



Oregon

Tina Kotek, Governor

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August 24, 2023

Traci Parker
Siltronic Corporation
7200 NW Front Avenue
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via electronic delivery (email)

**Re: DEQ's Reply to Response to DEQ's Comments on Siltronic Operable Unit Remedial Investigation Data Summary Report
Siltronic Operable Unit
Portland, Oregon
ECSI# 183**

Dear Traci Parker:

The Oregon Department of Environmental Quality (DEQ) reviewed the July 14, 2023 *Response to DEQ's Comments on Siltronic Operable Unit Remedial Investigation Data Summary Report*¹ (RTCs) submitted by Maul Foster Alongi, Inc. (MFA) on behalf of Siltronic Corporation (Siltronic). The RTC was prepared under the *Order Requiring Remedial Investigation/Feasibility Study and Source Control Evaluations*² (Unilateral Order). The RTCs respond to DEQ's June 1, 2023 comments³ on the *Siltronic Operable Unit (OU) Remedial Investigation Data Summary Report*⁴.

DEQ conditionally approves the RTCs, subject to the replies provided herein. DEQ does not require a revision to the RTCs.

DEQ's Replies

- 1) **DEQ's Reply to Response to Comment 7: Table 1-1.** In their response to DEQ Comment 7, Siltronic disagrees with DEQ's requirement to remove dioxins/furans as a contaminant of interest (COI) associated with former manufactured gas plant (MGP) wastes and residuals. Siltronic's response notes their perspective that excluding dioxins/furans as COIs for MGP wastes would potentially result in an incomplete conceptual site model (CSM) for the SOU. The RTC includes a technical memorandum (tech memo) providing lines of evidence intended to support a conclusion that MGP wastes and residuals are sources of dioxins/furans.

¹ Maul Foster Alongi, Inc. 2023. Letter to: Blair Paulik, Oregon Department of Environmental Quality. Regarding: Response to DEQ's Comments on Siltronic Operable Unit Remedial Investigation Data Summary Report, Siltronic Corporation, 7200 NW Front Avenue, Portland, Oregon, ECSI No. 183, DEQ Order No. ORSP-NWR-16-02. July 14.

² DEQ. 2016. Order Requiring Remedial Investigation/Feasibility Study and Source Control Evaluations. DEQ Order No. OPSR-NWR-16-02. August 16.

³ DEQ. 2023. Letter to: Traci Parker, Siltronic Corporation. Regarding: DEQ Comments on Siltronic Operable Unit Remedial Investigation Data Summary Report, Siltronic Corporation, Portland, Oregon, ECSI No. 183. June 1.

⁴ Maul Foster Alongi, Inc. 2023. Siltronic Operable Unit Remedial Investigation Data Summary Report. Prepared on behalf of Siltronic Corporation. March 31, 2023.

DEQ notes that Siltronic's tech memo does not provide a complete evaluation of potential dioxin/furan sources on the SOU. Siltronic and DEQ agree that dredge spoils composed of Willamette River sediments were used to fill the Siltronic property; however, Siltronic's tech memo did not include an evaluation of the dioxins/furans chemical signature in Willamette River sediments to support its conclusions. DEQ evaluated the dioxin/furan chemical signature from 45 surface sediment samples collected from the upriver reach of the Willamette River (between RM 16.8 and RM 28.7) to compare to the dioxin/furan signatures presented in Siltronic's tech memo for various SOU media. The upriver reach data are reported in the *Phase I Field Sampling and Data Report*⁵. DEQ considers the upriver reach sediment samples to be representative of dredge spoils historically placed on the Siltronic property, while avoiding the influence of known dioxin/furan sources to Portland Harbor sediments (e.g., RPAC and Arkema) and the potential influence of other sources of contamination (e.g., Gasco). In addition, the upriver reach data achieved low laboratory quantitation limits and are considered high-quality data, making forensic analysis of the dioxin/furan chemical signature more reliable.

DEQ used the same methodology described in Siltronic's tech memo to evaluate the dioxin/furan chemical signatures in the upriver reach samples. DEQ removed two sample results (MFA-031-SS and MFA-041-SS) because OCDD concentrations were reported as non-detect with elevated OCDD reporting limits. Figure 2 presents the Willamette River upriver reach sediment sample dioxin/furan chemical signatures represented as the fraction of individual dioxin/furan congeners as a proportion of the total dioxins/furans. DEQ arranged the dioxin/furan congeners shown in the stacked column chart in the same order and using the same color as the charts included in Siltronic's tech memo.

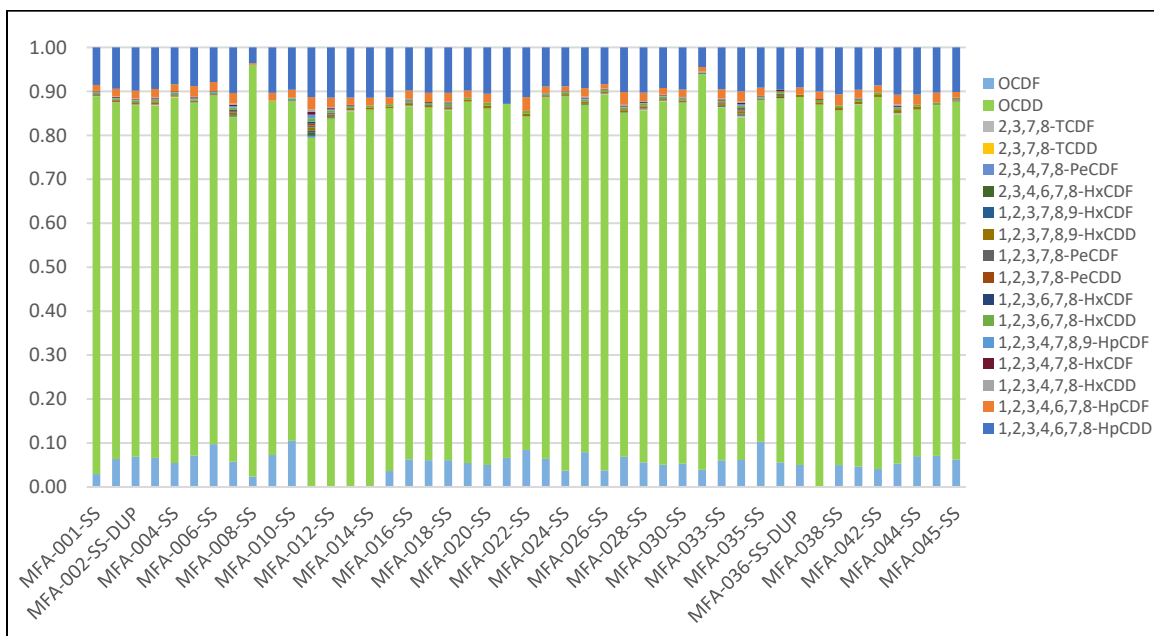


Figure 2. Willamette River Upriver Reach Dioxin/Furan Signature

⁵ Maul Foster & Alongi, Inc. 2022. Phase I Field Sampling and Data Report, Upriver Reach Background Investigation, Lower Willamette River. June 28.

Figure 3, below, presents a boxplot of the four most prevalent dioxin/furan congeners in Willamette River surface sediments to further illustrate the consistency in the Willamette River surface sediment dioxin/furan chemical signatures. Figure 3 also overlaid the mean dioxin/furan fraction for these four congeners in SOU (and GOU) DNAPL, SOU soil, and SOU groundwater⁶ based on the data provided in Siltronic's tech memo. Figure 3 shows that 1) the chemical signature for dioxins/furans in Willamette River surface sediments are consistent, and 2) the average SOU (and GOU) DNAPL, SOU soil, and SOU groundwater dioxin/furan chemical signatures match the Willamette River surface sediment dioxin/furan chemical signature.

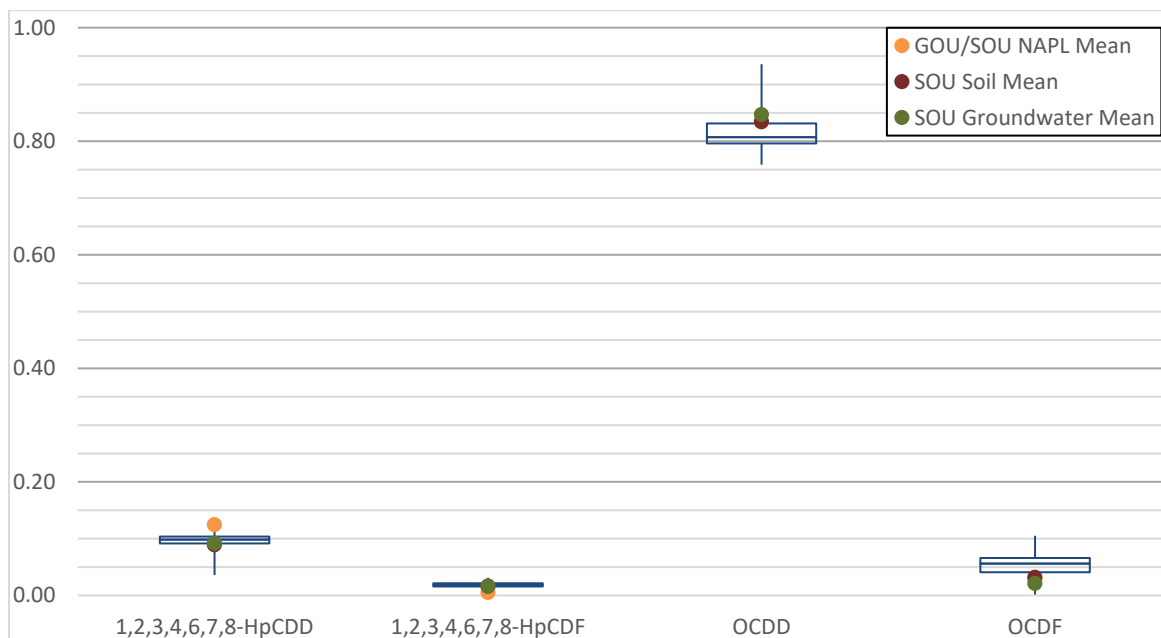


Figure 3. Willamette River Upriver Reach Dioxin/Furan Boxplot

Given the widespread use of dredge spoils as fill placed across the Siltronic property, investigating the nature and extent of dioxins/furans as part of the SOU RI will necessarily include the full extent of fill soils and Fill WBZ groundwater, and potentially Upper Alluvium WBZ groundwater. Therefore, DEQ disagrees that eliminating dioxins/furans as a COI associated with MGP wastes and residuals will result in an incomplete CSM or otherwise affect the scope of the SOU RI/FS. DEQ directs Siltronic to remove dioxins/furans as a COI associated with MGP wastes and residuals from all future deliverables.

In addition to these findings, DEQ notes that the summary section of Siltronic's tech memo concludes with comments about dioxins/furans being a COI for MGP activities at the Gasco facility. This commentary is outside of the scope of work for the SOU under the Unilateral Order. DEQ requires that Siltronic remove and refrain from making positional statements regarding cleanup work on the Gasco OU from all future work submitted to DEQ under the Unilateral Order.

⁶ DEQ removed groundwater collected from wells screened or partially screened below 65 feet below ground surface.

- 2) **DEQ's Reply to Response to Comment 8: Figures.** For clarification, the scope of the SOU RI will necessarily include evaluating contaminant migration to offsite areas, including Doane Creek, consistent with the direction provided by DEQ in our May 10, 2022 letter⁷ that established the direction of the Siltronic OU Remedial Investigation, Feasibility Study, and Source Control Evaluation. DEQ considers offsite contamination originating from the Siltronic OU to be within the Siltronic OU locality of facility and subject to work completed under the Unilateral Order.

As noted in our letter dated August 23, 2023, I will be transitioning out of the Project Manager role in DEQ's Siltronic project team, effective August 28, 2023. Please contact Wesley Thomas for any clarifications on this letter at 971-263-8822 or Wesley.Thomas@deq.oregon.gov.

Sincerely,



Blair Paulik Aguilar, PhD
Remedial Project Manager/Toxicologist
NWR Cleanup Section

EC: Wesley Thomas, DEQ
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Madi Novak, EPA
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ECSI No. 183 File

⁷ DEQ. 2022. Letter to Myron Burr, Siltronic Corporation. Regarding: Southern Siltronic Operable Unit Remedial Investigation, Feasibility Study, and Source Control Evaluation, Siltronic Corporation, Portland, Oregon, ECSI No. 183. May 10.