EPA United States Environmental Protection Agency

Major Cleanup Wraps Up at Former Kaiser Smelter Site

February 2021

In December, the U.S. Environmental Protection Agency Emergency Management Branch completed a time-critical cleanup action at the Former Kaiser Smelter Site (former Kaiser Aluminum facility) in Mead, Washington. Work crews removed thousands of tons of contaminated materials, preventing hazardous exposures to people on the site who may not be aware of the danger, and to surrounding homes and businesses. The cleanup also removed a major source of polychlorinated biphenyls (PCBs), found to be migrating through stormwater to Deadman Creek during extreme storm events. The creek flows into the Little Spokane River. This will help protect fish, people who eat fish, and the Spokane River ecosystem. The five-month cleanup helps prevent immediate threats and stabilizes the property, setting the stage for future rehabilitation at the site.

Removing Toxic Chemicals Helps Protect Health, Environment

Before and after cleanup: *Looking northwest at Building 52 and the broader Carbon Plant. EPA removed contaminated siding from the building (background) and over 1,000 tons of abandoned green coke toxic waste (foreground) that was left outside and exposed to the elements. Cancer-causing PAHs in the waste were moving through the stormwater system.*

At the request of the Washington Department of Ecology, in 2019 EPA performed field sampling at the site, and found very high levels of a number of hazardous and cancer-causing substances, including PCBs, polycyclic aromatic hydrocarbons (PAHs), and asbestos-containing materials. The site was actively releasing PCBs through an underground stormwater system to Deadman Creek. Before cleanup, water and sediment in the site's two stormwater settling ponds greatly exceeded state water quality and sediment standards for PCBs. These ponds were full, thus threatening a larger release of toxic PCBs to the watershed.

What Did Cleanup Accomplish?

Cleanup began in late July of 2020 and took place in two parallel cleanup operations. In the primary operation, EPA crews removed over 12,000 tons of highly contaminated material from the 170-acre developed portion of the site, which includes many large, deteriorating structures and waste piles. At the same time, a second operation carried out by Kaiser Aluminum managed the removal of contaminated water and sediment from the settling ponds on a 400-acre undeveloped part of the site north of the former smelter facility.

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What Did Cleanup Accomplish?

A worker samples the inside wall of Building 57 for contaminants.

This property is still owned by the aluminum company. The cleanup included removal of:

- Over 318,000 square feet of highly contaminated building siding, from 24 buildings. This material contained over 8,000 pounds of PCBs.
- Over 14,000 linear feet of pipe insulation containing friable asbestos (capable of being inhaled).
- 6,500 cubic yards (5,500 tons) of hazardous waste material left in large piles, including green coke and coal tar pitch. This material contained over 26,000 pounds of semivolatile organic compounds, including Benzo(a) pyrene, a cancer-causing chemical.
- Over 3,400 tons of contaminated sediment from the settling ponds. Over 755,000 gallons of contaminated water were also treated over the course of the project.
- Overall, Kaiser Aluminum's team recovered over 45 pounds of PCBs from these ponds. The ponds were used as the last place to contain contaminants before they moved directly into the creek.

During this cleanup, we removed more than 8,200 pounds of PCBs. The amount of water that could have been contaminated by just the PCBs recovered from the settling ponds would be over 30 times the volume of Lake Coeur d'Alene. The volume of water that could have been contaminated by the PCBs recovered from the ponds and the contaminated building siding would be equal to all five Great Lakes combined.

Waste materials were hauled to a permitted disposal facility. EPA expresses our thanks to our contractors and partners who helped make this major cleanup happen on schedule and under budget! We would also like to thank the local community for your patience while we completed this work to protect people's health and the environment.

Coordinating with Our Partners

EPA, Ecology, and EPA's contractor tour alumina storage in Building 32.

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Coordinating with Our Partners

The EPA team coordinated the removal approach with the Washington Department of Ecology's Eastern Region office and the Spokane Regional Clean Air Agency. We also coordinated with the Spokane, Kalispel, and Coeur d'Alene Tribes at various points.

Now that EPA's cleanup is complete, we are working closely with Ecology to ensure a seamless transition between EPA's project and the longer-term work of monitoring and overseeing ongoing efforts to protect the environment.

Ecology staff will use the strong state compliance program to work with facility owners and ensure that environmental protections are in place, waste management costs are minimized, and that properties can continue to contribute to the local economy and tax base. Over the course of future state efforts, community engagement opportunities will be identified and made available.

Health and Safety First

To adjust to the evolving risks posed by COVID-19, EPA took steps to ensure our cleanup activities prioritized the health and safety of EPA staff, contractors, partner agencies, and the communities we serve, first and foremost. We evaluated our field operations and logistical plans for the cleanup and followed state and federal guidelines to help prevent transmission of the virus. After logging 35,000 work hours over nearly five months, no cases of COVID-19 were detected within the project team.

Building 35 after ore removal activities

Learn About Site Contaminants

Polycyclic Aromatic Hydrocarbons (PAHs):
cdc.gov/biomonitoring/PAHs_FactSheet.html

Polychlorinated Biphenyls (PCBs):
epa.gov/pcbs

Asbestos:
https://www.epa.gov/asbestos

For More Information

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If you need materials in an alternative format, please contact **Debra Sherbina** *at* 206-553-0247.

TDD or TTY users, please call 800-877-8339 and give the operator Debra Sherbina's phone number.

Want to be on our Mailing List?

To be included on our project mailing list, please email **Debra Sherbina** at sherbina.debra@epa.gov.

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Look Inside ...

- Removing toxic chemicals helps protect health, environment
- What did cleanup accomplish?
- Coordinating with our partners

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