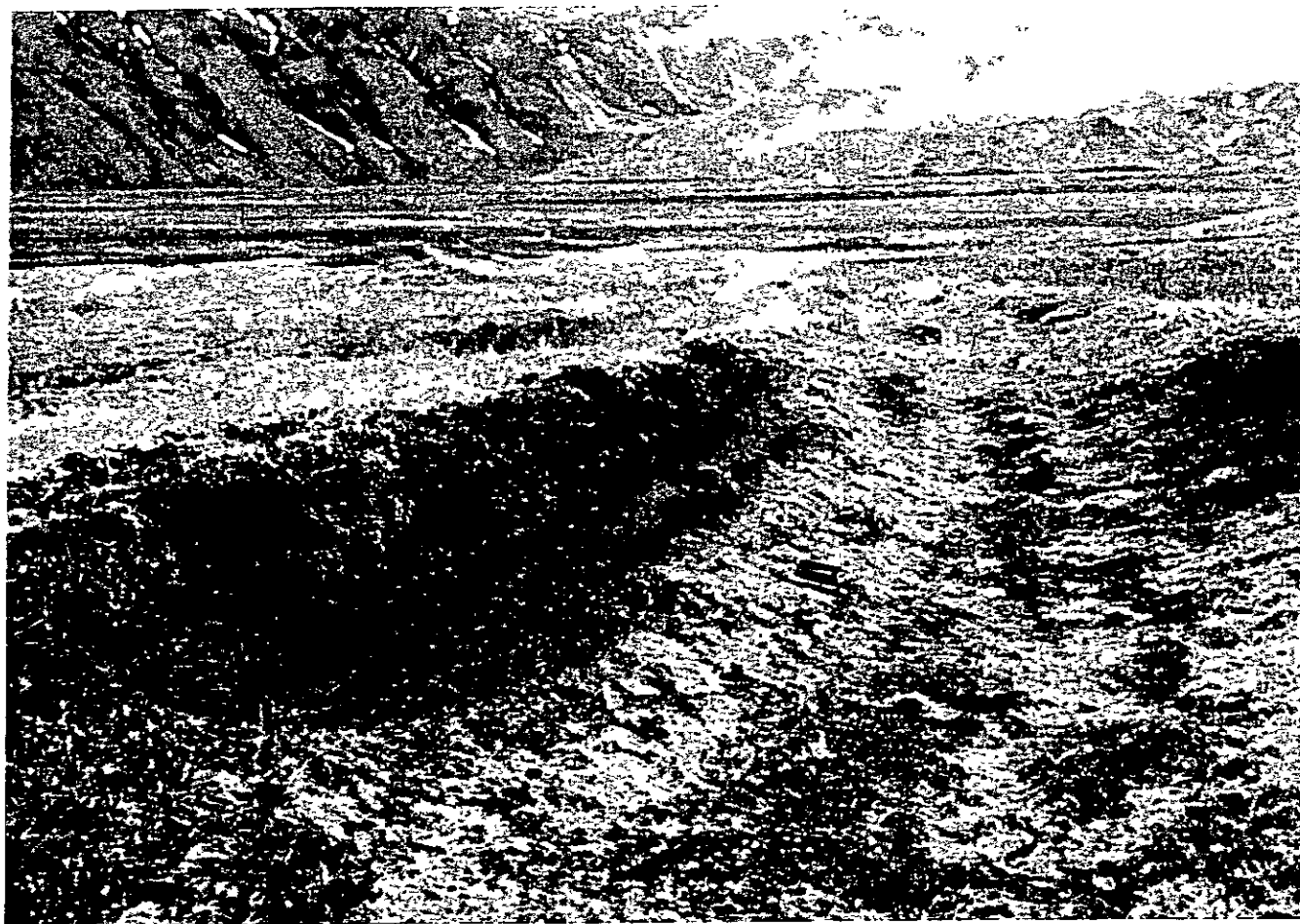
The foundation of the former lighting vault. The wooden stake marks the location of sample 95DWD015SO. The rectangular holes in the foundation appear where the former cement generator stands were located. The area on the left of the foundation is the former USTs location.

PHOTOGRAPHIC LOG (Continued)



Photograph #9
Former drum storage area in the foreground

PHOTOGRAPHIC LOG (Continued)



Photograph #10
Trench area near the drum storage area

PHOTOGRAPHIC LOG (Continued)



Photograph #11
PID survey area in the airstrip turnaround

PHOTOGRAPHIC LOG (Continued)



Photograph #12

Locations of sample 95DWD023SO (background) and water sample 95DWD019WS
95DWD020WS, and 95DWD021WS

PHOTOGRAPHIC LOG (Continued)



Photograph #13
Former POL tank ring

PHOTOGRAPHIC LOG (Continued)



Photograph #14

Location of sample 95DWD027SO on the north side of the POL pumphouse

PHOTOGRAPHIC LOG (Continued)



Photograph #15
Approximate former location of the 25,000-gallon MOGAS tank

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE