



# COLUMBIA GORGE ALUMINUM PLANT - FACT SHEET

## THE CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION FISHERIES RESOURCE MANAGEMENT PROGRAM

### Site Summary

The Columbia Gorge Aluminum (CGA) Site consists of approximately 73 developed acres within a larger property of 350 acres located on the north side of the Columbia River, approximately one mile northeast of the John Day Dam, in Klickitat County, WA (Plateau Geoscience, 2010a). CGA operated as an aluminum smelting facility from 1971 to 2003 when it was temporarily shut down, and never restarted (URS, 2008). In 2007, the CGA facility was acquired by Golden Northwest Aluminum Holding Company, which has continued to decommission the facility. Figure 1 identifies primary Site features.

Two aquifers underlie the CGA Site. Groundwater generally flows to the south towards the Columbia River. Groundwater at the CGA is contaminated in places with fluorides, chlorides, and sulfates. Soils at the Site have been contaminated with polycyclic aromatic hydrocarbons (PAHs) and metals, including arsenic, cadmium, chromium, mercury, and selenium.

The upland disposal areas and surface impoundments, with oversight by Ecology, are being characterized and remediated as individual Solid Waste Management Units (SWMUs). Cleanup activities at the Site have focused on remediating contamination associated with sludge generated by the pollution control scrubbers, and disposed of at multiple onsite landfills and surface impoundments (URS, 2008; Arcadis, 2006; Arcadis, 2010). Some of these SWMUs have been remediated and closure has been approved by Ecology. Other SWMUs are currently undergoing remedial investigations, and remedial actions have not yet been identified.

Cleanup actions have been conducted at numerous SWMUs, and known PAH contamination has been remediated to the Model Toxic Control Act (MTCA) Residential cleanup level of 0.14 milligrams per kilogram (mg/kg) and the MTCA Industrial cleanup level of 2 mg/kg. No sampling has been conducted in the areas between the individual SWMUs to determine if these areas are clean.

### Contaminants of Concern

The primary wastes produced by aluminum smelting facilities include carbon dioxide gas, and fluoride gasses (including highly acidic hydrogen fluoride) that are produced in each smelting pot. As a result of the sulfur in petroleum coke and petroleum pitch, some sulfur dioxide is also produced (Plateau Geoscience, 2010b). Carbon dioxide and other coke-derived products such as PAHs are passed on to the primary pollution control scrubbers and then to the plant exhaust system. Sludge produced by the scrubbers is thus contaminated with trace amounts of fluorides and metals, as well as more significant quantities of PAHs. Wastewater discharged from the CGA carried sludge directly into the Columbia River through a National Pollutant Discharge Elimination System (NPDES) permitted outfall.

In addition to the scrubber sludge, the graphite pot liners, which must be periodically replaced, are impregnated with significant quantities of fluorides and cyanides. Spent pot liners may

Figure 1. Detail of Columbia Gorge Aluminum Site, Klickitat County, WA.



be disposed of off-site, but are more frequently leached to recover the fluoride compounds which can be reused in the smelting process.

### Species and Habitats of Interest

The Columbia River is a major migratory corridor for several salmonid species migrating inland from the Pacific Ocean. Chinook (spring, summer, and fall runs), coho, chum, and sockeye salmon and steelhead trout (summer and winter runs) all migrate through this section of the Columbia River, as do American shad, Pacific lamprey, and smelt. For several years, smelt runs have been inconsistent and often reduced in number.

White sturgeon are also found in the Columbia River, which they use as a migratory corridor, and for adult, spawning, and juvenile habitat. The Columbia River also provides rearing, foraging, spawning and adult habitat for numerous resident fish, shellfish, plants, and wildlife species unique to the Pacific Northwest. Locally, wetlands occur within the Site boundary and adjacent to the Site.

### Human Use

The CGA is fully within Yakama Nation's ceded lands, and the Columbia River adjacent to this site is part of the Usual and Accustomed area where tribal subsistence and commercial fishing is ongoing. Additionally, the US Army Corps of Engineers lists twelve boat ramps in the vicinity of John Day dam, as well as six campsite areas and five swimming beaches. Fishing and boating facilities in the immediate vicinity of the CGA include Railroad Island Park, The Cliffs Park, and Giles French Park, all managed by the U.S. Army Corps of Engineers.

### Yakama Nation Authority

The Yakama Nation is a federally recognized Tribe pursuant to the Treaty of 1855 (12 Stat. 951) with authority to manage, protect and restore treaty resources throughout the Pacific Northwest. The Columbia River, life blood of the Yakama Nation, has become a polluted and life threatening environment for salmon and other aquatic resources because of industrial development. The Yakama Nation has the additional authority, as a natural resource trustee

under Superfund law, to initiate and oversee response and restoration actions that affect our Treaty reserved rights and interests. Furthermore, the Yakama Nation's involvement in the remediation of contaminated sites and implementation of restoration activities ensures that these efforts are protective of our Treaty resources. The Yakama Nation is steadfast in restoring a clean and productive Columbia River that sustains our cultural practices and improves life for our neighbors and future generations.

## COLUMBIA RIVER: HONOR. PROTECT. RESTORE.

### Since time immemorial...

The sacred relationship with the Yakama People, the Salmon, and the Columbia River was established in ancient time. When the first people established themselves in this region, the Creator came and revealed that He was going to make human beings. He advised the first people to take care of these new beings. After lengthy discussions, it was so agreed that the first people would give of themselves to sustain the human beings and that the human beings would honor and take care of the first people. Then the Creator asked who would be the first to volunteer and the salmon came forward.

The relationship between the People, the Salmon, and the Columbia River is the foundation of the time-honored laws of the Yakama people: the laws that protect life and the cycles of nature and provide for human well being; the laws that govern our long house traditions; the laws that support our practices, which have sustained the Yakama people since time immemorial. The sacred relationship of the Yakama people, the Salmon, and the mighty Columbia River is based on an understanding that all life is intertwined and interdependent. Today the Salmon has become the epitome of a time honored agreement; fighting to survive, fighting to maintain their natural life cycle, fighting to honor their agreement with the Creator and the Yakamas.

### References

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