**Union Pacific Railroad Tie Treating Plant Site**

**Project Overview**

The Union Pacific Railroad (UPRR) tie-treating plant is located on Tie Plant Road in The Dalles. The 83-acre site includes the plant and contaminated areas of Riverfront Park and the Columbia River to the north of the plant.

The tie-treating plant historically treated, and continues to treat wood products (railroad ties, guard rail posts, etc.) for the Union Pacific Railroad Company. Wood has been treated with a variety of compounds, including ammoniacal copper arsenate, creosote, a creosote/fuel oil mixture, and pentachlorophenol.

UPRR owned and operated the plant from 1926 to 1959. J.H. Baxter Company operated the plant from 1959 to 1987. Kerr-McGee Chemical Corporation purchased the plant in 1987 and operated through 2004. Amerities acquired the plant in 2005 and currently operates the plant. UPRR still owns the property and is responsible for the liability of the environmental investigations and cleanup.

Investigations of the site began in 1984. Creosote components, pentachlorophenol, fuel oil, ammonia, volatile organic compounds (VOCs) and arsenic were found in soil and groundwater near the plant. Contamination was also found in soils and sediments in Riverfront Park and along the shoreline of the Columbia River. Contamination found in the park and river originated from an underground pipe that carried storm water runoff from the plant to the river from 1937 to 1971.

UPRR entered into a consent agreement with DEQ to investigate the nature and extent of contamination at the site in May 1989. The U.S. Environmental Protection Agency (EPA) listed the site on the National Priorities List (NPL) in August 1990, but DEQ remains the lead agency for overseeing the investigation and cleanup of the site.

Approximately 5,000 cubic yards of contaminated soil was removed from Riverfront Park in 1992. A multi-layered cap was constructed along the Columbia River shoreline to contain contaminated sediments in 1995.

The Remedial Investigation and Feasibility Study was completed in 1995. DEQ issued a Record of Decision (ROD) in March 1996. The approved cleanup involves extraction and treatment of contaminated groundwater, recovery of creosote from the groundwater, and hydraulic containment in order to prevent migration of existing contamination.

The groundwater containment system began operating in February 1998. The creosote recovery system followed in 1999. Treated groundwater is discharged to Three-Mile Creek, which in turn discharges to the Columbia River. The discharge water is sampled quarterly. The creosote recovery system uses both injection and extraction wells. Injected water is used to push creosote to extraction points where oil and water are removed. The creosote is removed and water is reinjected to the subsurface to continue the process of oil removal. The recovery system was expanded to two additional sections in 2004. The initial creosote recovery system was successful creosote recovery and shut down 2010. The two additional sections remain operational. Approximately 117,188 gallons of creosoting oil have been recovered from the site through June 2015.

**Environmental Concerns**

DEQ monitors the performance and stability of the treatment system to ensure its continued protectiveness of the City of The Dalles’ Lone Pine potable water well, Three-Mile Creek, the Columbia River, or other water bodies in River Front Park used by the public.

**Next Steps**

Treatment will continue until product recovery reaches a diminished volume and then future operational goals of the system will be evaluated. Institutional controls and long term monitoring of the site will continue into the future.

**For More Information**

Additional information and materials related to this site can be viewed in the ECSI database online at [http://www.deq.state.or.us/lq/cu/index.htm](http://www.deq.state.or.us/lq/cu/index.htm) under site ID 0054.