

Kaiser Aluminum – Mead Works Potliner Superfund Cleanup Site



Draft Cleanup Action Plan: Cleanup of Groundwater and of the Potliner Pile at Kaiser Mead Works.

The Department of Ecology has issued under the Model Toxics Control Act (Chapter 70.105D RCW), a proposed Draft Cleanup Action Plan (DCAP) for the Kaiser Aluminum Potliner Superfund Site in Mead, WA. The proposed Draft Cleanup Action Plan identifies the different options that were considered in the cleanup action negotiations, specifies which option is favored for the site, and describes the level of cleanup to be attained under that option.

In addition, Ecology is recommending a State Environmental Policy Act (SEPA, Chapter 197-11 WAC) determination of non-significance (DNS) for the proposed Draft Cleanup Action Plan. After reviewing the completed environmental checklist and other information on file, Ecology (as lead agency) has determined that this cleanup project will not have a probable significant adverse impact on the environment. Instead, by further limiting possible releases of contaminated water to the Spokane Rathdrum aquifer and treating the contaminated water, this action should have a significant positive environmental impact.

Your comments on the proposed Draft Cleanup Action Plan and SEPA DNS are welcome through May 30, 2002. A public hearing will be held in Spokane, Washington on May 9, 2002 to record comments on the Draft Cleanup Action Plan. Comments can also be submitted in writing at any time during the comment period, which runs through May 30, 2002. The box at the right provides information on where to find a copy of the Draft Cleanup Action Plan as well as the time and location of the public hearing.

What Is A Cleanup Action Plan?

The proposed Draft Cleanup Action Plan is a legal document issued by the Department

of Ecology that describes the actions that have and will take place at the site. The Draft Cleanup Action Plan describes the development of both the preferred cleanup methods option and the site cleanup (level) standards. The plan will ensure that environmental impacts associated with past potliner and solid waste disposal activities on the site are investigated, and those impacts remediated, where necessary to protect human health and the environment.

Site Background

Kaiser Aluminum & Chemical Corporation owns and operates an aluminum smelter at Mead, Washington, approximately seven miles north of downtown Spokane. The smelter was constructed in 1942 during World War II to supply aluminum to the war effort. The Kaiser plant occupies approximately 1200 acres of land. The plant operates eight potlines, a prebake anode production facility with bake ovens, and a coke calciner. At full capacity, the plant produces in excess of 640 tons of aluminum a day. The cleanup site is located on the north side of the plant complex.

The facility has used the Hall-Heroult electrolytic cell process to produce aluminum since its construction in 1942. The process is an electrochemical reduction reaction in which aluminum oxide is dissolved in a bath of molten salts (cryolite) at a temperature of 1760 degrees (F). An electric current is passed through

May 2002

PUBLIC COMMENT PERIOD

May 1 to May 30, 2002

PUBLIC MEETING

6:30 p.m. May 9, 2002

Spokane Community College
Lair Auditorium, Bldg #6

SEND WRITTEN COMMENTS ON THE DRAFT CLEANUP ACTION PLAN TO:

Paul Skillingstad
Department of Ecology
PO Box 47706
Olympia, WA 98504-7706
(360) 407-6949

INFORMATION REPOSITORIES

Copies of the Draft Cleanup Action Plan and SEPA DNS are available at the following locations:

Industrial Section
Department of Ecology
300 Desmond Drive
Lacey, WA 98503
(360) 407-6916

Ecology Eastern Regional Office
N. 4601 Monroe, Suite 100
Spokane, WA 99205-1295
(509) 456-2926

North Spokane Library
44 East Hawthorne Road
Spokane, WA 99218
(509) 457-5250

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the cell causing the reduction of alumina to aluminum. The entire process occurs in a steel shell or "pot".

In order to retain the purity of the molten aluminum and the structural integrity of the cell, the molten aluminum and cryolite mixture must be kept isolated from the steel shell of the pot. Each pot is lined with insulation materials and carbon, known as potlining. Over time, the carbon lining materials become impregnated with the molten cryolite solution and are mechanically eroded away by the production of aluminum, eventually threatening the integrity of the steel shell. The pot is drained and the carbon and insulation materials replaced. The carbon that is removed from the failed pots is known as spent potlining. Spent potlining historically was disposed of in piles located on the facility's property.

Spent potlining consists of carbon, fluoride, aluminum, and sodium, with minor amounts of calcium, silica, iron, and cyanide. Analysis of spent potlining from the smelter indicates that the spent potlining in the piles should contain less than 4.8 % cyanide and 9.2 % fluoride. Average spent potlining contains 0.78 % cyanide and 8.0 % fluoride.

Cyanide and fluoride contaminated soils are found directly under the existing potlining piles. Under ground water, contaminated with cyanide and fluoride, forms a plume that stretches from beneath the potliner piles to the Little Spokane River.

What Is Being Done?

The Draft Cleanup Action Plan provides for Kaiser to continue and complete the preferred cleanup option at the site. The preferred cleanup option for the site consists of: consolidation of the potliner waste into one pile and covering the pile with an engineered cap; evaluation of the water piping surrounding the consolidated pile, along with repair of any leaking piping; and the pumping and treating of contaminated groundwater found in soil beneath the pile. The project is being completed in two phases.

The first construction phase of the project, (the capping of the solid waste and asphalt covered dangerous waste (spent potlining) piles found on the site and the repair of leaky pipelines) was completed in August of 2001. The capping project consisted of grading three separate piles on the site into one consolidated pile. Contaminated soil and concrete sumps that surround the three piles were removed and added to the new consolidated pile. The cap on the consolidated pile consists of: a foundation layer, a geosynthetic clay liner, a geomembrane liner; a drainage layer, geotextile, and an armor layer of rock riprap. Following capping, several areas surrounding the consolidated pile were covered with asphalt and new access roads to the cap were built.

In addition to the capping and cover project, Kaiser Aluminum finished the repair or removal of leaking piping located near the spent potliner pile site. The repair, replacement, and lining of pipe segments was finished in the spring of 2001.

Ecology is currently reviewing an engineering study that describes the groundwater treatment system for the Site. This review will be finished during the spring of 2002. The "pump and treat" groundwater treatment plant will be constructed during the spring and summer of 2003.

What Happens Next?

Public comment on the proposed Draft Cleanup Action Plan and SEPA DNS will be considered and the plan will be modified, if necessary, based on the comments received. A final Consent Decree for the site should be completed in approximately six to nine months after the completion of the Cleanup Action Plan. The next step in the project will be the construction of a "pump and treat" groundwater treatment system after the signing of the Consent Decree.

Ecology Wants Your Comments!

You are invited to read and comment on the proposed Draft Cleanup Action Plan through May 30, 2002. The public comment period presents an opportunity to have your ideas and comments heard by Ecology. The box on page one provides details on where the documents can be found and how to submit comments. To review more detailed documents than those found in the information repositories, call Paul Skyllingstad at (360) 407-6949.

A public meeting is scheduled to be held at the Spokane Community College, Lair Auditorium, Bldg #6 at 6:30 PM, May 9, 2002. This will be an opportunity to learn about the Site and the proposed Kaiser Aluminum Draft Cleanup Action Plan for groundwater treatment, and to voice your concerns.

Please submit your written comments by May 30, 2002, to Paul Skyllingstad at the Ecology address listed on page one. Ecology will consider and respond to all written comments received, and will revise the Cleanup Action Plan, if necessary. Updates of site activities will be provided to those who submit comments or ask to be placed on the site mailing list.