



U.S. Environmental Protection Agency  
Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101-9797

Alaska  
Idaho  
Oregon  
Washington

A large circular graphic with a textured, shaded background. Inside the circle is a white silhouette of the state of Oregon. Overlaid on the map is the title text.

# Oregon Superfund Progress Report October 1997

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## ***Welcome to the Region 10 Superfund program....***

The information contained in this book should give you a snapshot of our efforts at the U.S. Environmental Protection Agency (EPA) Region 10 (Alaska, Idaho, Oregon & Washington) to clean up sites contaminated with hazardous wastes which pose risk to people and the environment. You can look at the contents of this book as a status report of where we are in addressing the 78 sites on the National Priorities List (NPL) in the Region (14 have been deleted), as well as our efforts to address emergency or short term cleanup actions, and to assess new sites that we learn about. The book is formatted as follows:

***Section 1 - Superfund At Work:*** describes the overall progress picture for your state, and provides some highlights of significant progress and innovative approaches around the region. In it you will find:

- 1) a pie chart indicating the status of NPL sites in your state.
- 2) a bar chart indicating the range of cost of cleanup for sites in your state.
- 3) highlights of significant progress and new approaches around the region.

***Section 2 - Superfund in Your Community:*** should give you a picture of the sites within your state/Congressional District and the location and status of each. In this section you will find:

- 1) a list of early cleanup actions completed in your state.
- 2) summaries of some early cleanup actions in your state, in alphabetical order.
- 3) a list of all NPL sites in your state, including their status.
- 4) summaries of each NPL site in your state, in alphabetical order.
- 5) maps that illustrate the location of all Region 10 NPL sites.

We hope you can use this information as a resource as questions arise about Region 10 Superfund activities.

For more information about any of the sites and activities discussed in this book, please feel free to call the Region 10 Community Relations & Outreach Manager at (206) 553-1272. If calling from within Region 10 states, you can call toll free at (800) 424-4372.

Information Resources Center  
US EPA (8404)  
401 M Street, SW  
Washington, DC 20460



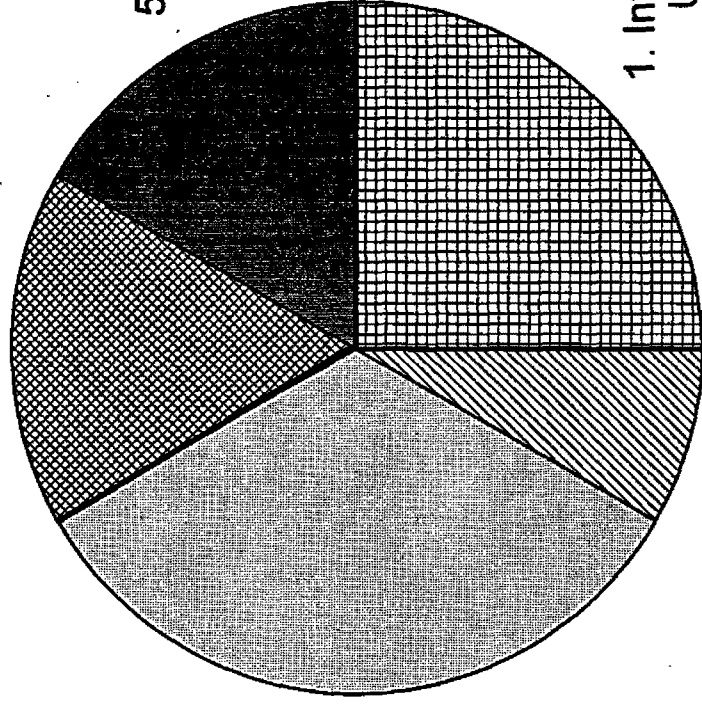
***SUPERFUND AT WORK***



# Progress Towards Cleanup at 12 Oregon NPL Sites

4. All Cleanup Construction Completed (2)

5. Site Removed from  
NPL (2)

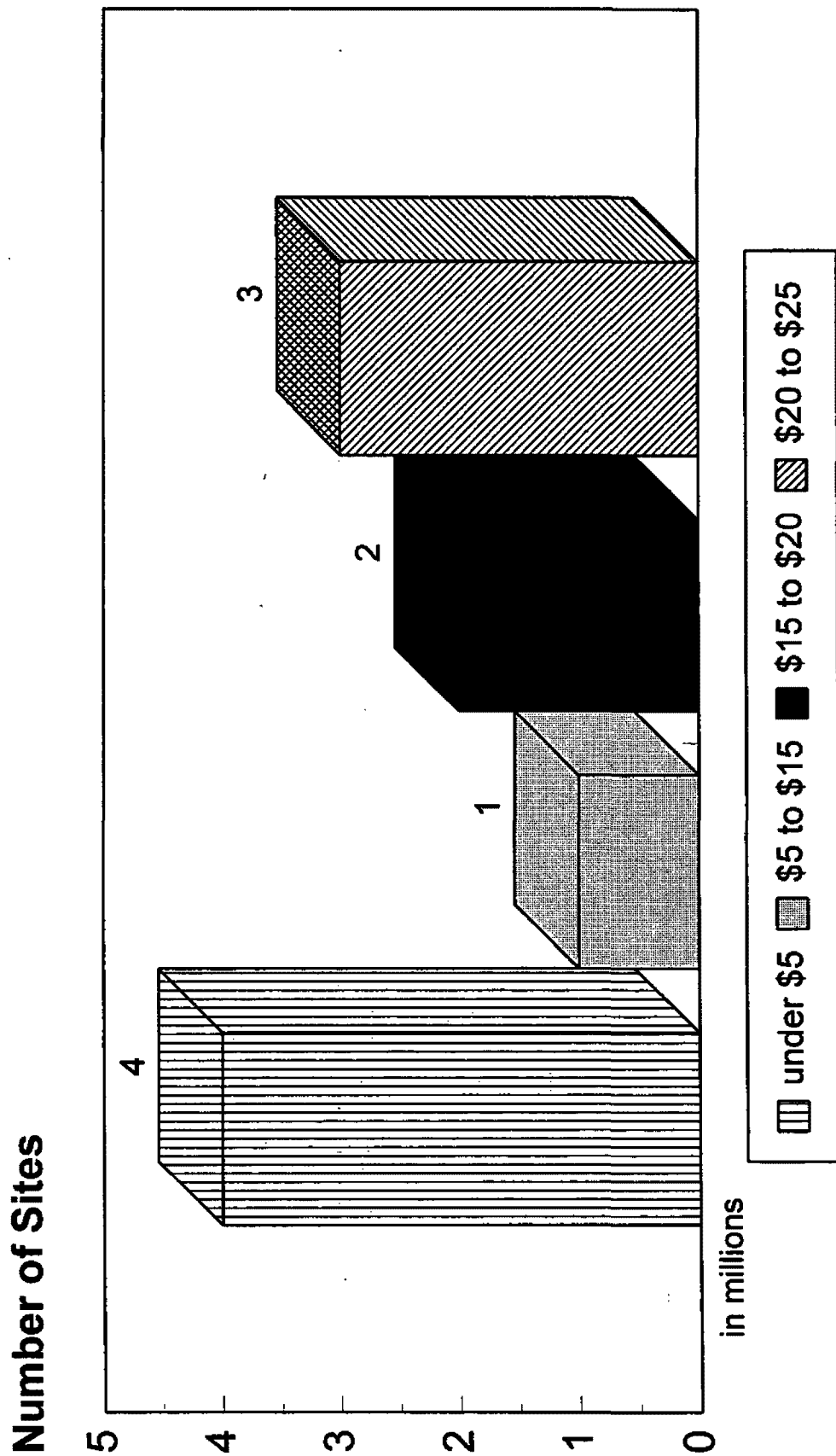


1. Investigation  
Underway (3)

2. Remedy Selected  
for Pending Cleanup (1)

3. Cleanup in  
Progress (4)

# Estimated Remediation Costs in Oregon



\* Estimated costs for majority of sites (70%) are below \$20 million.



## **SUCSESSES IN REGION 10**

*EPA Region 10 continues to explore ways to improve our efforts to clean up hazardous waste sites in the most efficient way possible, and to return them to productive uses while protecting human health and the environment. The ability to be flexible in making cleanup decisions and improved cooperation with state and local communities have contributed to recent Superfund successes.*

*Following are five stories which highlight significant progress and new approaches around the region...*

## Cooperative Agreements with the State of Oregon

**Site Assessment Cooperative Agreement:** EPA and the Oregon Department of Environmental Quality (DEQ) have an excellent partnership on site assessment. Real environmental benefit has been gained without duplication or delay of work. EPA funding has been progressively increased as DEQ's role has become greater.

**Site Screening** DEQ screens sites brought to their attention by the public, other agencies, or owner/operators and consultants. Approximately 250 site screenings have been done in the last five years, in order to consider the worst sites first. Many screenings consist only of file searches and phone calls, while others involve collecting additional information and conducting site drive-bys. When further action is needed, DEQ and EPA work together to determine what should be done. DEQ has typically recommended about 15 - 20% of sites screened be added to EPA's inventory of sites needing further Superfund consideration (CERCLIS).

**Preliminary Assessments** For sites that would warrant assessment under Superfund, Oregon staff and EPA staff work together on a streamlined federal Preliminary Assessment. DEQ has completed approximately 50 PAs in the last five years.

**Site review/Technical Assistance** For complex sites, state and EPA staff together carry out a joint investigation. Oregon DEQ reviews site assessment work completed by EPA contractors for technical merit, and for possible state action.

**Brownfields Project** Developers are reluctant to buy vacant or under utilized properties that may be contaminated because of the risk of cleanup liability. EPA's Brownfields program is working to assess environmental problems, clean, and revitalize these properties. Oregon DEQ is compiling an inventory of potential Brownfield sites. Sites will be prioritized for assessment based on how they meet certain criteria such as ownership, location, potential for commercial or industrial development, and whether there is a potential developer interested in the property.

### **McCormick & Baxter Creosoting Company/State Lead Site**

This is the State of Oregon's highest priority Superfund site. Oregon DEQ has the technical lead for the cleanup, while EPA has a consultation role. Federal Superfund dollars pay for the cleanup via a Cooperative Agreement between the state and EPA Region 10.

Operations at the former wood treating facility resulted in contamination of soil, sediments, and ground water. Contaminants are migrating from ground water to the Willamette River, including pentachlorophenol (PCP), polycyclic aromatic hydrocarbons (PAHs), arsenic and dioxin.

The cleanup is currently in the remedial design phase. Plans for cleanup actions include treatment and/or removal of on-site contaminated soil, extraction and treatment of floating and sinking pure non-aqueous phase liquid (NAPL) product from the ground water, and capping the entire site to

*(continued)*

make it ready for future development. Demolition of on-site structures has been completed which allows for easier access to contaminated areas.

There is considerable local interest in the redevelopment of this site. It is a high priority Brownfields redevelopment for the City of Portland. EPA has funded a Technical Assistance Grant for a local neighborhood group (WAKE-UP) that is closely following the progress of the cleanup.

#### **East Multnomah County Groundwater Superfund Site**

The East Multnomah County Groundwater Superfund site covers three square miles in eastern Portland. Groundwater beneath the area, contaminated with Volatile Organic Compounds (VOCs) by several area businesses using solvents, has been used for drinking water. Early response actions taken by the responsible parties provided several groundwater extraction wells to control the contaminant plume, and a cutoff trench to prevent contaminated shallow groundwater from migrating into deeper aquifers.

The Oregon Department of Environmental Quality has issued Records of Decision for two operable units, the Troutdale Sandstone Aquifer and the Cascade Corporation Site-Troutdale Gravel Aquifer. These decisions for further cleanup represent significant milestones toward restoring the availability of the city of Portland's back-up drinking water supply.

Residents in the Portland area are extremely interested in ensuring that groundwater resources will be protected. EPA has funded a Technical Assistance Grant for a local neighborhood group, Friends of Blue and Fairview Lakes. The group has a contract with Portland State University to review documents and provide input to DEQ, EPA, and the local community through the Friends of Blue and Fairview Lakes.

## **Local Involvement in Spokane Hastens Cleanup & Renews Property Values**

Community interest in the Spokane Junkyard/Associated Properties Superfund site has always been high. It was especially gratifying for EPA to participate in the community's recent celebration of the completion of the cleanup. Signs, posted to warn people of the dangers of contamination at the site, were removed by a neighborhood activist at the ceremony.

What was once a threat to the community, a field of highly contaminated soil littered with drums of hazardous waste and a variety of other unsightly and potentially dangerous materials, is now a field of native plants, safe and clean and ready to become a community asset.

The site consisted of a former junkyard, the former Spokane Metals facility, and two other parcels of land. Salvage operations at Spokane Metals, from the 1940s until the early 1980s, resulted in soil contaminated with polychlorinated biphenyls (PCBs) and lead. Poor junkyard storage practices of asbestos, paint waste, and various liquids and solid wastes also resulted in site contamination.

After an explosive fire on the junkyard property in 1987, EPA conducted an emergency cleanup during 1988 and 1989. The most highly contaminated materials were removed and the site was fenced to keep people out. The site was added to EPA's National Priorities List for further long-term cleanup in May 1994.

The site is surrounded by homes and apartments, businesses, and an elementary school. Local and state agencies, businesses, and community activists worked with EPA in many meetings about this site. Nearby residents worried about vandalism at the site and the risk of children being exposed to contamination. Neighbors supported plans for a low-income housing project on the site. Everyone was anxious for this property to become a safe, attractive, and productive part of the neighborhood.

Three companies -- Kaiser Aluminum, Washington Water Power, and Inland Power and Light -- agreed to conduct a site investigation and to prepare plans for cleaning up the site under an Administrative Order with EPA in June 1995. Exceptional cooperation between EPA and the three companies using the most efficient Superfund authorities accelerated the process.

In January 1996, after completion of site investigations, six cleanup alternatives were proposed. EPA selected a cleanup alternative after reviewing and considering comments received during a public comment period. The three companies completed the cleanup design in the summer of 1996, and the cleanup of the site was accomplished from September to November 1996.

The site now consists of a capped containment cell on the Spokane Metals property, and a seeded field covering the rest of the site. Residential cleanup levels were selected for the site cleanup because all properties except the Spokane Metals property will be zoned for residential use in the future.

## **Cleanup & Economic Development Go Hand in Hand**

**The Pacific Sound Resources Superfund Site in Seattle:** One way that Region 10 helps promote development and economic growth in areas designated as Superfund sites is through the Prospective Purchaser Agreement Policy. The Pacific Sound Resources (PSR) Superfund site is an example of how well that policy can work.

PSR (formerly the Wyckoff Company) operated a wood preserving plant on 25 acres next to Elliott Bay until 1994. Soil, groundwater, and near shore marine sediments were contaminated with creosote, pentachlorophenol, copper, arsenic, and zinc. Because the site posed a threat to public health from contact with contaminated soil and to aquatic life in Elliott Bay, EPA added the site to the National Priorities List in May 1994.

The Port of Seattle then purchased the PSR site under a prospective purchaser's agreement which protects the Port from future liability for additional cleanup costs associated with past contamination. The Port agreed to provide services and cleanup funds totaling \$16.2 million and to conduct cleanup work under an Administrative Order with EPA.

All together about 200 acres of abandoned, contaminated industrial/commercial land, which includes the PSR Superfund site, has been cleaned up by the Port and returned to productive use as a combined cargo terminal and intermodal yard for American President's Line. The Port, local, state, and federal agencies, community members, and the business community worked together to successfully restore this important resource.

**Asarco Smelter Complex Cleanup in Tacoma:** A "civic triumph" is how the News Tribune described the January 1997 signing of a "definitive agreement" governing redevelopment of the old Asarco Smelter site on Commencement Bay, straddling the border between the town of Ruston and the city of Tacoma in Washington. The definitive agreement was signed by officials from Asarco, Ruston, Tacoma, and the Metropolitan Park District. Most of the 100 acres, which includes the 67 acre Superfund site, is now a barren fenced-off eyesore. Over the next few years, the site will be cleaned up and transformed: offices, light industrial facilities, and a public park with remarkable views of Puget Sound and surrounding mountains will replace the old smelter.

The redevelopment agreement was negotiated in parallel with a consent decree between EPA and Asarco covering the environmental cleanup of wastes left from 80 years of smelting operations. The consent decree requires that the cleanup be completed by December 2003. The parks are expected to be available for public use by the summer of 2004.

These agreements come after years of meetings between EPA, Asarco, and the surrounding communities. EPA received more than 900 public comments on the cleanup and site reuse plans. Workshops were attended by 1,200 people to express their individual views and those of 35 groups including community action groups, neighborhood councils, city of Tacoma and town of Ruston councils, and other local government commissions. All were dedicated to finding the best solutions to problems so that environmental cleanup and economic development could advance simultaneously.

## Cleanups Expedited at Alaska Military Bases

By working in partnership with States, the Department of Defense and the Department of Energy, EPA Region 10's Federal Facilities Superfund program has been able to streamline requirements and reduce costs while implementing flexible and efficient cleanup solutions throughout the Northwest. Alaska is an excellent example of this partnership, where six of the eight NPL sites are military bases.

**Eielson Air Force Base**, located 24 miles southeast of Fairbanks, covers 19,780 acres. Major sources of hazardous wastes include both closed and active unlined landfills, trenches used for tank sludge burial, drum storage areas, fire suppression training, and fuel storage and delivery. Areas within the groundwater are contaminated with lead and volatile organic compounds such as benzene and trichloroethylene. Several areas of subsurface petroleum-contaminated soil and petroleum products are sources of contamination. Elevated levels of polychlorinated biphenyls (PCBs) were found in sediments and in fish caught in a slough that runs through the base.

The base included 64 potential source areas of contamination that required some level of investigation. The investigations were streamlined and tailored to use an appropriate level of evaluation for each area and to avoid unnecessary investigative costs. All investigations are complete, and remedies have been selected covering all problems at the base. Cleanups for all areas except one are currently in place, are fully functional, and include the use of innovative technologies such as bioventing. The last cleanup, the PCB soil and sediment cleanup in Garrison Slough will be finished this summer.

The Air Force, EPA, and the state of Alaska worked together to determine the best technical and regulatory approaches at Eielson, including innovative treatment technologies, source reduction with natural attenuation to address limited areas of groundwater contamination, hybrid landfill cap designs, and technical impracticability waivers for immobile lead groundwater contamination.

**Fort Richardson**, covering 61,900 acres in Anchorage, has been divided into four smaller units so that cleanup can progress more efficiently. Each of four work areas identified for cleanup contains a variety of contaminated sub-areas. While waiting for on-going investigations to be completed for all the complex work areas, it was important that early actions be taken at some areas.

The Eagle River Flats ordnance impact area, which encompasses 2,500 acres of wetlands associated with the Eagle River delta, is one of the four work areas. Many thousands of waterfowl who fed in the contaminated sediments of those wetlands have died. Under an agreement with EPA and the state of Alaska, the Army is dredging and drying wetland sediments contaminated with white phosphorous, which allows the white phosphorous to change into a harmless compound. The Army will continue dredging and drying the contaminated sediments until the threat to waterfowl is eliminated. The death rate for waterfowl that use the wetlands during spring and fall migrations has already dropped from thousands to hundreds of ducks for each migratory season.

## Progress Continues in Idaho at Bunker Hill

The Bunker Hill Superfund site spans 21-square miles in the heart of the Silver Valley in Northern Idaho. More than 6,000 people live within the site boundary in the communities of Smelterville, Kellogg, Wardner, Pinehurst, Page, Elizabeth Park, and Ross Ranch. Contamination, caused by mining activities since the late 1800s, includes lead, mercury, cadmium, sulfuric acid, arsenic and zinc. Mine tailings deposited into the Coeur d'Alene River have contaminated the valley, riverbeds and Lake Coeur d'Alene. Ground and surface water is contaminated with a variety of heavy metals due to discharges of mine drainage. Lead is the primary contaminant in the valley and poses a serious health threat particularly to children and pregnant women.

Some of the 17 private companies identified as being potentially responsible for the contamination are working in partnership with EPA and the Idaho Department of Environmental Quality to support the cleanup. Much progress has been made previously at the site. Blood lead levels of children have dropped dramatically in the last decade, due both to cleanups of contaminated soils and a continuing effective local public health program. In 1996, more major cleanups took place:

- 600 tons of contaminated material were excavated & removed
- 100,000 seedlings & 100 acres of grass were planted on hillsides
- 500 million gallons of contaminated water were treated
- 395 children were tested for possible lead contamination
- contaminated soil was excavated and replaced with clean soil at 200 residential yards
- 75 structures were demolished, resulting in the disposal of 1000 cubic yards of asbestos and 20,000 truckloads of debris
- 8980 contaminated railroad ties and 86 tons of rail were removed from the Union Pacific Railroad right-of-way through the site

EPA and Idaho staff are working with local officials to maximize the reuse of this land, consistent with the cleanup. A few projects that have benefited the community are:

- A Special Area Management Plan to help Shoshone County plan for future development at an on-site wetland area.
- At the request of the county, a section of a temporary haul road is being paved to provide access to a proposed business park. Storm water ditches and pipelines are being added to support future development and to divert contaminated water from the Coeur d'Alene River.
- Capping and paving a 50-acre slag pile near I-90 will support future industrial development.
- EPA and the state are currently working with community leaders to support future land use in the design for the 200-acre cap of the Central Impoundment Area.

*(continued)*

- At the request of community leaders, Shoshone County plans to use several structures, saved from scheduled demolition, for future development.
- The People's Action Coalition was awarded a \$50,000 Superfund Technical Assistance Grant (TAG) to hire a technical advisor to monitor on-going site activities for the community and review site documents relating to health risks and contamination.



***SUPERFUND  
IN YOUR COMMUNITY***



# EARLY CLEANUP ACTIONS OREGON

<u>SITE NAME</u>	<u>START</u>	<u>COMPLETION</u>
<b>Congressional District: 01</b>		
ASTORIA PLYWOOD CORP, ASTORIA	7/25/94	8/12/94
BERGSOE METAL CORP, ST HELENS	2/26/88	5/9/88
COLUMBIA RIVER DRUMS, ST HELENS	11/12/91	11/12/91
CRIMMS ISLAND REMOVAL, CLATSKANIE	4/20/89	7/6/89
DANT & RUSSELL BN NORTH PLAINS SITE, NORTH PLAINS	10/15/85	3/8/86
	3/6/86	1/7/91
DEPOE BAY, LINCOLN CITY	4/25/88	7/1/88
ENVIRONMENTAL PACIFIC CORP, AMITY	3/22/93	9/30/93
ERICKSON HARDWOOD, GRANDE RONDE	9/27/90	6/6/91
GARIBALDI DRUMS, GARIBALDI	1/28/91	1/28/91
LINCOLN CITY DRUM, LINCOLN CITY	11/7/90	11/8/90
PACIFIC OCEAN GEARHART DRUM SITE, GEARHART	1/19/90	1/19/90
SEAL ROCK STATE PARK DRUM, NEWPORT	4/8/92	4/8/92
TIERRE DEL MAR BEACH DRUM, TIERRE DEL MAR	12/7/90	12/8/90
W.C.REMIOR CO RECYCLING CTR, YAMHILL	6/10/91	5/27/94
WILLAMETTE RIVER DRUM #1, PORTLAND	3/11/87	6/9/87

## Sites Addressed by Superfund for Congressional District 01: 16

### Congressional District: 02

FREMONT NATIONAL FOREST/WHITE KING AND LUCKY LASS URANIUM MINES (USDA)	9/25/95	3/20/96
JOSEPH FOREST PRODUCTS, JOSEPH	9/25/91	11/9/91
	3/30/93	5/8/93
NORTHWEST DUST CONTROL, WHITE CITY	1/23/84	5/16/84
NORTHWEST PIPELINE-BAKER, BAKER	3/29/88	8/6/88
ROGUE VALLEY CIRCUITS, ROGUE RIVER	9/14/90	1/15/91
UNION PACIFIC RAILROAD TIE TREATMENT, THE DALLES	10/13/92	10/23/92
WILSON TIRE SITE, WHITE CITY	3/8/85	7/31/85

## Sites Addressed by Superfund for Congressional District 02: 8

### Congressional District: 03

ALLIED PLATING, INC, PORTLAND	10/20/92	11/9/92
BASIN AVENUE BOAT DOCK DRUM, PORTLAND	3/16/92	3/16/92
HAYDEN ISLAND DRUM, PORTLAND	11/7/90	11/8/90

Sites in bold are not National Priorities List sites.

# **EARLY CLEANUP ACTIONS OREGON**

<u>SITE NAME</u>	<u>START</u>	<u>COMPLETION</u>
<b>Congressional District: 03</b>		
MARTIN ELECTRIC, LAKE OSWEGO	3/27/89	4/30/89
MCCORMICK & BAXTER CREOSOTING CO. (PORTLAND), PORTLAND	3/31/95	6/1/96
REYNOLDS METALS COMPANY, TROUTDALE	9/29/95	
SAUVIE ISLAND DRUM SITE, PORTLAND	5/7/90	5/7/90
SWANN ISLAND DRUM #1, PORTLAND	11/5/90	11/6/90
SWANN ISLAND DRUM #2, PORTLAND	7/12/91	7/12/91
UNION AVENUE PCB SITE, PORTLAND	8/6/86	8/22/86
WILLAMETTE RIVER DRUM, WILLAMETTE RIV	10/23/90	10/24/90
<b>Sites Addressed by Superfund for Congressional District03: 11</b>		
<b>Congressional District: 04</b>		
CONTINENTAL PLATING, EUGENE	5/9/96	5/14/96
OREGON COAST DRUM, FLORENCE	7/1/91	7/3/91
PARIS WOOLEN MILL, STAYTON	2/6/92	
PUGET SOUND PLYWOOD, EUGENE	8/3/84	9/26/84
RANGERFUND II/WESTFIR, WESTFIR	2/9/88	6/24/88
UMPQUA RIVER DRUM, COOS BAY	10/10/90	10/12/90
<b>Sites Addressed by Superfund for Congressional District04: 6</b>		
<b>Congressional District: 05</b>		
HAYES PROPERTY, MULINO	6/1/87	6/1/87
MOLALLA DRUM SITE, MOLALLA	7/12/91	2/17/93
NORTHWEST PIPE & CASING CO, CLACKAMAS	11/14/93	11/18/93
PORTABLE EQUIP SALVAGE CO, CLACKAMAS	5/7/87	10/20/90
UNITED CHROME PRODUCTS, INC, CORVALLIS	7/2/85	11/6/85
<b>Sites Addressed by Superfund for Congressional District05: 5</b>		

**Sites in bold are not National Priorities List sites.**

**Environmental Pacific Corporation  
Yamhill County, Amity, Oregon**

**Congressional District 1**

**Site Background:**

The Environmental Pacific Corporation is a two acre site located in Amity, Oregon. The site includes an abandoned former battery recycling facility that ceased operation in 1991. Companies from around the nation shipped batteries to this facility for recycling.

At the request of the State of Oregon Department of Environmental Quality (ODEQ), EPA inspected the site in November 1992. The EPA found over 70,000 gallons of hazardous substances including acids, caustics, and solvent wastes. In addition, the inspectors found that site soils, sludges, buildings, and debris were contaminated with high levels of mercury, lead and arsenic. The site posed a risk from direct exposure to mercury, lead and other toxic chemicals.

**Removal Action:**

The Removal Action was conducted between March and June 1993. EPA emptied and removed over 120 drums and on-site tanks. Over 70,000 gallons of acids and other toxic liquids were analyzed, treated, and disposed of off site. Soils with high lead contamination were removed, and disposed off site.

The mercury contaminated floors, ceilings, and walls of the on-site building were decontaminated, first with power washers and vacuums, then with a carbon dioxide blaster to remove mercury contamination from the structures. This innovative alternative reduced the volumes of material requiring disposal, thus reducing disposal costs by over one million dollars. The residue from the cleaning operations was collected and removed for off-site disposal. In April 1995, the ODEQ declared the site clean.

The former owner, Richard Hill was convicted of environmental crimes and is currently serving time in a federal prison in Colorado.

Cost recovery efforts were successful, and EPA's costs of \$936,000 were recovered.

**Paris Woolen Mills  
Marion County, Stayton, Oregon**

**Congressional District 4**

Site Background:

Paris Woolen Mill is located in Stayton, Oregon. The Mill was abandoned and the County was in the process of taking possession of the property under a tax lien. The Mayor of Stayton contacted EPA in the summer of 1991, due to worries of a significant fire hazard posed by the old wooden structure which housed the mill. There were numerous hazardous and flammable materials abandoned inside and outside the building. It is located on a canal connected to the Santiam River, that serves as a drinking water source. The Mayor and Fire Chief were concerned that pollution could be washed into the river in the event of a fire or vandalism. There were reports of kids playing and vandalizing in and around the old building.

Removal Action:

Upon assessment of the site, EPA installed a fence around the building and then notified past and present owner/operators of EPA's determination that an emergency Removal Action was required. The former Mill owner responded, and expressed interest in regaining ownership and conducting the necessary cleanup. Once the Removal plan was approved by EPA and the County, EPA issued a Consent Order to the owner to conduct the cleanup. EPA performed oversight of the cleanup, which consisted of asbestos removal, and recycling of many reusable products and fuels. The cleanup was completed to EPA's satisfaction by December 1991.

**Reynolds Metals Site  
Multnomah County, Troutdale, Oregon**

**Congressional District 3**

**Site Background:**

The Reynolds Metals site is located approximately 1.25 miles north of the city of Troutdale, Oregon, at the confluence of the Sandy and Columbia Rivers. It is an aluminum reduction facility, built for the U.S. Government in 1941. Reynolds leased the facility in 1946 and purchased it in 1949. The plant itself is situated on an 80 acre tract of land, and Reynolds owns an additional 700 acres surrounding the plant. The plant has been in a standby mode since 1992 due to a depressed price of aluminum. During full production, 21 separate waste streams were produced at the plant, and historically the wastes were placed at various locations throughout the plant. The wastes include cyanide, fluoride, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCB), and a variety of metals.

EPA received a report of PCB capacitors being dumped and buried on site and was asked to investigate. In the spring of 1994, EPA initiated an integrated assessment at the facility. In June of 1994, Reynolds agreed to conduct all assessment activities under EPA oversight. The assessment revealed a number of contaminated waste and dump areas on site, which contributed to fluoride and cyanide contamination in groundwater. The City of Portland has a municipal well field approximately 1.5 miles downgradient from the site. In December 1994, EPA added Reynolds to the National Priorities List. In September 1995, EPA issued a Consent Order to Reynolds to conduct a Removal Action and to initiate a Remedial Investigation and Feasibility Study (RI/FS).

**Removal Action:**

Between 1995 and 1997, Reynolds and EPA worked collaboratively to clean up the worst areas on site that were contaminating groundwater. From the 4 waste areas cleaned up so far, Reynolds has excavated and removed 500 tons of PCB contaminated soil and debris, 2,600 tons of diesel contaminated soil, 11,000 tons of spent potliner (high in fluoride and cyanide), and 14,000 tons of cryolite (high in fluoride and other metals). Reynolds and EPA are continuing with the RI/FS to characterize the remaining contaminated areas on site. During the RI/FS, as other opportunities arise for accelerated cleanup, they will be pursued.

**Rogue Valley Circuits Removal Site  
Jackson County, Wimer, Oregon**

**Congressional District 2**

**Site Background:**

The 450 acre site is a remote ranch in Wimer, Oregon. Rogue Valley Circuits, Inc. of Medford, Oregon, a circuit manufacturer, illegally dumped cyanide and heavy metal rich sludges (including copper, lead, and chromium) on the property.

The contamination posed a direct contact risk, and could have contaminated surface water and groundwater, posing a threat to the drinking water supply of the 400 residents of Wimer.

**Removal Action:**

Under a 1990 Consent Order, Rogue Valley Circuits agreed to undertake the site cleanup under the supervision of EPA. The full cost of the cleanup was approximately \$600,000. The Removal commenced in October, 1990 and the site was cleaned up by January 1991.

Over 800 cubic yards of cyanide and metals contaminated soil were excavated from the site. In addition, cement-like blocks and drums containing hazardous substances were removed. Most of the material was treated at an EPA approved hazardous waste landfill in Arlington, Oregon. One truckload of hazardous debris was transported to an EPA approved hazardous waste incinerator located in the Mid-West.

In a combined effort by the responsible party and EPA, the entire 450 acre ranch was surveyed for areas of potential contamination using geophysical electromagnetics, ground penetrating radar, X-ray florescence and areal photos. By focusing the sampling efforts with geophysical screening tools, the costs, time and efforts needed for the investigation were reduced.

Two years of post removal monitoring show that the cleanup was fully successful. The ranch has returned to its original use including cattle grazing and private residences. Groundwater and surface water do not show site contamination.



# NATIONAL PRIORITIES LIST OREGON

## SITE NAME

## STATUS

**Congressional District: 01**

**GOULD, INC**

Cleanup in Progress

**Congressional District: 02**

**FREMONT NATIONAL FOREST/WHITE KING AND LUCKY LASS URANIUM MINE**

**JOSEPH FOREST PRODUCTS**

**MARTIN-MARIETTA ALUMINUM CO**

**UMATILLA ARMY DEPOT (LAGOONS)**

**UNION PACIFIC RAILROAD TIE TREATMENT**

Investigation

Construction Completed

Removed from NPL

Cleanup in Progress

Remedy Selected

**Congressional District: 03**

**ALLIED PLATING, INC**

**MCCORMICK & BAXTER CREOSOTING CO. (PORTLAND)**

**REYNOLDS METALS COMPANY**

Removed from NPL

Cleanup in Progress

Investigation

**Congressional District: 05**

**NORTHWEST PIPE & CASING CO**

**TELEDYNE WAH CHANG**

**UNITED CHROME PRODUCTS, INC**

Investigation

Cleanup in Progress

Construction Completed

**Allied Plating**  
**Multnomah County, Portland, Oregon**

**Congressional District: 03**  
**Listing: 02/21/90**

**Site Background:**

A chrome plating facility operated on the 1 1/2-acre site located in Portland, Oregon, from 1957 until the late 1980s. The operation generated electroplating wastes containing heavy metals and arsenic. For over 25 years, the company discharged waste without treating it. Prior to 1969, wastes were discharged onto a low-lying area of the property, which drained into the Columbia Slough. After 1969, filling activities isolated the site and the plating waste created a surface impoundment. Groundwater, surface water, sediments, and soil were contaminated with heavy metals, including chromium and lead. The soil also contained cyanide. Chromium, copper, and nickel were present in sludge on the site. Approximately 20,000 people live within 3 miles of the site. Public and private wells within 3 miles of the site provide drinking water for about 1,500 people. The Columbia Slough, which drains into the Willamette River, lies about 600 feet northeast of the site.

**Cleanup Progress:** Removed from NPL

**Early Actions:** In 1992, the EPA conducted an early action during which 1100 cubic yards of contaminated soil and sludge were excavated from the site and treated and disposed of off site.

**Long-term Actions:** In 1993, the EPA determined that no further actions were required at the site. However, to ensure that groundwater is not used in the future, the EPA imposed a deed restriction on the property.

The site was deleted from the NPL on November 11, 1994.

**Fremont National Forest/White King  
and Lucky Lass Uranium Mines  
Lake County, Lakeview, Oregon**

**Congressional District: 02  
Listing: 04/25/95**

**Site Background:**

The White King Mine is located in the mountains approximately 18 miles northwest of Lakeview within the Lakeview Ranger District, Fremont National Forest, Lake County, Oregon. The mine is situated on both National Forest land and private land. The Lucky Lass Mine is situated 1 mile northwest of the White King Mine and is also on National Forest land. The site encompasses 140 acres affected by uranium mining activities which occurred during the 1960s: acid mine drainage affected a wetlands and creek; radioactive ore and soil stockpiles cover the site and pose some risk under a recreational or residential exposure scenario. The nearest residence to the site is 12 miles away. The site is covered by snow 8 months of the year.

**Cleanup Progress: Investigation Underway**

**Early Actions:** Between September 1995 and April 1996, EPA performed an early action during which erosion control measures were installed to protect the ore and soil stockpiles, and to prevent further spreading of contaminants to site soils and the creek.

**Long-term Actions:** Investigations are underway by EPA to determine the extent of soil, surface water, and groundwater contamination at the site. Final cleanup measures are expected to be selected late in 1997.

**Gould, Inc.**  
**Multnomah County, Portland, Oregon**

**Congressional District: 01**  
**Listing: 09/8/83**

**Site Background:**

The Gould, Inc. site covers about 10 acres in an industrial area in northwestern Portland, Oregon, known as the Doane Lake area. A secondary lead smelter and lead oxide production facility operated at the site from 1949 until 1981. Smelter waste and approximately 87,000 tons of battery casings were disposed of on the site, and an estimated 6 million gallons of acid were discharged to a lake remnant adjacent to the facility. Soil, debris, disposed casings, and lake sediments are contaminated with lead from prior site operations. Organic contamination from a former herbicide/pesticide production facility located adjacent to the site is commingled with the waste. A few residences and rental units are located to the south and west of the site. Approximately 270 people are employed by the businesses in the vicinity and on the site. About 10,000 people live within a mile of the site.

**Cleanup Progress: Cleanup in Progress**

The cleanup of the Gould site is being conducted by the site potentially responsible parties (PRPs) in response to an Administrative Order issued by EPA in January 1993. Between 1993 and 1995, an estimated 24,500 tons of battery casings were treated in a battery separation and treatment process, with 88 tons of coarse lead and 244 tons of plastic recycled off site. Approximately 20,000 cubic yards of contaminated soil and smelter waste were treated by stabilization and stored on site. Based on operating experience and new information about conditions at the site, EPA determined in 1996 that continued operation of the battery casing treatment process was no longer appropriate for completing the cleanup at the site. EPA subsequently directed the PRPs to evaluate alternatives for completion of the site cleanup. In May 1997, EPA issued a Record of Decision (ROD) Amendment to modify the remedy selected in March 1988. The modified remedy includes on-site treatment and containment. Design of the revised remedy is expected to be completed and construction underway by the end of 1997. Construction is expected to take approximately two years.

**Joseph Forest Products**  
**Wallowa County, 1 mile northwest of Joseph, Oregon**

**Congressional District: 02**  
**Listing: 03/31/89**

**Site Background:**

The 18-acre Joseph Forest Products site is located about one mile northwest of the City of Joseph in Wallowa County. A wood treating facility operated at the site from 1974 until 1985. Currently, wood cutting and planing are the only activities at the site. Contamination at the site was caused by sloppy site operations and by a 1974 fire that destroyed the treatment building and caused a release of chromated copper arsenate (CCA) wood treatment solution. Soil on site was contaminated with copper, chrome, arsenic, and lead. Low levels of chromium and arsenic were also detected in groundwater monitoring wells located on site. The company filed for bankruptcy in 1984 and ceased operations in 1985. The site lies within the City of Enterprise watershed protection area, and the City water supply springs are located less than one mile downstream. Groundwater within 3 miles of the site provides drinking water to more than 2,000 people. Approximately 1,000 people live within 3 miles of the site.

**Cleanup Progress: Construction Completed**

**Early Actions:** In the fall of 1991, EPA excavated approximately 1,068 tons of highly contaminated soil adjacent to the treatment building and transported it to an off-site hazardous waste disposal facility.

**Long-term Actions:** After conducting an investigation, EPA issued a Record of Decision (ROD) in September 1992, which selected a final remedy for the site. The remedy included excavation of contaminated surface and subsurface soils, demolition of the treatment building, decontamination of the drip pad, off-site disposal of contaminated soil and debris, removal of asbestos from the wood drying building, removal of underground storage tanks, and groundwater monitoring. Construction of the remedy was completed by EPA in May 1993. A total of 6443 tons of contaminated soil and debris were excavated and transported to off-site disposal facilities. Groundwater monitoring, conducted by EPA and the Oregon Department of Environmental Quality for the past three years, has not shown a need for any additional cleanup.

**Martin-Marietta Aluminum Company**  
**Wasco County, The Dalles, Oregon**

**Congressional District: 02**  
**Listing: 06/10/86**

Site Background:

The 350-acre Martin-Marietta Aluminum Co. site is located in Wasco County, The Dalles, Oregon. The site is within an 800-acre area used primarily for heavy industry, manufacturing and agricultural purposes. Martin-Marietta acquired the facility in 1970 from Harvey Aluminum, Inc. and continued aluminum processing operations until 1984, when the plant was shut down. In 1986, Martin-Marietta leased the plant and an adjacent portion of the property to Northwest Aluminum Company, which resumed aluminum operations in 1987. The site consisted of 28 areas of significant contamination which resulted from treatment, storage, and disposal practices at the site. A 15-acre landfill, now capped, contains approximately 200,000 cubic yards of waste and construction debris, including asbestos, metallic wastes, and 5,000 tons of spent potliner materials (cathode waste) containing cyanide, polycyclic aromatic hydrocarbons (PAHs), and arsenic. Leachate emanating from the landfill prior to the installation of a leachate collection system contaminated the area groundwater. Groundwater beneath the site was found to be contaminated with cyanide. In addition, approximately 64,670 cubic yards of cathode waste material were deposited in the unloading area and the cathode waste management areas, which cover 15 acres and contain contaminated sludge and subsoil. Sediments and soil contain fluoride, asbestos, PAHs, and arsenic. Fewer than 20 homes and businesses are located in the vicinity of the site. The nearest residence is located approximately ¼ mile from the site. Groundwater provides drinking water to 14,000 people in The Dalles and Chenoweth. The wells in the immediate vicinity are also used for industrial purposes. Because the site is located within the Columbia River flood plain, flooding could have potentially affected groundwater flow patterns and contaminant distribution.

Cleanup Progress: Removed from NPL

In 1988, the EPA selected a two-stage cleanup. The first stage of the cleanup, completed in 1990 by the potentially responsible parties under an EPA Consent Decree, consisted of: excavating the cathode waste material and placing it into the existing landfill; installing a soil cap over scrubber sludge ponds 2 and 3; and groundwater monitoring. The second stage was completed in 1991 by the PRPs, also under an EPA consent decree, and included: capping the landfill; collecting and treating on-site landfill leachate and groundwater; plugging and abandoning nearby production wells and connecting groundwater users to the City of The Dalles water supply system; establishing a contingency plan to recover groundwater in the event further contamination is detected; and implementing site deed restrictions or fencing following the cleanup. In early 1992, Martin Marietta, the major site PRP, informed the EPA of a problem with the remedy. There was an excessive amount of water in the leachate collection system around the landfill. The PRPs conducted several studies and construction activities around the landfill in 1992 and 1993 which determined that 1) the cap was operating as designed, and was not allowing surface water into the landfill; and 2) the water in the leachate collection system was infiltrating in from the fractured bedrock beneath the landfill. As a result in early 1995, Martin Marietta upgraded the leachate treatment system to accommodate additional volume over the long term. The PRPs continue to

operate and maintain the leachate collection and treatment system.

The site was deleted from the NPL on July 5, 1996.

**McCormick and Baxter Creosoting Co.**  
**Multnomah County, Portland, Oregon**

**Congressional District: 03**  
**Listing: 05/31/94**

State Lead (activities conducted under the authority of the Department of Environmental Quality)

**Site Background:**

The McCormick and Baxter site is a former wood treatment facility located on the Willamette River in Portland, Oregon. The site encompasses approximately 43 acres on land and 15 acres in the river. Wood treatment operations were conducted on the site between 1944 and 1991. Wood treating products used at the site include creosote/diesel oil mixtures, pentachlorophenol (PCP)/diesel oil mixtures, and a variety of water- and ammonia-based solutions containing arsenic, chromium, copper, and zinc. Between 1945 and 1969, waste water and non-contact cooling water were discharged directly into the Willamette River. Prior to 1971, boiler water, storm water, and oily wastes were disposed of in the western portion of the site. The facility ceased wood treating operations in 1991. Approximately 4,500 people live within one square mile of the site. The City of Portland recently purchased 27 acres immediately north of the site for a greenway.

On-site soils are contaminated with heavy metals, polyaromatic hydrocarbons (PAHs), and PCP to a depth of 80 feet; shallow groundwater is contaminated with pure product in the form of light and dense non-aqueous phase liquid (NAPL); migration of site contaminants has contaminated Willamette River sediments to a depth of 35 feet.

**Cleanup Progress: Cleanup in Progress**

The site is a state-lead cleanup and is being funded under a Cooperative Agreement between the Oregon Department of Environmental Quality (ODEQ) and EPA.

**Early Actions:** ODEQ conducted early actions at the site in 1994. These actions included excavation and off-site disposal of site structures, including retorts and buildings; disposal of wood-treating process waste; treatment of stormwater collected from retort sumps; installation of NAPL extraction wells; recovery of NAPL and treatment of NAPL-contaminated groundwater.

**Long-term Actions:** The final site remedy, selected in April 1996, includes enhancements to the NAPL extraction/treatment system, on-site soil treatment and/or a soil cap over the entire site, and a sediment cap. ODEQ is currently designing the final remedy and construction activities are expected to begin in 1998.



**Northwest Pipe and Casing Co.**  
**Clackamas County, Clackamas, Oregon**

**Congressional District: 05**  
**Listing: 10/14/92**

**Site Background:**

The Northwest Pipe and Casing Company is 53 acres in size and located in an industrial park in Clackamas, Oregon. Pipe manufacturing and coating operations were conducted at the site from 1956 to 1985. Waste disposal activities included using trenches and pits to bury drums, wastes, coal tars, ashes from open burning and spills. Groundwater, surface water and on-site sediments are contaminated with polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and polyaromatic hydrocarbons (PAHs). On-site surface water flows into the Willamette River, which is used for fishing. Wetlands and endangered species are found along this river. Private and municipal wells within 4 miles of the site supply drinking water to an estimated 6,100 people; the nearest of these wells is within a mile of the site. Approximately 5,200 people reside within a mile of the site.

**Cleanup Progress: Threat Mitigated, Investigation Underway**

**Early Actions:** In the fall of 1993, EPA took an early action, that included the demolition of on-site buildings, and constructed a fence to prevent public contact with materials on the site.

**Long-term Actions:** In 1996 EPA initiated the Remedial Investigation and Feasibility Study (RI/FS), to determine the nature and extent of contamination at the site. The EPA expects that the RI/FS will be completed in 1998.

**Reynolds Metals**  
**Multnomah County, Troutdale, Oregon**

**Congressional District: 03**  
**Listing: 12/16/94**

**Site Background:**

The Reynolds Metals site is a primary aluminum reduction plant where alumina from bauxite ore is converted to aluminum. The site includes the 80-acre plant area and approximately 700 acres surrounding the plant currently owned by Reynolds Metals. The facility is located approximately 1 1/4 miles north of the city of Troutdale, Oregon, and is bordered by the Columbia River to the north and the Sandy River to the east. The United States government built the plant in 1941 to support its war-time operations. Reynolds first leased the plant from the government in 1946, and purchased it three years later. Large quantities of wastes were generated by the plant during the production of aluminum. Operations at the plant ceased in November 1991. The current operation is limited to casting ingots from molten aluminum transported from the Reynolds reduction plant in Longview, Washington. Currently, about 100 employees maintain and administer the facility, including security. The City of Troutdale airport is south of the plant, and the area to the west is a mix of undeveloped/farm land and commercial facilities.

EPA sampling has detected elevated levels of fluoride, cyanide, polynuclear aromatic hydrocarbons (PAHs), and metals in the soil, sediment, and groundwater at the facility.

Cleanup Progress: Threat Mitigated, Investigation Underway

The Reynolds Metals cleanup is being addressed in two phases: early and long-term actions.

Early Actions: Under a September 1995 Consent Order with EPA Reynolds Metals completed six early actions during 1995 and 1996. These actions addressed the following areas:

Cryolite ponds: 13,900 tons of cryolite, a production waste with high levels of fluoride, were excavated and disposed off site.

East potliner area: 11,000 tons of spent potliner, a production waste with high fluoride, cyanide, and PAHs, were excavated and disposed off site.

PCB spill area: 580 tons of PCB-contaminated dust, soil, and debris from inside and outside the cashouse were removed and disposed off site.

Diesel spill area: 2,600 tons of contaminated soil were excavated and disposed off site.

Bakehouse sumps: 21 dewatering sumps contaminated with fluoride, cyanide, and PAHs were cleaned, and surface water runoff was redirected to prevent further contamination.

Production wells: 7 out of 18 deep wells no longer in use were decommissioned.

Long-term Actions: Under the same Consent Order, Reynolds Metals is conducting the Remedial

Investigation and Feasibility Study (RI/FS) at the site. The RI/FS is focusing on groundwater, soil and debris areas, wastewater discharge areas, and surface water and sediments. Groundwater monitoring wells have been installed and quarterly sampling of the wells is underway. The RI/FS should be completed by 1999.

**Teledyne Wah Chang**  
**Linn County, Millersburg, Oregon**

**Congressional District: 05**  
**Listing: 09/8/83**

**Site Background:**

The Wah Chang plant (formerly Teledyne Wah Chang) is one of the world's largest producers of zirconium and other rare earth metals and alloys. The site is located in Millersburg, Oregon and includes two areas: a 110-acre plant; and a 115-acre area comprised of four ponds containing sludges from the plant's wastewater treatment facility, and a 60-acre field where sludges containing radium were used as a soil amendment. Production at the site began in 1957. Process wastes disposed of on the site contained radionuclides, heavy metals, and chlorinated solvents. Solids generated from the process wastewater treatment system have been stored in a number of surface impoundments. Until 1980, sludges were taken to seven unlined storage ponds on site, including the Lower River Solids Pond and Schmidt Lake, both located adjacent to the Willamette River. Approximately 20,000 people live within 3 miles of the site. About 1,100 employees currently work on site; as many as 2,000 people were previously employed at the plant. The Willamette River, Truax Creek, and Murder Creeks border the facility and are used for recreational activities, irrigation, watering of livestock, and fishing. Municipalities downstream from the site do not use the Willamette River as a drinking water source.

On-site sludge was contaminated with thorium, uranium, radium, and heavy metals. Creek sediments are contaminated with polychlorinated biphenyls (PCBs). Shallow groundwater is contaminated with volatile organic compounds (VOCs), radium, and heavy metals.

**Cleanup Progress:** Threat Mitigated, Construction Underway

**Early Actions:** The Solids Area was addressed as an early action prior to the completion of the remedial investigation. In 1990 EPA selected a remedy for cleanup of the sludges which included removing approximately 110,000 cubic yards of sludges from the Lower River Solids Pond and Schmidt Lake, solidifying the sludges, and removing the mixture to a permitted off-site disposal facility. Cleanup activities were initiated by Teledyne under an EPA Administrative Order in 1991, and were completed in 1993.

**Long-term Actions:** Groundwater/Sediments/Soils: Wah Chang, under an Administrative Order, completed the remedial investigation in 1995. EPA selected a remedy for groundwater and sediments in 1994. The selected remedy called for pumping and treating contaminated groundwater, and excavation and disposal of PCB-contaminated sediments. The remedy for soils, selected in 1995, included excavation of radium-contaminated soils, and institutional controls to mitigate risk from radon. Wah Chang began to design the remedy for groundwater, sediment, and soil in 1997 under an EPA Consent Decree.

**Umatilla Army Depot (Lagoons)**  
**Umatilla County, Hermiston, Oregon**

**Congressional District: 02**  
**Listing: 07/22/87**

Site Background:

The Umatilla Army Depot site occupies about 20,000 acres in Hermiston, Oregon, and has operated as a storage depot for conventional munitions and chemical warfare agents since 1941. Areas of the site were contaminated with explosives and metals as a result of past demilitarization and disposal operations. About 85 million gallons of wastewater from explosive washout operations were discharged into two unlined lagoons from the 1950s to 1965. The lagoons cover about 1/2 acre. A groundwater contaminant plume is estimated to cover 350 acres. Access to the site is restricted. There are about 100 people living at the post, and approximately 900 people live within 3 miles of the site. The nearest drinking water well is located about 6,500 feet from the disposal area. Commercial agriculture is conducted within the vicinity of the depot, and crops are irrigated with area groundwater.

On-site groundwater and soil are contaminated with explosives including trinitrotoluene (TNT) and cyclonite. The soil also contains heavy metals such as lead, cadmium and barium.

Cleanup Progress: Cleanup in Progress

The site is being addressed through seven long-term cleanup actions addressing the cleanup of the following Work Areas: Work Area 1-Deactivation Furnace; Work Area 2-Washout Lagoons Soils; Work Area 3-Active and Inactive Landfills; Work Area 4-Washout Lagoons Groundwater; Work Area 5-Explosives Washout Plant; Work Area 6-Ammunition Demolition Activity; and Work Area 7-Miscellaneous Areas.

A site-wide Remedial Investigation and Feasibility Study (RI/FS) to determine the nature and extent of contamination at the site was completed by the Army in 1992. Remedies were selected for all seven specified Work Areas by the summer of 1994. Information on each is provided below.

**Work Area 1-Deactivation Furnace:** The remedy was selected in December 1992, which included on-site solidification/stabilization of 6,000 tons of lead-contaminated soil. Treatment residues were placed in the on-site Active Landfill. Construction activities were completed by the Army in 1996.

**Work Area 2-Washout Lagoons Soils:** The remedy was selected in September 1992. It included on-site bioremediation (composting) of 15,000 tons of explosives- contaminated soils. Treatment residues will be backfilled on site. The Army completed construction activities in the fall of 1996.

**Work Area 3-Active and Inactive Landfills:** After completing investigations at both the active and inactive landfills, it was determined that they pose no risks to public health or the environment. No further action was selected in August 1993.

**Work Area 4-Washout Lagoons Groundwater:** The remedy was selected in July 1994. It included

a groundwater pump and treat system that uses granular activated carbon (GAC) to reduce the level of contamination in a 350-acre explosives-contaminated groundwater plume. The Army completed construction of and began operating the 1500-gallon per minute system in early 1997. Explosives-laden GAC is treated by off-site thermal regeneration. The system reinjects clean groundwater at the site, and its operation is estimated to be necessary for 27 years.

**Work Area 5-Explosives Washout Plant:** The washout plant posed a hazard due to potentially reactive quantities of explosives that remained in the process equipment, and residue of explosives within the building. Under those existing conditions, the building was unstable. The remedy, selected in July 1994, included steam cleaning, treating by flash flaming, and demolishing the building. These activities were completed by the Army in 1996.

**Work Area 6-Ammunition Demolition Activity Area:** The remedy, selected in July 1994, included excavation, solidification/ stabilization, and on-site landfill disposal of 30,000 tons of soil contaminated with metals and explosives, off-site removal of unexploded ordnance (UXO), and implementation of institutional controls to prevent public access to the area. In early 1997, surface clearance of UXO was completed and treatment of soils is nearing completion. Additional work will be conducted to map subsurface UXO. All work is being performed by the Army.

**Work Area 7-Miscellaneous Areas:** The remedy, selected in July 1994, also addressed several remaining areas where soils were contaminated with metals. The remedy included, excavation, solidification/stabilization, and on-site landfill disposal of 400 tons of metals- contaminated soil. These construction activities were completed by the Army in 1996.

**Union Pacific Railroad Company Tie Treating Plant  
Wasco County, The Dalles, Oregon**

**Congressional District: 02  
Listing: 08/30/90**

State Lead (activities conducted under the authority of the Department of Environmental Quality)

Site Background:

The Union Pacific Railroad Co. Tie Treating Plant site covers 83 acres in a mixed commercial and residential area approximately 500 feet south of the Columbia River in Wasco County, The Dalles, Oregon. Union Pacific owned the wood treatment facility from 1926 until late 1987, when equipment and structures were purchased by Kerr-McGee Chemical Corporation. However, Union Pacific retained ownership of the land and responsibility for all pre-1987 contamination of soil and groundwater. The plant primarily treated railroad ties for Union Pacific, but also treated wood for other commercial users across the United States. From 1959 to 1987, J. H. Baxter Co. operated the plant for Union Pacific. The facility treated wood with copper arsenate, creosote, a creosote/fuel mixture, and pentachlorophenol. Spills of treatment solutions and wastewater ponds in use were the main sources of contamination. Groundwater is used by over 11,000 people located within 3 miles of the site. The City of The Dalles has increased its monitoring of municipal water supply wells.

The groundwater and soils contain creosote components, polychlorinated phenols, fuel oil, ammonia, and arsenic. Contamination by arsenic and volatile organic compounds is greatest in the shallow and intermediate aquifers beneath the site. Deep groundwater aquifers contain phenanthrene and naphthalene.

Cleanup Progress: Remedy Selected

**Early Actions:** A small area contaminated with creosote was found on the shoreline of the Columbia River in early 1991. As a temporary control measure, and under a State Consent Order, Union Pacific covered the contaminated soil with a heavy synthetic liner.

**Long-term Actions:** Union Pacific, under a Consent Order with the State of Oregon, has completed an investigation to determine the nature and extent of contamination at the site. The State selected a site remedy in 1996. The final remedy consists of product removal, groundwater extraction and treatment, soil vapor extraction and treatment, and surface drainage controls. The remedy is currently being designed by Union Pacific. Construction is expected to start in 1997.

**United Chrome**  
**Benton County, Corvallis, Oregon**

**Congressional District: 05**  
**Listing: 09/21/84**

**Site Background:**

The 2 1/2-acre United Chrome Products, Inc. site is a former chrome plating facility located in an industrial complex adjacent to the Corvallis Municipal Airport, 3 1/2 miles south of the City of Corvallis, Oregon. The company conducted electroplating operations from 1956 to 1985. Plating wastes were discharged into a dry well. The indoor plating tanks leaked plating solution directly to subsurface soils. Groundwater, surface water, sediments and on-site soils were contaminated with chromium. Approximately 42,000 people live within 3 miles of the site. The closest residence is approximately 900 feet northeast of the site. Corvallis obtains some of its water from the Willamette River, which formerly received drainage from ditches and surface water from the site.

**Cleanup Progress: Construction Completed**

**Early Actions:** In 1985, EPA removed 8,000 gallons of chrome-contaminated liquids and 11,000 pounds of hazardous waste off site for disposal.

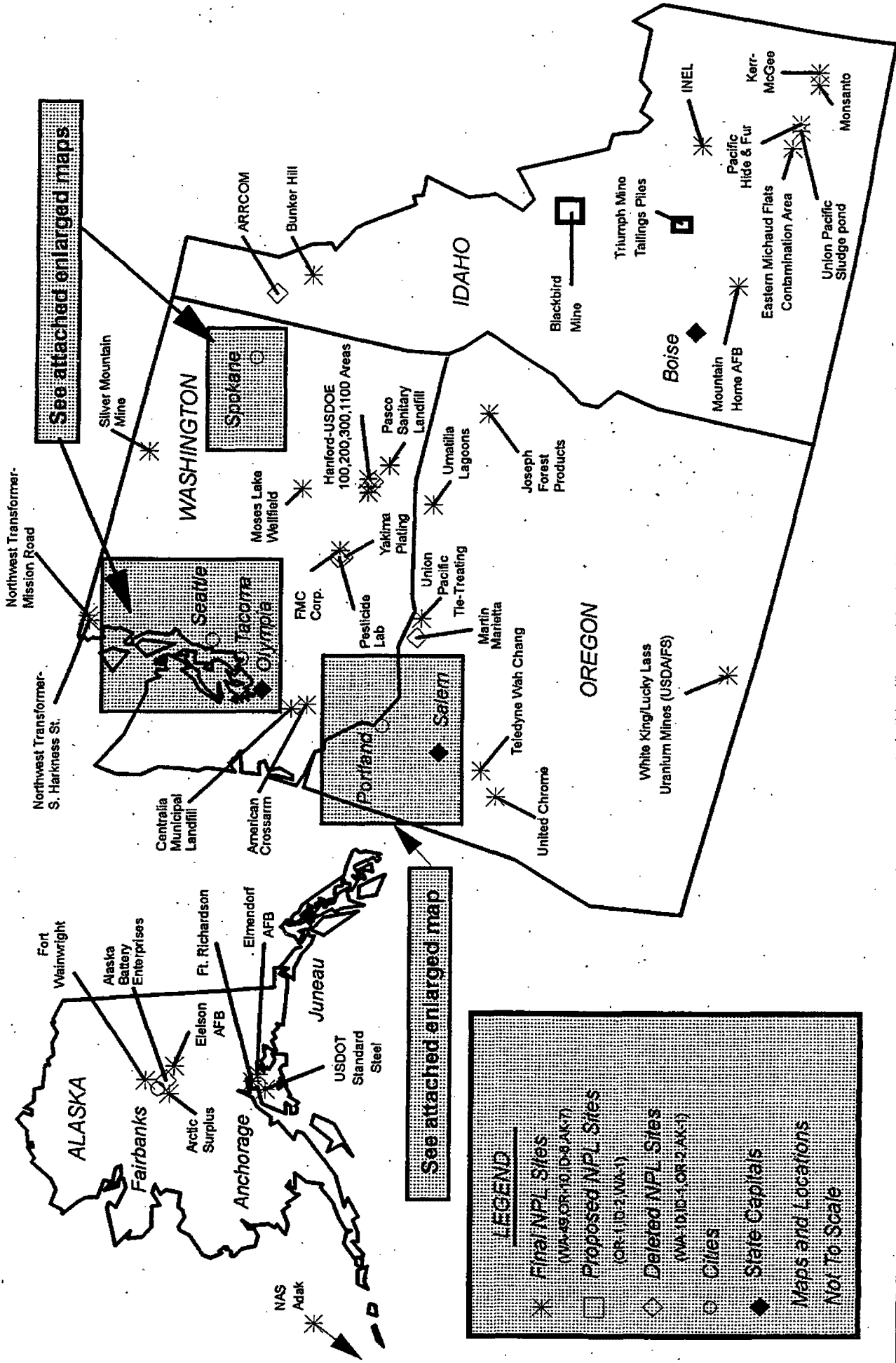
**Long-term Actions:** After conducting an investigation to determine the nature and extent of contamination at the site, EPA selected a final remedy in September 1986. The remedy was implemented in 1988, which included the installation of a groundwater extraction and treatment system and demolition of buildings. Chromium contamination in groundwater has decreased significantly. In December 1991 EPA issued an Explanation of Significant Differences (ESD) to the 1986 Record of Decision. The ESD modified the groundwater cleanup levels and included the off-site treatment of extracted groundwater by the publicly owned treatment works (POTW). EPA expects the target cleanup levels to be achieved in 1998.

The City of Corvallis, the owner of the site, signed a Consent Decree in 1992 for partial reimbursement of EPA's past response costs and for operation of the groundwater extraction system.





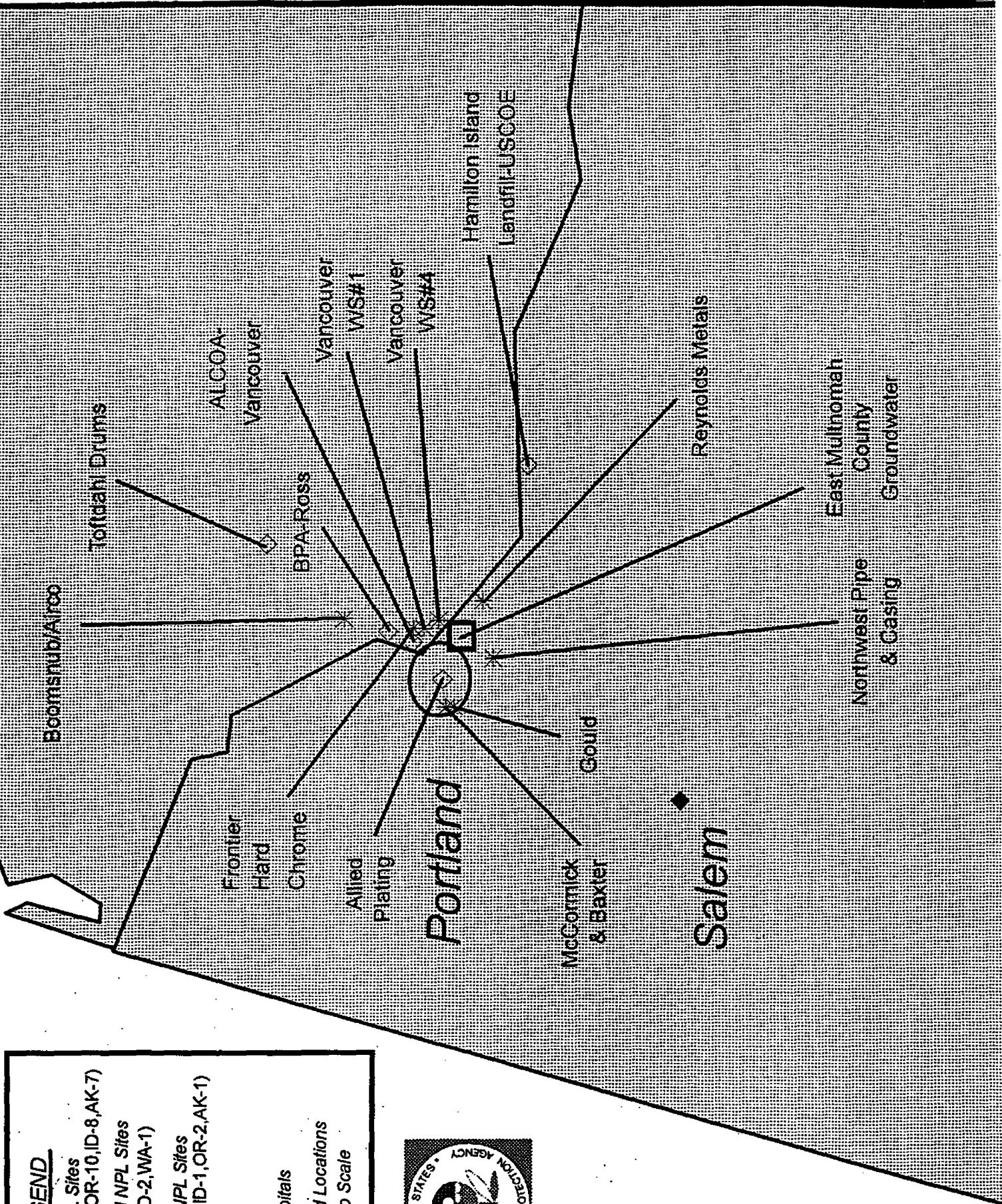
# Superfund Sites in the Pacific Northwest EPA REGION 10 As of 4/1/97

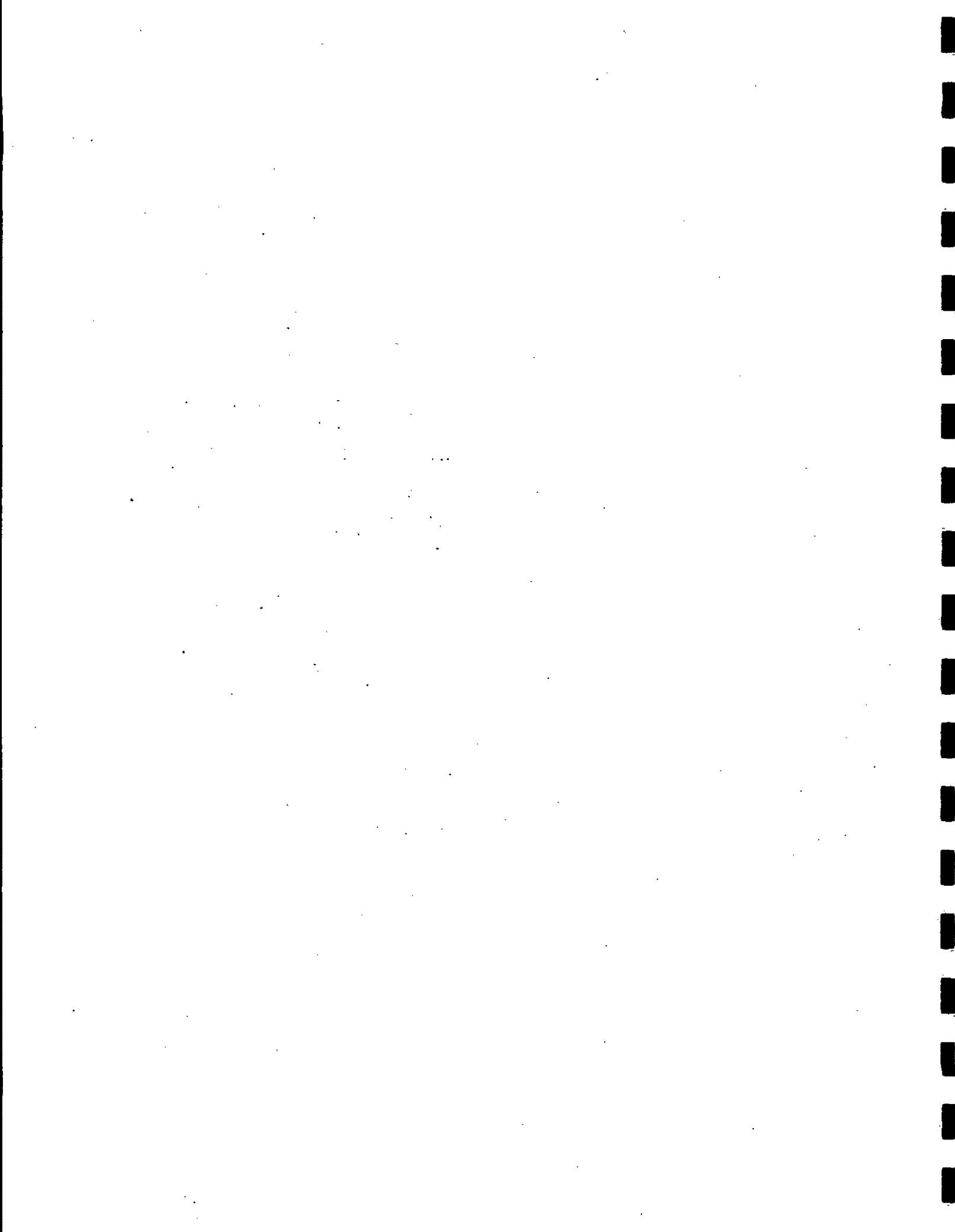




# LEGEND

- \* Final NPL Sites  
(WA-49,OR-10,ID-8,AK-7)
  - Proposed NPL Sites  
(OR-1,ID-2,WA-1)
  - ◇ Deleted NPL Sites  
(WA-10,ID-1,OR-2,AK-1)
  - Cities
  - ◆ State Capitals
- Maps and Locations  
Not To Scale



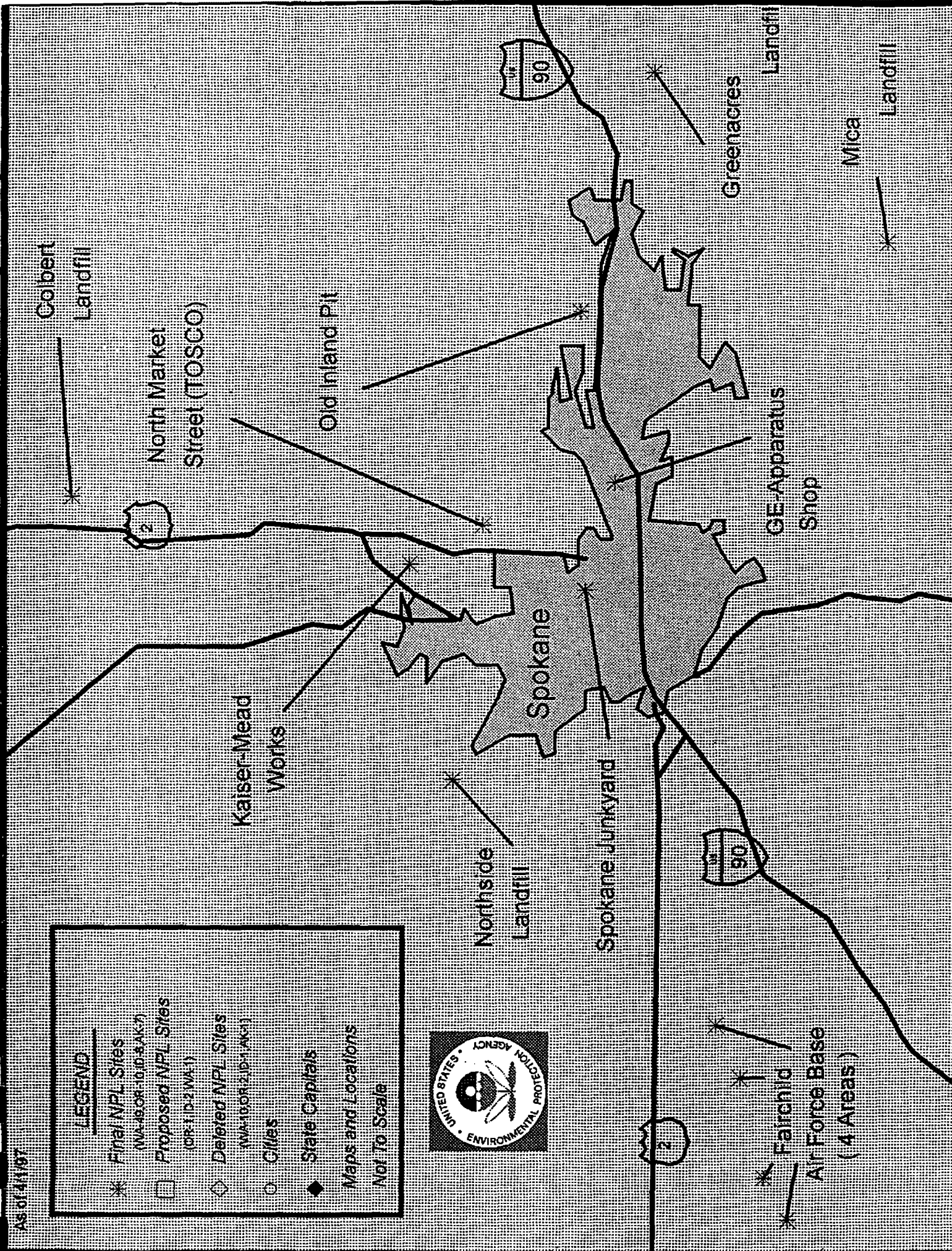


AS of 4/1/97

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Maps and Locations  
Not To Scale







As of 4/1/97

Deser. Co.

NAS-Whidbey  
Ault Field

NAS-Whidbey  
Seaplane Base

Port Hadlock  
Detachment (USN)

USN Bangor  
(Rest of Base)

USN Bangor  
(Site A)

NUWES  
Keyport

Jackson Park  
Housing (USN)

Puget Sound  
Naval  
Shipyard

Old Navy Dump  
Manchester  
(EPA/NCAA)

Tutillp Landfill

Wyckoff/Eagle Harbor

Pacific Sound Resources (Wyckoff)

Harbor Island

PACCAR-Renton

Western  
Processing

Queen  
City  
Farms

Midway  
Landfill

Kent-Highlands  
Landfill

Commencement Bay  
Nearshore/Tideflats

Commencement Bay  
S. Tacoma Channel

Ponders  
Corner

McChord AFB  
Washrack/Treatment

American Lake Gardens

Ft. Lewis Logistic Center

Ft. Lewis Landfill #5

Palermo Groundwater  
Contamination

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Maps and Locations

Not To Scale



