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Trentwood Works

February 28, 2022

Mr. Pat Hallinan
Department of Ecology
4601 N Monroe
Spokane, WA 99205-1295

**Re: Draft National Discharge Elimination System Permit No. WA0000892
Kaiser Aluminum Washington**

Dear Mr. Hallinan,

Thank you for the opportunity to provide comments on Draft NPDES Permit No. WA0000892 (the “draft permit”). Kaiser Aluminum Washington, LLC (“Kaiser”) is committed to continuing its close work with the Department of Ecology (“Ecology”) to assure continued compliance with its permit obligations and to protect and improve water quality in the Spokane River. Kaiser follows best management practices (“BMPs”) to control and reduce pollutants in our treated effluent and will continue to implement the most effective and economically and technically feasible technologies for our permitted discharge.

A. Kaiser is continuing to take significant and effective actions to improve Spokane River water quality.

Being a good steward of the environment is important to Kaiser and its employees. Kaiser continually evaluates its use of water from the Spokane River and has significantly reduced its discharge of treated water to the river. Since 2010, the Trentwood facility in Spokane Valley has reduced its water usage and discharge to the river by 40%, even as the facility’s production increased, and we continuing to explore new ways to further reduce our water usage and discharge.

Like facilities across the state, our Trentwood facility used products containing polychlorinated biphenyls (“PCBs”) for their safety-related properties in electrical and hydraulic systems until PCBs were banned in 1978. Although Kaiser stopped using PCBs decades ago, low level residual PCBs remain at our Trentwood facility, which began operations in 1942 for defense purposes. PCBs are also in the groundwater underneath our Trentwood facility and in groundwater up gradient of the facility from non-Kaiser sources. These PCBs enter the facility’s water conveyance systems when Kaiser extracts groundwater for manufacturing operations.

We recognize that any level of PCB discharge is a public concern, and Kaiser is committed to doing its part to remove PCBs from our permitted discharge by implementing innovative technologies. Kaiser has an important role to play in the protection of the Spokane River, and Kaiser’s successful operation in the region is necessary to continue to cooperatively develop

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solutions to the legacy PCB contamination, which can be used by Kaiser and others across the state facing similar challenges. We will continue to do our part to improve water quality in the Spokane River.

To control and eliminate legacy sources of PCBs, Kaiser has completed numerous activities to excavate and remove PCB-contaminated soil, clean historical water conveyance systems, and remove and replace old equipment. Kaiser conducts this work under the supervision of and in full cooperation with Ecology.

Kaiser continues to work every day to address the legacy sources of PCBs. In addition to reducing the volume of discharge, we have reduced our facility's permitted discharge of PCBs by implementing new technologies and controlling potential sources. These actions have resulted in a significant reduction in the concentration of PCBs in our treated effluent.

Kaiser follows BMPs to control and reduce PCBs in our permitted discharge. Kaiser operates a walnut shell filtration system to remove PCBs that enter the wastewater from legacy sources at our Trentwood facility. The walnut shell filtration system removes about 70% of the PCBs entering the system. With Ecology's approval and oversight, Kaiser is developing even more innovative technology alternatives by running a pilot test of an ultraviolet light system that destroys PCBs. See Wash. Dep't of Ecology, *Cleaning up: Promising Pilot Test Destroying Groundwater Contamination in Spokane Valley*, (Dec. 2, 2020), <https://ecology.wa.gov/Blog/Posts/December-2020/Cleaning-up-Promising-pilot-test-destroying-ground>. This technology would remove the need to transfer PCBs to another media. The initial small-scale pilot test UV light system destroyed more than 90% of PCBs from contaminated groundwater, and the treated water met drinking water standards.¹ If successful, we would expect to share the technology and what we have learned with other dischargers facing similar challenges.

B. Continuing Kaiser's implementation of measurable and specific actions is good for water quality and good for business.

In addition to the work that has been done, Kaiser has a clear, specific, and measurable roadmap for improving water quality, and this approach should guide the final permit requirements. A permit that requires Kaiser to continue to implement PCB-reduction actions to meet milestones is good for the river and also allows Kaiser to operate with certainty.

Kaiser's current permit has been administratively extended since 2016. Since that time, Kaiser was the only permitted discharger to enter an agreed order with Ecology to continue to

¹ Technologies such as advanced membranes that are available to municipal dischargers like the City of Spokane and Spokane County are not effective treatment for Trentwood's discharge. PCBs adhere to solids, and these technologies remove PCBs by screening out the suspended solids and organic matter that is present in municipal wastewater. These technologies will not address the PCBs in Kaiser's industrial wastewater. That is why Kaiser is pushing the envelope on new technologies to address legacy PCB sources.



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implement BMPs, address legacy PCB sources, and test PCB treatment technologies. The current permit and the agreed order include specific, narrative requirements, with an enforceable schedule, that obligate Kaiser to continue to evaluate treatment technologies, achieve PCB reduction milestones, and make real water quality improvements. Pursuant to our current permit and the agreed order, Kaiser is completing the pilot project testing of PCB prevention and control candidate technologies and will prepare an engineering report that assesses all known, available, and reasonable treatment alternatives to reduce PCBs in Trentwood's permitted discharge. The agreed order also requires us to evaluate the technical and economic feasibility of alternatives.

Kaiser has developed a PCB pollution minimization plan ("PMP") that Ecology approved. Kaiser implements the PMP to identify and complete PCB reduction activities. The PCB PMP is a living document that is updated regularly as we complete PCB reduction activities and identify other actions to take to improve water quality. As part of the PMP, Kaiser continually evaluates the effectiveness of its PCB reduction activities, including material substitutions, treatment system performance improvements, and operational modifications. Kaiser submits a PMP annual report to Ecology that provides detailed PCB effluent data, describes updates or revisions to the PMP, and evaluates the effectiveness of completed activities. Kaiser will continue to reduce Trentwood's permitted discharge volume and PCBs in the effluent.

Any final permit should provide certainty to Kaiser and to other stakeholders working for real water quality improvements. At this time, however, the water quality standard for PCBs, on which Ecology based the proposed numeric limit in the draft permit, is almost certain to change. To stay litigation between Ecology and the U.S. Environmental Protection Agency ("EPA"), EPA agreed to promulgate revised human health criteria for certain toxics in Washington, including PCBs. *See* Stipulated Mot. to Hold Case in Abeyance Pending Voluntary Reconsideration and Rulemaking, *Washington v. United States Env'tl. Protection Agency*, No. 2:19-cv-00884-RAJ (W.D. Wash. June 30, 2021), ECF No. 84. With the water quality standard and the numeric limit in the draft permit uncertain, Ecology should instead use the specific and measurable plan that is already in place as the basis for final permit requirements.

Ecology has already acknowledged that an action-specific, narrative plan for Trentwood's permitted discharge can achieve water quality improvements. Kaiser submitted a complete variance application to Ecology in April 2019. *See* Kaiser Aluminum Washington, LLC Application for Variance for an Individual Discharger (April 29, 2019), <https://fortress.wa.gov/ecy/ezshare/wq/standards/KaiserApp.pdf>. In June 2020, Ecology issued draft rule language for PCB variances on the Spokane River, along with a technical support document. Kaiser's application was well supported and identified a series of actions to be taken, and Ecology included those actions in the draft variance rule. In fact, these are many of the same actions that Kaiser is implementing pursuant to its PCB PMP, despite Ecology pausing the variance rulemaking process. These actions include converting to groundwater as a sole source of cooling water, eliminating or reinjecting non-contact cooling water, recirculating contact cooling water for manufacturing operations, enhancing current treatment systems, and developing and implementing "Next Level of Treatment" for surface water discharge.



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Kaiser will continue to implement the plan required in our current permit and administrative order. To provide certainty and to continue to achieve water quality improvements, this narrative plan should guide the final permit requirements.

C. Kaiser's draft permit is inconsistent with other draft permits.

Other draft permits issued by Ecology to Spokane River dischargers demonstrate Ecology's recognition that stringent numeric limits for PCBs are not necessary to protect water quality in the river.

A. Liberty Lake's draft permit demonstrates that a narrative plan to reduce PCBs protects the Spokane River.

Kaiser and Liberty Lake discharge to the same segment of the Spokane River, but the respective draft permits include very different effluent limits for PCBs. In the fact sheet accompanying Kaiser's draft permit, Ecology states that Kaiser's discharge "has a reasonable potential to contribute to excursions above the water quality standard for PCBs... based on the presence of PCBs in the effluent and the 303(d) listing for PCBs in fish tissue in the Spokane River at the point of discharge." Wash. Dep't of Ecology, *Draft Fact Sheet for NPDES Permit WA 0000892 Kaiser Aluminum Washington, LLC*, at 44 (Dec. 29, 2021). Liberty Lake also discharges effluent containing PCBs, and its point of discharge is to the same segment of the river as Kaiser's. Wash. Dep't of Ecology, *Draft Fact Sheet for NPDES Permit WA0045144 Liberty Lake Sewer & Water District*, at 12 (Jan. 25, 2022). Despite these similarities, Ecology has proposed a significantly different kind of PCB effluent limitation for Liberty Lake.

Like Kaiser's current permit and agreed order, Liberty Lake's draft permit demonstrates that there is another way to continue to achieve water quality improvements, without imposing infeasible numeric limits. Rather than an infeasible numeric PCB limit, Liberty Lake's draft permit requires BMPs to control its discharge of PCBs. Wash. Dep't of Ecology, *Draft NPDES Permit No. WA0045144 Liberty Lake Sewer & Water District*, at 39-40 (Jan. 25, 2022); 40 C.F.R. § 122.44(k).

Requiring BMPs to control PCBs in discharge to a 303(d)-listed receiving water is consistent with case law from the Washington State Pollution Control Hearings Board. *See Sierra Club v. Wash. Dep't of Ecology*, PCHB No. 11-184, at 22 (July 19, 2013 Findings of Fact, Conclusions of Law, and Order). Narrative limits that require measurable progress, include deadlines for achieving milestones toward compliance with the water quality standard, and require affirmative steps to implement reductions in permitted pollutant discharges are sufficient and reasonable when numeric limits are infeasible. *Id.* Ecology followed this model in Liberty Lake's draft permit by requiring a BMP plan that identifies PCB-reducing actions, includes a method for assessing the actions' efficacy, and quantifies the resulting reductions. Wash. Dep't of Ecology, *Draft NPDES Permit No. WA0045144 Liberty Lake Sewer & Water District*, at 39-40 (Jan. 25,



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2022). These are the steps Kaiser is already taking pursuant to our current permit and agreed order.

The approach proposed for Liberty Lake should also be the basis for Kaiser's final permit. Indeed, Kaiser's draft permit already includes the elements of a BMP plan and requires Kaiser to implement a PCB PMP to identify and quantify PCB-control actions. Wash. Dep't of Ecology, *Draft NPDES Permit No. WA0000892 Kaiser Aluminum Washington, LLC*, at 28-31 (Dec. 29, 2021). Kaiser's PCB PMP satisfies the requirements for a narrative limit to reduce PCB loadings, quantify progress, and protect the Spokane River. Consistent with Liberty Lake's draft permit, Ecology should remove the numeric limit for PCBs in the draft permit and require the Trentwood facility to continue to implement effective and measurable PCB-reduction actions.

B. The City of Spokane's draft permit demonstrates that an infeasible numeric limit will not protect water quality.

The City's draft permit includes a numeric limit of 1.8 ng/L PCBs (equivalent to 1800 pg/L), a limit more than ten times the numeric limit for PCBs in Kaiser's draft permit. The apparent basis for this difference appears to be that the City's discharge outfall is at River Mile 67.4, approximately 19 river miles downstream of Kaiser's outfall and into a portion of WRIA 54 that is not listed as impaired for PCBs in fish tissue. There are two reasons that difference does not support a more stringent proposed numeric limit in Kaiser's draft permit that will not protect water quality.

First, certain segments of the Spokane River, including parts of WRIA 57 (where Kaiser's permitted outfall discharges) and WRIA 54 (Lower Spokane River), are listed as impaired for PCBs based on studies measuring the tissue exposure concentration in fish. Three studies measured fish caught between 1993 and 2005 at Plante's Ferry and River Mile 85. There is, of course, no physical barrier to prevent fish movement from the study areas in the listed portions of WRIA 57 and WRIA 54 to the unlisted segment of the river where the City's permitted outfall discharges. This distinction, with no basis in actual water quality, results in a more than ten-fold difference between the PCB numeric effluent limit in Kaiser's draft permit and the numeric effluent limit in the City's draft permit.

Second, a portion of WRIA 54 almost immediately downstream of the City's permitted discharge is listed as impaired for PCB in fish tissue. Of course, just like there are no barriers to prevent fish movement between WRIA 57 and WRIA 54, there are also no physical barriers to prevent fish movement between the unlisted portion of WRIA 54 (where the City discharges) and adjacent portions that are listed as impaired. Ecology's inclusion of a ten-times-greater numeric limit in the City's draft permit demonstrates the agency's recognition that a more stringent limit is not necessary to protect fish or water quality.

Furthermore, Kaiser's and the City's respective permitted discharge volumes underscore that the numeric limit proposed in Kaiser's draft permit is not necessary to protect water quality. Kaiser's

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reported discharge in 2021 averaged approximately 5.82 million gallons of water per day. The City's maximum monthly design flow is 68.1 million gallons of water per day. See City Draft Permit at Table 14. With a permitted discharge volume almost 12 times greater than Kaiser's and an effluent limit for PCBs more than 10 times greater than the limit in Kaiser's draft permit, the City's draft permit would allow it to discharge a mass of PCBs up to approximately 120 times more than Kaiser on a daily basis. The limits in the City's draft permit demonstrate that water quality-based numeric effluent limits are not necessary to protect water quality in the Spoke River.

Again, Kaiser continues to reduce its water usage and discharge, implement BMPs, operate an effective and efficient wastewater treatment plant, test and explore more innovative technology, and investigate potential sources of legacy PCBs. A final permit that requires a narrative, measurable, and effective plan to control and remove PCBs will reinforce Kaiser's ongoing work with Ecology to evaluate PCB treatment and destruction technologies. Kaiser will continue to implement the most effective, economically and technically feasible technology for its permitted discharge, as required by its agreed order, current permit, and pending variance application materials. Ecology should remove from the draft permit the proposed numeric limit for PCBs that will not result in water quality improvements.

D. The draft permit contains inconsistent monitoring requirements and limits.

The draft permit contains inconsistencies regarding required PCB monitoring relative to the discharge limits. In particular, Table 2 (Condition S1.A.1) sets an average monthly effluent limit from Outfall 001 of 170 pg/L and a maximum daily limit of 233 pg/L, using Method 608 to measure compliance. The draft permit's monitoring schedule for Outfall 001, however, is inconsistent with effluent limits stated as monthly average and daily maximum values. The monitoring schedule in Table 9 (Condition S2) calls for a minimum sampling frequency of twice per year (every six months). If Kaiser follows the twice-per-year PCB monitoring schedule for Outfall 001, it will not have sufficient data to report a monthly average.

Similarly, Condition S9 triggers a loading investigation when the monthly average Total PCB inlet loading to the walnut shell filtration system exceeds 0.78 grams/day.² Table 12 (Condition S2) requires one sample monthly of the walnut shell filtration system influent. A daily limit for a monthly average is unclear and unreasonable—an investigation would be triggered if the one monthly sample exceeds 0.78 grams/day, with no averaging. Regardless of the inconsistency between the loading investigation trigger and the monitoring schedule, sampling the influent to the walnut shell filtration system for PCBs is redundant and unnecessary with the addition of an end-of-pipe monitoring requirement and effluent limit. If Kaiser's final permit includes a

² Condition S9.B erroneously refers to the "BWSF," or the black walnut shell filtration system. Kaiser operates the walnut shell filtration system using English walnut shells. To eliminate confusion, the final permit should remove any reference to "BWSF" or black walnut shells.



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numeric effluent as currently proposed in the draft permit, then Ecology should remove any influent monitoring requirement.

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Again, we recognize that any level of PCB discharge is a public concern, and we are committed to doing our part to remove PCBs from our permitted discharge. We believe we have an important role to play in the protection of the Spokane River, and our successful operation in the region is necessary to continue to cooperatively develop solutions to the legacy PCB contamination. Kaiser is committed to implementing BMPs, complying with current permit requirements, meeting its agreed order obligations, and developing and implementing innovative technologies to address legacy sources of PCBs and looks forward to continuing to cooperate with Ecology to improve water quality in the Spokane River.

I am happy to discuss these comments or any questions at your convenience.

Sincerely,

Edgar C. Scott
Vice President of Environmental and Governmental Affairs