**MEMORANDUM**

**DATE:** May 7, 2024

**SUBJECT:** **DEQ Responses to EPA Comments on Shore Terminals WR-209 Source Control Measures Report** Shore Terminals LLC, Portland, Oregon ECSI #5130

**TO:** Project File ECSI 5130

**FROM:** Kenneth Thiessen, R.G. Hydrogeologist

EPA provided comments on the *WR-209 Source Control Measures* report (referred to as the Subject Report herein) for the Shore Terminals, LLC site located at 9420 NW St. Helens Road (U.S. Highway 30) in Portland, Oregon in a January 22, 2024, document to DEQ. This memorandum provides DEQ's responses to EPA comments to be incorporated into the forth coming Source Control Decision. The EPA comments have been copied below in italics for reference, followed by our responses.

**Primary Comments**

1. *The report does not provide sufficient justification that dry weather flow attributed to groundwater intrusion poses no recontamination risk to the Willamette River. The Source Control Decision (SCD) should include a weight of evidence evaluation per the Portland Harbor Joint Source Control Strategy (DEQ and EPA 2005) and DEQ's upland stormwater guidance (DEQ 2009).*

Stormwater from the Shore Terminals Facility does not discharge to the WR-209 conveyance line or river outfall. The Shore Terminals Facility does contribute groundwater to the WR-209 conveyance line and river outfall as dry weather flow during high water table stands via cracks in the conveyance pipe beneath Tank Field #3.

Samples of the dry weather flow from outfall WR-209 were collected on August 16 and September 9, 2017, prior to the 2022 source control measure to remove legacy sediment from the pipe. Six chemicals: (bis[2-ethylhexyl]phthalate, benzo[a]anthracene, benzo[b]fluorene, and chrysene, arsenic and manganese) exceeded Table 17 PHSS ROD cleanup levels for surface water in the dry weather flow.

Following the sediment removal source control measure, dry weather flow was sampled on October 21, 2021. Laboratory analytical results monitoring indicated that benzo[a]anthracene, chrysene, arsenic and manganese exceeded of Table 17 PHSS ROD cleanup levels for surface water.

DEQ believes that the Subject Report provides sufficient evidence that the source control measure successfully achieved the goal of mitigating the impact from legacy sediment on discharges to the Willamette River. DEQ will utilize a Weight of Evidence evaluation in the

SCD to support that groundwater intrusion does not provide a re-contamination risk to the Willamette River.

2. *The stormwater component of the direct discharge pathway to the Willamette River should be included as part of the SCD. EPA understands that outfall WR-209 runs underneath the Shore Terminals property and discharges non-Facility stormwater that collects in the WR-209 ditch. However, Shore Terminals contributes dry weather flow via groundwater and overland flow to WR-209. Additional Stormwater contributors to WR-209 such as the upland forested areas (e.g. Forest Park), Oregon Department of Transportation, and the railroad should be documented and any investigations summarized in the SCD, if available. The B1a Project Area Sufficiency Assessment considers unclaimed outfalls (such as WR-209) as sources that are not sufficiently assessed or controlled and this pathway has been identified as a data gap for source control (Jacobs 2020). Dry weather flow evaluations are a component of the direct discharge pathway, but a comprehensive evaluation of all discharges from WR-209 is needed to address the data gap identified in the sufficiency assessment.*

The stormwater component of the direct discharge pathway to the Willamette River will be included in the forthcoming SCD for the Shore Terminals site.

The SCE completed for the Facility in 2015 included a stormwater component of the direct discharge pathway for both the Facility and unclaimed outfall WR-209. The 2015 analysis of stormwater samples from outfall WR-209 was further screened against 2017 PHSS ROD Table 17 constituents. These data are included in the tables contained in Appendix A of the Subject Report.

The extensive stormwater sampling conducted for the Shore Terminals' 2015 SCE coupled with the recent dry weather discharge sampling provide a complete evaluation of discharge from WR-209. Existing data should satisfy the needs of the B1a Group sufficiency assessment. Additional stormwater assessment has been performed by the Oregon Department of Transportation (ODOT). ODOT has sampled analogous segments of Highway 30 and intends for these results to be comparable to the stormwater that enters the WR-209 conveyance line.

**To Be Considered**

3. *Surface water discharge evaluations should include all contaminants that have surface water cleanup levels in Table 17 of the PHSS Record of Decision (EPA 2017) and analytical results should be compared with the applicable cleanup levels. EPA notes that contaminants identified in surface sediment near the WR-209 outfall exceeding cleanup levels and/or remedial action levels or principal threat waste concentrations include PCBs, DDx, HxCFD,1,2,3,7,8-PeCDD, 2,3,4,7,8-PeCDF, and 2,3,7,8-TCDD (Jacobs 2022).*

DEQ interprets EPA's "surface water discharge evaluations" to mean total SW and GW flow from WR-209.

As identified above, stormwater and dry weather discharge samples have been analyzed for all relevant Table 17 cleanup levels for surface water. Shore Terminals Facility does not contribute stormwater to outfall WR-209.

Dioxins and furans were not included in the analyses of the WR-209 total flow stormwater samples because the Shore Terminals Facility has never used nor stored any materials that would contain dioxins/furans. Supporting this conclusion, groundwater samples from selected monitoring wells at the Shore Terminals facility was analyzed for dioxins/furans during previous phases of work and none were detected. Dioxins/furans are not considered chemicals of interest for the Shore Terminals Facility and were not included in the WR-209 total flow stormwater characterization.

A small amount of stormwater from the Olympic Pipeline Corporation (OPLC) Switching Station can enter the WR-209 conveyance system. The volume of stormwater discharged to the Willamette River via outfall WR-209 from the OPLC Switching Station is de minimis as compared to the volume of stormwater from upgradient offsite sources. There is no known use of dioxins/furans containing materials at OPLC and given its operations, none would be expected.

For the weight of evidence argument in the WR-209 Source Control Decision, ODOT Hwy 30 stormwater report includes analysis for dioxin and furans and PCBs in stormwater and also found in SMA off WR-209. (Herrera Consultants, 2023)

## References


Apex Companies, LLC (Apex), 2015. *Source Control Evaluation Report, Shore Terminals LLC, Portland, Oregon*. March 16, 2015.

Cascadia Associates, LLC (Cascadia), 2018. Draft *Source Control Measure Work Plan, Shore Terminals LLC, Portland, Oregon*. May 2018.

Cascadia, 2020. *Summary of Outfall WR-209 Investigations and Sampling Memorandum, Shore Terminals LLC, 9420 NW St. Helens Road (US Highway 30).* April 14, 2020.

GeoEngineers, Inc (GeoEngineers), 2022. *Groundwater Pathway Source Control Evaluation, Shore Terminals LLC, Portland, Oregon*. April 11, 2022.

GeoEngineers, 2023. *WR-209 Source Control Measures, Shore Terminals, LLC, Portland Facility, Portland, Oregon*. January 20, 2023.

DEQ and EPA, 2005. *Portland Harbor Joint Source Control Strategy*. December 2005; updated 2007.

EPA, 2017. *Record of Decision Portland Harbor Superfund Site Portland, Oregon*. January 2017.

Herrera Consultants, 2023. Oregon Dept. of Transportation. Draft Technical Memorandum. Water Year 2023 Supplemental Monitoring Report for the ODOT Facility (Hwy 30) in Porland Harbor. Aug. 17, 2023