SITE NAME: Naval Mobile Construction Battalion (NMCB) Building T-1416 Expanded Area

ALASKA DEC DATABASE RECORD KEY: 200025X110637

ALASKA DEC REGULATORY AUTHORITY: Oil and Other Hazardous Substances Pollution Control (18 AAC 75, Article 3)

RESPONSIBLE PARTY: Navy BRAC Program
Management Office, West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

CHEMICALS OF POTENTIAL CONCERN/MEDIA IMPACTED:

- **Soil:** Petroleum hydrocarbons, semivolatile organic compounds (SVOCs), and chlorinated volatile organic compounds (VOCs)
- **Groundwater:** Petroleum hydrocarbons, metals, SVOCs, and chlorinated VOCs
- **Marine Sediment:** Petroleum hydrocarbons and SVOCs

ON-SITE CONTAMINANT CONCENTRATIONS:

Diesel-range organics (DRO) and gasoline-range organics (GRO) were detected in soil at concentrations greater than the alternative cleanup levels (ACLs), which were calculated using Alaska Department of Environmental Conservation (DEC) Method Four [18 Alaska Administrative Code (AAC) 75.340(a)(4)]. The maximum and minimum detected concentrations of DRO and GRO in soil are provided in Table 1. Benzene, DRO, GRO, and lead were detected at concentrations greater than 10 times the tabulated groundwater cleanup levels [18 AAC 75.345(b)(1), Table C]. The maximum and minimum detected concentrations for these chemicals in groundwater are provided in Table 2. The ecological risk assessment established that existing concentrations of contaminants in marine sediment do not pose an unacceptable risk. Therefore, no cleanup levels were established for marine sediments, and contaminant concentrations for marine sediment are not included in the table below.
Table 1
Concentration of Chemicals Exceeding ACLs in Soil

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Min. Conc. (mg/kg)</th>
<th>Max. Conc. (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRO</td>
<td>4.08 J</td>
<td>43,000 J</td>
</tr>
<tr>
<td>GRO</td>
<td>2.1</td>
<td>27,000</td>
</tr>
</tbody>
</table>

Notes:
conc. - concentration
DRO - diesel-range organics
GRO - gasoline-range organics
J - estimated value
max. - maximum
mg/kg - milligram/kilogram
min. - minimum

Table 2
Concentrations of Chemicals Exceeding Ten Times the Tabulated Groundwater Cleanup Levels

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Min. Conc. (µg/L)</th>
<th>Max. Conc. (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>0.872</td>
<td>360</td>
</tr>
<tr>
<td>DRO</td>
<td>105</td>
<td>44,500</td>
</tr>
<tr>
<td>GRO</td>
<td>8.2J</td>
<td>33,000</td>
</tr>
<tr>
<td>Lead - Dissolved</td>
<td>1</td>
<td>250</td>
</tr>
<tr>
<td>Lead – Total</td>
<td>1.6J</td>
<td>330</td>
</tr>
</tbody>
</table>

Notes:
conc. - concentration
DRO - diesel-range organics
GRO - gasoline-range organics
J - estimated value
max. - maximum
µg/L - microgram per liter
min. - minimum

CLEANUP LEVELS:

Soil: Cleanup levels specified for soil are based on Alaska DEC Method Four criteria [18 AAC 75.340(a)(4)], which uses site-specific risk assessments to establish ACLs. The ACLs for soils at the NMCB Building Expanded Area are:

- DRO 31,000 milligrams per kilogram (mg/kg)
- GRO 1,700 mg/kg
**Groundwater:** Cleanup levels are based on 10 times the tabulated groundwater cleanup levels [18 AAC 75.345(b)(1), Table C] because groundwater is not reasonably expected to be a potential future source of drinking water [18 AAC 75.345(b)(2)]. The groundwater cleanup levels for the NMCB Building Expanded Area are:

- Benzene 50 micrograms per liter (µg/L) (0.05 milligrams per liter [mg/L])
- DRO 15,000 µg/L (15 mg/L)
- GRO 13,000 µg/L (13 mg/L)
- Lead 150 µg/L (0.15 mg/L)

**Marine Sediment:** The ecological risk assessment established that existing concentrations of contaminants in marine sediment do not pose an unacceptable risk. Therefore, no cleanup is necessary.

**CLEANUP REMEDY:**

Alternative 2 – Institutional Controls, Free-Product Recovery, and Monitored Natural Attenuation (MNA) – is selected as the remedial alternative for the NMCB Building Expanded Area. Free-phase product will be removed via groundwater wells and passive skimmers, petroleum concentrations in groundwater will be reduced through natural attenuation, and institutional controls will be used to protect human health and the environment as long as groundwater concentrations are greater than the groundwater cleanup levels (URS 2005a).

**REVIEW OF CLEANUP ACTION AFTER SITE CLOSURE:**

Under 18 AAC 75.380(d)(1), the Alaska DEC may require the Navy to perform additional cleanup if new information is discovered which leads Alaska DEC to make a determination that the cleanup described in this decision document is not protective of human health, safety, and welfare or the environment, or if new information becomes available which indicates the presence of previously undiscovered contamination or exposure routes related to Navy activities.
ACCEPTANCE BY PARTIES:

The State of Alaska and the Navy have agreed to the decisions outlined in this document.

Cindy O'Hara, P.E.
Adak BRAC Environmental Coordinator
U.S. Navy, Naval Facilities Engineering Command Northwest

Date

Jennifer Roberts
Contaminated Site Program, Section Manager
Alaska Department of Environmental Conservation

March 16, 2006

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ABBREVIATIONS AND ACRONYMS

AAC Alaska Administrative Code
ACL alternative cleanup level
ARAR applicable or relevant and appropriate requirements
ARC Adak Reuse Corporation
bgs below ground surface
BTEX benzene, toluene, ethylbenzene, and total xylenes
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CMP Comprehensive Monitoring Plan
COC chemical of concern
COPC chemical of potential concern
CR cancer risk
CSM conceptual site model
cy cubic yard
DD decision document
DEC Department of Environmental Conservation
DRO diesel-range organics
EPA U.S. Environmental Protection Agency
EPC exposure point concentration
FAA Federal Aviation Administration
FFA Federal Facilities Agreement
FFS focused feasibility study
GRO gasoline-range organics
HI hazard index
ICMP institutional control management plan
J estimated value
JP-5 jet petroleum
mg/kg milligram per kilogram
mg/L milligram per liter
µg/L microgram per liter
MNA monitored natural attenuation
mogas motor vehicle gasoline
NA not applicable
Navy U.S. Navy
NMCB Naval Mobile Construction Battalion
NPL National Priorities List
O&M operation and maintenance
OU operable unit
ABBREVIATIONS AND ACRONYMS (Continued)

PAH  polycyclic aromatic hydrocarbons
PEB  pre-engineered building
RAB  Restoration Advisory Board
RAOs remedial action objectives
RBSC risk-based screening concentration
RME reasonable maximum exposure
ROD Record of Decision
RRO residual-range organics
SAERA State-Adak Environmental Restoration Agreement
SARA Superfund Amendments and Reauthorization Act of 1986
SOP Standard Operation Procedures
SVOC semi-volatile organic compound
SWMU solid waste management unit
TAC The Aleut Corporation
TAH total aromatic hydrocarbons
TAqH total aqueous hydrocarbons
TPH total petroleum hydrocarbons
UCL95 95 percent upper confidence limit
USGS United States Geological Survey
UST underground storage tank
VOC volatile organic compound
DECLARATION

1.0 INTRODUCTION

This decision document (DD) presents the selected cleanup alternative and the supporting rationale for cleanup of the Naval Mobile Construction Battalion (NMCB) Building T-1416 Expanded Area (hereafter referred to as the NMCB Building Expanded Area) at the former Adak Naval Complex, Adak Island, Alaska. The decisions documented in this DD are based on supporting documents in the Administrative Record located at the offices of Naval Facilities Engineering Command Northwest in Silverdale, Washington. The State of Alaska and U.S. Navy (Navy) have agreed to the decisions outlined in this document. Also, The Aleut Corporation (TAC), the current property owner, has concurred with the selected cleanup alternative. The Navy is responsible for implementing the cleanup alternative presented in this DD.

The former Adak Naval Complex is located on Adak Island, which is approximately 1,200 air miles southwest of Anchorage, Alaska, in the Aleutian Island chain (Figure 1-1). Figure 1-2 shows the general location of the NMCB Building Expanded Area. A legal description specifying the boundary of the site is included as Appendix A. A site map showing the legal boundary of the NMCB Building Expanded Area is also provided (Figure 1-3). The legal boundary was developed for land transfer purposes and does not necessarily correspond with the extent of contamination.

Alternative 2 – Institutional Controls, Free-Product Recovery, and Monitored Natural Attenuation (MNA) – is selected as the remedial alternative for the NMCB Building Expanded Area. As part of the remedy, additional activities will be performed at the site to confirm that the remedy is protective. These activities include installation of five new wells, collection of soil samples during the installation of the new wells, collection of additional groundwater samples from the five new wells, and visual monitoring of the Sweeper Cove shoreline. The selected cleanup alternative and additional site activities for the NMCB Building Expanded Area are discussed in more detail in Sections 9 and 10.

This DD was developed in accordance with State of Alaska regulations governing petroleum-release sites, the Alaska Department of Environmental Conservation (DEC) Oil and Other Hazardous Substances Pollution Control Regulations (18 Alaska Administrative Code [AAC] Chapter 75).
Adak Island, AK

U.S.NAVY

Figure 1-1
Adak Island Vicinity

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Figure 1-3
Legal Boundaries, NMCB Building Expanded Area

Note:
This figure prepared in Navy Grid Coordinate System