



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

MEMORANDUM

DATE: August 17, 2021

SUBJECT: Source Control Evaluation for Stormwater Pathway
Tube Forgings of America, Inc./Front Avenue LLCs Facility, Portland, OR
ECSI # 1239
March 2021

FROM: Benjamin Leake, PMP *BJL*
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TO: Robert Hood
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The following are the United States Environmental Protection Agency (EPA) comments on the March 8, 2021 document titled *Source Control Evaluation for Stormwater Pathway, Tube Forgings of America, Inc./Front Avenue LLCs* (SCE), prepared by Bridgewater Group on behalf of Tube Forgings of America, Inc./Front Avenue LLCs. The Tube Forgings of America (TFA) facility is located at 5200 NW Front Avenue in Portland Oregon. Stormwater from the TFA facility discharges to the Willamette River at approximately River Mile 8.0 West of the Portland Harbor Superfund Site (PHSS) near the boundary of the River Mile 9 West and Willbridge Cove in-water project areas. The Site is listed in the Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) database as ECSI #1239.

EPA's comments are categorized and provided as "Primary," which identify concerns that must be resolved to achieve the assessment's objective; "To Be Considered," which, if addressed or resolved, would reduce uncertainty, improve confidence in the document's conclusions, or best support the assessment's objectives; and "Matters of Style," which substantially or adversely affect the presentation of technical information provided in the report.

Primary Comments

1. The text in Sections 7.2, 8.1, and 9 should be revised to accurately represent the application of the rank-order curves for stormwater at Portland Harbor Heavy Industrial Sites. The text in these sections state that data that plotted on the lower portion of the rank-order curves "indicates that no additional source control measures are necessary," which is not the intended use of these plots. All such statements should be removed and replaced with a weight-of-evidence evaluation consistent with the guidance provided in the *Portland Harbor Joint Source Control Strategy* (DEQ and EPA 2005) and DEQ's *Guidance for Evaluating the Stormwater Pathway at Upland*

Sites (DEQ 2010). As described in DEQ’s Guidance for Evaluating the Stormwater Pathway at Upland Sites, “interpretations made using these charts should be corroborated by other lines of evidence and should not be presumed to provide conclusive evidence of the presence or absence of contamination at a site. Furthermore, the determination that contaminant concentrations are ‘typical’ is not the same as determining the discharges will not cause or contribute to risk in the waterbody.”

2. The SCE should provide a discussion of the potential for dioxins and furans to be present in stormwater discharges from TFA. Dioxins and furans compounds are identified as driver COCs in the RM9W project area, are focused COCs for sediment in Table 21 of the ROD, and have a surface water cleanup level in Table 17 of the ROD (EPA 2017). Because dioxins and furans are not in the stormwater dataset, the SCE should evaluate the potential for dioxins/furans in stormwater. This discussion should include whether current or past facility operations could have produced dioxins/furans, any sampling of other media at TFA that included dioxin/furan analysis, and whether the existing stormwater SCMs are likely to remove any potential dioxins/furans from stormwater discharge.

To Be Considered Comments

1. The SCE report should provide additional description of the stormwater treatment system to support the performance evaluation provided in the report. At a minimum, a reference to design reports or SCE appendices that contain more detailed process descriptions or design information should be included. The brief description in Section 7.2.4, page 28, should be supplemented to provide a more thorough description of the treatment system that is the primary source control measure (SCM) for the TFA facility.
2. The SCE report should clarify the capacity of lift station and conveyance systems in drainage areas DA-002 and DA-003. Section 2.2.2 states that overflows could occur during a precipitation event greater than the design storm of 0.83 inches in 24 hours, but that no overflows have occurred since the system began operating in November 2014. There have been many instances since November 2014 when the precipitation intensity has exceeded 0.83 inches in 24 hours, suggesting the capacity of the lift stations is greater than the runoff produced by this design storm. The potential for pump failure and associated water quality consequences should also be discussed.
3. The SCE should clarify the maintenance frequency and media replacement schedule for the Contech unit with the CSF® Leaf Media that is used to treat stormwater from drainage area DA-004. The text indicates that that the cartridges will be replaced when “the inspection indicates that the media should be replaced or excess sediment has accumulated and requires removal.” Contaminant breakthrough in filter media cannot be determined by visual inspection alone, and the SCE report describes that TFA is no longer required to collect stormwater samples from outfall C-4 as part of the NPDES permit. If samples will not be collected, there should be a plan for media replacement on a predetermined schedule that is based on breakthrough times that have been observed with stormwater data or are based on manufacturer specifications.

4. The contaminants of interest identified in Section 4 should also consider contaminants that were identified in SMAs in the southern portion of the Willbridge Cove Project Area. Section 4 describes the contaminants identified by Foth as driver COCs in the River Mile 9 West Project Area (RM9W) but does not mention the Willbridge Cove Project Area. Outfall WR-7 discharges at the far northern portion of RM9W and directly adjacent to the boundary of Willbridge Cove Project Area. It is possible that past or current stormwater discharges from WR-7 impact the Willbridge Cove Project Area in addition to RM9W.
5. Section 5.3 should be revised to clarify the frequency of catch basin inspections and measurement of sediment accumulation. The text in Section 5.3 states that sediment accumulation is measured semiannually, but the stormwater pollution control plan (Appendix A) includes monthly inspections that include assessment of sediment accumulation.
6. The first paragraph of Section 6.1.1 should be revised. This paragraph references the 2010 DEQ Stormwater Guidance document and states that analytical results from stormwater solids sampling are not relied on as in indicator of stormwater quality discharging to the river. While stormwater solids results may not be reflective of actual COC concentrations discharging to the river in stormwater, stormwater solids results provide an important line of evidence for an SCE and should be considered as such. Catch basins do capture stormwater solids but the possibility remains that some stormwater solids are not captured by the catch basins and are instead discharged downstream where they either accumulate in the storm drain system, get removed by a treatment system, or discharge to the river.
7. A rank-order plot for polychlorinated biphenyl (PCB) concentrations in stormwater solids should be included in Appendix E. Section 7.1 indicates that PCBs (i.e., Aroclor 1254) were detected in the sample collected from the TFA C-5 to WR-7 stormwater line at a concentration of 89.2 $\mu\text{g}/\text{kg}$, which exceeds the Portland Harbor record of decision (ROD) cleanup level of 9 $\mu\text{g}/\text{kg}$ and remedial action level of 75 $\mu\text{g}/\text{kg}$. Plotting this concentration on the rank-order stormwater solids plots would allow for comparison to other heavy industrial sites within Portland Harbor. Additionally, non-detect samples should also be plotted on the PCB rank-order plot at the method reporting limit.
8. All available post-SCM stormwater data should be provided in the SCE report, including recent 1200-Z sampling data. Section 7.2 states that stormwater samples have been collected through 2020, but the stormwater sampling analytical results (Tables 1 and 6) only provide sampling data through February 2018 at sample location C-5.
9. The figures in Appendix H should provide all available post-SCM data collected for the SCE. Specifically, the following issues should be addressed:
 - a. Provide a rank-order curve for arsenic.
 - b. Provide all BEHP stormwater data. Post-SCM stormwater samples were collected at location C-5 during four stormwater events, but only one value is shown for C-5 in the BEHP figure in Appendix H.
 - c. Provide a rank-order curve for chromium.

Matters of Style Comments

1. The analytical tables should define the meaning of bolded and shaded values and the less than (<) symbol. Based on the values presented in the table, EPA assumes that bolded values represent detected concentrations, shaded values exceed the ROD cleanup levels (EPA 2017), and the less than symbol indicates that the sample was not detected at the reported method reporting limits.
2. The sampling dates should be verified in the rank-order curves in Appendix H. For example, there are many sample points without dates on the lead plots. Additionally, the TSS plot indicates that outfall C-3 was sampled on 3/13/2017, but the text in Section 2 describes that discharge from drainage area DA-03 was rerouted in November 2014 and there are no longer discharges to outfall C-3. Similarly, the TSS plot indicates that a sample was collected on 5/20 at former outfall C-1, whereas text in Section 2 describes that sampling point C-1 is no longer sampled and has been replaced by post-treatment sample point C-5/001.
3. Samples should be plotted at the method reporting limit in the rank-order charts in Appendix H for analytes that were not detected. This will provide context to the sampling results and support the discussions of the effectiveness of stormwater treatment and adequacy of analytical methods.

References

DEQ. 2010. *Guidance for Evaluating the Stormwater Pathway at Upland Sites*. Updated October 2010.

DEQ and EPA. 2005. *Portland Harbor Joint Source Control Strategy*.

EPA 2017. *Record of Decision, Portland Harbor Superfund Site, Portland, Oregon*. Prepared by EPA Region 10.