

# COMMISSION AGENDA

Item No: 3A

Meeting: 5/19/22

**DATE:** May 4, 2022

**TO:** Port Commission

**FROM:** Eric D. Johnson, Executive Director  
Sponsor: Jason Jordan, Director, Environmental and Planning Services  
Project Manager: Rob Healy, Environmental Senior Project Manager

**SUBJECT:** General Business: Occidental Chemical Cleanup Status Briefing

## **A. BRIEFING REQUESTED**

Ecology and Port staff will provide an update on Occidental Chemical's cleanup action status. No action is requested.

## **B. SYNOPSIS**

Ecology and Occidental have been working to develop a cleanup action plan for Occidental's property at 605 Alexander Avenue in the Tacoma Tideflats (Facility Site No. 4326, Cleanup Site No. 1212). Occidental's property is located on the end of the Blair-Hylebos Peninsula, is approximately 36 acres in area with 1,700 feet of linear footage on the Hylebos Waterway and is adjacent to multiple Port Parcels. Because the Occidental contamination impacts surrounding Port property, Port staff have been monitoring Occidental and Ecology's progress on the project. Ecology will update the Commission on recent fieldwork activities, the remedy selection, and the status of the cleanup action plan.

## **C. BACKGROUND – HISTORICAL OPERATIONS**

Hooker Chemical Corporation, a predecessor to Occidental Corporation, began operations on the property in 1929. By 1948, chemicals produced included sodium hydroxide, chlorine, hydrogen, muriatic acid, trichloroethylene, tetrachloroethylene, and hydrogenated oils. Wastes produced included brine sludge, caustic soda, sulfuric acid and weak hydrochloric acid, calcium chloride, calcium hydroxide, and small amounts of muriatic acid, crude oils, and boiler blowdown. These waste products were discharged into drainpipes or ditches that then discharged to the Hylebos Waterway. Lime slurry from the acetylene plant was deposited in a holding pond where it solidified and dried. The sludge from the pond was then hauled away to the deep marine water site or various land disposal sites. These disposal processes continued through the 1960s.

In 1968, Hooker Chemical Corporation was acquired by Occidental Petroleum. Occidental operated the chemical plant until 1997, when it was sold to Pioneer Chlor-Alkali Company, Inc. Occidental retained ownership of a groundwater treatment plant; however, Pioneer employees operated the plant on Occidental's behalf.

In December 2005, Pioneer notified Ecology and the EPA of the sale of the property to Mariana Properties, Inc. an affiliate of Occidental. Pioneer had already terminated the manufacturing of chlor-alkali in 2002 and was operating the Facility solely for product storage and transfer operations.

#### **D. BACKGROUND – REGULATORY HISTORY**

The first groundwater investigation at the Site was completed in 1979, with subsequent investigations occurring into 1988. These were considered corrective actions under RCRA<sup>1</sup>. In February 1988, EPA issued a RCRA Facility Assessment Report, and in November 1988, Ecology and EPA issued a joint permit for the storage of dangerous waste at the Facility. The permit directed the continuation of investigation already underway, titled “Corrective Action for Past Practices”. Between 1990 and 2005, corrective actions to address soil and groundwater contamination under the Dangerous Waste Permit consisted of the removal of 750 cubic yards of contaminated soil, submittal of a Corrective Action Plan and Corrective Action Monitoring Plan, analysis of preliminary pumping tests, construction and startup of the groundwater treatment facility, and the startup of the groundwater extraction and injection system. Following startup of the system Occidental submitted annual data and performance evaluations. A “Compilation of Soils and Related Data” was submitted in 1999, and annual “Investigation Progress Reports” were submitted beginning in December 2000. In 2005, Ecology required Occidental to submit a Corrective Measures Study Work Plan, which was approved by Ecology in February 2005. The last groundwater monitoring report under the Corrective Action Monitoring Plan was dated May 2009. Ecology formally suspended implementation of the Corrective Action Monitoring Plan in 2013 acknowledging that the plan would be revised when Ecology determined clear objectives for continued groundwater monitoring. The RCRA corrective action permit expired on April 29, 2015.

In February 2005, the 1997 Administrative Order on Consent was amended to add Ecology as a Party to require compliance with CERCLA, MTCA, and RCRA, and to conduct additional site characterization for both upland areas and beneath the Hylebos Waterway. The purpose was to determine the nature and extent of soil, groundwater, surface water, and sediment contamination; develop feasibility alternatives to address remaining contamination of all media and develop an integrated remedy or set of remedies to be selected and designed to satisfy both the EPA and Ecology’s statutory requirements.

In August 2015, Occidental submitted the Site Characterization Report, a requirement of the Order, which included all RI data and the final Conceptual Site Model. This was approved by Ecology and the EPA on April 10, 2014. The report concluded that hazardous substances continued to be released from sources at the Facility into the environment including the Hylebos Waterway, shallow groundwater beneath and beyond the Facility, Commencement Bay, and buildings on Port of Tacoma property.

The Feasibility Study Report was submitted to Ecology for review, revised, and opened for public comment on January 27, 2017. The public comment period closed on June 26, 2017. The FS was amended by Ecology in response to the comments and approved as amended by letter dated November 6, 2018.

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<sup>1</sup> Resource Conservation and Recovery Act (RCRA) is our nation’s primary law governing the disposal of solid hazardous waste. Congress passed RCRA October 21, 1976, to address the increasing problems the nation faced from our growing volume of municipal and industrial waste.

On December 31, 2019, Occidental and Ecology entered into an Agreed Order under the Model Toxics Control Act (MTCA) to complete a Draft Cleanup Action Plan, conduct seasonal water level monitoring, implement baseline groundwater monitoring, and conduct a groundwater extraction demonstration. Concurrently, Ecology issued a Dangerous Waste Management Permit for Corrective Action, effective as of January 6, 2020, to remain in effect until January 6, 2030. The Agreed Order and its attachments are incorporated by reference as fully enforceable under this Permit. When Ecology selects a remedy, the Permit will be modified as needed to include the selected remedy and incorporate by reference a consent decree or other available administrative mechanism.

#### **E. NATURE AND EXTENT OF CONTAMINATION**

Site Investigations have identified the following principal contaminants of concern: chlorinated volatile organic compounds (CVOC), fuel-related volatile organic compounds, caustic (sodium hydroxide), salt (sodium chloride), metals (arsenic, chromium, copper, lead, mercury, nickel, thallium, zinc), semi-volatile organic compounds (SVOC) (hexachlorobenzene and hexachlorobutadiene, which are by-products of solvent production), polychlorinated biphenyls (PCBs), and dioxin/furans. These principal contaminants of concern are present in Site soil and groundwater.

A seep study performed in the Hylebos confirmed that seepage of impacted groundwater was occurring to some extent into the Hylebos. A 2016 investigation of potential CVOCs in sediments in the Hylebos determined that most CVOCs were below detection limits and no reported concentrations exceeded EPA's Commencement Bay/Nearshore Tidelands Site sediment quality objectives. A 2016 investigation of porewater beneath the Hylebos indicated only one parameter, the CVOC vinyl chloride, reported in one sample (adjacent to the northern end of the 605 Alexander Avenue property) had the potential to exceed the associated screening criterion at the applicable point of compliance.

CVOCs and elevated pH groundwater represent the most widespread contamination in groundwater. These contaminants are present in groundwater above screening criteria from shallow groundwater at 10 feet below to groundwater to depths of 160 feet below sea level and are present off-site on surrounding Port property and beneath the Hylebos Waterway. The CVOC plume is relatively shallow on Occidental's property near the source area but has migrated to deeper water bearing zones underneath Port property and the Hylebos Waterway. The pH plume is also shallow near its source area and has migrated to deeper water bearing zones underneath Port property and the Hylebos Waterway. The two plumes are co-mingled at some locations, thereby complicating historical and future groundwater extraction efforts.

#### **F. ECOLOGY'S STATUS UPDATE ON THE OCCIDENTAL CLEANUP**

Ecology and Occidental are working together to complete a draft cleanup action plan that will be made available for public comment. Over the last two years, Occidental has conducted additional field activities to support Ecology's drafting of the cleanup action plan, including soil gas monitoring, long-term pumping tests, and additional groundwater sampling. Ecology has evaluated a new set of alternatives derived by recombining elements from the 2017 FS, and Ecology has selected a preferred alternative using Ecology's disproportionate cost analysis.

The following elements will be included in Ecology's selected remedy:

- Soil and soil vapor early action source treatment
- VOC source area mass reduction by strategic groundwater pumping
- Ex-situ groundwater treatment, including a rebuilt treatment plant
- Vertical barrier wall adjacent to the Hylebos Waterway
- Physical direct contact exposure barrier
- Hydraulic containment with performance standards
- Compliance monitoring of the remedy, including impacts to porewater and sediments in the Hylebos Waterway and Commencement Bay
- Institutional Controls, e.g., covenants
- Periodic review (minimum of every 5 years)

#### **G. NEXT STEPS**

Ecology is working to finalize the draft cleanup action plan and is preparing for the public review. Documents for the public review will include the dCAP, a new draft Agreed Order for cleanup implementation, a public participation plan, and recent technical reports. The public comment period is tentatively scheduled for the Summer of 2022. Port staff will provide comment on the public documents to ensure that Port interests are protected.

#### **H. ATTACHMENTS TO THIS REQUEST**

- Port of Tacoma's slide presentation introducing Ecology
- Ecology's slide presentation with imbedded video