



US Army Corps  
of Engineers  
HUNTSVILLE DIVISION

FINAL

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Defense Environmental Restoration Program  
for  
Formerly Used Defense Sites

Ordnance and Explosive Waste  
Chemical Warfare Materials

**ARCHIVES SEARCH REPORT  
FINDINGS**

**NAVAL AIR STATION  
TONGUE POINT**

ASTORIA, OREGON

Project Number F10OR048304

MARCH 1998  
~~DECEMBER 1994~~

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Prepared by  
US ARMY CORPS OF ENGINEERS  
ST. LOUIS DISTRICT

ORDNANCE AND EXPLOSIVE WASTE  
CHEMICAL WARFARE MATERIALS  
ARCHIVES SEARCH REPORT  
FINDINGS  
NAVAL AIR STATION TONGUE POINT  
ASTORIA, OREGON

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## 1.0 Introduction

### 1.1 Authority

In 1986, Congress established the Defense Environmental Restoration Program at 10 U.S.C. 2701 et.seq. This program directed the Secretary of Defense to "carry out a program of environmental restoration at facilities under the jurisdiction of the Secretary."

In March, 1990, the EPA issued a revised National Contingency Plan. Under 40 C.F.R. 300.120, EPA designated DOD to be the removal response authority for incidents involving DoD military weapons and munitions under the jurisdiction, custody and control of DoD.

Since the beginning of this program, the U.S. Army Corps of Engineers has been the agency responsible for environmental restoration at Formerly-Used Defense Sites (FUDS). Since 1990, the U.S. Army Engineering and Support Center, Huntsville, has been the Mandatory Center of Expertise and Design Center for Ordnance and Explosives.

## 1.2 Subject

Naval Air Station (NAS), Tongue Point, located in Clatsop County, Oregon, was originally constructed as a submarine and destroyer base. Later, it was converted to a Naval Air Station for seaplane bombers.

## 1.3 Purpose

This Archives Search Report (ASR) compiles information obtained through historical research at various archives and records holding facilities, interviews with persons associated with the site or its operations, and personal visits to the site. All efforts were directed towards determining possible use or disposal of OEW on the site. Particular emphasis was placed on establishing the type of munitions, quantities and area of disposal. Information obtained during this process was used in developing recommendations for further actions at the site.

## 1.4 Scope

The entire site of the former Naval Air Station was evaluated in assessing the potential for OEW, to include chemical warfare material, contamination. Particular attention was given to the ordnance storage area located on the northern portion of the facility. Consisting of approximately 840 acres, the site is designated as DERP-FUDS Site No. F10OR048300.

## 2.0 Previous Site Investigations

### 2.1 Findings and Determination of Eligibility

Under the Defense Environmental Restoration Program (DERP), the Portland District prepared a Findings and Determination of Eligibility (FDE), for the subject Tongue Point NAS which was approved on 1 September 1989. The original INPR was revised, to include a proposed OEW project in May 1994, and subsequently approved in June 1994. The FDE indicates that the site which is comprised of approximately 840 acres, was acquired beginning in 1921, and grew to the approximate 850 acres by 1948. The FDE indicates that the Department of the Navy relinquished control of the site in 1961 and that the Department of Labor obtained "permitted use" of the site in 1965. The report determined that the site was eligible for the Defense Environmental Restoration Program for Formerly Used Defense Sites under 10 U.S.C. 2701 et seq.

Included in the FDE are Risk Assessment Code forms, (11 Mar 94 edition), assigning a score of 4 to the Naval Air Station. A copy of the FDE is included at Appendix C.

### 2.2 Available Studies and Reports

- a. USBR, Preliminary Site Characterization Investigation for USTs.
- b. ODEQ, Site Report, Tongue Point Abandoned Landfill.
- c. RZA-AGRA, UST Decommissioning Investigation, Feb 92; Pegasus Environmental Management Services, Final Field Report for UST Removal, Nov 92; and TMC Environmental, Underground Tank Removal Report, Apr 93.
- d. Shapiro and Associates, Limited Remedial Investigation, Former Naval Air Station Landfill.
- e. Seattle District, U.S. Army Corps of Engineers, Land Utilization History, Tongue Point, Former Naval Air Station.
- f. Portland District, U.S. Army Corps of Engineers, Tongue Point, Oregon Navigation Improvements, April 1989.
- g. USACE, Portland District, Tongue Point Monitoring Program (Final Report), 1989-1992.
- h. Oregon Division of State Lands, A Cultural Resources Inventory of Certain Lands in the Astoria Area that were Formerly a Part of the Tongue Point Naval Air Station, November 1981.
- i. Columbia River Estuary Study Taskforce (CREST), Index to C.R.E.D.D.P. data.

### 3.0 Site and Site Area Description

#### 3.1 Location

The Naval Air Station (NAS), Tongue Point is located in Clatsop County, Oregon, five miles east of the city of Astoria. Ten miles inland from the Pacific Ocean, on the south shore of the Columbia River, it forms the western edge of Cathlamet Bay. The former NAS appears on the Astoria, Oregon-Washington Quadrangle of the 7.5 minute series of the U.S.G.S. topographic maps. It falls within Sections 2, 10, 11, and 12, Township 08 North, Range 06 West, Willamette Meridian. Approximate coordinates are Latitude 46 degrees, 12 minutes North; Longitude 123 degrees, 46 minutes West.

#### 3.2 Past Uses

The site was acquired by the Department of Navy beginning in 1921 to facilitate the development of a submarine and destroyer base which never became fully operational. In 1939, construction of the Naval Air Station, with all attendant features to support air operations began. The site was under direct Navy control from 1921 to 1961.

#### 3.3 Current Uses

The site is currently owned, in parts, by the Oregon Division of State Lands, the Department of Labor, which operates a Job Corps Training Center, and the Department of Interior. The lands owned by the Department of Interior was formerly the ordnance storage area and is presently controlled by the Fish and Wildlife Service (FWS). It is the site of the Lewis and Clark National Wildlife Refuge.

#### 3.4 Demographics of the Area

##### 3.4.1 Center of Activity

NAS Tongue Point is located near the City of Astoria, Clatsop County, Washington. This community has numerous centers of activity such as Capt. George Flavel mansion, Upperton Fire Fighters museum, Columbia River Maritime museum, Ft. Clatsop National Memorial. There are many miles of beaches for walks and fishing. There are also many trails for biking, hiking and walking. There are four major shopping areas and many neighborhood shopping areas. Various parks and golf courses are located throughout the community.

##### 3.4.2 Population Density

City: Astoria	County: Clatsop
Area: N/A sq.mi.	Area: 805 sq.mi.
POP: 10,069	POP: 33,301
PD: N/A persons per sq.mi.	PD: 40.5 persons per sq.mi.

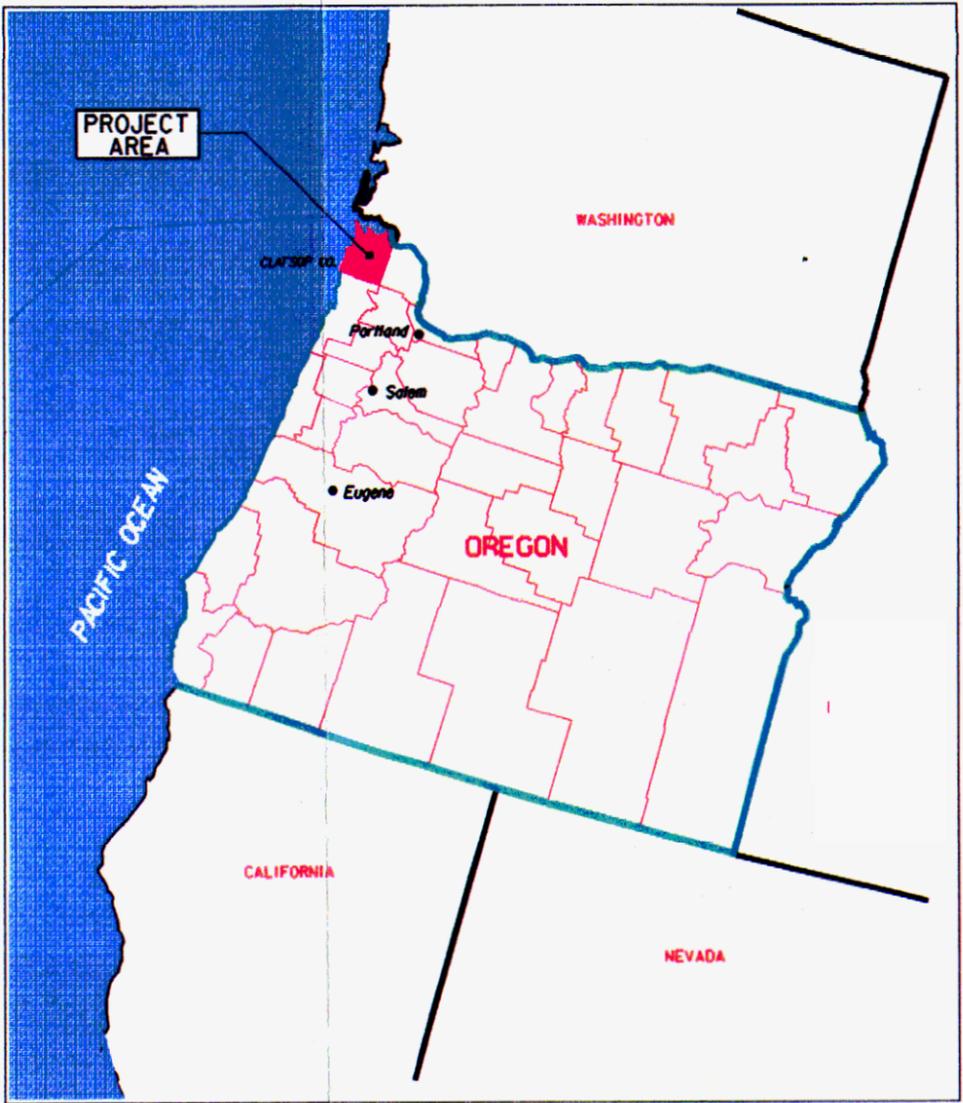
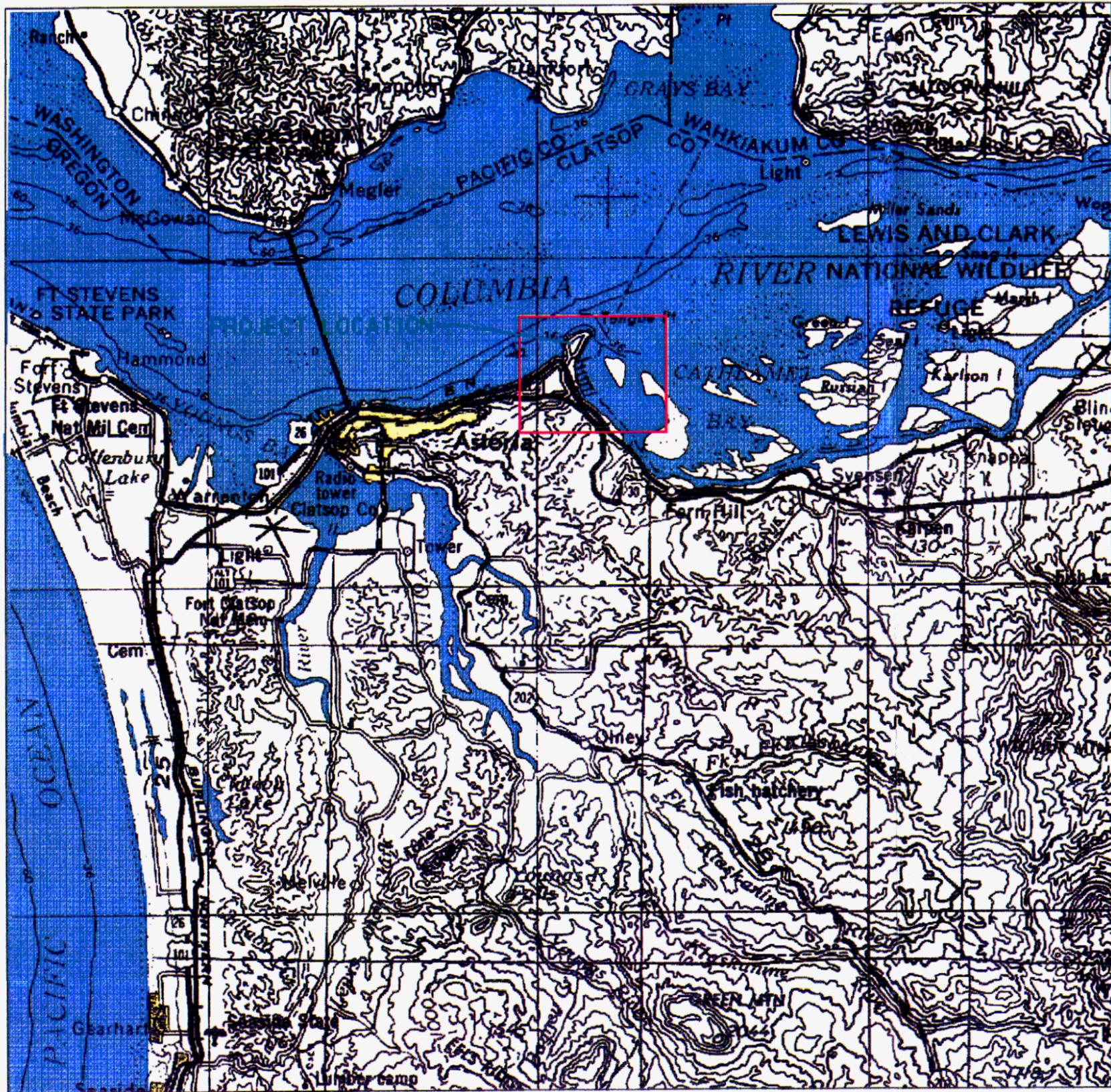
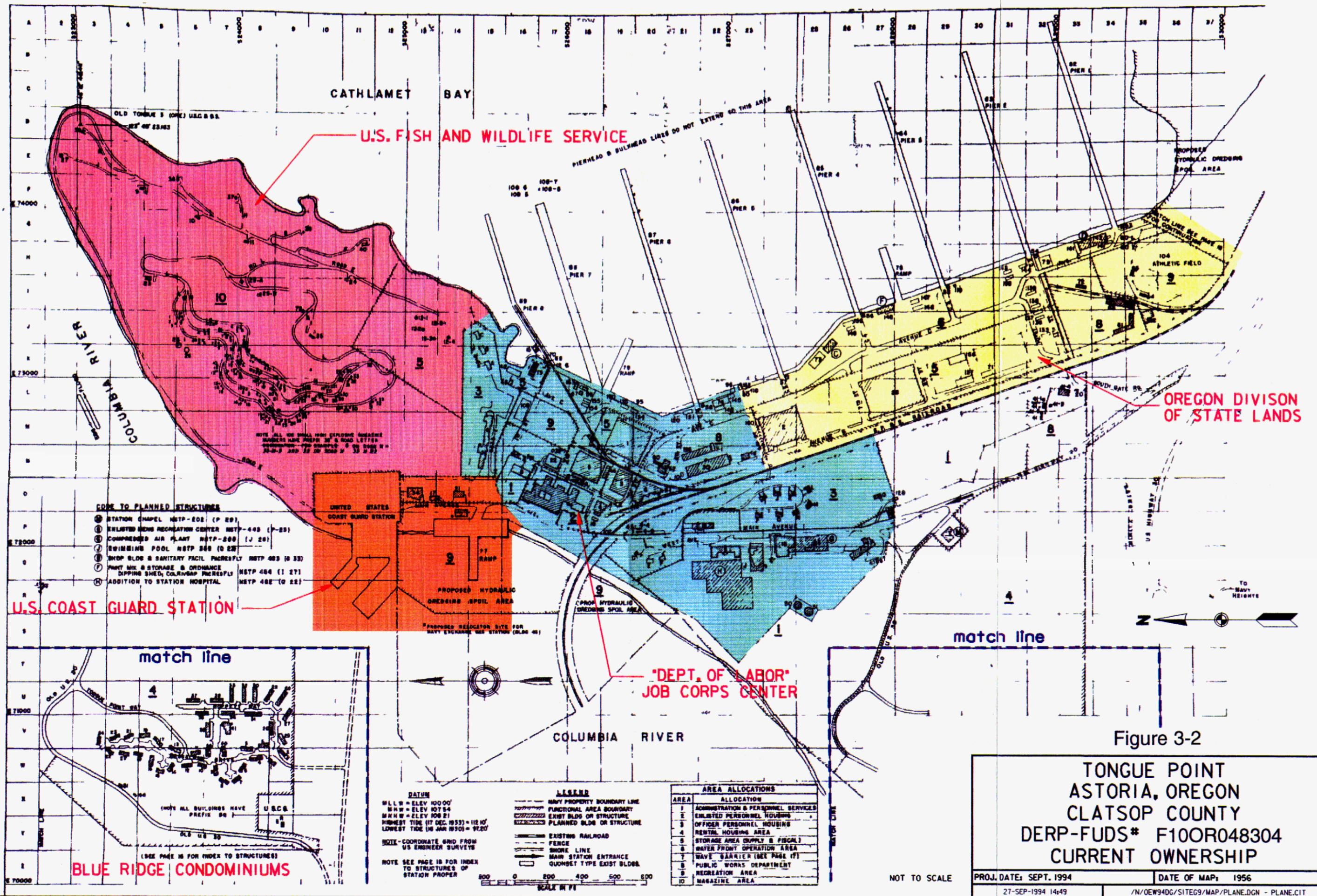


Figure 3-1

TONGUE POINT  
 ASTORIA, OREGON  
 CLATSOP COUNTY  
 DERP-FUDS\* F10OR048304  
 VICINITY MAP

NOT TO SCALE

PROJ. DATE: SEPT. 1994	DATE OF MAP: 1974 & 1994
16-SEP-1994 16:56	/N/OEW940G/SITE09/MAP/OR0483.DGN - ASTORIA,B,C,D,CIT



U.S. FISH AND WILDLIFE SERVICE

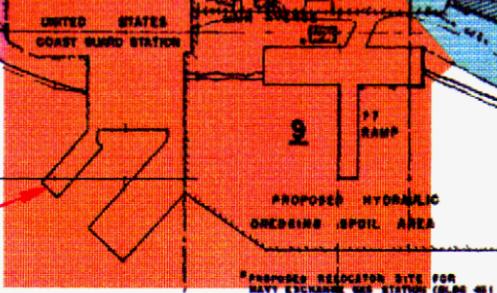
OREGON DIVISION OF STATE LANDS

U.S. COAST GUARD STATION

'DEPT. OF LABOR' JOB CORPS CENTER

BLUE RIDGE CONDOMINIUMS

- CODE TO PLANNED STRUCTURES**
- 1 STATION CHAPEL NSTP-808 (P 28)
  - 2 RELATED HOME REGULATION CENTER NSTP-448 (P-25)
  - 3 COMPRESSED AIR PLANT NSTP-809 (J 20)
  - 4 SWIMMING POOL NSTP 808 (O 22)
  - 5 SHOP BLDG & SANITARY FACIL. PACRESPLY NSTP 403 (O 33)
  - 6 PAINT MIX & STORAGE & ORDNANCE DIPPING SHED, COL. WAGON PACRESPLY NSTP 484 (I 27)
  - 7 ADDITION TO STATION HOSPITAL NSTP 486 (O 22)



**DATUM**  
 MLLW = ELEV 1000'  
 MHHW = ELEV 1075'  
 MHW = ELEV 1062'  
 HIGHEST TIDE (17 DEC. 1933) = 112 1/2'  
 LOWEST TIDE (16 APR 1930) = 97.0'

**NOTE** - COORDINATE GRID FROM US ENGINEER SURVEYS  
 NOTE SEE PAGE 18 FOR INDEX TO STRUCTURES OF STATION PROPER

- LEGEND**
- NAVY PROPERTY BOUNDARY LINE
  - FUNCTIONAL AREA BOUNDARY
  - EXIST BLDG OR STRUCTURE
  - PLANNED BLDG OR STRUCTURE
  - EXISTING RAILROAD
  - FENCE
  - SHORE LINE
  - MAIN STATION ENTRANCE
  - QUONSET TYPE EXIST BLDG.

AREA ALLOCATIONS	
AREA	ALLOCATION
1	ADMINISTRATION & PERSONNEL SERVICES
2	EXISTING PERSONNEL HOUSING
3	OFFICER PERSONNEL HOUSING
4	RENTAL HOUSING AREA
5	STORAGE AREA (SUPPLY & FISCAL)
6	WATER FRONT OPERATION AREA
7	WAVE BARRIER (SEE PAGE 17)
8	PUBLIC WORKS DEPARTMENT
9	RECREATION AREA
10	MAGAZINE AREA

NOT TO SCALE

**TONGUE POINT  
 ASTORIA, OREGON  
 CLATSOP COUNTY  
 DERP-FUDS# F100R048304  
 CURRENT OWNERSHIP**

PROJ. DATE: SEPT. 1994      DATE OF MAP: 1956  
 27-SEP-1994 14:49      /N/0EW940G/SITEG9/MAP/PLANE.DGN - PLANE.CIT

Figure 3-2

Population and area are based on the U.S. Department of Commerce, Bureau of the Census, 1990 statistics, and telephone interviews.

### 3.4.3 Type of Businesses

A review of both telephone interviews and County Business Patterns (1990) assisted in developing a business profile of the area. The City of Astoria is diversified. The largest employers include: James Mill - a pulp and paper mill operation, Shiloh Inns, four fish processing plants, Fred Meyer - a retail trade business, and Federal government agencies with the largest being the U.S. Coast Guard.

### 3.4.4 Type of Industry

Astoria is an economically diverse community. The community supports retail and service industries, along with agriculture and non-agricultural businesses, Columbia Memorial and Providence Seaside general hospitals, Clatsop Community College, and the Seaside, Astoria, and Warrenton school districts. There are several other small industries and manufacturers

### 3.4.5 Type of Housing

Housing in Astoria is composed of both single and multi-family homes.

### 3.4.6 New Development in the Area

Development in the Astoria area includes residential dwellings and several expansions including Columbia Memorial Hospital, Clatsop Care Center, and the Dunes Motel. Construction is taking place at the New Bank of Astoria, Coast Guard Housing, and North Tongue Point infrastructure improvements.

### 3.4.7 Typical Cross-Section of Population

The ancestry in Astoria is diverse. The percent of those under the age of 18 is 25.4%, over 65 years is 16.6%. The median age is 35. Approximately 95% of the population is white, 0.3% Black, 2.5% Hispanic, 1.4% American Indian or Eskimo, and 2.1% Asian or Pacific Islander. There are approximately 4,631 housing units with a median value of \$ 54,400. The work force, based on the number of establishments, of Clatsop County is broken down into the following: manufacturing, 6.5%; services, 28.3%; agriculture, 3.7%; trade and finances 42.5%; other 19.0.

## 4.0 Physical Characteristics of the Site

### 4.1 Geology\Physiography

NAS Tongue Point is located in the Oregon Coast Range section of the Pacific Border province. This section is characterized by uplifted peneplain surfaces on weak rocks. Along the western shore of the Coast Range the line of abrupt coastal headlands is fairly evenly interspersed with shallow bays, estuaries, pocket beaches and sand dunes. Extensive sands are present from Seaside to the Columbia River. Sand has accumulated as bars or spits across the mouths of most rivers hindering the flow of water in and out of the bays.

The Coast Range section extends offshore and continues to the continental shelf and slope that descends to the abyssal plain at 9000 feet below sea level. The surfaces of the shelf and slope are broken by high bedrock scarps, ridges, basins, and canyons. The most significant offshore feature is the subduction zone beneath the base of the continental slope where the Farallon plate is sliding under the North American landmass.

The foundation block of coastal Oregon and Washington mountains began as a volcanic island chain that collided with the North American plate. Some distance to the west of Oregon and far beneath the ocean crust, a hot spot generated deep sea lavas 64 million years ago. This volcanic source was situated beneath an ocean spreading center straddling two active tectonic plates. As the two plates continued spreading or pulling apart, a chain of undersea mountains strung out to the north and south. Close to the end of early Eocene time the North American plate, moving westward, collided with the recently formed islands and seamounts. With the capture of the new landmass, North America had grown about 50 miles in width. Volcanic rocks of this island chain today form the backbone of the Oregon and Washington coastal mountains and are the oldest known rocks in the range (Orr, Orr, and Baldwin 1992).

### 4.2 Soils

In general the soils of the site are deep and moderately deep, well-drained silt loam, gravelly loam and extremely gravelly loam found on mountainsides. The permeability of the soil is moderate and runoff is rapid. Therefore, the hazard of soil erosion is severe. The surface layer of the soil is composed of very dark grayish-brown, silty, sandy clay. The subsoil is dark grayish-brown silty clay and sandy silty clay in the upper part and dark yellowish-brown and yellowish-brown silty sandy clay. Below the subsoil, at depths varying from 95 to 150 cm, weathered siltstone is encountered. Table 4-1 shows a generalized soil profile.

Table 4-1. Soil Profile						
DEPTH (CM)	SOIL DESCRIPTION	PERCENTAGE PASSING SIEVE NUMBER			LIQUID LIMIT	PLAS- TICITY INDEX
		#4	#40	#200		
0-30	silty sandy clay	100	95-100	75-90	40-50	5-10
30-95	silty clay	100	95-100	75-95	35-50	15-30
95-150	weathered bedrock	-----				
Table taken from Soil Survey of Clatsop County, OR						

One area of exception to the type of soil is the tide influenced flood plain on the eastern edge of the neck of Tongue Point. The soil here is composed of very dark gray sand from 0 to 5 cm and dark gray sand from 5 to 150 cm. This area is excessively drained and permeability is very rapid. The runoff is slow (Smith and Shipman 1988).

4.3 Hydrology

4.3.1 Surface Water

NAS Tongue Point is located in Clatsop County, Oregon and is drained by the Columbia River. The Columbia River discharges are regulated by many upstream reservoirs. The site on the Columbia River at Tongue Point is located at River Mile 18.2. Table 4-2 gives the water surface elevation versus exceedence probability for the Columbia River at Tongue Point. This table is based on the latest "Columbia River Combined Flood Profiles" developed by the Portland District, U.S. Army Corps of Engineers, dated 1 June 1994.

TONGUE POINT GAGE (RM 18.2) TABLE 4-2	
Water Surface Elevation (feet NGVD)	Exceedence Probability in percent
7.8	50
8.7	10
9.0	2
9.2	1
9.6	.2

### 4.3.2 Ground Water

Tongue Point is located directly on the Columbia River. The drainage and flow of ground water is toward the river.

### 4.4 Weather

The site, located near Astoria, Oregon has a temperate marine climate typical of the West Coast. It has a dry season and pleasant temperature in summer, a mild but rather rainy winter, and a narrow range in temperature. The coastal mountains protect this area from the more intense winter storms that move inland from the ocean and the Cascade Mountain Range shields it from the higher summer and lower winter temperatures of eastern Washington. Cold air in winter and occasional hot air in summer flowing west through the Columbia River Gorge also has an influence on the climate.

Late in spring and in summer high pressure usually dominates and as a result the dry season begins. It peaks in midsummer and it is not unusual for several weeks to pass without measurable rainfall. In fall and winter low pressure centers in the Gulf of Alaska. This brings a prevailing flow of warm moist air into the area from a southwesterly direction. As a result, winter temperatures are mild and the rainy season begins in fall, reaches a peak in midwinter and decreases again in spring.

The prevailing wind direction is from the southeast. East-southeasterly winds prevail during most of the winter, and northwesterly winds prevail during the summertime.

Relative humidity ranges from about 70 percent in midafternoon to 90 percent during the early hours of the day in the warmest and driest months. In winter it ranges from 75 percent in midafternoon to around 85 percent or higher early in the morning.

Light snow sometimes falls as warm moist air moves in following a quick shot of cold air. It seldom remains on the ground for more than a few days. Average annual snowfall is almost 7 inches. Ice storms also occur a few times a winter when rain falls through cold air moving westward through the Columbia River Gorge.

In Astoria, the sun shines for about 25 percent of the daylight hours in winter, and for about 65 percent in summer. Annually skies are clear about 15 percent of the time, partly cloudy 20 percent, and cloudy about 65 percent.

Climatological data for the area are summarized in TABLE 4-3. Data were collected at the National Weather Service meteorological station at the Clatsop County Airport. The site is located about 6 miles east of the Clatsop County Airport.

**CLIMATOLOGICAL DATA FOR  
ASTORIA, OREGON  
TABLE 4-3**

Month	Temperature		Precipitation Average (Inches)	Wind	
	Average Minimum (°F)	Average Maximum (°F)		Average Speed Miles/Hour	Average Direction
January	35.4	46.8	11.29	9.2	E
February	37.1	50.6	7.81	9.0	ESE
March	36.9	51.9	7.26	8.9	SE
April	39.7	55.5	4.60	8.8	WNW
May	44.1	60.2	2.84	8.6	NW
June	49.2	63.9	2.43	8.6	NW
July	52.2	67.9	1.04	8.7	NW
August	52.6	68.6	1.56	8.1	NW
September	49.2	67.8	3.11	7.6	SE
October	44.3	61.4	6.21	7.6	SE
November	38.6	53.5	9.88	8.8	SE
December	37.3	48.8	11.57	9.1	ESE
Average	43.1	58.1	69.60	8.6	SE

#### 4.5 Ecology

The information on the endangered and threatened species for this site has been provided by the U.S. Fish and Wildlife Service and the Oregon Department of Fish and Wildlife.

The U.S. Fish and Wildlife Service has indicated that the following Federally protected species may be found in the vicinity of the NAS Toung Point Site: Columbian white-tailed deer (*Odocoileus virginianus leucurus*), endangered; bald eagle (*Haliaeetus leucocephalus*), threatened; brown pelican (*pelecanus occidentalis*), endangered; marbled murrelet (*Brachyramphus marmoratus*), threatened; Snake River chinook salmon (*Oncorhynchus tshawytscha*), threatened; Snake River sockeye salmon (*Oncorhynchus nerka*), endangered; Oregon silverspot butterfly (*Speyeria zerene hippolyta*), threatened; white-footed vole (*Arborimus albipes*), candidate; Pacific western big-eared bat (*Plecotus townsendii townsendii*), candidate; northern red-legged frog (*Rana aurora aurora*), candidate; tall bugbane (*Cimicifuga elata*), candidate; Howell's montia (*Montia howellii*), candidate.

The Oregon Department of Fish and Wildlife provided comments on the following State threatened and endangered species: bull trout (*Salvelinus confluentus*), critical; tui chub (*Gila bicolor*), critical; Warner sucker (*Catostomus warnerensis*), endangered; California roach (*Hesperoleucus symmetricus mitrulus*), critical; goose lake lamprey (*Lampetra tridentata* ssp.), critical; cascades frog (*Rana cascadae*), critical; spotted frog (*Rana*

*pretiosa*), critical; American peregrine falcon (*Falco peregrinus*), endangered; bald eagle, endangered; snowy plover (*Charadrius alexandrinus*), threatened; northern spotted owl (*Strix occidentalis caurina*), threatened; black-backed woodpecker (*Picoides articus*) critical; burrowing owl (*Speotyto cunicularia*), critical; ferruginous hawk (*Buteo regalis*), critical; flammulated owl (*Otus flammeolus*), critical; Lewis' woodpecker (*Asyndesmus lewis*), critical; northern goshawk (*Accipiter gentilis*), critical; pileated woodpecker (*Dryocopus pileatus*), critical; red-necked grebe (*Podiceps grisegena*), critical; three-toed woodpecker (*Picoides tridactylus*), critical; upland sandpiper (*Bartramia longicauda*), critical; white-headed woodpecker (*Dendrocopos albolarvatus*), critical; purple martin (*Progne subis*), critical; yellow-billed cuckoo (*Coccyzus americanus*), critical; yellow rail (*Coturnicops noveboracensis*), critical; American martin (*Martes americana*), critical; Pacific fisher (*Martes pennanti*), critical; Pacific western big-eared bat, critical; wolverine (*Gulo luscus*), threatened.

No additional information on the occurrence of rare or endangered species or natural communities is known at this time. This does not mean that other state or federally-listed species may not be present within the areas of interest. An on site inspection by appropriate state and federal personnel may be necessary to verify the presence, absence, or location of listed species, or natural communities if remedial action is recommended as part of the final ASR.

## 5.0 Real Estate

### 5.1 Present Ownership

The Findings and Determination of Eligibility (FDE), cited in Paragraph 2.0, indicates that the former Naval Air Station lands (840 acres) was declared excess on 17 October 1961 and the NAS deactivated in January 1962. Following deactivation, the site was transferred to GSA. GSA formally transferred 748.4 acres to DOL on 15 December 1970, terminating the permitted use agreement, between the two agencies, which had been in effect since 21 April 1965. From the 748.4 acre site, GSA excessed, and deeded 45 acres to the State of Oregon, leaving 703.4 acres under DOL control.

The FDE attributes the discrepancy of 91.6 acres, [difference between the original acquisition (840 acres) and the transfer acreage (748.4 acres), to incomplete accountability data. It further provided that accurate acreage figures for the water areas (tide lands, wharfage, and riparian rights) were not available, and are not included.

While DOL remains in control of the majority of the former site proper, the ordnance storage area, consisting of 70 acres, and a portion of the "Navy Heights" containing approximately 90 acres, has been transferred to the Fish and Wildlife Service. The former ordnance area is currently the site of the Lewis and Clark Wildlife Refuge.

### 5.2 Confirmed DOD Ownership

Based on data contained in the FDE, the 840 acre site was under DOD control from 1921 to 1961.

Our findings indicate that the site consisted of at least 871 acres (Appendix C). This differs from the total reported in the INPR. This difference in acreage we attribute to the housing area which occupied 32 acres and was located south of the installation proper.

### 5.3 Historically Significant Past Ownership

There is nothing in the records to indicate that there were any historically significant past ownerships, other than DOD, with respect to possible OEW contamination.

## 6.0 OEW/CWM Site Analysis

### 6.1 Historical Summary of OEW/CWM Activities

In 1900, a proposal was presented to Congress in 1919 for the construction of a submarine and destroyer base on the present site of U.S. Naval Station, Tongue Point, and subsequent congressional action appropriated \$1.5 million for the construction on a three year development plan. In 1921, the City of Astoria transferred ownership of 371 acres to the federal government; dredging began that same year. Construction was complete in 1924, with a breakwater and four wooden finger piers extending into Cathlamet Bay. However, with decreased military appropriation following the war, the base was never used. The actual ground breaking for the naval station began in 1939; three out of the four old wooden finger piers were removed. The facilities of the Air Station were to include a hangar, three seaplane ramps, supply and administrative buildings, and various other structures necessary for station keeping. Tongue Point was to be a base for amphibious seaplane patrols of the coastline. This proved difficult due to the logs and other floating debris on the Cathlamet Bay which made takeoff and landing conditions hazardous. The facility's most significant role during WW II was as a pre-commissioning and commissioning site for escort aircraft carriers-better known as "jeep flattops"-built up in the big Victory ship yards in the Portland-Vancouver area. Other wartime activities included air crew training and routine patrol flights; up to 20,000 servicemen were assigned to Astoria during the war.

Following the war, the base was converted to a moorage facility for the Ready Reserve fleet. To accommodate this fleet, eight new concrete piers were built out into Cathlamet Bay. From 1946-62, the Navy stored as many as 250 mothballed Liberty ships at the facility. By 1962, the Tongue Point Naval Station was transferred to the General Services Administration as excess property. When the station was deactivated by the Department of the Navy it consisted of 842.03 acres of land and water areas and 320 structures. In that same year 99.14 acres were acquired by the U.S Maritime Commission and 748.4 acres by the Office of Economic Opportunity to use the site as a job corps center (the property itself was transferred to the Department of Labor in 1971). In 1981, the federal government sold 43 acres of the old naval station property to the Oregon Division of State Lands for \$2.1 million. This included most of the filled land, two of the three hangars, and five of the seven concrete piers constructed for the mothball fleet in 1946.

Facilities at the Tongue Point Naval Air Station in 1942 included: High explosive magazines (3), Small high explosive magazines (108), y-gun ammunition magazines, fuse and detonator magazines (4), bombsight and torpedo shop, smoke drum and storehouse, fixed ammunition magazine and small arms and pyrotechnics magazines (2). Additional facilities (constructed between 1944-47) included: a machine gun range, eight concrete piers and a mine observation tower. Stored materials included: blasting caps, C.N. grenades (tear gas), fragmentation grenades, smoke grenades, gas test sets, fuses, detonators, torpedoes and demolition charges.

## 6.2 Records Review

**National Archives and Records Administration  
Suitland Branch  
4205 Suitland Road  
Suitland, MD 20409**

**RG 71** Records of the Bureau of Yards and Docks  
Bay and Dock Management

**RG 77** Records of the Chief of Engineers  
Entry A-50-23 Security - Classified subject files 1940-45

**RG 175** Records of the Chemical Warfare Service  
Entry 2 National Guard through Navy  
Entry 2 Tin through Toxement  
Entry 2 Blasting caps  
Entry 4A Chemical Warfare Installations (Portland)

Many other record groups were reviewed but there were no pertinent documents.

**National Archives, Pacific Northwest Region  
6125 Sand Point Way N.E.  
Seattle, WA 98115**

**RG 77** Records of the Chief of Engineers  
Rivers and Harbors

**RG 121** Records of the Public Buildings Service  
Report of Excess  
Disposal Case Files

**RG 181** Records of the Naval Districts and Shore Establishments  
Entry 70519 Naval District and shores lists  
Navy Files  
13th Naval District

**RG 270** Records of the War Assets Administration  
Entry 58A542 General Services Administration Property Disposal  
GSA Property Disposal  
Legal Case Files

**RG 291** Records of the Property Management and Disposal Service  
Entry 195 GSA Property Disposal  
Disposition Case Files 1959-66  
*Availability of Real Property notices*

Many other record groups were reviewed but there were no pertinent documents.

**National Archives  
Washington, D.C.**

Archive personnel referred us to RG 181 at the Regional Archives.

**Oregon Historical Society  
Portland, OR**

Several pertinent newspaper clippings from the Oregonian.

**Multnomah Public Library  
Portland, OR**

The reference librarian indexed all catalogs and found no pertinent information.

**Astoria Public Library  
Astoria, OR**

Several pertinent newspaper clippings from the Astorian.

**Clatsop County Historical Society  
Astoria, OR**

Cumtux - Clatsop County Historical Society Quarterly.  
The Quarterdeck - local maritime newsletter.  
Old photos and short history.

**Columbia River Maritime Museum  
Astoria, OR**

Tongue Point government property sale guide Map.

**Columbia River Estuary Study Taskforce  
Astoria, OR**

Dredging and In-Water Disposal Handbook

**Department of Environmental Quality  
Portland, OR**

Underground storage tank report.  
Landfill report.  
Environmental Assessment.

**Washington Naval Yard  
901 M Street S.E.  
Washington, D.C. 20374**

Diaries from the 1940s.  
Thirteenth Naval District report.

**Assessors Office  
Astoria, OR**

Ownership maps.

6.3 Interpretation of Aerial Photographs

6.3.1 Photo Analysis

Photo analysis and land-use interpretation were performed using the following photographic sources:

<b>Photo Date</b>	<b>Approx. Scale</b>	<b>Source</b>	<b>Frame ID #s</b>
03 Sep 1953	1"=1,000'	ASCS	62 thru 65 143 thru 146
04 Sep 1953	1"=1,000'	ASCS	1 thru 4 90 thru 94 96 thru 100
01 Oct 1954	1"=1,000'	ASCS	92 thru 95 160 thru 162 183 thru 187
20 May 1970	1"=1'667'	ASCS	164 thru 167
05 Aug 1983	1"=1,000'	EROS	82 thru 85

Aerial photography for this site was referenced using the Astoria, Oregon-Washington USGS 7.5' quadrangle (photorevised 1984). No photography before 1953 was available for interpretation.

1953 photography shows a lot of activity going on in the area. Several roads are seen. A big shipyard is located to the south of the point, indicating plenty of activity. Areas of interest could not be detected.

The 1954 photos do not show any change from the 1953 photos.

The 1970 photos show activity in the area. There are several small roads covering the point itself. There is no visual evidence showing that there was ordnance stored in the area. Large areas south of the point have been deforested. There are several small cleared areas throughout the area. Most of these areas contain a some type of structure.

The 1980 photos shows continued activity in the area, especially on both sides of the point. On the east side there are many docks. Most of what is going on in the area deals with logging. New settling ponds are along the west side of the site. There are several large buildings that look to be warehouses. There is an area of deforestation north of Columbia River Highway.

### 6.3.2 Map Analysis

The ASTORIA, OREGON-WASHINGTON USGS 7.5' quadrangle was used in analysis of the site. The approximate geographic coordinates for the center of the site are as follows:

46°12'30"N  
123°46'W

The quadrangle shows varied planimetric and topographic features, along with hydrographic features. NAS Tongue Point is essentially surrounded by the Columbia River and Cathlamet Bay. The city of Astoria is to the west of Tongue Point. There are several hard and soft surface roads in the area, along with scattered buildings and powerlines throughout. Tongue Point has one light duty road and one unimproved dirt road.

Topographically speaking the land goes at an upward slope from the Columbia River with the highest point being over 650 feet.

No other additional areas of interest were located during the photographic analysis.

### 6.4 Interviews

Interviews were conducted by telephone and in person, both prior to and during the site inspection. The primary purpose of these interviews was to make initial contact with individuals knowledgeable of the site and to coordinate follow-up visits during the site

inspection phase of this ASR's preparation. A list of persons interviewed is included at Appendix E. Any pertinent information derived from these discussions is covered within the context of this report and in the trip reports included at Appendix C.

### 6.5 Site Inspection

The subject site survey was performed during the period of 06 Sep 94 to 15 Sep 94 by the following St. Louis District personnel:

Dennis W. Gilmore	Project Manager and Site Safety Officer
James Luebbert	Historian
Charles (John) Daly	Historian

Prior to departing for the subject site, Dennis Gilmore gave the safety briefing, and safety aspects related to the site were discussed.

On 6 Sep 94, the team conducted local research in the Portland area. Personnel at the Portland District office who were familiar with the site were interviewed. Also visited were the Oregon State Historical Museum and the Multnomah County Library.

At the District, Jon M. Gornick, who is the Navigation Section Project Manager for the reach of the Columbia River at which Tongue Point is situated, was interviewed. He had no knowledge of OEW being discovered at the site. The rationale for interviewing Jon was that the Corps previously conducted all dredging in the vicinity of the site. In the event that OEW was disposed of in the waters, it is most probable that some items would have been recovered.

Jon provided copies of several reports and studies related to the site, among these were Tongue Point, Oregon Navigation Improvements and Tongue Point Monitoring Program. In addition to addressing environmental aspects of the site, these reports provide sediment sampling data. He introduced Mark Siipola of the Planning/Engineering Division. Mark is the Ocean Dumping Coordinator and as such is responsible for the evaluation of contaminants in the dredged materials. Mark indicated that he was not aware of any OEW recoveries. He did state that high concentrations of metals were found in samples taken between the "finger piers." He provided copies of these test results. An important note is that the highest levels of these contaminants were found in horizons which would seem to indicate that they resulted from, or date to, the time period of the Navy's occupation of the facility. Further study to determine the source of the high concentrations of metals in the sediments may be appropriate.

Arriving on site on 7 Sep 94, the crew of the Corps' dredge which works the Tongue Point area was interviewed. They were not aware of any ordnance discovery. When asked if they had ever dredged up any, they replied that it would be impossible for them to know unless it exploded. Their dredge holds 400 cys of material which they transport and dispose of in the ocean, never having visually examined the contents.

Inquiries at the County Assessors Office yielded real estate information relative to current owners, plot maps, etc. Of note was information indicating that the site totalled of 915.334 acres. This differs from the information provided in the INPR which lists the site as consisting of 748.4 acres. The 900 plus acres description includes a parcel of 290.8 acres in the "Navy Heights" housing area which was located south of US Hwy 30. A portion of the housing area parcel has been transferred to the FWS with the remainder being in private ownership.

Inquiries were also made at the Clatsop County Public Works Office and the office of the Soil Conservation Service where documents and information were obtained, none of which provided evidence of OEW contamination. Subsequent interviews of locals familiar with the site likewise failed to provide any suggestion or evidence of OEW contamination.

Other government agencies queried included FWS (current owners of the ammunition storage area), Portland District (USACE), Astoria Field Office (located on southern Tongue Point), Oregon Department of Environmental Quality, and the Oregon Division of State Lands (owners of the southern portion of the former NAS). None of the individuals interviewed at these agencies were knowledgeable of any OEW related incidents.

At the Tongue Point Job Corps Center, original Navy documents, to include maps and dredging records were reviewed in addition to interviewing several long time employees of the facility. Arrangements were made to copy some materials, the most significant of which was an inspectors report, dated 14 August 1945, in which he instructed the dredge contractor to "have employees turn in any 20 mil. shells found in dredged material." This statement suggests that ordnance had previously been recovered during performance of the work by virtue of the fact that a particular category of ordnance is given. Additionally, the location of the dredging corresponds with the area of the basin which exhibits high concentrations of metals in the sediments.

On continuing our review of the documents, a subsequent letter revealed that the disposal area for the potentially OEW contaminated spoil was a site owned by the Port of Astoria, and located on the Astoria waterfront adjacent to Pier 5. No Pier 5 exists at the Port of Astoria today.

During the course of the local research, records were reviewed, interviews conducted, and documents were obtained at the following repositories:

- Oregon Historical Society
- Multnomah Public Library
- Astoria Public Library
- Columbia River Estuary Study Taskforce (CREST)
- Clatsop County Historical Society
- Columbia River Maritime Museum

Other interviews were conducted throughout the period, two of which are summarized below:

Jim "Smokey" Stoval is a navy veteran who was stationed at Tongue Point in 1952 and 1957-1959. After retiring from the Navy, he went to work for the Job Corps on the site in 1978. He spoke of the burn pit on the southern end of the site, a small arms range in the ammunition storage area and the seaplane ammo load operation, as well as explaining the "Mothball" operation.

The mothball operation (Decommissioning) consisted of stripping the vessels of all spare parts and nonpermanent equipment and the spot painting of the ships to prevent rusting. Ordnance loaded on the seaplanes was carted from the ordnance area to the ramp area where it was then loaded on to the planes. The ordnance was not fused until the plane was airborne. The vessels being decommissioned arrived with no ordnance on board having off-loaded all ordnance at a facility in Puget Sound. On the subject of the burn pit, he never saw any ordnance disposed of in that manner but would not doubt that it occurred. He has personal knowledge of oil, paint, solvents, etc. being disposed of there, both by the Navy and the Job Corps.

Lisa Tolonen, Recreation Specialist, Job Corps, told us of an unknown malady which previously affected the occupants of Residence 4 and others who frequented the area. In 1993, the Corps (CENPS) removed site buried drum from the area and the symptoms disappeared. She did not know the contents of the drums. Additionally, while conducting a hiking trip in the ordnance storage area, the group gained access to one of the bunkers and found provisions (ie., water, food, comfort items). She believe this to be remains from usage of the site for civil defense purposes. She has hiked the former site on numerous occasions and found nothing she could identify as OEW.

Our site survey concluded with an inspection of the ordnance storage area. This portion of the former installation is overgrown with extremely dense vegetation which precluded a thorough examination of the lands surrounding the storage bunkers. All of the bunkers viewed had the doors either removed or welded shut. At no time during the site inspection was anything observed which may be termed OEW.

## 7.0 Evaluation of Ordnance Contamination

Based on the extensive archive searches performed, interpretation of aerial photographs, interviews with the owners and/or occupants of major portions of this DERP-FUDS site, and the results of the site investigation, there exist a possibility of OEW contamination at two separate locations within this site (Figure 7.1).

### 7.1 Berthing Area

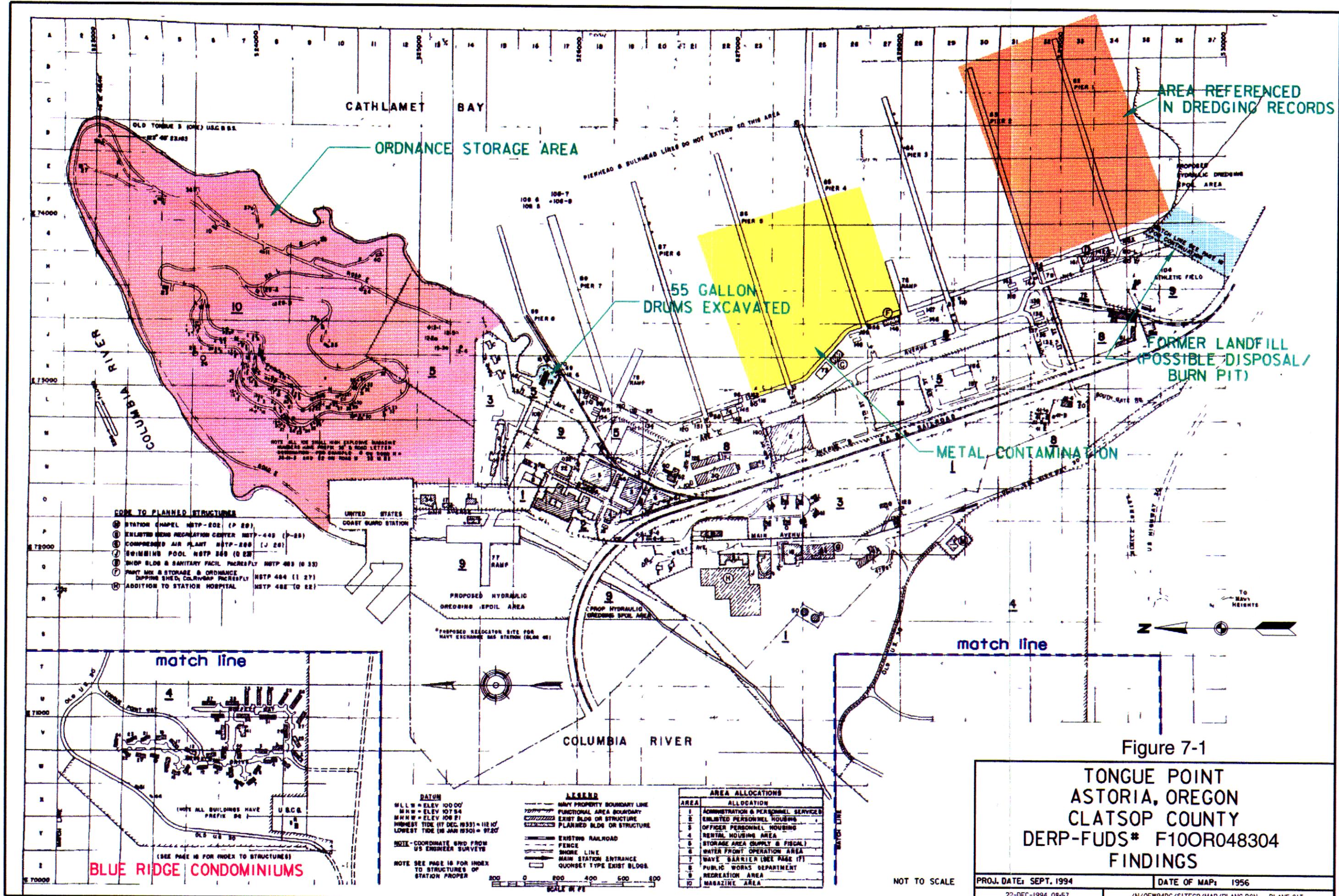
As noted in Section 6.5 - Site Inspection, a Construction Inspector's daily report was found which suggests that 20 millimeter shells were found in the spoil from dredging activity. If shells were found, and since none of the records reviewed indicated that the area was ever decontaminated, then one can reasonably assume that all of the ordnance may not have been recovered. Therefore the entire dock area should be considered as potentially contaminated with OEW.

Additional findings which may strengthen the above evaluation are the reports detailing high levels of metal contamination in the sediments at the "finger piers". Metals which were found to exceed established criteria includes cadmium, chromium, copper, lead, and mercury. It is entirely possible that these elevated concentrations are attributable to sources other than the presence of ordnance, but ordnance disposal should be examined as a potential source of the contamination. Other non-DOD activities are known to have occurred at the docking facility which resulted in some degree of contamination.

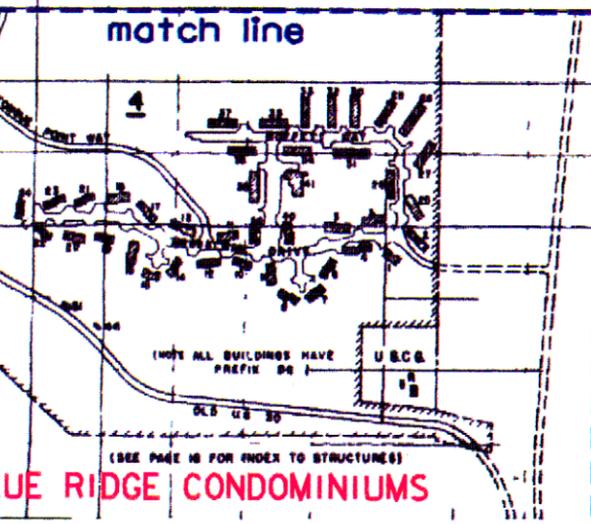
### 7.2 Landfill/Disposal Area

Although no evidence of OEW was observed during the site inspection, the INPR provides that there has been at least one undocumented report of OEW having been recovered. During the period in which this installation was active, burial of ordnance was an approved method of disposal. Based on the location of the landfill, relative to other facilities of the installation, it was ideally situated for the disposal of ordnance.

A RI/FS is currently ongoing at this site in preparation for a HTW removal action and subsequent development of the site for marine industrial use. It is therefore prudent to consider the possibility of OEW contamination and to take additional measures to confirm or deny the presence ordnance related hazards.



- CODE TO PLANNED STRUCTURES**
- ① STATION (MAPL NHTP-202 (P 20))
  - ② ENLISTED MEN REGULATION CENTER NHTP-445 (P-25)
  - ③ COMPRESSED AIR PLANT NHTP-288 (J 20)
  - ④ SWIMMING POOL NHTP 265 (Q 22)
  - ⑤ SHOP BLDG & SANITARY FACIL INCREASLY NHTP 483 (Q 33)
  - ⑥ PAINT MK & STORAGE & ORDNANCE DIPPING SHED, COLTRVSP INCREASLY NHTP 484 (I 27)
  - ⑦ ADDITION TO STATION HOSPITAL NHTP 482 (Q 22)



**DATUM**  
 M.L.L.W. = ELEV 100'00"  
 M.H.W. = ELEV 107'54"  
 M.H.N. = ELEV 106'21"  
 HIGHEST TIDE (17 DEC. 1933) = 112'10"  
 LOWEST TIDE (16 JAN 1901) = 97'20"

**NOTE** - COORDINATE SHD FROM US ENGINEER SURVEYS  
 NOTE SEE PAGE 16 FOR INDEX TO STRUCTURES OF STATION PROPER

**SCALE** IN FEET  
 0 200 400 600 800

**LEGEND**

- NAVY PROPERTY BOUNDARY LINE
- FUNCTIONAL AREA BOUNDARY
- EXIST BLDG OR STRUCTURE
- PLANNED BLDG OR STRUCTURE
- EXISTING RAILROAD
- FENCE
- SHORE LINE
- MAIN STATION ENTRANCE
- QUONSET TYPE EXIST BLDGS

AREA ALLOCATIONS	
AREA	ALLOCATION
1	ADMINISTRATION & PERSONNEL SERVICES
2	ENLISTED PERSONNEL HOUSING
3	OFFICER PERSONNEL HOUSING
4	RENTAL HOUSING AREA
5	STORAGE AREA (SUPPLY & FISCAL)
6	WATER FRONT OPERATION AREA
7	WAVE BARRIER (SEE PAGE 17)
8	PUBLIC WORKS DEPARTMENT
9	RECREATION AREA
10	MAGAZINE AREA

**Figure 7-1**

**TONGUE POINT  
 ASTORIA, OREGON  
 CLATSOP COUNTY  
 DERP-FUDS# F10OR048304  
 FINDINGS**

NOT TO SCALE

PROJ. DATE: SEPT. 1994      DATE OF MAP: 1956

22-DEC-1994 08:57      /N/OEW940G/SITEG3/MAP/PLANC.DGN - PLANE.CIT

Ordnance and Explosive Waste  
Chemical Warfare Materials  
**ARCHIVES SEARCH REPORT**  
for the former  
**NAVAL AIR STATION TONGUE POINT**  
Astoria, Oregon

Project No. F10OR048304

## **APPENDICES**

- A. REFERENCES
- B. ACRONYMS
- C. REPORTS/STUDIES/LETTERS/MEMORANDUMS
- D. HISTORICAL PHOTOGRAPHS
- E. INTERVIEWS
- F. NEWSPAPERS/JOURNALS -- NOT USED
- G. PRESENT SITE PHOTOGRAPHS
- H. HISTORICAL MAPS/DRAWINGS
- I. RISK ASSESSMENT CODE PROCEDURE FORMS
- J. REPORT DISTRIBUTION LIST
- K. ARCHIVE ADDRESSES

**APPENDIX A**  
**REFERENCES**

Ordnance and Explosive Waste  
Chemical Warfare Materials  
**ARCHIVES SEARCH REPORT**  
for the former  
**NAVAL AIR STATION TONGUE POINT**  
Astoria, Oregon  
Project No. F10OR048304

APPENDIX A -- REFERENCES

**A.1 GENERAL REFERENCES**

Anonymous

1963 For Sale Government Property...bid opening date: June 24, 1963. Columbia River Maritime Museum.

Kann, Steve and Kann, Janet

1991 WWII Civilian Defense. The Cumtux, Vol. 11, No. 2, Spring 1991. The Astoria Public Library.

Kytr, Hobe

1993 Tongue Point: The Once and Future Landmark. The Quarterdeck, Vol. 19 No. 2, Winter 1993. Columbia River Maritime Museum.

Seattle Corps of Engineers

1994 Land Utilization History, Tongue Point Former Naval Air Station.

U.S. Navy

1943 War Diary, May 2, 1943-May 31, 1943. Washington Naval Yard, Washington, D.C.

**A.2 REFERENCES FOR DEMOGRAPHICS**

Astoria Chamber of Commerce (503)325-6311

U.S. Department of Commerce. Bureau of the Census. Oregon. 1990.

**A.3 REFERENCES FOR GEOLOGY AND SOILS**

Orr, Elizabeth L., Orr, William N., and Baldwin, Ewart M.

1992 Geology of Oregon. Kendall/Hunt Publishing Company, Dubuque, Iowa.

Smith, Philip R., and Shipman, John A.

1988 Soil Survey of Clatsop County, Oregon. US Department of Agriculture, Soil Conservation Service in cooperation with Oregon Agricultural Experiment Station.

## **APPENDIX B**

### **ACRONYMS**

Ordnance and Explosive Waste  
Chemical Warfare Materials  
**ARCHIVES SEARCH REPORT**  
for the former  
**NAVAL AIR STATION, TONGUE POINT**  
Astoria, Oregon  
Project No. F10OR048304

**APPENDIX B -- ACRONYMS**

ASR	Archives Search Report
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CEHND	Corps of Engineers, Huntsville Division
CREDDP	Columbia River Estuary Data Development Program
CREST	Columbia River Estuary Taskforce
CSM	Chemical Surety Material
CWM	Chemical Warfare Material
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DOL	U.S. Department of Labor
EOD	Explosives Ordnance Disposal
EPA	Environmental Protection Agency
ERDA	Environmental Restoration Defense Account
FDE	Findings and Determination of Eligibility
FUDS	Formerly Used Defense Sites
FWS	U. S. Fish and Wildlife
GSA	General Services Administration
HTW	Hazardous and Toxic Waste
INPR	Inventory Project Report
IRP	Installation Restoration Program
MCX	Mandatory Center of Expertise
NAS	Naval Air Station
NCP	National Contingency Plan
OEW	Ordnance and Explosive Waste
RAC	Risk Assessment Code
SARA	Superfund Amendments and Reauthorization Act
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USAED	U.S. Army Engineer District
USAEDH	U.S. Army Engineer Division, Huntsville, AL
USATHMA	U.S. Army, Corps of Engineers, Toxic and Hazardous Materials Agency
UXO	Unexploded Ordnance
WRNC	Washington National Records Center

**APPENDIX C**

**REPORTS, STUDIES, LETTERS, MEMORANDUMS**

Ordnance and Explosive Waste  
Chemical Warfare Materials  
**ARCHIVES SEARCH REPORT**  
for the former  
**NAVAL AIR STATION TONGUE POINT**  
Astoria, Oregon

Project Number F10OR048304

**APPENDIX C**

**REPORTS/STUDIES/LETTERS/MEMORANDUMS**

- C-1 Findings and Determinations, Naval Air Station Tongue Point.
- C-2 Site Specific Safety and Health Plan (SSHP).
- C-3 Inspector's Daily Report/Dredging Record, 14 August 1945.
- C-4 1945 letter regarding disposal of dredged material and Map C4.1 Disposal Areas.
- C-5 Disposal Plan/Real Estate Documents, April 1962.

## **APPENDIX C-1**

**Findings and Determinations, Naval Air Station Tongue Point.**

15 Apr 94

MEMORANDUM FOR Commander, North Pacific Division, ATTN: CENPD-PM-MP

SUBJECT: Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP-FUDS), Addendum to Inventory Project Report (INPR) for Site No. F100R048300, Naval Air Station, Tongue Point, Oregon

1. This addendum to the subject INPR covers the potential for Ordnance and Explosive Waste (OEW) contamination at Naval Air Station, Tongue Point. A revised site survey summary sheet and site maps are enclosed (encl 1).
2. This INPR has been reviewed and concurred by the Portland District Office of Counsel.
3. Site eligibility has already been determined. A copy of the signed Findings and Determination of Eligibility is enclosed (encl 2).
4. Three hazardous waste projects: Containerized/Hazardous and Toxic Waste (CON/HTRW), Building Demolition/Debris Removal (BD/DR) and HTRW were approved by CEMP-RF on 7 Dec 90. Remedial Design (RD) for the CON/HTRW and BD/DR projects was completed on 24 Jun 92 and 30 Dec 91. Removal Action (RA) for the CON/HTRW and BD/DR projects was completed on 12 Apr 93 and 5 May 92. The HTRW project (conducted by CENPS-EN-GT-EM) is ongoing.
5. This addendum proposes an OEW project at the site. The Project Summary Sheet and Risk Assessment Code (RAC) are enclosed (encl 3).
6. Recommendation:
  - a. Forward a copy of this addendum to CEHND for the PA file and for a determination of the need for further study at the former Naval Air Station.
7. Portland District point of contact for this project is Michael Gross, (503) 326-6489.

FOR THE COMMANDER:

3 Encls  
as

STEVEN L. STOCKTON, P.E.  
Chief, Planning and Engineering  
Division

CF:  
CENPS-EN-GT-EM (Maas)

APR 21 1994

SITE SURVEY SUMMARY SHEET  
FOR  
DERP-FUDS SITE NO. F10OR048300  
NAVAL AIR STATION, TONGUE POINT, OREGON  
4 APR 94

SITE NAME: Naval Air Station (NAS), Tongue Point.

LOCATION: Clatsop County, Oregon, approximately 3 miles east of the City of Astoria.

SITE HISTORY: DOD use began in January 1921 when approximately 395 acres were deeded from Clatsop County. When final acquisition was made in March 1945, the NAS consisted of approximately 847.87 acres. The NAS consisted of approximately 320 structures including aircraft fueling, repair, maintenance, and housing facilities. A large ordnance storage area was located on the north end of the base. The base was deactivated by the Department of the Navy in 1962 and the property transferred to GSA. The U.S. Maritime Commission acquired 99.14 acres in April 1962 and the Job Corps program was initiated on 748.4 acres in April 1965. The Job Corps Center property was formally transferred to the Department of Labor (DOL) in 1971 for continued use as a Job Corps Center. In 1980 the DOL exceded 45 acres of the Job Corps site which was conveyed to the state of Oregon.

SITE VISIT: Site visits were conducted 19-21 April and 6 June 1989. John Todd and Jerry Horrocks (CENPP-PE-DC) and Victor Bartkus (CENPP-RE-M) visited the site. They spoke with Bob Tompson, Job Corps Center Operations office (retired) and Steve Purchase, Engineering Manager, Division of State Lands. Subsequent site inspections were conducted during the Remedial Design (RD) and Removal Action (RA) projects.

CATEGORY OF HAZARD: CON/HTRW, BD/DR, HTRW, OEW.

PROJECT DESCRIPTION: There are two completed projects, one ongoing project and one potential project at the site.

a. CON/HTRW. RA completed in Apr 93. Three contracts were awarded to remove tank contents, decommission 19 USTs, remove 13 refueling pits, associated equipment and miscellaneous chemical containers.

b. BD/DR. RA completed in May 92. Removal of one antenna (2 poles).

c. HTRW. RI/FS ongoing by CENPS-EN-GT-EM. Limited RI report on former landfill completed in Jun 93.

d. OEW. Ordnance was stored at the site. Hazardous waste may be present.

AVAILABLE STUDIES AND REPORTS:

a. USBR, Preliminary Site Characterization Investigation for USTs.

b. ODEQ, Site Report, Tongue Point Abandoned Landfill.

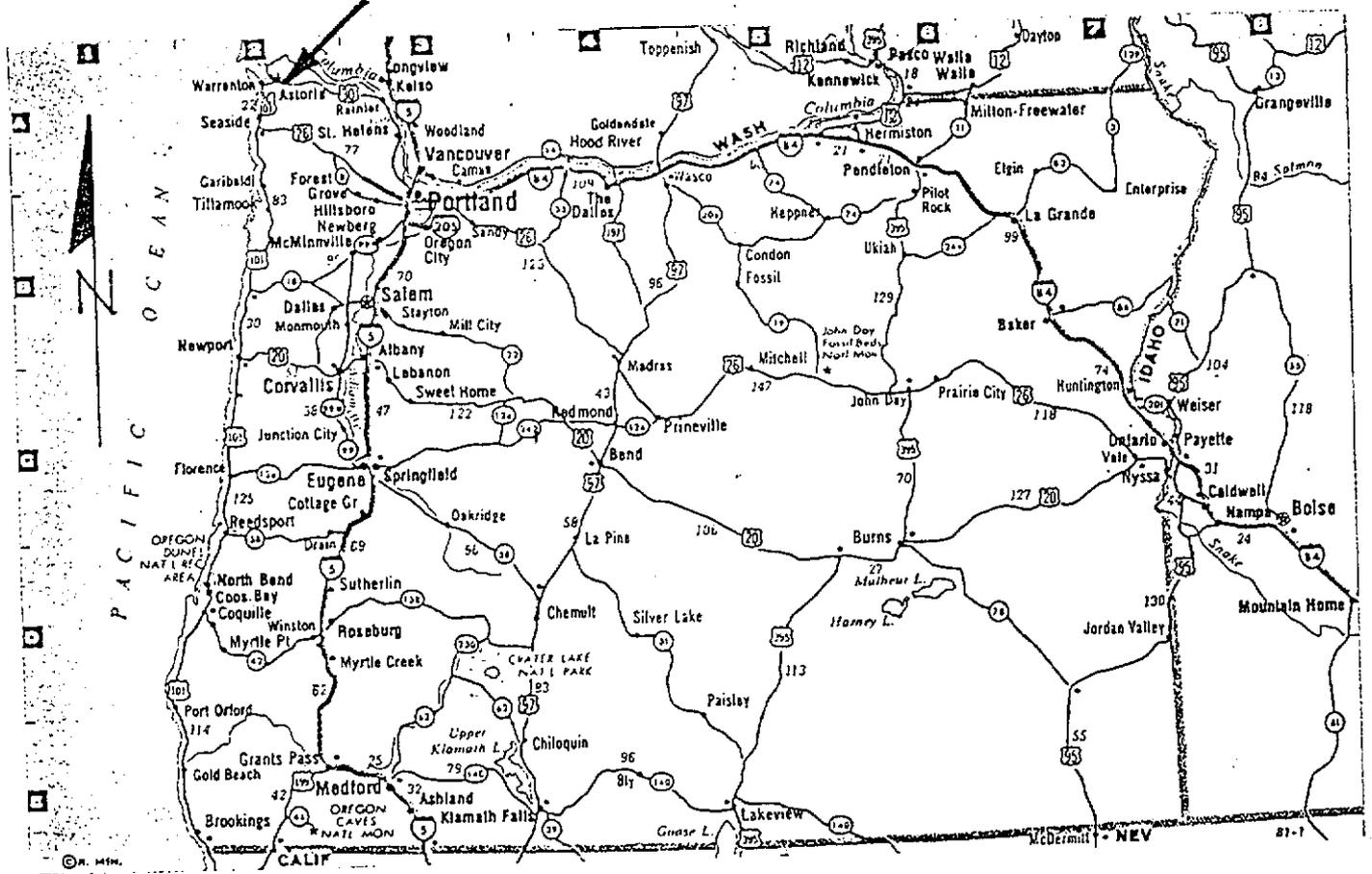
c. RZA-AGRA, UST Decommissioning Investigation, Feb 92; Pegasus Environmental Management Services, Final Field Report for UST Removal, Nov 92; and TMC Environmental, Underground Tank Removal Report, Apr 93.

d. Shapiro and Associates, Limited Remedial Investigation, Former Naval Air Station Landfill.

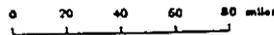
e. Seattle District, U.S. Army Corps of Engineers, Land Utilization History, Tongue Point, Former Naval Air Station.

PA POC: Michael Gross, CENPP-PE-DC, (503) 326-6489.

# LOCATION OF SITE

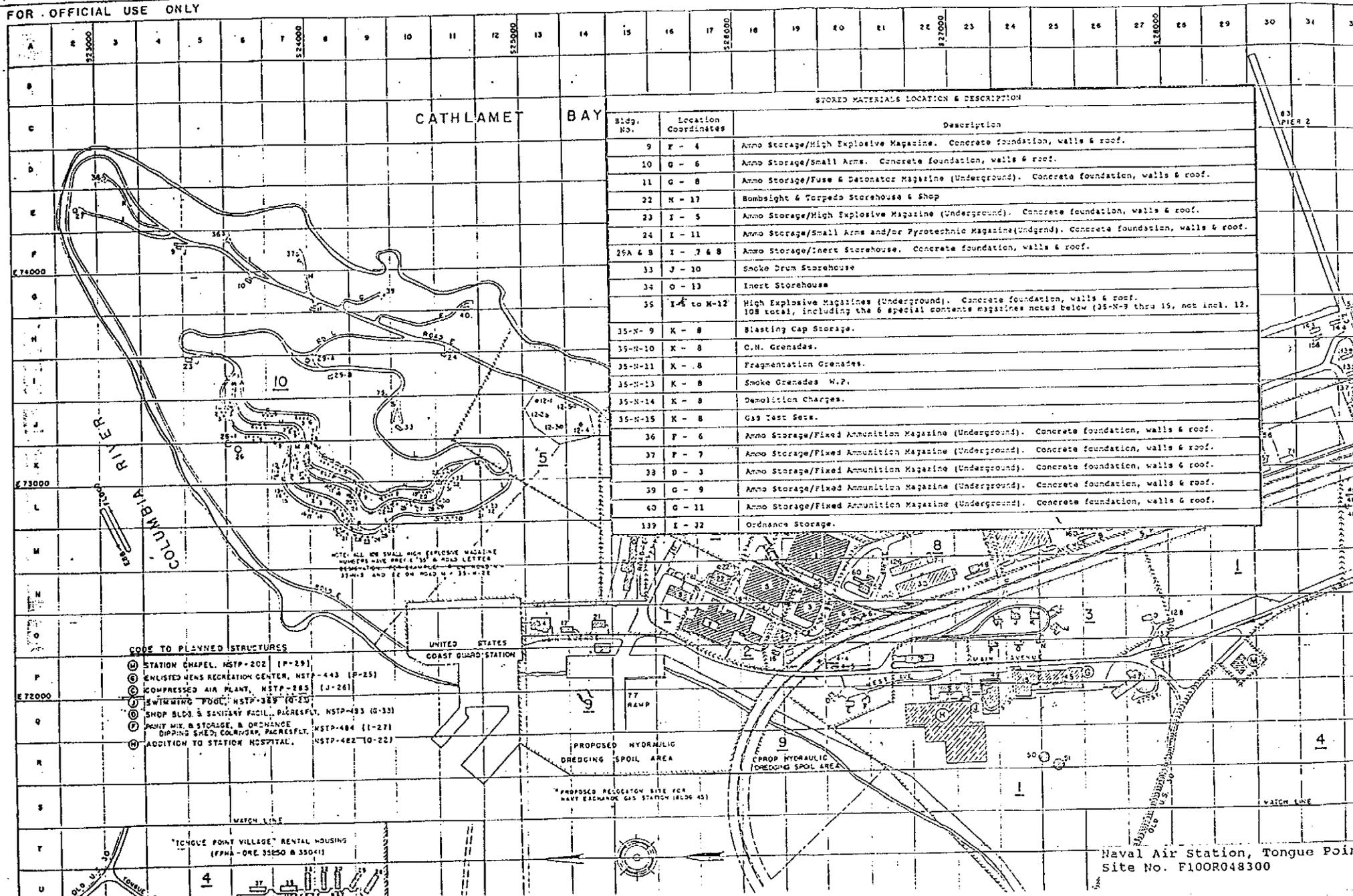


## VICINITY MAP SCALE IN MILES



Naval Air Station, Tongue Point  
Site No. F10OR048300

FOR OFFICIAL USE ONLY



CATHLAMET BAY

STORED MATERIALS LOCATION & DESCRIPTION

Bldg. No.	Location Coordinates	Description
9	F - 4	Armo Storage/High Explosive Magazine. Concrete foundation, walls & roof.
10	G - 6	Armo Storage/Small Arms. Concrete foundation, walls & roof.
11	G - 8	Armo Storage/Fuse & Detonator Magazine (Underground). Concrete foundation, walls & roof.
22	N - 17	Bombsight & Torpedo Storehouse & Shop
23	I - 5	Armo Storage/High Explosive Magazine (Underground). Concrete foundation, walls & roof.
24	I - 11	Armo Storage/Small Arms and/or Pyrotechnic Magazine (Underground). Concrete foundation, walls & roof.
25A & B	I - 7 & 8	Armo Storage/Inert Storehouse. Concrete foundation, walls & roof.
33	J - 10	Smoke Drum Storehouse
34	O - 13	Inert Storehouse
35	I-5 to N-12	High Explosive Magazines (Underground). Concrete foundation, walls & roof. 108 total, including the 6 special contents magazines noted below (35-N-9 thru 15, not incl. 12.
35-N-9	K - 8	Blasting Cap Storage.
35-N-10	K - 8	C.N. Grenades.
35-N-11	K - 8	Fragmentation Grenades.
35-N-13	K - 8	Smoke Grenades W.P.
35-N-14	K - 8	Demolition Charges.
35-N-15	K - 8	Gas Test Sets.
36	F - 6	Armo Storage/Fixed Ammunition Magazine (Underground). Concrete foundation, walls & roof.
37	F - 7	Armo Storage/Fixed Ammunition Magazine (Underground). Concrete foundation, walls & roof.
38	D - 3	Armo Storage/Fixed Ammunition Magazine (Underground). Concrete foundation, walls & roof.
39	G - 9	Armo Storage/Fixed Ammunition Magazine (Underground). Concrete foundation, walls & roof.
40	G - 11	Armo Storage/Fixed Ammunition Magazine (Underground). Concrete foundation, walls & roof.
139	I - 22	Ordnance Storage.

CODE TO PLAYED STRUCTURES

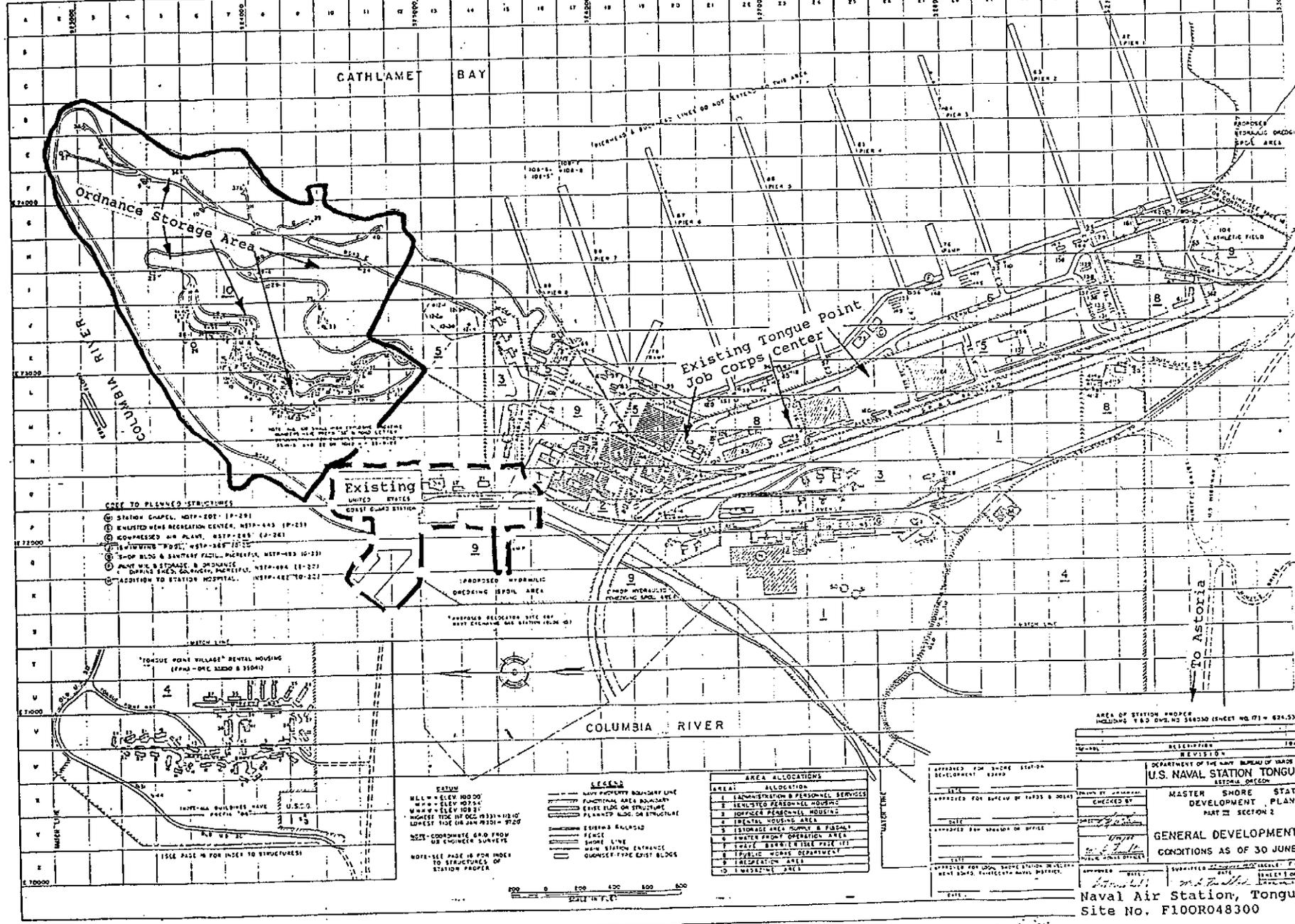
- ① STATION CHAPEL, NSTP-202 (F-29)
- ② ENLISTED MENS RECREATION CENTER, NSTP-443 (F-25)
- ③ COMPRESSED AIR PLANT, NSTP-285 (J-26)
- ④ SWIMMING POOL, NSTP-389 (O-25)
- ⑤ SHOP BLDG & BENEFIT FACIL., PACRESFLT, NSTP-483 (O-33)
- ⑥ PAINT MIX. & STORAGE, & ORDNANCE DIPPING SHED, COLONGAR, PACRESFLT, NSTP-484 (I-27)
- ⑦ ADDITION TO STATION HOSPITAL, NSTP-482 (O-22)

"TONGUE POINT VILLAGE" RENTAL HOUSING (PPNA - ORE 35250 & 35041)

\*PROPOSED RECREATION SITE FOR NAVAL EXCHANGE GAS STATION (1826 45)

Naval Air Station, Tongue Point  
Site No. F10OR048300

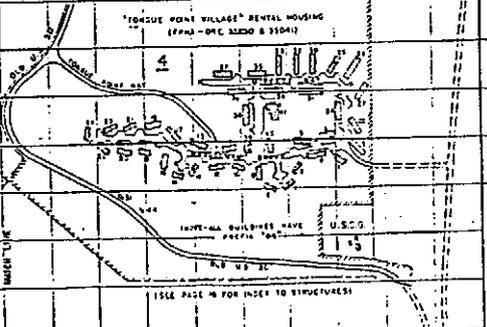
FOR OFFICIAL USE ONLY



- KEY TO PLANNED STRUCTURES**
- ① STATION CHAPEL, NHP-202 (17-291)
  - ② ENLARGED MEN'S RECREATION CENTER, NHP-443 (17-231)
  - ③ COMPRESSED AIR PLANT, NHP-228 (17-261)
  - ④ "TONGUE POINT" SWIMMING POOL, NHP-227 (17-261)
  - ⑤ 15-FOOT BUNGALOW & SANITARY FACILITY, NHP-483 (18-231)
  - ⑥ FUEL OIL & STORAGE & DRAINAGE DRAINAGE AREA, NHP-484 (18-231)
  - ⑦ ADDITION TO STATION HOSPITAL, NHP-482 (18-231)

Existing  
STATION  
EXISTING STATION

Existing Tongue Point  
Job Corps Center



**STATUS**  
 ALL WORK ELEV 100.00'  
 M.S.M. (ELEV 100.00')  
 M.S.M. (ELEV 100.00')  
 HIGHEST TIDE (AS OF JAN 1953) = 97.20'  
 LOWEST TIDE (AS OF JAN 1953) = 97.20'  
 NOTE - COORDINATE GRID FROM  
 US ENGINEER SURVEYS  
 NOTE - SEE PAGE 14 FOR INDEX  
 TO STRUCTURES OF  
 STATION PAPERS

- LEGEND**
- NEW PROPERTY BOUNDARY LINE
  - FUNCTIONAL AREA BOUNDARY
  - EXIST. BLDG. OR STRUCTURE
  - PLANNED BLDG. OR STRUCTURE
  - EXISTING RAILROAD
  - FENCE
  - SHORE LINE
  - NEW STATION ENTRANCE
  - QUONSET TYPE EXIST. BLDGS.

AREA	ALLOCATION
1	ADMINISTRATION & PERSONNEL SERVICES
2	RECREATION PERSONNEL HOUSING
3	OFFICE PERSONNEL HOUSING
4	RECREATION HOUSING AREA
5	STATION AREA (MUNICIPAL & FEDERAL)
6	WATER TREATMENT OPERATIONS AREA
7	WATER STORAGE TANK (17')
8	PUBLIC WORKS DEPARTMENT
9	INSPECTION AREA
10	WATERWAY AREA

AREA OF STATION PROPOSED INCLUDING T&O DIVE NO 318030 (SHEET NO 07) = 624.534 ACRES

APPROVED FOR SHORE STATION DEVELOPMENT 63480	DATE
APPROVED FOR BUREAU OF T&O'S & DIVE'S	DATE
APPROVED FOR SHIP YARD OR OFFICE	DATE
APPROVED FOR LOCAL SHORE STATION DEVELOPMENT	DATE

DEPARTMENT OF THE NAVY BUREAU OF SHIPS AND DOCK YARDS  
**U.S. NAVAL STATION TONGUE POINT ASTORIA, OREGON**

MASTER SHORE STATION DEVELOPMENT PLAN  
 PART III SECTION 2

GENERAL DEVELOPMENT PLAN  
 CONDITIONS AS OF 30 JUNE 1954

Naval Air Station, Tongue Point  
 Site No. 1100R048300

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM (DERP)  
FOR FORMERLY USED SITES  
NAVAL AIR STATION, TONGUE POINT (PHASE I)  
ASTORIA, OREGON  
PROJECT NO. F10OR048300

FINDINGS OF FACT

1. An immediate hazardous and toxic waste removal project consisting of the removal of contents from six 25,000 gallon underground storage tanks and removal of contents in gasoline lines buried under the former aircraft parking areas and under pier 8 is proposed. The items proposed for removal are potential sources of environmental contamination. In November 1988 a "gasoline slick" was discovered on the Columbia River near Pier 8. Further investigation by the U.S. Bureau of Reclamation (USBR), contracted by the Department of Labor (DOL), resulted in the location of the six underground storage tanks and gasoline lines. The team also identified the tanks and gasoline lines as the possible source for the contamination in the Columbia River. Immediate action is necessary to respond to this situation.

2. On 13 January 1921, approximately 395 acres of land, including all tide lands, wharfage, and riparian rights, were deeded to the United States from Clatsop County for military purposes. On 26 November 1940, an additional 13 acres were deeded to the United States from Clatsop County. The Department of the Navy then acquired a total of 141 acres through condemnation in August and September 1941. A final acquisition was made effective 3 March 1948 for 291 acres which were also deeded from Clatsop County to the United States. The acreage figures total approximately 840 acres, including some water areas. Accurate acreage figures for the water areas (tide lands, wharfage, and riparian rights) were not available.

3. The original utilization of the acquired 395 acre area in 1924 was for a submarine and destroyer base. In 1939 this facility was converted to a Naval Air Station (NAS). This conversion required additional construction and dredging of the boat basin, which was completed in 1947. The entire site was under Department of the Navy control and operation from 1921 to 1961. During this time, the Department of the Navy constructed most of the improvements on the site, including underground storage tanks and underground fuel lines (structures believed responsible for the HTW problem). The site was initially used as a Job Corps Center from 21 April 1965 until 1971 through a permit issued by the General Services Administration (GSA). The permit was used as a temporary and interim authorization by GSA prior to the disposal of this excess property by transferring the site to the Department of Labor (DOL) for continued use as a Job Corps Center in 1971. On 20 October 1980, 45 acres of the 748.4 acre Job Corps Center site was deeded to the State of Oregon through GSA. This left the Job Corps Center with 703.4 acres under DOL jurisdiction. It is important to note that the acreage figures do not include acres for tidelands, wharfage, or riparian rights.

Records do not provide complete information for the accountability of 91.6 acres difference between the original acquisition (840 acres) and the transfer (748.4 acres) to DOL.

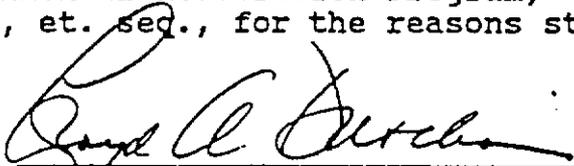
4. The Department of the Navy, through the Northwest and Alaskan Division, Bureau of Yards and Docks, Seattle, Washington, reported the NAS as excess property on 17 October 1961. The NAS (approximately 840 acres of land and water areas and 320 structures) was deactivated by the Department of the Navy in January 1962. The property was subsequently transferred to GSA later that year. Through GSA, the Office of Economic Opportunity first initiated a Job Corps program at the site on 21 April 1965. The DOL made a formal request to GSA on 15 December 1970 for the transfer of 748.4 acres for use as a Job Corps Center. GSA notified the DOL that the transfer had been accomplished effective 14 January 1971 under the authority of the Federal Property and Administrative Act of 1949. On 27 January 1971 the Job Corps, through the DOL, acknowledged the transfer document and accepted custody and accountability of these 748.4 acres. On 20 October 1980 through an excessing and disposal action by GSA, 45 acres of the Job Corps Center was deeded to the State of Oregon.

5. The DOL has requested that the contents in the six underground storage tanks be removed and that the gasoline lines buried under the former aircraft parking areas and under pier 8 be drained. The tanks and pipelines, including contents, were left in-place when the Navy deactivated the NAS in 1962. Contents in the six underground storage tanks and pipelines have not been used by the current owners. This report addresses only the HTW problems requiring immediate action and resolution. An analysis on the remaining hazardous and toxic waste (HTW) at the Tongue Point Naval Air Station will be completed under Phase II.

#### DETERMINATION

Based on the foregoing Findings of Fact, the site has been determined to have been formerly used by DOD. Moreover, it is determined that an environmental restoration project, to the extent set out herein, is an appropriate undertaking within the purview of the Defense Environmental Restoration Program, established under U.S.C. 2701, et. seq., for the reasons stated above.

1 Sep 89  
Date

  
Lloyd A. Buscha, P.E.,  
Deputy Director,  
Directorate of Military Programs

PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS OEW PROJECT F10OR048304  
NAVAL AIR STATION, TONGUE POINT  
SITE NO. F10OR048300  
4 APR 94

PROJECT DESCRIPTION: The site is a former Naval Air Station which contained two Ammo Storage/High Explosive Magazines, one Ammo Storage/Small Arms Magazine, two Ammo Storage/Small Arms and/or Pyrotechnic Magazines, one Ammo Storage/Fuse and Detonator Magazine, two Ammo Storage/Inert Storehouses, four Ammo Storage/Fixed Ammunition Magazines, 106 High Explosive Magazines, one Bombsight and Torpedo Storehouse and Shop, one Smoke Drum Storehouse, storage bunkers for blasting caps, hand grenades, demolition charges, and gas test kits, and one Small Arms Range.

PROJECT ELIGIBILITY: Records indicate that all facilities were used by the Navy Department.

POLICY CONSIDERATIONS: There is no policy applicable to this project.

PROPOSED ACTIVITIES: The INPR should be referred to HND for a determination of further action.

RAC: Attached, RAC score is IV-B, 4.

POC: Michael Gross, CENPP-PE-DC, (503) 326-6489.

RISK ASSESSMENT PROCEDURES FOR  
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	<u>Naval Air Station, Tonque Point</u>	Rater's Name	<u>John Todd</u>
Site Location	<u>Astoria, Oregon</u>	Phone No.	<u>(503) 326-6491</u>
Project #	<u>F10OR048304</u>	Organization	<u>CENPP-PE-DC</u>
Date Completed	<u>April 5, 1994</u>	RAC Score	<u>IV-B, 4</u>

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability. Personnel involved in visits to potential OEW sites should view the CEHND videotape entitled "A Life Threatening Encounter: OEW."

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE  
(Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursterns	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	<u>0</u>

What evidence do you have regarding conventional OEW? Though there is no documented evidence of OEW, excess property listings and maps identify area used for ordnance storage.

B. Pyrotechnics (For munitions not described above.)	VALUE
Munitions (Container) Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
Flares, Signals, Simulators	4
Pyrotechnics <u>(Select the largest single value)</u>	<u>0</u>

What evidence do you have regarding pyrotechnics? No evidence of pyrotechnics has been found or documented in 40+ years of activity.

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

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerine, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
High Explosives <u>(Select largest single value)</u>	<u>0</u>

What evidence do you have regarding bulk explosives? No evidence of bulk explosives has been found or documented in 40+ years of activity.

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

	VALUE
Solid or Liquid Propellants	6
Propellants	<u>0</u>

What evidence do you have regarding bulk propellants? No evidence of bulk propellants has been found or documented in 40+ years of activity.

E. Radiological/Chemical Agents/Weapons

VALUE

Toxic Chemical Agents  
(Choking, Nerve, Blood, Blister) 25

War Gas Identification Sets 20

Radiological 15

Riot Control and Miscellaneous  
(Vomiting, Tear, incendiary and smoke) 5

Radiological/Chemical Agent (Select the largest single value) 0

What evidence do you have regarding chemical/radiological OEW? No evidence of Chemical Munitions and Weapons (CMW) has been found or documented in 40+ years of activity, even though war gas test kits were reportedly stored on-site.

=====

TOTAL HAZARD SEVERITY VALUE 0

(Sum of Largest Values for A through E--Maximum of 61).

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY\*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	22 and greater
CRITICAL	II	11 to 22
MARGINAL	III	6 to 10
NEGLIGIBLE	IV	1 to 5
<b>**NONE</b>		<b>0</b>

\*Apply Hazard Severity Category to Table 3.

\*\*If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action. Available information shows "Ordnance Storage Area" at site. Therefore, Part II, Hazard Probability will be completed.

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

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

A. Locations of OEW Hazards	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations.	4
Inside walls, ceilings, or other parts of Buildings or Structures.	3
Subsurface	2
Location (Select the single largest value)	<u>5</u>

What evidence do you have regarding location of OEW? The ordnance is assumed to have been found on the surface.

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

	Value
Less than 1250 feet	5
1250 feet to 0.5 mile	4
0.5 mile to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2.0 miles	1
Distance (Select the single largest value)	<u>5</u>

What are the nearest inhabited structures? There are dormitories for the Job Corps Center and barracks for the Coast Guard Station within 1250 feet at risk.

C. Numbers and types of Buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	Value
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0
Number of Buildings <u>(Select the single largest value)</u>	<u>5</u>

Narrative: There are approximately 40 buildings in use within the two mile radius.

D. Types of Buildings (within a 2 mile radius)

	Value
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0
Types of Buildings <u>(Select the largest single value)</u>	<u>5</u>

Describe types of buildings in the area. There are Residential, Commercial, and educational buildings within a two mile radius.

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

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

Describe the site accessibility. The sites are located on land under the jurisdiction of the Department of Labor, Tongue Point Job Corps Center.

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

	VALUE
Expected	5
None Anticipated	0
Site Dynamics <u>(Select largest value)</u>	<u>0</u>

Describe the site dynamics. The site is currently overgrown, has steep slopes, and is considered wildlife habitat. Therefore, it is unlikely that future development will take place on the storage area site.

TOTAL HAZARD PROBABILITY VALUE

(Sum of Largest Values for A through F--Maximum of 30)

25

Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	28 or greater
PROBABLE	B	22 to 27
OCCASIONAL	C	16 to 21
REMOTE	D	9 to 15
IMPROBABLE	E	less than 9

\*Apply Hazard Probability to Table 3.

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

TABLE 3

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

RISK ASSESSMENT CODE (RAC)

- RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.
- RAC 2 High priority on completion of INPR - Recommend further action by CEHND.
- RAC 3 Complete INPR - Recommend further action by CEHND.
- RAC 4 Complete INPR - Recommend further action by CEHND.
- RAC 5 Usually indicatges that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

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

Risk assessment is based on documented evidence of ordnance stored on the former Naval Air Station. No documented evidence of improperly disposed of OEW has been found. Due to the storage area's proximity to the Job Corps Center and the Coast Guard base, we recommend further study to fully determine the extent of OEW contamination, if any.

## **APPENDIX C-2**

**Site Specific Safety and Health Plan (SSHP).**

SITE SPECIFIC SAFETY AND HEALTH PLAN (SSHP)  
OEW/CWM Archives Search Site Inspection Visit

TONGUE POINT  
Clatsop County, Oregon  
Site #F100R048300

1. REFERENCES:

a. Safety Manual, CELMS-PM-M, 16 Sep 93 w/ Ch1.

b. SOP for Reporting Ordnance and Unexploded Ordnance (UXO), CELMS-PM-M, 15 Nov 93.

2. GENERAL: This plan prescribes the safety and health requirements for team activities and operations conducted to determine the presence of ordnance and explosive waste and /or chemical warfare materials at the specified site.

a. The Safety Officer has final authority on all matters relating to safety. The safety rules will be followed at all times. Any member of the team may stop operations if they observe a situation or activity which poses a potential hazard to any individual or to the operation. All actions must comply with the common sense rule!

b. All team members will be aware of the local emergency numbers and the location of the nearest telephone.

3. MISSION: Reconnoiter, document, and photograph areas on Tongue Point suspected to be contaminated with UXO and/or toxic chemical munitions.

4. SAFETY PRECAUTIONS: All team members will stay within sight of each other while on site. A first aid kit will be on hand. The following three basic safety rules apply at all times:

a. Rule 1 - Do not touch or pick up anything at the site.

b. Rule 2 - Do not step anywhere you cannot see where you place your foot.

c. Rule 3 - There will be no eating or smoking at the site. Hands will be washed after the survey and prior to eating.

Drinking fluids should be done during periodic breaks.

5. **SITE COMMUNICATIONS:** The primary means of communicating with other team members will be by voice. Team members will always remain within sight of each other. Cellular telephones should be carried to facilitate and expedite calling for emergency medical services.

6. **NATURAL HAZARDS:** Possible humid, wet conditions with oceanic breezes nearby.

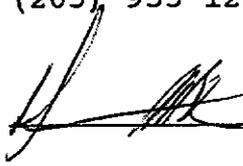
7. **ORDNANCE HAZARDS:** Possible OEW.

8. **EMERGENCY PROCEDURES:** First aid will be rendered for any injuries. In the event of a detonation, everyone should freeze until the situation can be assessed by the team leader. Unnecessary injuries can be avoided by not panicking and planning a logical course of action, which may include retracing your steps out of an impact area. Emergency medical services will be contacted by the most expeditious means available.

9. **SAFETY STATEMENT:** Safety is everyone's business. No unnecessary risks will be taken to obtain photos or other data. Team members are responsible for notifying the project Manager or safety Officer of any physical conditions that may impede or prevent their accomplishment of the mission. An example is allergic reactions to bee stings.

#### **Important Phone Numbers**

Emergency medical service:	911
Law enforcement agency:	(503) 325-2345
Huntsville Safety:	(205) 955-1229

SSHP reviewed by: 

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Encls

1. Safety Briefing Attendance
2. Safety gear

# SITE SURVEY SAFETY BRIEFING

PPE	Site Hazards
<input checked="" type="checkbox"/> Work Clothing	<input checked="" type="checkbox"/> OEW
<input checked="" type="checkbox"/> Gloves	<input type="checkbox"/> CSM
<input type="checkbox"/> Hardhat	<input checked="" type="checkbox"/> HTW
<input type="checkbox"/> Hearing protection	<input checked="" type="checkbox"/> Slips, falls, trips
<input checked="" type="checkbox"/> Safety shoes	<input checked="" type="checkbox"/> Wildlife
<input type="checkbox"/> Safety glasses	<input checked="" type="checkbox"/> Vegetation

### Weather Precautions

Cold/Heat  
 Severe Weather

### Safety Briefing Attendance

All team members and any accompanying personnel will be briefed and sign this form:

Print name and organization

Signature

[Signature]  
CELMS - PM-M 314 331 8108

[Signature]  
CELMS PD-AR 314 331-8839

James G. Leublit      314-331-8840  
CELMS - PD-AR

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MANDATORY MINIMUM SAFETY GEAR

First aid kit (individual)	<input checked="" type="checkbox"/>
Survival kit	<input checked="" type="checkbox"/>
Fire starter	<input type="checkbox"/>
Space blanket	<input type="checkbox"/>
Whistle	<input type="checkbox"/>
Mirror	<input type="checkbox"/>
Cellular phone	<input checked="" type="checkbox"/>
Flash light	<input checked="" type="checkbox"/>
Survey tape	<input checked="" type="checkbox"/>
Canteen	<input checked="" type="checkbox"/>

**APPENDIX C-3**

**Inspector's Daily Report/Dredging Record, 14 August 1945.**



INSPECTOR'S DAILY REPORT

REPORT NO. 35 SHEET NO. 2

PLACE U.S.S. Astoria

SPECIFICATION NO. 1480-

DATE 14 August 1918

CONTRACT NO. 1000000 FOR Rebuilding Pier 1

CONTRACTOR W. H. C. Co. SUPERINTENDENT L. C. Taylor

WEATHER { A.M. Cloudy  
P.M. \_\_\_\_\_

TEMPERATURES { TIME OF STARTING WORK— A.M. 0900 <sup>5/4</sup> ° F.  
NOON \_\_\_\_\_ ° F.  
TIME OF STOPPING WORK— P.M. 0515 <sup>3/5</sup> ° F.

TIDES (FOR ALL WORK AFFECTED THEREBY) { HIGH 5.9 ELEVATION AT 1.27 M.  
LOW 1.5 ELEVATION AT 1.26 M.

CONTRACTOR'S FORCE INCLUDING SUPERVISORS AND SUBCONTRACTOR'S FORCES					WORK		
NO.	TRADE	HOURS	RATE	AMOUNT WAGES	CLASS	QUANTITY	REMARKS
1	Leveman	8	1.72 1/2	13.80	Dredge Crew		1st Shift 0800 to 1600
1	Mate	8	1.32 1/2	10.60			
2	Deckhands	8	1.03 1/2	8.25			
1	Asst. Eng.	8	1.43	11.44			
1	Fireman	8	1.25	10.00	Dredge Crew		2nd Shift 1600 to 2400
1	Leveman	8	1.72 1/2	13.80			
1	Mate	8	1.32 1/2	10.60			
2	Deckhands	8	1.03 1/2	8.25			
1	Asst. Eng.	8	1.43	11.44	Dredge Crew		3rd Shift 2400 to 0800
1	Fireman	8	1.25	10.00			
1	Leveman	8	1.72 1/2	13.80			
1	Mate	8	1.32 1/2	10.60			
1	Deckhand	8	1.03 1/2	8.25			
1	Asst. Eng.	8	1.43	11.44			
1	Fireman	8	1.25	10.00			
Cleaning up sloughed material along Pier 1 slip #1							

MATERIAL RECEIVED THIS DATE

ITEM	DELIVERED	PASSED	REJECTED	ITEM	DELIVERED	PASSED	REJECTED



## **APPENDIX C-4**

**1945 letter regarding disposal of  
dredged material and Map C4.1 Disposal Areas.**

June 8, 1945

Astoria Naval Station  
Public Works Officer  
Astoria, Oregon

Attention: Lt. Comdr. Butsine

Subject : Disposal area for dredged material from Slips 1 and 2, under  
lease to the Naval Station.

Dear Sir:

In response to your personal call and interview today in regard to disposal of material dredged from Slips 1 and 2 at the Astoria Naval Station, this will confirm my verbal advise to you that the Port of Astoria will grant to the Navy, free of charge, an area west and south-west of our Pier 3 for the disposal of such dredged material, and that the Port of Astoria owns the area, in fee simple, that is being granted and has the right and authority to grant such permission.

We, however, request in granting such permission that the fill from the pipe line shall be made approximately at the westerly bulk head line, adjacent to the Standard Oil Company lease, now in force with the Standard Oil Company of California.

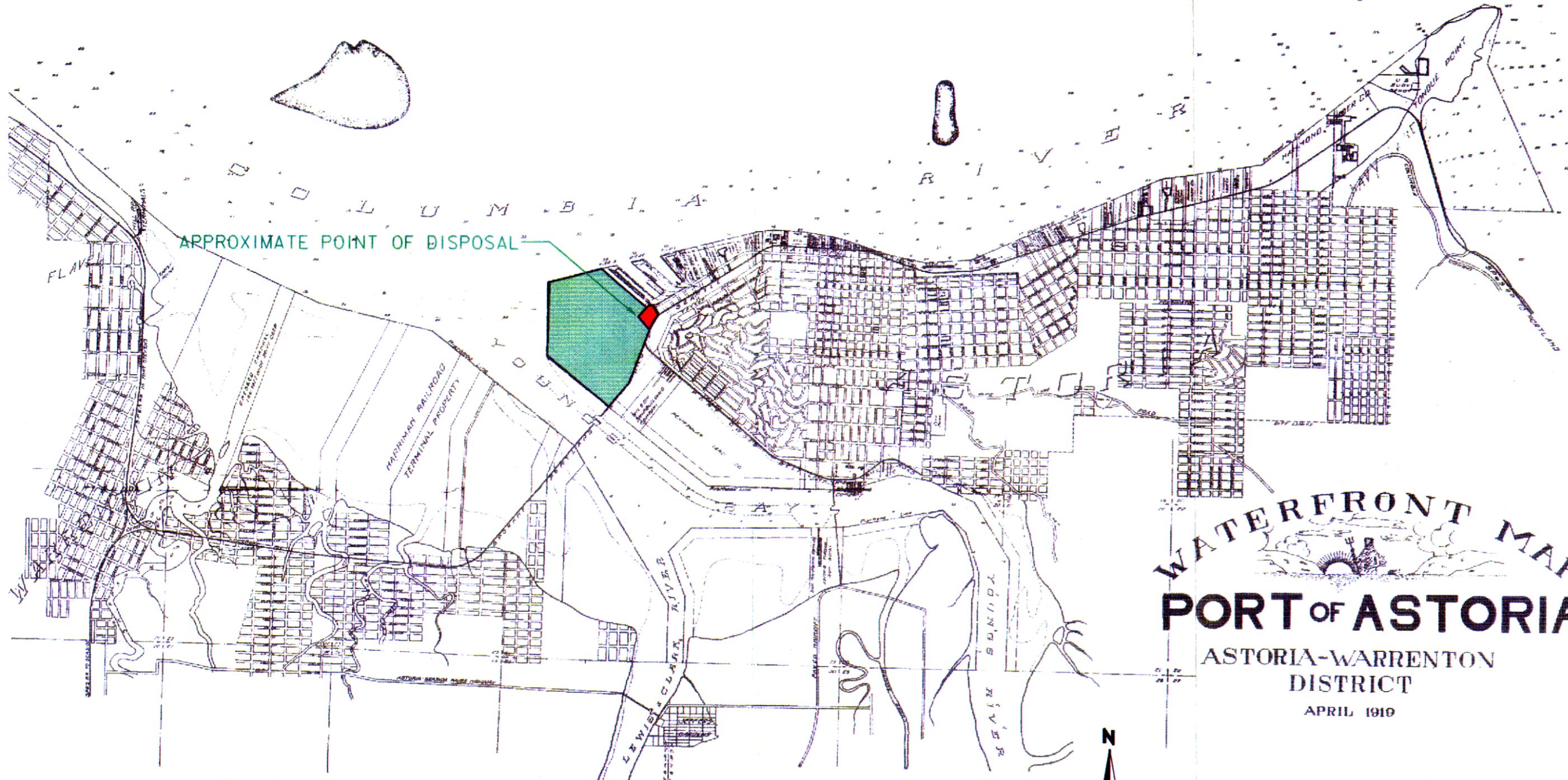
We also grant you permission to include such information in your specifications for the proposed work.

Very truly yours,

PORT OF ASTORIA

By   
Manager

RBB:meh



**WATERFRONT MAP**  
**PORT OF ASTORIA**  
 ASTORIA-WARRENTON DISTRICT  
 APRIL 1919

Figure C4.1

**LEGEND:**

- PORT OF ASTORIA - MUD FLAT
- STANDARD OIL CO. - LEASE FROM PORT

**TONGUE POINT**  
**ASTORIA, OREGON**  
**CLATSOP COUNTY**  
**DERP-FUDS\* F100R048300**  
**DISPOSAL AREAS (1945)**

NOT TO SCALE

**APPENDIX C-5**

**Disposal Plan/Real Estate Documents, April 1962.**

**DISPOSAL PLAN**

**Submitted pursuant to H. R. Excess and Surplus  
Real Property, Chap. 3-51 thru 60**

Region 10

April 2, 1962

**a. Identification of Property.**

The former Tongue Point Naval Station, Astoria, Clatsop County, Oregon; N-Ore-508B, consisting of 32 acres, N-Ore-508C, consisting of 847.87 acres (842.03 fee and 5.84 easement), T-Ore-447, Coast Guard Quarters "R", consisting of 1 acre.

**b. Reported Excess by.**

N-Ore-508B by Report No. 13-24 dated May 18, 1961 and N-Ore-508C by Report No. 13-29 dated October 17, 1961 both reported by Director, Northwest and Alaskan Division Bureau of Yards and Docks, Seattle, Washington. T-Ore-447 by Report No. CG-232 dated October 19, 1961 by Treasury Department U. S. Coast Guard, Washington 25, D. C.

**c. Acquisition Cost.**

N-Ore-508B	\$ 385,492.00
N-Ore-508C	14,089,798.00
T-Ore-447	18,500.00

**d. Description and History.**

The property covered by this plan is the Tongue Point Naval Station and the Coast Guard Base Quarters "R", Astoria Oregon, on the Columbia River about 10 miles inland from the Pacific Ocean.

The property consists of 875.03 acres of land and marginal land, a stand of commercial timber mostly hemlock and is improved with water front facilities, hangar type buildings, warehouses, shops, barracks, living quarters and miscellaneous other buildings as well as water, sewage and electrical systems.

The property lies adjacent to the easterly city limits of Astoria about 3 miles from the business center and is traversed by U. S. Highway 30 which separates the Navy Heights residential area from the balance of the property. The property was acquired in various parcels from 1921 through 1941 as additional land was needed during periods of increased activities by the Navy. The Naval Station was deactivated in January 1962.

**e. Highest and Best Use.**

Use of the property, when privately owned, will be governed by the zoning regulations if annexed by the City of Astoria which it is anticipated will be approximately the same as the Navy utilization of the property. The water front area, the Navy operations area, to be used for industrial purposes and the

quarters areas to be used for residential purposes. Clatsop County has no zoning regulations governing the use of property lying within the county.

f. Method of Disposal.

It is anticipated that transfer of certain parcels to the following Agencies will be accomplished:

The Maritime Commission is currently using 99.14 acres for reserve fleet by permit and are requesting transfer of this area.

Bonneville Power Administration has requested transfer of the site of their existing substation consisting of .04 of an acre.

Bureau of Public Roads have requested transfer of two acres of land improved with building "S" a two story frame building formerly the hospital annex.

The Department of Commerce, OCDM expressed an interest for space in some of the buildings for relocation office purposes.

In addition to the anticipated disposals listed above; the City of Astoria has expressed an interest in acquiring the sanitary and storm sewer system, the water distribution system and possibly the fire alarm system also roads and streets if the property is annexed. The city indicated an interest in acquiring the 75 to 80 acre wooded tongue point area for public park purposes including the rock quarry for a source of rock for street construction. The State of Oregon Highway Commission expressed an interest in acquiring a portion of the tongue point including the rock quarry. The County of Clatsop has indicated that it would submit a proposal for acquisition of the entire facility. The office of the Oregon State Forester, Salem, Oregon expressed an interest in acquiring the area in which is located the rock quarry for removal of rock for road construction. The county expressed interest in acquiring roads in the event the city does not annex the property.

In the event the property is not acquired by a public body it is proposed that the property be offered for sale to the public on a sealed bid basis of sales parcels as follows:

One acre, improved with residence and garage, T-Ore-447 having appraised fair market value of \$5,000.00.

32 acres improved with 40 multi-family living quarters

and one community recreation building used as a chapel, N-Ore-508B, having an appraised fair market value of \$40,000.00. In the event the existing water and sewer systems are not discontinued the fair market value is determined to be \$70,000.00.

Balance of the property, N-Ore-508C, including utilities having a fair market value of \$856,795.00 to be offered in parcels as follows:

The northerly portion, known as the tongue point, consisting of approximately 80 acres is raw land, steep terrain traversed by gravel roads. This area could be sold for merchantable timber having FMV of \$30,510.00 and possible residential subdivision after timber has been marketed.

The water front area, consisting of about 65 acres of level land containing facilities suitable for industrial purposes, about 298 acres water and marginal shore land less the portion to be transferred to the Maritime Commission and adjacent hillside and ridge or bench land consisting of approximately 110 acres improved with barracks, recreation building, single residences and other buildings to be offered as one parcel for industrial purposes.

The portion lying south of U. S. Highway 30 contains approximately 290 acres of land of which about half is in timber with fair market value of \$113,790.00. This parcel is improved with 100 single and multi-family quarters and other buildings with FMV of \$460,000.00 exclusive of utilities. It is proposed to offer this as one sales parcel.

The utilities to be offered as separate sales parcels;

Electrical power distribution system having a FMV of \$39,125.00.

Water distribution system having FMV of \$7,670.00.

Sanitary and storm sewer system having FMV of \$5,000.00.

g. Factors Considered.

The rather depressed economy of the Astoria, Oregon area is not

conducive to an additional large number of residential properties being placed on the market. The two parcels considered to be suitable for continued residential use to be sold for this purpose anticipating that the purchaser would utilize as many of the residential units for rentals as the market would permit and dispose of the balance. The parcel considered suitable for residential use could be sub-divided by the purchaser for sale for residential building sites. Both parcels are readily accessible to downtown Astoria and are removed from the area considered potentially industrial. The parcel considered suitable for industrial use could be sub-divided by the purchaser if unable to utilize the entire area and leased or sold or use the building required in his enterprise and dispose of the balance for salvage.

Sub-dividing the property into sales parcels will be subject to possible transfer and disposal relative to the aforementioned interested agencies and public bodies.

h. Advertising.

The first advertising is scheduled for May 1, 1962 with bid opening scheduled for June 7, 1962. Advertising to be accomplished by colored brochure mailed to prospective purchasers having expressed an interest in the property and to the GSA mailing list. Also newspaper display advertisement, 2-column by 5 to appear in local vicinity as well as Portland, Oregon and Seattle, Washington publications. Advertising copy to be prepared in accordance with the types of property, not acquired by public bodies, which are offered for sale to the public.

Based upon the above, we believe that the proposed method of disposal will be in the best interest of the Government.

Prepared by \_\_\_\_\_

A. H. Aosved  
Realty Officer

Approved by \_\_\_\_\_

C. E. Ocamb  
Chief, Real Property Division  
Utilization and Disposal Service



DEPARTMENT OF THE NAVY  
BUREAU OF YARDS AND DOCKS  
WASHINGTON 25, D. C.

IN REPLY REFER TO

R-330/GEH:fwz

4 OCT 1961

AIR MAIL

Real Property Disposal Division  
Public Buildings Service  
General Services Administration  
Washington 25, D. C.

Gentlemen:

The Department of the Navy proposes to report the following as excess to the Department.

Columbia River Group, Pacific Reserve Fleet, Tongue Point,  
Astoria, Oregon

Enclosed herewith is an information copy of Disposal Report No. 81 which was submitted to the Armed Services Committees of Congress on 29 September 1961.

This information is furnished in advance in order that you may be apprised of the Navy's intention to report the property covered by this enclosure as soon as possible.

Very truly yours,

DAVID W. AGNEW  
BRANCH MANAGER  
NORTHWESTERN BRANCH  
REAL ESTATE DIVISION

Encl:

(1) Disposal Report No. 81

Copy to:  
DIR NOWESTALDIVDOCKS  
GSA Region 10  
BUPERS  
CNO

DEPARTMENT OF THE NAVY

SUBMITTED BY:  
CHIEF, BUREAU OF YARDS AND DOCKS

DISPOSAL REPORT NO. 31

Station Designation: Columbia River Group, Pacific Reserve Fleet,  
Tongue Point, Astoria, Oregon

Former Use: Headquarters, Pacific Reserve Fleet

<u>Area</u>	<u>Land</u>	<u>Acquisition Cost</u>	
		<u>Improvements</u>	<u>Total</u>
871.29	\$18,400.46	\$13,926,321.00	\$13,944,721.46

Consideration: None (to be reported to GSA as excess)

1. The Department of the Navy proposes to report to the General Services Administration 871.29 acres of excess land, together with improvements located thereon, located approximately five miles East of the City of Astoria, Oregon, at Tongue Point. This property is excess to the current and future needs of the Navy and it is proposed that it be reported to the General Services Administration for disposal without restriction, except for the reservation for access and utility lines to serve the proposed joint Army Reserve Center and Naval Reserve Electronics Facility and the U. S. Coast Guard.

2. This property was originally acquired for the establishment of the Naval Air Station, Tongue Point. Since the disestablishment of the Air Station, the property has been utilized by the Columbia River Group, Pacific Reserve Fleet, which is scheduled for disestablishment on 31 January 1962. However, the property will continue to be required, on a diminishing basis, until 30 June 1962, the presently scheduled completion date for the shipment of personal property from the facility, which will be accomplished by the Naval Supply Depot, Seattle.

3. The property has been screened with the Departments of the Army and the Air Force and no defense requirement has materialized.

4. The property was acquired by the Government at a cost of \$18,400.46 as follows:

729.84 acres - By various deeds from Clatsop County Oregon  
141.45 acres - By five condemnation actions

The improvements consist of approximately 320 buildings and structures, of which about 120 are housing or barracks type buildings. Others include the Station hospital, recreational and service facilities, four flammable storage buildings, ammunition storage and 108 high explosive magazines, 19

covered storage (general warehouse), three hangar type buildings (general warehouse and administration offices), marine fueling and other industrial type facilities. In addition, the property contains a radio transmitter antenna, 10 piers comprising a total of 349,730 square feet of space, 3620 lineal feet of railroad trackage, roads, streets, sidewalks, paved parking areas, street lighting, fire alarms, TV antennae and distribution system and propane, steam, water, electric and compressed air distribution systems and storm and sanitary sewers including sewage treatment facilities. These improvements, including pre-cut structural timbers, intended for use in the repair of Pier No. 8, have a Plant Account value of \$13,926,321. There are no runways at this activity as it was originally constructed as a seaplane base.

5. The plans of the Navy Department do not include the acquisition of any land or improvements for similar use at or near the Station excess property within the foreseeable future.

6. The estimated annual protection and maintenance cost of the property is \$204,400.

7. This submission is in accordance with the provisions of Section 511, Public Law 86-500.

SUBMITTED TO ASCs

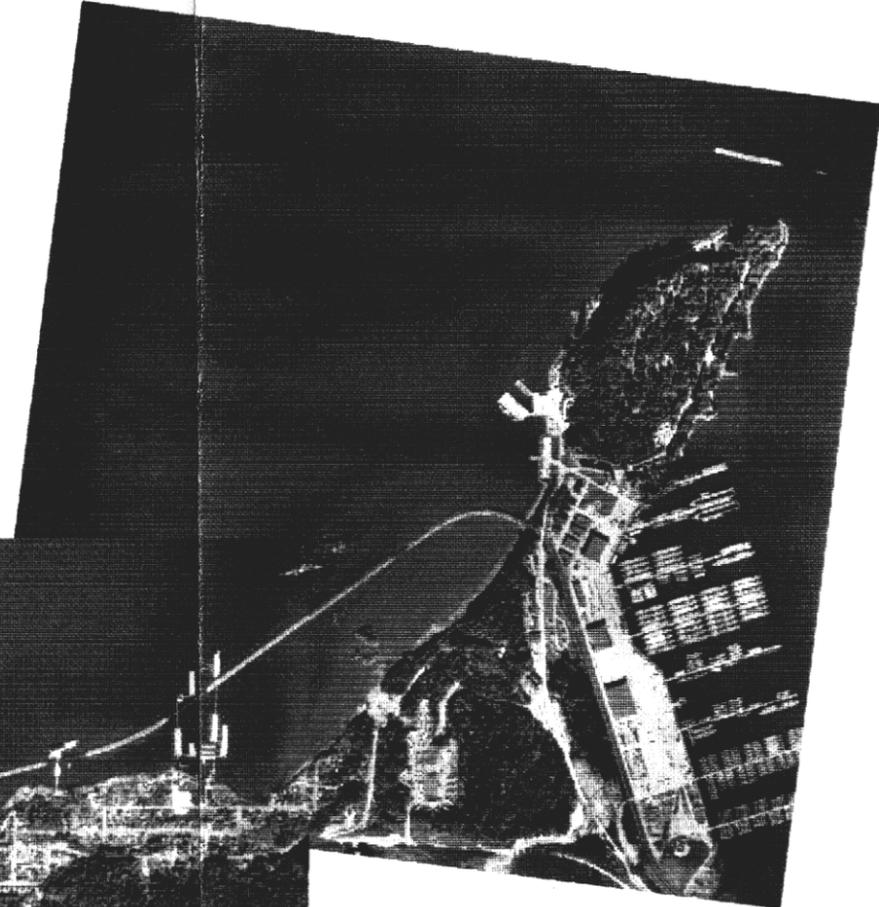
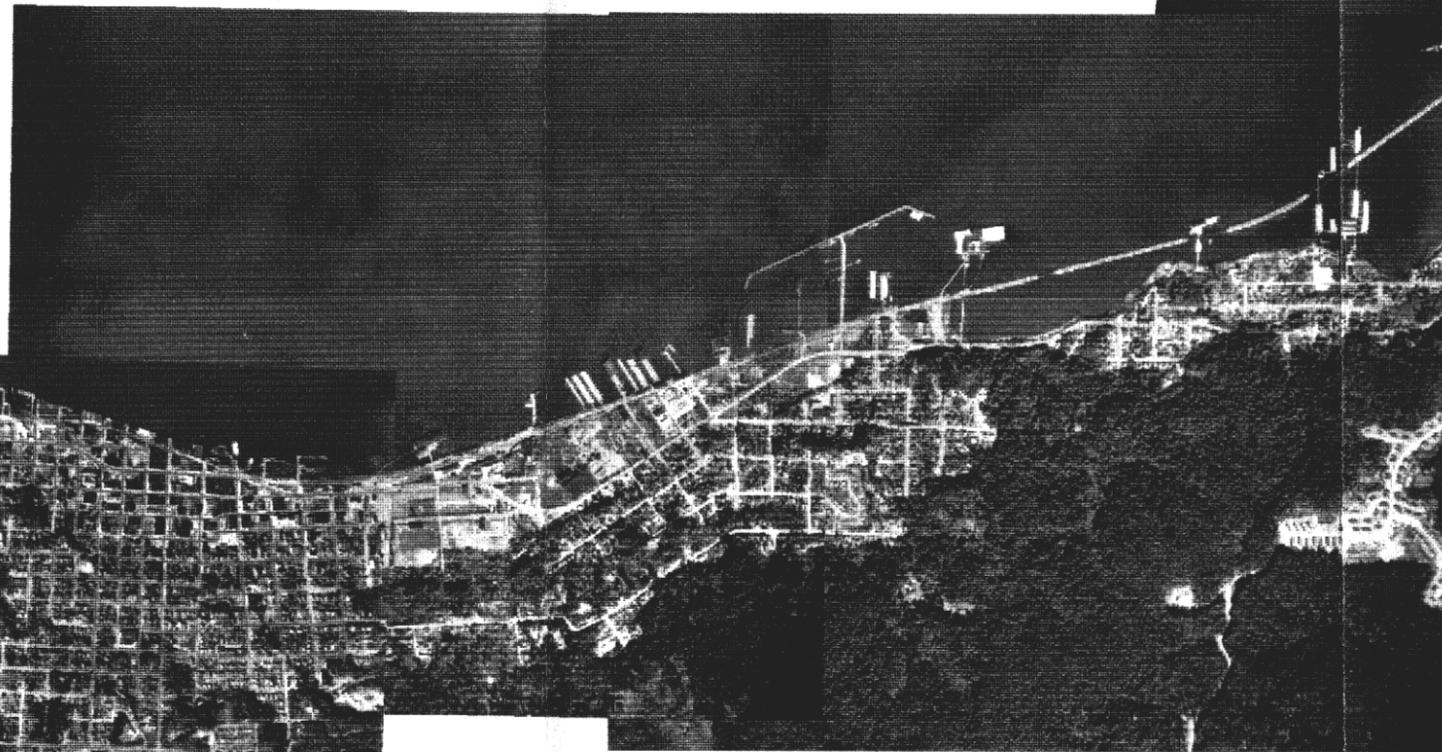
29 Sept 1961

**APPENDIX D**  
**HISTORICAL PHOTOGRAPHS**

Ordnance and Explosive Waste  
Chemical Warfare Materials  
**ARCHIVES SEARCH REPORT**  
for the former  
**NAVAL AIR STATION TONGUE POINT**  
Astoria, Oregon  
Project No. F10OR048304

**APPENDIX D -- HISTORICAL PHOTOGRAPHS**

- D-1 1953-54 Aerial Photo
- D-2 1970 Aerial Photo
- D-3 1983 Aerial Photo

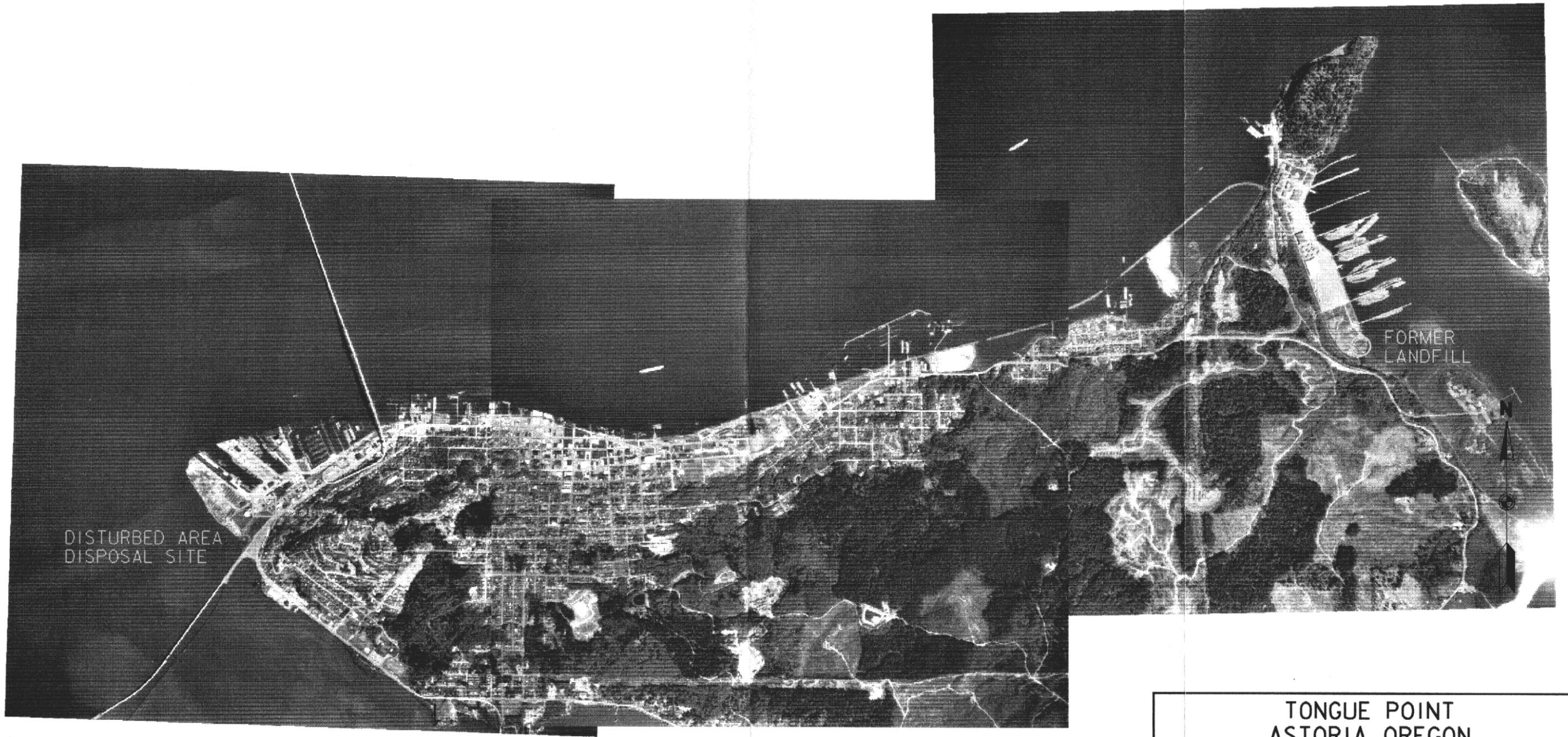


DISTURBED AREA  
DISPOSAL SITE



NOT TO SCALE

TONGUE POINT ASTORIA, OREGON CLATSOP COUNTY DERP-FUDS# F100R048300 1953-54 AERIAL PHOTOS	
PROJ. DATE: AUG 1994	DATE OF PHOTO: 1953-54
22-DEC-1994 15:43	/N/OEW94DG/SITEG9/PHOTO/T0N19534.DGN, T0N1954A,1953A-D.EXT



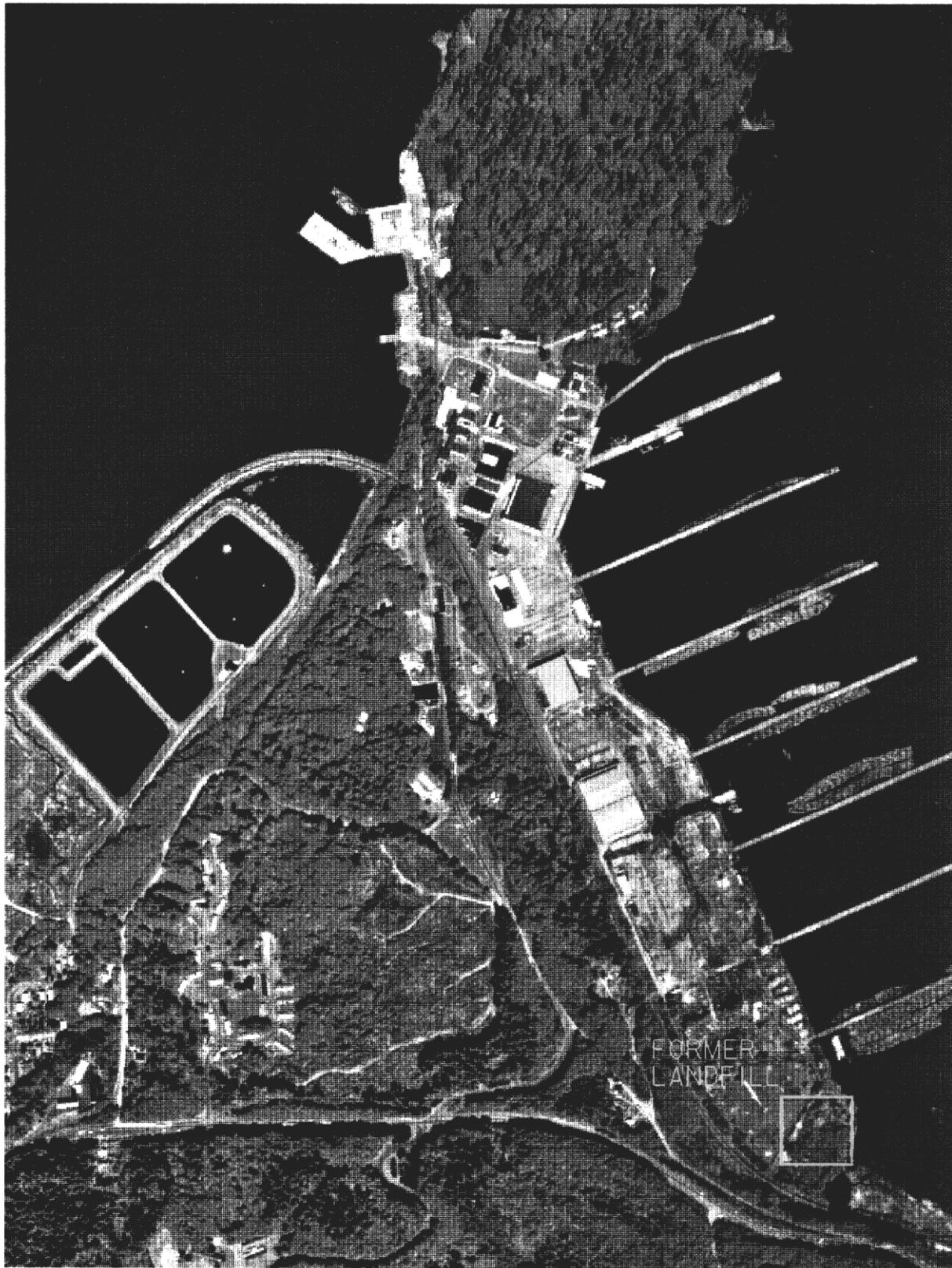
DISTURBED AREA  
DISPOSAL SITE

FORMER  
LANDFILL

TONGUE POINT  
ASTORIA, OREGON  
CLATSOP COUNTY  
DERP-FUDS# F100R048300  
1970 AERIAL PHOTOS

NOT TO SCALE

PROJ. DATE: AUG 1994	DATE OF PHOTO: 1970
20-DEC-1994 10:23	/N/OEW94DG/SITEG9/PHOTO/TONI970.DGN, TONI970A,B,C.EXT



TONGUE POINT  
ASTORIA, OREGON  
CLATSOP COUNTY  
DERP-FUDS# F100R048300  
1983 AERIAL PHOTO

NOT TO SCALE

PROJECT DATE: AUG 1994

DATE OF PHOTO: 1983

20-DEC-1994 10:11

/N/0EW940G/SITE69/PHOTO/TON 1983.DGN,TONI983.EXT

**APPENDIX E**  
**INTERVIEWS**

ORDNANCE AND EXPLOSIVE WASTE  
CHEMICAL WARFARE MATERIALS  
ARCHIVES SEARCH REPORT  
for the former  
NAVAL AIR STATION TONGUE POINT  
ASTORIA, OREGON

Project Number F10OR048304

APPENDIX E --INTERVIEWS

<u>Individual Contacted</u>	<u>Position/Organization</u>
Jim Stover	Retired Navy Veteran (503)325-7002 Astoria, OR
John Hankins	Civil Maintenance Tongue Point Job Corps (503)325-2131 Ext 120 Astoria, OR
Mark Tolonen	Clatsop Historical Society (503)325-2203 Astoria, OR
Lisa Tolonen	Recreation Specialist Tongue Point Job Corps (503)325-3193 Astoria, OR
Jenn Sutter	Department of Environmental Quality (503)229-6148 Portland, OR
Mike Brown	Facilities Maintenance Supervisor Tongue Point Job Corps (503)325-2131 Ext 121 Astoria, OR
Bud Williams	VST Coordinator Tongue Point Job Corps (503)325-2131 Ext 147/207 Astoria, OR

**APPENDIX F**  
**NEWSPAPERS/JOURNALS**  
**NOT USED**

**APPENDIX G**  
**PRESENT SITE PHOTOGRAPHS**

ORDNANCE AND EXPLOSIVE WASTE  
ARCHIVES SEARCH REPORT  
for the former  
NAVAL AIR STATION TONGUE POINT  
Astoria, Oregon

Project Number F10OR048304

APPENDIX G -- PRESENT SITE PHOTOGRAPHS

<b>PAGE</b>	<b>DESCRIPTION</b>
<b><u>Page G-1</u></b>	
<b>Photo #1</b>	Typical view of finger piers.
<b>Photo #2</b>	Warning sign posted at Pier 8.
<b><u>Page G-2</u></b>	
<b>Photo #3</b>	East seaplane ramp.
<b>Photo #4</b>	U.S. Coast Guard facilities.
<b><u>Page G-3</u></b>	
<b>Photo #5</b>	Small high explosive magazine.
<b>Photo #6</b>	Large high explosive magazine.
<b><u>Page G-4</u></b>	
<b>Photo #7</b>	High explosive magazine.
<b>Photo #8</b>	Typical ammunition bunker.
<b><u>Page G-5</u></b>	
<b>Photo #9</b>	Entrance sign to Tongue Point.



**#1 Typical view of finger piers.**



**#2 Warning sign posted at Pier 8.**



**#3 East seaplane ramp**



**#4 U.S. Coast Guard facilities.**



**#5 Small high explosive magazine.**



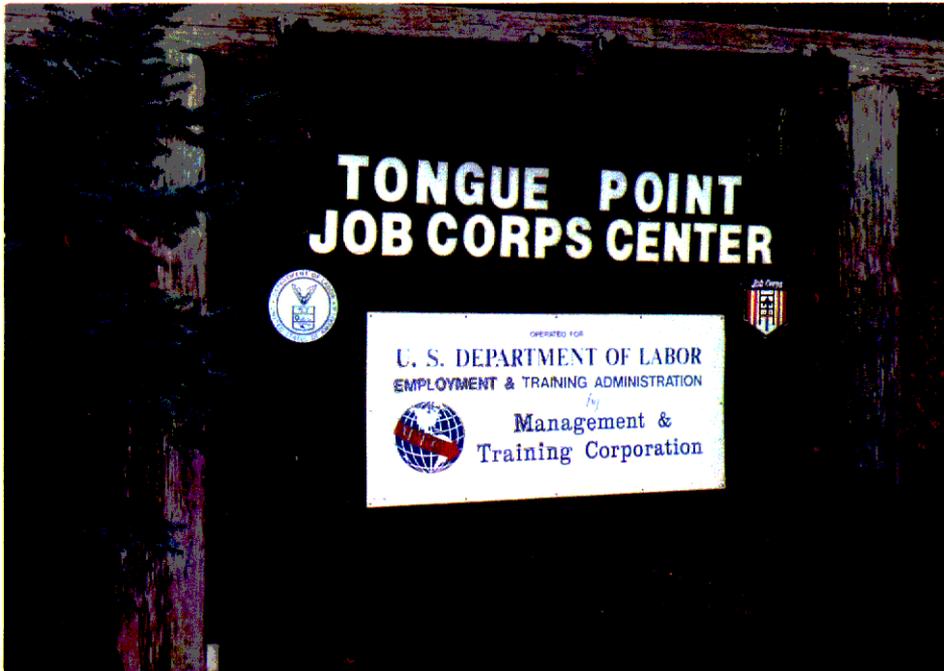
**#6 Large high explosive magazine.**



**#7 High explosive magazine.**



**#8 Typical ammunition bunker.**



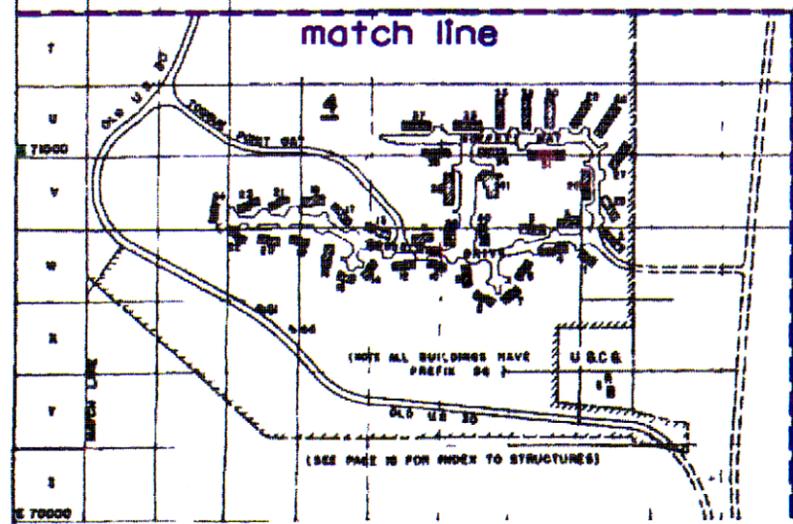
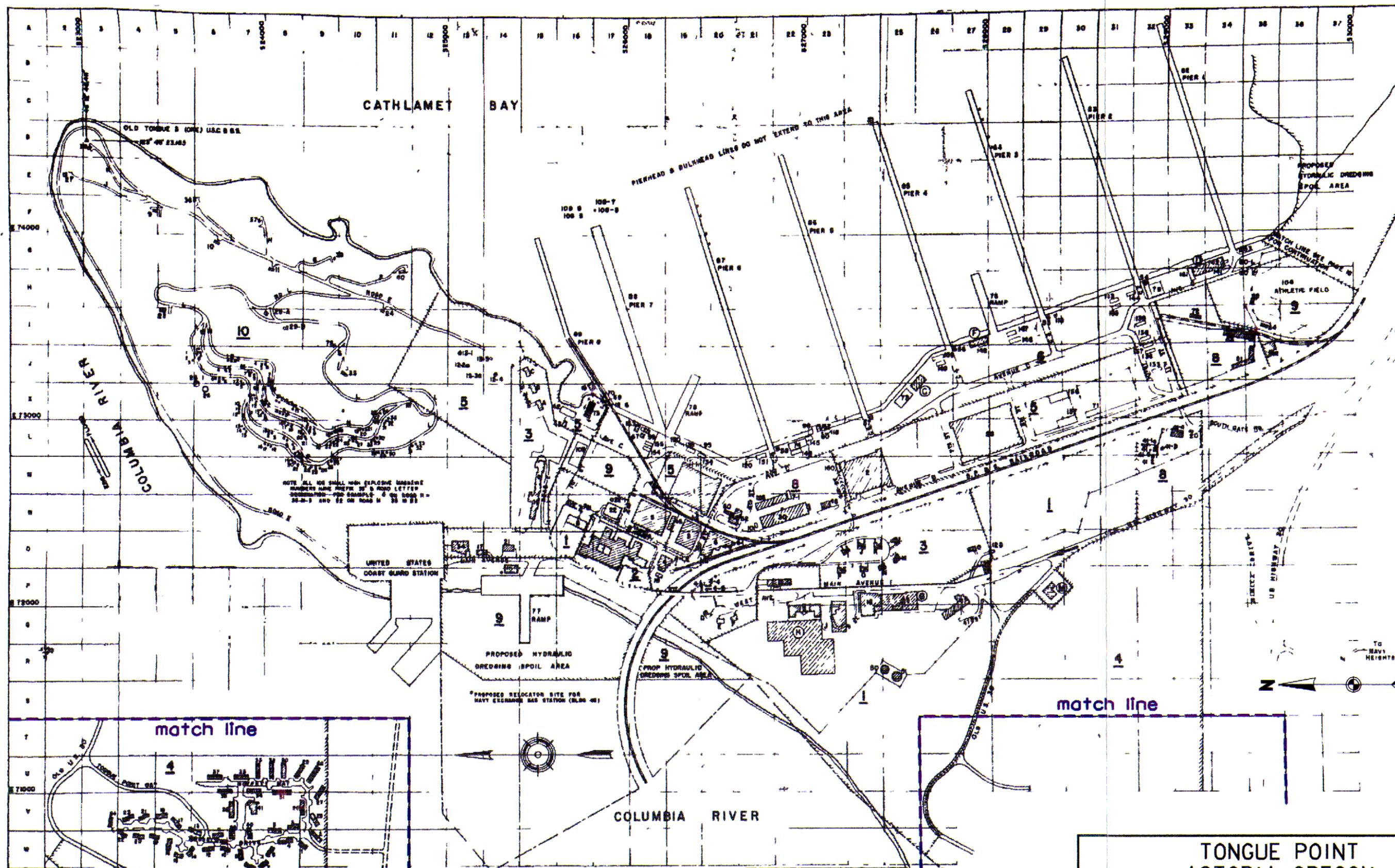
**#9 Entrance sign to Tongue Point.**

**APPENDIX H**  
**HISTORICAL MAPS/DRAWINGS**

Ordnance and Explosive Waste  
Chemical Warfare Materials  
**ARCHIVES SEARCH REPORT**  
for the former  
**NAVAL AIR STATION TONGUE POINT**  
Astoria, Oregon  
Project No. F10OR048304

**APPENDIX H -- HISTORICAL MAPS/DRAWINGS**

- H-1 Site Plan (1956)
- H-2 Navy Heights Housing Area



**RATUM**  
 M.L.L.W. = ELEV 100 00'  
 M.H.W. = ELEV 107 64'  
 M.H.W. = ELEV 108 21'  
 HIGHEST TIDE (17 DEC 1933) = 112 10'  
 LOWEST TIDE (16 JAN 1950) = 97 20'

**NOTE** - COORDINATE GRID FROM US ENGINEER SURVEYS  
 NOTE SEE PAGE 10 FOR INDEX TO STRUCTURES OF STATION PROPER

**SCALE IN FEET**  
 0 200 400 600 800

**LEGEND**

- MANY PROPERTY BOUNDARY LINE
- FUNCTIONAL AREA BOUNDARY
- EXIST BLDG OR STRUCTURE
- PLANNED BLDG OR STRUCTURE
- EXISTING RAILROAD
- FENCE
- SHORE LINE
- MAIN STATION ENTRANCE
- QUONSET TYPE EXIST BLDG

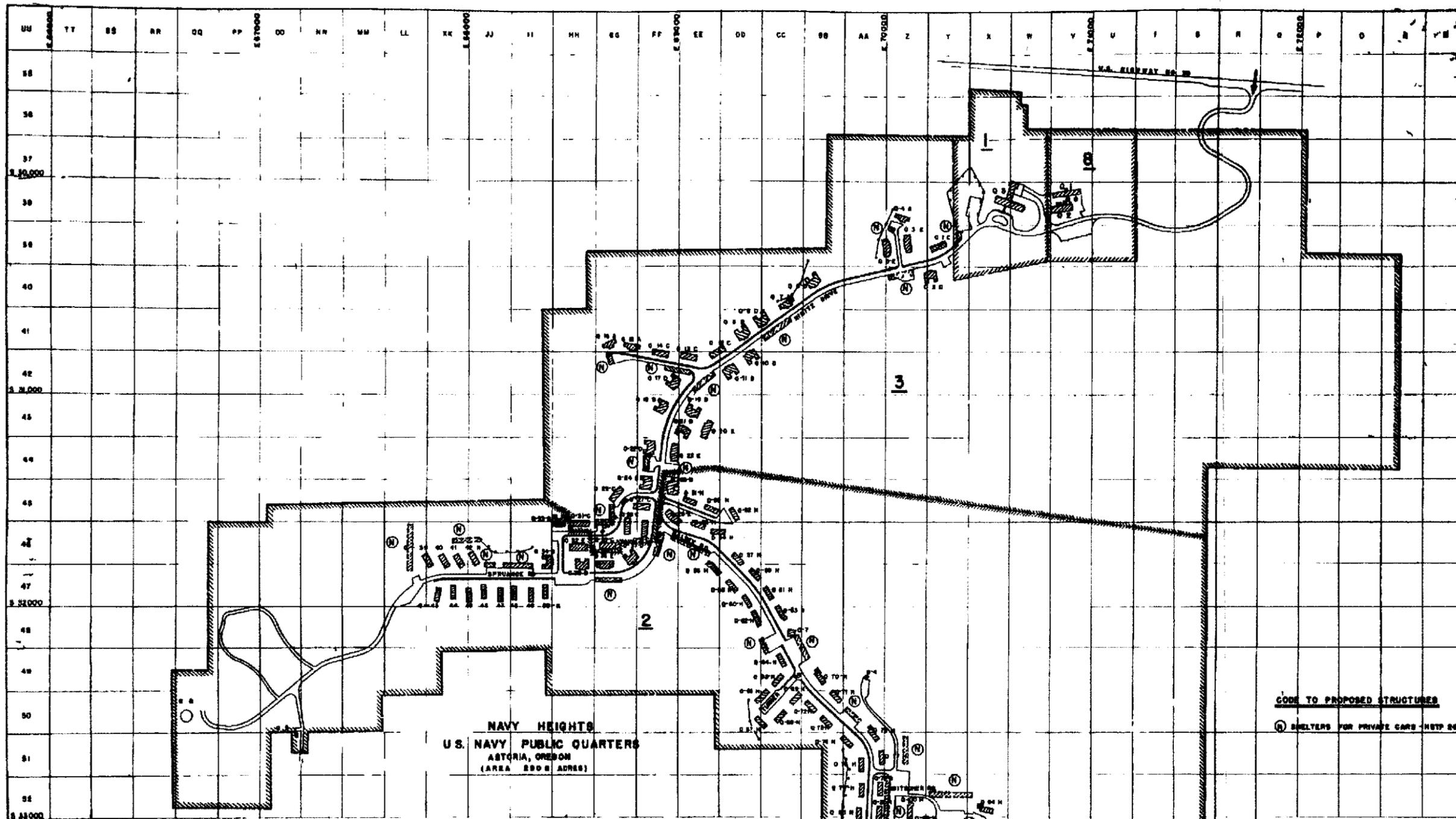
AREA ALLOCATIONS	
AREA	ALLOCATION
1	ADMINISTRATION & PERSONNEL SERVICES
2	ENLISTED PERSONNEL HOUSING
3	OFFICER PERSONNEL HOUSING
4	REPAIR HOUSING AREA
5	STORAGE AREA (SUPPLY & FISCAL)
6	WATER FRONT OPERATOR AREA
7	WAVE BARRIER (SEE PAGE 17)
8	PUBLIC WORKS DEPARTMENT
9	RECREATION AREA
10	MAGAZINE AREA

**TONGUE POINT  
 ASTORIA, OREGON  
 CLATSOP COUNTY  
 DERP-FUDS# F100R048300  
 SITE PLAN**

NOT TO SCALE

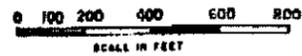
PROJ. DATE: SEPT. 1994      DATE OF MAP: 1956

21-SEP-1994 16:11      /N/0EW94DG/SITE69/MAP/PLANB.DGN - PLANE.CIT



**LEGEND**

- NAVY PROPERTY BOUNDARY LINE
- ▨ FUNCTIONAL AREA BOUNDARY
- ▩ EXISTING BUILDING OR STRUCTURE
- ▧ PROPOSED BUILDING OR STRUCTURE
- ▬ EXISTING ROAD OR PAVED AREA
- ▬ FUTURE ROAD OR PAVED AREA
- ➔ MAIN ENTRANCE



NOT TO SCALE

TONGUE POINT  
 ASTORIA OREGON  
 CLATSOP COUNTY  
 DERP-FUDS\* F100R048300  
 NAVY HEIGHTS HOUSING AREA

PROJ. DATE: SEPT. 1994      DATE OF MAP: 1958  
 20-SEP-1994 15:48      /N/OEW94DG/SITEG9/MAP/PLANA.DGN - PLANA.CIT

**APPENDIX I**

**RISK ASSESSMENT CODE PROCEDURE FORMS**

RISK ASSESSMENT PROCEDURES FOR  
 ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name NAS - TONGUE POINT Rater's Name DENNIS W. GILMORE  
 Site Location TONGUE POINT, OR Phone No. 314 331 8108  
 DERP Project # F10 OR 048309 Organization CEHMS - PM - M  
 Date Completed 15 DEC 94 RAC Score 2

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritize the remedial action at Formerly Used Defense Sites. The OEW risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential OEW hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability. Personnel involved in visits to potential OEW sites should view the CEHND videotape entitled "A Life Threatening Encounter: OEW."

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE  
 (Circle all values that apply)

A. Conventional Ordnance and Ammunition	VALUE
Medium/Large Caliber (20 mm and larger)	(10)
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms (.22 cal - .50 cal)	1
Conventional Ordnance and Ammunition (Select the largest single value)	_____

What evidence do you have regarding conventional OEW? 1945 DREDGING RECORD

B. Pyrotechnics (For munitions not described above.) VALUE

Munition (Container) Containing  
White Phosphorus (WP) or other  
Pyrophoric Material (i.e.,  
Spontaneously Flammable) 10

Munition Containing A Flame  
or Incendiary Material (i.e., Napalm,  
Triethylaluminum Metal Incendiaries) 6

Flares, Signals, Simulators, Screening  
Smokes (other than WP) 4

Pyrotechnics (Select the largest single value) 0

What evidence do you have regarding pyrotechnics? \_\_\_\_\_

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

Primary or Initiating Explosives  
(Lead Styphnate, Lead Azide,  
Nitroglycerin, Mercury Azide,  
Mercury Fulminate, Tetracene, etc.) 10

Demolition Charges 10

Secondary Explosives  
(PETN, Compositions A, B, C,  
Tetryl, TNT, RDX, HMX, HBX,  
Black Powder, etc.) 8

Military Dynamite 6

Less Sensitive Explosives  
(Ammonium Nitrate, Explosive D, etc.) 3

High Explosives (Select the largest single value) 0

What evidence do you have regarding bulk explosives? \_\_\_\_\_

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

Solid or Liquid Propellants 6

Propellants 0

What evidence do you have regarding bulk propellants? \_\_\_\_\_

E. Chemical Warfare Materiel and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification Sets	20
Radiological	15
Riot Control Agents (Vomiting, Tear)	5
Chemical and Radiological <u>(Select the largest single value)</u>	<u>0</u>

What evidence do you have of chemical/radiological OEW? \_\_\_\_\_

TOTAL HAZARD SEVERITY VALUE

(Sum of Largest Values for A through E--Maximum of 61)

Apply this value to Table 1 to determine Hazard Severity Category.

10

TABLE 1

HAZARD SEVERITY\*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	II	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE		0

\* Apply Hazard Severity Category to Table 3.

\*\*If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action.

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

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

A. Locations of OEW Hazards	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations.	4
Inside walls, ceilings, or other parts of Buildings or Structures.	3
Subsurface	(2)
Location (Select the single largest value)	<u>2</u>
What evidence do you have regarding location of OEW? _____ <u>1945 DREDGING RECORD</u>	

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

	VALUE
Less than 1250 feet	(5)
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1
Distance (Select the single largest value)	<u>5</u>
What are the nearest inhabited structures? <u>DORMITORY, SCHOOL</u>	

C. Numbers of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0
Number of Buildings (Select the single largest value)	<u>5</u>
Narrative	<u>JOB CORPS CENTER IMMEDIATELY ADJACENT</u>

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0
Types of Buildings (Select the largest single value)	<u>5</u>
Describe types of buildings in the area.	<u>(WWII TYPE STRUCTURE UTILIZED)</u>
	<u>AS JOB CORPS TRAINING CENTER</u>

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

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

Accessibility (Select the single largest value)

4

Describe the site accessibility. ACCESS UNCONTROLLED FROM WATER

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

	VALUE
Expected	5
None Anticipated	0
Site Dynamics <u>(Select largest value)</u>	<u>5</u>

Describe the site dynamics. STATE OF OREGON ACTIVELY PURSUING DEVELOPMENT

TOTAL HAZARD PROBABILITY VALUE  
(Sum of Largest Values for A through F--Maximum of 30)  
Apply this value to Hazard Probability Table 2 to determine  
Hazard Probability Level.

26

TABLE 2

HAZARD PROBABILITY

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

\* Apply Hazard Probability Level to Table 3.

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

TABLE 3

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

RISK ASSESSMENT CODE (RAC)

- RAC 1 Expedite INPR, recommending further action by CEHND - Immediately call CEHND-ED-SY--commercial 205-955-4968 or DSN 645-4968.
- RAC 2 High priority on completion of INPR - Recommend further action by CEHND.
- RAC 3 Complete INPR - Recommend further action by CEHND.
- RAC 4 Complete INPR - Recommend further action by CEHND.
- RAC 5 Usually indicates that no further action (NOFA) is necessary. Submit NOFA and RAC to CEHND.

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

SEE ASR

**APPENDIX J**  
**REPORT DISTRIBUTION LIST**

Ordnance and Explosive Waste  
Chemical Warfare Materials  
**ARCHIVES SEARCH REPORT**  
for the former  
**NAVAL AIR STATION TONGUE POINT**  
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- 13) Columbia River Estuary Study Taskforce  
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Astoria, OR 97103-4513
- 14) Department of Environmental Quality  
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