

**STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY**

In the Matter of Remedial Action by:

**Kaiser Aluminum & Chemical Corporation  
Trentwood Site**

**AMENDMENT NO. 1 TO  
AGREED ORDER**

No. 2692

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**TO: Kaiser Aluminum Washington, LLC  
(Formerly Kaiser Aluminum & Chemical Corporation)  
P.O. Box 15108  
15000 East Euclid Avenue  
Spokane Valley, Washington 99215-5108**

**I. AMENDMENT**

Agreed Order (Order) No. 2692 dated August 15, 2005, is hereby amended to incorporate the information and requirements contained in this Amendment. This Amendment is issued pursuant to the Model Toxics Control Act (MTCA), RCW 70.105D.050 (1) and except as indicated below does not replace or change any of the existing requirements of the Order, which shall remain in effect.

**III. PARTIES BOUND**

Section III (Parties Bound) is amended by replacing the previous entire section language with the following:

This Agreed Order shall apply to and be binding upon the Parties to this Order, their successors and assigns. Subject to the next two sentences, the undersigned representative of each Party hereby certifies that he or she is fully authorized to enter into this Order and to execute and legally bind such Party to comply with the Order. Kaiser agrees to undertake all actions required by the terms and conditions of this Order. No change in ownership or corporate status shall alter Kaiser's responsibility under this Order. Kaiser shall provide a copy of this Order to all agents,

contractors, and subcontractors retained to perform work required by this Order, and shall ensure that all work undertaken by such agents, contractors, and subcontractors complies with this Order.

#### **IV. DEFINITIONS**

Section IV (Definitions) is amended by replacing the language of the third definition with the following:

3. PLP: Refers to Kaiser Aluminum Washington, LLC (formerly Kaiser Aluminum & Chemical Corporation).

#### **V. FINDINGS OF FACT**

Section V (Findings of Fact) is amended by adding the following facts:

(16) Agreed Order No. 2692 entered into by Ecology and Kaiser on August 16, 2005 required Kaiser to complete a Remedial Investigation (RI) and Feasibility Study (FS) for the Site. The Scope of Work, Exhibit B of Agreed Order No. 2692 also provided for implementation of interim actions if RI data show the necessity for such measures.

(17) Based on RI data, an interim action was conducted in the West Discharge Ravine in 2007 and completed in 2008. This interim action involved excavation and off-site disposal of soils contaminated with PCBs and petroleum, as detailed in the report:

Hart Crowser, 2008 (February 25) *West Discharge Ravine Interim Action Completion Report, Kaiser Trentwood, Spokane Valley, Washington.*

(18) In July 2008, Kaiser completed the removal of three field constructed tanks. The closure of these tanks is described in the following report:

Hart Crowser, 2008 (November 12), *Tank Closure Report, South Field Constructed Tank, Kaiser Trentwood Facility, Spokane Valley, WA.*

(19) The RI and FS, completed and finalized after public comment in 2012, are contained in the following reports:

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Hart Crowser, 2012 (May), *Final Site-wide Groundwater Remedial Investigation, Volumes I and II, Kaiser Trentwood, Spokane Valley, Washington.*

Hart Crowser, 2012 (May), *Final Site-Wide Soil Remedial Investigation, Volumes I and II, Kaiser Trentwood, Spokane Valley, Washington.*

Hart Crowser, 2012 (May), *Final Kaiser Trentwood Facility Human Health and Ecological Risk Assessment.*

Hart Crowser, 2012 (May), *Final Feasibility Study Technical Memorandum, Kaiser Trentwood Facility, Spokane Valley, Washington.*

Hart Crowser, 2012 (May), *Final Feasibility Study Report, Kaiser Trentwood Facility, Spokane Valley, Washington.*

(20) The RI identified petroleum, petroleum related contaminants, and Polychlorinated Biphenyls (PCBs) in soils and groundwater at the Site. The FS identified and evaluated cleanup actions for the Site contamination.

(21) Based on the Final FS, Ecology has determined that additional interim actions are needed to provide sufficient information to develop, evaluate, and select cleanup actions for the PCBs in groundwater. Ecology is requiring Kaiser to perform interim actions that will in part provide the following:

- Evidence of natural biodegradation of Site PCBs, and if possible, determine the rate of biodegradation if it is occurring.
- The feasibility or practicability of treating the PCBs in groundwater using an ex-situ system as described in Exhibit B-A1 (Scope of Work and Schedule), as amended.

(22) Ecology believes that the recommended alternatives for contaminated soils and petroleum in groundwater meet MTCA's criteria for the selection of cleanup actions. Implementing these alternatives will not foreclose any reasonable cleanup action alternatives for addressing PCBs in groundwater. Ecology is thus requiring that implementation of these recommended alternatives for contaminated soils and petroleum in groundwater as interim actions begin in advance of the issuance of a Draft Cleanup Action Plan (DCAP). These actions

for the contaminated soils and petroleum in groundwater may constitute, in part or in full, the cleanup action if the interim actions are subsequently shown to comply with WAC 173-340-350 through 173-349-390.

(23) In April 2012, Kaiser completed additional investigations in the West Discharge Ravine area. These investigations along with an addendum to the FS are described in the following report:

Hart Crowser, 2012 (April 3), *Remedial Investigation Addendum, Kaiser Trentwood Facility, West Discharge Ravine, Spokane Valley, WA.*

Hart Crowser, 2012 (May), *Focused Feasibility Study, Kaiser Trentwood Site, West Discharge Ravine, Spokane Valley, WA.*

These two reports are still subject to public review and comment as required under MTCA and will be finalized after addressing public comments, if necessary.

## **VI. ECOLOGY DETERMINATIONS**

Section VI (Ecology Determinations) is amended by adding the following:

5. Under WAC 173-340-430, an interim action is a remedial action: that is technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance; that corrects a problem that may become substantially worse or cost substantially more to address if the remedial action is delayed; or that is needed to provide for completion of a site hazard assessment, remedial investigation/feasibility study or design of a cleanup action.

6. Ecology has determined that additional work in the form of certain interim actions is necessary in order to: provide information needed to select cleanup actions for PCBs in groundwater; and, to begin implementation of cleanup actions for soils and petroleum in groundwater so as to improve environmental conditions at the Site. Such circumstances are consistent with WAC 173-340-430.

7. Ecology believes that the additional work to be performed as interim actions is in the public interest.

## **VII. WORK TO BE PERFORMED**

Section VII, Work to Be Performed, is amended by adding the following actions:

6. Kaiser shall furnish all personnel, materials and services necessary for, or incidental to, the planning, initiation, completion, and reporting upon the Scope of Work and Schedule, attached as Exhibit B-A1. Exhibit B-A1 is incorporated by reference and is an integral and enforceable part of the Order. The work to be performed is to conduct additional interim actions. Kaiser shall commence work and thereafter complete all tasks in Exhibit B-A1 in the time frames and frame work indicated unless the Department grants an extension in accordance with Section VIII.K, or unless provided otherwise in the Order. Each element of Exhibit B-A1 shall be implemented and completed in accordance with the Model Toxics Control Act (Chapter 70.105D RCW) and its implementing regulation (Chapter 173-340 WAC) as amended, and all applicable federal, state, and local laws and regulations.

## **VIII. TERMS AND CONDITIONS OF ORDER**

Section VIII, Terms and Conditions of Order is amended by replacing the applicable language or adding to the language of the identified sub-sections as follows:

A. Public Notices (replace in whole)

Agreed Order No. 2692 and Amendment No. 1 to the Order have been the subject of public notice and comment pursuant to WAC 173-340-600.

D. Designated Project Coordinators (replace in part)

The project coordinator for Kaiser is:

Bernard P. Leber, Jr.  
Kaiser Aluminum Washington, LLC  
P.O. Box 15108  
Spokane Valley, WA 99215-5108

G. Sampling, Data Reporting, and Availability (additional language to end of first paragraph)

The sampling referenced in this paragraph also concerns data collected for the implementation of interim actions.

H. Public Participation (additional language to end of first paragraph)

In addition, Ecology has developed an amended public participation plan for the Site, which is attached to this Amendment to the Order as Exhibit C-A1.

H. Public Participation (replace language in sub-section 4)

4. When requested by Ecology, arrange and/or continue information repositories to be located at the following locations:

- (a) Spokane Valley Library  
12004 East Main Avenue  
Spokane Valley, WA 99206-5193
- (b) Washington Department of Ecology  
Eastern Regional Office  
4601 N. Monroe Street  
Spokane, WA 99205-1295

At a minimum, copies of all public notices, fact sheets, and documents associated with the public comment period shall be promptly placed in these repositories.

Effective date of this Amendment: \_\_\_\_\_

**KAISER ALUMINUM WASHINGTON, LLC**

**STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY**

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**Michael R. Zerga**  
Vice President  
Flat Rolled Products  
Telephone: 509-927-6214

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**Michael A. Hibbler**  
Section Manager  
Toxics Cleanup Program  
Eastern Regional Office  
Telephone: 509-329-3568

## EXHIBIT B-A1

### SCOPE OF WORK AND SCHEDULE

#### TASK X. ADDITIONAL INTERIM ACTIONS WORK PLANS

Based on the information provided in the Final FS Report, Ecology has determined that additional interim actions are needed prior to the selection of site cleanup actions. The interim actions will include the following two parts:

- A. Treatability and/or pilot studies are needed in order to: 1) demonstrate if natural biodegradation of PCBs is occurring at the Site, and if it is occurring, to determine, if possible, the rate of biodegradation; and 2) evaluate if it is practicable to remove PCBs from extracted groundwater using an ex-situ system (Black Walnut Shell Filtration System).
- B. Implementation of the following recommended remedies:
- Alternatives A2/A4, Alternatives B2/B5 for contaminated soils as described in the Final FS Report
  - Alternative C2 for petroleum in groundwater as described in the Final FS Report
  - Alternative E2 for contaminated soils as described in the Final Focused Feasibility Study for the West Discharge Ravine.

Interim Action Work Plans shall address the requirements of WAC 173-340-430, including providing for an implementation schedule, and shall be submitted for Ecology's approval. The plans related to the implementation of recommended remedies shall include a Work Plan, an Engineering Design Report, and Construction Plans and Specifications consistent with the requirements of WAC 173-340-400(4).

Deliverables:

Work Plans Deliverables and Schedules are listed in Table 1, below, under Task X.A and X.B.

#### TASK XI. IMPLEMENTATION OF ADDITIONAL INTERIM ACTIONS

The implementation of interim actions shall be consistent with the schedule in the Work Plans approved by Ecology in Task X.

Deliverables: Quarterly Progress Reports  
(February 15<sup>th</sup>, May 15<sup>th</sup>, August 15<sup>th</sup>, and November 15<sup>th</sup>)

#### TASK XII. INTERIM ACTION REPORT(S)

Interim Action Report(s) shall be prepared and submitted to Ecology after completion of the interim actions. Interim actions related to implementation of recommended remedies shall be consistent with the requirements under WAC 173-340-400(6) (b).

Deliverables:

Interim Action Reports Deliverables and Schedules are listed in Table 1, below, under Task XII.

**TABLE I**

Schedule of Tasks/Deliverables, is amended by the addition of the following:

TASK/DELIVERABLE	DATE
<b>Task X. Interim Action Work Plans</b>	
<b>A. Treatability/Pilot Study</b>	
1. Biodegradation of PCBs Concept Memorandum - Draft	120 days after effective date of Amended Order
Biodegradation of PCBs Concept Memorandum - Final	45 days after receipt of Ecology's comments on the Draft Biodegradation of PCBs Treatability/Pilot Study Concept Memorandum
Biodegradation of PCBs Work Plan - Draft	In accordance with the Final Biodegradation of PCBs Treatability/Pilot Study Concept Memorandum
Biodegradation of PCBs Work Plan - Final	45 days after receipt of Ecology's comments on the Draft Biodegradation of PCBs Treatability/Pilot Study Work Plan
2. Ex-Situ Removal of PCBs from Extracted Groundwater Concept Memorandum - Draft	120 days after effective date of the Amended Order
Ex-situ Removal of PCBs from Extracted Groundwater Concept Memorandum - Final	45 days after receipt of Ecology's comments on the Draft Ex-Situ Removal of PCBs from Extracted Groundwater Treatability/Pilot Study Concept Memorandum
Ex-Situ Removal of PCBs from Extracted Groundwater Work Plan - Draft	In accordance with the Final Ex-Situ Removal of PCBs from Extracted Groundwater Treatability/Pilot Study Concept Memorandum
Ex-Situ Removal of PCBs from Extracted Groundwater Work Plan - Final	45 days after receipt of Ecology's comments on the Draft Ex-Situ Removal of PCBs from Extracted Groundwater Treatability/Pilot Study Work Plan
<b>B. Remedy Implementation</b>	
1. Contaminated Soils Excavation (excluding the West Ravine Area) and Off-Site Disposal	
• Work Plan containing an Engineering Design Report - Draft	90 days after effective date of Amended Order
• Work Plan containing an Engineering Design Report - Final	45 days after receipt of Ecology's comments on the Draft Work Plan/Engineering Design Report for Contaminated Soils Excavation and Off-Site Disposal



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Table 1...(continued)

<ul style="list-style-type: none"> <li>• Construction Plans and Specifications – Draft</li> </ul>	In accordance with the Final Work Plan/Engineering Design for Contaminated Soils Excavation and Off-Site Disposal
<ul style="list-style-type: none"> <li>• Construction Plans and Specifications - Final</li> </ul>	45 days after receipt of Ecology’s comments on the Draft Construction Plans and Specification for Contaminated Soils Excavation and Off-Site Disposal
2. Soil Capping	
<ul style="list-style-type: none"> <li>• Preliminary Work Plan - Draft</li> </ul>	90 days after effective date of Amended Order
<ul style="list-style-type: none"> <li>• Preliminary Work Plan - Final</li> </ul>	45 days after receipt of Ecology’s comments on the Draft Preliminary Work Plan for Soil Capping
<ul style="list-style-type: none"> <li>• Work Plan containing an Engineering Design Report, and Construction Plans and Specifications - Draft</li> </ul>	In accordance with the Final Preliminary Work Plan for Soil Capping
<ul style="list-style-type: none"> <li>• Work Plan containing an Engineering Design Report, and Construction Plans and Specifications - Final</li> </ul>	45 days after receipt of Ecology’s comments on the Draft Work Plan/Engineering Design Report, and Construction Plans and Specifications for Soil Capping
3. Remedial Actions for Petroleum in Groundwater	
<ul style="list-style-type: none"> <li>• Phase I Work Plan – Draft</li> </ul>	30 days after effective date of Amended Order
<ul style="list-style-type: none"> <li>• Phase I Work Plan- Final</li> </ul>	45 days after receipt of Ecology’s comments on the Draft Phase I Work Plan for Remedial Actions for Petroleum in Groundwater
<ul style="list-style-type: none"> <li>• Phase II Work Plan containing an Engineering Design Report, and Construction Plans and Specifications - Draft</li> </ul>	In accordance with the Final Phase I Work Plan for Remedial Actions for Petroleum in Groundwater
<ul style="list-style-type: none"> <li>• Phase II Work Plan containing an Engineering Design Report, and Construction Plans and Specifications - Final</li> </ul>	45 days after receipt of Ecology’s comments on the Draft Phase II Work Plan containing an Engineering Design Report, and Construction Plans and Specifications for Remedial Actions for Petroleum in Groundwater.
4. Remedial Actions for the West Discharge Ravine	
<ul style="list-style-type: none"> <li>• Work Plan containing an Engineering Design Report - Draft</li> </ul>	45 days after effective date of Amended Order
<ul style="list-style-type: none"> <li>• Work Plan containing an Engineering Design Report – Final</li> </ul>	45 days after receipt of Ecology’s comments on draft Work Plan/Engineering Design Report for Remedial Actions for the West Discharge Ravine

Table 1 ... (continued)

<ul style="list-style-type: none"> <li>Construction Plans and Specifications - Draft</li> </ul>	In accordance with the Final Work Plan/Engineering Design Report for Remedial Actions for the West Discharge Ravine
<ul style="list-style-type: none"> <li>Construction Plans and Specifications - Final</li> </ul>	45 days after receipt of Ecology's comments on the Draft Construction Plans and Specifications for Remedial Actions for the West Discharge Ravine
<b>Task XI. Implementation</b>	
Implementation of Work Plans	In accordance with approved Work Plans
Progress Reports	Quarterly Reports (February 15 <sup>th</sup> , May 15 <sup>th</sup> , August 15 <sup>th</sup> , and November 15 <sup>th</sup> )
<b>Task XII. Interim Action Reports</b>	
<b>A. Treatability/Pilot Study</b>	
1. Biodegradation of PCBs Completion Report - Draft	In accordance with the Final Biodegradation of PCBs Treatability/Pilot Study Work Plan
Biodegradation of PCBs Completion Report - Final	45 days after receipt of Ecology's review comments on the Draft Biodegradation of PCBs Completion Report
2. Ex-Situ Removal of PCBs from Extracted Groundwater Treatability Study Completion Report - Draft	In accordance with the Final Ex-Situ Removal of PCBs from Extracted Groundwater Treatability/Pilot Study Work Plan
Ex-situ Removal of PCBs from Extracted Groundwater Treatability Study Completion Report - Final	45 days after receipt of Ecology's review comments on the Draft Ex-Situ Removal of PCBs from Extracted Groundwater Treatability/Pilot Study Completion Report
<b>B. Remedy Implementation</b>	
1. Contaminated Soils Excavation and Off-Site Disposal Completion Reports - Draft	In accordance with the Final Work Plan/Engineering Design Report, and Construction Plans and Specifications for Contaminated Soils Excavation and Off-site Disposal
Contaminated Soils Excavation and Off-Site Disposal Completion Reports - Final	45 days after receipt of Ecology's comments on the Draft Contaminated Soil Excavation and Off-Site Disposal Completion Reports
2. Soil Capping Completion Reports - Draft	In accordance with the Final Work Plan/Engineering Design Report, and Construction Plans and Specifications for Soil Capping
Soil Capping Completion Reports - Final	45 days after receipt of Ecology's review comments on the Draft Soil Capping Completion Reports

Table 1 ... (continued)

<p>3. Remedial Actions for Petroleum in Groundwater Completion Report - Draft</p>	<p>In accordance with the Final Work Plan/Engineering Design Report, and Construction Plans and Specifications for Remedial Actions for Petroleum in Groundwater</p>
<p>Remedial Actions for Petroleum in Groundwater Completion Report - Final</p>	<p>45 days after receipt of Ecology's review comments on the Draft Remedial Actions for Petroleum in Groundwater Completion Report</p>
<p>4. Remedial Actions for the West Discharge Ravine Completion Report - Draft</p>	<p>In accordance with the Final Work Plan/Engineering Design Report and Construction Plans and Specifications for Remedial Actions for the West Discharge Ravine</p>
<p>Remedial Actions for the West Discharge Ravine Completion Report - Final</p>	<p>45 days after receipt of Ecology's comments on the Draft Remedial Actions for the West Discharge Ravine Completion Report.</p>

**EXHIBIT C-A1**

**AMENDED PUBLIC PARTICIPATION PLAN**

**KAISER ALUMINUM & CHEMICAL  
CORPORATION TRENTWOOD SITE**  
(now known as Kaiser Aluminum Washington, LLC)

**DRAFT PUBLIC PARTICIPATION PLAN  
FOR THE  
AMENDED AGREED ORDER FOR INTERIM ACTIONS**

**FACILITY SITE ID No. 53481373  
CLEANUP SITE ID No. 7093**

**PREPARED BY THE  
WASHINGTON STATE DEPARTMENT OF ECOLOGY**

**July 2012**

## **INTRODUCTION**

### **Overview of the Public Participation Plan**

An original Public Participation Plan was developed in June 2005 as part of an Agreed Order that required Kaiser Aluminum & Chemical Corporation (Kaiser) to conduct a Remedial Investigation and Feasibility Study at the Trentwood Site. The site is located at 15000 East Euclid Avenue, Spokane Valley, Spokane County, Washington. Details about the location, site background, contaminants of concern, and parties involved are found on page 6 of this Plan.

An amended Order is now being completed that requires Kaiser (now known as Kaiser Aluminum Washington, LLC) to conduct work called interim actions at the site. Based on the Final Feasibility Study (FS) Kaiser conducted, Ecology determined additional interim actions are needed. These additional actions will in part provide necessary information to fully develop, evaluate, and select cleanup actions for PCBs in groundwater. Ecology is requiring that recommended alternatives in the Final FS for soils and petroleum in groundwater be implemented as interim actions. These actions are to be done prior to issuance of a Draft Cleanup Action Plan (DCAP). Ecology believes these actions are necessary to protect human health and the environment.

The purpose of this Public Participation Plan is to continue to promote public understanding of the Washington Department of Ecology's (Ecology) responsibilities, planning, and cleanup activities at the site. It also serves as a way of continuing to gather information from the public that will assist Ecology and Kaiser in furthering cleanup work at the site in a manner that is protective of human health and the environment. This Plan will help residents and stakeholders interested in the site to continue to be informed regarding remaining cleanup activities and learn how they may contribute to the decision making process.

This Plan has been developed by the Washington Department of Ecology and complies with the Washington State Model Toxics Control Act (MTCA) regulations (Chapter 173-340-600 WAC. Amendments may occur at future stages of cleanup and may be part of a 30-day comment period if associated with cleanup documents (e.g., Consent Decree). Ecology will determine final approval of this Plan as well as any amendments.

Documents relating to the cleanup may be reviewed at the repositories listed on page 8 of this Plan. If individuals are interested in knowing more about the site or have

comments regarding the Public Participation Plan, please contact one of the individuals listed below:

<p>Teresita Bala, Site Manager WA State Department of Ecology Toxics Cleanup Program 4601 North Monroe Spokane, WA 99205 509-329-3581 <a href="mailto:tbal461@ecy.wa.gov">tbal461@ecy.wa.gov</a></p> <p>Bud Leber, Environmental Manager Kaiser Aluminum Washington, LLC P.O. Box 15108, Mail Stop #32 Spokane Valley, WA 99215-5108 509/927-6554</p> <p>Carol Bergin, Public Involvement WA State Department of Ecology Toxics Cleanup Program 4601 North Monroe Spokane, WA 99205 509-392-3546 <a href="mailto:cabe461@ecy.wa.gov">cabe461@ecy.wa.gov</a></p>	<p><b>Para asistencia Espanol</b> Richelle Perez WA State Department of Ecology</p> <p><b>Если вам нужно помощь по русский, звоните</b> Larissa Braaten 509/710-7552</p> <p>Kari Johnson, Public Disclosure WA State Department of Ecology 4601 North Monroe Spokane, WA 99205 509-329-3415 <a href="mailto:Kari.johnson@ecy.wa.gov">Kari.johnson@ecy.wa.gov</a></p>
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### **Public Participation and the Model Toxics Control Act (MTCA)**

The Model Toxics Control Act is a “citizen-mandated” law that became effective in 1989 to provide guidelines for the clean up of contaminated sites in Washington State. This law sets up standards to make sure the clean up of sites is protective of human health and the environment. Ecology’s Toxic Cleanup Program investigates reports of contamination that may threaten human health and/or the environment. If an investigation confirms the presence of contaminants, the site is generally ranked and placed on a Hazardous Sites List. The Kaiser Trentwood site is ranked a two on the Hazardous Sites List. Current or former owner(s) or operator(s), as well as any other potentially liable persons (PLPs), of a site may be held responsible for cleanup of contamination according to the standards set under MTCA. The Ecology identified Kaiser Aluminum & Chemical Corporation (now Kaiser Aluminum Washington, LLC) as the PLP for this site.

Public participation is an important part of cleanup under the MTCA process. The participation needs are assessed at each site according to the level of public interest and degree of risk posed by contaminants. Individuals who live near the site, community groups, businesses, government, other organizations and interested parties are provided an opportunity to become involved in commenting on the cleanup process. The Public Participation Plan includes requirements for public notice such as: identifying reports about the site and the repositories where reports may be read; providing public comment periods; and holding public meetings or hearings. Other forms of participation may be interviews, citizen advisory groups, questionnaires, or workshops.

Additionally, citizen groups living near contaminated sites may apply for public participation grants (during open application periods) to receive technical assistance in understanding the cleanup process and to create additional public participation avenues. Note: Ecology currently does not have a citizen technical advisor for providing technical assistance to citizens on issues related to the investigation and cleanup of the site.

## **SITE BACKGROUND**

### **2005 Agreed Order for Remedial Investigation and Feasibility Study**

The Washington State Department of Ecology (Ecology) entered into an Agreed Order with Kaiser Aluminum & Chemical Corporation to conduct a Remedial Investigation and Feasibility Study (RI/FS) at the Trentwood facility. The site is located at 15000 East Euclid Avenue, Spokane Valley, Spokane County, Washington (See Appendix A – Site Map Figure 1).

An Agreed Order is a legal document issued by Ecology that formalizes the agreement between Ecology and potentially liable persons (PLPs) for the cleanup actions needed at a site. The purpose of the Remedial Investigation (RI) was to evaluate the extent of petroleum, metals, and polychlorinated biphenyls (PCBs) in soil and groundwater at the site. The Feasibility Study (FS) identified and evaluated possible alternatives for cleanup of these contaminants.

After the RI/FS was completed reports were made available to the public for comment. The RI/FS reports consisted of 8 binders of information. Because of the large volume of information, Ecology provided a 60 day comment period for the public to review and comment on the reports. The majority of comments received were pre-printed cards with identical language (but individual signatures) in support of Kaiser's proposed cleanup remedies.

### **Site Background and History**

Kaiser Trentwood is a large site that sits along the Spokane River at approximately river mile 86. It is north of the Spokane Valley Mall, east of Mirabeau Point and 10 miles east of downtown Spokane. It is made up of 512 acres and includes three on-site landfills. These landfills are located in the West, East and South sections of the property and were used for disposal of site-specific materials. All three landfills are now closed.

In 1942 the U. S. Government's Defense Plant Corporation (DPC) began construction of the Trentwood Works on the property. The facility produced aluminum needed for making aircraft for World War II. The Aluminum Company of America (Alcoa) operated the facility for the DPC until the end of World War II when operations stopped. Kaiser then leased the site from the U.S. government in 1946 and later purchased the facility and property. The facility currently operates as an aluminum sheet, plate, and coil rolling mill, and provides materials for aerospace and general engineering applications.



In 1980 Kaiser applied for a permit from the U.S. Environmental Protection Agency (EPA) to store hazardous materials on-site that are necessary for the production of aluminum products. These hazardous substances included petroleum fuels, PCB oil, solvents, and chromium. Wastes generated as a result of present or past operations include wastewaters, chrome sludge, paint and solvent wastes, and black dross.

EPA was responsible for compliance, review and monitoring activities associated with this type of permit application. In 1992 EPA recommended additional review and/or monitoring at six “management units” on-site and identified three additional areas of concern. No further action was necessary at 26 out of 32 “management units.”

In 1994 EPA gave Ecology authority to implement corrective actions at treatment, storage and disposal (TSD) facilities in the state using the Model Toxics Control Act (MTCA) as the regulatory authority. As a result, Ecology became involved at the site in 1994 and using MTCA named Kaiser as a Potentially Liable Person (PLP) responsible for cleaning up the site.

Since 1980, several documented releases have occurred related to historical operations at the site. Kaiser conducted independent investigations and remedial actions to address groundwater and soil contamination coming from these releases. Soil studies showed concentrations of PCBs, petroleum product, and metals did not meet state standards under MTCA regulations.

Groundwater monitoring began in 1979 to assess potential on-site groundwater impacts. Since 1993, Kaiser implemented independent cleanup actions in the Oil House and Wastewater areas to prevent movement of petroleum containing PCBs floating on groundwater. Actions were also taken to prevent movement of the dissolved hydrocarbons found in groundwater.

Since the late 1980s over 100 additional monitoring wells have been installed at the site as part of a series of voluntary investigations and clean-up efforts by Kaiser. Results of this monitoring also showed petroleum product containing PCBs floating on groundwater. It also showed Total Petroleum Hydrocarbons (TPH), PCBs, iron, manganese, antimony, and arsenic in groundwater at levels exceeding state standards. PCB contamination was also found in groundwater in the remelt and hot line areas (See Appendix A – Site Map Figure 2).

As part of the operations at Kaiser, sanitary and industrial wastewater is discharged to the Spokane River. These discharges are managed under an NPDES permit administered by Ecology’s Water Quality Program. The discharges are permitted under the provisions of the State of Washington Water Pollution Control Law and the federal Water Pollution Control Act.

### **Contaminants of Concern**

The main contaminants at the site identified in the RI are Polychlorinated Biphenyl’s (PCBs), petroleum product, and metals. Metals include iron, manganese, and arsenic.

**Polychlorinated biphenyl's (PCBs)** are a group of manufactured synthetic chemicals, either solids or oily liquids. They may range from colorless to light yellow in color and have no smell or taste. These chemicals were historically used as insulating fluids, coolants and lubricants in transformers, capacitors or other electrical equipment; as heat transfer and hydraulic fluids; in inks and carbonless paper. The manufacture of PCBs stopped in the United States in 1977 because of evidence they accumulate in the environment and do not breakdown. They may also cause harmful health effects to fish, wildlife, humans and other living organisms.

Common routes of human exposure to PCBs may include drinking contaminated well water; eating contaminated foods such as dairy, fish, and meat; breathing air contaminated with PCBs; conducting maintenance on electrical transformers containing PCB fluids or handling materials containing PCBs. For details regarding PCB health effects, please see the Agency for Toxic Substances and Disease Registry (ATSDR) website at <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=140&tid=26>

## **COMMUNITY BACKGROUND**

### **Community Profile and Concerns**

The community has grown over the years since cleanup work at the Kaiser site began. The site is surrounded by industrial and commercial businesses as well as residential homes. The Mirabeau Point, Center Place Event Center, and Department of Fish and Wildlife developments have brought more public attention to the area including increased interest in the river and impacts to it.

The Slavic community living near the site as well as Marshallese, Vietnamese, Native American, Asian, Hispanic, and other populations are growing which adds to the rich diversity of people living and recreating in this area. This segment of the Spokane River is used for recreational activities including swimming, boating, hiking and fishing. Certain areas of the river are also used for subsistence fishing by Native Americans and some of the non-English speaking population.

A broad range of outreach efforts have been conducted over the years by Ecology, Kaiser, the Department of Health, Spokane Regional Health District, The Lands Council, The Riverkeepers, Center for Justice, and the Spokane River Forum.

Early outreach from 1999-2000 focused on educating the public about fish and sediment advisories for the Spokane River. This work continues to the present. Surveys conducted by The Lands Council through a grant received from Ecology indicate knowledge about the Spokane River, fish and sediment advisories, and current opportunities to engage in improving the river are improving.

Ecology conducted community interviews in 2004-2005 and the following are some of the concerns that were expressed:

- There may be negative economic impacts due to Kaiser's bankruptcy. Concern was expressed whether Kaiser would be able to pay for clean up of pollution they caused or whether costs would be passed to taxpayers.
- If the river isn't cleaned up it will cause economic loss.
- The river is an important part of the Spokane region. It is important to clean up any pollution so the beaches and water are safe for recreating, the fish are safe to eat and people don't have to worry about chemicals and health effects from pollution.
- What type of contamination is in the river, where is it located, and how long will it take to clean up?
- Keep the people living along or near the river informed about the work taking place and give them an opportunity to contribute their opinions in the decision-making process.
- Inform people of any health risks for children, adults and pets that use the river.

Feedback in 2012 from the public about the Kaiser site came primarily through comments received during the comment period for the Remedial Investigation/Feasibility Study Reports. The majority of respondents were aware of the work Kaiser has done to cleanup various aspects of the site and were supportive of Kaiser's proposed cleanup alternatives.

Ecology, Kaiser and various Stakeholder and outreach groups have focused on addressing community concerns. The activities listed in the Public Participation Activities and Timeline section below are some of the ways Ecology and Kaiser have kept the public informed and involved in the site cleanup.

### **Public Participation Activities and Timeline**

The following is a list of some of the public participation efforts that continue to occur until the cleanup actions are completed:

- ❖ A **mailing list** was developed and continues to be updated periodically for individuals who live near the site. The potentially affected vicinity covers any adjacent properties and homes and/or businesses within close proximity to the site and areas to be investigated. These persons, along with Kaiser, receive copies of all fact sheets developed regarding the cleanup process via first class mail. Additionally, individuals, organizations, local, state and federal governments, and any other interested parties have been added to the mailing list as requested. If you are interested in being on the mailing list contact Carol Bergin at the Department of Ecology (see page 3 for details).
- ❖ **Public Repositories** are locations where documents may be reviewed. Originally, four repositories were established as places the public could review documents. Due to declining City, County, and State budgets, reduced library hours, and lack of responses from the public during comment periods, there are now two physical locations to review documents. Additionally, Ecology now provides the convenience of reviewing documents on-line at

Ecology's Kaiser Trentwood site website. The following are the locations where documents may be reviewed during comment periods:

Washington Department of Ecology  
4601 North Monroe  
Spokane, WA 99205-1295  
Contact: Kari Johnson, Public Disclosure Coordinator  
509-329-3415

Spokane Valley Library  
12004 East Main  
Spokane Valley, WA  
509-926-6283

Ecology's website for the Kaiser Trentwood site:  
<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=7093>

- ❖ During each stage of cleanup **fact sheets** are created by Ecology, then distributed to individuals on the mailing list. These fact sheets explain the stage of cleanup, the site background, what happens next in the cleanup process and ask for comments from the public. A **30-day comment period** allows interested parties time to comment on the process. The information from these fact sheets is also published in a statewide **Site Register** which is sent to those who request to be on that mailing list. Persons interested in receiving the Site Register should contact Seth Preston of Ecology at 360-407-6848 or e-mail [seth.preston@ecy.wa.gov](mailto:seth.preston@ecy.wa.gov). The fact sheets are also posted on Ecology's website for the Kaiser Trentwood site at <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=7093>.
- ❖ **Display ads or legal notices** are published in the Spokesman Review, ethnic newspapers when available, and on Ecology's Public Events Calendar <http://www.ecy.wa.gov> to inform the general public. These notices are published at the beginning of the 30-day comment period for the public notices. They are also used to announce public meetings and workshops or public hearings.
- ❖ **Public meetings, workshops, open houses and public hearings** are held based upon the level of community interest. If ten or more persons request a public meeting or hearing based on the subject of the public notice, Ecology will hold a meeting or hearing and gather comments. These meetings, workshops or hearings will be held at a location that meets ADA standards and is close to the site. They may be held away from the site if it is necessary to accommodate large numbers of interested persons. These events are announced using the same methods as display ads or legal notices.
- ❖ Flyers may also be made available in various locations throughout the community to announce public comment periods, meetings, workshops, etc.
- ❖ If substantial comments are received during the 30-day comment period Ecology may prepare a **Responsiveness Summary**. The Responsiveness Summary is sent to those who make the written comments and is also made available on-line and at the Repositories.

### Answering Questions from the Public

Individuals in the community may want to ask questions to better understand the cleanup process. Page 3 lists the contacts for Ecology and the Kaiser Aluminum Trentwood Site. Please contact one of the people listed on page 3 to obtain information about the site, the process, and potential decisions.

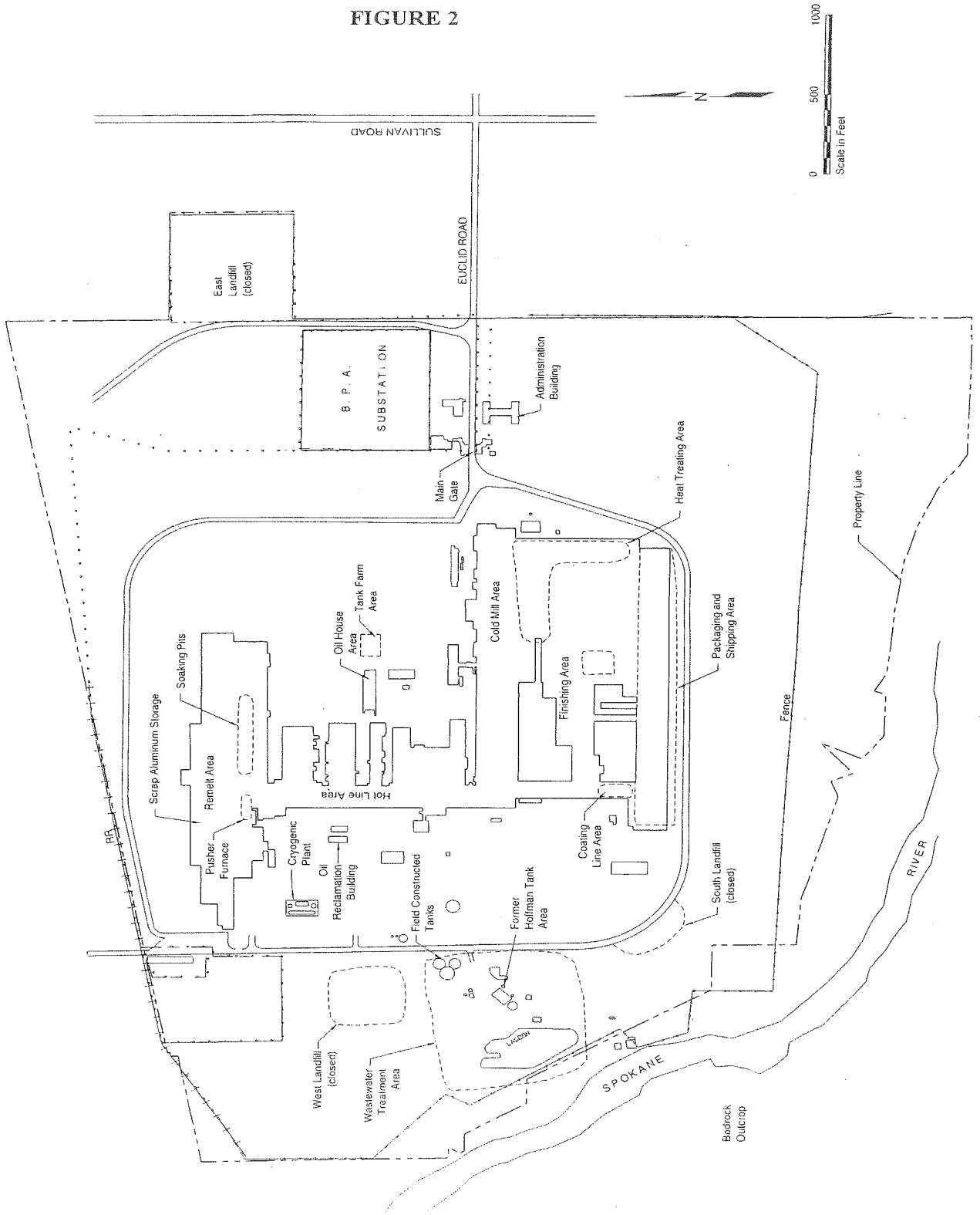
### Public Notice and Comment Periods

#### Timeline

DATE	ACTION TAKEN
September 2004 – January 2005	Community Interviews for Kaiser Aluminum Trentwood Site
Begin January 2005	Negotiations for an Agreed Order for a Remedial Investigation and Feasibility Study (RI/FS)
July 2005	Postcard notifying the public about a public meeting on July 21, 2005 to introduce the Agreed Order for the RI/FS
July 21, 2005	Public Meeting about the Agreed Order for the RI/FS
May 29 through June 27, 2007	Fact Sheet – Public Comment Period for Interim Actions in the West Discharge Ravine and SEPA
April 2011	Fact Sheet Update about Progress at the Site
May 2012	Fact Sheet Update regarding the status of the Remedial Investigation Report and progress of the Feasibility Study
January 6 through March 6, 2012	Fact Sheet – Public Comment Period for Remedial Investigation/Feasibility Study Reports and Announcing Public Meeting
January 25, 2012	Public Meeting about Remedial Investigation/Feasibility Study Reports



FIGURE 2



**APPENDIX C**

**KAISER ALUMINUM TRENTWOOD SITE  
MAILING LIST  
(on file at Ecology's Spokane Office)**



## APPENDIX D GLOSSARY

- Agreed Order:** A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed at a site. An agreed order is subject to public comment. If an order is substantially changed, an additional comment period is provided.
- Applicable State and Federal Law:** All legally applicable requirements and those requirements that Ecology determines are relevant and appropriate requirements.
- Area Background:** The concentrations of hazardous substances that are consistently present in the environment in the vicinity of a site which are the result of human activities unrelated to releases from that site.
- Carcinogen:** Any substance or agent that produces or tends to produce cancer in humans.
- Chronic Toxicity:** The ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.
- Cleanup:** The implementation of a cleanup action or interim action.
- Cleanup Action:** Any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.
- Cleanup Action Plan:** A document which identifies the cleanup action and specifies cleanup standards and other requirements for a particular site. After completion of a comment period on a Draft Cleanup Action Plan, Ecology will issue a final Cleanup Action Plan.
- Cleanup Level:** The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.
- Cleanup Process:** The process for identifying, investigating, and cleaning up hazardous waste sites.
- Consent Decree:** A legal document approved and issued by a court which formalizes an agreement reached between the state and potentially liable persons (PLPs) on the actions needed at a site. A decree is subject to public comment. If a decree is substantially changed, an additional comment period is provided.
- Containment:** A container, vessel, barrier, or structure, whether natural or constructed, which confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.
- Contaminant:** Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.
- Enforcement Order:** A legal document, issued by Ecology, requiring remedial action. Failure to comply with an enforcement order may result in substantial liability for costs and penalties. An enforcement order is subject to public comment. If an enforcement order is substantially changed, an additional comment period is provided.

**Environment:** Any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the state of Washington.

**Exposure:** Subjection of an organism to the action, influence or effect of a hazardous substance (chemical agent) or physical agent.

**Exposure Pathways:** The path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from the site. Each exposure pathway includes an actual or potential source or release from a source, an exposure point, and an exposure route. If the source exposure point differs from the source of the hazardous substance, exposure pathway also includes a transport/exposure medium.

**Facility:** Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed or, placed, or otherwise come to be located.

**Feasibility Study (FS):** A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

**Free Product:** A hazardous substance that is present as a nonaqueous phase liquid (that is, liquid not dissolved in water).

**Groundwater:** Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

**Hazardous Sites List:** A list of sites identified by Ecology that requires further remedial action. The sites are ranked from 1 to 5 to indicate their relative priority for further action.

**Hazardous Substance:** Any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) (any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes; (a) have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or (b) are corrosive, explosive, flammable, or may generate pressure through decomposition or other means,) and (6) (any dangerous waste which (a) will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may affect the genetic makeup of man or wildlife; and is highly toxic to man or wildlife; (b) if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment), or any dangerous or extremely dangerous waste as designated by rule under Chapter 70.105 RCW: any hazardous substance as defined in RCW 70.105.010 (14) (any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste,

regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter,) or any hazardous substance as defined by rule under Chapter 70.105 RCW; petroleum products.

**Hazardous Waste Site:** Any facility where there has been a confirmation of a release or threatened release of a hazardous substance that requires remedial action.

**Independent Cleanup Action:** Any remedial action conducted without Ecology oversight or approval, and not under an order or decree.

**Initial Investigation:** An investigation to determine that a release or threatened release may have occurred that warrants further action.

**Interim Action:** Any remedial action that partially addresses the cleanup of a site.

**Mixed Funding:** Any funding, either in the form of a loan or a contribution, provided to potentially liable persons from the state toxics control account.

**Model Toxics Control Act (MTCA):** Washington State's law that governs the investigation, evaluation and cleanup of hazardous waste sites. Refers to RCW 70.105D. It was approved by voters at the November 1988 general election and known is as Initiative 97. The implementing regulation is WAC 173-340.

**Monitoring Wells:** Special wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.

**Natural Background:** The concentration of hazardous substance consistently present in the environment which has not been influenced by localized human activities.

**National Priorities List (NPL):** EPA's list of hazardous waste sites identified for possible long-term remedial response with funding from the federal Superfund trust fund.

**Owner or Operator:** Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned or operated or exercised control over the facility any time before its abandonment.

**Polynuclear Aromatic Hydrocarbon (PAH):** A class of organic compounds, some of which are long-lasting and carcinogenic. These compounds are formed from the combustion of organic material and are ubiquitous in the environment. PAHs are commonly formed by forest fires and by the combustion of fossil fuels.

**Potentially Liable Person (PLP):** Any person whom Ecology finds, based on credible evidence, to be liable under authority of RCW 70.105D.040.

**Public Notice:** At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and opportunity for interested persons to comment.

**Public Participation Plan:** A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

**Recovery By-Products:** Any hazardous substance, water, sludge, or other materials collected in the free product removal process in response to a release from an underground storage tank.

**Release:** Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

**Remedial Action:** Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

**Remedial Investigation (RI):** A study to define the extent of problems at a site. When combined with a study to evaluate alternative cleanup actions it is referred to as a Remedial Investigation/Feasibility Study (RI/FS). In both cases, a comment period on the draft report is required.

**Responsiveness Summary:** A compilation of all questions and comments to a document open for public comment and their respective answers/replies by Ecology. The Responsiveness Summary is mailed, at a minimum, to those who provided comments and its availability is published in the Site Register.

**Risk Assessment:** The determination of the probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

**Sensitive Environment:** An area of particular environmental value, where a release could pose a greater threat than in other areas including: wetlands; critical habitat for endangered or threatened species; national or state wildlife refuge; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic river; rookery; riparian area; big game winter range.

**Site:** See Facility.

**Site Characterization Report:** A written report describing the site and nature of a release from an underground storage tank, as described in WAC 173-340-450 (4) (b).

**Site Hazard Assessment (SHA):** An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

**Site Register:** Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200.

**Surface Water:** Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the state of Washington or under the jurisdiction of the state of Washington.

**TCP:** Toxics Cleanup Program at Ecology

**Total Petroleum Hydrocarbons (TPH):** A scientific measure of the sum of all petroleum hydrocarbons in a sample (without distinguishing one hydrocarbon from another). The "petroleum hydrocarbons" include compounds of carbon and hydrogen that are derived from naturally occurring petroleum sources or from manufactured petroleum products (such as refined oil, coal, and asphalt).

**Toxicity:** The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.

**Underground Storage Tank (UST):** An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW.

**Washington Ranking Method (WARM):** Method used to rank sites placed on the hazardous sites list. A report describing this method is available from Ecology.