



UNITED STATES AIR FORCE
CAPE NEWENHAM LRRS, ALASKA

INSTALLATION RESTORATION PROGRAM

DECISION DOCUMENT FOR DRUM DISPOSAL SITE (LF03)

FINAL

25 OCTOBER 2000

R E C E I V E D

APR 17 2001

DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

R E C E I V E D

OCT 25 2000

DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AFB	Air Force Base
ARAR	applicable or relevant and appropriate requirements
ARCO	Atlantic Richfield Company
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DRO	diesel range organics
GRO	gasoline range organics
IRA	interim removal action
IRP	Installation Restoration Program
LRRS	Long Range Radar Site
mg/kg	milligram per kilogram
PA	preliminary assessment
PCB	polychlorinated biphenyl
ppm	parts per million
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
SI	site investigation
SVOC	semi-volatile organic compound
TBC	to be considered
USAF	U.S. Air Force
USC	Unites States Code
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound
WAA	Waste Accumulation Area

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Part I DECLARATION

SITE NAME AND LOCATION

Installation Restoration Program (IRP) Site LF03 (Drum Disposal Site) is located at Cape Newenham Long Range Radar Site (LRRS), Alaska.

STATEMENT OF BASIS

This decision document presents the selected remedial action for LF03 at Cape Newenham LRRS. This decision document was developed in accordance with the Defense Environmental Restoration Program, 10 United States Code (USC) 2701; consistent with the Comprehensive Environmental Response, Compensations, and Liability Act (CERCLA), 42 USC 9604(a); Executive Order 12580, 52 Federal Register 2923; and to the extent practicable with the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Register Regulations 300).

This decision is based on information contained in the administrative record, including but not limited to the results of the *Remedial Investigation of PCBs at Upper Camp (SS07), Cape Newenham LRRS, Alaska* (U.S. Air Force [USAF], 1996) and the *Drum Removal (LF03) at Cape Newenham LRRS, Alaska* (USAF, 1999a).

ASSESSMENT OF SITE

The selected remedy for this site is no further action. Based on comprehensive investigations conducted at LF03 to date, only two isolated soil sample locations contain DRO concentrations above the applicable DRO soil cleanup level of 250 ppm (Sample 14 at 451 ppm and Sample 6 at 2,540 ppm) (Alaska Department of Environmental Conservation [ADEC], 1999a). No groundwater or surface water results indicated contamination above the 18 AAC 70 Water Quality Standards (ADEC, 1999b) and 18 AAC 75 Oil and Hazardous Substances Pollution Control. Based on the limited extent of contamination and source removal action, no further investigations or remedial action is warranted. This determination is protective of human health and the environment; therefore, the selected remedy for IRP Site LF03 is no further action under CERCLA, as amended. The State of Alaska supports and concurs with the selected remedy of no further action.

DESCRIPTION OF THE SELECTED REMEDY

On the basis of current conditions at LF03, no unacceptable risk or threat to human health or the environment exists. Therefore, the selected remedy for LF03 is no further action under CERCLA, as amended.

DECLARATION AND STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate, and is cost-effective. The statutory preference for treatment is not satisfied because treatment was not found to be necessary. Contaminant levels at the site do not present an unacceptable threat to human health or the environment; thus, no treatment is required.

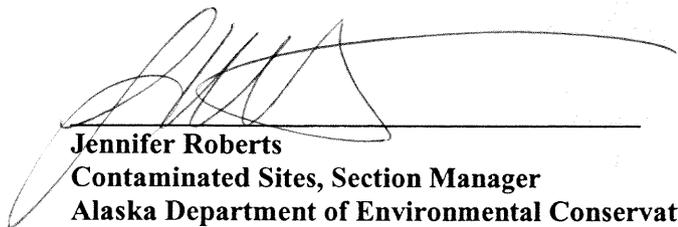
This decision may be reviewed in the future if new information becomes available which indicates the presence of previously undiscovered contamination or exposure routes that may cause a risk to human health or the environment.

This signature sheet documents the USAF and the ADEC acceptance of the record of decision for the Drum Disposal Site (LF03), Cape Newenham, Alaska. This decision document satisfies the requirements of the National Environmental Policy Act that apply to CERCLA response actions.



Michael M. Wyka, Colonel, U.S. Air Force
Commander, 611th Air Support Group

4 Dec 00
Date



Jennifer Roberts
Contaminated Sites, Section Manager
Alaska Department of Environmental Conservation

Oct 31 2000
Date

Part II

DECISION SUMMARY

1.0 SITE NAME, LOCATION, AND DESCRIPTION

This decision document provides an overview of the no further action determination for Site LF03 located at Cape Newenham LRRS, Alaska. This site is part of the Air Force IRP. This decision document presents a summary of site information and background, extent of contamination, site risks, and the selected cleanup remedy. It also describes how the selected remedy satisfies the requirements of the Defense Environmental Restoration Program, 10 USC 2701, consistent with CERCLA, 42 USC 9601(a) and Executive Order 12580, and the National Oil and Hazardous Substances Pollution Contingency Plan.

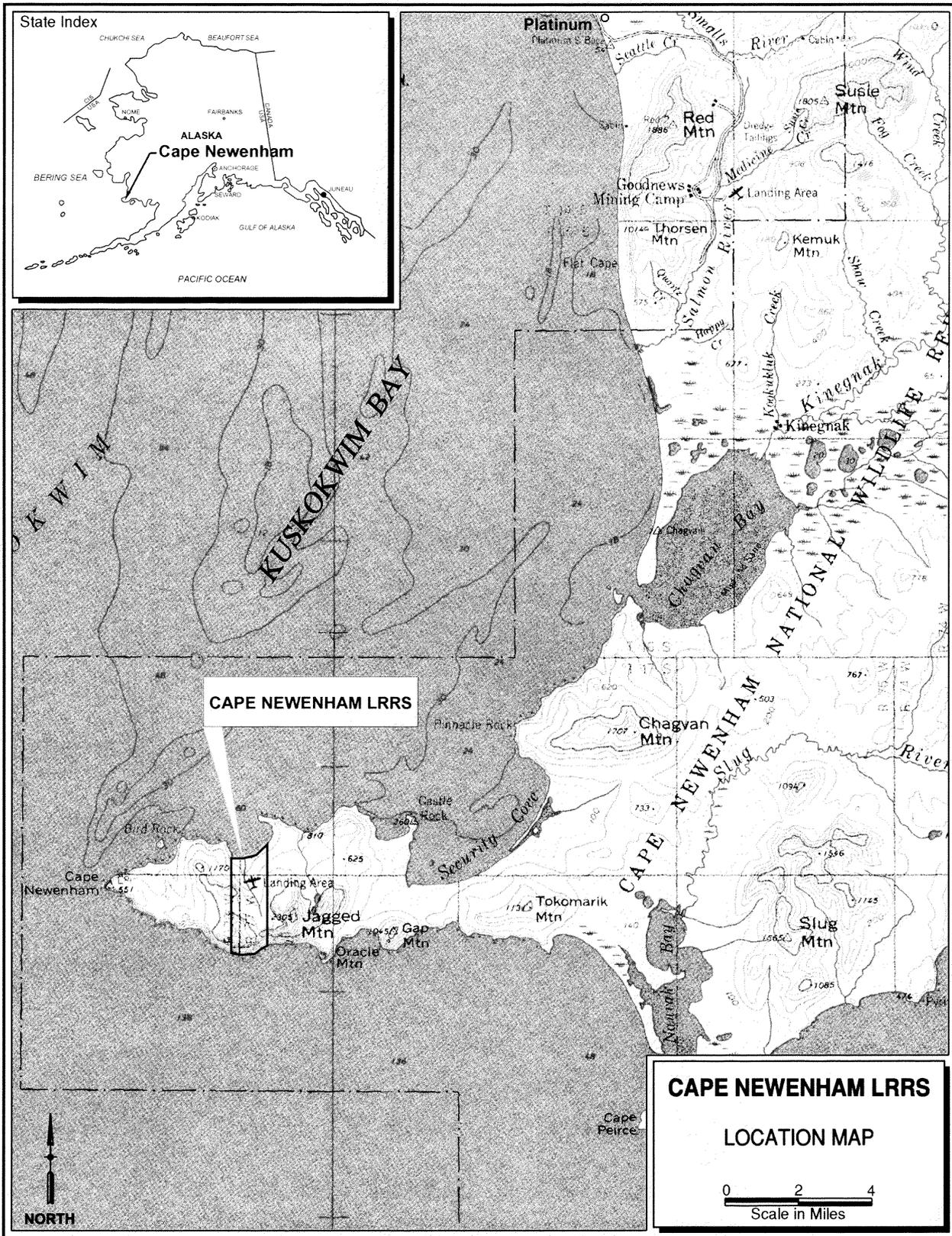
Cape Newenham LRRS is on a small coastal peninsula located 460 miles southwest of Anchorage. Cape Newenham LRRS is located on about 2,300 acres of Air Force property within the Togiak National Wildlife Refuge and is bordered by Bristol Bay to the south and Kuskokwim Bay to the north. The location is remote and accessible only by air or sea. The nearest community is Platinum (population about 55), which is about 30 miles north of the LRRS on Goodnews Bay. Figure 1 presents the location and vicinity of the installation, Togiak National Wildlife Refuge (formerly Cape Newenham Wildlife Refuge), and Platinum, Alaska.

The Cape Newenham LRRS was one of the original Aircraft Control and Warning sites constructed as part of the establishment of a permanent air defense system to provide radar coverage over a segment of Alaska's west coast. The Cape Newenham LRRS installation was constructed in the early 1950's, with the Aircraft Control and Warning system at the Upper Camp becoming operational in 1954.

The Upper Camp is situated on a mountaintop. Surface water from the Upper Camp drains downslope to available receiving drainages including several small ponds. All streams that develop at the lower elevations of the LRRS drain approximately northward. The upper valley at the LRRS is the principal recharge zone of groundwater. The valley near the Lower Camp consists of a thick zone of permeable coarse-grained talus and alluvium, which normally contains groundwater at shallow depths (3 to 7 feet). Two springs appear to be located about 2 miles north of the Upper Camp near the north end of the runway. Drinking water at the LRRS is obtained from shallow groundwater via a buried gallery system located near the south end of the runway at the Lower Camp.

Initially, the Cape Newenham installation provided living quarters for about 100 military personnel. In 1977, a contractor was hired to provide support services, eliminating many military positions. Installation of Joint Surveillance System equipment in 1982 enabled radar and beacon data to be transmitted directly via satellite to Elmendorf Air Force Base (AFB). This eliminated the remaining military positions and permitted total operation by the contractor. Today, about four people live at the site and reside at the Lower Camp in the composite building (USAF, 1997). The current military mission of the Cape Newenham LRRS is the continued operation of the minimally attended radar station as part of the SEEK IGLOO Program that performs aircraft control and warning missions in Alaska (USAF, 1999b).

The Upper Camp Aircraft Control and Warning system was converted to a Minimally Attended Radar station in 1984. The facility is expected to remain a Minimally Attended Radar station under the control of the Air Force. Future residential use is highly unlikely due to its remote location. Subsistence activities are not known to occur on the Air Force property due to the installation's distance from local populations and inaccessibility to regional residents.



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Figure 1. Location of Cape Newenham LRRS, Alaska

2.0 SITE INFORMATION AND ENFORCEMENT ACTIVITIES

The LRRS is divided into two areas, the Upper Camp and the Lower Camp. The Upper Camp contains the radar dome facility and is connected to the Lower Camp by a road and tramway. The Lower Camp area includes the runway, the composite building, and other facilities. A composite building, built in 1980, replaced the old industrial and housing structures. LF03 is at the north end of the runway at the Lower Camp. Figure 2 shows the installation layout and the location of LF03.

2.1 Site History

LF03 is a former drum disposal site located near the north end of the landing strip at Lower Camp. The site is approximately 2,400 square feet and lies within an area formerly known as Waste Accumulation Area (WAA) No. 2. WAA No. 2 was used to store drums and debris from the time the LRRS was constructed into the 1970s. LF03 consisted of a mound of native soil and rock debris that covered or partially covered an accumulation of 55-gallon drums. Some of these drums were exposed due to erosion.

The Air Force conducted an IRP Phase I Records Search in 1985 at which time the former Landfill No. 2 and WAA No. 1 and No. 2 were all incorporated into one IRP site, LF03. This records search recommended LF03 for further investigation.

Site evaluations were conducted in 1988 at several sites including LF03. Following the evaluation, a Decision Paper recommending No Further Action was signed (USAF, 1988).

Following a request of additional information by the United States Environmental Protection Agency (USEPA) regarding LF03, the Air Force conducted a Preliminary Assessment of the site in 1992. The USEPA Region X concluded that Cape Newenham LRRS had a high enough risk to warrant additional investigations. LF03 was one of the sites designated for further study. A site investigation (SI) was performed in 1993.

During a 1995 Remedial Investigation (RI) of polychlorinated biphenyls (PCBs) at the Upper Camp (USAF, 1996), approximately 25 previously unreported drums were discovered within the old WAA No. 2. The exposed drums were of the open head type and found to be dated back to 1951 and 1952. Some of the drums were marked Richfield Oil Company, which became Atlantic Richfield Company (ARCO) in 1967. Therefore, it is possible that these drums have been buried for over 30 years. It is believed that erosion at the site exposed this drum mound. Soil samples taken at the site indicated elevated levels of DRO above regulatory cleanup levels. As a result of the drum discovery, the site was reopened and recommended for remedial action in 1997 (USAF, 1999b).

The Air Force completed an interim removal action (IRA) at LF03 in 1997. The Air Force removed 1,290 drums in various condition from the site. Soil and groundwater sampling was performed to determine if contaminants remain at the site. Based on the results of the IRA, there are only two isolated soil exceedences that do not present an unacceptable risk or threat to human health or the environment, and no further action is warranted. The site was recommended for no further action in 1999 (USAF, 1999b).

2.2 Regulatory Enforcement Activities

LF03 was first identified with an IRP designation following a Phase I records search conducted in 1985. A decision paper for No Further Action Planned was signed in 1988 (USAF, 1988). Later, however, the site was recommended again for further investigation. LF03 was a collection of three sites, Landfill No. 2, WAA No. 1, and WAA No. 2. A preliminary assessment (PA) report was conducted at LF03 in 1992. Following a SI report in 1993, the USEPA warranted the site for even further investigation. A RI was conducted in 1996, at that time exposed drums at WAA No. 1 and No. 2 were sampled for contents, and soil samples in LF03 were taken to better determine the nature and extent of contamination. The Air Force conducted a drum removal remedial action in 1997. Following this action, the proposed plan for LF03 is for no further action.

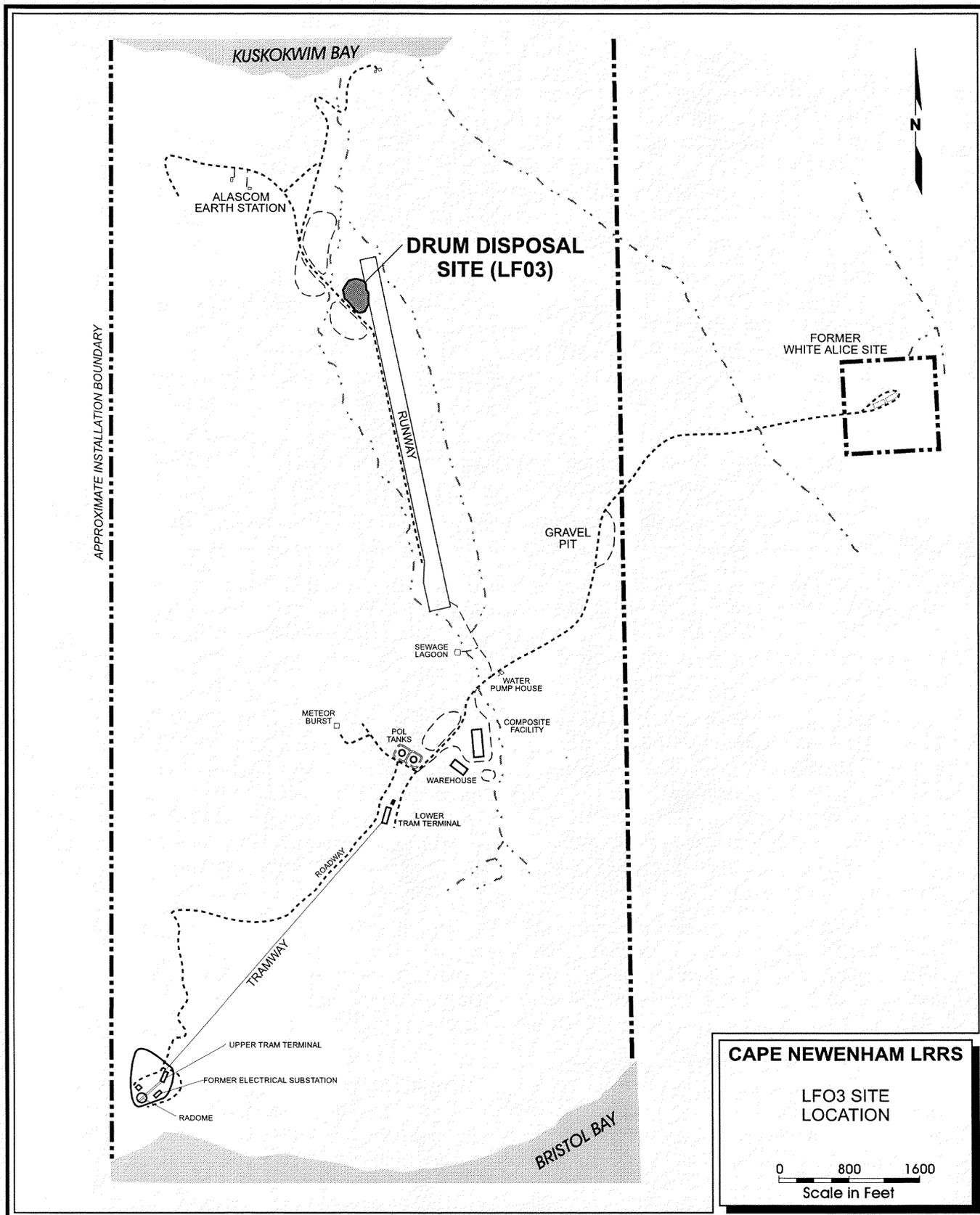


Figure 2. Location of Drum Disposal Site (LF03) at Cape Newenham LRRS, Alaska

2.3 Community Relations Activities

Public participation has been an important component of the CERCLA process at Cape Newenham LRRS. Activities aimed at informing and soliciting public input regarding cleanup activities for LF03 are as follows:

- **Public Comment Period.** The Air Force presented the proposed plan for public review through a public mail out to all interested parties in May 2000. A summary of the public comment period is included in the Responsiveness Summary contained in Part III of this document.
- **Updated Mailing List.** A mailing list of interested parties is maintained and updated regularly by the Air Force Community Relations Coordinator.
- **Administrative Record.** The administrative record, located at the 611th CES office at the Elmendorf AFB and in Platinum, is continually being updated and developed. The administrative record for the Cape Newenham LRRS contains the information used to support this decision and is accessible to the public.
- **Information Repository.** A file containing newspaper clippings and community relation documents relating to proposed plans and response actions for all of the IRP sites is maintained by the 611th CES Community Relations Coordinator at the Elmendorf AFB and is accessible to the public.
- **Management Action Plan.** This report is made available to the public in order to provide a summary of all restoration activities in one document.
- **Proposed Plan.** The Air Force submitted the proposed plan to the public by mail for review in May, 2000. The plan proposed no further action for LF03. No public comments were received in regard to the proposed plan. Comments from the United States Fish and Wildlife Surface (USFWS) are addressed in Part III of this decision document.

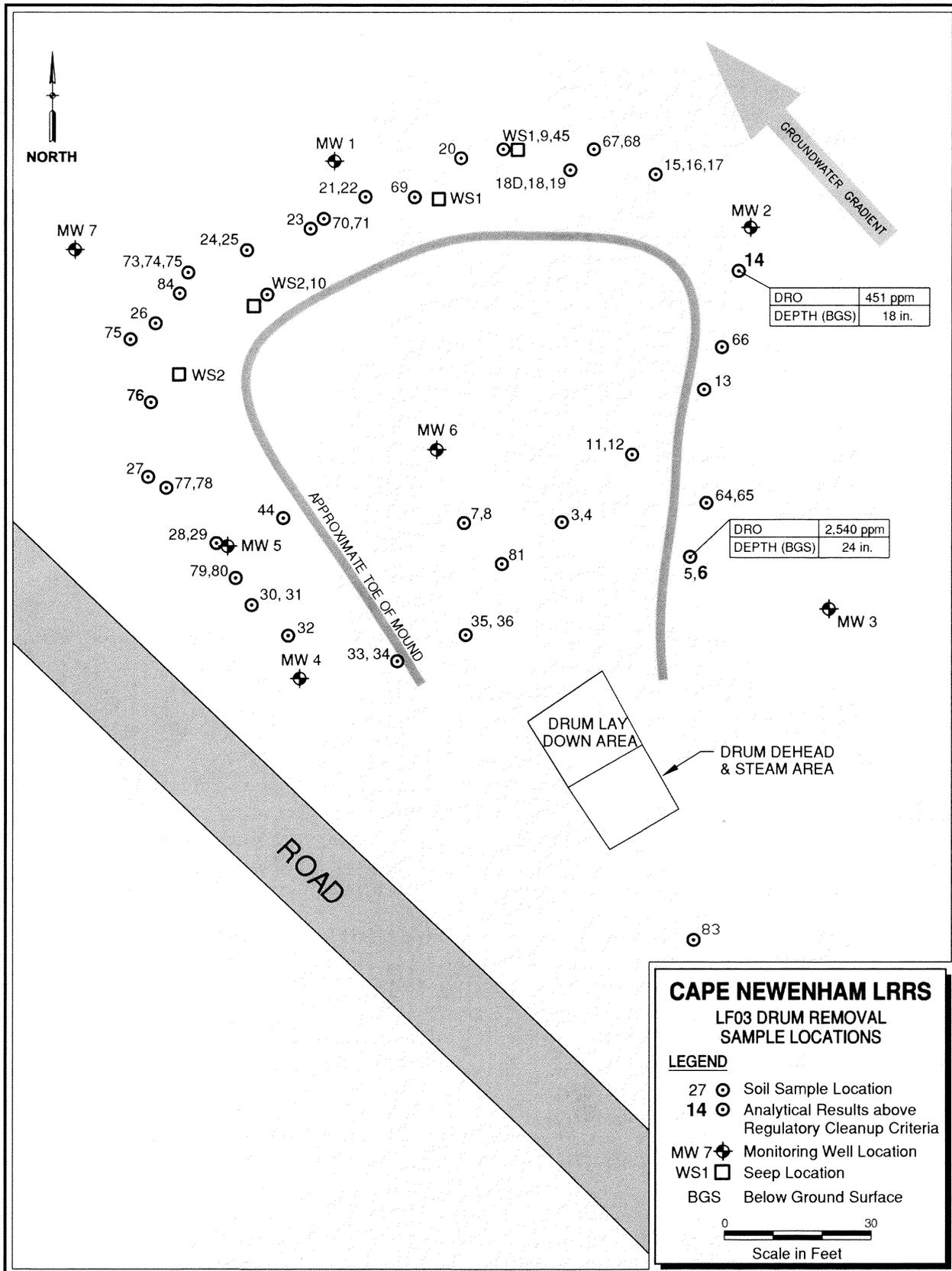
3.0 SITE CONTAMINATION AND RISKS

A drum removal action was conducted in 1997. Groundwater sampling confirmed no levels of contaminants above regulatory limits, and soil samples indicated only 2 results of DRO contamination above regulatory cleanup levels remain at the site. These isolated exceedences do not present an unacceptable risk to human health or the environment. For this reason, the site is recommended for no further action. The following subsections summarize the investigation results and risks.

DRO was initially detected during the 1995 field season at levels that slightly exceeded regulatory levels. Sampling results from the 1997 field event show the contaminant levels in surface water and groundwater are below regulatory cleanup levels, and only 2 out of 33 soil samples had DRO values above the regulatory level of 250 ppm. Sample locations are identified in Figure 3. Based on the comprehensive SI, the DRO samples above the regulatory cleanup are isolated exceedences and present no unacceptable risk to human health and the environment. No other contaminants of concern remain at the site.

3.1 Remedial Action Objectives

As part of the RI conducted in 1995, applicable or relevant and appropriate requirements (ARARs) and to be considered (TBCs) guidance were developed using the 1991 ADEC Interim guidance for Non-Underground Storage Tank (UST) Contaminated Soil Cleanup Levels, ADEC Oil and Hazardous Substances Pollution Control (18 AAC 75) and the USEPA Region III Risk-Based Concentration Table, Third Quarter 1994. Since this time, ADEC has published new regulations regarding soil cleanup levels under 18 AAC 75. As part of the drum removal action in 1997, updated remedial action objectives (RAOs) were developed for LF03.



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Figure 3. Work Site and Sample Locations, Cape Newenham LRRS, Alaska

Chemical-specific ARARs and TBC criteria used for establishing site-specific RAOs included ADEC regulations for cleanup of hazardous substances for soil 18 AAC 75, Articles 3 and 9, Oil and Hazardous Substances Pollution Control Regulations (ADEC, 1999a), and surface water 18 AAC 70, Water Quality Standards (ADEC, 1999b), and the federal Clean Water Act.

The only contaminant of concern remaining is DRO in soils. Two out of 33 samples had DRO values above the 250 ppm regulatory cleanup level. (Sample 14 at 451 ppm and Sample 6 at 2,540 ppm). No contaminants of concern were identified for groundwater or surface water, and no contaminants exceeded regulatory cleanup criteria. The suite of analysis performed in 1997 is provided in Table II-1 below

TABLE II-1
Summary of Soil and Water Analytical Parameters
1997 Drum Removal Remedial Action

Analyte	Method
Gasoline Range Organics (GRO)	AK101
Diesel Range Organics (DRO)	AK102
Semi-volatile Organic Compounds (SVOCs)	EPA SW-846 8270
Volatile Organic Compounds (VOCs)	EPA SW-846 8240
Pesticides	EPA SW-846 8080
Polychlorinated Biphenyls (PCBs)	EPA SW-846 8080
Priority Pollutant Metals	EPA SW-846 6010/7000 series

3.2 Site Investigation Results

In 1995, the Air Force sampled LF03 to determine if any spills and/or leaking drums disposed at this site contaminated the soil. DRO exceeded the regulatory level of 250 ppm with the highest concentration reported at 437 ppm (USAF, 1996).

In 1997, the Air Force removed 1,290 empty fuel drums from LF03. The drums were cut open, steam cleaned, crushed flat, boxed, and shipped off-site. Soil, surface water, and groundwater samples were collected. The only analyte detected above regulatory cleanup levels was DRO in soil. Two out of 33 soil samples had DRO values above the 250 ppm regulatory level. (Sample 14 at 451 ppm and Sample 6 at 2,540 ppm). The sample with the higher DRO level of 2,540 ppm was collected just above the groundwater table at 24 inches below ground surface. No adjacent or down gradient soil samples exceeded regulatory levels, and no surface water and groundwater samples exceeded regulatory levels. As no other sample locations at the site or down gradient contained contaminants above cleanup criteria for soils or groundwater and the contaminant sources have been removed, no further action is recommended. Sample locations are indicated on Figure 3

4.0 **SELECTED REMEDY**

The selected remedy for this site is no further action. Based on comprehensive investigations conducted at LF03 to date, only two isolated soil sample locations revealed DRO concentrations (451 and 2,540 ppm) above the applicable DRO soil cleanup level of 250 ppm. Based on the limited extent, no further investigation or remediation is warranted. This determination is protective of human health and the environment. Therefore, the selected remedy for IRP Site LF03 is no further action under CERCLA, as amended. The State of Alaska supports and concurs with the selected remedy of no further action.

This decision may be reviewed and modified in the future if new information becomes available which indicates the presence of previously undiscovered contamination or exposure routes that may cause risk to human health or the environment. Therefore, the selected remedy for IRP Site LF03 is no further action.

5.0 REFERENCES

Alaska Department of Environmental Conservation (ADEC). *Oil and Hazardous Substances Pollution Control Regulations, Discharge Reporting, Cleanup, and Disposal of Oil and Hazardous Substances and General Provisions*. January 1999a.

Alaska Department of Environmental Conservation. *Water Quality Standards*. May 1999b.

United States Air Force (USAF). *IRP Decision Paper for No Further Action at Cape Newenham AFS, Alaska*. February 1988.

United States Air Force (USAF). *Remedial Investigation of PCBs at Upper Camp (SS07), Cape Newenham LRRS, Alaska*. March 1996.

United States Air Force (USAF). *Human Health and Ecological Risk Assessment for PCBs at Upper Camp (SS07), Cape Newenham LRRS, Alaska*. February 1997.

United States Air Force (USAF). *Drum Removal (LF03) at Cape Newenham LRRS, Alaska*. December 1999a.

United States Air Force (USAF). *Revised Management Action Plan, Cape Newenham LRRS, Alaska*. February 1999b.

Part III

RESPONSIVENESS SUMMARY

OVERVIEW

The Responsiveness Summary provides a review of all public comments regarding the proposed plan and includes the Air Force's response to these comments. No public comments however, were received in response to the proposed plan for LF03. Comments received by the Air Force from other interested parties are included in the Responsiveness Summary in the Integration of Comments section. Every attempt has been made to respond to concerns raised during the public comment period.

1.0 COMMUNITY PREFERENCE

No public comments have been received by the Air Force regarding the Proposed Plan for LF03.

2.0 INTEGRATION OF COMMENTS

Comments presented by other interested parties (U.S. Fish and Wildlife Service) and the Air Force's responses are presented in the following Table.

**TABLE III-1
Response To U.S. Fish and Wildlife Service June 8, 2000 Comments on
May 2000 Proposed Plan for LF03, Cape Newenham LRRS, Alaska**

USFWS COMMENTS				
NO	PAGE	SECTION	COMMENT	RESPONSE
1	General	General	The Service requests the occasional monitoring be conducted at LF03 to ascertain the extent of natural attenuation of residual DRO at the site.	LF03 has been recommended for no further action as the level of contamination at this site is below the ADEC recommended 250 ppm for DRO. Only 2 of 33 samples exceeded this level. A thorough sampling program was conducted at the site at the time of remedial action (USAF, 1999b). Further sampling of the site is not warranted (ADEC, 2000)
2	2	Paragraph 3	A composite building was constructed in 1980, which "replace the old industrial and housing structures." Since they were built in the 1950s, we assume that the original structures contained asbestos and lead-based paints. Please describe the location of the debris generated from the destruction of these facilities and identify the landfills and associated asbestos cell/s on Figure 2 (and/or Figure 4, as appropriate).	The Proposed Plan was limited to only two Installation Restoration Program sites, SS07 and LF03. Additional information concerning current and former landfills, the White Alice Site, and the demolition of the Lower Camp facilities will be provided to the Service.
3	5	Paragraph 1	"...all chemicals of concern" is vague. Describe which chemicals were measured and what matrices were analyzed.	Analyticals included GRO, DRO, BTEX, VOCs, PCBs, pesticides, and Priority Pollutant metals. A complete description of all contaminants of concern is included in the 1999 Final Drum Removal (LF03) at Cape Newenham LRRS, Alaska (USAF, 1999c). These COCs, except two samples for DRO, were either non-detect or were detected below ADEC regulatory levels. All COCs are addressed under the final Decision Document for LF03.
4	9	Paragraph 2	The plan states that the soil sample of 2,540 ppm DRO was an "isolated hit." A figure showing the sampling locations should be included to demonstrate that the areas were sampled sufficiently to warrant the previous statement. A graphical representation would illustrate that the sampling effort was enough to delineate the site and support the statement that the sample containing 2,540 ppm was indeed an isolated event. The Service may request that additional soil samples be collected in the immediate area surrounding the 2,540 ppm "hit," if review of the sampling design indicates that additional analyses were warranted.	A figure containing soil sampling locations is included in the final Decision Document for LF03.
5	9	Paragraph 2	No evidence exists which supports the statement, "the contaminants identified as DRO in the samples may actually be natural organic matter...." It should be deleted from the document.	Whether the nature of DRO in soils is biogenetic or anthropogenic is irrelevant at LF03 as contaminants are below ADEC cleanup criteria. The final Decision Document does not reference naturally occurring organics in the soil.
6	11	Paragraph 5	Explain which federal and state regulations apply and describe how the proposed alternatives meet the objectives and requirements of these laws.	All applicable state and federal regulations pertaining to sites SS07 and LF03 are listed in the Proposed Plan, page 1, paragraph 3. An evaluation of each alternative can be found on page 11. These criteria follow ADEC guidance.