



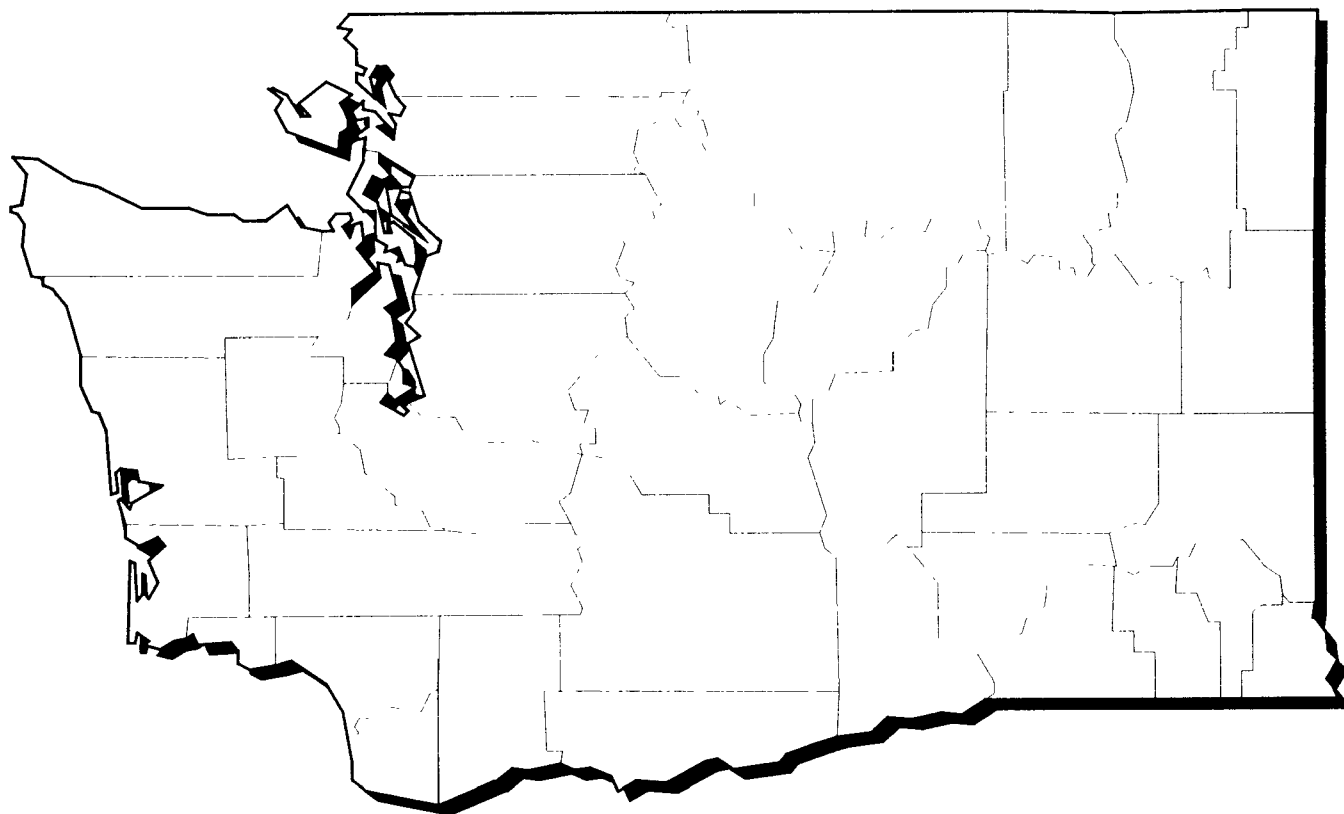
United States
Environmental Protection
Agency

Solid Waste And
Emergency Response
(5201 G)

EPA/540/R-95/117 L
PB95-962949
9200.5-746C
May 1995

SUPERFUND:

Progress at
National
Priority
List Sites



WASHINGTON 1995 UPDATE



Printed on Recycled Paper

How to Use the NPL Book

CLC #31-070

The site fact sheets presented in this book are comprehensive summaries that cover a broad range of information. The fact sheets describe hazardous waste sites on the NPL and their locations, as well as the conditions leading to their listing ("Site Description"). The summaries list the types of contaminants that have been discovered and related threats to public and ecological health ("Threats and Contaminants"). "Cleanup Approach" presents an overview of the cleanup activities completed, underway, or planned. The fact sheets conclude with a brief synopsis of how much progress has been made in protecting public health and the environment. The

summaries also pinpoint other actions, such as legal efforts to involve polluters responsible for site contamination and community concerns.

The fact sheets are arranged in alphabetical order by site name. Because site cleanup is a dynamic and gradual process, all site information is accurate as of the date shown on the bottom of each page. Progress is always being made at NPL sites, and the EPA periodically will update the site fact sheets to reflect recent actions. The following two pages show a generic fact sheet and briefly describe the information under each section.

How Can You Use This State Book?

You can use this book to keep informed about the sites that concern you, particularly ones close to home. The EPA is committed to involving the public in the decision making process associated with hazardous waste cleanup. The Agency solicits input from area residents in communities affected by Superfund sites. Citizens are likely to be affected not only by hazardous site conditions, but also by the remedies that combat them. Site cleanups take many forms and can affect communities in different ways. Local traffic may be rerouted, residents may be relocated, temporary water supplies may be necessary.

Definitive information on a site can help citizens sift through alternatives and make decisions. To make good choices, you must know what the threats are and how the EPA

intends to clean up the site. You must understand the cleanup alternatives being proposed for site cleanup and how residents may be affected by each one. You also need to have some idea of how your community intends to use the site in the future, and you need to know what the community can realistically expect once the cleanup is complete.

The EPA wants to develop cleanup methods that meet community needs, but the Agency only can take local concerns into account if it understands what they are. Information must travel both ways in order for cleanups to be effective and satisfactory. Please take this opportunity to learn more, become involved, and assure that hazardous waste cleanup at "your" site considers your community's concerns.

Provides the dates when the site was Proposed, made Final, and Deleted from the NPL.

Identifies the Federal, State, and/or potentially responsible parties taking responsibility for cleanup actions at the site.

Summarizes the actions to reduce the threats to nearby residents and the surrounding environment and the progress towards cleaning up the site.

Other Names:

[illegible]

XXXXXXXX XX XXXXX XXXXXXXXXXXXXXXX
XXXXXXXX XXXXXXXXXXX XXXXXXXXX
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Proposed: XX/XX/XX
Final: XX/XX/XX



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A line graph with a vertical y-axis and a horizontal x-axis. The y-axis has five horizontal grid lines, and the x-axis has five vertical grid lines. A line starts at the origin (0,0), rises to the first grid line, dips slightly, then rises steadily to the top of the graph (5,5).

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Lists the location of the primary site repository. The site repository may include community relations plans, public meeting announcements and minutes, fact sheets, press releases, and other site-related documents.

A

SITE DESCRIPTION

This section describes the location and history of the site. It includes descriptions of the most recent activities and past actions at the site that have contributed to the contamination. Population estimates, land usages, and nearby resources give readers background on the local setting surrounding the site.

B

THREATS AND CONTAMINANTS

The major chemical categories of site contamination are noted, as well as which environmental resources are affected. Icons representing each of the affected resources (may include air, groundwater, surface water, soil, and contamination to environmentally sensitive areas) are included in the margins of this section. Potential threats to residents and the surrounding environments arising from the site contamination also are described.

C

CLEANUP APPROACH

This section contains a brief overview of how the site is being cleaned up.

D

RESPONSE ACTION STATUS

Specific actions that have been accomplished or will be undertaken to clean up the site are described here. Cleanup activities at NPL sites are divided into separate phases, depending on the complexity and required actions at the site. Two major types of cleanup activities often are described: initial, immediate, or emergency actions to quickly remove or reduce imminent threats to the community and surrounding areas; and long-term remedial phases directed at final cleanup at the site. Each stage of the cleanup strategy is presented in this section of the summary. Icons representing the stage of the cleanup process (initial actions, site investigations, EPA selection of the cleanup remedy, engineering design phase, cleanup activities underway, and completed cleanup) are located in the margin next to each activity description.

E

SITE FACTS

Additional information on activities and events at the site are included in this section. Often details on legal or administrative actions taken by the EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

Guide to the NPL Book Icons

The “icons,” or symbols, accompanying the text allow the reader to see at a glance which environmental resources are affected and the status of cleanup activities at the site.

Icons in the Threats and Contaminants Section



Contaminated *Groundwater* resources in the vicinity or underlying the site. (Groundwater is often used as a drinking water source.)



Contaminated *Surface Water and Sediments* on or near the site. (These include lakes, ponds, streams, and rivers.)



Contaminated *Air* in the vicinity of the site. (Air pollution usually is periodic and involves contaminated dust particles or hazardous gas emissions.)



Contaminated *Soil and Sludges* on or near the site. (This contamination category may include bulk or other surface hazardous wastes found on the site.)



Threatened or contaminated *Environmentally Sensitive Areas* in the vicinity of the site. (Examples include wetlands and coastal areas or critical habitats.)

Icons in the Response Action Status Section



Initial, Immediate, or Emergency Actions have been taken or are underway to eliminate immediate threats at the site.



Site Studies at the site to determine the nature and extent of contamination are planned or underway.



Remedy Selected indicates that site investigations have been concluded, and the EPA has selected a final cleanup remedy for the site or part of the site.



Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.



Cleanup Ongoing indicates that the selected cleanup remedies for the contaminated site, or part of the site, currently are underway.



Cleanup Complete shows that all cleanup goals have been achieved for the contaminated site or part of the site.

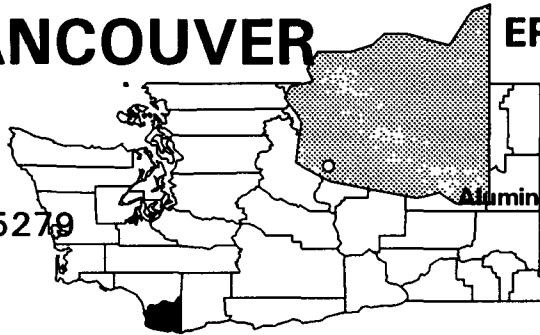
EPA ID**Number****Site Name**

WAD009045279 ALCOA (VANCOUVER SMELTER)
WAD057311094 AMERICAN CROSSARM & CONDUIT CO.
WAD980833065 AMERICAN LAKE GARDENS
WA5170027291 BANGOR NAVAL SUBMARINE BASE
WA7170027265 BANGOR ORDNANCE DISPOSAL
WA1891406349 BONNEVILLE POWER ADMINISTRATION ROSS COMPLEX (USDOE)
WAD00962445 BOOMSNUB/AIRCO
WAD980836662 CENTRALIA MUNICIPAL LANDFILL
WAD980514541 COLBERT LANDFILL
WAD980726368 COMMENCEMENT BAY, NEAR SHORE/TIDE FLATS
WAD980726301 COMMENCEMENT BAY, SOUTH TACOMA CHANNEL
WA9571924647 FAIRCHILD AIR FORCE BASE (4 WASTE AREAS)
WAD000643577 FMC CORP. (YAKIMA PIT)
WA9214053465 FORT LEWIS (LANDFILL NO. 5)
WA7210090067 FORT LEWIS LOGISTICS CENTER
WAD053614988 FRONTIER HARD CHROME, INC.
WAD001865450 GENERAL ELECTRIC CO. (SPOKANE SHOP)
WAD980514608 GREENACRES LANDFILL
WA5210890096 HAMILTON ISLAND LANDFILL (USA/COE)
WA3890090076 HANFORD 100-AREA (USDOE)
WA4890090075 HANFORD 1100-AREA (USDOE)
WA1890090078 HANFORD 200-AREA (USDOE)
WA2890090077 HANFORD 300-AREA (USDOE)
WAD980722839 HARBOR ISLAND (LEAD)
WAD980511539 HIDDEN VALLEY LANDFILL (THUN FIELD)
WA3170090044 JACKSON PARK HOUSING COMPLEX (USNAVY)
WAD000065508 KAISER ALUMINUM MEAD WORKS
WAD050075662 LAKEWOOD SITE
WA8570024200 MCCHORD AIR FORCE BASE (WASH RACK/TREAT)
WAD980511661 MICA LANDFILL
WAD980638910 MIDWAY LANDFILL
WAD988466355 MOSES LAKE WELLFIELD CONTAMINATION
WA5170090059 NAVAL AIR STATION, WHIDBEY ISLAND (AULT)
WA6170090058 NAVAL AIR STATION, WHIDBEY ISLAND (SEAPLANE)
WA1170023419 NAVAL UNDERSEA WARFARE STATION (4 AREAS)
WAD000641548 NORTH MARKET STREET
WAD980511778 NORTHSIDE LANDFILL
WAD027315621 NORTHWEST TRANSFORMER (SOUTH HARKNESS ST)
WAD980833974 NORTHWEST TRANSFORMER
WAD980982557 OLD INLAND PIT
WA8680030931 OLD NAVY DUMP/MANCHESTER LAB (USEPA/NOAA)
WAD009249210 PACIFIC CAR & FOUNDRY CO.
WAD009248287 PACIFIC SOUND RESOURCES
WAD991281874 PASCO SANITARY LANDFILL
WAD120513957 PESTICIDE LAB
WA4170090001 PORT HADLOCK DETACHMENT (USNAVY)
WA2170023418 PUGET SOUND NAVAL SHIPYARD COMPLEX
WAD980511745 QUEEN CITY FARMS
WAD980639462 SEATTLE MUNICIPAL LANDFILL (KENT HIGHLANDS)
WAD980722789 SILVER MOUNTAIN MINE

EPA ID Number	Site Name
WAD981767296	SPOKANE JUNKYARD/ASSOCIATED PROPERTIES
WAD980723506	TOFTDAHL DRUMS
WAD980639256	TULALIP LANDFILL
WAD988519708	VANCOUVER WATER STATION #1 CONTAMINATION
WAD988475158	VANCOUVER WATER STATION #4 CONTAMINATION
WAD009487513	WESTERN PROCESSING CO., INC.
WAD009248295	WYCKOFF CO./EAGLE HARBOR
WAD040187890	YAKIMA PLATING CO.

ALCOA (VANCOUVER SMELTER) WASHINGTON

EPA ID# WAD009045279



EPA REGION 10

Clark County
Vancouver

Other Names:
Aluminum Company of America -
Vancouver
Vanaico, Inc.

Site Description

The Aluminum Co. of America (ALCOA) began operating a primary aluminum smelter in 1940 on a 300-acre site adjacent to the Columbia River in Vancouver. In 1986, the Vancouver Aluminum Company of America (VANALCO) purchased the smelter portion of the site. About 66,000 tons of waste potlinings containing cyanide, fluoride, and heavy metals were piled on the ground from 1973 to 1980. ALCOA has been monitoring groundwater since 1979, and both ALCOA and the State have found cyanide and fluoride in wells around the piles. One of the wells provides drinking water and process water for the smelter. An estimated 50,000 people draw drinking water from public and private wells within 3 miles of the site. Groundwater also is used to irrigate about 300 acres of cropland.

Site Responsibility: The site is being addressed through State and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 02/21/90

Threats and Contaminants



The groundwater and soil are contaminated with cyanide and fluoride. Additionally, the soil contains reclaimed alumina. Contaminated groundwater and soil could pose a health risk to individuals through direct contact or accidental ingestion. There is a potential for the Columbia River to be polluted by contaminants present at the site.

Cleanup Approach

The site is being addressed through long-term cleanup.

Response Action Status



Entire Site: In 1992, the State selected a cleanup plan for the entire site which includes: excavating and removing contaminated potlining piles and reclaimed alumina for disposal at an approved hazardous waste landfill; constructing a protective cover for the areas where wastes were removed; regrading the area; installing a fence; and monitoring contaminated groundwater and the Columbia River adjacent to the facility. The groundwater will continue to be monitored until cleanup levels meet established drinking water standards.

Site Facts: In March 1992, the Washington Department of Ecology signed a Consent Decree with EPA to conduct site cleanup activities. Alcoa completed cleanup activities in December of 1992.

Environmental Progress



By completing cleanup of the source of site contamination, the threat to people and the environment from contaminated soil has been eliminated. Groundwater monitoring will continue until established cleanup levels are met.

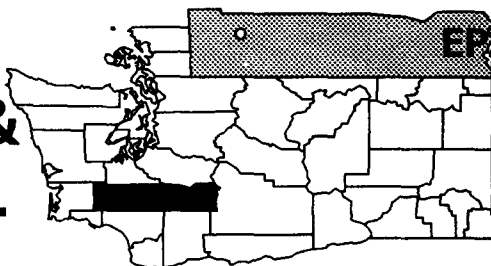
Site Repository



Washington Department of Ecology, Industrial Section, 300 Desmond Drive, Lacey, WA 98503.

AMERICAN CROSSARM & CONDUIT CO. WASHINGTON

EPA ID# WAD057311094



EPA REGION 10

Lewis County
Chehalis

Site Description

The American Crossarm & Conduit Company site is located on 16 acres of land in Chehalis. The site consists of a wood treatment facility, a factory, a cooling shed, drying kilns, and an impoundment for surface runoff and wastewater. Crossarm began operations in 1948, primarily as a treatment facility for utility pole crossarms. Originally, the crossarms were pressure-treated with creosote. Later, the process used pentachlorophenol (PCP). Beginning in 1952, Crossarm deposited solid waste on the property just south of the factory area. In 1983, wood treatment activities ceased. During a flood in 1986, waters from the nearby Chehalis River flowed onto the site and were contaminated with PCP and diesel fuel. Residential and commercial neighborhoods to the north and the northeast were affected by the contamination transported by the flood. A fire in 1987 left some of the kilns exposed. After 1987, the site was operated as a salvage yard, storing cars and other machinery in the old factory. The site now is unoccupied. Apartment buildings are located on part of the property of the former wood treatment facility. Approximately 200 homes are located in residential neighborhoods to the northeast and east of the facility. A softball field is adjacent to the eastern boundary of the site. Approximately 500 feet away is Dillenbaugh Creek, which empties into the Chehalis River less than a mile downstream from the site. A stormwater runoff lagoon, contaminated by Crossarm activities, is a backwater associated with Dillenbaugh Creek.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



The groundwater, soil, and sediments are contaminated with PCP and creosote. Soil also contains dioxins. Accidental ingestion of or direct contact with the contaminated groundwater and soil could pose a health threat. Some concern has been expressed about the possibility that fish in Dillenbaugh Creek may be affected by contaminants leaving the site.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Early Actions: In 1988 and 1989, the EPA incinerated approximately 900 tons of material contaminated with PCP using a mobile incinerator. The EPA also fenced portions of the site to restrict access, due to the safety hazard presented by the structures and hazardous substances on site. In 1992, the EPA temporarily relocated 426 bags of ash and 65 drums of sludge from the incineration until they could be properly disposed of; installed a security fence around the relocation area; decontaminated and scrapped drums, empty tanks, and piping; removed and disposed of asbestos-covered piping and PCB-contaminated concrete to an approved facility; and demolished the wood-treating building and a concrete structure and relocated them to another portion of the site or disposed of them at an approved facility.



Entire Site: In 1992, the EPA completed its investigation at the site to evaluate existing contamination and the extent of the problem. The investigation included a study of the soil on and off the site. Cleanup began in the fall of 1994 and includes: excavating contaminated soils; demolishing all structures at the former American Crossarm & Conduit facility; cleaning the stormwater discharge lagoon and sewer pipe of contaminated sediments; relining the sewer pipe; removing floating oil on the groundwater beneath the site; consolidating and treating the oil (if required); consolidating incinerator ash remaining at the site with the excavated soils from the Chehalis Avenue excavations and using ash to backfill the excavated areas on the American Crossarm & Conduit facility; covering the soil/ash with clean fill; monitoring groundwater; and placing land use limitations on the facility and implementing deed restrictions as necessary. Cleanup activities are underway and scheduled for completion in late 1996.

Site Facts: In 1986, the State issued an order requiring the company to stop discharging wastewater to the sewer, investigate all tanks and sumps, and install secondary containment around all tanks and sumps.

Environmental Progress



By incinerating 900 tons of contaminated material, fencing the site, and conducting further emergency actions in 1992, the EPA has reduced the potential of direct contact with contaminants at the American Crossarm site while final cleanup activities are underway.

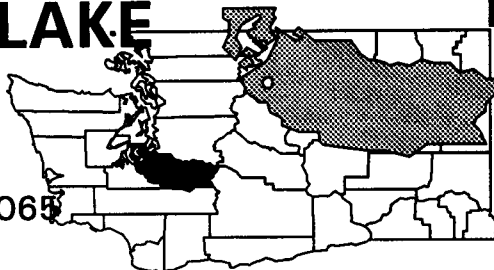
Site Repository



Timberland Regional Library, Chehalis Branch, 76 Northeast Park Street, Chehalis, WA 98532

AMERICAN LAKE GARDENS WASHINGTON

EPA ID# WAD980833065



EPA REGION 10

Pierce County
Tacoma

Other Names:
McChord AFB Area "D"

Site Description

The American Lake Gardens site occupies approximately 1/2 square mile in a semi-rural residential community in Tacoma and is surrounded by McChord Air Force Base and Fort Lewis Military Reservation. In 1983, a resident complained to the EPA about family health problems believed to have been caused by drinking contaminated water. The EPA and the Tacoma-Pierce County Health Department sampled nearby drinking water wells and found high levels of metals and volatile organic compounds (VOCs). Contamination is believed to be coming from Area D of McChord Air Force Base, which contains former landfills now covered by an on-base golf course. American Lake Gardens is a residential area with a population of 3,000. There are two schools near the site. Residences with private wells were connected to an alternate water supply as part of an interim action. McChord Air Force Base has two sites listed on the NPL.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



The shallow groundwater is contaminated with VOCs, including trichloroethylene (TCE), and dichloroethylene (DCE). Contaminated shallow groundwater poses a threat to individuals through direct contact or accidental ingestion. Base drinking water is not threatened, as it is pumped from a deeper groundwater source. American Lake has the potential to become polluted from the contaminants found on the site, but presently shows no sign of contamination.

Cleanup Approach

Response Action Status



Early Actions: In 1985, the EPA drilled and sampled eight monitoring wells in American Lake Gardens and sampled three monitoring wells constructed by the Air Force on adjacent property. The laboratory results showed contamination of the shallow groundwater wells to be coming from McChord Air Force Base. The Air Force provided bottled water to the residents of American Lake Gardens affected by well contamination. Later, all American Lake Gardens residences were connected to the public water supplies at the Air Force's expense.



Entire Site: In 1991, the Air Force completed an investigation of the nature and extent of contamination at the site. The Air Force selected a remedy that involves pumping groundwater to keep the contamination from spreading, treating the extracted groundwater by carbon adsorption, flushing treated water into deeper zones to push contaminated water out, long-term monitoring, and controlling future use of groundwater through deed restrictions. Construction of the groundwater treatment system was completed in 1993 and is currently operating. Connection to public water supplies will continue to be offered until cleanup is complete.

Site Facts: McChord Air Force Base is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



All construction at the site is complete. Providing alternate water supplies to the residents of American Lake Gardens has reduced the threat of exposure to contaminated groundwater while treatment is underway.

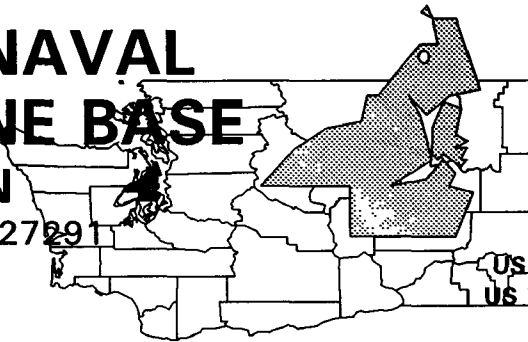
Site Repository



McChord Air Force Base Library, Building 765, 62 CSG/SS1, Tacoma, WA 98438

BANGOR NAVAL SUBMARINE BASE WASHINGTON

EPA ID# WA5170027291



EPA REGION 10

Kitsap County
Silverdale

Other Names:
Sites C, D, & F

US Navy Bangor Submarine Base
US Navy - Naval Submarine Base -
Bangor

Site Description

The Bangor Naval Submarine Base site is a 7,000-acre facility located near Silverdale, Washington. Approximately 42 areas of the active military facility may be contaminated. Site F, the Wastewater Disposal Area for Demilitarization Operations, has contaminated the groundwater in the upper aquifer. From 1944 to 1965, an area of the site, now known as the Burning Ground or Site D, was used for ordnance burning and detonation. The site received wastes resulting from the demilling (steam cleaning and recovery of solid materials) of ordnance containing trinitrotoluene (TNT) and cyclonite (RDX) from 1960 to 1971. Approximately 500,000 mines and 75,000 rockets were processed at the site. Other portions of the facility included in this site involve the disposal of ordnance or ordnance wastewater. Groundwater beneath the base is used for drinking water, irrigation, and industrial purposes. Groundwater wells located on base and off site draw from the lower aquifer. There are no drinking water sources in the upper (contaminated) aquifer. The groundwater contamination has not migrated off base. The facility, located in a rural area, has approximately 700 people residing within 1 mile of the site. About 3,900 people living within 3 miles of the site depend on groundwater for their drinking water. Another parcel at this facility, Bangor Ordnance Disposal, was placed on the NPL in 1987.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 07/14/89

Final Date: 08/30/90

Threats and Contaminants



Groundwater, soils, surface water, and sediments contain TNT and RDX.

Groundwater also is contaminated with volatile organic compounds (VOCs), plastics, and heavy metals. People may suffer adverse health effects if they accidentally ingest or come into direct contact with contaminated groundwater, soils, surface water, and sediments.

Cleanup Approach

The site is being addressed in seven stages: interim actions and six long-term remedial phases focusing on cleanup of the washout lagoon, the incinerator area, the dump residue area, the acid pit, the burning ground, and Hood Canal Sediments.

Response Action Status



Interim Actions: In 1990, the Navy selected an interim remedy to address contamination at the Washout Lagoon described below. The action calls for extraction, treatment, and reinjection of contaminated groundwater. The interim action is designed to contain the migration of the contaminated plume. Design of the interim remedy was completed in the fall of 1993. Cleanup activities are scheduled for completion in late 1995.



Washout Lagoon: An investigation of the washout lagoon to determine the nature and extent of contamination and to identify final cleanup alternatives was completed in 1993. The final remedy for this site includes continued cleanup of the aquifer by pumping and treating, and bioremediation of contaminated soils at the site of the former lagoon with placement of an infiltration barrier. This area, also known as Site F, is being partly addressed by an interim action described above. The cleanup design is scheduled for completion in early 1995 when construction is scheduled to begin.



Incinerator Area: In 1994, the Navy completed an investigation of the incinerator area to determine the nature and extent of contamination and to identify cleanup alternatives. In 1994, the EPA determined that no further action was required as the incinerator area does not pose a risk to people or the surrounding environment. Groundwater monitoring will be conducted for 5 years.



Dump Residue Area: In 1994, the Navy completed an investigation of the sump residue area, also known as Site C, to determine the nature and extent of contamination and to identify cleanup alternatives. In 1994, the EPA determined that no further action was required as this area does not pose a risk to people or the surrounding environment.



Acid Pit and Pesticide Pit: In 1994, the Navy completed an investigation of the acid and pesticide pits to determine the nature and extent of contamination and to identify potential cleanup alternatives. An early action was completed in 1993 to remove pesticide containers and stockpile contaminated soil. Options for the cleanup of pesticide-contaminated soils are being evaluated. The pesticide pit area is also known as Site 11 and the acid pit area is known as Site E.



Burning Ground (Site D): In 1994, the Navy completed an investigation of the Burning Ground area to determine the nature and extent of contamination and to identify cleanup alternatives. A remedy was selected in 1994 that includes solid phase bioremediation composting as the treatment for the contaminated soils.



Hood Canal Sediments: In 1994, the Navy completed an investigation to determine the nature and extent of contamination of a number of on-base areas that contribute to sediment contamination in the adjacent water body. An early action to excavate buried drums was completed in 1993. A decision on final cleanup actions is expected shortly.

Site Facts: The Bangor Naval Submarine Base is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants and other DOD facilities.

Environmental Progress



The interim cleanup actions conducted at the site have reduced the potential threat to human health and the environment while further investigations and cleanup activities are taking place.

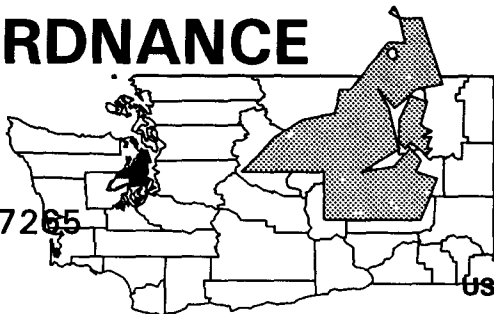
Site Repository



Kitsap Regional Library, Bangor Naval Submarine Base Library, Building 2500, Silverdale, WA 98315

BANGOR ORDNANCE DISPOSAL WASHINGTON

EPA ID# WA7170027265



EPA REGION 10

Kitsap County
Bremerton

Other Names:
Site A

Bangor Ordnance Disposal
(USN Sub Base)

US Navy Submarine Base - Bangor

Site Description

The Bangor Ordnance Disposal site is a 6-acre hazardous waste site located on the Bangor Naval Submarine Base. The site is used by the Explosive Ordnance Disposal Team as a test range. The Bangor Naval Submarine Base also includes two debris areas totaling 12 acres. Between 1965 and 1973, the U.S. Navy detonated and burned over 2 million pounds of explosives at the base. Surface water and shallow groundwater were contaminated as a result of these activities. In 1983, the Navy moved to control the migration of potential chemical waste from the site by diverting stormwater runoff from the burn site to an area between Vinland and Cattail Lake. Wilkes Marsh covers approximately 4 acres and is located about 500 feet from the site. Approximately 3,900 people reside within 3 miles of the base and depend on groundwater for drinking water. An agricultural area surrounds the facility. Another portion of this facility was added to the NPL as a separate site in 1990.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 07/22/87

Threats and Contaminants



Groundwater, soil, leachate, and surface water are contaminated with trinitrotoluene (TNT) and cyclonite (RDX). Soil also is contaminated with lead. Accidental ingestion of or direct contact with contaminated soil or surface water could expose people on or near the site to pollutants. Studies show that groundwater is not a risk to the local community due to the very slow migration of the contaminant plume. The base is located 1/2 mile from Hood Canal, a sensitive marine environment.

Cleanup Approach

The site is being addressed in a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Entire Site: In late 1991, the Navy selected a cleanup plan to remove ordnance compounds from the contaminated soil. Soil washing will be used, and the leachate generated from the soil washing will be treated. Further investigation indicated that levels of ordnance and lead were less than the initial investigations indicated. The lead-contaminated soil is located on a steep slope above a creek, and it was determined that it would be best to leave the area intact. Soil washing began in 1994 after completion of the leachate treatment system and water distribution system. Groundwater cleanup is scheduled to begin in 1996.

Site Facts: The Ordnance Disposal site, a sub-area of the Bangor Naval Submarine Base, is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and DOD facilities.

Environmental Progress



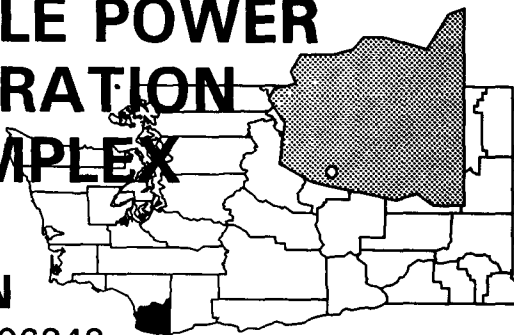
Initial investigations determined that the Bangor Ordnance Disposal site does not pose an immediate threat to local residents or the environment while final cleanup activities are ongoing.

Site Repository



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

**BONNEVILLE POWER
ADMINISTRATION
ROSS COMPLEX
(USDOE)
WASHINGTON**
EPA ID# WA1891406349



EPA REGION 10
Clark County
North of Vancouver

Other Names:
USDOE-BPA Ross Substation
Ross Substation

Site Description

The Bonneville Power Administration (BPA) has occupied this 200-acre site north of Vancouver since 1939. The facility became part of the Department of Energy (DOE) when the department was established. The Ross Complex serves as the control center for the generation and transmission of electricity throughout the Pacific Northwest. The site contains a number of storage and disposal areas including the DOB-1 Drainfield, where laboratory wastes were deposited; the Cold Creek Fill Area, where soil contaminated with oil, polychlorinated biphenyls (PCBs), and heavy metals was disposed of; and the Fog Chamber Disposal Area, where capacitors containing PCBs were buried in trenches. In 1987 and 1988, the BPA sampled an on-site well and found volatile organic compounds (VOCs). Approximately 105,000 people in Vancouver obtain drinking water from public wells within 3 miles of the site. Cold Creek is about 450 feet downgradient of the complex and is fed by shallow groundwater flowing under the site. Vancouver Lake, located 1½ miles away, is used for fishing and other recreational activities.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY
Proposed Date: 07/14/89
Final Date: 11/21/89

Threats and Contaminants



Investigations have revealed that out of 21 potential waste units identified at the site, only four areas contained soil contamination at levels that require cleanup action. PCBs were found in surface soils at the Capacitor Test Lab and the Ross Substation and Capacitor Yard; polycyclic aromatic hydrocarbons (PAHs) and pentachlorophenol (PCP) were found in surface soils at the Wood Pole Storage Area East; and the Fog Chamber Dump contains high levels of PCBs and heavy metals, such as lead, throughout the subsurface soils. One on-site deep groundwater monitoring well slightly exceeded the drinking water standards for dichloroethylene (DCE) and chloroform. Results of the site risk assessment indicated that exposure to either on-site or off-site groundwater would not pose a risk to human health.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Initial Actions: Removal actions to comply with the State of Washington's Model Toxics Control Act were undertaken in the summer of 1991 at seven areas around the site. Contaminated soils were excavated and disposed of in off-site landfills.



Entire Site: In 1990, the site was divided into two separate cleanup areas, A and B. In 1993, remedies were selected for cleanup of areas A and B. The selected cleanup actions include excavation and disposal of off-site PCB-contaminated soils from the Capacitor Test Lab and the Ross Substation and Capacitor Yard; enhanced bioremediation of the contaminated soils at the Wood Pole Storage Area East; capping the Fog Chamber Dump Trench Area 1; and monitoring of both the shallow and deep on-site groundwater. Cleanup activities are underway and scheduled for completion in early 1995.

Site Facts: The EPA, the State, and Bonneville Power have signed an Interagency Agreement to govern site cleanup.

Environmental Progress



The EPA has determined that the Bonneville Power Administration Ross Complex (USDOE) site does not pose an immediate threat to local residents or the environment while cleanup of the site is underway.

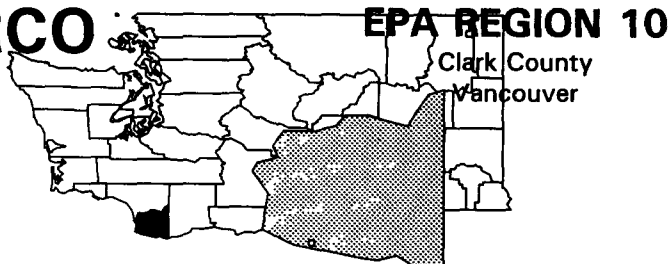
Site Repository



Fort Vancouver Regional Public Library System, Vancouver Community Library, 1007 East Mill Plain Boulevard, Vancouver, WA 98663

BOOMSNUB/AIRCO WASHINGTON

EPA ID# WAD009624453



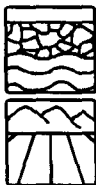
Site Description

The Boomsnub/Airco site covers about 14 acres in a light industrial and residential area of Vancouver, Washington. Two facilities, Airco Gases (Airco) and Boomsnub, have been combined into one site because contamination from both has resulted in a commingled groundwater plume that is contaminated with volatile organic compounds (VOCs) and chromium. The soils at the Boomsnub site became contaminated with chromium as a result of improper handling and disposal of the waste from metal plating operations. In late 1989, the chromium was transferred to the groundwater by a water line break that released 300,000 gallons of water. In 1991, an investigation of the Boomsnub site showed the presence of VOCs in the groundwater monitoring wells. The VOCs detected in the groundwater, however, do not appear to be associated with Boomsnub's operations. Airco is an active gas manufacturing plant that has been in operation at this location since 1964. Airco manufactures compressed gas products, including liquid nitrogen, liquid oxygen, and liquid argon. Airco also stores and distributes other specialty gases. The contaminated groundwater plume that overlies the Troutdale aquifer, a regional drinking water source, is an unconfined alluvial aquifer. The county wells at risk from the chromium and VOC plume provide drinking water to more than 55,000 people. To date, the chromium plume has migrated more than 3,300 feet. Although a clay and silt layer separates the two aquifers, there are known breaches that could allow the Troutdale aquifer to become contaminated.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY
Proposed Date: 01/18/94

Threats and Contaminants



Groundwater is contaminated with high levels of chromium and various VOCs. Soil is contaminated with chromium. Touching or ingesting contaminated groundwater or soil could pose a health risk.

Cleanup Approach

The site is being addressed in two stages: emergency actions and a long-term action focusing on cleanup of the entire site.

Response Action Status



Emergency Actions: The Washington Department of Ecology (WDOE) conducted an emergency interim action at the Boomsnub/Airco site which consisted of pumping and treating the groundwater to minimize off-site chromium migration and defining the extent of contamination. After the site was added to the NPL, the main plating building was removed, an improved pump and treat system for contaminated groundwater was installed, and work was begun on the large excavation to remove the source of the groundwater contamination. Although for investigation and cleanup purposes the two companies (Boomsnub and Airco) have been designated as one Superfund site, these removal actions pertain only to the property and operation of the Boomsnub portion of the site.



Entire Site: The EPA and WDOE will continue the investigation to determine if any further interim or long-term cleanup actions are necessary to address site contamination.

Environmental Progress



The immediate actions being taken by the WDOE have kept the site safe while studies leading to the selection of final cleanup remedies are being planned.

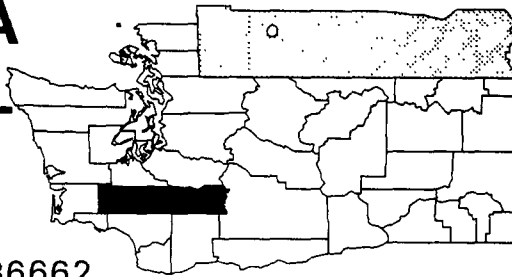
Site Repository



Not yet established.

CENTRALIA MUNICIPAL LANDFILL WASHINGTON

EPA ID# WAD980836662



EPA REGION 10

Lewis County
Centralia

Other Names:
Lewis County Dump
Centralia Sanitary Landfill

Site Description

The Centralia Municipal Landfill, closed in the spring of 1994, was a landfill covering 55 acres of an 80-acre parcel of land in Centralia. The landfill began operations in 1958, using a trenching method where trenches were excavated, filled with wastes, and covered. Later, the landfill used the lift method, where wastes were placed in layers and covered daily with clean fill. All fill areas at the landfill were unlined. A system of leachate collection trenches was installed to intercept the leachate generated by the landfill. The collected leachate was pumped to the municipal wastewater treatment plant in Centralia. During flooding and periods of heavy rainfall, the treatment plant was frequently unable to accept flow from the landfill. At these times, the capacity of the perimeter ditches was occasionally exceeded. When that occurred, the overflow eventually reached the Salzer Creek. Historically, the landfill accepted municipal wastes and some industrial wastes including polychlorinated biphenyls (PCBs)-contaminated soil, paint shop wastes, empty pesticide containers, electric burn wastes, and sulfur wastes. Groundwater at the site reaches the surface during the rainy season. The upper and lower aquifers are thought to be hydraulically connected, allowing water to move between them. Over 12,000 people living within 3 miles of the landfill obtain drinking water from the lower aquifer. The city of Centralia's nearest municipal well is located 1 1/2 miles north of the landfill. The nearest private well is about 700 feet west of the site. Salzer Creek is a tributary to the Chehalis River and water from Salzer Creek and the Chehalis River is used for irrigation.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Site Responsibility: The site is being addressed through Federal, State, and municipal actions.

Threats and Contaminants



Groundwater contains heavy metals such as manganese, sodium, and iron. Leachate emanating from the landfill contains heavy metals. People who accidentally ingest or come into direct contact with contaminated groundwater, sediments, soil, or leachate may be at risk. Leachate drains from the landfill into Salzer Creek, a spawning area, nursery, and migration route for Coho Salmon. Salzer Creek empties into the Chehalis River, which is a habitat for Chinook, Coho, and Chum Salmon, and Steelhead Trout. Contaminants in the creek and river pose a potential threat to nearby wildlife.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Immediate Actions: In 1991, the potentially responsible parties installed a security fence, constructed a temporary protective cover over the inactive areas of the landfill, constructed a temporary gas control system, performed erosion control measures, and improved the leachate collection system.



Entire Site: During 1994, a permanent cover was installed over 46 acres of the site, which will reduce the quantity of leachate generated by the landfill and, thereby, reduce the potential for the release of contaminants from the landfill. The State installed a permanent landfill gas collection and treatment system, undertook additional stormwater and erosion control efforts, constructed an access road, and completed the installation of a fence around the site. Additional groundwater sampling is now underway to assess whether further cleanup actions are necessary.

Site Facts: In 1991, a Consent Decree was signed by the potentially responsible parties requiring them to conduct immediate actions at the site. In March 1993, the potentially responsible parties and the State agreed to a second Consent Decree requiring the potentially responsible parties to conduct investigations to determine the nature and extent of contamination and to identify cleanup alternatives at the site. Recently, the first Consent Decree was amended. The amended Order required the removal of the temporary cover and installation of a permanent cover system.

Environmental Progress



The construction of the permanent cap over the landfill, the installation of the gas collection and treatment system, the erosion control efforts, and completion of the fence have reduced the threat of contamination to human health and the environment while additional sampling of groundwater to determine if other actions are necessary is underway.

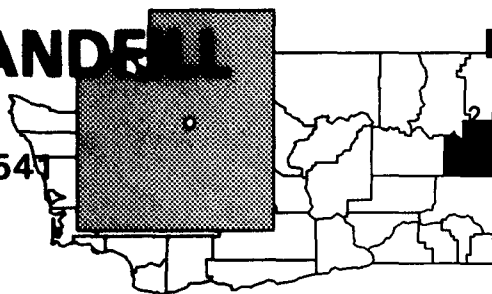
Site Repository



Washington Department of Ecology, Southwest Region, Records Center, 7272 Cleanwater Lane, Olympia, WA 98504

COLBERT LANDFILL WASHINGTON

EPA ID# WAD980514547



EPA REGION 10

Spokane County
2 miles northwest of Colbert

Other Names:
Colbert Dump

Site Description

The Colbert Landfill site is 40 acres in size and located 2 miles northwest of Colbert. From 1968 through 1986, the landfill received municipal and commercial wastes. Between 1975 and 1980, a local electronics manufacturing company disposed of spent organic solvents at the landfill. These wastes typically were brought to the landfill in drums and were poured down the sides of open trenches containing soil and ordinary municipal refuse. During the same period, Fairchild Air Force Base disposed of various solvent wastes at the site. In 1980, nearby residents became concerned over the disposal practices. Several private drinking water wells were sampled and found to contain solvents. The landfill was closed in 1986. The site is located in a semi-rural area; approximately 1,500 people live within 3 miles of the site. Nearby residents operate small crop and livestock farms. The Little Spokane River is located about 1/2 mile away from the site.

Site Responsibility: The site is being addressed through a combination of Federal, State, local, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants



Groundwater contains volatile organic compounds (VOCs) including methylene chloride and trichloroethane (TCA). Methylene chloride is found in the soil. Accidental ingestion of or direct contact with contaminated groundwater and soil may pose a potential health threat.

Cleanup Approach

The site is being addressed in two stages: early actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Early Actions: In 1984, Spokane County and Key Tronic began supplying bottled water to residents affected by polluted groundwater. In 1985, the county extended the public water supply main to 135 affected residences.



Entire Site: In 1987, the EPA selected a remedy to clean up the landfill, which includes: installing and operating interception wells to prevent the contaminants from spreading; removing the contaminated materials that have entered the aquifers and are contributing to the contaminant plume, and installing and operating extraction wells in the area where the plumes originate; reducing the toxicity, mobility, and volume of contaminants by treating all extracted groundwater from both the interception and extraction wells; and providing an alternate water supply system to any residents deprived of their domestic supply due to the contamination or to the construction of interception or extraction wells. Spokane County, under supervision by the State and the EPA, has drilled wells for monitoring the groundwater. The pilot extraction wells and treatment plant were tested in early 1991. Construction of the final groundwater extraction and treatment system was finished in the spring of 1994. Some startup and adjustment of the water extraction and treatment system is expected.

Site Facts: In 1981, the EPA entered into a Cooperative Agreement with Spokane County to investigate the site. The EPA also entered into a Cooperative Agreement with the State to investigate the site and to develop cleanup alternatives in 1985.

Environmental Progress



The immediate actions of providing bottled water and extending the municipal water supply system to affected residents have reduced the threat to the public from the Colbert Landfill site while the cleanup is underway. A drinking water well monitoring program ensures the continued safety of drinking water for residents.

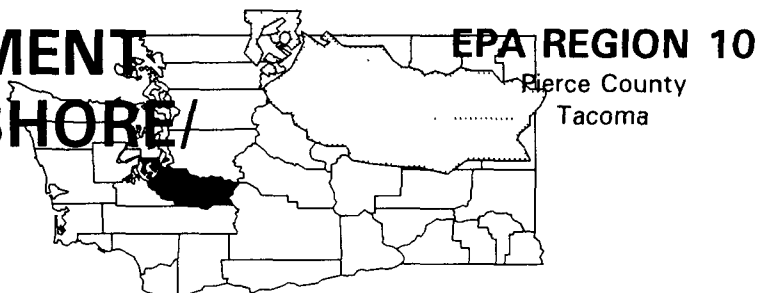
Site Repository



Spokane County Library, North Spokane Branch Library, 44 East Hawthorne Road, Spokane, WA 99218

COMMENCEMENT BAY, NEAR SHORE/ TIDE FLATS WASHINGTON

EPA ID# WAD980726368



Site Description

The Commencement Bay, Near Shore/Tide Flats site covers 12 square miles in Tacoma and includes more than 300 active businesses and nearly 500 identified point and nonpoint source. The Near Shore area is defined as the point along the Ruston Way Shoreline from the Mouth of Thea Foss (formerly City) Waterway to Point Defiance. The Tide Flats area includes the Hylebos, Blair, Wheeler-Osgood, Sitcum, Milwaukee, St. Paul, Middle, and Thea Foss waterways, plus the Puyallup River upstream to the Interstate 5 Highway Bridge. Industrial development of the Commencement Bay area began in the late 1800s. Dredge and fill activities in the Tide Flats area began in the 1920s to open navigable waterways where numerous industrial and commercial operations still are located. These operations include pulp and lumber mills, shipbuilding, shipping, chlorine and chemical production, concrete production, aluminum and copper smelting, oil refineries, and other chemical manufacturers. Hazardous substances and waste material were released into the terrestrial, freshwater, groundwater, and marine environments. From 1890 until 1986, the American Smelting and Refining Company, Inc. (Asarco) operated a smelter on the shore of Commencement Bay. Originally it operated as a lead smelter, but was converted to a copper smelter by 1911. The smelter specialized in processing ores with high arsenic concentrations and recovered arsenic trioxide and metallic arsenic as products for sale. Copper smelting and arsenic operations ceased in 1985 and 1986, respectively, for economic reasons. The Tacoma Tar Pits area of the site lies between the Puyallup River, the City of Tacoma, and the Wheeler-Osgood Waterway. These bodies of water are not used as a water supply, but support extensive fish and shellfish populations. In 1924, a coal gasification plant began operations, and waste materials from the manufacturing process were disposed of on site. The plant discontinued operations in 1956. From 1965 to 1966, the plant was dismantled and demolished. Most of the metal structures were removed from the site; however, all demolition debris and below-grade structures were left in place, including tanks and pipelines containing tars. In 1967, a metal recycling company began operating at the site. Recycling of automobile batteries contaminated the soil with acid, heavy metals, lead, and polychlorinated biphenyls (PCBs). Commencement Bay supports important fishery resources and recreational fishing. According to a 1981 survey by the local health department, approximately 4,000 people shorefish and boatfish in the bay, exposing an estimated 15,000 people to pollutants through food chain contamination. The City of Tacoma has a population of 162,100 people.

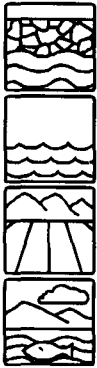
Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/23/81

Final Date: 09/08/83

Threats and Contaminants



Groundwater, sediments, and soils are contaminated with volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), PCBs, and heavy metals. People who come in direct contact with or ingest contaminated groundwater, sediments, or soil may be at risk. Fish in Commencement Bay contain VOCs, PCBs, and heavy metals including arsenic, lead, and mercury, and may pose a health threat to those who eat them. The County has advised people not to eat bottom fish and shellfish from Commencement Bay.

Cleanup Approach

The site is being addressed in seven long-term remedial phases focusing on cleanup of the CBNT sediments, the Asarco Smelter, the Tacoma Tar Pits, Ruston/North Tacoma Study Area, source control, the Asarco sediments, and the Asarco buildings and structures.

Response Action Status



CBNT Sediments: In 1989, the EPA selected remedies to clean up 1,162,000 cubic yards of contaminated marine sediments in eight different problem waterway areas, which include: St. Paul, Sitcum, Mouth of Hylebos, Head of Hylebos, Middle, Wheeler-Osgood, Mouth of Thea Foss, and Head of Thea Foss. The St. Paul waterway cleanup was completed in 1991. The cleanup included controlling the sources of pollution and capping contaminated sediments. The St. Paul Waterway agreement was the first complete sediment cleanup in the U.S. coastal waters under the federal Superfund law. In addition, the agreement combined the Superfund cleanup with a settlement for initiation of the natural resource damage assessment and an enhancement project to restore natural resources. In 1991, an Administrative Order was signed between the EPA and the Port of Tacoma requiring the latter to conduct cleanup of the Sitcum Waterway. The Port of Tacoma completed the cleanup in the Sitcum Waterway in 1994. One and one-half million cubic yards of contaminated sediments from the Blair and Sitcum Waterways were dredged and placed behind a berm created in the Milwaukee Waterway. The Port will fill the area and pave the surface to create more container areas. This cleanup action is part of an economic development project for the Port of Tacoma. Because this fill caused the loss of wetland and habitat areas, two new habitat areas were created; one at the mouth of the Milwaukee Waterway and one along the Puyallup River, called the Swan Creek/Clear Creek Habitat area. The City of Tacoma signed an Administrative Order on Consent in early 1994 to perform design work for the Thea Foss/Wheeler-Osgood Waterways. Sampling was conducted during the summer of 1994 and design work is expected to begin in 1996. A group of potentially responsible parties have formed a group called the Hylebos Cleanup Committee to conduct sampling and pre-design work for cleanup at the Hylebos Waterway. This group signed an Administrative Order on Consent with EPA in late 1993.

In all waterways, marginally contaminated sediments will be left alone, because they are expected to recover naturally over a 10-year period. The sediments will be monitored to confirm that natural cleanup is occurring. The most contaminated sediments will be confined with a substantial physical barrier to isolate the contaminated sediments and protect aquatic animals. The contaminated area may be covered with clean sediments, or contaminated sediments may be moved and disposed of or confined elsewhere within the site. Recreational fishing in the waterways will be restricted until the cleanup is completed. The source discharges and sediments will be monitored throughout the cleanup phase of the project. The EPA will oversee sediment cleanup operations. Sediment cleanup in each of the problem areas is being phased over the next 10 years according to the success of the source control remedies. All cleanup remedies are expected to be underway by 1997.



Asarco Smelter: In 1986, under EPA oversight, Asarco began an investigation to determine the nature and extent of contamination and to identify cleanup alternatives at the smelter. In 1989, Asarco suspended operations and demolished and cleaned some of the structures used for copper smelting, arsenic trioxide and metallic arsenic production, and arsenic emissions control. In addition, they began cleaning 11 publicly accessible properties starting with Ruston Park, Ruston School yard, and a privately owned vacant lot. Soil is being excavated, and the excavated areas are being filled with clean soil and reseeded. Ruston Park was covered with sod. The contaminated soil removed from the properties is being stored on the smelter property until a final cleanup plan is selected for the smelter site. The cleanup has been completed in 10 of the 11 publicly accessible properties. In 1990 and 1991, Asarco cleaned up seven additional properties affected by contamination at the site. During 1994, a Public Land Use Group, composed of representatives of the City of Tacoma and Asarco, held public forums on the future land uses for the smelter property. Based on the comments received, future uses of the property were developed and will be presented to the various government agencies and the public before being approved. Following public comment periods, the EPA will determine cleanup remedies for the remainder of the site area.



Tacoma Tar Pits: In 1987, the EPA selected a remedy to clean up the Tacoma Tar Pits. The cleanup, to be approached in two phases, includes excavating all contaminated soils and stabilizing them with a polymer/cement mixture; covering the stabilized soil with asphalt; channeling and managing the surface waters; monitoring the groundwater; and removing and treating pond water. The potentially responsible parties have designed the technical specifications, under EPA oversight, for cleanup of the tar pits. Treatability studies are complete. The design phase was completed in 1992, at which time the cleanup began. Site preparation and construction began in 1992. Cleanup work is continuing at the site, under EPA supervision. To date, over 160,000 cubic yards of soil, tar, and auto fluff have been stabilized. Nearly 3 acres of concrete pads have been constructed over areas which have been excavated, treated, and placed in the waste pile. A new drainage system is being constructed around the site. The work is on schedule and is nearing completion. All the work, including the waste pile cap, is expected to be completed by 1995.



Ruston/North Tacoma Study Area: The study area includes 950 acres and approximately 1,820 residences. EPA issued a Unilateral Administrative Order to Asarco in the summer of 1993 to conduct sampling and yard removals. Sampling of properties began in late 1993. Yard removal and replacement began in the spring of 1994. As part of the cleanup activities, a Community Protection Measures Workgroup was established. The group is tasked to develop educational and instructional materials for maintaining yards and other properties which are being cleaned up. Asarco signed a Consent Decree to continue to conduct sampling and yard removals in the fall of 1994.



Source Control: Source control cleanup applies to all waterways listed under CBNT Sediments. The State established the in-house Commencement Bay Urban Bay Action Team (UBAT), which is responsible for discovering and controlling sources of contamination that affect Commencement Bay. Over 400 inspections have been conducted, which resulted in 70 confirmed releases of contaminated materials. Actions, such as legal orders or permits and voluntary cleanup, have been used to achieve source control. All source control cleanup is expected to be completed in 1995.



Asarco Sediments: Groundwater monitoring began in the spring of 1994. The EPA and Asarco are negotiating an agreement for additional groundwater monitoring and additional off-shore sediment sampling studies.



Asarco Buildings and Structures: In 1990, a remedy was selected to address on-site buildings and structures related to Asarco operations. These buildings and structures will be demolished. Interim stabilization and surface water control will be implemented as well. In 1992, a Consent Decree was signed between EPA and Asarco, requiring Asarco to conduct the demolition of the buildings. Demolition of the buildings and smelter stack was conducted in 1993 and completed in the summer of 1994. Demolition debris was decontaminated and transported to an off-site landfill. Material that could not be decontaminated is being stored on site in the Fine Ores Bins Building until a final disposal site is selected.

Site Facts: In 1991, the EPA awarded Citizens for a Healthy Bay a \$50,000 grant to hire independent technical advisors to educate and advise the community. Another portion of Commencement Bay, the South Tacoma Channel, also is on the NPL.

Environmental Progress



Demolishing parts of the Asarco Smelter and cleaning publicly accessible areas of Ruston have reduced the threat of the public coming into direct contact with contaminants at the Commencement Bay, Near Shore/Tide Flats site while investigations and final cleanup activities continue. Source control efforts in Commencement Bay have reduced the contaminant loading to the marine environment. The cleanup of contaminated sediments in St. Paul and Sitcum Waterways has reduced the exposure of marine organisms to contaminated sediments.

Site Repository



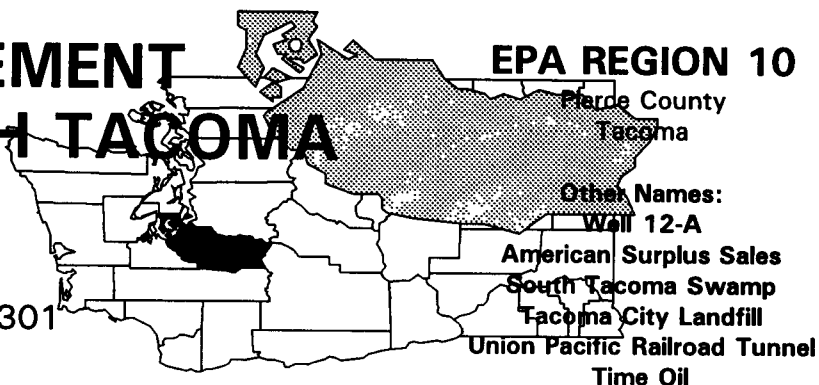
Tacoma Public Library, 1102 Tacoma Avenue South, Tacoma, WA 98402

Citizens for a Healthy Bay, 771 Broadway, Tacoma, WA 98402

Asarco Information Center, 5311 North Commercial, Ruston, WA 98388

COMMENCEMENT BAY, SOUTH TACOMA CHANNEL WASHINGTON

EPA ID# WAD980726301



Site Description

The Commencement Bay, South Tacoma Channel site covers 2 1/2 square miles in Tacoma. The site includes three areas: South Tacoma Field, the Tacoma Municipal Landfill, and wells supplying drinking water to the City of Tacoma. South Tacoma Field covers about 300 acres of industrial, commercial, residential, and vacant land. Parts of the area were used for railway car construction and repair, salvage operations, and the disposal of industrial and construction debris. The Tacoma Landfill covers about 210 acres and is operated by the City of Tacoma. In 1960, the landfill began accepting municipal, industrial, construction, demolition, and bulk wastes. About 4 million tons of refuse have been deposited at the landfill, including wastes received in the 1960s and 1970s that have since been designated as hazardous substances. The landfill is surrounded by residential development and open land, with some commercial and industrial development. Well 12A is one of 13 wells used by the City of Tacoma to meet peak summer and emergency water demands. The well was closed by the City when it was found to be contaminated. Investigations by the EPA found the source of contamination to be centered on properties owned by the Burlington Northern Railroad and the Time Oil Company. Waste oil and solvent reclamation processes were operated by the previous owners on the property owned by Time Oil Company. An aquifer beneath the site provides drinking water to the town of Fircrest and the city of Tacoma. Approximately 24,000 people live within 1 mile of South Tacoma Field. Another portion of Commencement Bay, the Near Shore/Tide Flats site, also is on the NPL.

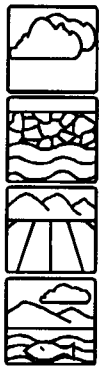
Site Responsibility: The site is being addressed through Federal, municipal, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/01/81

Final Date: 09/08/83

Threats and Contaminants



At Tacoma Landfill, landfill gas contains volatile organic compounds (VOCs) including methylene chloride and toluene. Groundwater is contaminated with VOCs and heavy metals. Groundwater flows to the southwest toward Leach Creek, which lies about 1/4 mile from the landfill. Consequently, wetlands downstream of the landfill could receive contaminants from the groundwater. Soil is contaminated with VOCs, heavy metals, and carcinogenic polycyclic aromatic hydrocarbons (PAHs). Surface soils and, in some areas, subsurface soils are contaminated with lead, arsenic, PAHs, polychlorinated biphenyls (PCBs), and VOCs including benzene, toluene, xylenes, and ethylbenzene. People who ingest or come into direct contact with contaminated groundwater or soil, or who inhale gas from the landfill, may be at risk.

Cleanup Approach

The site is being addressed in four stages: early actions and three long-term cleanup phases focusing on the cleanup of Well 12A and Time Oil, South Tacoma Field, and Tacoma Landfill.

Response Action Status



Early Actions: In 1983, the EPA began pumping and treating the water in Well 12A by air stripping. In 1988, a carbon adsorption groundwater treatment system was installed near the Time Oil property to control the source of contamination.

Pumping the well has stopped the contaminant movement and is cleaning the aquifer. In 1990, the potentially responsible parties, under EPA oversight, dismantled the former brass foundry and removed underground storage tanks and stained soil around the tanks in the South Tacoma Field area. Under an Administrative Order, Amsted, which owns 6 acres on the South Tacoma Field site, installed additional monitoring wells, evaluated hydrocarbons found floating in groundwater monitoring wells, and sampled groundwater for dissolved constituents. This work was completed in mid-1992 and groundwater monitoring continued until 1994. Also in 1992, the EPA installed a vapor extraction system on the Time Oil property to remove and treat the organic compounds in the soils. Contamination was detected in three private drinking water wells near the Tacoma landfill. The City of Tacoma connected the affected residents and a few neighboring residents to the Tacoma public water system. The city also installed a system to extract and burn landfill gas in 1986 and upgraded the system in 1992.



Well 12A and Time Oil: In 1986, under EPA oversight, Burlington Northern excavated approximately 1,000 cubic yards of soil and disposed of them in a federally-approved facility. In 1988, the EPA installed a carbon adsorption system to remove the solvents from the aquifer at the source of the contamination. The EPA has installed a vacuum extraction system to cleanup the remaining contaminated soils. Construction of the vacuum extraction system was completed in 1993. The system is scheduled to operate for up to 10 years. In 1994, four additional wells located closer to the source of the contamination were added to the groundwater treatment system.



South Tacoma Field: In 1987, EPA and Burlington Northern Railroad signed an Administrative Order on Consent, under which the railroad agreed to investigate and clean up their portion of the South Tacoma Field area. Under a 1990 Administrative Order, four other potentially responsible parties completed the investigation of soil, surface water, groundwater, and sediment on the other portions of the site. The site investigation was completed in 1993. In 1994, EPA proposed a cleanup plan for public comment. In late 1994, EPA selected a cleanup approach consisting of the following: consolidating and capping some material on site; treating other contaminated soil and disposing of it off site; and treating contaminated groundwater. The technical design for these activities is scheduled to begin shortly.



Tacoma Landfill: In March 1988, EPA selected the cleanup remedy for the Tacoma Landfill. In 1991, EPA and the Washington Department of Ecology signed a Consent Decree for the Tacoma Landfill with the City of Tacoma for the city to conduct cleanup activities at the Tacoma Landfill. Construction of an impermeable landfill cap over the refuse area was completed in 1992. Operation of 19 extraction wells and two air stripping towers to remove VOCs also began in 1992. A second series of nine additional extraction wells began operation in late 1992. Pumping and treating of groundwater is expected to continue approximately 10 years to meet established cleanup standards.

Site Facts: EPA has reached agreement with several parties potentially responsible for site contamination whereby they will conduct cleanup activities at the Commencement Bay, South Tacoma Channel site. EPA has signed several Administrative Orders and a Consent Decree with the potentially responsible parties to this effect.

Environmental Progress



Extracting and treating the groundwater, excavating contaminated soil, removing underground storage tanks and partially capping the landfill have reduced the potential of exposure to contaminants from the Commencement Bay, South Tacoma Channel while cleanup at the site continues.

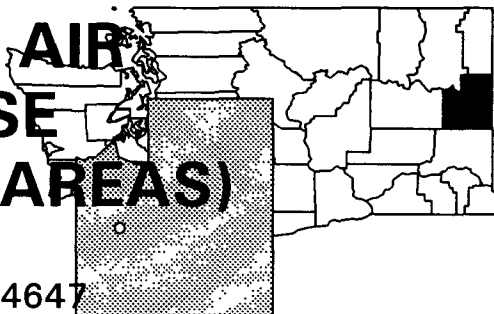
Site Repository



Tacoma Public Library, 1102 Tacoma Avenue South, Tacoma, WA 98402

FAIRCHILD AIR FORCE BASE (4 WASTE AREAS) WASHINGTON

EPA ID# WA9571924647



EPA REGION 10

Spokane County
12 miles west of Spokane

Site Description

The Fairchild Air Force Base occupies approximately 4,300 acres 12 miles west of Spokane. The base opened in 1942 as the Spokane Army Air Depot. In 1950, the name was changed to Fairchild Air Force Base. Its primary mission is to maintain and repair aircraft such as bombers and tankers. Initially, there were four waste areas of concern covering 85 acres, including the Building 1034 french drain and dry well system, two landfills, and the industrial waste lagoons. During past base activities, the equivalent of over 4,000 drums of carbon tetrachloride and other solvents, paint wastes, plating sludges containing cadmium and lead, and related industrial wastes were disposed of in the four areas. During investigations, additional areas were found, including a fire training area and multiple spill areas. Groundwater sampling in 1986 and 1987 detected elevated levels of contamination. A well within base boundaries serves as a standby water supply for the base's 5,200 employees. Approximately 400 private wells serving about 20,000 people are within 3 miles of the facility. West Medical Lake, Medical Lake, and Silver Lake are within 3 miles downstream of Fairchild Air Force Base. These lakes support wildlife and are used for recreational activities.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88
Final Date: 03/13/89

Threats and Contaminants



Groundwater, soil, and sediments are contaminated with volatile organic compounds (VOCs) including trichloroethylene (TCE) and semi-volatile and inorganic compounds. People who ingest or come into direct contact with contaminated groundwater may suffer adverse health effects. The sand and gravel beneath the site facilitate the movement of contaminants into the groundwater, as well as the movement of contaminated groundwater. If contaminants leach from the base into the nearby lakes, wildlife in or around the water may be harmed.

Cleanup Approach

The site is being addressed in four stages: immediate actions and three long-term remedial phases focusing on cleanup of the Craig Road landfill; old base landfill, the flightline area, wastewater lagoons, and fire training pit; and the remaining site areas.

Response Action Status



Immediate Actions: In 1989, the Air Force provided bottled water to nearby trailer park residents when their water supply was found to be contaminated. The residences later were connected to the base's water supply. The Air Force also connected nearby Vietzke Village to the base's water supply in 1990. In 1992, the Air Force began removing contaminated sediments from the french drain system. The Air Force also removed all contaminated soils from the fuel oil tanks located at Wherry Housing and Deep Creek Steam Generating Plant.



Craig Road Landfill: The Air Force has completed an investigation to determine the nature and extent of contamination at the Craig Road Landfill. In 1992, a wastewater infiltration pond near the Craig Road Landfill was closed. A remedy for final cleanup was chosen in early 1993. The selected remedy requires the Air Force to install a landfill cap over the contaminated areas and a groundwater extraction and treatment system. The Air Force has already installed a groundwater extraction and treatment system in the Northern Disposal Area of the landfill. Construction of the landfill cap began in the fall of 1994 and should be completed in 1996.



Old Base Landfill, Flightline Area, Wastewater Lagoons, and Fire Training Pit: The Air Force has completed the investigation of these areas. Cleanup alternatives were evaluated and remedies were chosen in 1993 addressing the four separate areas. The selected remedy at the Wastewater Lagoons site includes groundwater extraction and treatment. Bioventing and air sparging are components of the selected remedy at the Fire Training Pit to address contaminated soil and groundwater. Passive fuel recovery will be used at the Flightline Area to retrieve floating product from the water table. Additionally, long term monitoring of the Old Base Landfill and petroleum spill areas was selected to evaluate natural attenuation of the groundwater contamination.



Remaining Areas: The Air Force is conducting 17 additional investigations on base. These include the jet engine cell, POL Bulk storage area, Area C pumphouse, aircraft crash site, heating oil tank area in Wherry Housing, fuel oil storage tanks, and fuel truck maintenance area. Based on the results of these investigations, expected to be completed in mid-1995, appropriate cleanup measures will be recommended for all remaining areas of the site.

Site Facts: Fairchild Air Force Base is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



The provision of an alternate water supply to the residents of a trailer park and a neighboring village and the 1992 removal of contaminated soil and sediments have reduced the threat of public exposure to contaminants while cleanup actions at Fairchild Air Force Base continue.

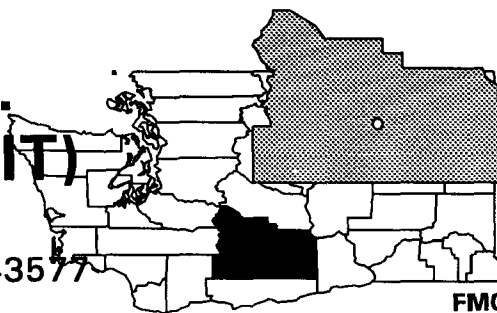
Site Repository



Spokane Public Library, Comstock Library Building, 906 West Main Street,
Spokane, WA 99201

FMC CORP. (YAKIMA PIT) WASHINGTON

EPA ID# WAD000643577



EPA REGION 10

Yakima County
Yakima

Other Names:
FMC - Yakima

FMC - Agricultural Chemical Division

Site Description

The FMC Corp. (Yakima Pit) site, covering about 4 acres in Yakima, operated as a pesticide formulation facility from 1951 until 1986. From 1952 to 1969, FMC disposed of agricultural pesticides in a "poison pit" on site. Some of the pesticides that may have been disposed of in the pit include DDT, diazinon, and dieldrin. Access to the pit area is restricted by a 6-foot chain link fence. There are about 10,000 people living within a mile of the site, with the nearest residence located about 200 yards from the facility. Area groundwater is used for drinking water, industrial purposes, crop irrigation, and livestock watering.

Site Responsibility: The site was addressed by Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater and soil were contaminated with various pesticides, including DDT derivatives. Potential health threats included direct contact with or ingestion of contaminated groundwater or soil.

Cleanup Approach

Response Action Status



Early Actions: In 1988, FMC, under EPA oversight, began excavating and removing the contaminated soil from the former disposal pit. Excavation of the pit was stopped at one point because of the high level of groundwater and concern over causing further groundwater contamination. In 1989, while the water was at a seasonal low, the remaining contaminated soil was excavated. Approximately 850 tons of contaminated soil were disposed of in a federally approved facility.



Entire Site: FMC, under EPA oversight, completed a study of the site in 1990. The EPA selected a remedy that included: additional sampling to determine the extent of contamination; incineration of excavated soils on site; removal and disposal of other contaminated materials; and disposal of incinerated soils on site after sampling to ensure that the incinerated soil met the cleanup standards. To expedite the time required to start the cleanup, the cleanup was performed in two phases. Phase One involved the excavation of contaminated materials. Phase Two involved the incineration of contaminated materials. The cleanup design for Phase One was completed in mid-1992 and excavation and stockpiling of material was completed in the fall of that year. Incineration began in the winter of 1992, and was completed in the summer of 1994.

Site Facts: In 1987, the EPA signed an order with FMC requiring the company to conduct an investigation of the site. In 1988, the EPA issued a second order to FMC, requiring excavation of contaminated materials from the pit.

Environmental Progress



The excavation and removal of approximately 850 tons of contaminated soil reduced the immediate threat of exposure to pesticides. During the final cleanup action, approximately 5000 cubic yards of material were excavated and incinerated. Construction of all cleanup remedies at the FMC Corp. (Yakima Pit) site have been completed.

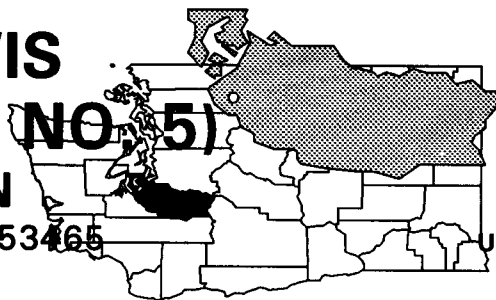
Site Repository



Yakima Regional Library, 102 North 3rd Street, Yakima, WA 98901

FORT LEWIS (LANDFILL NO. 5) WASHINGTON

EPA ID# WA9214053465



EPA REGION 10

Pierce County
Tillicum

Other Names:

U.S. Army 9th Infantry - Fort Lewis
U.S. Army - Fort Lewis
Fort Lewis

Site Description

The 86,000-acre Fort Lewis Army facility is located near Tacoma on the southeastern shore of Puget Sound and has been an Army facility since 1917. Industrial operations include maintenance of aircraft and vehicles, repair and refurbishing of weapons, and neutralization of caustic paint-stripping waste and battery acids. Prior to the mid-1970s, wastes were disposed of in on-site landfills covering approximately 225 acres. The 104-acre Landfill No. 5 was in operation from 1967 through 1990. The waste disposal history of this site is largely unknown, although the majority of disposed materials has been municipal waste from Fort Lewis, McChord Air Force Base, and the city of Dupont. Access to the site is restricted. Approximately 46,700 people live on the post. The closest residence to the site is located about 2 miles away. Municipal drinking water wells are located within 1 1/2 miles of the site. Another hazardous waste area at the Fort Lewis Army facility, the Logistics Center, is also on the NPL.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 07/22/87

Threats and Contaminants



Preliminary investigations in 1987 indicated that elevated levels of heavy metals and organic compounds had contaminated groundwater. Potential human health threats included direct contact with or ingestion of contaminated groundwater. Groundwater flows north-northwest toward Puget Sound.

Cleanup Approach

Response Action Status



Initial Actions: The State installed a composite cover in 1990 to prevent rainwater from leaching contaminants into the groundwater.



Entire Site: The U.S. Army conducted a study to determine the nature and extent of contamination resulting from the landfill. The study concluded that since covering the landfill, the site no longer poses an unacceptable threat to human health or the environment. Therefore, a no further action remedy was chosen in the summer of 1992. The Army has instituted a groundwater monitoring program to ensure the continued protectiveness of the landfill cover. The site is expected to be deleted from the NPL in 1995.

Site Facts: Fort Lewis is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



Covering the landfill has reduced the threat of public exposure to contaminants at the Fort Lewis (Landfill No. 5) site. All construction at the site is complete. Monitoring will continue to confirm that the groundwater does not exceed safe drinking water levels.

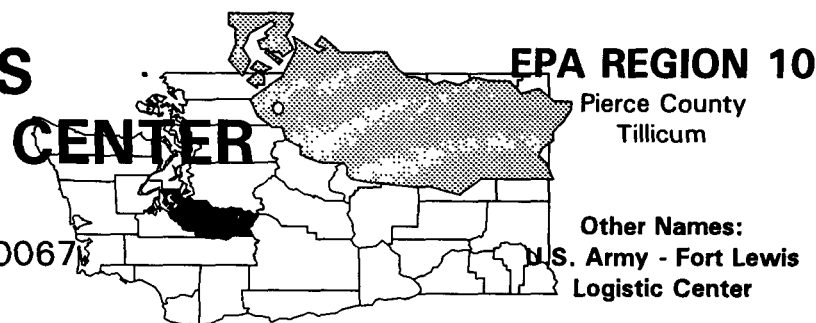
Site Repository



Pierce County Library, Lakewood Branch, 6300 Wildaire Road Southwest,
Tacoma, WA 98499

FORT LEWIS LOGISTICS CENTER WASHINGTON

EPA ID# WA7210090067



Site Description

The 86,000-acre Fort Lewis Army facility is located near Tacoma on the southeastern shore of Puget Sound and has been an Army facility since 1917. Industrial operations include maintenance of aircraft and vehicles, repair and refurbishing of weapons, and neutralization of caustic paint stripping waste and battery acids. The 650-acre Logistics Center is primarily an industrial facility, with some limited commercial use. Three contaminated waste units have been identified and are included in the Logistics Center site. The contamination zone is about 10,000 feet long and 2,500 feet wide, and extends 80 feet into the ground. The Solvent Refined Coal Pilot Project (SRCPP) area was operated from 1974 to 1981 by the Department of Energy as a production/research facility for developing petroleum-like products from coal. The main water supply wells for the base are situated approximately 1/4 mile from the landfill. Approximately 46,700 people live on the post. The closest residence to the site is about 2 miles away. Another hazardous waste unit at the Fort Lewis Army facility, the Landfill No. 5 site, is listed separately on the NPL.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 07/14/89

Final Date: 11/21/89

Threats and Contaminants



Volatile organic compounds (VOCs) including trichloroethylene (TCE), dichloroethylene and polynuclear aromatic hydrocarbons (PAHs) have contaminated soil and shallow groundwater beneath the Logistics Center. The contamination is migrating toward the American Lake Gardens housing area and the City of Tillicum. TCE also has been detected in the deeper Salmon Springs aquifer and in Lynn Lake. Potential health risks include accidental ingestion of or direct contact with contaminated groundwater, soil, or surface water.

Cleanup Approach

The site is being addressed through early actions and three long-term cleanup actions focusing on cleanup of the groundwater, Landfill #4, and the Solvent Refined Coal Project area.

Response Action Status



Early Actions: During the site investigation, the Army provided an alternate water supply to residents of a nearby neighborhood.



Groundwater: The Army completed an investigation into groundwater contamination of most areas of the site in 1990. Based on the results of the investigation a cleanup remedy was chosen, which includes extracting contaminated groundwater, treating it with air strippers, and reinjecting the treated groundwater into the aquifer. The groundwater cleanup is being implemented in two phases. Phase One is the construction of a groundwater extraction well field. Phase Two involves the construction of a groundwater treatment plant. Construction was completed for Phase One in early 1993. Construction began for Phase Two in mid-1994 and is expected to be completed in 1995. Cleanup activities are expected to last until late 1995. Contamination levels in the lake are expected to decline as groundwater is cleaned up.



Landfill #4: The U.S. Army completed an investigation at Landfill #4 and outlined the cleanup plan in 1993. The selected cleanup activities include construction of a treatment system consisting of air sparging of the contaminated groundwater and vapor extraction of gases in soils above the groundwater. A pilot facility for the treatment system is currently being constructed at the site. The pilot study will be used in the design of a full-scale treatment system, which is scheduled to begin operating by the spring of 1996.



Solvent Refined Coal Pilot Project (SRCPP): The U.S. Army completed an investigation at SRCPP and selected a remedy in 1993. The remedy includes treatment of all soils above the established cleanup level utilizing either soil washing or low-temperature thermal desorption. Treatability studies for soil treatment are currently being conducted. Soil treatment is scheduled to begin by the fall of 1995.

Site Facts: Fort Lewis is participating in the Installation Restoration Program, established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



The provision of an alternate water supply to nearby residents **has reduced the potential** for exposure to contamination while further cleanup activities **are being planned at the Fort Lewis Logistics Center.**

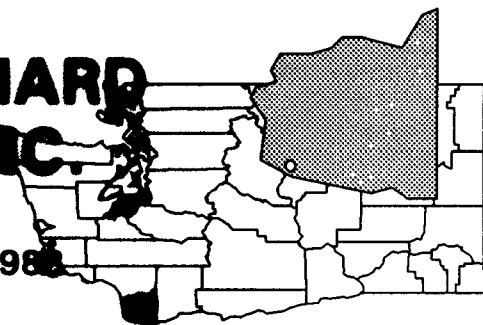
Site Repository



Pierce County Library, Lakewood Branch, 6300 Wildaire Road, Southwest,
Tacoma, WA 98499

FRONTIER HARD CHROME, INC. WASHINGTON

EPA ID# WAD053614982



EPA REGION 10

Clark County
Vancouver

Site Description

The 1 1/4-acre Frontier Hard Chrome, Inc. site is a former chrome-plating facility located in a light-industrial and manufacturing area of Vancouver. Beginning in 1955, the site primarily was occupied by two companies engaged in the chrome-plating business. Presently, the facility is being used as a storage and staging area for a neighboring business. From 1970 to 1976, wastewater from the facility's chrome-plating operation was discharged into the sanitary sewer system. In 1976, the City of Vancouver requested that an alternate disposal method be used until the wastewater treatment plant could be modified to accommodate the chromium. Plating wastewater then was discharged into a dry well on the property and into a large depression located beyond the eastern property line. In 1983, the State ordered Frontier to stop discharging into the dry well. Subsequently, Frontier Hard Chrome, Inc. decided to discontinue operations. The plating baths contained variable amounts of dissolved metals and other contaminants stripped from the metal pieces being plated including iron, nickel, and trivalent chromium. The Columbia River is approximately 1/2 mile south of the facility. Drinking water for 10,000 Vancouver residents is drawn from an aquifer under the site. The nearest city well is about a mile upgradient from a contaminated well. The closest residence is on adjoining property to the north of the site, and two others are a few hundred feet farther north.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater and soils are contaminated with heavy metals and volatile organic compounds (VOCs). Exposure to pollutants through ingestion of or direct contact with contaminated groundwater or soils may pose a health risk.

Cleanup Approach

The site is being addressed through a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Entire Site: The EPA selected the following remedy to clean up the site: excavating chromium-contaminated soils; treating the excavated materials by chemical stabilization; replacing the treated materials; demolishing the buildings on the site; installing a cap over the site to prevent leaching of chromium from the soils and to control surface water runoff resulting from rain; installing groundwater extraction wells; installing a groundwater treatment system to remove contaminants; discharging the treated water into the Columbia River or into the city of Vancouver's sewer system; and developing regulatory controls restricting the use of groundwater and controlling the drilling of new wells in the groundwater plume. The design of the cleanup was delayed while the EPA conducted additional groundwater monitoring to evaluate a noted reduction in groundwater contamination. The results from the groundwater monitoring are being used by the EPA and the State of Washington to determine if groundwater treatment and soil stabilization are necessary to meet cleanup goals.

Environmental Progress



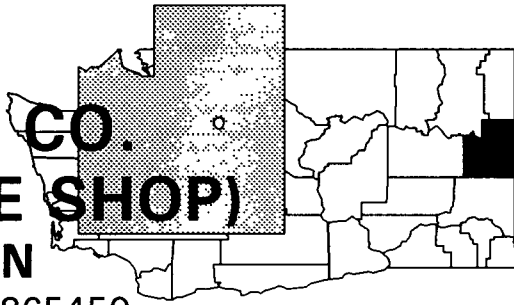
The EPA conducted an initial evaluation of the Frontier Hard Chrome site and determined that no immediate actions are needed while the design of the final cleanup remedy is underway.

Site Repository



Washington Department of Ecology, Toxic Cleanup Reference Center, Woodland Square, 4415 Woodview Drive Southeast, Lacey, WA 98504

**GENERAL
ELECTRIC CO.
(SPOKANE SHOP)
WASHINGTON**
EPA ID# WAD001865450



EPA REGION 10

Spokane County
Spokane

Other Names:

Spokane Apparatus Service Shop
General Electric-Old Site
GE-Spokane Site

Site Description

The General Electric Company site covers about 5 acres in Spokane and includes the company's former industrial service shop and adjacent leased property. From 1961 to 1980, General Electric cleaned, repaired, and restored electrical transformers. The company stored oils from the transformers, electrical motors, switches, pumps, compressors, and other related equipment on the site. Some of this equipment contained polychlorinated biphenyls (PCBs) that entered dry wells on site as a result of steam cleaning activities. General Electric began a study of the contamination at the site after the Washington Department of Ecology (WDOE) found high levels of PCBs in soils. The site is located along the northern edge of a light industrial area in eastern Spokane. About 200,000 people live within 3 miles of the site. The facility overlies the Spokane Valley-Rathdrum Prairie Aquifer, which is the sole source of drinking water for the area. There are about 50 private wells within 4 square miles of the site. The facility is approximately 1,200 feet south of the Spokane River.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88
Final Date: 10/04/89

Threats and Contaminants



On-site soil, groundwater, and sludge contain PCBs. Individuals who come into direct contact with or ingest contaminated groundwater, soil, or sludge may suffer adverse health effects.

Cleanup Approach

The site is being addressed in two stages: early actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Early Actions: The actions completed in 1990 included: demolishing the service shop and removing it from the site; excavating underground structures; transporting and disposing of building debris and a limited amount of soil in a hazardous waste disposal facility; drilling soil test borings; installing additional groundwater monitoring wells; and sampling the groundwater.



Entire Site: Under State supervision, General Electric identified cleanup alternatives at the site. In early 1994, General Electric began quarterly monitoring of groundwater. Later in 1994, General Electric completed the design of the proposed technology to clean up PCB-contaminated soils using in-situ vitrification. This process uses electricity to bind the contaminated soils into a glassy, solid material that is resistant to leaching. General Electric currently is revisiting the design to ensure its effectiveness in cleaning up the soil. In addition, institutional controls will be implemented to prevent unauthorized access to the site.

Site Facts: General Electric and the State of Washington signed a Consent Decree, under which the company agreed to clean up the site.

Environmental Progress



Demolishing the service shop and excavating underground structures and soils have reduced the threat of exposure to contaminants while final cleanup activities are being planned.

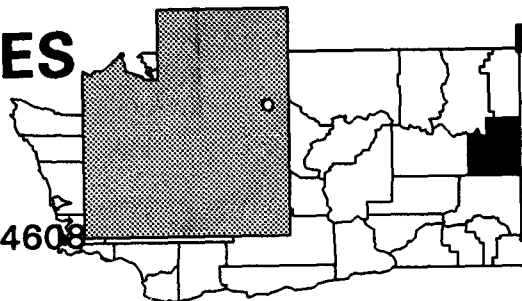
Site Repository



Washington Department of Ecology, Eastern Region, North 4601 Monroe Street, Suite 100, Spokane, WA 99205

GREENACRES LANDFILL WASHINGTON

EPA ID# WAD980514608



EPA REGION 10

Spokane County
14 miles east of Spokane

Other Names:
Liberty Lake Landfill

Site Description

The Greenacres Landfill Site is a 45-acre landfill located near Liberty Lake, 14 miles east of Spokane. The landfill was operated as an open municipal dump from 1951 to 1967. Upon dissolution of the Greenacres Township government in 1967, the County assumed responsibility for the landfill's operation until 1972, when operations ceased. The landfill accepted a variety of household, industrial, and agricultural wastes. In 1978, the State found that a well immediately downgradient from the landfill was contaminated with chlorinated organic solvents. Results from an EPA water quality study show that groundwater adjacent to the site is becoming increasingly contaminated. Approximately 1,000 people live within a 4-mile radius of the site. There are public wells within 2 miles of the site, but water quality data show that the wells are not contaminated. The Spokane Valley-Rathdrum Prairie Aquifer underlying the site is the sole source of drinking water for about 350,000 people.

Site Responsibility: The site is being addressed through Federal, State, and County actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



Groundwater contains volatile organic compounds (VOCs), acid, and heavy metals. People who ingest or come into direct contact with contaminated groundwater may be at risk. The major health hazard posed by the site is the potential movement of contaminated groundwater into the sole source aquifer.

Cleanup Approach

The site is being addressed in a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Entire Site: The investigation of the site was completed in 1991. The State wrote a Cleanup Action Plan for the site in 1992. An Enforcement Order, requiring implementation of the Cleanup Action Plan, was issued to the County and other potentially responsible parties in 1994. The cleanup action for the site requires groundwater sampling until 1997. The groundwater data will be evaluated to determine if further action is warranted. Construction of an impermeable landfill cover will be initiated in 1998 unless groundwater data indicates cleanup action at the site is not needed to protect human health and the environment. Deed modifications restricting use of contaminated groundwater and limiting access to the landfill will be required.

Site Facts: In late 1987, the State and the County of Spokane signed a Consent Decree requiring the County to conduct a study of site contamination.

Environmental Progress



An initial evaluation of the Greenacres Landfill site determined that no immediate actions were needed while cleanup is being planned.

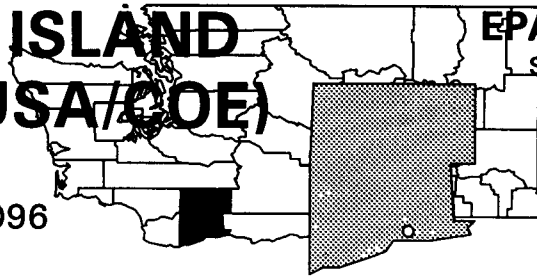
Site Repository



Eastern Region, Washington Department of Ecology, North 4601 Monroe Street, Suite 100, Spokane, WA 99205

HAMILTON ISLAND LANDFILL (USA/COE) WASHINGTON

EPA ID# WA5210890096



EPA REGION 10

Skamania County
North Bonneville

Site Description

Hamilton Island Landfill is a 240-acre site located in Skamania County in southwestern Washington. This site is owned and managed by the U.S. Army Corps of Engineers (USA/COE). From 1977 to 1982, this unlined landfill was used to dispose of approximately 19 million cubic yards of materials excavated during the construction of a powerhouse for the Bonneville dam, which lies 1 mile upstream, as well as the debris collected during the demolition of a nearby town. Suspected chemical wastes included paints and degreasers. Approximately 900 people obtain their drinking water from wells within 4 miles of the site. The Columbia River, a highly productive area for commercial and recreational fisheries, boating, site-seeing, and wind surfing, is adjacent to the site. The site lies within a Federally-designated National Scenic Area.

Site Responsibility: This site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 07/29/91

Final Date: 10/14/92

Threats and Contaminants



Initial sampling indicated that surface and subsurface soil, groundwater, and leachate were contaminated with elevated levels of heavy metals including arsenic and cadmium, and various volatile and semi-volatile organic compounds (VOCs). It was determined in a subsequent investigation, however, that hazardous substances at Hamilton Island do not pose a risk to human health and the environment.

Cleanup Approach

Response Action Status



Immediate Actions: The USA/COE fenced a portion of the site in 1987, restricting public access to contamination at the site.



Entire Site: In the fall of 1993, the USA/COE began investigations of the nature and extent of site contamination. These investigations have detected no hazardous wastes that require cleanup action. The EPA, the Washington Department of Ecology (WDOE), and the USA/COE are proposing that no further action be taken on Hamilton Island.

Site Facts: The U.S. Army Corps of Engineers (USA/COE), the EPA, and WDOE negotiated a formal agreement requiring the USA/COE to conduct investigations of the site and to study various cleanup alternatives under EPA and WDOE supervision.

Environmental Progress



Investigations to determine the nature and extent of site contamination showed that the site does not pose a risk to human health and the environment. Therefore, a recommendation of no further action at the Hamilton Island Landfill (USA/COE) is expected.

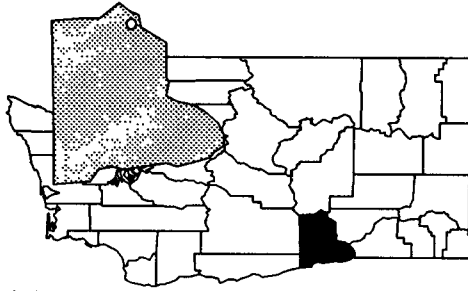
Site Repository



North Bonneville City Hall, Community Library, North Bonneville, WA
Bonneville Dam Second Powerhouse Visitor Center
Skamania County Courthouse, Stevenson, WA

HANFORD 100-AREA (USDOE) WASHINGTON

EPA ID# WA3890090076



EPA REGION 10

Benton County
35 miles north of Richland

Other Names:
USDOE-Hanford Site-100-Area

Site Description

The Hanford 100-Area site covers 11 square miles 35 miles north of Richland. It is one of four areas at the Hanford Nuclear Reservation listed as sites on the EPA's NPL; the other three are the 200-, 300-, and 1100-Areas. These areas are part of a large U.S. Department of Energy (DOE) complex that includes buildings, disposal sites, an ecological research park, and vacant land covering approximately 560 square miles. Hanford was built in the 1940s to make plutonium for nuclear weapons. The nearby Columbia River provided cooling waters for the reactors producing the nuclear materials. The Atomic Energy Commission was in charge of these operations from the early 1940s until Congress created the DOE in 1977. Over the years, Hanford widened its role to include research and development of nuclear materials for uses other than nuclear weapons. The 100-Area is adjacent to the Columbia River in the northern section of Hanford and includes nine nuclear reactors. Of these, eight were used from the 1940s to the early 1970s to produce plutonium. The ninth reactor also produced plutonium as well as electricity until the DOE shut it down in 1988. The DOE and its predecessor disposed of several million cubic yards of radioactive and hazardous wastes in cribs, trenches, and burial grounds in the 100-Area. Approximately 11 square miles of groundwater under the 100-Area are contaminated. The shallow groundwater underneath the site consists of a sand and gravel aquifer, conditions that facilitate the movement of contaminants through the water. Groundwater is not used as a source of drinking water within 3 miles of the 100-Area; however, groundwater does flow into the Columbia River. Over 3,000 workers at the 100- and 200-Areas of Hanford use drinking water intakes located along the stretch of the Columbia River occupied by the 100-Area. The Cities of Richland, Pasco, and Kennewick, with a combined population of approximately 100,000, maintain water intakes on the Columbia River for the bulk of their municipal supply system, but occasionally mix it with groundwater from municipal wells drilled in the sand and gravel aquifer. The Yakima Indian Nation has exclusive fishing rights to the Yakima River, which borders the site.

Site Responsibility: The site is being address through
Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



Groundwater in the Hanford 100-Area contains radioactive waste material including strontium, cobalt, and uranium. People could be exposed to hazardous substances through direct contact with or accidental ingestion of contaminated groundwater. The Columbia River borders the site and is used for fishing and recreation. It supplies water for agricultural use and is the main source of water for municipal supply systems in the area.

Cleanup Approach

For investigation and cleanup purposes, the site is divided into nine areas and is being addressed through long-term cleanup of these areas.

Response Action Status



100-HR-1 and 100-HR-3 Areas: Under State oversight, the DOE is investigating the nature and extent of contamination at the 100-HR-1 and 100-HR-3 Areas. The 100-HR-1 Area consists of the liquid disposal sites located within the 100-H subsite.

The 100-H subsite contains one reactor and support facilities. The 100-HR-3 Area consists of the groundwater underneath the 100-D and 100-H subsites. The studies are expected to be completed in early 1995.



100-DR-1 and 100-BC-1 Areas: The DOE is conducting an investigation to determine the nature and extent of contamination at the 100-DR-1 Area and the 100-BC-1 Area. The State is overseeing cleanup of the 100-DR-1 Area while the EPA is

overseeing cleanup of the 100-BC-1 Area. The 100-DR-1 Area consists of the liquid disposal sites in the 100-D subsite. The 100-D area contains two reactors and support facilities. The 100-BC-1 area consists of the liquid disposal sites in the 100-B and 100-C subsites. The 100-B and 100-C subsites each contain one reactor and support facilities. The studies are expected to be completed in 1995.



100-BC-5, 100-KR-1, and 100-KR-4 Areas: Under EPA oversight, the DOE is investigating the nature and extent of contamination at the 100-BC-5, 100-KR-1, and 100-KR-4 Areas. The 100-BC-5 Area consists of the groundwater that underlies the 100-B and 100-C subsites. The 100-KR-1 Area consists of the liquid disposal sites in the 100-K subsite of Hanford. The 100-K Area contains two reactors and support facilities. The 100-KR-4 Area consists of the groundwater that underlies the 100-K subsite. The 100-KR-4 investigation is scheduled for completion in late 1995, and the studies at 100-BC-5 and 100-KR-1 Areas are expected to be completed in mid-1995.



100-NR-1 Area: Under State oversight, the DOE is scheduled to investigate the nature and extent of contamination at the 100-NR-1 Area. The 100-NR-1 Area consists of the liquid disposal sites in the 100-N subsite. Completion of this study has

been delayed due to an expansion in the scope of the study, but current expectations are that the study will be completed in early 1996.



100-NR-2 Area: Contaminated areas other than the liquid disposal sites in the 100-N subsite will be the focus of this investigation. The scope of the study has been expanded to include additional N-Area sites. Investigations are scheduled to be completed in late 1995.



100-FR-1 Area: The investigation at this area will address the primary liquid disposal areas at the 100-F Reactor Area. The study is scheduled for completion in late 1995.



100-BC-2, 100-DR-2, 100-HR-2 Areas, and 100-KR-2: The investigations of 110-BC-2 and 100-DR-2 are underway. Investigation of the remaining areas will be initiated by the end of 1996.



100-FR-3: In 1991, the DOE began an investigation to determine the nature and extent of contamination and to identify cleanup alternatives for groundwater contamination in the F Reactor Area. The study is scheduled for completion in late 1996.



100-BC-3, 100-KR-3, 100-DR-3, 100-HR-2, and 100-FR-2: The EPA has identified solid waste burial grounds in these areas of the site. A treatability test at the 116-B-1 solid waste burial ground took place in the fall of 1994. The intent of this test was to gather necessary information on the characteristics of burial grounds and to provide the cost and performance data needed for detailed analysis of cleanup alternatives. Determination of the final cleanup remedy will begin after the treatability test results have been evaluated.

Site Facts: In May 1989, the EPA, the State, and the DOE entered into an Interagency Agreement and a Consent Order to provide a legal and procedural framework for cleanup and regulatory compliance at the DOE's waste sites at Hanford. The EPA, the DOE, and the Washington State Department of Ecology jointly developed an action plan that addresses Superfund and Resource Conservation and Recovery Act (RCRA)-related issues at Hanford. The parties will produce work plans to study the nature and extent of contamination at the Hanford site.

Environmental Progress



Since the facility is secured, exposure to contamination is unlikely while the EPA and the State plan investigations leading to the selection of final cleanup plans for the site.

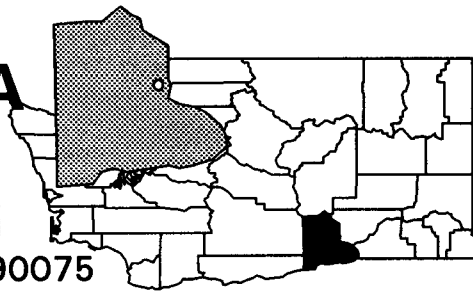
Site Repository



U.S. Department of Energy Public Reading Room
Washington State University, Tri-Cities
100 Sprout Road, Room 130 West
Richland, WA 99352

HANFORD 1100-AREA (USDOE) WASHINGTON

EPA ID# WA4890090075



EPA REGION 10

Benton County
1 mile north of Richland

Other Names:
Hanford Site-1100
USDOE-Hanford Site 1100-Area

Site Description

The Hanford 1100-Area covers 150 acres, approximately 1 mile north of Richland. It is one of the four areas at the Hanford Nuclear Reservation on the EPA's National Priorities List (NPL); the other three are the 100-, 200-, and 300-Areas. These areas are part of a U.S. Department of Energy (DOE) complex that includes buildings, disposal sites, an ecological research park, and vacant land covering approximately 560 square miles. Hanford was built in the 1940s to make plutonium for nuclear weapons. The nearby Columbia River provided cooling waters for the reactors producing the nuclear materials. The Atomic Energy Commission was in charge of these operations from the early 1940s until Congress created the DOE in 1977. Over the years, Hanford widened its role to include research and development of nuclear materials for uses other than nuclear weapons. The DOE conducts maintenance operations in the 1100-Area and provides services to other areas of the site. The area includes a warehouse, a vehicle repair shop, a gas station, and a bus depot for Hanford workers. The DOE is specifically concerned with approximately 10 acres of the 1100-Area containing a landfill, a sandpit, an underground storage tank, and other areas that potentially are contaminated. Up to 15,000 gallons of waste battery acid may have been disposed of in the pit. The DOE used the underground storage tank to store waste antifreeze which may have leaked from the tank. Shallow groundwater under the 1100-Area is 24 feet below the surface. The shallow groundwater underneath Hanford and Richland consists of a sand and gravel aquifer, a condition that facilitates the movement of contaminants through the water. The Columbia River is used for industrial process water, boating, fishing, hunting, and as a drinking water supply about a mile downstream of the site. The cities of Richland, Pasco, and Kennewick, with a combined population of about 100,000, maintain water intakes in the Columbia River for the bulk of their municipal supply system, but occasionally mix it with groundwater from municipal wells drilled into the sand and gravel aquifer. The nearest well in Richland is located approximately 2,600 feet from the disposal area. The Yakima Indian Nation has exclusive fishing rights to the Yakima River, which borders the site.

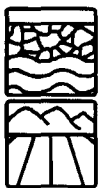
Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



On-site wells in the vicinity of the 1100-Area contain volatile organic compounds (VOCs), including trichloroethylene (TCE). Nitrates, sodium, and sulfate are present in Richland's well water. On-site soils are contaminated with heavy metals and polychlorinated biphenyls (PCBs). People could be exposed to hazardous substances through direct contact with or accidental ingestion of contaminated groundwater and soil. The Yakima River borders the site and is a main fishing source for the Yakima Indian Reservation.

Cleanup Approach

The site is being addressed through long-term cleanup of the entire site.

Response Action Status



Entire Site: The DOE has completed a study of the 1100-Area to determine the nature and extent of contamination at the site and to identify alternative methods to address the contamination. A cleanup remedy was selected in the fall of 1993. The selected remedy entails excavation and off-site disposal of contaminated soils followed by capping and covering of the landfill. On-site response actions should be complete in early 1996, with the exception of groundwater monitoring which will continue for several more years.

Site Facts: In May 1989, the EPA, the State, and the DOE entered into an Interagency Agreement and a Consent Order to provide a legal and procedural framework for cleanup and regulatory compliance at the DOE's waste sites at Hanford. The EPA, the DOE, and the Washington Department of Ecology (WDOE) jointly developed an action plan that addresses Superfund- and Resource Conservation and Recovery Act (RCRA)-related issues at Hanford. The parties will produce work plans to study the nature and extent of contamination at the Hanford site.

Environmental Progress



Cleanup of the Hanford 1100-Area site is underway and expected to be complete in 1996, except for groundwater monitoring, which will continue for second more years.

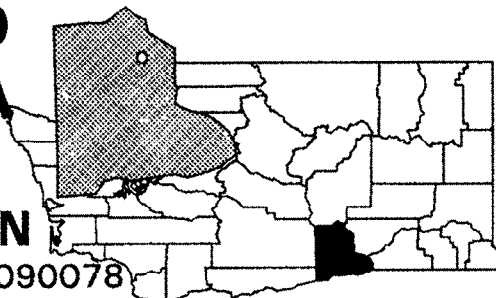
Site Repository



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Washington State University, Tri Cities
100 Sprout Road
Room 130 West
Richland, WA 99352

HANFORD 200-AREA (USDOE) WASHINGTON

EPA ID# WA1890090078



EPA REGION 10

Benton County
20 miles north of Richland

Other Names:
US DOE- Hanford Site-200-Area

Site Description

The Hanford 200-Area covers 215 square miles about 20 miles north of Richland. It is one of the four areas at the Hanford Nuclear Reservation on the National Priorities List (NPL); the other three are the 100-, 300-, and 1100-Areas. These areas are part of a U.S. Department of Energy (DOE) complex that includes buildings, disposal sites, an environmental research park, and vacant land covering approximately 560 square miles. Hanford was built in the 1940s to make plutonium for nuclear weapons. The nearby Columbia River provided cooling waters for the reactors producing the nuclear materials. The Atomic Energy Commission was in charge of these operations from the 1940s until Congress created the DOE in 1977. Over the years, Hanford widened its role to include research and development of nuclear materials for uses other than nuclear weapons. The 200-Area is in the middle of the Hanford site. The DOE uses the 200-Area to process, finish, and manage nuclear materials, including plutonium. The DOE and the Atomic Energy Commission disposed of an estimated 1 billion cubic yards of solid and diluted liquid wastes comprised of radioactive, mixed, and hazardous substances in trenches, ditches, and a landfill at the site. More than 230 waste disposal locations have been identified in the 200-Area. The shallow groundwater underlying Hanford and Richland consists of a sand and gravel aquifer. This condition facilitates the movement of contaminants in the groundwater. More than 3,000 workers at the 100- and 200-Areas of Hanford use drinking water from intakes on the Columbia River, which are located 5 miles north of this site. The cities of Richland, Pasco, and Kennewick, with a combined population of approximately 100,000, maintain water intakes in the Columbia River for the bulk of their municipal supply system, but occasionally mix it with groundwater from municipal wells drilled in the sand and gravel aquifer. The Yakima Indian Nation has exclusive fishing rights to the Yakima River, which borders the site.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY Proposed Date: 06/24/88 Final Date: 10/04/89

Threats and Contaminants



Air sampling of the 200-Area in 1987 showed the presence of strontium, iodine, and plutonium. On-site groundwater and soil are contaminated with tritium, uranium, cyanide, carbon-tetrachloride, and other contaminants. Surface water intakes on the Columbia River for the city of Richland contain tritium. People may be exposed to hazardous or radioactive substances on site through direct contact with, or accidental ingestion of, contaminated particles, groundwater, or surface water. The Yakima River borders the site and is a main fishing source for the Yakima Indian Reservation.

Cleanup Approach

The site is being addressed through both early actions and long-term cleanup actions.

Response Action Status



Early Actions: The removal of approximately 1,400 metric tons of carbon tetrachloride from the 200-ZP-2 area began in 1992. This material is being removed from the soil by large-scale soil vapor extraction systems.



200-UP-2-Area: Forty-three individual waste sites are located in 200-UP-2, part of the 200 West Area, most of which received liquid waste from the uranium recovery and reprocessing plant. The DOE began an investigation into the nature and extent of contamination at this area, which is scheduled to be completed in 1995.



200-BP-1-Area: In 1989, the DOE began a study of the 200-BP-1-Area to determine the nature and extent of contamination and to identify alternative methods to address the contamination. Investigations are complete, and the DOE expects to propose a cleanup plan for public comment in 1995.



200-BP-5: This portion of the site consists of contaminated groundwater. A treatability test is underway to determine the effectiveness of two different systems that would address the contaminants. A proposed interim action plan is scheduled for completion in 1995.



200-UP-1: This portion of the site consists of contaminated groundwater. An investigation is underway to determine the nature and extent of contamination, and is expected to be completed in 1996. A treatability test was completed that evaluated the effectiveness of the remedy to address some of the contaminants. A proposed interim action plan is scheduled for completion in 1995.



200-BP-11: A work plan addressing the regulatory requirements of both the Resources Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Conservation, and Liability Act (CERCLA) is being developed. The plan will identify the steps for an investigation into the nature and extent of contamination at the site.



200-ZP-1: This portion of the site also consists of contaminated groundwater. A treatability test is scheduled to determine the effectiveness of the remedy to address the contamination. A proposed interim action plan is scheduled for completion in 1995.

Site Facts: In May 1989, the EPA, the State, and the DOE entered into an Interagency Agreement and a Consent Order to provide a legal and procedural framework for cleanup and regulatory compliance at the DOE's waste sites at Hanford. The EPA, the DOE, and the Washington State Department of Ecology jointly developed an action plan that addresses Superfund and Resource Conservation and Recovery Act (RCRA)-related issues at Hanford.

Environmental Progress



The Hanford site is a secured DOE facility, and public access is limited. Limited public access to the site, combined with the removal of contaminated soil, greatly reduces the threat of direct exposure to contaminants while the DOE continues investigations leading to the selection of final cleanup remedies at the Hanford 200-Area site.

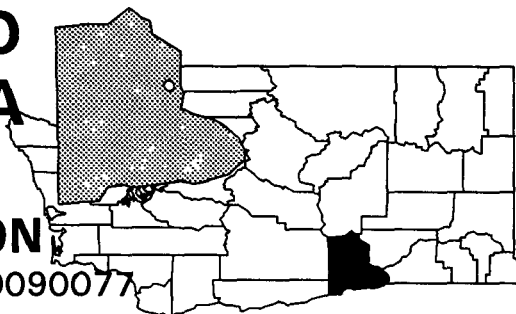
Site Repository



U.S. Department of Energy Public Reading Room, Washington State University, Tri Cities, 100 Sprout Road, Room 130 West, Richland, WA 99352

HANFORD 300-AREA (USDOE) WASHINGTON

EPA ID# WA2890090077



EPA REGION 10

Benton County
2 miles north of Richland

Other Names:
USDOE-Hanford Site-300 Area

Site Description

The Hanford 300-Area covers about 1 square mile, 2 miles north of Richland. It is one of the four areas at the Hanford Nuclear Reservation on the EPA's National Priorities List (NPL); the other three are the 100-, 200-, and 1100-Areas. These areas are part of a Department of Energy (DOE) complex that includes buildings, disposal sites, an environmental research park, and vacant land covering about 560 square miles. Hanford was built in the 1940s to make plutonium for nuclear weapons. The nearby Columbia River provided cooling waters for the reactors producing the nuclear materials. The Atomic Energy Commission was in charge of these operations from the early 1940s until Congress created the DOE in 1977. Over the years, Hanford widened its role to include research and development of nuclear materials for uses other than nuclear weapons. The DOE fabricates fuel for nuclear reactors in the 300-Area. The site contains 25 separate locations used to dispose of radioactive and hazardous wastes. The disposal areas and plumes of contaminated groundwater under them cover approximately 2 square miles. The DOE and its predecessor disposed of about 27 million cubic yards of solid and diluted liquid wastes mixed with radioactive and hazardous wastes in ponds, trenches, and landfills in the 300-Area. The areas used for liquid discharges had no outlets, and liquids percolated through the soil into the groundwater and the Columbia River located directly east and downgradient from the 300-Area. The shallow groundwater underlying Hanford and Richland consists of a sand and gravel aquifer, conditions that facilitate the movement of contaminants through water. The Columbia River is used for industrial process water, boating, fishing, hunting, and as a supply of drinking water 3 miles downstream of the 300-Area. The cities of Richland, Pasco, and Kennewick, with a combined population of approximately 100,000 people, maintain water intakes in the Columbia River for the bulk of their municipal supply system, but occasionally mix it with groundwater from municipal wells drilled in the sand and gravel aquifer. The Yakima Indian Nation has exclusive fishing rights to the Yakima River, which borders the site.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



On-site groundwater is contaminated with uranium, nitrate, and trichloroethane. Soils on and off site contain polychlorinated biphenyls (PCBs), trichloroethylene (TCE), copper, and uranium. The DOE has detected uranium in springs around the area and the Columbia River. Strontium and uranium are present in vegetation. People could be exposed to hazardous and radioactive substances from the site through direct contact, accidental ingestion, and inhalation of contaminated particles, groundwater, soil, or surface water.

Cleanup Approach

The site is being addressed through early actions and two long-term cleanup phases focusing on source control and groundwater cleanup in the 300-Area.

Response Action Status



Early Actions: In 1991, buried drums of hexone and kerosene were removed from burial grounds on site. In 1992, the recovered organic liquids were incinerated.



Source Control: In 1989, the DOE began a study of a portion of the 300-Area to determine the nature, extent, and source of the contamination at the site and to identify alternative methods to address the contamination. The DOE removed and consolidated contaminated sediments from the 300-Area Process Trenches in 1991 as part of the study. The DOE expects to complete the study in 1995, at which time it will begin a study of the remaining areas.



Groundwater: In 1990, the DOE began a study of the groundwater contamination in the 300-Area to identify alternative methods to address the contamination. The DOE expects to complete the study in 1995.

Site Facts: In May 1989, the EPA, the State, and the DOE entered into an Interagency Agreement and a Consent Order to provide a legal and procedural framework for cleanup and regulatory compliance at the DOE's waste sites at Hanford. The EPA, the DOE, and the Washington State Department of Ecology jointly developed an action plan that addresses Superfund and Resource Conservation and Recovery Act (RCRA)-related issues at Hanford.

Environmental Progress



The Hanford site is a secured DOE facility, and public access is limited. Public exposure to contamination is unlikely while the DOE continues investigations leading to the selection of final cleanup remedies for the Hanford 300-Area site.

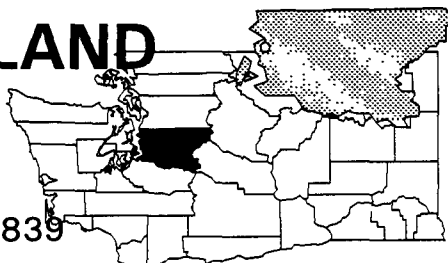
Site Repository



U.S. Department of Energy Public Reading Room, Washington State University, Tri Cities, 100 Sprout Road, Room 130 West Richland, WA 99352

HARBOR ISLAND (LEAD) WASHINGTON

EPA ID# WAD980722839



EPA REGION 10
King County
Puget Sound

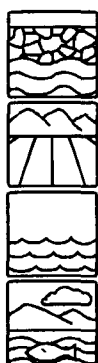
Site Description

The 405-acre Harbor Island (Lead) site is located approximately one mile southwest of downtown Seattle and lies at the mouth of the Duwamish River on the southern edge of Elliott Bay. The island was dredged to facilitate navigation and constructed of river sediments and debris from demolition and regrading projects in the Seattle area. Due to past industrial activities on the island, such as smelting and shipbuilding, there are high levels of lead and other hazardous wastes present. Warehouses, laboratories, and office buildings also are located on the island. There are no residences on Harbor Island, but approximately 10,000 people live within a mile of the site. All residents are supplied with water from the Seattle public water supply system. Elliott Bay is used by fishermen for shellfishing and crabbing.

Site Responsibility: The site is being addressed through Federal, State, municipal, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants



Groundwater contains benzene, ethylbenzene, xylene, mercury, cadmium, lead, and zinc. Groundwater under Harbor Island is not used as a source of drinking water. Sediments near the island are contaminated with heavy metals, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). Soils contain primarily heavy metals, PCBs, and petroleum. Fish in Elliott Bay have been found to be contaminated with PCBs, which may in part be due to contaminated sediments around Harbor Island. There is potential for individuals to be exposed to contaminants through direct contact or incidental ingestion of soils, seafood, or sediments. The site is located in an estuary, an important habitat for wildlife.

Cleanup Approach

For investigation and cleanup purposes, the site has been divided into six phases: early actions and five long-term cleanup phases focusing on the cleanup of the stormdrains, marine sediments, soil and groundwater, the Lockheed Shipyard, and the petroleum storage tank facilities.

Response Action Status



Early Actions: Through an Administrative Order signed in January 1991, the owner of the property has completed the removal of drums containing metal plating solutions.



Stormdrains: In 1990, the City of Seattle, under EPA supervision, sampled, removed, and disposed of all the sediments in the stormdrains. The EPA determined that the sources of contamination were linked to illicit stormdrain connections, poor housekeeping practices, and runoff from on-site contamination. In 1991, the City installed floodgates on the stormdrain outfalls into Puget Sound to allow City crews to clean out the system at any time and to prevent the tidal action from washing offshore contaminants back into the stormdrain system. The City intends to monitor the stormdrain system periodically.



Marine Sediments: The EPA has been investigating the nature and extent of marine sediment contamination. The EPA plans to issue the proposed plan for cleanup for the marine sediment unit in 1995.



Soil and Groundwater: An investigation into soil and groundwater contamination was completed in early 1993. The EPA's cleanup plan was issued in the fall of 1993. The selected cleanup includes: excavation and treatment of highly contaminated soil; containment of soils above the cleanup goals by capping with asphalt; extraction and treatment of floating petroleum product on the groundwater; and the monitoring of groundwater.



Lockheed Shipyards: Lockheed completed an investigation into the nature and extent of contamination from this unit and selected a remedy in 1994. The selected cleanup includes: excavation and treatment of highly contaminated soil; containment of soil with contaminants above the cleanup goals by capping with asphalt; and the monitoring of groundwater.



Petroleum Storage Tank Facilities: The Washington Department of Ecology is the lead for the cleanup of the petroleum storage tank facility and intends to complete a cleanup action plan in 1995.

Site Facts: EPA is currently negotiating agreements with the potentially responsible parties to conduct selected cleanup remedies.

Environmental Progress



Cleaning out storm drains and removing contaminated drums have reduced the threat of exposure to contaminants at the Harbor Island (Lead) site. Long-term protection of human health and the environment will be achieved through implementation of the cleanup action plans.

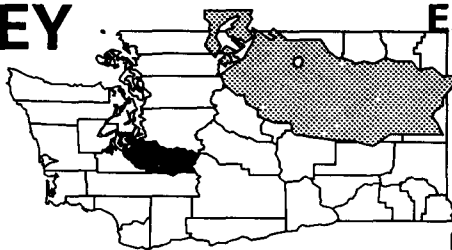
Site Repository



EPA Region 10, Record Center, 7th Floor, 1200 Sixth Avenue, Seattle, WA 98101

HIDDEN VALLEY LANDFILL (THUN FIELD) WASHINGTON

EPA ID# WAD980511539



EPA REGION 10

Pierce County
Near Puyallup

Other Names:
Thun Field
Pierce County Landfill

Site Description

The 86-acre Hidden Valley Landfill (Thun Field) site, near Puyallup, has operated as a landfill in an old gravel pit since 1967. The landfill accepted liquid, solid, and industrial wastes, including heavy metal sludges. Bulk liquids, sludges, and large volumes of industrial waste have not been accepted at the landfill since 1985. The landfill consists of two distinct portions: an unlined area (approximately 56 acres); and an area with a composite liner (approximately 30 acres) with leachate collection and treatment. All disposal currently occurs within the lined area. All unlined areas of the landfill have been closed and capped. A landfill gas collection and incineration system also services the landfill. Land use within a one-mile radius of the site consists of rural and semirural, residential, commercial, industrial, and wooded, undeveloped land. The Thun Field airstrip, an active gravel pit, and a gun club, are adjacent to the landfill. The Sunrise housing development is located east of the site and the Gem Heights development is located northwest of the site. Within the vicinity of the landfill, most residents receive water from the Fir Grove Water District which supplies water to approximately 10,000 residents in the South Hill area. The nearest Fir Grove supply well is approximately 3,000 feet south of the landfill. The site overlies the Central Pierce County Aquifer System, a sole source aquifer. A freshwater wetland is located 1 mile from the site.

Site Responsibility: The site is being addressed through State and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 03/31/89

Threats and Contaminants



Groundwater is contaminated with metals, volatile organic compounds (VOCs), and nitrates. People who ingest or come into direct contact with contaminated groundwater or liquid waste may suffer adverse health effects. Wetlands in the vicinity of the site also may be threatened.

Cleanup Approach

The site is being addressed through a long-term cleanup action.

Response Action Status



Entire Site: In 1987, a potentially responsible party, Land Recovery, Inc., under State oversight, began a study into the nature and extent of contamination at the site. The study defines the contaminants of concern and recommends effective alternatives for final site cleanup. The Washington State Department of Ecology is drafting a Cleanup Action Plan, which will outline the final cleanup plan.

Site Facts: In 1987, the State and Land Recovery, Inc. entered into a Consent Order, requiring the company to conduct an investigation of the site. A Consent Decree will be issued by the State to achieve final cleanup of the site following completion of the Cleanup Action Plan.

Environmental Progress



The EPA has conducted an initial evaluation of the Hidden Valley Landfill (Thun Field) site and determined that no immediate actions are needed while an investigation leading to the selection of the final cleanup is being completed.

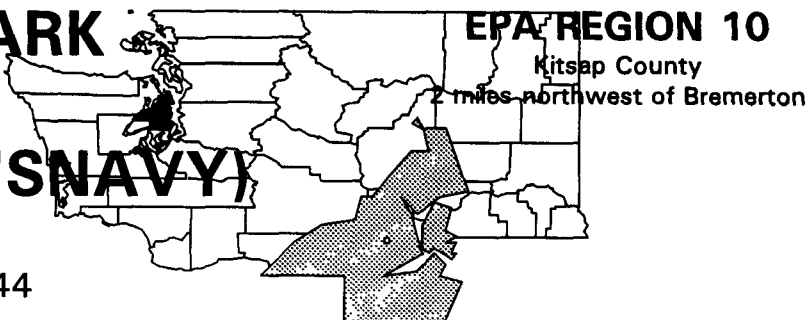
Site Repository



Washington Department of Ecology, Southwest Region, Records Center, 7272 Cleanwater Lane, Olympia, WA 98504

JACKSON PARK HOUSING COMPLEX (USNAVY) WASHINGTON

EPA ID# WA3170090044



Site Description

The Jackson Park Housing Complex (JPHC) is located east of Highway 3, approximately 2 miles northwest of Bremerton, Washington. JPHC occupies approximately 300 acres of land that includes housing for about 3,000 military personnel, recreational areas, undeveloped areas, a hospital, and community service buildings. The facility was operated as a Naval ammunition depot from 1904 to 1959. Residual ordnance powders from loading operations were disposed of by open burning along the waterfront or at a fill area at the south end of the site. During ordnance handling and loading operations, potentially hazardous dust and powder were deposited on the floor and washed into floor drains emptying into Ostrich Bay. In 1959, ordnance and industrial operations were relocated to the Bangor Ordnance Disposal, which is also on the NPL. Between 1973 and 1975, nearly all ammunition buildings were demolished and the current facility was constructed. Industrial activities at JPHC included: ordnance storage, loading, testing, burning, and disposal; case and projectile cleaning; tank and powder can repair; bag dyeing; fuse operations; demilitarization; and pier operations. In addition, the site contained incinerators; paint, locomotive, battery, industrial, and machine shops; and a boiler plant.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/23/93

Final Date: 05/31/94

Threats and Contaminants



According to reports from several sources, Ostrich Bay occasionally became a yellow color due to discharges emanating from the ordnance facility. The yellow color was a result of wastewater containing ammonium picrate (an explosive) or dyes. During decontamination and demolition operations in 1974 and 1975, ammonium picrate was found in storm drains leaving abandoned buildings that had formerly housed ordnance operations. The Navy sampled the soil and drainage areas in 1991 and confirmed the presence of arsenic, cadmium, chromium, copper, lead, nickel, zinc, 2,4,6-trinitrotoluene, 2,6-dinitrotoluene, 1,3,5-trinitrobenzene, and 1,3-dinitrobenzene. Ostrich Bay has been identified by EPA as a special area requiring protection under the National Estuary Program. The bay is used for both recreational and commercial fishing, and extensive wetland habitats exist adjacent to the site. Accidental ingestion of, or contact with, contaminants may have adverse health effects. The wetlands area also may be at risk.

Cleanup Approach

The site is being addressed through an initial action and a long-term remedy focusing on cleaning up the entire site.

Response Action Status



Initial Actions: The Navy, in conjunction with the Washington State Department of Ecology, is in the process of removing contaminated soil from several areas on the site.



Entire Site: An investigation is underway to determine the nature and extent of contamination. Further investigations and analysis of treatment alternatives will be conducted in the future.

Environmental Progress



The EPA has determined that the public and the environment are not at immediate risk while studies at the Jackson Park Housing Complex (USNAVY) site are being conducted and the final cleanup alternatives are being evaluated.

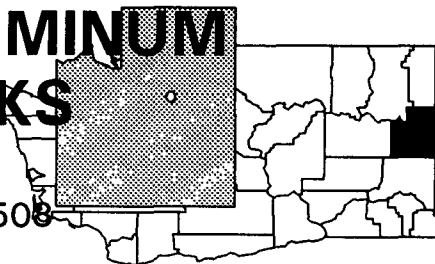
Site Repository



Central and Downtown Libraries, Bremerton
Silverdale Library
Grand Central Station, Jackson Park Housing Complex

KAISER ALUMINUM MEAD WORKS WASHINGTON

EPA ID# WAD000065508



EPA REGION 10

Spokane County
Near Mead

Other Names:
Kaiser Aluminum & Chemical
Corp. - Mead Works

Site Description

The 240-acre Kaiser Aluminum Mead Works site is an aluminum reduction facility located near Mead. From 1942 until 1978, pot linings were disposed of in the northwestern section of the plant property. The pots were soaked with water to loosen the linings for removal prior to disposal. In 1978, cyanide was detected in several private drinking water wells to the northwest of the Kaiser facility. Cyanide has contaminated an aquifer that supplies water to a tributary of the Little Spokane River. The contamination is believed to have originated from the pot lining wastes or wastewater from the pot soaking. In 1978, Kaiser discontinued the practices of pot soaking and discharging effluent to sewage ponds. From 1980 to 1990 Kaiser stored pot liners on the site in a specially constructed building. In 1990, Kaiser began shipping pot liners to a hazardous waste landfill. The closest residences are located about 1/2 mile northwest of the plant. Approximately 5,500 people are served by the water system.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Cyanide and fluoride were detected in soils and the upper portion of the aquifer underlying the site. Concentrations of cyanide in the groundwater plume are decreasing with the dewatering of several industrial lagoons or ponds near the pot liner disposal area. On-site leachate contains arsenic and cyanide. People may be exposed to contaminants through direct contact with or accidental ingestion of soil, groundwater, or leachate. The migration of the contaminant plume from the site may potentially affect aquatic life in the Little Spokane River.

Cleanup Approach

The site is being addressed through early actions and long-term cleanup.

Response Action Status



Early Actions: Kaiser offered affected residents bottled water and physical examinations. The company also offered residences with contaminated wells the options of a permanent hook-up to the public water supply, a deionizer for existing wells, or newly constructed wells. One individual opted for the new well, while 25 affected residences were connected to public water. An adjacent area located to the north of the waste pile was fitted with an underdrain system leading to a lined pond that was paved.



Entire Site: In 1992, Kaiser signed an agreement with the State to complete a study of cleanup options. The assessment was completed in 1993, and a report, which summarizes the investigations of the site and provides evaluations of alternative cleanup actions, was submitted to the State. The study was finished in 1993 and the State is reviewing it.

Environmental Progress



The alternate water supply provided to affected residences has reduced the threat to public health while the State reviews the results of the investigation and a final cleanup remedy is chosen for the Kaiser Aluminum Mead Works site.

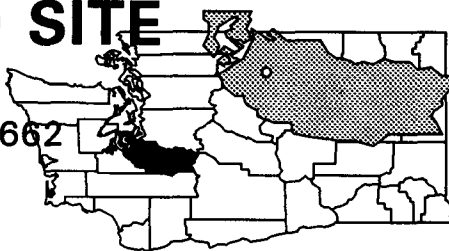
Site Repository



Washington Department of Ecology, Eastern Region, North 4601 Monroe Street, Suite 100, Spokane, WA 99205

LAKEWOOD SITE WASHINGTON

EPA ID# WAD050075662



EPA REGION 10

Pierce County
Lakewood

Other Names:
Lakewood Water District Site
Ponder's Corner
Plaza Cleaners

Site Description

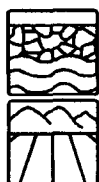
The Lakewood Site is a commercial area that includes a laundry and dry-cleaning facility and covers about 1 square mile in Lakewood. In 1981, two major wells of the Lakewood Water District, which serves more than 10,000 people, were found to be contaminated with chlorinated organic compounds. The Lakewood Water District shut down the wells and notified its customers of the problem. Following the shutdown of the wells, EPA determined that the contaminants were components of degreasers, solvents, and other substances common in industrial use. Further investigation showed the contamination was originating at the commercial dry cleaner.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants



The solvents trichloroethylene (TCE) and tetrachloroethylene (PCE) were detected in groundwater and soil. Potential health risks existed for individuals accidentally ingesting or coming into direct contact with contaminated groundwater and soil.

Cleanup Approach

Response Action Status



Early Actions: Between 1984 and 1985, the State excavated the septic tanks and contaminated sludge from the site. Two aeration towers were constructed to remove the organic solvents from the public water supply. The area was then backfilled with clean soils.



Entire Site: Following an investigation of the soil and groundwater contamination at the site in 1985, EPA determined that groundwater monitoring would continue, and that contaminated soil would need treatment to extract the solvents. In 1992, EPA completed treatment of the contaminated soils on the Plaza Cleaners property using a soil vapor extraction system to reduce contaminant levels. The vapor extraction system since has been dismantled. The groundwater treatment system, installed as part of the early actions, continues to successfully remove contaminants from the drinking water supply. Groundwater treatment is expected to continue until contamination has been reduced to established safety levels.

Site Facts: In 1983, the State issued an enforcement order requiring Plaza Cleaners to cease dumping solvent-containing materials into the septic system. Notice letters were sent to two potentially responsible parties in 1989. Because they were not able to pay for the cleanup, a lien was placed on the property in February 1991.

Environmental Progress



All construction at the site is complete. The soil treatment has been completed at the Lakewood Site. The groundwater treatment system is successfully removing contaminants from the drinking water supply. EPA expects the Lakewood Water District to continue operating the groundwater treatment system until contamination has been reduced to established safety levels.

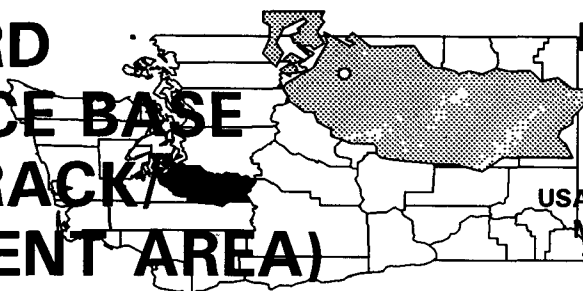
Site Repository



Pierce County Library
Lakewood Branch
6300 Wildaire Road Southwest
Tacoma, WA 98499

MCCHORD AIR FORCE BASE (WASH RACK/ TREATMENT AREA) WASHINGTON

EPA ID# WA8570024200



EPA REGION 10

Pierce County
South of Tacoma

Other Names:

USAF - McChord Air Force Base
McChord Wash Rack Area

Site Description

McChord Air Force Base is an active military base covering almost 4,600 acres, just south of Tacoma. The mission of the base is to provide airlift services to troops, cargo, equipment, passengers, and mail. Since 1940, almost 500,000 gallons of hazardous substances have been used and disposed of on the base. The Wash Rack/Treatment Area is a former aircraft washing facility. The site encompasses the pavement area, where airplanes were washed to remove oil, grease, and other foreign materials with chemical solvents, and two unlined leach pits that received contaminated wash water runoff from the adjacent pavement. Underneath the site is part of an aquifer that supplies drinking water to McChord Air Force Base, the Lakewood Water District, and the American Lake Gardens development. American Lake Gardens is a separate NPL site. The nearest residence is 1/2 mile away, and over 16,000 people live within 3 miles of the site. Approximately 300 domestic wells are located within 5 miles of the base.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 07/22/87

Threats and Contaminants



A layer of floating fuel sits on top of the groundwater table that underlies an area of approximately 300,000 square feet. The fuel layer is primarily an oil emulsion and is contaminated with benzene. Groundwater is contaminated with benzene at levels slightly above federal and state standards as a result of the floating fuel. Individuals who ingest or come into direct contact with contaminated groundwater may be at risk.

Cleanup Approach

Response Action Status



Entire Site: In 1992, EPA completed an investigation to determine the type and extent of contamination at the base. Based on this investigation, it was decided that the best approach for cleaning up the groundwater was through the passive removal of the floating fuel layer from the water table. After beginning this action, it was found that the volume of the floating fuel had been overestimated. An Explanation of Significant Difference (ESD) was completed in 1994 to modify the earlier decision since, as passive fuel recovery was found to be inappropriate. The revised approach calls for natural attenuation, whereby the contaminants naturally dissipate from the groundwater over time. To ensure the effectiveness of this decision, groundwater will be monitored over the next several years.

Site Facts: McChord Air Force Base is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



The EPA conducted an initial evaluation of the McChord Air Force Base (Wash Rack/Treatment Area) site and determined that no immediate actions were needed. Groundwater monitoring will continue at the site for several years to ensure that the groundwater has been restored.

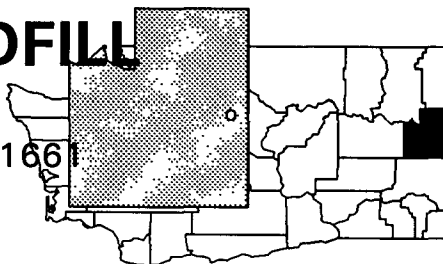
Site Repository



McChord Air Force Base Library, Building 765, 62 CSG/SSL, Tacoma, WA 98438

MICA LANDFILL WASHINGTON

EPA ID# WAD980511661



EPA REGION 10

Spokane County
Near Mica

Other Names:

Spokane Co Utilities Dept - Office
Spokane Co - Mica Landfill

Site Description

The Mica Landfill site has been owned by Spokane County Utilities since 1972 and covers 180 acres near Mica. Until 1981, the landfill was licensed by the State to handle hazardous, domestic, and industrial wastes including dross, baghouse dust, and asbestos in accordance with State regulations. Although a leachate collection system has been installed, leachate continues to migrate off site. The landfill, which ceased operation in late 1991, is located on a hill with intermittent creeks. The creeks empty into Chester Creek, which flows into the Spokane River 3 miles from the landfill. The Spokane River is connected hydrologically to the Spokane Valley-Rathdrum Prairie Aquifer, which has been designated as a sole source aquifer. The closest residence is 1/5 mile from the site. Approximately 115 domestic water wells and 8 irrigation wells are located within 3 miles of the site. About 425 people use the area groundwater as a drinking water source. Two municipal wells serving approximately 4,000 people are within 3 miles of the landfill.

Site Responsibility: The site is being addressed through Federal, State, and County actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



Groundwater contains volatile organic compounds (VOCs), heavy metals, and phenols. Leachate is contaminated with at least 20 regulated organic compounds along with inorganic ions and metals. People who ingest or come into direct contact with contaminated groundwater and leachate may be at risk. The presence of explosive levels of landfill-generated methane gas creates additional threats to public health and the environment.

Cleanup Approach

The site is being addressed through early action and long-term cleanup of the entire site.

Response Action Status



Initial Action: In 1991, the County constructed a number of leachate collection trenches and two leachate collection ponds. These ponds are pumped out as needed.

Leachate is transported to the local treatment plant for treatment and disposal. In 1994, Spokane County began construction of a permanent cover system for the landfill due to the continued leaching of contaminants off of the site. The cover design includes the installation of two impervious barrier layers. Landfill gases also will be controlled. The cover is scheduled to be completed by early 1995.



Entire Site: After the cover is constructed the site will be monitored to determine if the cover system can serve as the final cleanup action for the site. If not, a study will be performed to identify additional actions needed.

Site Facts: The County and the State signed a Consent Order requiring the County to conduct an investigation of the site to perform early cleanup actions under State supervision.

Environmental Progress



The final cover system will significantly reduce threats from exposure to contaminants at the landfill site. Installing leachate collection ponds and trenches has reduced the threat of exposure to contaminants at the Mica Landfill site while construction of the permanent landfill cover continues.

Site Repository



Washington Department of Ecology, Eastern Region, North 4601 Monroe Street, Suite 100, Spokane, WA 99205

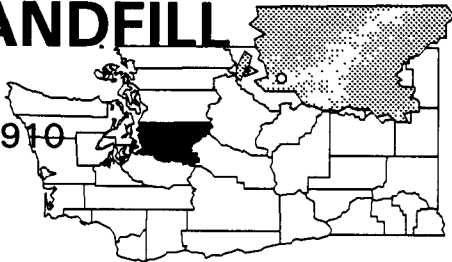
Spokane County - Utilities Division, W. 1026 Broadway Avenue, Spokane, WA 99260-0180

Spokane Public Library, 906 W. Main Avenue, Spokane, WA 99201-0976

Spokane County Public Library, E. 12004 Main Avenue, Spokane, WA 99201-5193

MIDWAY LANDFILL WASHINGTON

EPA ID# WAD980638910



EPA REGION 10

King County
Kent

Other Names:
Midway Disposal Site
City of Seattle Midway Landfill

Site Description

The Midway Landfill site is an old gravel quarry covering approximately 60 acres in Kent. From 1966 to 1983, the landfill, which is on City-owned property, was operated by the City of Seattle. During operations, approximately 3 million cubic yards of refuse were deposited in the unlined landfill, including paint sludge, dye and preservative wastewater, oily wastewater, oily sludges, alkaline wastes, and waste coolant. Closure activities began in 1983, when clean soil was used to cover and grade the landfill, and it was capped with silt or fine sands. Combustible gas was detected in structures up to 3000 feet from the landfill. Approximately 8,200 people live near the affected area. Two elementary schools and a community village are within ½ mile of the site. The Green River is about a mile away.

Site Responsibility: The site was addressed through Federal, State, and municipal actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



Groundwater was contaminated by leachate that contains heavy metals, polychlorinated biphenyls (PCBs), and volatile organic compounds (VOCs) including benzene and vinyl chloride. VOCs also were present in landfill gas, although this threat has substantially subsided. People could have been exposed to contaminants by inhaling landfill gas or ingesting or coming into direct contact with contaminated groundwater.

Cleanup Approach

The site was addressed through a long-term cleanup plan that focused on cleanup of the entire site.

Response Action Status



Entire Site: In 1985 and 1986, the City of Seattle installed 32 gas extraction wells around the perimeter of the landfill to control the migration of gas from the site. Over 130 additional wells have been installed. Four final flares to burn off the gases were installed on site. Off-site gas extraction wells were installed to remove pockets of gas from around the most affected residences as quickly as possible. Monitoring has indicated that the off-site gas problem has substantially subsided. In addition, a fence was constructed around the site to restrict access. Under a 1990 Consent Decree, the City constructed a final protective cover over the site, refined the landfill gas control systems, and constructed stormwater and drainage control systems. These activities were completed in late 1991. Construction is complete and no further cleanup is anticipated at the site. The activities taken appear to be sufficient to prevent future leakage of contaminants from the landfill. However, groundwater, surface water, and the level of gas at the site are being monitored to ensure that the cleanup actions have been successful.

Site Facts: In mid-1990, the City and the State signed a Consent Decree, requiring the City to conduct the actions at the site as described above.

Environmental Progress



The installation of a protective cover and gas extraction system, the construction of stormwater and drainage control systems, and the installation of a fence around the site have reduced gas-related risks to people and the environment. All cleanup actions at the site are complete, although monitoring of groundwater, surface water, and gas will continue to ensure the effectiveness of the cleanup actions.

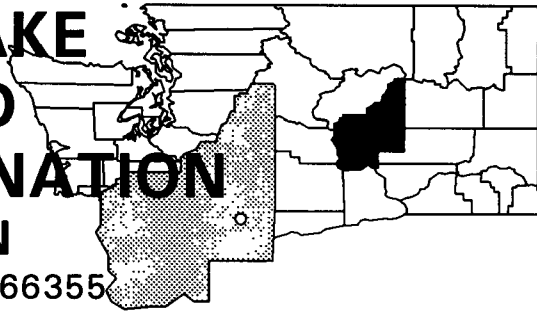
Site Repository



King County Library System, Kent Library 212 Second Avenue North, Kent, WA 98032

MOSES LAKE WELLFIELD CONTAMINATION WASHINGTON

EPA ID# WAD988466355



EPA REGION 10

Grant County
Moses Lake

Site Description

In February 1988, the Washington Department of Health (WDOH) sampled eight Moses Lake municipal drinking water wells as part of a routine sampling effort in compliance with the Federal Safe Drinking Water Act (SDWA). Two wells contained trichloroethylene (TCE) above the EPA's Maximum Contaminant Level established by the SDWA. These high concentrations were confirmed in three separate tests conducted in 1988. The two contaminated wells are part of a blended system that provides drinking water to approximately 5,000 people. Other residents depend on private wells. The EPA conducted further studies to identify the potential source or sources of the TCE groundwater contamination in the Moses Lake area. During a review of nearby Larson Air Force Base (LAFB) maps, discussions with former LAFB employees, and meetings with the City and Port of Moses Lake personnel, the EPA identified a number of potential sources, including, but not limited to, a variety of former LAFB operations and disposal facilities, the City of Moses Lake municipal waste treatment plant, an infiltration area for the LAFB storm sewer system, and a burn pit currently used by the Big Bend Community College Fire Training School. The EPA's study indicates that the area has a long history of operations that could have generated the waste TCE; however, no definite source has been identified. The regional hydrogeology is very complex, which greatly complicates the correlation of groundwater samples with specific portions of the aquifer.

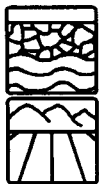
Site Responsibility: This site is being addressed through Federal, State, and local actions.

NPL LISTING HISTORY

Proposed Date: 07/29/91

Final Date: 10/14/92

Threats and Contaminants



Groundwater and soil are contaminated with TCE. Moses Lake municipal drinking water wells were found to be contaminated. The Skyline water system, a private water system with about 150 users, also is contaminated. Coming in direct contact with or drinking contaminated groundwater poses a health risk.

Cleanup Approach

This site is being addressed through two phases: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Immediate Actions: The City of Moses Lake has taken contaminated wells out of service or, in some cases, blended the water with clean water so that citizens are receiving water that meets drinking water standards. The City is also constructing a new reservoir to better manage water service to the area. The Port of Moses Lake, one of the potentially responsible parties at the site, has been providing bottled water to users of the private Skyline water system since March 1994. EPA has initiated plans to work with the Port of Moses Lake to implement a long-term solution at Skyline.



Entire Site: The U.S. Army Corps of Engineers (COE) has completed an initial environmental investigation at the LAFB facility, which is part of this site, under the Department of Defense Environmental Restoration Program. The COE has constructed 23 monitoring wells and taken soil samples at 52 locations to help determine the sources and extent of contamination. EPA has collected 92 soil gas samples and 62 groundwater samples throughout the affected area. EPA has also collected geophysical data of the subsurface in the area of one municipal well. The State of Washington and the Agency for Toxic Substances and Disease Registry have completed a health assessment outlining the health risks posed by the site's contaminants. EPA has met with the potentially responsible party group to begin evaluating the need for additional investigations and to identify cleanup alternatives. This additional work is expected to begin shortly.

Site Facts: The EPA has completed a search for potentially responsible parties and is coordinating community relations activities.

Environmental Progress



Improvements made to the municipal water system and the provision of bottled water have reduced the threat of exposure to TCE contamination while further investigations leading to final cleanup actions are being conducted.

Site Repository

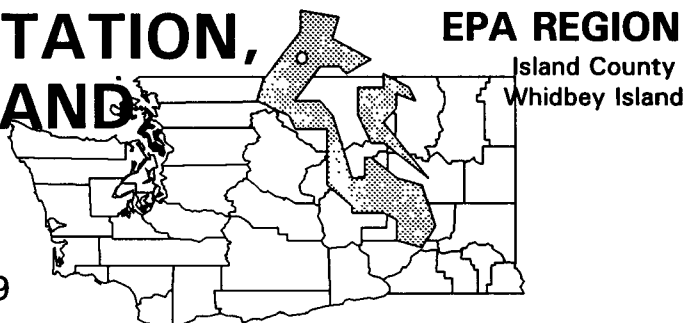


Moses Lake Community Library, 418 E. 5th Avenue, Moses Lake, WA

NAVAL AIR STATION, WHIDBEY ISLAND (AULT FIELD) WASHINGTON

EPA ID# WA5170090059

EPA REGION 10



Site Description

The Naval Air Station at Whidbey Island covers over 7,000 acres and consists of Ault Field and the Seaplane Base, which are 5 miles apart. The Seaplane Base also is on the NPL and is being addressed in conjunction with Ault Field. The station was commissioned in 1942 to maintain and operate facilities and to provide services and materials in support of the Navy's aviation activities and utilities. Most of the military activities take place at Ault Field. Its major waste-generating activities include aircraft and vehicle maintenance and washing, engine testing, non-destructive testing, parts cleaning, painting and paint stripping, battery maintenance, pest control, public works maintenance, and transformer servicing. Wastes generated included solvents, heavy metals, paints, and pentachlorophenols (PCPs). The Ault Field site contains nine waste areas, including four landfills. The site lies on shallow and sea-level aquifers. These aquifers provide drinking water to approximately 21,000 people within 3 miles of the site. Local surface water bodies are used for recreation and irrigation. One surface water intake, found about 6,500 feet from the site, is used to irrigate 66 acres of farmland. A freshwater wetland is located within 500 feet of Ault Field.

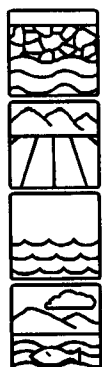
Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 09/18/85

Final Date: 02/21/90

Threats and Contaminants



Groundwater at the site is contaminated with volatile organic compounds (VOCs) including trichloroethylene (TCE) and trichloroethane (TCA). Ingestion of or direct contact with the contaminated groundwater could be a health hazard; therefore, the Navy has provided free connections to city water for residents whose drinking water wells could be impacted by the plume of contaminated groundwater. Soils and sediments contaminated with PCBs, heavy metals, pesticides, PAHs, and dioxin have been found at various locations throughout the site. While there is no immediate threat to human health, there are future human health as well as ecological risks in these areas.

Cleanup Approach

The Ault Field site has been divided into four subsites for the purpose of managing cleanup activities. Subsite 1 consists of Area 6, a known landfill, and Area 5, a suspected disposal area. Subsite 2 is made up of the Walker Storage Barn, Pesticide Rinsate Area, Clover Valley Fire School, Western Highlands Landfill, Area 3, and 1969-1970 Landfill. Subsite 3 encompasses the runaway ditch complex and the former runaway fire school. An additional 26 site areas were investigated as part of the Hazardous Waste Evaluation Study to determine if these areas required more extensive investigation. As a result of this study, a fourth subsite was established, which consists of the beach landfill and Jet Engine Test Cell.

Response Action Status



Initial Actions: The Navy recently began excavating former drywells and storage tanks which then will be backfilled with clean soil. The Navy anticipates completing these removals by the summer of 1995.



Subsite 1: In early 1992, an interim action was selected to pump and treat groundwater underneath and adjacent to Area 6, the landfill. Construction of the pump and treat system is complete and the system is now operating. Nearby residents with private drinking water wells have been connected to city water. In addition to the installation of a pump and treat system at the landfill, the landfill itself will be capped. The Navy and EPA are currently working on the cap design and construction is expected to begin in the fall of 1995. Contaminated soils and sediments from cleanup actions at Subsites 2 and 3 and the Seaplane base will be disposed of in the landfill before it is capped.



Subsite 2: The Navy has selected a long-term cleanup approach for Subsite 2 which calls for the excavation and disposal of contaminated soils from the Walker Storage Barn, Pesticide Rinsate Area, Clover Valley Fire School, and Western Highland Landfill. Institutional controls also will be issued to prevent unauthorized access to the site. In addition, the Navy will monitor the groundwater to ensure the effectiveness of the cleanup actions. Currently, the Navy is designing the technical specifications for these actions, and is expected to begin cleanup in early 1995.



Remaining Subsides: Investigations have been completed at all of the remaining subsites. The Navy has issued a proposed plan for long-term cleanup at Subsite 3 and expects to select the final cleanup plan for Subsites 3 and 4 in 1995.

Site Facts: The Naval Air Station, Whidbey Island (Ault Field) facility is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



Cleanup actions have been selected and are being implemented at the areas which posed the most immediate threats to human health and the environment. All site investigations have been completed. A Restoration Advisory Board, which consists of members of the community, has been formed to work with the Navy on site cleanup decisions.

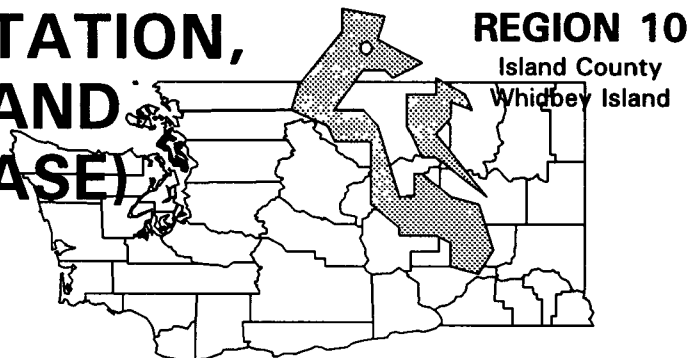
Site Repository



Oak Harbor Public Library, 3075 300th Avenue West, Oak Harbor, WA 98277

NAVAL AIR STATION, WHIDBEY ISLAND (SEAPLANE BASE) WASHINGTON

EPA ID# WA6170090058



Site Description

The Naval Air Station at Whidbey Island covers over 7,000 acres and consists of Ault Field and the Seaplane Base, which are five miles apart. The Naval Air Station, Whidbey Island (Ault Field) site also is on the NPL and is being addressed in conjunction with the Seaplane Base. The station was commissioned in 1942, and its mission is to maintain and operate facilities and provide services and materials in support of the Navy's aviation activities and units. The major waste generating activities at the Seaplane Base involve aircraft and vehicle maintenance, paint and paint stripping, and machine and boat shop activities. Wastes generated include solvents, zinc chromate, lead-containing paint wastes, thinners, acid, and lead-based sealants. The Seaplane Base site consists of five waste areas, including a landfill, salvage yard, and three uncontained spills, covering 7 acres. The waste areas potentially affect both the shallow and the sea-level aquifers. Local surface water bodies are used for recreation. A coastal wetland is located within 200 feet of the site. The closest residence is 1/2 mile away. The population on the Seaplane Base is approximately 4,000. The City of Oak Harbor and the Seaplane Base import fresh water from the mainland via a pipeline as their primary source of water. Two backup wells exist for emergency purposes.

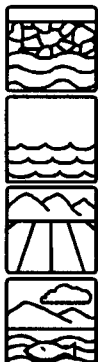
Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 09/18/85

Final Date: 02/21/90

Threats and Contaminants



Investigations at this site have found heavy metals, including lead and arsenic, in the soil in the vicinity of an old auto repair shop and adjacent to the old seaplane nose hanger/repair shop. There are also three soil "hot spots" of pesticide contamination near Building 25 and an area of polycyclic aromatic hydrocarbons (PAHs) that will be removed to allow unlimited use of the Seaplane Base. The groundwater and surface water may be contaminated with heavy metals. The sediments may contain heavy metals and PAHs. Multiple leaks and spills from fuel and oil tank storage areas may affect the surface waters of Oak and Crescent Harbors. Individuals who ingest or come into direct contact with contaminated groundwater, surface water, sediments, or soils may suffer adverse health effects. Wetlands also may be threatened.

Cleanup Approach

The site is being addressed in a long-term remedial phase focusing on cleanup of the landfill and other disposal areas.

Response Action Status



Landfill and Other Disposal Areas: The Navy's investigations at the landfill area, auto repair and paint shop, a disposal area, a Nose Hangar, and a salvage yard to determine the nature and extent of the contamination were completed by the spring of 1993. The cleanup remedy selected in 1993 was to excavate the areas of contamination and dispose of the soils in an appropriate landfill. Excavation began in the summer of 1994 and are expected to be completed in early 1995.

Site Facts: The Naval Air Station, Whidbey Island (Seaplane Base) facility is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



An initial evaluation of the Naval Air Station, Whidbey Island (Seaplane Base) site has determined that no immediate actions are needed while the final cleanup actions are underway.

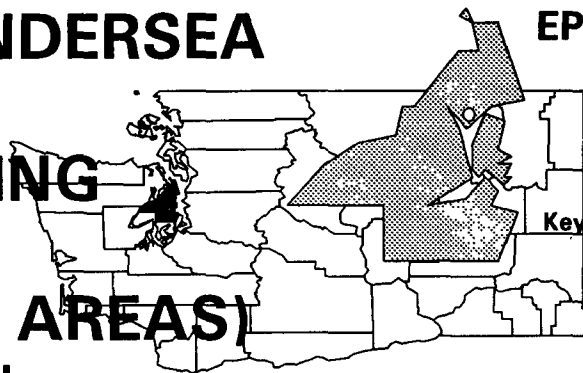
Site Repository



Oak Harbor Public Library, 3075 300th Avenue West, Oak Harbor, WA 98277

NAVAL UNDERSEA WARFARE ENGINEERING STATION (4 WASTE AREAS) WASHINGTON

EPA ID# WA1170023419



EPA REGION 10

Kitsap County
Keyport

Other Names:
Keyport Torpedo Station

Site Description

The Naval Undersea Warfare Engineering Station (NUWES) at Keyport was acquired in 1913 to develop a still-water torpedo testing range. The 200-acre site consists of six separate areas on a peninsula 15 miles west of Seattle. The site is contaminated with wastes containing volatile organic compounds (VOCs) and heavy metals that were disposed of or spilled at the site. At Liberty Bay, wastes were discharged directly into the water. The station is involved in a wide variety of activities, including the maintenance of torpedoes; storage of fuel and ordnance; and production functions, such as welding, plating, painting, carpentry, and sheet metal work. Approximately 3,500 people work at the facility. There are 135 private wells and 22 public water supply wells drawing from the surficial aquifer within 3 miles of the site. The wells serve about 230 households. The unlined landfill is built on a salt marsh and may be in contact with the groundwater. The Van Meter area of the site is located near an intermittent creek that flows into a lagoon used for fishing and swimming. Nearby Liberty and Dogfish Bays are used for recreational activities and for commercial shellfishing.

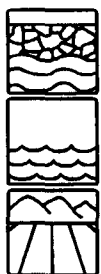
Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 10/04/89

Threats and Contaminants



Groundwater is contaminated with petroleum hydrocarbons, heavy metals, and VOCs. Sediments and soils contain heavy metals. Contaminants identified in shellfish include semi-VOCs and metals. People may be exposed to contaminants through direct contact with or ingestion of contaminated groundwater, sediments, and soils. The ingestion of bioaccumulated contaminants in the shellfish also may pose a health risk.

Cleanup Approach

For investigation and cleanup purposes, the site is divided into two areas: the Keyport Landfill; and the area consisting of Van Meter Road Spill/Drum Storage Area, Sludge Disposal Area, Plating Shop Waste/Oil Spill Area, Otto Fuel Leak, and Liberty Bay Outfalls/Shoreline (Areas 2, 3, 5, 8, & 9). The entire site is being addressed through an early action and two long-term cleanup actions.

Response Action Status



Early Action: In 1992, the Navy removed chromium contaminated soils from the Plating Shop/Waste Oil Spill Area. This early action reduced contamination at the site, thus reducing immediate threats to human health and the environment.



Keyport Landfill: An investigation to determine the nature and extent of contamination at the landfill is underway. Currently a plan is being considered which would require more sampling to supplement the investigation. A remedy to address contamination at the Keyport Landfill is expected to be selected in mid-1995.



Other Areas (Areas 2, 3, 5, 8, & 9): In the fall of 1994, the EPA selected remedies to address areas 2, 3, 5, 8, & 9. Groundwater contamination in areas 3 and 5 was determined to be within the EPA's acceptable risk range; therefore, no action is needed. The remedy selected for area 2 includes implementing institutional controls and monitoring. Area 9 requires monitoring and area 8 (plating-shop) will have all soil removed around and underneath the shop down to the groundwater level. Once the source of the contamination is removed, the groundwater will be monitored. Design of these activities is scheduled to begin shortly.

Site Facts: The Naval Undersea Warfare Engineering Station is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



The removal of contaminated soils from the Plating Shop/Waste Oil Spill Area has reduced the threat to public health and the environment while investigations continue at the landfill and the design of the remedies selected is planned.

Site Repository

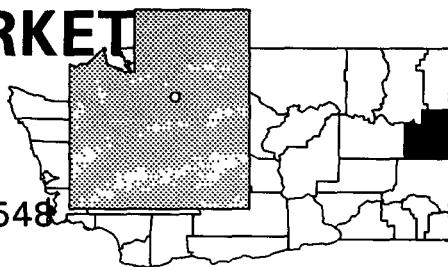


Kitsap Regional Library, 1301 Sylvan Way, Bremerton, WA

Poulsbo Branch Library, 700 NE Lincoln, Poulsbo, WA

NORTH MARKET STREET WASHINGTON

EPA ID# WAD000641548



EPA REGION 10

Spokane County
1 ½ miles north of Spokane

Other Names:

Spokane Term.

Tosco Corp. (Spokane Terminal)

Site Description

The 50-acre North Market Street site, once a petroleum refinery complex and now a bulk storage tank farm for petroleum products, is 1½ miles north of Spokane. Industrial activities from various petroleum related operations since the 1920s have resulted in site contamination from petroleum-derived chemicals. Part of the site operated as an oil refinery until it was decommissioned in 1953. Unlined waste oil lagoons were once located in the northwestern corner of the site and extended onto the adjacent property. The lagoons have been covered with clean soil and fenced. A 6-foot-high chain-link fence topped with barbed wire surrounds the site. The site overlies the Spokane Valley-Rathdrum Prairie Aquifer, designated as a sole source of drinking water. Soil overlying the aquifer is highly permeable, facilitating the movement of contaminants into the groundwater. Groundwater within 3 miles of the site provides drinking water to over 200,000 people and is used for irrigating croplands. Approximately 228 private wells are located within 3 miles of the site.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Threats and Contaminants



Groundwater and soil are contaminated with petroleum compounds and volatile organic compounds (VOCs). Exposure to contaminants may result from ingestion of or direct contact with contaminated groundwater and soil.

Cleanup Approach

The site is being addressed through long-term cleanup.

Response Action Status



Entire Site: As part of a site investigation, the State of Washington constructed monitoring wells and analyzed groundwater from on-site and off-site wells and soil from test pits and borings in the lagoon area. The first phase of a site-wide study into the nature and extent of contamination was completed in early 1994. Remaining investigation work will define the contaminants of concern and will result in recommendations for the final groundwater and soil cleanup remedies.

Environmental Progress



An initial evaluation of the site has determined that no immediate actions are necessary at the North Market Street site while an investigation leading to the selection of final cleanup remedies is underway.

Site Repository

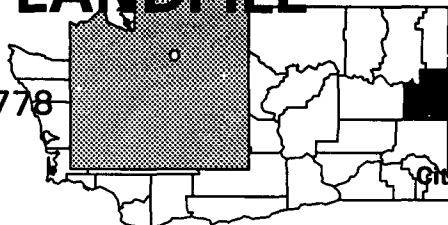


Department of Ecology, Eastern Regional Office, N. 4601 Monroe Street, Spokane, WA 99205
Hillyard Branch Library, N. 4001 Cook Street, Spokane, WA 99207-5880

NORTHSIDE LANDFILL

WASHINGTON

EPA ID# WAD980511778



EPA REGION 10

Spokane County
Spokane

Other Names:

City of Spokane Indian Trails Landfill

Site Description

The Northside Landfill is located on a 345-acre parcel of land in northwestern Spokane. The site was established as a city landfill in 1931 and was the largest refuse disposal operation in Spokane County. The site was used for open burning until the mid-1950s, when open burning was replaced with shallow excavation and fill operations. In the 1960s, the process of covering refuse-filled trenches and canyons with soil was used. In the mid-1970s, an area fill technique was started using 20-foot lifts (20 foot thick layers) on previously buried refuse. The existing landfill stopped receiving refuse in December 1991. More recently, a new waste disposal cell, meeting all new State requirements for landfills, was constructed. This action will allow the site to continue operations as a sanitary landfill in the future. It is anticipated that Northside will be used as a demolition waste and incinerator by-pass disposal site. Contaminants have filtered into the aquifer beneath the site. The aquifer is the sole source of drinking water for the City of Spokane. Approximately 65 residents live in the area of the groundwater plume.

Site Responsibility: The site is being addressed through Federal, State, potentially responsible parties', and municipal actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants



Several nearby domestic water wells are contaminated with organic solvents including tetrachloroethylene (PCE). On-site sludge contains trichloroethylene (TCE) and PCE. Potential health risks exist for individuals who ingest or come into direct contact with contaminated groundwater or sludge.

Cleanup Approach

Response Action Status



Early Actions: In 1983, the City of Spokane extended municipal water to homes with contaminated wells and later to the entire area northwest of the landfill. All residences within the contaminant plume area have been provided with alternate water supplies. The City is regularly monitoring on-site wells and a number of off-site wells and has determined the location and direction of the flow of the plume.



Entire Site: In 1989, the EPA selected a cleanup remedy for the landfill that includes: closure of the existing landfill units as soon as possible; installation of a cap after closure; treatment of the groundwater to reduce the amount of contaminants migrating from the landfill; continuation of groundwater monitoring; installation of a gas collection system to control landfill gas; and deed restrictions to protect the landfill, cap, and monitoring wells from unauthorized access. Parties potentially responsible for contamination at the site have led the design and cleanup efforts. All the landfill units were closed by the summer of 1993. A cap has been installed over the landfill and the site is fully fenced and landscaped. Landfill contaminants have been contained and are no longer spreading. An alternate water supply has been provided to affected residences. All construction at the site was completed in 1993. Groundwater will continue to be treated until it meets drinking water standards.

Site Facts: The EPA and the City of Spokane signed a Consent Order in 1988, requiring the City to complete an investigation of the Northside Landfill. In December 1991, the refuse disposal process for the County was changed to waste incineration. The new waste cell disposal area now accepts non-combustible materials. Incinerator ash is being taken to another dedicated disposal site.

Environmental Progress



Cleanup actions are underway and construction is complete. Site risks have been reduced while the groundwater plume is cleaned up to meet drinking water standards.

Site Repository

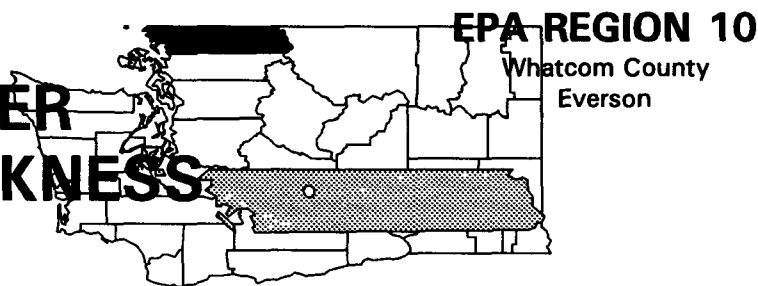


City of Spokane, Engineering Services Division, West 808 Spokane Falls Boulevard,
Room 318, Spokane, WA 99201

NORTHWEST TRANSFORMER (SOUTH HARKNESS STREET)

WASHINGTON

EPA ID# WAD027315621



Site Description

The Northwest Transformer Service Company operated a transformer, reclamation, storage, and manufacturing facility in 1958 on a 1-acre site in downtown Everson. The company transferred its storage and salvage operations to the downtown site in 1985 from its Mission and Pole Roads salvage yard, which is also on the NPL. Northwest Transformer stored transformers, drums, and bulk tanks outdoors in an unpaved yard at the site. A Washington State Department of Ecology inspection in 1985 detected high levels of polychlorinated biphenyls (PCBs) in on-site soils. The company ceased operations at the South Harkness Street site by 1987. The soil is permeable, and the groundwater is shallow in some places at the site. These conditions could facilitate the movement of contaminants into the groundwater. Over 10,000 people use wells within 3 miles of the site for drinking water and irrigation. Surface water also is used for irrigation. Approximately 2,200 people live within 3 miles of the site.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 02/21/90

Threats and Contaminants



Soil and buildings at the site were contaminated with PCBs and heavy metals including arsenic, cadmium, and lead. People could have been exposed to contaminants through accidental ingestion of or direct contact with contaminated soil or building contents.

Cleanup Approach

Response Action Status



Early Action: Parties potentially responsible for contamination at the site led an effort to demolish and remove all buildings and PCB-contaminated soil to the extent practicable. Institutional controls to prevent unauthorized access to the site and established a program of groundwater monitoring will continue at the site to ensure the protectiveness of the early action.



Entire Site: An investigation of the site to determine the nature and extent of the contamination was completed in the fall of 1994. Based on the results of the investigation, the EPA determined that no further action was necessary to address the site.

Environmental Progress



Following the removal of buildings, debris, and soil, the EPA determined that the site poses no risks to the public or the environment.

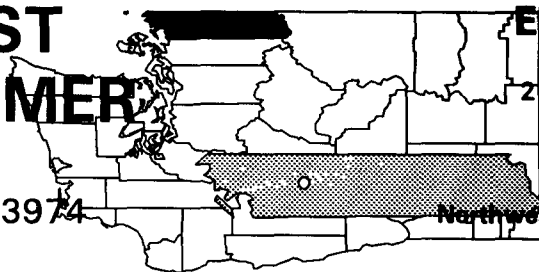
Site Repository



Everson Community Library, 104 Kirsh Drive, Everson, WA 98247

NORTHWEST TRANSFORMER WASHINGTON

EPA ID# WAD980833974



EPA REGION 10

Whatcom County
2 miles south of Everson

Other Names:

Northwest Transformer - Salvage Yard

Site Description

The Northwest Transformer site covers 1 1/2 acres in Whatcom County. The company used the site as a salvage yard from 1958 to 1985 and carried out other activities on site, including dismantling and reclaiming equipment, burning casings for transformers in an open concrete burn pit, burning waste oils in a space heater, and draining transformer oils into a seepage pit. Frequently, chemicals including polychlorinated biphenyls (PCBs) spilled and leaked into site soil. In 1985, the Whatcom County Health Department detected PCBs in private wells near the site. The site is located in a rural/residential area where berries, dairy products, and Christmas trees are produced. Grain is cultivated to the south of the salvage yard. Approximately 700 acres of agricultural land are irrigated with groundwater within 3 miles of the site. The nearest residence is approximately 300 feet away, and about 27 private wells are located within 1/2 mile of the site. Approximately 200 people live within a mile of the salvage yard. The Northwest Transformer (South Harkness Street) site also is on the NPL.

Site Responsibility: The site was addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



PCBs found in the soil once posed a potential threat to human health. As a result of the cleanup actions taken, this threat no longer exists.

Cleanup Approach

Response Action Status



Early Actions: In 1985, the EPA conducted an early action involving the removal of contaminated soil, liquids, and structures from the site. This action removed most of the contamination at the salvage yard. The EPA constructed a chain-link fence around the site and sampled the soils and groundwater. Transformers were drained and rinsed with diesel fuel above a large water tank. Approximately 6,600 gallons of contaminated liquids were transported off site and incinerated. About 1,400 cubic yards of contaminated soil and debris were excavated and disposed of at a federally approved facility.



Entire Site: Cleanup activities are complete at the site. The cleanup activities to address contamination included: excavating, consolidating, and removing approximately 400 cubic yards of the most contaminated soil for off-site incineration; removing an additional 1,200 to 1,300 cubic yards of less contaminated soil for off-site disposal at an approved landfill; capping the site with clean soil; and instituting land use restrictions as necessary. The EPA will continue to monitor on-site groundwater for a year to ensure the effectiveness of the cleanup.

Site Facts: In January 1990, a number of potentially responsible parties signed an Administrative Order with the EPA. Under this Order, the parties completed a study to determine the treatability of waste. In October of 1991, approximately 100 potentially responsible parties signed a Consent Decree agreeing to cleanup site contamination.

Environmental Progress



Cleanup activities are complete at the site and have eliminated threats to public health and the environment. The groundwater will be monitored for a year to confirm the groundwater was not affected by site contaminants. The soil cleanup achieved state and federal standards for future use.

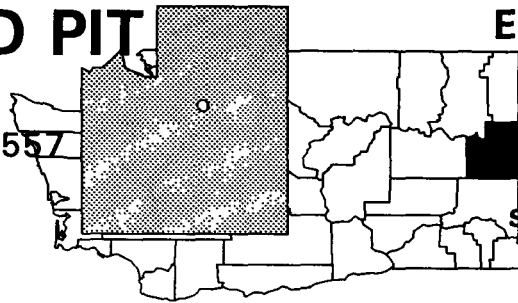
Site Repository



Everson Community Library, 104 Kirsh Drive, Everson, WA 98247

OLD INLAND PIT WASHINGTON

EPA ID# WAD980982557



EPA REGION 10

Spokane County
Spokane

Other Names:
Spokane Steel Foundry

Site Description

The Old Inland Pit site is located in Spokane and covers 10 acres of a former gravel mine. It is part of a larger site shared by the Kaiser Aluminum and Chemical Company. The Inland Asphalt Company used the old gravel mine to dispose of solid waste in 1977. From 1978 to 1983, the Spokane Steel Foundry, located directly across the street from the site, deposited approximately 180 tons of baghouse dust in the mine. Wastes in the pit contain heavy metals and volatile organic compounds (VOCs). The pit is no longer active, and the site is fenced. The nearest residence is approximately 1/4 mile away. The pit overlies the Spokane Valley-Rathdrum Prairie Aquifer, the sole source of drinking water for more than 30,000 people living within 3 miles of the site. Geologic conditions around the pit facilitate the movement of contaminants into the groundwater. The area surrounding the site includes industrial activities, a commercial district, and residential areas. The wells for the Spokane Industrial Park are within 2,000 feet of the site.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 02/21/90

Threats and Contaminants



Soil contains elevated levels of heavy metals and organic solvents. Individuals may be exposed to hazardous chemicals through accidental ingestion of or direct contact with contaminated soil. Groundwater under the site contains low-levels of heavy metals; however, further sampling is needed to confirm whether levels in soil or groundwater are a threat to human health and the environment.

Cleanup Approach

The site is being addressed in a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Entire Site: The State completed initial investigations of the nature and extent of contamination at the Old Inland Pit. This investigation revealed low levels of contamination in soils and groundwater under the site. Based on the results of the investigation, additional studies may be conducted, and alternatives for site cleanup will be recommended.

Environmental Progress



An initial evaluation of the Old Inland Pit site has determined that no immediate actions are needed while site investigations are underway.

Site Repository

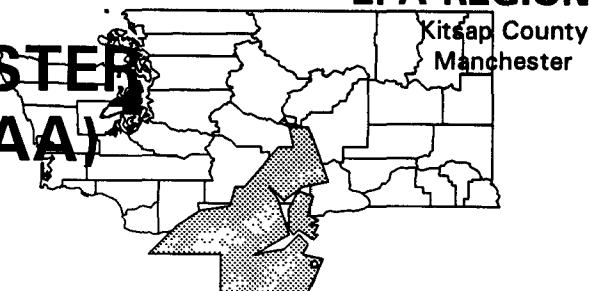


Washington Department of Ecology, Eastern Region, North 4601 Monroe Street, Suite 100, Spokane, WA 99205

OLD NAVY DUMP/MANCHESTER LAB (USEPA/NOAA) WASHINGTON

EPA ID# WA8680030931

EPA REGION 10



Site Description

The Old Navy Dump/Manchester Laboratory (USEPA/NOAA) site is located along the western shore of Clam Bay, which is an embayment west of Rich Passage in the Puget Sound. The site is approximately 1 1/4 miles north of Manchester, Washington. Federal ownership of this site started in 1898 with the U.S. Army. In 1924, the entire site was transferred to the U.S. Navy. The Navy used the site primarily for construction, repair, maintenance, and storage of submarine nets and boats. The site also contained a Naval firefighters school and a dump used for disposal of wastes generated at the site and from the Puget Sound Naval Shipyard in Bremerton, Washington. In the early 1970s, the EPA and the National Oceanic and Atmospheric Administration (NOAA) acquired a portion of the property. The site is currently occupied by an analytical laboratory and a fisheries research laboratory. Portions of the site may extend onto an adjacent state park, a Navy fuel supply depot, and adjacent marine tidelands of Clam Bay. There are currently over 100 people working on site at the two laboratories. Residents in the surrounding area use groundwater for domestic supplies. A sensitive marine estuary, Clam Bay, is located near the site and may be adversely affected by contamination at the site.

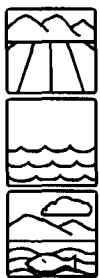
Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 01/18/94

Final Date: 05/31/94

Threats and Contaminants



Runoff water from the dump contains copper and zinc. In addition, site soils contain elevated levels of heavy metals such as lead, mercury, and cadmium; polychlorinated biphenyls (PCBs) and other organic chemicals; petroleum products; and asbestos within the dump, former firefighters school, and adjacent sediments of Clam Bay. Clam Bay is used primarily for recreational shellfishing and is also known to be used by the bald eagle, a federally-threatened species designated under the Endangered Species Act. Touching or ingesting contaminated soil, sediments, or surface water could be a health threat.

Cleanup Approach

The site is being addressed in a long-term action focusing on cleanup of the entire site.

Response Action Status



Entire Site: A detailed investigation to determine the nature and extent of contamination at the site is currently being planned. Although an overall cleanup plan will be developed upon completion of the detailed investigation, interim cleanup actions may be conducted while the investigation is ongoing.

Site Facts: The EPA is currently negotiating with the U.S. Army Corps of Engineers to perform any cleanup necessary at the site under the Formerly Used Defense Sites (FUDS) program, which was established to clean up sites previously owned by the Department of Defense. Current information indicates that former Naval activities are solely responsible for the contamination at the site.

Environmental Progress



The EPA has determined that the site is safe while investigations leading to cleanup alternatives are being planned.

Site Repository

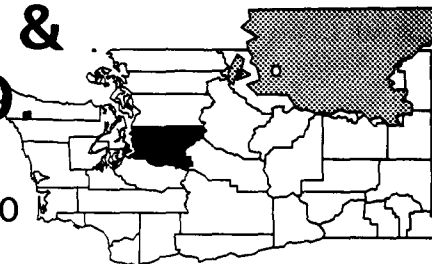


Not yet established.

PACIFIC CAR & FOUNDRY CO.

WASHINGTON

EPA ID# WAD009249210



EPA REGION 10

King County
Renton

Other Names:
PACCAR

Site Description

Pacific Car & Foundry Co. (PACCAR) manufactured trucks, winches, military equipment, railroad cars, and anodes on 82 acres in an industrial area of Renton from 1907 to 1988. Until 1964, the facility deposited waste materials, including foundry sand, wood, metal, paints, solvents, and oils in a marshy area underlain by peat and clay. The wastes are estimated to have been buried up to 7 feet below the surface in this landfill. The landfill has been covered with sand and gravel. In 1986, heavy metals were detected in on-site soil and in shallow groundwater. The City of Renton uses wells drilled in an aquifer connected to the contaminated shallow aquifer. Approximately 37,200 people obtain drinking water from municipal wells within 3 miles of the site. A ditch on the property drains into the Cedar River and John's Creek. The Cedar River flows into Lake Washington, which is used for recreational activities.

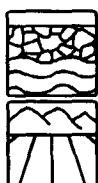
Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 02/21/90

Threats and Contaminants



Contaminants identified in the groundwater include heavy metals, petroleum products, and solvents. Soil contains heavy metals, petroleum products, polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs). The potential for exposure to contaminants exists through ingestion of or direct contact with contaminated groundwater and soil.

Cleanup Approach

The site is being addressed through early actions and a long-term phase focusing on cleanup of the entire site.

Response Action Status



Early Actions: In 1987, PACCAR, Inc. excavated contaminated soil containing hydrocarbons and lead and transported it to a federally-approved hazardous waste facility.



Entire Site: In 1991, the State selected the final cleanup remedy, which includes excavation and treatment of soils containing high levels of heavy metals or PAHs, and excavation and off-site disposal of soils containing PCBs. Soils containing heavy metals will be treated by stabilization, while soils containing PAHs will be treated by bioremediation. Soils containing low levels of contamination will be covered with clean earth to prevent people coming into contact with them. Groundwater contamination is expected to decrease as a result of the soil cleanup and will be monitored until contamination levels meet established cleanup levels. Site cleanup activities began in late 1991 and are expected to be completed in 1997.

Site Facts: A Consent Decree between the State and PACCAR, Inc. was signed in 1989, under which the company agreed to investigate site contamination. A second Consent Decree between the State and PACCAR was signed in 1991, under which the company agreed to clean up the site under State supervision.

Environmental Progress



Excavating and disposing of contaminated soil have reduced the threat of exposure to the public and the environment from the Pacific Car & Foundry Co. site while final cleanup is underway.

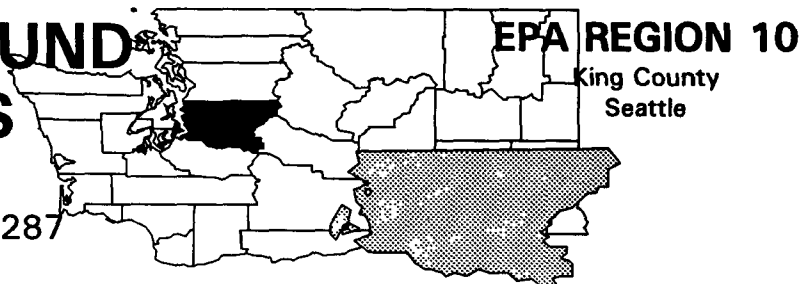
Site Repository



Renton Public Library, 100 Mill Avenue, South, Renton, WA 98055

PACIFIC SOUND RESOURCES WASHINGTON

EPA ID# WAD009248287



Site Description

The Pacific Sound Resources (PSR) site is a 25-acre property. It is located on Southwest Florida Street in West Seattle, on the shore of Elliott Bay and Puget Sound near the Duwamish River. The Wyckoff Co. began operations at this former wood treating facility in 1909. Wyckoff Co. reorganized as PSR in 1964, and operations ceased in 1994. Organic and inorganic wood preservatives have been used at the site, including creosote, pentachlorophenol (PCP) and chemonite (an inorganic solution of copper, arsenic, and zinc salts). One major source of contamination at the site is a former transfer table where workers loaded and unloaded containers. The transfer table was located in the "transfer table pit," a shallow, unlined, earthen pit. Another major contamination source is an area adjacent to Elliott Bay, where three above-ground tanks were used to store creosote. Over the years, the pipelines leading to the tanks have spilled many times. Wastes from the site can flow overland to Elliott Bay through storm drains, direct surface runoff, flooding, and accidental spills. Heavy metals and polycyclic aromatic hydrocarbons (PAHs) were found in the Elliott Bay by the Washington Department of Ecology and the EPA in 1988. Investigations by the EPA in 1989 and 1991 have documented additional sources of contamination. Elliott Bay is a fishery and a key migration route for anadromous fish. The Bay is identified as a subarea in the Comprehensive Conservation and Management Plan for the Puget Sound National Estuary. Land use in the immediate area is primarily industrial, with nearby facilities conducting manufacturing and shipping operations. About 150 people live within 1/4 mile of the site; however, about 175,000 people live within 4 miles. The Port of Seattle is considering acquiring the property to expand an existing container shipping terminal.

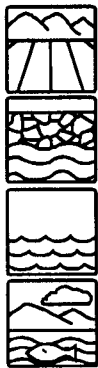
Site Responsibility: The site is being addressed through Federal and State actions. In addition, the Port of Seattle intends to contribute to the investigation, cleanup, and redevelopment of the site.

NPL LISTING HISTORY

Proposed Date: 05/10/93

Final Date: 05/31/94

Threats and Contaminants



Wood treating operations at the site have contaminated surface and subsurface soils, groundwater, and marine sediments with PCP, PAHs, and heavy metals. The soil in the transfer table pit is contaminated with arsenic, chromium, copper, zinc, and PAHs. Populations that may be impacted by the PSR site include trespassers who ingest or touch contaminated soil or groundwater, and people consuming seafood from the adjacent bay. Groundwater at the site is not used as a drinking water source.

Cleanup Approach

The PSR site is currently being managed under the Superfund Accelerated Cleanup Model, an EPA initiative to address contamination at sites more quickly. The site is being addressed in four stages including several initial actions (time-critical and non-time-critical) and a long-term remedial phase focusing on control and cleanup of soils and groundwater. A separate phase will focus on the investigation and cleanup of marine sediments.

Response Action Status



Initial Actions: In mid-1990, PSR excavated about 450 cubic yards of soils and sludge from the transfer table pit and placed the material in a containment box, which PSR then covered with wire mesh and a 3-inch layer of concrete. The containment box is located at the northeast end of the site. The site has been fenced and signs have been posted in efforts to prevent unauthorized access to the site. Other initial actions may include capping of contaminated soils and groundwater source control actions. These actions are expected to occur through the winter of 1995.



Entire Site: In late 1994, under orders from the EPA, PSR began a full-scale study of the nature and extent of soil and groundwater contamination at the site. Upon completion of this study, slated for 1997, the EPA will select a long-term cleanup approach for the entire site. In the meantime, all on-site structures are being demolished. This process is expected to be completed in mid-1995. In addition, arsenic-contaminated soil on the site will be removed starting in mid-1995. Longer term actions are expected to include additional groundwater and marine sediment investigations, including evaluations of potential groundwater recovery and treatment measures. The sediments and groundwater investigations will likely occur in 1995, and groundwater recovery and treatment measures will be evaluated.

Site Facts: Since 1984, the EPA has issued several Administrative Orders against Wyckoff under the authorities of the Superfund program, the Resources Conservation and Recovery Act (RCRA), and the Clean Water Act (CWA). These orders required Wyckoff to fully study and clean up the site. In 1985, Wyckoff and officials no longer associated with PSR pled guilty to illegally storing hazardous waste at the facility and discharging wood-preserving residues into the West Waterway of the Duwamish River.

Environmental Progress



Since 1983, 18 different environmental studies have been performed at the site. Implementing site security and control measures and covering contaminated soil and sludge from the transfer table pit have reduced immediate threats at the site, while final site investigations are being completed.

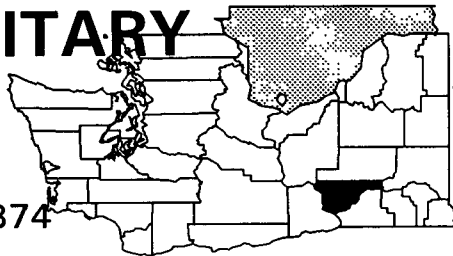
Site Repository



Seattle Public Library, West Seattle Branch, 2306 42nd Avenue, SW, Seattle, WA 98116

PASCO SANITARY LANDFILL WASHINGTON

EPA ID# WAD991281874



EPA REGION 10

Franklin County

1 1/2 miles northeast of Pasco

Other Names:

Larry Dietrich

Resource Recovery Corp.

Phillips Petroleum Co - Coulee Plant

Site Description

The Pasco Sanitary Landfill (PSL) is an active landfill located on 280 acres of land 1 1/2 miles northeast of Pasco. PSL operated as an open burning dump from 1956 to 1971. Municipal wastes were dumped on the surface and were periodically burned. In 1971, PSL was converted to a sanitary landfill. The operations permit for the sanitary landfill expired in mid-1992. A portion of the site was leased in 1972 and operated as a regional hazardous waste disposal site. The site accepted hazardous wastes until 1981. More than 47,000 drums of various hazardous wastes were deposited in the leased portions of the landfill. Wastes included sludges, paints, resins, herbicide manufacturing wastes, caustic chemicals, and empty pesticide containers. Prior to burial, liquid wastes were dried in lined and unlined lagoons. A trailer park is located approximately 3,000 feet southwest of the site, and residents obtain drinking water from the municipal water supply. An estimated 10,600 people live within 3 miles of the site. The confluence of the Snake River and the Columbia River is 2 1/2 miles south of the site. Groundwater within 3 miles of the site is used by over 1,000 people for drinking and irrigating almost 10,000 acres of land. One mobile home trailer and one drinking water well are located on the site.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 02/21/90

Threats and Contaminants



On-site groundwater contains volatile organic compounds (VOCs) including trichloroethylene (TCE), toluene, and xylenes. People who ingest or come into direct contact with contaminated groundwater may be at risk.

Cleanup Approach

The site is being addressed in a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Entire Site: The State began an investigation to determine the nature and extent of site contamination in 1992. Once the investigation is completed, recommendations will be made for the final cleanup remedies. The investigation is being conducted under an order between the State and 29 corporations.

Site Facts: In 1986, the Washington State Department of Ecology issued an Administrative Order requiring Pasco to monitor on-site wells on a quarterly basis.

Environmental Progress



An initial evaluation of the Pasco Sanitary Landfill site has determined that no immediate actions are required while site investigations are underway. The facility is monitoring groundwater contamination under the direction of the State.

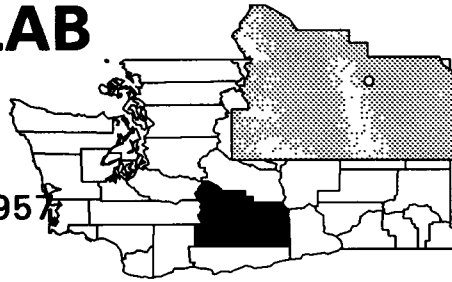
Site Repository



Washington Department of Ecology, Eastern Region, North 4601 Monroe Street, Suite 100,
Spokane, WA 99205

PESTICIDE LAB (YAKIMA) WASHINGTON

EPA ID# WAD120513957



EPA REGION 10

Yakima County
Yakima

Other Names:
USDA - Yakima Agriculture
Research Lab
Pesticide Pit - Yakima

Site Description

The Pesticide Lab (Yakima) is an agricultural research laboratory that covers approximately 40 acres in Yakima. The site is leased by the U.S. Department of Agriculture (USDA). Over the years, wastes from the pesticide storage/formulation/mixing facility were discharged into a septic tank disposal system at the site. Approximately 10,000 people live within a mile of the site, and about 60,000 people use the groundwater for drinking water.

Site Responsibility: The site was addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Deletion Date: 09/01/93

Threats and Contaminants



A drain pipe connecting the septic system and the storage building could have posed a threat to groundwater. People who ingested or came into direct contact with potentially contaminated groundwater may have been at risk.

Cleanup Approach

Response Action Status



Entire Site: The Pesticide Lab (Yakima) site is an active facility; therefore, the site was addressed under the Resource Conservation and Recovery Act program. A sampling program to determine the extent of groundwater and soil contamination at the site began in 1990. This sampling indicated the need to remove a septic tank and drain line. As a result, the septic tank and a drain line that connects the septic tank to the storage building were removed in 1992. The site was deleted from the NPL in 1993.

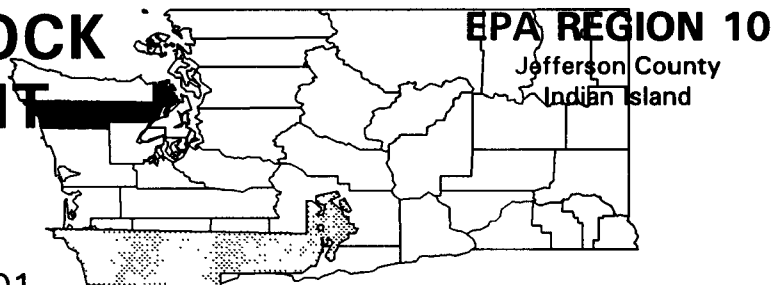
Environmental Progress



Removing the septic tank and drain line has eliminated the threat of exposure to hazardous materials at the Pesticide Lab (Yakima) site.

PORT HADLOCK DETACHMENT (US NAVY) WASHINGTON

EPA ID# WA4170090001



Site Description

The Port Hadlock Detachment (US NAVY) site is located on Indian Island, a 2700 acre island located southeast of the city of Port Townsend. The Navy purchased the island in 1939 and uses it for storage and handling of munitions. Potential sources of hazardous substances include municipal and industrial landfills, drum and container storage areas, above and below ground storage tanks, burn pits, and disposal pits. No private residences are present on the island; however, there are a limited number of military residences. A public highway connects the Olympic Peninsula with Indian Island and Marrowstone Island, which contains a community of approximately 250 residences. Groundwater on the island is not currently used for drinking or other domestic purposes. Commercial and recreational harvesting of shellfish and other aquatic organisms occurs on island beaches and in coastal waters surrounding the island. Although most of the island is restricted, civilians occasionally enter along beaches by boat to collect clams. Native Americans also have been granted access to the island to collect shellfish. Fort Flagler State Park is located a few hundred feet from the north end of the island. Offshore waters around the island are used for spawning, nursing, and feeding by a variety of marine species. The island supports diverse populations of wildlife including the bald eagle.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/23/93

Final Date: 05/31/94

Threats and Contaminants



Localized areas of the island contain contamination in the soils, groundwater, sediments, and clams. The types of contaminants include chemical compounds from Naval munitions, heavy metals such as lead and cadmium, pesticides, and polychlorinated biphenyls (PCBs). People may suffer adverse health effects if they come into direct contact with contaminated soils or loose material or if they eat shellfish or other marine organisms that are contaminated. Contamination may also be adversely affecting the diverse and abundant ecosystem on and around the island.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Initial Actions: As a result of an enforcement order issued by the Washington State Department of Ecology, the U.S. Navy, under the guidance of the EPA and the State, is in the process of removing contaminated materials from three areas on the base. Removal of materials from these former ordnance disposal sites should eliminate the need for further cleanup in these areas. Sampling conducted during and after these cleanups will be used to help determine whether any additional cleanup will be needed.



Entire Site: Investigations of two former landfills began in 1989 and are expected to be completed soon. Upon completion of these investigations, a final decision will be made as to how the remainder of the site will be cleaned up. A final remedy decision is expected to be made in early 1995.

Site Facts: The Navy is conducting cleanup activities on the island in consultation with the EPA and the Washington State Department of Ecology. The State issued an enforcement order to the Port Hadlock installation in June 1991 requiring it to conduct cleanup activities at the installation.

Environmental Progress



The removal of contaminated materials from the three areas on the island is underway to reduce threats to public health and the environment while final site investigations continue.

Site Repository

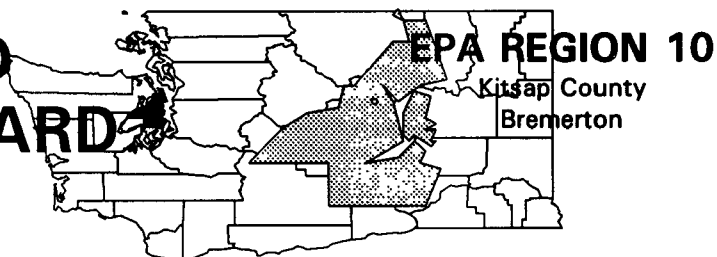


Port Hadlock Library, Ness Corner Rd. and Cedar Avenue, Port Hadlock, WA 98339

WEW Cooperative Extension Office, Jefferson County, 1322 Washington, Post Office Building, Port Townsend, WA 98368

PUGET SOUND NAVAL SHIPYARD COMPLEX WASHINGTON

EPA ID# WA2170023418



Site Description

The Puget Sound Naval Shipyard Complex site is located in Bremerton, Washington, along the Sinclair Inlet on the Puget Sound, about 15 miles west of Seattle. The Navy has owned and operated facilities at this location since 1891. The complex covers about 350 acres of land and an additional 340 acres of tidelands along 11,000 feet of shoreline. Over 12,000 people are employed at the complex, which consists of the Naval Shipyard and the Naval Supply Center. The complex contains over 300 buildings and structures, six deep water piers, six dry docks, and numerous moorings. The major industrial activities at the complex include construction, mooring, and dry docking of Naval ships, and staging and supply of materials. These activities generate large amounts of hazardous waste. The majority of the site is industrial and covered by pavement and buildings. Sinclair Inlet provides a habitat for a variety of marine life and is used for commercial fishing and recreational activities.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 05/10/93

Final Date: 05/31/94

Threats and Contaminants



Petroleum hydrocarbons, heavy metals, semi-volatile organic compounds and polychlorinated biphenyls (PCBs) have been identified in soil and sediments at a number of areas throughout the complex. Groundwater is contaminated with petroleum hydrocarbons, heavy metals, and in some locations, volatile organic compounds (VOCs). Groundwater flows into Sinclair Inlet and is not currently used for drinking water. The primary hazards posed by the site are to marine life and recreational users of Sinclair Inlet; however, people may be exposed to the contaminated soils and groundwater during on-site construction activity.

Cleanup Approach

For investigation and cleanup purposes, the site is divided into four sections: the Naval Supply Center; the Former Waste Disposal Area; the Industrial Core and Marine Area; and the Oil Storage Tank Area. The Navy has undertaken immediate actions to remove contaminants and is conducting investigations to establish long-term cleanup goals for the site.

Response Action Status



Initial Actions: The Navy removed 8,000 tons of lead-contaminated soils from the Naval Supply center and disposed of it off site. This action was completed in mid-1994.



Entire Site: Investigations to determine the type and extent of contamination at the Naval Supply Center, the Former Waste Disposal Area, the Industrial Core and Marine Area, and the Oil Storage Tank Area began in 1992 and are expected to be completed in early 1996. At that time, approaches will be selected for final cleanup.

Site Facts: Puget Sound Naval Shipyard Complex is participating in the Installation Restoration Program (IRP), a specially funded program established by the Department of Defense (DOD) in 1987 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



The removal of contaminated soils has reduced the threat to on-site workers and the environment while the investigations leading to the selection of final cleanup remedies is underway.

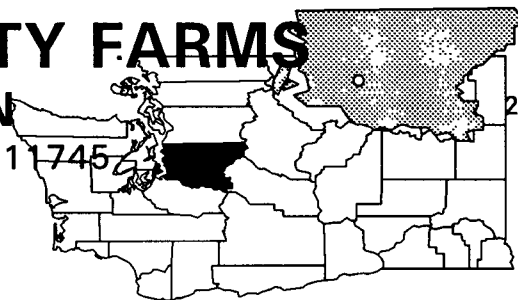
Site Repository



Kitsap Regional Library (Central Branch), 1301 Sylvan Way, Bremerton, WA
Downtown Branch Library, 612 5th Street, Bremerton, WA
Silverdale Branch Library, 3450 NW Carlton Street, Silverdale, WA

QUEEN CITY FARMS WASHINGTON

EPA ID# WAD980511745



REGION 10

King County

2 1/2 miles north of Maple Valley

Other Names:
Queen City Disposal Site
Four-Tek

Site Description

The Queen City Farms site is a 320-acre parcel of land located approximately 2½ miles north of Maple Valley. The site includes a wooded area, three industrial waste disposal ponds, a composting facility, a gravel pit, and Queen City Lake. Three ponds were used for the disposal of wastes from 1955 to 1964. In 1980, the ponds were sampled by the EPA, and heavy metals and volatile organic compounds (VOCs) were found in the water, sludge, and sediment. The area surrounding the site is semi-rural. Approximately 7,800 people live within 3 miles of the site. About 105 public and private wells are located within ½ mile of Queen City Farms. The King County Cedar Hills Landfill is located immediately to the north of the site.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



On-site groundwater monitoring wells contain VOCs such as trichloroethylene (TCE) and dichloroethylene (DCE). Arsenic was detected in residential wells. Soil is contaminated with polychlorinated biphenyls (PCBs) and metals. Sludge and surface water contain TCE. Individuals may be exposed to contaminants through ingestion of or direct contact with contaminated groundwater, soil, sludge, or surface water.

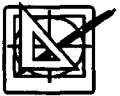
Cleanup Approach

The site is being addressed in two stages: early actions and a long-term cleanup phase focusing on the entire site.

Response Action Status



Early Actions: Between 1985 and 1986, Queen City Farms excavated, solidified, contained, and safely removed approximately 1 million gallons of liquid wastes and more than 16,000 cubic yards of solidified material from the site. In addition, the potentially responsible parties installed an initial upgradient water diversion system; processed wastes in ponds 1, 2, and 3; installed the final upgradient water diversion system; and capped, graded, and revegetated the site. In 1988, soil and drum fragments were taken to a permitted hazardous waste disposal facility. In 1990, approximately 200 cubic yards of contaminated soil were removed from an area of the site known as 4-Tek Industries. Shallow groundwater is being monitored as part of the 1990 removal action to determine if further actions are necessary.



Entire Site: An investigation that determined the type and extent of site contamination was completed in the summer of 1992. The EPA selected the final cleanup action late in 1992 which includes: removing floating oil product from the top of the shallow groundwater, removing contaminated soils, and constructing a vertical barrier wall; extracting and treating contaminated groundwater should the source removal and control measure not be successful; excavating approximately 10,000 cubic yards of contaminated soil and debris; sampling and analyzing deep groundwater in the vicinity of 4-Tek Industries; imposing deed restrictions and institutional controls on land and groundwater use; and long-term on- and off-site groundwater and surface water monitoring. A party potentially responsible for site contamination has agreed to conduct the engineering design of these remedies. Design activities began in late 1994 and are expected to continue until 1997.

Site Facts: In 1985, Queen City Farms and the Boeing Co. reached legal agreements with the EPA and the Washington State Department of Ecology to undertake initial cleanup measures at the site. In 1988, both potentially responsible parties agreed to conduct a comprehensive investigation at the site. In January of 1991, King County completed an investigation of the adjoining Cedar Hill Landfill to determine whether or not it was contributing to contamination present at the Queen City Farms site. The investigations found that the Cedar Hill Landfill was not responsible for contamination at the Queen City Farms site. The EPA has negotiated a Consent Decree with the Boeing Company, requiring it to conduct cleanup actions at all portions of the site except the 4-Tek Industries area. In March 1994, EPA issued a Unilateral Administrative Order to Queen City Farms, Inc. requiring it to conduct cleanup actions associated with the 4-Tek Industries area.

Environmental Progress



The initial measures of removing liquid wastes, soils, and drum fragments and installing a water diversion system and a cap have significantly reduced the threat of exposure to hazardous materials at the Queen City Farms site while design activities are being completed. An off-site private drinking water well study was completed in 1992. The study confirmed that no site-related groundwater contamination exists in the off-site wells. The additional removal of contaminated material and source control measures, as well as continued groundwater and surface water monitoring, will ensure that off-site drinking water supplies continue to be protected.

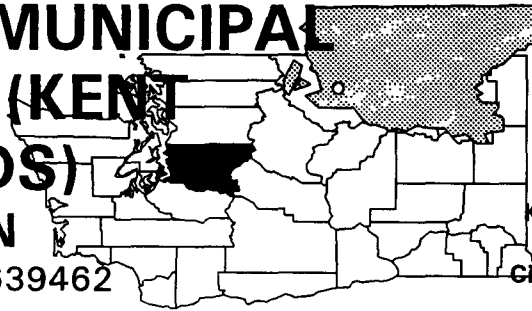
Site Repository



King County Library System, Maple Valley Public Library, 23730 Maple Valley Road,
Maple Valley, WA 98038

SEATTLE MUNICIPAL LANDFILL (KENT HIGHLANDS) WASHINGTON

EPA ID# WAD980639462



EPA REGION 10

King County
Kent

Other Names:

Kent-Highlands Disposal Site
Military Road Landfill

City of Seattle, Kent Highlands
Disposal Site

Site Description

The Seattle Municipal Landfill (Kent Highlands) site is located in Kent, approximately 14 miles south of Seattle. From 1968 to 1986, the City of Seattle leased the site and disposed of refuse on about 60 acres of a 90-acre ravine located on a hillside above the Green River. In addition to municipal wastes from Kent and Seattle, the landfill accepted sand-blasting grit, industrial sludge, and other industrial wastes. In 1984, contaminants were detected in on-site monitoring wells, and leachate seeps were noted on the eastern side of the landfill. The leachate mixed with runoff from the landfill and was routed to a leachate collection pond which discharged into a sanitary sewer system under permit. Approximately 12,700 people live within 1 mile of the site. Over 18,000 people obtain drinking water from public wells within 3 miles of the landfill.

Site Responsibility: The site is being addressed through Federal and municipal actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Threats and Contaminants



Landfill gas contains volatile organic compounds (VOCs) including toluene, xylene, vinyl chloride and trichloroethylene (TCE). Groundwater is contaminated with heavy metals. Leachate contains VOCs and heavy metals. People may be exposed to contaminants through ingestion of or direct contact with contaminated groundwater and leachate, or through inhalation of landfill gas.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Initial Actions: Initial actions taken at the landfill include the installation of a leachate collection and treatment system during operation of the landfill in the 1970s, installation of a landfill gas control system, and construction of a fence.

Improvements in the landfill gas control system were made in 1990 and 1991. A temporary cap was installed after the site was closed, and the site was vegetated.



Entire Site: An investigation to determine the type and extent of site contamination is underway. While the investigation is taking place, an impermeable cover is being installed as well as a ditch system to direct surface water to a stormwater detention pond. The stormwater detention pond is being expanded, repairs and improvements are being made to the leachate collection system, and gas collectors and flares are being added to the gas control system. Compliance monitoring and institutional controls also are being implemented.

Site Facts: A Consent Agreement was signed in 1987, in which the City of Seattle agreed to conduct an investigation of the site.

Environmental Progress



The improvements and repairs to the leachate collection and treatment system, surface water drainage system, and landfill gas control system has reduced the potential for exposure to contaminants at the Seattle Municipal Landfill while an investigation leading to the selection of the final cleanup remedy continues. Presently, there is no evidence of contamination leaving the site.

Site Repository

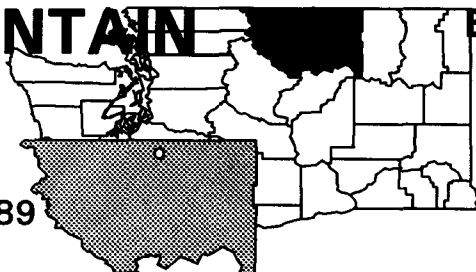


King County Library System, Kent Library, 232 South Fourth Street, Kent, WA 98032

SILVER MOUNTAIN MINE

WASHINGTON

EPA ID# WAD980722789



EPA REGION 10
Okanogan County
Horse Springs Coulee

Site Description

The Silver Mountain Mine site is an abandoned silver and gold mine located in Horse Springs Coulee, approximately 8 miles northwest of Tonasket. The site covers 5 acres and operated sporadically from 1928 to the 1960s. In the early 1980s, cyanide was used to extract metals from mine tailings. In this process, a solution of sodium cyanide was pumped over the tailings and drained into a collection basin where metals were extracted from the solution. By 1983, the site was abandoned, and the mine tailings and holding basin, which contained cyanide-contaminated water, were left behind. The nearest residence is approximately 3 miles away, and fewer than five people live within 3 miles. Private wells are located within 3 miles and are used for domestic purposes, irrigation, and livestock watering.

Site Responsibility: The site was addressed through Federal and State actions.

NPL LISTING HISTORY
Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants



Metal contaminants were detected in on-site groundwater. The leachate pit was contaminated with cyanide and arsenic. Individuals could have been exposed to pollutants through ingestion of or direct contact with contaminated groundwater and leachate.

Cleanup Approach

Response Action Status



Early Actions: In 1985, the Washington State Department of Ecology stabilized the site by removing contaminated water from the pond, capping the heap and pond with a plastic liner, and fencing the site.



Entire Site: Construction activities were completed in 1992. Activities included: consolidating the mine tailings; capping the tailings; fencing the area; and closing the entrance to the mine. The site was revegetated in 1993 and all cleanup goals have been met. Domestic stock watering will be provided as soon as an acceptable source is located.

Site Facts: The Silver Mountain Mine site was placed on the NPL because it is a non-coal site with mining operations that occurred after August 3, 1977, the enactment date of the Surface Mining Control and Reclamation Act (SMCRA). Thus, it is neither regulated by SMCRA nor eligible for cleanup funds from the SMCRA Abandoned Mine Land Reclamation Program.

Environmental Progress



All cleanup activities at the site are complete. Removing contaminated pond water, capping the pond, heap pile, and tailings, fencing the site, and closing the entrance to the mine have eliminated the threat to public health and the environment from the Silver Mountain Mine site.

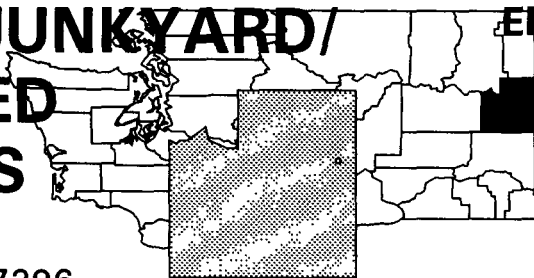
Site Repository



Okanogan County Health District, Environmental Health Section, 237 North 4th Street,
Okanogan, WA 98840

SPOKANE JUNKYARD/ ASSOCIATED PROPERTIES WASHINGTON

EPA ID# WAD981767296



EPA REGION 10

Spokane

Site Description

The Spokane Junkyard/Associated Properties site is approximately 10½ acres in size. The surrounding area is light commercial and residential, with single and multiple-family dwellings, several private businesses, and an elementary school. From the 1940s until 1983, the Spokane Junkyard accepted military surplus items, automobiles, heavy equipment, appliances, and electrical transformers. Spokane Metals Co., located next to the junkyard, recycled scrap metal, including transformers, from 1936 to 1983. A residential lot, a privately-owned vacant field, and an undeveloped strip of land dedicated to public use also fall within the boundaries of the site. An explosive fire in mid-1987 consumed the junkyard. During studies conducted from 1987 to 1989, the EPA found elevated levels of heavy metals and polychlorinated biphenyls (PCBs) in surface soils. An estimated 200,000 square feet of contaminated soil remain on the site. Public and private wells within 4 miles of the site supply drinking water to an estimated 165,000 people. The water from these wells is also used for irrigation. The site lies above the Spokane Valley Aquifer, which is a "sole source aquifer" as described in the Safe Drinking Water Act.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/14/92

Final Date: 05/31/94

Threats and Contaminants



Elevated levels of PCBs and heavy metals, including liquid mercury, cadmium, and lead, have been detected in on-site soils. Contamination could migrate to public and private wells within 4 miles of the site because the wells are shallow and the soil is permeable. A fence surrounds the site; however, several attempts have been made to access the site illegally. Typical signs of vandalism include: holes in the fence, a stolen front gate, and missing locks and chains from the gates. The EPA is repairing and replacing these items continuously.

Cleanup Approach

This site is being addressed in two stages: early actions and a long-term remedial phase focusing on the cleanup of the entire site.

Response Action Status



Early Actions: The EPA transported 140 drums of hazardous liquids and solids and 140 cubic yards of asbestos to regulated landfills after the 1987 fire. Hazardous materials removed from the site included PCB oils, flammable materials, corrosive materials, and chlorinated organic compounds. Contaminated soil still remains on the site.



Entire Site: An investigation into the nature and extent of contamination is underway and is scheduled for completion in 1995. After the investigation is completed, the EPA will select a remedy to clean up remaining site contamination.

Environmental Progress



The EPA has reduced the immediate threat posed by site contamination by removing hazardous materials. A remedy will be selected for cleanup of remaining site contamination once full-scale investigations are completed.

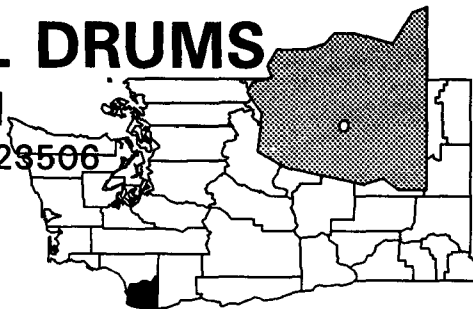
Site Repository



Not yet established.

TOFTDAHL DRUMS WASHINGTON

EPA ID# WAD980723506



EPA REGION 10

Clark County
Brush Prairie

Site Description

The 15-acre Toftdahl Drums site, located in Brush Prairie, was used in the early 1970s to clean used drums for resale. The three main areas where hazardous substances were used included a drum cleaning area, an initial burial trench, and a final drum burial area. Between 100 to 200 drums containing industrial waste were brought to the site from a plywood manufacturer. About 50 of the drums were crushed, placed in a trench, and covered with dirt because they could not be cleaned. Between 1978 and 1982, 38 of the drums from the trench were moved to a local landfill. In 1983, EPA site investigations revealed six badly rusted and leaking drums, which were subsequently removed. The area surrounding the site is rural-residential. Approximately 5,770 people live within 3 miles of the site. The surface of the site slopes downward to a spring and a small westerly flowing tributary of Morgan Creek.

Site Responsibility: The site was addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Deleted Date: 12/23/88

Threats and Contaminants



On-site surface water, groundwater, and soil were contaminated with heavy metals and polychlorinated biphenyls (PCBs). Cleanup actions have removed any potential health threats that were present at the site.

Cleanup Approach

Response Action Status



Early Actions: In 1983, the EPA sampled the six leaking drums and placed them in an excavation trench lined with polyethylene. The drums were then capped with a sheet of polyethylene, excavated soil, and a final sheet of polyethylene. A 6-foot fence was installed around the excavated area. Three additional drums were found in a second excavation and were placed within the fenced area. In 1984, five potential burial locations were identified outside the fence and one area inside the fence. Further investigation of the areas outside the fence uncovered metal debris and "paint-chip-like debris." This debris was addressed in the subsequent cleanup action. Inside the fenced area, 20 pits were excavated.



Entire Site: The State removed and disposed of five crushed drums, parts of additional drums, and 40 cubic yards of contaminated soils. Contaminated soils were placed in polypropylene bags. All contaminated materials were disposed of off-site at a federally-approved hazardous waste facility. Sampling and monitoring of private wells will continue until 1998 to ensure the long-term effectiveness of the cleanup.

Environmental Progress



All cleanup actions at the site have been completed; it no longer poses a threat to public health or the environment. The Toftdahl Drums site was deleted from the NPL in 1988. Annual monitoring by the Washington State Department of Ecology continues to confirm that no contamination is linked to the Toftdahl Drums site.

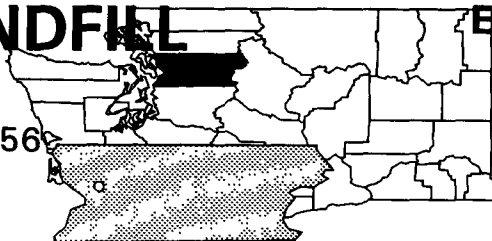
Site Repository



EPA Hazardous Waste Records Center, 1200 Sixth Avenue, Seattle, WA

TULALIP LANDFILL WASHINGTON

EPA ID# WAD980639256



EPA REGION 10

Snohomish County
Marysville

Site Description

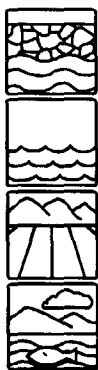
Tulalip Landfill is a 146-acre site located on the Tulalip Indian Reservation. The reservation is surrounded by Ebey Slough to the north, Steamboat Slough to the south, and Possession Sound to the west. Surface water from each of these water bodies flows into northern Puget Sound, a federally-designated National Estuary which is a recognized habitat for salmon, shellfish, and some endangered species. In 1964, the Tulalip Tribe leased land to the Seattle Disposal Company which deposited an estimated 4 million cubic yards of municipal, industrial, and hospital waste on site. In 1979, the landfill was closed in compliance with a Federal Consent Decree. In 1987, the EPA issued a modified permit under the National Pollutant Discharge Elimination System (NPDES) requiring the Tulalip Tribe to collect the approximately 10 to 90 million gallons of leachate generated by the site each year and transport it for off-site treatment. The Tribe has not complied with the permit. In December of 1990, a NPDES inspection conducted by the EPA revealed that the site was receiving demolition debris, including dredge spoils and treated lumber, not previously approved for disposal. The Tribe has discontinued the disposal of all demolition debris at the EPA's request. An estimated 7,800 people obtain their drinking water from private and municipal wells that are within 4 miles of the site. The nearest drinking water source is within 1 mile of the site.

Site Responsibility: This site is being addressed through Federal and potentially responsible party actions.

NPL LISTING HISTORY

Proposed Date: 07/29/91

Threats and Contaminants



Groundwater, wetland water, and slough water are contaminated with heavy metals, including lead, copper, chromium, and cadmium, in excess of both the EPA's Maximum Contaminant Levels established under the Safe Drinking Water Act, and the marine Ambient Water Quality Criteria established under the Clean Water Act. On-site leachate and pooled water sources contain elevated levels of heavy metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs) including toluene and xylene, and semi-VOCs. In addition, leachate, pooled water, and slough samples are plagued by numerous strains of opportunistic pathogens. Due to the infiltration of estuarine water that is rich in nutrients and dissolved oxygen, these pathogens are resistant to several antibiotics and can survive for years. Sensitive wetland areas, local fisheries, and wildlife inhabiting the Puget Sound area are threatened by contaminants at the site.

Cleanup Approach

This site is being addressed in two phases: immediate actions and a long-term remedial phase focusing on the cleanup of the entire site.

Response Action Status



Immediate Actions: The EPA has posted signs to discourage site entry and fishing in nearby waters.



Entire Site: Investigations to determine the nature and extent of contamination and to identify cleanup alternatives are underway by the potentially responsible parties.

An investigation to support early design of a "presumptive" (or standardized) remedy for the site has been completed. Presumptive remedies for landfills may include a landfill cap, source area groundwater control to contain contamination, landfill leachate collection and treatment, landfill gas collection and treatment, and institutional controls to prevent unauthorized access to the site. The EPA expects to make a cleanup decision for the landfill in 1996.

Site Facts: The landfill was closed in 1977 as a result of a Federal Consent Decree. The EPA has developed a data base containing information on over 6,000 parties who contributed waste to the landfill. The EPA may implement a *de minimis* settlement with those parties whose waste contribution is minimal, to quickly resolve their potential liability for the site.

Environmental Progress



Discontinuing the disposal of demolition debris at the Tulalip Landfill has reduced the possibility of continued contamination. Posting signs has also reduced the possibility of exposure to contaminants while final investigations are underway.

Site Repository



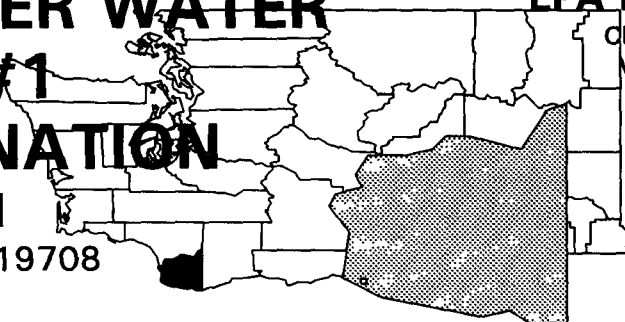
Marysville Library
4822 Grove
Marysville, WA 98270

VANCOUVER WATER STATION #1 CONTAMINATION WASHINGTON

EPA ID# WAD988519708

EPA REGION 10

Clark County
Vancouver



Site Description

The Vancouver Water Station #1 site, located at East Reserve and Northeast Plain Boulevard, is one of the well fields that supplies drinking water to the City of Vancouver. Vancouver Water Station #1 is the largest of Vancouver's operating well fields and is located in a municipal park called Waterworks Part. Ten wells pump as much as 20 million gallons of water per day during peak periods to supply drinking water to the residents of Vancouver and Clark County. In 1988, the City discovered low levels of tetrachloroethylene (PCE) and other volatile organic compounds in some of the wells at Station #1. In 1992, the concentrations of PCE in some individual wells exceeded the federal drinking water standard for this chemical.

Site Responsibility: The site is being addressed through
Federal and local actions

NPL LISTING HISTORY

Proposed Date: 06/23/93

Final Date: 05/31/94

Threats and Contaminants



Groundwater is contaminated with PCE. Touching or ingesting contaminated groundwater could have adverse health effects.

Cleanup Approach

The site will be addressed in a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Initial Actions: The EPA conducted site inspections in 1990 and 1991, which included taking soil gas measurements at businesses near the site. No identifiable source of contamination was found. In response to increasing levels of contamination, the City of Vancouver began pumping wells and designing a treatment system. Five air stripping towers were constructed and began removing contaminants from the groundwater in the summer of 1993.



Entire Site: The EPA is planning an investigation of the nature and extent of contamination at the site. Upon completion of this investigation, the EPA will evaluate cleanup alternatives and select a final cleanup approach for the site.

Environmental Progress



The air stripping towers have successfully removed contaminants from the water. The EPA has determined that the public and the environment are not at immediate risk while studies leading to cleanup alternatives at the Vancouver Water Station #1 Contamination site are being planned.

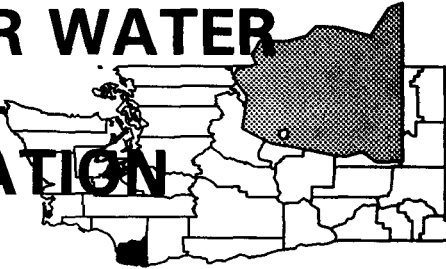
Site Repository



Not yet established

VANCOUVER WATER STATION #4 CONTAMINATION WASHINGTON

EPA ID# WAD988475158



EPA REGION 10

Clark County
Vancouver

Site Description

Vancouver Water Station #4 is located in the City of Vancouver approximately a 1/2 mile north of the Columbia River. Station #4 is one of several well fields used to provide drinking water to Vancouver and surrounding areas; it blends water output from other wells to supply drinking water to approximately 108,000 people. In 1988, the State Department of Health sampled Water Station #4 under guidelines provided by the Safe Drinking Water Act (SDWA) and discovered perchloroethylene (PCE) in excess of the Federal standards. The sample also showed very low levels of other volatile organic compounds (VOCs) such as trichloroethylene (TCE). The City took Station #4 out of service in October of 1989.

Site Responsibility: This site is being addressed through Federal, State, and local actions.

NPL LISTING HISTORY Proposed Date: 07/29/91 Final Date: 10/14/92

Threats and Contaminants



Groundwater is contaminated with PCE. Accidental ingestion of, or direct contact with, contaminated groundwater could have adverse health effects.

Cleanup Approach

The site is being addressed in two phases: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Initial Actions: The City of Vancouver has constructed two air stripping towers at the site. The towers began operating in early 1992 and are removing PCE from the water. The treated water then is distributed to the community.



Entire Site: The City of Vancouver has examined soil gas, groundwater, and existing and newly installed monitoring wells. PCE was not detected in any soil samples collected from the monitoring well borings; however, high levels of PCE were discovered in the groundwater of some monitoring wells. This study also has investigated historic land use in an effort to identify potential sources of PCE. Dry cleaners are a suspected source, but further investigation will be necessary to confirm the actual sources of contamination.

Environmental Progress



The air stripping towers have successfully removed contaminants from the water. There are no immediate threats to human health while final site investigations continue.

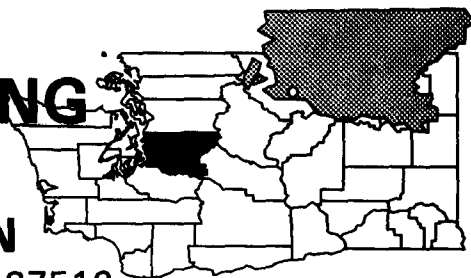
Site Repository



Not established.

WESTERN PROCESSING CO., INC. WASHINGTON

EPA ID# WAD009487513



EPA REGION 10

King County
Kent Valley

Site Description

The Western Processing Company, Inc. site covers 13 acres, located approximately 20 miles south of Seattle, in the highly industrialized Kent Valley. Originally, the company reprocessed animal by-products and brewer's yeast. In the 1960s, the business expanded to include recycling, reclaiming, treating, and disposing of industrial wastes. The wastes included waste oils, electroplating wastes, waste pickle liquor, battery acids, flue dust from steel mills, pesticides, spent solvents, and zinc dross. From 1961 until 1983, approximately 300 businesses transported their industrial wastes to the Western Processing site. The company stored approximately 4,000 to 6,000 drums on the site. The property also contained 72 bulk tanks, open waste piles, 10 lagoons, transformers, and other containers. The company was closed permanently by court order in 1983. Approximately 10,000 people live within 3 miles of the site. The City of Kent, with a population of 41,880, obtains its drinking water from an aquifer located more than a mile from the site. The aquifer is much deeper than the contaminated aquifer at the site.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 07/23/82

Final Date: 09/08/83

Threats and Contaminants



Contaminants found in groundwater and sediments included phenols and heavy metals. Soils contained volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), phenols, and metals. VOCs and metals were detected in surface water. Individuals may have been exposed to contamination through accidental ingestion of or direct contact with contaminated groundwater, sediments, soils, or surface water.

Cleanup Approach

Response Action Status



Early Actions: In 1983, the EPA stabilized the site by removing 127 drums of PCB liquids; 1,944 cubic yards of solidified paint sludges; 24,700 gallons of recycled solvents; and 447,450 gallons of mixed contaminated liquids. The EPA and the State also installed a stormwater runoff system, capped a material pile with an impermeable, flexible cover, and regraded portions of the site. In 1984, construction of a lined impoundment for stormwater collection and treatment was completed.



Source Control: In 1984, the EPA selected a remedy to control the source of contamination including: removing all bulk liquids, drummed liquids, and waste piles to a federally approved facility for disposal or incineration; removing and disposing of all transformers and substation equipment; dismantling, demolishing, and removing all on-site buildings and bulk storage tanks; using a portable stormwater treatment plant on site; and monitoring air quality. The potentially responsible parties, under EPA oversight, completed these cleanup actions in 1984, with the exception of treatment of some dioxin-contaminated liquids, which was completed in 1986.



Entire Site: In 1985, the EPA selected a remedy to clean up the entire site. Approximately 25,000 cubic yards of contaminated soils were removed from the site by the potentially responsible parties in 1987. The wastewater treatment plant began operating in 1988. As of the end of May 1994, over 507,000,000 gallons of contaminated groundwater had been treated. Construction activities were completed late in 1991. Cleanup of contaminated sediments in Mill Creek and the East Drain was completed in 1994. Extensive monitoring, including sampling of the extraction wells, treatment plant influent and effluent, and Mill Creek and the East Drain, is continuing. In addition, several wells outside the site are being monitored.

Site Facts: In 1983, the EPA issued an order to Western Processing to cease operations due to contamination problems. In 1984, the EPA, the State of Washington, and the potentially responsible parties signed a partial Consent Decree requiring the parties to perform surface cleanup activities at the site. In 1986, a Consent Decree was signed requiring the potentially responsible parties to perform groundwater cleanup activities for a minimum of 5 to 7 years, followed by 30 years of monitoring.

Environmental Progress



The removal of liquids and sludges; the excavation of soils, soil wastes, and sediments; and the treatment of stormwater and groundwater have reduced the threat of exposure to contaminants at the Western Processing site. All construction at the site is complete. Cleanup activities at the site are nearing completion and monitoring is ongoing.

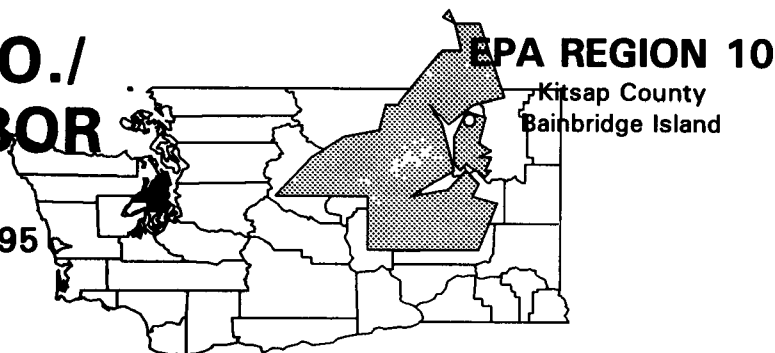
Site Repository



EPA Region 10 Hazardous Waste Records Center, 1200 Sixth Avenue, Seattle, WA 98101

WYCKOFF CO./ EAGLE HARBOR WASHINGTON

EPA ID# WAD009248295



Site Description

The 40-acre Wyckoff Co./Eagle Harbor site is located on Bainbridge Island. The site includes Eagle Harbor and the former Wyckoff Co., a wood-treating facility located at the mouth of Eagle Harbor. The facility was in operation from 1905 to 1988. This facility and a former shipyard are the major sources of widespread sediment contamination in the adjacent 500-acre harbor. In the past, wood was pressure-treated with solutions containing pentachlorophenol (PCP) or creosote to prevent the growth of sapstain and mold fungi. Soils and groundwater contain polycyclic aromatic hydrocarbons (PAHs), a group of chemical compounds found in creosote and used oil. Before 1981, over 23 million gallons of wastewater were discharged to a seepage basin, and tons of sludge were buried on site. In 1981, a closed-loop effluent system was installed. In 1984, an advisory was issued warning against harvesting or consuming fish and shellfish from Eagle Harbor. Approximately 2,000 people live within a mile of the site. The nearest residence is located less than ¼ mile away. More than 150 residents in the Eagle Harbor area rely on four public and between 8 and 15 private wells from the aquifer for their drinking water. The harbor is used for fishing, swimming, and boating.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY Proposed Date: 09/18/85 Final Date: 07/22/87

Threats and Contaminants



Volatile organic compounds (VOCs), PAHs, and PCP have been found in groundwater and seeps on adjacent beaches. Marine sediments and soils contain PAHs, VOCs, metals, and PCP, as well as dioxins and furans. Individuals ingesting or coming into direct contact with contaminated groundwater, sediments, soils, or seeps may be at risk. The Kitsap County Health Department has issued a health advisory against eating shellfish from Eagle Harbor.

Cleanup Approach

The site is being addressed in several stages: early actions and four long-term remedial phases focusing on cleanup of the West and East Harbor Areas, the Wyckoff facility, and groundwater beneath the Wyckoff facility.

Response Action Status



Early Actions: Under a 1988 Administrative Order, Wyckoff was required to perform immediate activities to reduce pollutants entering Eagle Harbor which included: recovering floating oil from recovery wells on the site; removing buried sludge and tank sludges from the site; treating groundwater pumped from the wells; and monitoring and discharging treated water to the harbor. The groundwater extraction and treatment system began operating in 1990 and uses physical separation, biological breakdown, and carbon filters to treat the water prior to discharge. EPA assumed operation of the system in 1993 and continues to operate and upgrade the system. As of July 1994, approximately 138 million gallons of groundwater had been pumped and treated, and approximately 44,000 gallons of oily contamination had been recovered from extraction wells.



West Harbor Area: In 1992, remedies were selected to address contamination in the West Harbor Area. The remedies include excavating a "hot spot" of mercury-contaminated sediments near the former shipyard, installing a cap and a thin layer of sediment over this area, and allowing the environment to naturally recover in less contaminated areas. Design of the cleanup is underway and is expected to be completed in 1995.



East Harbor Area: In 1991, EPA completed an investigation of East Harbor to identify cleanup alternatives. EPA also conducted an interim cleanup action prior to selecting a long-term cleanup approach. This action, which was completed in early 1994, used sandy material to cover more than 50 acres of contaminated bottom sediments. The final remedy for the East Harbor Area was selected in the fall of 1994 and entails monitoring existing capped and neighboring uncapped areas, and capping those remaining areas once the source of the contamination is controlled. A nearby beach, which has been contaminated by seeping sludge, will naturally recover once the source has been cut off.



Wyckoff Facility: In 1992, EPA began an investigation into the nature and extent of contamination at the Wyckoff Facility. The results of this investigation, expected to be completed in early 1996, will lead to the selection of final cleanup remedies.



Wyckoff Facility Groundwater: Groundwater under the Wyckoff facility is contaminated and moving into the harbor. In 1994, EPA completed an investigation of the groundwater and selected cleanup remedies. The remedies include: building a new water treatment plant; expanding the extraction system described in the Early Actions section above; abandoning all drinking water wells on the site; and if necessary, construction a barrier wall around the perimeter of the site. These efforts are now underway, with the exception of the treatment plant. Construction of the new water treatment plant is anticipated to begin in several years.

Site Facts: In 1984, the EPA issued an order requiring Wyckoff to investigate soil and groundwater contamination at the site. In July 1988, the EPA and the Wyckoff Company signed an Administrative Order on Consent, under which Wyckoff performed initial cleanup measures at its Eagle Harbor facility. A 1991, a Unilateral Administrative Order expanded Wyckoff Company activities. However, the Wyckoff Company was unable to fully comply with the EPA requirements, and EPA has since taken over the cleanup work at the site. EPA, the Federal/Tribal Natural Resources Trustees, and the Wyckoff Company are continuing to negotiate a final settlement for activities at the site.

Environmental Progress



The early actions described above have significantly reduced the threat to human health and the environment from contamination at the Wyckoff Co./Eagle Harbor site while final cleanup activities continue.

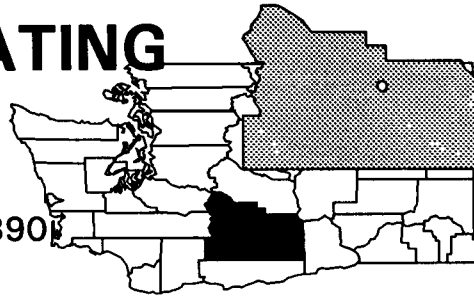
Site Repository



Kitsap Regional Library, Bainbridge Branch Library, 1270 Madison North,
Bainbridge Island, WA 98110

YAKIMA PLATING COMPANY WASHINGTON

EPA ID# WAD040187890



EPA REGION 10

Yakima County
Yakima

Other Names:
Yakima Plating

Site Description

The Yakima Plating Company site covers 2 acres in Yakima. Since 1962, the company has electroplated bumpers for cars and other objects. Yakima Plating has discharged wastewaters from its operations to an on-site drainfield from the beginning of plant operations. The plant operated under a State permit to discharge its wastewater from 1966 to 1977. In 1986, the EPA found contaminants in the groundwater. The site is located in a neighborhood of Yakima that includes light commercial and residential areas. Approximately 98,500 people use groundwater as a source of drinking water within 3 miles of the site. The nearest well is 225 feet from the company's drainfield.

Site Responsibility: The site was addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 03/31/89

Deleted Date: 08/23/94

Threats and Contaminants



Groundwater contained low levels of heavy metals including copper, lead, and zinc. Individuals may have been exposed to contaminants through ingestion of or direct contact with contaminated groundwater.

Cleanup Approach

Response Action Status



Entire Site: In 1991, the EPA selected the following remedies to clean up the site: removal of drums and tanks containing plating wastes; removal of contaminated surface and subsurface soils for off-site disposal at an approved hazardous waste facility; and groundwater monitoring. Cleanup at this site was accelerated as part of a Superfund Accelerated Cleanup Model pilot program. All of the construction activities at the site have been completed and cleanup goals have been met. The site has been deleted from the NPL.

Environmental Progress



Removal of contaminated soils and drums, as well as tanks of plating wastes, has eliminated contamination at the Yakima Plating Company site. All cleanup activities are complete and the site has been deleted from the NPL.

Site Repository



Yakima Valley Regional Library, 102 North 3rd Street, Yakima, WA 98901