

**EXPLANATION OF SIGNIFICANT DIFFERENCES
FOR THE
RECORD OF DECISION
FOR OPERABLE UNIT 2
NAVAL UNDERSEA WARFARE CENTER DIVISION
KEYPORT, WASHINGTON
• AREA 8 - PLATING SHOP WASTE AREA •**

I. Introduction

This document presents an Explanation of Significant Differences (ESD) for the Record of Decision (ROD) for the Operable Unit 2 (OU 2) at Naval Undersea Warfare Center Division (NUWCD), Keyport, Washington, which was signed by the United States Department of the Navy (Navy), the United States Environmental Protection Agency (EPA), and the state of Washington Department of Ecology (Ecology) in September 1994. The OU 2 ROD was signed pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. The site name and location are as follows:

Area 8, Operable Unit 2
Naval Undersea Warfare Center Division, Keyport, Washington

The significant differences from the ROD are:

- The chrome room area is to be included in Phase II work plans and any excavation required in the chrome room area will be performed in conjunction with that work. Delaying soil removal at the chrome room will not add significant risk from site contaminants.
- In determining the quantity of soils to be excavated during Phase II, total chromium will be tested for and assumed to be all hexavalent chromium (Cr VI).

The lead agency for this action is the U.S. Navy. EPA and Ecology agree with the rationale for significant change to the selected remedy, and concur with the changes presented in this ESD. The final remedy will still be protective of human health and the environment, and will still attain applicable or relevant and appropriate requirements (ARARs).

This ESD, prepared in accordance with section 117(c) of CERCLA and section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), is necessary to address modifications to the selected remedy identified in the OU 2 ROD.

This and other relevant documents will become part of the Administrative Record (AR) file pursuant to Section 300.825(a)(2) of the NCP. Public notice of the ESD will be published in a major newspaper. This ESD will be made available to the public for review at the following locations:

ADMINISTRATIVE RECORD

Engineering Field Activity, Northwest
19917-7th Avenue NE
Poulsbo, WA 98370

INFORMATION REPOSITORY

Kitsap Regional Library
Central Branch
1301 Sylvan Way
Bremerton, WA 98310

Kitsap Regional Library
Poulsbo Branch
700 N.E. Lincoln Hill Road
Poulsbo, WA 98370

Public Utility District No. 1
1431 Finn Hill Road
Poulsbo, WA 98370

II. Site History, Contamination Problems, and Pre-ROD Investigations

NUWCD Keyport is located adjacent to the community of Keyport, Washington, on a small peninsula in Liberty Bay (Figure 1). Operable Unit 2 consists of Areas 2, 3, 5, 8, and 9 (Figure 2). The Plating Facility (Building 72) is located in the southeast corner of NUWCD Keyport and directly borders Liberty Bay. Building 72 lies within Area 8 of the Superfund Remedial Investigation/Feasibility Study conducted at Keyport (Figure 3). The area is virtually flat and almost entirely paved (concrete up to 10 inches thick) or covered by buildings. Stormwater drains into storm sewers which discharge into Liberty Bay. An industrial pier (Pier 1) extends from the eastern side of the roadway adjacent to Area 8 into Liberty Bay.

The chrome room is located in the eastern portion of Building 72. Information derived from as-built drawings indicate that the room was used as a sand blast room prior to use as a chrome plating room. Historical photographs show the floor of the room was covered with wood slats and contained several vats of chrome plating solutions and other plating chemicals. The floor has since been concreted. A trench is located in the center of the chrome room floor and apparently drained to the east outside the Plating Facility. The chrome room was abandoned upon discovery of chrome contamination in January 1991 and since that time has not been used for any activity (plating or storage). The sumps and trenches outside and east of the building were removed in 1992.

Environmental problems associated with Area 8 were discovered under the U.S. Navy's Installation Restoration Program (IRP). The Environmental Assessment done by Hart

Crowser in 1991 showed soils beneath the floor of the chrome plating room to contain elevated levels of total chromium. The samples with the highest concentrations of total chromium were collected from the south side of the trench in the center of the floor from depths 2.5 to 3.0 feet and 1.0 to 1.5 feet below the surface. The remedial investigation (RI) and feasibility study (FS) were completed in the fall of 1993. Based on the distribution of chromium in the soil being primarily adjacent to the trench, the RI concluded that the soil was contaminated through infiltration; thereby limiting the potentially contaminated zone to the soil near the trench. Total chromium was used during pre-ROD as a conservative approach to evaluate cleanup areas. The volume of soil for excavation in the FS was a conservative estimate derived from the extent of the groundwater plume.

III. Summary of the Selected Remedy

A ROD for this site was signed September 28, 1994. The selected remedy, as stated in the ROD, includes continued groundwater monitoring, sediment and tissue monitoring, institutional controls to restrict residential use of the site, and removal of vadose zone soil hot spots for off-site disposal.

The groundwater monitoring is being used to establish trends in groundwater chemical concentrations and determine when institutional controls could be discontinued. The groundwater data will also be compared with monitoring results for sediments and tissues to determine whether additional actions to protect the marine environment should be implemented at Area 8.

The component of the remedy that is being addressed by this ESD is the hot spot soil removal. The purpose of the hot spot soil removal is to reduce risks to current and future site users and reduce migration of contaminants into groundwater. The excavation of hot spots will remove the majority of the contaminants in the soil that could otherwise be transported by groundwater into Liberty Bay, and help to accelerate natural processes for restoring the aquifer. Although soil cleanup levels for protection of both drinking and surface water quality are the ultimate remediation goals for Area 8 soils, the MTCA B soil ingestion levels were selected to be used as action levels for the soil hot spot removals. The ROD identifies the MTCA B soil ingestion level of 400 for hexavalent chromium (Cr VI) as the Area 8 Soil Removal Action Level. Total chromium was used during pre-ROD analysis as a conservative approach to evaluate cleanup areas; however, MTCA B does not list a cleanup level for total chromium. The ROD states that the actual soil volume to be removed would be a function of the number of excavation passes at each hot spot location that are needed before analyses show that a clean surface has been attained compared with the action level. Because of the technical impracticability and the cost of dewatering, the excavation is not to exceed the depth of groundwater.

The ROD designates that the soil removal was to occur in two phases. The first phase was to involve excavation of soil below the chrome room of the plating shop and commence within 15 months of the signing of the ROD. The first excavation phase was not to extend laterally beyond the limits defined by the walls of the chrome room. The

second phase of soil removal will involve excavation of the remaining hot spots. The timing of the second removal phase depends on the Navy obtaining funding for construction of a new plating shop, because the plating facilities are needed to support base operations and the existing plating building must be demolished to provide access for the soil removal action. The Navy will implement the second phase of soil removal no later than 1998 when the new plating facility is operational.

IV. Significant Differences and Basis for Difference

The significant differences from the ROD are:

- The chrome room area is to be included in Phase II work plans and any excavation required in the chrome room area will be performed in conjunction with that work. Delaying soil removal at the chrome room will not add significant risk from site contaminants.
- In determining the soils to be excavated during Phase II, total chromium will be tested for and assumed to be all hexavalent chromium (Cr VI).

Circumstances that give rise to the need for this ESD

The remedial work plans were finalized March 13, 1995 after review and comment by the Restoration Advisory Board and Ecology. These plans called for the sampling of chrome room soils to more accurately define the extent of the chrome room hot spot and to determine the levels of contaminants for hazardous waste disposal characterization. The sampling method selected to determine the chromium levels in soils was based on the assumption that a TCLP extract of the soils could be tested for speciation and give a satisfactory result for Cr VI. This method was previously used in another EPA region.

Implementation of these work plans began May 17, 1995 with the sampling of soils at various locations below the concrete floor of the chrome room. The TCLP method gave results for Cr VI that were below the ROD criteria for excavation. Based on these results the Navy demobilized the excavation crew.

Upon review of the Phase I Closeout Report, EPA advised that it was unlikely that the TCLP process extracted all the chromium in the sample, and that the method may not have reported accurate values for Cr VI.

Ecology, EPA, and the Navy reviewed the situation and agreed that because of the uncertainties of the analysis method it is likely the Phase I activities (the hot spot soil removal) at the chrome room area are not complete, and that additional testing is necessary to clarify the chromium concentrations. However, the contaminants under the concrete floor of the chrome room that would have been excavated do not present an immediate threat to human health. Also, since the area is covered with a building, it is not likely the contaminants in the vadose zone below that building are a significant on-going source of metals to groundwater. Additionally, the groundwater elevation beneath the

chrome room is approximately 2 feet mean sea level. The elevation of the chrome room floor is approximately 12 feet. A fluctuation of 10 feet is improbable; therefore, the possibility of groundwater encountering the soil in the chrome room is extremely remote.

EPA, Ecology and the Navy agreed that remobilizing for added testing and excavation under the chrome room at this time will not be an effective use of limited available funds. In addition, it is agreed that due to the difficulties inherent in analyzing soil for hexavalent chromium, future soil analysis and excavation areas will be based on total chromium.

The Navy will implement the soil removals when the new plating facility is operational. The construction of the new plating shop is on schedule. The funding has been approved, the design has been finalized, and the work is expected to be completed in the 1998 fiscal year (FY98). The workplans for Phase II will be completed and the contract for the Phase II work will be contracted for prior to the completion of the new plating facility. The FY97 Environmental Restoration Navy Account (ERNA) budget request includes the preparation of the Phase II workplans. These workplans will include the hot spot removal in the chrome room area. The Phase II remedial action is included in the FY98 budget request.

A monitoring program including groundwater, sediment, and tissue sampling has commenced.

V. Affirmation of Statutory Determinations

The modifications to the remedial actions will continue to utilize permanent solutions to the maximum extent practicable for the site. Based on the information gained during the pre-excavation soil sampling, it has been determined by the Navy, Ecology, and EPA that the delay of any post-ROD soil removal until Phase II in FY98 will not affect the ability of the remedy to achieve cleanup levels. Additionally, the remedy will remain protective of a human health and the environment, comply with federal and state ARARs, and is cost-effective.

VI. Public Participation Activities

RAB members were briefed on this issue in meetings on June 10 and June 22, 1995. Several questions were asked and are documented in the minutes. All RAB meetings are open to the public. The community was informed of the status in a Community Update of July 1995 and in an article which appeared in the North Kitsap Herald on June 28, 1995. No public inquiries were received.

All documents associated with the Record of Decision (ROD) are available for public review. The Administrative Record (AR) includes the ROD, this Explanation of Significant Difference (ESD), the Project Plans for the Phase I Soil Hot Spot Removal, and the Final Closure Report for the Phase I Soil Hot Spot Removal. The hot spot soil removal will be implemented with the Phase II work which is scheduled to take place in

FY98, in conjunction with the demolition of the Plating Shop. Although modified from the original ROD, the remedy does not result in a fundamental change in scope or purpose of the ROD. Thus a formal comment period will not be conducted.

Consistent with Section 300.435(c)(2)(i) of the NCP, this ESD has been placed in the previously listed Information Repositories, at the time of publication of a notice in the following newspapers:

The Sun
The North Kitsap Herald

The public is encouraged to review this ESD and other relevant documents in the Information Repositories and Administrative Record. Additional information may be requested within 30 days of the notice of issuance of this ESD by contacting:

Hank Pangborn
NUWC Division, Keyport
Public Affairs Office, Code 0521PAO
610 Dowell Street
Keyport, WA 98345-7610
(360) 396-2699.

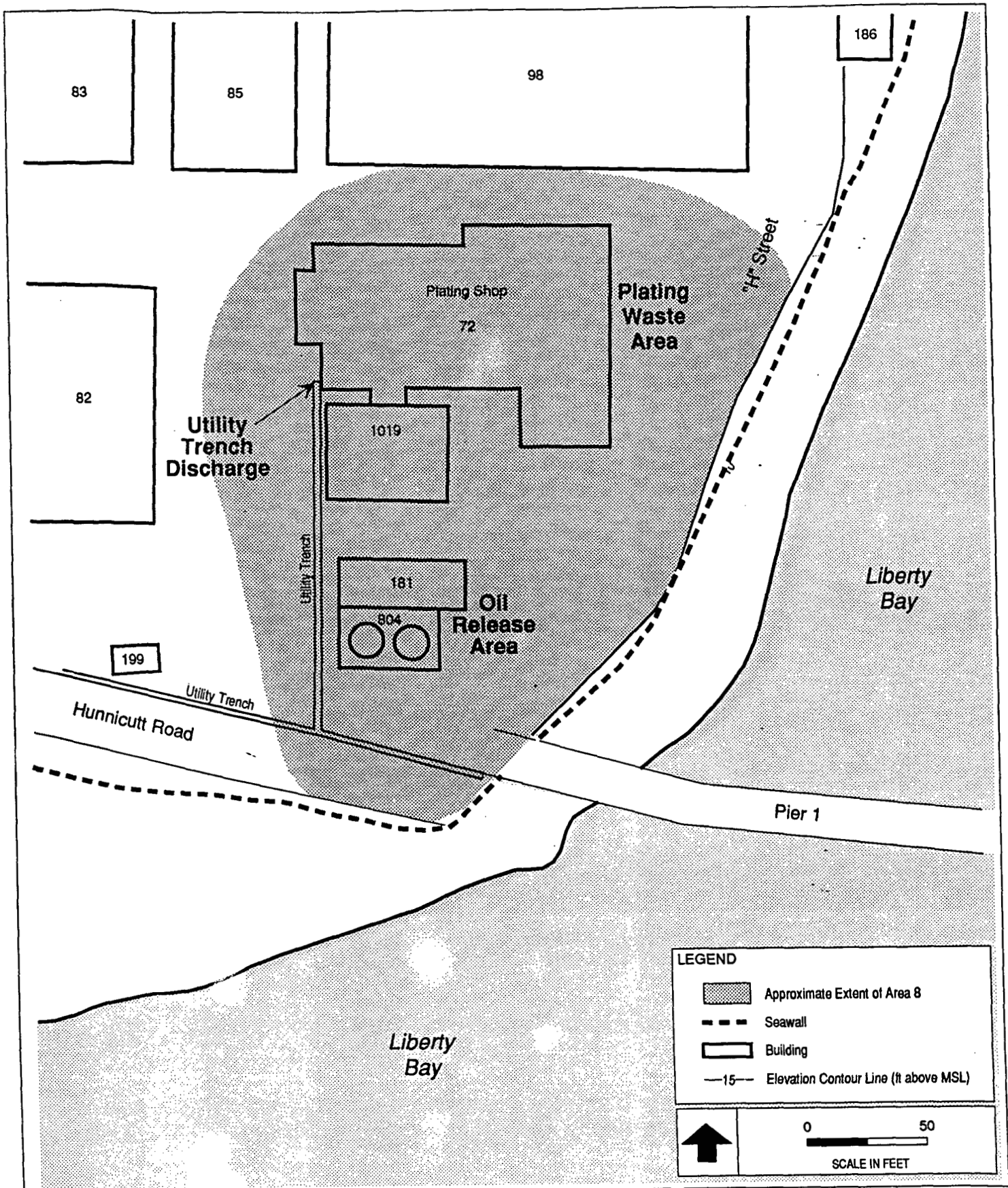


Figure 3
Area 8 - Plating Shop Waste/Oil Spill Area

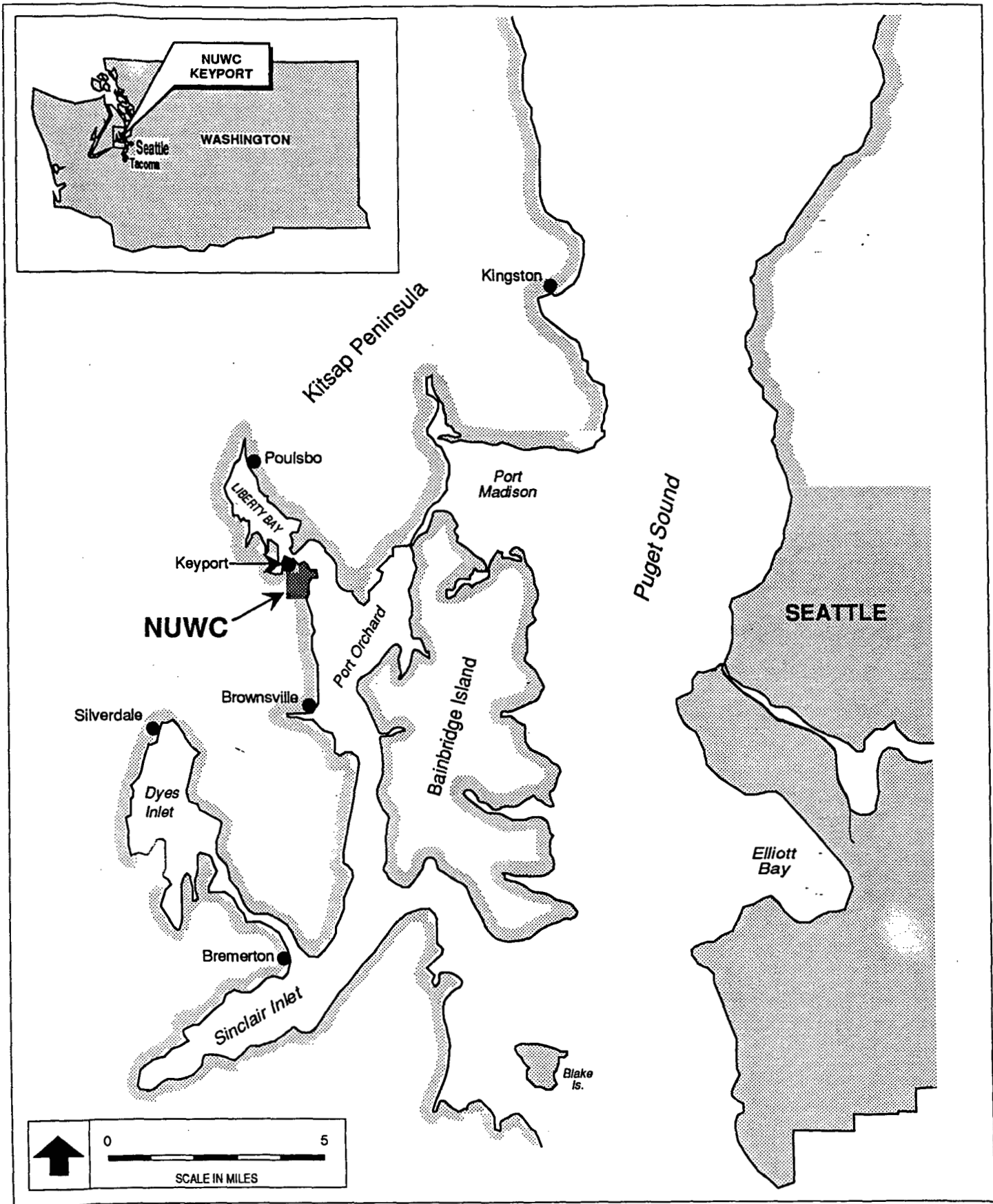


Figure 1
 NUWC Keyport Location Map

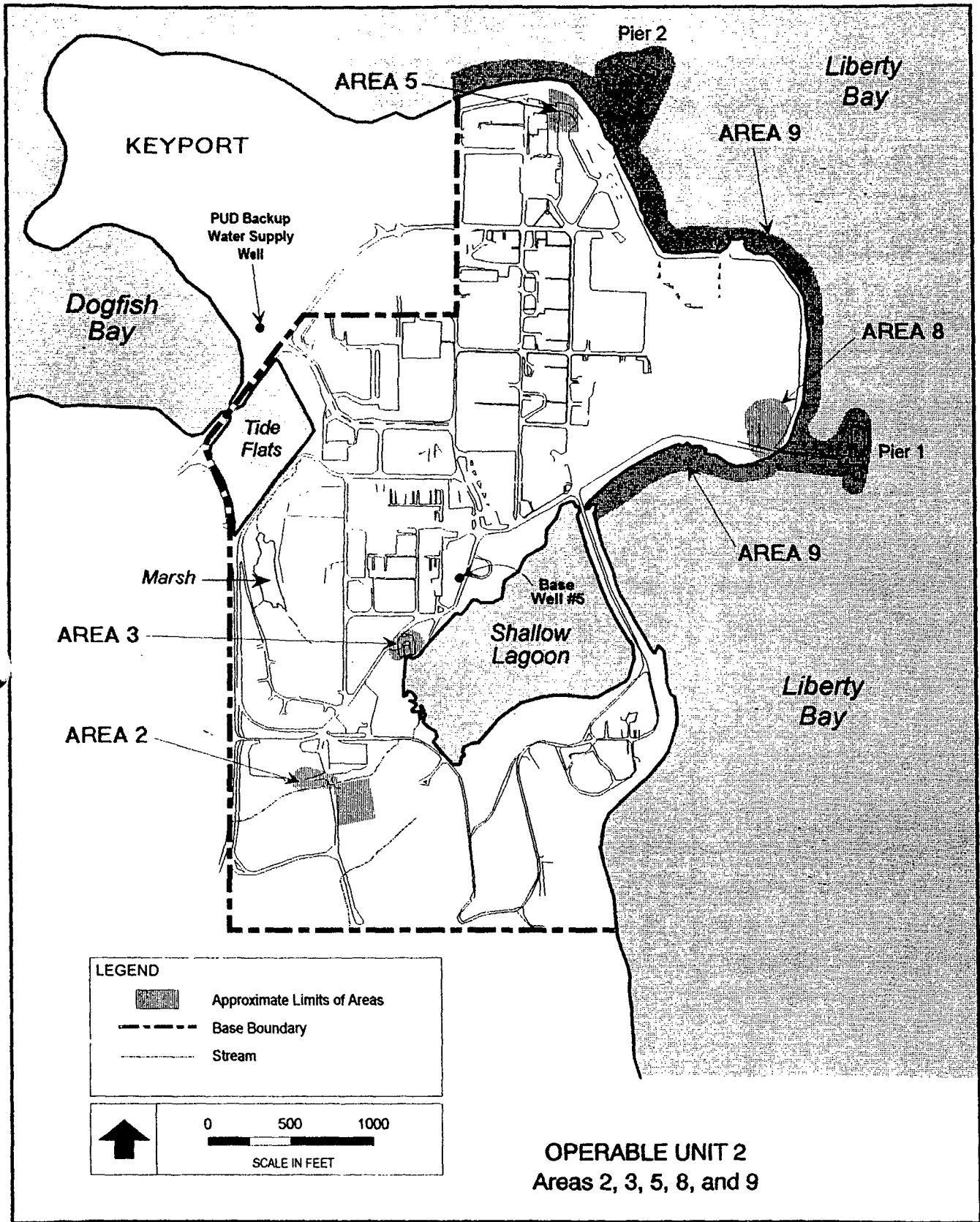


Figure 2