

## **Appendix F1 - Ecology Responses to Comments for Kaiser Aluminum Washington, LLC Draft Permit WA0000892 and Fact Sheet**

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The legal notice that informed the public that a draft permit and fact sheet were available for review was published in the Spokesman Review on December 29, 2021. Ecology hosted two identical online workshops, each immediately followed by a public hearing, on February 1 and 3, 2022. Ecology received comments on the draft documents during the 60-day public comment period and from public hearing testimony. Below are a summary of the comments, the comments, and Ecology's responses. A copy of all comment documents are available upon request.

After release of the draft permit and fact sheet, Ecology became aware of a correction to the fact sheet language regarding natural conditions. Ecology has made changes to this language based on EPA's recent disapproval of 'natural conditions' language in the State's Water Quality Standards in Section III.D, Designated uses and surface water quality criteria and Section III.G, Evaluation of surface water quality-based effluent limits for numeric criteria, Temperature discussion. Ecology also corrected inconsistencies in Appendix D, Reasonable Potential Spreadsheet and Table 7, Wastewater Characterization in the Fact Sheet for aluminum concentrations; and an error in Table 16, Existing Case-by-Case Technology-based Limits for Outfall 006 also in the Fact Sheet. Ecology changed the daily maximum limit for cyanide in Table 16 from 1.4 (incorrect value) to 1.27 (correct value and consistent with that contained in the proposed and final permit).

Additionally, Ecology made errors in trading ratio calculations for the carboneaous biochemical oxygen demand (CBOD<sub>5</sub>) bubble limit with Inland Empire Paper Company. These ratios have been corrected in the final fact sheet consistent with the memorandums contained in Appendix E - Bubble (Aggregate) Limit Calculations.

The comments received were reviewed and evaluated by Washington State Department of Ecology. Comments were categorized into 13 areas for response, though many comments touched on aspects of more than one comment category. The comment categories include:

- 1. Aluminum**
- 2. Reopener Clause**
- 3. Variances**
- 4. Mixing Zones**
- 5. SRRTF**
- 6. PFAS Monitoring**
- 7. PCBs**
- 8. E. Coli**
- 9. Temperature**
- 10. Bubble Limit**
- 11. Reduce Pollution**

- 12. Mercury**
- 13. Methylmercury**
- 14. Unclassified**

A total of 16 persons provided comments regarding the draft documents. In the comment table below, each commenter is referenced by an assigned commenter number.

Affiliation	Commenter Name	Topics where comments were assigned	Associated Comment numbers
<b>Individual</b>			
	Anonymous	Reopener Clause	I-10-3
		Mixing Zones	I-10-4
		PFAS Monitoring	I-10-2
		PCBs	I-10-1
	Jennifer Compau	Reduce Pollution	I-1-1
	James Cronin	Reopener Clause	I-8-3
		Mixing Zones	I-8-5
		SRRTTF	I-8-4
		PFAS Monitoring	I-8-2
		PCBs	I-8-1
	Erin Dascher	Reopener Clause	I-9-3
		Mixing Zones	I-9-5
		SRRTTF	I-9-4
		PFAS Monitoring	I-9-2
		PCBs	I-9-1
	Patty Gates	Reopener Clause	I-7-3
		Mixing Zones	I-7-5
		SRRTTF	I-7-4
		PFAS Monitoring	I-7-2
		PCBs	I-7-1
	Mark Kreilkamp	Reopener Clause	I-6-3
		Mixing Zones	I-6-5
		SRRTTF	I-6-4
		PFAS Monitoring	I-6-2
		PCBs	I-6-1
	Paul Kropp	Reopener Clause	I-3-4
		Mixing Zones	I-3-2
		SRRTTF	I-3-5
		PFAS Monitoring	I-3-3
		PCBs	I-3-1
	Walther Soeldner	Reopener Clause	I-2-4
		Mixing Zones	I-2-1
		SRRTTF	I-2-5
		PFAS Monitoring	I-2-3
		PCBs	I-2-2
	Debbie Stempf	Reopener Clause	I-5-3
		Mixing Zones	I-5-5
		SRRTTF	I-5-4
		PFAS Monitoring	I-5-2
		PCBs	I-5-1
	James Tuck	Reopener Clause	I-4-3
		Mixing Zones	I-4-5
		SRRTTF	I-4-4
		PFAS Monitoring	I-4-2

Affiliation	Commenter Name	Topics where comments were assigned	Associated Comment numbers
		PCBs	I-4-1
Agency			
Environmental Protection Agency (EPA)	Susan Poulosom	Aluminum	A-1-5
		PCBs	A-1-1 , A-1-4 , A-1-6 , A-1-7 , A-1-8 , A-1-9
		Mercury	A-1-2
		Methylmercury	A-1-3
Business			
Kaiser Aluminum Washington, LLC	Edgar Scott	PCBs	B-1-1 , B-1-2 , B-1-3 , B-1-4 , B-1-5 , B-1-6 , B-1-7 , B-1-8 , B-1-9 , B-1-10
Kaiser Aluminum Washington, LLC	Edgar Scott Brent Downey	Unclassified	B-1-11 B-1-12
Organization			
Spokane Riverkeeper	Jerry White, Jr.	Reopener Clause	O-1-1 , O-1-9 , O-1-13
		Variances	O-1-7
		Mixing Zones	O-1-6
		SRRTTF	O-1-8
		PFAS Monitoring	O-1-10
		PCBs	O-1-2 , O-1-3 , O-1-5
		E. Coli	O-1-4
		Temperature	O-1-11
		Bubble Limit	O-1-12
Tribal Gov./Agency			
Lower Elwha Klallam Tribe, Port Gamble S'Klallam Tribe, Suquamish Tribe (collectively, “the Tribes”)	Jane Steadman	Reopener Clause	T-1-1 , T-1-2 , T-1-3 , T-1-4 , T-1-5 , T-1-6
Spokane Tribe of Indians	Chad McCrea	Reopener Clause	T-2-4
		PCBs	T-2-1 , T-2-2 , T-2-3

Comments and Responses are grouped together and organized by topic. Under each topic heading you can see all the comments Washington State Department of Ecology received for that topic followed by Washington State Department of Ecology's single response to all the comments on that topic when applicable.

## 1. Comments on Aluminum

### Commenter: EPA - Comment A-1-5

As Brian Nickel of my staff discussed with you on February 2, 2022, EPA published updated Clean Water Act Section 304(a) recommended criteria for aluminum in 2018. These updated criteria superseded the recommended criteria from 1988, which are used in the reasonable potential analysis for aluminum on Page 72 of the fact sheet. Ecology should repeat the reasonable potential analysis for aluminum using the updated recommended aluminum criteria.

### Response to Aluminum

Ecology has repeated the analysis with the updated recommended aluminum criteria values which resulted in no reasonable potential. Ecology used upstream receiving water data from Ecology's EIM data system to calculate 10<sup>th</sup> percentile values for pH (7.1 su, 274 samples), dissolved organic carbon (1.0 mg/L, 74 samples), and hardness (18.6 mg/L as CaCO<sub>3</sub>, 118 samples) during the low flow months from July through October. Using EPA's aluminum criteria spreadsheet (<https://www.epa.gov/sites/default/files/2018-12/aluminum-criteria-calculator-v20.xlsm>), Ecology calculated a CMC (acute criterion) of 630 ug/L and a CCC (chronic criterion) of 320 ug/L.

The reasonable potential spreadsheet in the final fact sheet has been updated to include the criteria and calculations.

## 2. Comments on Reopener Clause

**Summarized Commenters:** Walther Soeldner; Paul Kropp; James Tuck; Debbie Stempf; Mark Kreilkamp ; Patty Gates; James Cronin; Spokane Riverkeeper; Erin Dascher; Anonymous; Lower Elwha Klallam Tribe, Port Gamble S'Klallam Tribe, Suquamish Tribe (collectively "the Tribes"); Spokane Tribe of Indians

### Commenter: Anonymous - Comment I-10-3

When regulations change or testing methods improve, the permit should automatically reopen and be rewritten to include these changes. This could be the WQS for PCBs changing or the TMDL finishing (including implementing a stakeholder advisory committee different from the SRRTTF).

### Commenter: James Cronin - Comment I-8-3

Both permits (City of Spokane and Kaiser Aluminum) should be automatically opened and re-written if the WQS for PCBs is changed and/or the TMDL is finished in 2024.

### Commenter: Erin Dascher - Comment I-9-3

Both permits (City of Spokane and Kaiser Aluminum) should be automatically opened and re-written if the WQS for PCBs is changed and/or the TMDL is finished in 2024.

**Commenter: Patty Gates - Comment I-7-3**

Both permits (City of Spokane and Kaiser Aluminum) should be automatically opened and re-written if the WQS for PCBs is changed and/or the TMDL is finished in 2024.

**Commenter: Mark Kreilkamp - Comment I-6-3**

Both permits (City of Spokane and Kaiser Aluminum) should be automatically opened and re-written if the WQS for PCBs is changed and/or the TMDL is finished in 2024.

**Commenter: Paul Kropp - Comment I-3-4**

Both permits (City of Spokane and Kaiser Aluminum) should state they will be automatically re-opened and re-written if the water quality standards for PCBs is changed and/or when the TMDL is finished by US EPA.

**Commenter: Walther Soeldner - Comment I-2-4**

Since there is now an EPA study for writing a TMDL for PCBs in the Spokane River, and since it is possible that the water quality Standard may also be changed, these permits should be automatically opened and re-written if the WQS is changed and/or when the TMDL is finished and put in place.

**Commenter: Debbie Stempf - Comment I-5-3**

Both permits (City of Spokane and Kaiser Aluminum) should be automatically re-written if the water quality standards for PCB's and/or the TMDL is finished by 2024.

**Commenter: James Tuck - Comment I-4-3**

Both permits (City of Spokane and Kaiser Aluminum) should be automatically re-written if the water quality standards for PCB's and/or the TMDL is finished by 2024.

**Commenter: The Tribes - Comment T-1-1**

These comments are submitted on behalf of the Lower Elwha Klallam Tribe, the Port Gamble S'Klallam Tribe, and the Suquamish Tribe (collectively, "the Tribes") in response to the Kaiser Aluminum Washington Public Notice of Draft Permit (NPDES Permit WA0000892) and the City of Spokane-Riverside Park Water Reclamation Facility (RPWRF) and Pretreatment Program Washington Public Notice of Draft Permit (NPDES Permit WA0024473). While the Tribes do not comment on the entire permits and defer to the views of tribes that may be directly affected by permits discharging into the Spokane River, the Tribes write today to express their concern regarding the reopener provisions in both draft permits, which do not contain clear language requiring that the permit, including its effluent limits, be updated as water quality standards are strengthened in Washington. In turn, the lack of automatic reopener language does not assure adequate protection over the life of the permit for tribal fishers and others who rely heavily on locally caught fish.

The Tribes request that the Washington State Department of Ecology ("Ecology") revisit and strengthen the language of the reopener provisions in these permits, as well as any new NPDES permits or permit renewals that Ecology may issue.

**Commenter: The Tribes - Comment T-1-2**

Given how soon more protective HHC are likely to be finalized for Washington and given the importance of the HHC to ensuring the protection of Treaty fishing rights and tribal member health, any permits that rely on the HHC currently in place should have mandatory reopeners to account for the more stringent federal HHC that will come into effect within less than a year. Vexingly, despite the fact that both the Kaiser Aluminum and City of Spokane-RPWRF permits have effluent limits for PCBs (a highly toxic pollutant that can cause severe developmental and neurological impacts to fetuses, babies, children, and adults), the permits' fact sheets and reopener provisions are equivocal regarding whether the new PCB effluent limits will be updated prior to the expiration of the permits.

**Commenter: The Tribes - Comment T-1-3**

With regard to permit modifications, the fact sheet for both permits states: "Ecology may also modify this permit to comply with new or amended state or federal regulations." Kaiser Permit Fact Sheet at 57 (emphasis added); City of Spokane-RPWRF Permit Fact Sheet at 68 (emphasis added). In the section of the fact sheets describing EPA's imminent promulgation of more stringent federal human health criteria for Washington, Ecology states only:

General condition G3 of the permit allows Ecology to modify, revoke, reissue or terminate a permit under certain conditions. One of the conditions includes the promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision. When EPA finalizes its new rule, Ecology will evaluate the impact to the permit resulting from any changes to the criteria. Ecology will then take appropriate actions, which could include modifying the current permit or including new requirements in the next permit issuance.

Kaiser Permit Fact Sheet at 24-25 (emphasis added); City of Spokane-RPWRF Permit Fact Sheet at 28-29 (emphasis added).

And the permit language itself is no better. General Condition G3 of both permits states only that the permit "may be modified, revoked and reissued, or terminated" for "the reasons specified in 40 CFR 122.62, 40 CFR 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5." Kaiser Permit at 43-44 (emphasis added); City of Spokane-RPWRF Permit at 57-58 (emphasis added). Listed causes for termination include a "determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination." Kaiser Permit at 43; City of Spokane-RPWRF Permit at 58. Listed causes for modification but not revocation and reissuance include "promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision."

Kaiser Permit at 44; City of Spokane-RPWRF Permit at 58. This is far from the mandatory reopener language that circumstances on the ground demand.

**Commenter: The Tribes - Comment T-1-4**

The Tribes recognize that Ecology has referenced 40 C.F.R. § 122.62 ("Modification or revocation and reissuance of permits (applicable to State programs, see § 123.25)") in the permit. However, the Tribes urge Ecology to be more explicit regarding the requirements of that Page 3 of 4 provision and the provisions referenced therein. PCBs are on the list of toxic pollutants designated pursuant to section 307(a)(1) of the Clean Water Act at 40 C.F.R. § 401.15. New human health criteria, including for PCBs, are anticipated to be promulgated by EPA in the very near future. Therefore, the agency should specifically reference the provisions of the federal regulations that require mandatory reopener and modification in order to conform a permit's toxic effluent limits to new, more stringent water quality standards for toxics. Specifically, the permit should reference the following three provisions: 40 C.F.R. § 122.62(a)(6) ("The following are causes for modification . . . 307(a) toxics. When required to incorporate an applicable 307(a) toxic effluent standard or prohibition (see § 122.44(b))"); 40 C.F.R. § 122.62(a)(7) ("The following are causes for modification . . . Reopener. When required by the "reopener" conditions in a permit, which are established in the permit under § 122.44(b) (for CWA toxic effluent limitations and Standards for sewage sludge use or disposal...)"); and 40 C.F.R. § 122.44(b)(1) ("[I]f any applicable toxic effluent standard or prohibition . . . is promulgated under section 307(a) of CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the Director shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition" (emphasis added)). The reopener and modification provisions for the draft Kaiser Aluminum and City of Spokane RPWRF permits should more expressly reflect the mandatory requirements of the federal Clean Water Act and its regulations, and should eliminate any question as to Ecology's commitment to ensuring over the lifetime of the permit the protection of those who are vulnerable to the ingestion of toxics through their reliance on sustenance fishing.

**Commenter: The Tribes - Comment T-1-5**

Without Ecology's express commitment to reopening and modifying these permits following federal promulgation of new, more stringent human health criteria, which commitment would be evidenced by more prescriptive, mandatory reopener provisions, Washingtonians who come into contact with or rely on the Spokane River for food could be forced to endure four or more years of elevated PCB pollution levels that would not be permitted if Ecology were to wait to renew these permits until the HHC were final in January 2023. Even worse, given that Ecology frequently extends permits beyond their original five-year expiration dates, these individuals may be subjected to many more years of exposure to toxics.



The Tribes understand that the permits may be an improvement over the status quo in some ways, including that there are PCB effluent limits at all, but the way to balance the benefits of re-issuing permits now against the harm that will come from less stringent PCB effluent limits is to ensure that the reissued permits will be reopened once the new HHC are finalized.

**Commenter: The Tribes - Comment T-1-6**

The Tribes strongly encourage Ecology to include mandatory reopener language in each permit to eliminate any question as to whether the permit will be reopened and modified in order to account for the more stringent human health criteria that can be reasonably anticipated within less than a year of the permit's issuance. Further, if Ecology is considering issuing or renewing any permits incorporating effluent limits for toxics within the Tribes' usual and accustomed fishing areas in the Puget Sound and Strait of Juan de Fuca area prior to EPA's reinstatement of more stringent HHC, it is critically important that we receive, and the Tribes hereby request, advance written notice of these deliberations and government-to-government consultation. Thank you for considering these comments, and the Tribes look forward to our continued cooperative efforts to protect water quality in the State of Washington.

**Commenter: Spokane Riverkeeper - Comment O-1-1**

We understand that the permits for two facilities will be receiving Waste Load Allocations for PCBs in 2024 under a Settlement Agreement and who may be accountable to a different Water Quality Standard after the EPA revisits the current Washington Standard and the Aquatic Life Standard. These permits require a clause that states that permit will be reopened and the effluent limits, attached to a Waste Load Allocation, for both facilities will be assigned at such times that 1) a TMDL is issued and/or the Human Health Criteria for PCBs inside the WQS or the Aquatic Life Criteria for toxics (and other toxics) changes over the next five years. (Similar comments are included in both permit comments below).

**Commenter: Spokane Riverkeeper - Comment O-1-9**

The permit must contain a reopener clause that initiates the reopening of the NPDES permit to:

- Conform to the federal or State promulgation of a new Human Health Criteria and Water Quality Standard for any number of parameters to include PCBs.
- To the development of a new Total Maximum Daily Load for PCBs and its attendant new Waste Load Allocation for PCB pollution.
- The federal or State promulgation of a new Aquatic Life Criteria for toxics and other chemicals.

**Commenter: Spokane Riverkeeper - Comment O-1-13**

We appreciate this aspect of the draft NPDES Permit:

"A. Permit modifications. Ecology may modify this permit to impose numerical limits, if necessary to comply with water quality standards for surface waters, with sediment quality standards, or with water quality standards for groundwaters, after obtaining new information from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies. Ecology may also modify this permit to comply with new or amended state or federal regulations." Page 57 of the Fact Sheet.

**Commenter: Spokane Tribe of Indians - Comment T-2-4**

These permits should account for the uncertainty presented by developing permits when the very standards used to develop the permits are subject to two separate lawsuits and an EPA administrative process, along with the development of a PCB TMDL. The permits should include an automatic reopener to address any discrepancies that arise if the water quality standards change during the term of these permits and when WLAs are finalized.

**Response to Reopener Clause**

Thank you for your comments. We have added language in General Condition G3 to indicate that Ecology will reopen the permit should the Human Health Criteria for PCBs be revised. General Permit Condition G3 also allows Ecology to modify a permit when EPA completes a PCB TMDL with waste load allocations, or Aquatic Life Criteria are revised.

**3. Comments on Variances**

**Commenter: Spokane Riverkeeper - Comment O-1-7**

We strongly recommend that variances are not used to downgrade the designated uses in the Spokane River and allow for the discharge of bioaccumulative toxic such as PCBs, PFAS, or PBDEs. Discharger or water body variances for bioaccumulative toxins in a system wherein polluters continue to discharge these same pollutants is illegal and unethical. They would amount to a violation of the spirit and intentions of the CWA and frustrate the goals and outcomes envisioned by the original architects of the CWA.

Please refer to the document assembled in 2020 by Gonzaga Law School and included in this submission - this was originally a part of the SEPA (unofficial comment period) on the 5 applications for PCB variances in the Spokane River.

**Response to Variances**

Ecology has re-reviewed the 2020 material by the Gonzaga Law School. Thank you for providing this information.

#### **4. Comments on Mixing Zones**

**Summarized Commenters:** Walther Soeldner, Paul Kropp, James Tuck, Debbie Stempf, Mark Kreilkamp, Patty Gates, James Cronin, Spokane Riverkeeper, Erin Dascher, Anonymous

**Commenter: - Comment I-10-4**

Testing should be site specific, not from mixing water from different zones.

**Commenter: James Cronin - Comment I-8-5**

Please do not include mixing zones in these permits (City of Spokane and Kaiser Aluminum).

**Commenter: Erin Dascher - Comment I-9-5**

Please do not include mixing zones in these permits (City of Spokane and Kaiser Aluminum).

**Commenter: Patty Gates - Comment I-7-5**

Please do not include mixing zones in these permits (City of Spokane and Kaiser Aluminum)

**Commenter: Mark Kreilkamp - Comment I-6-5**

Please do not include mixing zones in these permits (City of Spokane and Kaiser Aluminum).

**Commenter: Paul Kropp - Comment I-3-2**

Do not include mixing zones in these permits.

**Commenter: Walther Soeldner - Comment I-2-1**

Testing for PCB pollution should be done at the end of the pipes coming from the dischargers rather than using "mixing zones" for testing. In fact, mixing zones should not be used for these permits.

**Commenter: Debbie Stempf - Comment I-5-5**

Do not include mixing zones in these permits (City of Spokane and Kaiser Aluminum).

**Commenter: James Tuck - Comment I-4-5**

Do not include mixing zones in these permits (City of Spokane and Kaiser Aluminum).

**Commenter: Spokane Riverkeeper - Comment O-1-6**

Mixing Zones should not be allowed for any bioaccumulative toxics such as PCBs or other topics and heavy metals that simply travel down the river and accumulate in the ecosystem and/or sediments.

### **Response to Mixing Zones**

Ecology reviewed the information that commenters provided and agree that a mixing zone for PCBs is not appropriate in the Spokane River. The final permit does not include a mixing zone for PCBs. However for other pollutants, Ecology has authorized a mixing zone.

State and federal rules allow mixing zones because the concentrations and effects of most pollutants diminish rapidly after discharge, due to dilution. Ecology defines mixing zone sizes to limit the amount of time any exposure to the end-of-pipe discharge could harm water quality, plants, or fish.

The state's water quality standards allow Ecology to authorize mixing zones for the facility's permitted wastewater discharges only if those discharges already receive all known, available, and reasonable methods of prevention, control, and treatment (AKART). This permit authorizes a small acute mixing zone, surrounded by a chronic mixing zone around the point of discharge (WAC 173-201A-400).

The water quality standards impose additional conditions before allowing the discharger a mixing zone which are outlined in the Fact Sheet, Section III Proposed Permit Limits, subsection C, Surface Water Quality-Based Effluent Limits.

## **5. Comments on SRRTTF**

**Summarized Commenters:** Walther Soeldner, Paul Kropp, James Tuck, Debbie Stempf, Mark Kreilkamp, Patty Gates, James Cronin, Spokane Riverkeeper, Erin Dascher,

### **Commenter: James Cronin - Comment I-8-4**

Dismantle the SRRTTF and require an implementation advisory committee of stakeholders when the TMDL is finished.

### **Commenter: Erin Dascher - Comment I-9-4**

Dismantle the SRRTTF and require an implementation advisory committee of stakeholders when the TMDL is finished.

### **Commenter: Patty Gates - Comment I-7-4**

Dismantle the SRRTTF and require an implementation advisory committee of stakeholders when the TMDL is finished.

### **Commenter: Mark Kreilkamp - Comment I-6-4**

Dismantle the SRRTTF and require an implementation advisory committee of stakeholders when the TMDL is finished.

### **Commenter: Paul Kropp - Comment I-3-5**

Dismantle the Spokane River Toxics Task Force (SRRTTF) and require an implementation advisory committee of stakeholders when the EPA TMDL is finished.

**Commenter: Walther Soeldner - Comment I-2-5**

The Spokane River Regional Toxics Task Force should be dismantled. It is a waste of money, now more than ever. Once a TMDL is finished a new advisory committee might be gathered from all stakeholders, not just or primarily dischargers, for implementation of the TMDL.

**Commenter: Debbie Stempf - Comment I-5-4**

Please dismantle SRRTTF and require an implementation advisory committee of stakeholders when the TMDL is finished.

**Commenter: James Tuck - Comment I-4-4**

Please dismantle SRRTTF and require an implementation advisory committee of stakeholders when the TMDL is finished.

**Commenter: Spokane Riverkeeper - Comment O-1-8**

Omit the requirement to take part in the Spokane River Regional Toxics Task Force. The SRRTTF should be dissolved.

**Response to SRRTTF**

Thank you for your comments. The previous permits required permittees to participate in the Spokane River Regional Toxics Task Force (SRRTTF) and the permits contained a provision that the SRRTTF prepare a "Comprehensive Plan to Reduce Polychlorinated Biphenyls (PCBs) in the Spokane River."

Once EPA completes the Spokane River PCB TMDL, Ecology will be tasked with writing the TMDL Implementation Plan and will be establishing a citizen's advisory group. We believe the current situation is an opportunity for Ecology to work towards a more inclusive organization and advisory process.

Ecology has also found that SRRTTF made measurable environmental progress in finding and reducing PCB inputs to the Spokane River. Specifically, the concentrations of PCBs in the river have been reduced. The central tendency for concentrations of PCBs in the river are currently below the current 170 ppq water quality criterion. Also, significant reductions of PCBs have been achieved as a result of education and outreach, environmental cleanup, the implementation of best management practices (BMPs), improved stormwater management, and installation of membrane treatment technology.

We have modified the permits to require participation in the Spokane River Regional Toxics Task Force, or other equivalent citizen advisory organization. This will provide permittees with the ability to work collaboratively on best management practices (BMPs) while Ecology initiates the process to create a more inclusive advisory group.

## **6. Comments on PFAS Monitoring**

**Summarized Commenters:** Walther Soeldner, Paul Kropp, James Tuck, Debbie Stempf, Mark Kreilkamp, Patty Gates, James Cronin, Spokane Riverkeeper, Erin Dascher, Anonymous

### **Commenter: - Comment I-10-2**

We expect clean water and a healthy river. This means that Kaiser Aluminum should have to test for pollution they put into the water (now or in the future), particularly for PCBs using the best method available (1668c) and PFAS.

### **Commenter: James Cronin - Comment I-8-2**

Both permits (City of Spokane and Kaiser Aluminum) should require the facilities to test for PFAS.

### **Commenter: Erin Dascher - Comment I-9-2**

Both permits (City of Spokane and Kaiser Aluminum) should require the facilities to test for PFAS.

### **Commenter: Patty Gates - Comment I-7-2**

Both permits (City of Spokane and Kaiser Aluminum) should require the facilities to test for PFAS.

### **Commenter: Mark Kreilkamp - Comment I-6-2**

Both permits (City of Spokane and Kaiser Aluminum) should require the facilities to test for PFAS.

### **Commenter: Paul Kropp - Comment I-3-3**

Both permits (City of Spokane and Kaiser Aluminum) should require these facilities to test for PFAS.

### **Commenter: Walther Soeldner - Comment I-2-3**

The permits should also require the facilities to test for PFAS.

### **Commenter: Debbie Stempf - Comment I-5-2**

Both permits (City of Spokane and Kaiser Aluminum) should require the facilities to test for PFAS.

### **Commenter: James Tuck - Comment I-4-2**

Both permits (City of Spokane and Kaiser Aluminum) should require the facilities to test for PFAS.

### **Commenter: Spokane Riverkeeper - Comment O-1-10**

Please add PFAS to the bioaccumulative toxics that Kaiser is monitoring for both in influent, effluent and receiving waters.

### **Response to PFAS Monitoring**

Thank you for your comment. While PFAS is of concern in the Spokane area, the primary PFAS impacts are associated with groundwater and drinking water contamination in the area near Fairchild AFB, west of the Spokane aquifer and river. In 2016 Ecology conducted a statewide study that provides data about Spokane River water, fish and wastewater treatment plant effluent.

Compared to other waterbodies, the Spokane River has some of the lowest concentrations of PFAS in the state. The concentrations of PFAS in fish are below DOH's level of concern for high fish consumers. PFAS concentrations in effluent are in the median range compared to other wastewater treatment plants.

We currently do not have federal criteria for regulating PFAS discharges under the Clean Water Act. However, the Department of Health recently passed regulations that establish monitoring and State Action Levels for PFAS in public water systems. Should PFAS be discovered in Spokane public water systems, the public water system operators are required to report, investigate the cause of contamination, and take action.

Ecology will not be requiring PFAS (and related chemicals) monitoring in this permit. However, because PFAS in Spokane drinking water supplies would be a source to wastewater treatment plants, we will track the situation and evaluate next steps should PFAS be discovered in the Spokane public water systems or EPA issues a drinking water standard for PFAS.

## **7. Comments on PCBs (Testing Method)**

**Summarized Commenters:** Walther Soeldner, Paul Kropp, James Tuck, Debbie Stempf, Mark Kreilkamp, Patty Gates, James Cronin, Spokane Riverkeeper, Erin Dascher, Anonymous Environmental Protection Agency, Kaiser Aluminum Washington, LLC, Spokane Tribe of Indians:

### **Commenter: - Comment I-10-1**

We expect clean water and a healthy river. This means that Kaiser Aluminum should have to test for pollution they put into the water (now or in the future), particularly for PCBs using the best method available (1668c).

### **Commenter: James Cronin - Comment I-8-1**

Please write the pollution permits so that they have the City of Spokane and Kaiser Aluminum testing the pollution coming out of the end of their pipes for PCBs using the best test method called 1668c.

**Commenter: Erin Dascher - Comment I-9-1**

Please write the pollution permits so that they have the City of Spokane and Kaiser Aluminum testing the pollution coming out of the end of their pipes for PCBs using the best test method called 1668c.

**Commenter: Patty Gates - Comment I-7-1**

Please write the pollution permits so that they have the City of Spokane and Kaiser Aluminum testing the pollution coming out of the end of their pipes for PCBs using the best test method called 1668c.

**Commenter: Mark Kreilkamp - Comment I-6-1**

Please write the pollution permits so that they have the City of Spokane and Kaiser Aluminum testing the pollution coming out of the end of their pipes for PCBs using the best test method called 1668c.

**Commenter: Paul Kropp - Comment I-3-1**

Please write the pollution permits so that they have the City of Spokane and Kaiser Aluminum test the effluent at their outfalls for PCBs using the most appropriate test method called 1668c only.

**Commenter: Walther Soeldner - Comment I-2-2**

In addition, testing at the end of the City of Spokane's and Kaiser Aluminum's pipes for PCBs should use the best test method, viz., test 1668c. It will provide a much better indicator of the pollution even if it is not yet used for compliance.

**Commenter: Debbie Stempf - Comment I-5-1**

Please write the permits so that they have both the City of Spokane and Kaiser Aluminum testing the pollution coming out of the end of their pipes for PCBs using the best testing method called 1668c.

**Commenter: James Tuck - Comment I-4-1**

Please write the permits so that they have both the City of Spokane and Kaiser Aluminum testing the pollution coming out of the end of their pipes for PCBs using the best testing method called 1668c.

**Commenter: EPA - Comment A-1-7**

Draft Permit, Monitoring Requirements.

The fact sheet states on Page 51 that PCB monitoring using method EPA Method 1668 is required for the purpose of BMP effectiveness monitoring. However, the only mention of Method 1668 in the permit is in the requirements for the quality assurance project plan for underground injection control reporting (S14.A.4).



The requirements for the PCB PMP annual report (S8.B.1) state that “the data summaries must include congener, homologue, dioxin like congener, and total PCB results”, which implies that a congener method is required, however, the permit does not specify the use of Method 1668, nor does the permit specify detection or quantification limits for PCB congeners, which would require the use of a sensitive method such as Method 1668C.

**Commenter: EPA - Comment A-1-8**

Draft Permit, Monitoring Requirements.

In the Permitting Recommendations for the Spokane River Watershed submitted to Ecology on July 13, 2015, EPA recommended that Ecology require monitoring of the final effluent for Kaiser Aluminum for PCB congeners using EPA Method 1668C at least quarterly. EPA continues to recommend this effluent monitoring to evaluate the effectiveness of both source control BMPs and treatment and to quantify PCB loadings from point sources.

**Commenter: Spokane Tribe of Indians - Comment T-2-1**

Unless noted these comments are directed at both draft permits (WA0000892 & WA0024473) ----The Tribe recognizes the current loophole in the enforcement of PCB water quality standards eloquently described by Justice Gonzalez dissenting in Puget Sound Keeper v. Dep’t of Ecology, et al., 191 Wn.2d 631, 646-653 (2018). This is interpreted by Ecology requires that enforcement monitoring for PCBs only be conducted with a method that cannot detect down to the water quality standards for PCBs, method 608. PCBs are currently an unenforceable limit in Ecology’s view.

With that said, it is critically important that Ecology revise these draft permits to include appropriate monitoring for PCBs utilizing Method 1668 or an equal and similar method for purposes of the effluent on at least a quarterly basis and during Combined Sewer Overflow (CSO) events as the case may be. This is an appropriate use of Method 1668. *Nw. Pulp & Paper Ass’n v. Dep’t of Ecology*, No. 55164-1-II, 2021 Wash. App. LEXIS 2970, at \*7, 8 (Ct. App. Dec. 14, 2021).----- It is important that all discharges into the Spokane River be monitored for PCBs appropriately for three important reasons.

First, the PCB TMDL will be completed by the EPA and will include appropriate Waste Load Allocations (WLA) for PCBs. The data EPA uses to develop the WLAs should be the best quality possible to increase the PCB TMDL’s effectiveness. Requiring the entities that discharge toxic pollution into the Spokane River to monitor their effluent at all discharge points will help gather the most relevant and current data and will in turn make the PCB TMDL more accurate.

**Commenter: Spokane Tribe of Indians - Comment T-2-2**

Second, apart from the numeric limits for PCBs, Ecology has narrative limits that must be monitored which Method 1668 can assist with. The following applies to all NPDES permits.

(b) Human health protection. The following provisions apply to the human health criteria in Table 240. All waters shall maintain a level of water quality when entering downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including the waters of another state. The human health criteria in the tables were calculated using a fish consumption rate of 175 g/day. Criteria for carcinogenic substances were calculated using a cancer risk level equal to one-in-one million, or as otherwise specified in this chapter. The human health criteria calculations and variables include chronic durations of exposure up to seventy years. All human health criteria for metals are for total metal concentrations, unless otherwise noted. Dischargers have the obligation to reduce toxics in discharges through the use of AKART.

WAC 173-201A-240(b)(emphasis added). Here, the Tribe is a downstream state (with a PCB water column standard of 1.3 pg/L) and Method 1668 monitoring of effluent can help provide data on whether this standard can be attained and maintained under the permit conditions.

**Commenter: Spokane Tribe of Indians - Comment T-2-3**

Third, 40 C.F.R. Section 122.4(d) requires that: “No permit may be issued: (d) When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States”. Again, the Tribe is an “affected” State for purposes of the Clean Water Act and requiring Method 1668 for effluent monitoring will allow the Tribe and the EPA to better monitor the effectiveness of the permit conditions.

**Response to PCBs (Testing Method)**

The final permit has been updated in Section S8.A.8 to specify that the Permittee must conduct PCB testing in the final effluent using EPA method 1668C. Although this condition does not specify a minimum testing frequency, the Permittee currently tests for PCBs in the final effluent every other week. Ecology anticipates that this testing frequency will continue.

**8. Comments on PCBs (Blank Censoring Methods)**

**Commenter: EPA - Comment A-1-1**

Fact Sheet, Ambient Background Data and Wastewater Characterization. Tables 5 and 6 list background and effluent data, respectively, for polychlorinated biphenyls (PCBs). However, the tables do not specify the type of blank censoring used for these PCB data. Please include this information.

**Response to PCBs (Blank Censoring Methods)**

Ecology has modified the final fact sheet to include this information. PCB results for the effluent had not been blank censored while the receiving water data used a 3x blank censoring value.

## **9. Comments on PCBs (EPA Method 1628)**

### **Commenter: EPA - Comment A-1-4**

The discussion of total PCB analytical methods beginning on Page 50 of the fact sheet should include EPA Method 1628. This is a PCB congener method which was published in July 2021, and which has undergone multi-laboratory validation, although it has not yet been approved under 40 CFR Part 136 for use in NPDES permit compliance monitoring.

### **Response to PCBs (EPA Method 1628)**

Ecology has modified the final fact sheet to include a discussion of EPA method 1628.

## **10. Comments on PCBs (Receiving Water Concentrations)**

### **Commenter: EPA - Comment A-1-6**

As Brian Nickel of my staff discussed with you on February 2, 2022, the receiving water concentrations of PCBs in the table on Page 75 of the fact sheet were labeled as having units of  $\mu\text{g/L}$ , but the listed values are expressed in units of  $\text{pg/L}$ . Assuming the receiving water PCB concentrations are accurate except for the mismatched units, these concentrations should be a 90th percentile of  $0.000059 \mu\text{g/L}$  and a geometric mean of  $0.000041 \mu\text{g/L}$ . Although this error is inconsequential because no mixing zone was authorized for PCBs, it should nonetheless be corrected.

### **Response to PCBs (Receiving Water Concentrations)**

In the final fact sheet, Ecology has corrected the units for PCBs in the reasonable potential spreadsheet.

## **11. Comments on PCBs (Sufficiently Sensitive Test Method)**

### **Commenter: EPA - Comment A-1-9**

EPA also recommends that the permit specify that a "sufficiently sensitive" method be used for determining compliance with the permit's effluent limits for total PCBs, instead of specifying the use of EPA Method 608.3. Currently, Method 608.3 is the most sensitive EPA-approved analytical method for PCBs and is therefore currently "sufficiently sensitive" as per 40 CFR 122.44(i)(1)(iv). However, a more sensitive method such as EPA Method 1628 may be approved for compliance purposes during the term of the permit. Requiring the use of a sufficiently sensitive method would require the permittee to switch to a more sensitive method if one is approved during the permit term, rather than continuing to use Method 608.3 until the permit is modified or reissued.

### **Response to PCBs (Sufficiently Sensitive Test Method)**

The final permit does not include a generic requirement to use the most sensitive test method for PCBs approved under 40 CFR Part 136. If during the permit term, EPA revises 40 CFR Part 136 to include a more sensitive test method for PCBs, Ecology would consider modifying the permit to include the newly approved test method. This permit modification would follow normal public notice and comment procedures.

## **12. Comments on PCBs (Numeric PCB Effluent Limit)**

### **Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-1**

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.

### **Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-2**

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/wg/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. 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.

**Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-3**

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.

**Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-4**

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 NP DES 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 NP DES 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.

**Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-5**

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 NP DES Permit No. WA0045144 Liberty Lake Sewer & Water District, at 39-40 (Jan. 25, 2022); 40 C.F.R. § 122.44(k).

**Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-6**

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

**Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-7**

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 NP DES 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.

**Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-8**

The City's (City of Spokane'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 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.

#### **Response to PCBs (Numeric PCB Effluent Limit)**

The Clean Water Act (section 303(b)(1)(c)) and Federal regulations at CFR Part 122.44(d), NPDES permits must contain limits to control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which Ecology determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.

Based on Ecology's current (2018) 303(d) list, the discharge occurs in a section of the Spokane River where water quality fails to meet water quality criteria for PCBs in fish tissue. For pollutants with human health criteria such as PCBs, Ecology assumes the effluent is contributing to an impairment where the pollutant is present in the effluent. The final permit will include an end of pipe limit based on the human health criterion of 170 pg/L.

Ecology has the ability to reopen the permit to include revised requirements based on revisions to the Human Health Criteria for PCBs, completion of a PCB TMDL that includes waste load allocations for this discharges, and any revised water quality criteria.

Additionally, Ecology plans to include numeric limits for PCBs for other dischargers to the Spokane River set at the current water quality criterion of 170 pg/L.

### **13. Comments on PCBs (PCB Monthly Average Reporting)**

#### **Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-9**

The draft permit contains inconsistencies regarding required PCB monitoring relative to the discharge limits. In particular, Table 2 (Condition S I .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.

#### **Response to PCBs (PCB Monthly Average Reporting)**

When sampling for compliance occurs at a frequency of once per month, or less, an individual result is compared to the monthly average limitation, not the daily maximum. When sampling for compliance occurs at a frequency less than once per month, a Permittee has the option of collecting samples more frequently than once per month for a specific month. This allows a comparison of the results to both the monthly average and daily maximum limitations.

#### **14. Comments on PCBs (PCB Monitoring at Walnut Shell Filtration System)**

##### **Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-10**

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

#### **Response to PCBs (PCB Monitoring at Walnut Shell Filtration System)**

The final permit increases the monitoring frequency for the influent to the walnut shell filtration system to that of the previous permit (1/every other week). This sampling allows for a more representative monthly average value for comparison to the monthly average PCB design limit.

In the final permit, Ecology has not removed the sampling or the design influent loading for PCBs to the walnut shell filtration system. Ecology approved design criteria for inlet PCB loadings to the Walnut Shell Filtration System as referenced in the fact sheet (CDM, 2002). Under WAC 173-220-150 (1)(g), flows and waste loadings must not exceed approved design criteria. Additionally, this requirement plays an important role in identifying and addressing higher than normal PCB loadings to the walnut shell filtration system.



## **15. Comments on PCBs (PCB Reasonable Potential)**

### **Commenter: Spokane Riverkeeper - Comment O-1-2**

(For above-mentioned reasons) We support WDOE placing numeric effluent limits (170 pg/L) for PCBs at the end of 001 outfall (to the Spokane River) at the Kaiser facility. On page 44 of the Fact Sheet for the draft Kaiser permit there is the statement, "Ecology has determined that the discharge has a reasonable potential to contribute to excursions above the water quality standards for PCBs. This determination is 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." According to the Fact Sheet on page 14, the Kaiser Aluminum Plant discharges (approximately) over 4000 picograms/L per day on average to the Spokane River from its outfall pipe (001) and issues a maximum daily discharge of (approximately) over 14,000 picograms/L. As noted above, and in these comments for the record, this discharge of PCBs has a reasonable potential to cause a violation of water quality criteria for Total PCBs. In fact, we believe it will cause a violation of the Water Quality Criteria as well as the Human Health Criteria.

### **Response to PCBs (PCB Reasonable Potential)**

Comment noted.

## **16. Comments on PCBs (AKART for PCBs)**

### **Commenter: Spokane Riverkeeper - Comment O-1-3**

Since PCBs are toxic pollutants under the Clean Water Act. See 40 C.F.R. § 401.15. The regulations set out at 40 C.F.R. § 125.3 describe the technology standard that applies to private industrial dischargers of PCBs like Kaiser Aluminum and Inland Empire. As discussed above, that technology standard is "Best Available Technology" or "BAT" 40 C.F.R. § 125.3(a)(2)(iii). Yet, neither Kaiser does not appear to be complying with the BAT requirement. The Walnut shell and Castor oil filtration system is over 20 years old and is now updated. WDOE must include enforceable permit limits that are commensurate with AKART. This permit should require that Kaiser initiate construction of AKART to upgrade to up to date removal that will provide the most effective protection of the standards that are in place. Further, there should be concrete actions and a schedule for arriving at AKART. Perhaps this is the removal of waste or perhaps this is a method to destroy PCBs.

### **Response to PCBs (AKART for PCBs)**

The proposed and final permit included an enforceable compliance schedule (Permit Condition S10) requiring the Permittee to evaluate additional technologies to reduce PCBs discharged in its effluent, and upgrade its treatment system based on the results of the evaluation. Additionally, Permit Condition S8 (PCB Pollutant Minimization Plan) requires a series of actions that the Permittee plans to take to reduce its effluent flow. This reduction of flow, in combination with improved treatment technology, will reduce in further reductions in PCBs discharged from the facility.

Regarding enforceable permit limits commensurate with AKART, NPDES permits require the more stringent of technology-based or water quality-based effluent limits. In this case, the permit includes a more stringent water quality-based effluent limit for PCBs set at the surface water quality criteria.

#### **17. Comments on PCBs (PCBs and EPA Method 1668)**

##### **Commenter: Spokane Riverkeeper - Comment O-1-5**

Please require Kaiser Aluminum to assist in the effort to petition EPA to use method 1668c to monitor PCBs in the outfall 001 for compliance under the CWA. Require Kaiser to monitor PCBs at several points in the receiving waters, the Spokane River, to include the outfall mixing zone, and several low-velocity points in the Spokane River well below the outfall (Upriver Dam pool). PCBs are hydrophobic and will travel great distances in a waterbody before accumulating in organic bodies or in sediments or depositional environments that have higher levels of carbon. Therefore, a test simply at the end of the outfall or the end of the discharge river pool, is not capturing the actual impact on our River or the uses.

##### **Response to PCBs (PCBs and EPA Method 1668)**

Ecology does not have regulatory authority to require Kaiser Aluminum to assist in the effort to petition EPA to use method 1668C to monitor PCBs in the outfall 001 for compliance under the CWA.

Ecology, the permittees, and the Spokane River Regional Toxics Task Force have conducted numerous quality assured studies to characterize the river system and continue to engage in collecting river data using Method 1668C. This information is available to the public through Ecology's PARIS database, the Environmental Information Management Database, and the Task Force database.

#### **18. Comments on E. Coli**

##### **Commenter: Spokane Riverkeeper - Comment O-1-4**

E Coli water quality standards: This permit should require Kaiser to attain the primary contact WQS in this permit cycle.

##### **Response to E. Coli**

The proposed and final permit required the Permittee to sample for both fecal coliform and E.coli bacteria in the effluent from sanitary wastewater treatment plant. This dual testing will allow the site specific correlation between E.coli and fecal coliform bacteria. With this information, Ecology will evaluate the limits necessary to meet the primary contact E.coli standard. This will occur in the next permit cycle.

## **19. Comments on Temperature**

### **Commenter: Spokane Riverkeeper - Comment O-1-11**

In the Fact Sheet on Page 31, it states that “Ecology does not have sufficient information on the temperature of the receiving water near the outfall to determine compliance with water quality criteria for temperature.” We ask that the permit require Kaiser to monitor receiving waters temperatures and comply with water quality-based effluent limits for temperature.

### **Response to Temperature**

Determining the reasonable potential for exceeding surface water quality standards for temperature relies on long term, site specific information. As an example, calculating a 90th percentile background receiving water temperature (highest 1-day maximum temperature, or 1DMax, equal to the highest water temperature reached on any given day throughout the summer season) would ideally use at least 10 years’ worth of data.

Under permit condition S13, the Permittee is required to monitor continuous, upstream temperatures of the receiving water. Ecology will use this information to evaluate the reasonable potential for temperature in subsequent permit renewals.

## **20. Comments on Bubble Limit**

### **Commenter: Spokane Riverkeeper - Comment O-1-12**

We feel that it is inappropriate to initiate a discussion around a water quality trade that involves two NPDES Permits wherein only one is open for comment and for review while the other has not been made available for review. We do not understand the pollution loading from Inland Empire Paper (Kaiser’s trading partner). It would be appropriate to have both permits open for discussion in draft form simultaneously to seriously evaluate the merits of this proposal.

Additionally, we have reservations about this draft Water Quality Trading scheme in that we are not clear as to who is liable should a permit exceedance occur. Beyond pollution exceedances, other liabilities or other questions of responsibility are also left open.

We recommend against the “bubble permit” feature inside the Kaiser Draft permit.

### **Response to Bubble Limit**

As explained in the Response to Comment introduction, the proposed permit contained errors in the specified trading ratios, and these errors have been corrected in the final permit. Ecology changed the trading ratios consistent with those specified in the technical memorandums in Appendix E - Bubble (Aggregate) Limit Calculations.

Ecology made these technical memorandums outlining the modeling approach and results for the bubble limit calculations available for review as an attachment to the fact sheet.

Ecology evaluated the results for consistency with the Spokane River and Lake Spokane Dissolved Oxygen TMDL (DO TMDL) similar to other delta elimination tools, such as extended compliance seasons and static pollutant equivalency. As explained in the fact sheet, this evaluation used Ecology and EPA guidelines developed to determine whether changes to permit limits complies with the WLAs and other requirements in the DO TMDL. These guidelines contained two parts:

- Any revised effluent limits, considered cumulatively with the load allocations in Table 6 of the TMDL, and Avista's DO responsibility in Table 7 of the TMDL, must meet the State's DO criteria in WAC 173-201A-200(1)(d).
- Any revised effluent limits must not further decrease the cumulative average DO levels of the shaded cells in Table 7 of the TMDL.

The bubble limits specified for both the Permittee and Inland Empire Paper Company met these guidelines and Ecology will move forward with the bubble limit approach in the final permit.

Compliance for each Permittee will be determined using a three step process as shown below:

Scenario	Compliance Determination	Bubble Allocation Available?
Each Permittee meets their individual limits	Each Permittee is in compliance	Yes, but not used
Both Permittees exceed their individual limit	Both Permittees are out-of-compliance	No, total allocation is exceeded
Permittee A meets their individual limit and Permittee B exceeds their individual limit	Permittee A is in compliance; Permittee B is in compliance if their discharge falls below an amount equal to their individual limit plus the bubble allocation; Permittee B is out-of-compliance if their discharge exceeds an amount equal to their individual limit plus the bubble allocation.	Yes, available for compliance determinations for Permittee B

## 21. Comments on Reduce Pollution

### Commenter: Jennifer Compau - Comment I-1-1

Please find other ways to manage waste that does not harm the environment and pollute our precious river.

### **Response to Reduce Pollution**

Thank you for your comment. The purpose of Ecology's NPDES permits are to maintain the highest possible purity of public waters by minimizing pollutant discharges to the extent practicable. NPDES permits are conditioned such that beneficial uses of the receiving water (aquatic life, recreation, and human health) are protected.

## **22. Comments on Mercury**

### **Commenter: EPA - Comment A-1-2**

Fact Sheet, Evaluation of Surface Water Quality-based Effluent Limits for Numeric Criteria.

The fact sheet states, on Page 43, that Ecology evaluated reasonable potential to cause or contribute to excursions above several chemicals that are subject to human health criteria, including mercury. The table on Page 73 of the fact sheet shows that Ecology applied a human health criterion of 0.14 µg/L for mercury. Ostensibly, this is based on footnote G to Table 240 in Ecology's water quality standards, which states that, "the human health criteria for mercury are contained in 40 CFR 131.36." The human health criterion for mercury in 40 CFR 131.36 for consumption of water and organisms is 0.14 µg/L.

However, this footnote has been disapproved by EPA. As explained in the action letter dated November 15, 2016, "The EPA is disapproving Footnote G because it is no longer accurate.

The EPA has removed Washington from the National Toxics Rule at 40 CFR 131.36 for mercury and promulgated new human health criteria for methylmercury in the EPA's final federal rule at 40 CFR 131.45." Thus, Ecology should not use this criterion for a reasonable potential analysis for mercury.

### **Response to Mercury**

Ecology has corrected the spreadsheets in the final fact sheet to omit the 0.14 ug/L value for the human health criterion for mercury from 40 CFR Part 131.36.

## **23. Comments on Methylmercury**

### **Commenter: EPA - Comment A-1-3**

The fact sheet does not address the EPA-promulgated methylmercury fish tissue criterion at 40 CFR 131.45. Ecology should determine whether the facility has the reasonable potential to cause or contribute to excursions above the fish tissue criterion for methylmercury.

EPA has published the Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion to assist permitting authorities with this analysis. EPA notes that there are data available for total mercury in fish tissue at river mile 84.4, downstream from the facility.

### **Response to Methylmercury**

Ecology notes that the discharge occurs in a section of river that is not on the 303(d) list (current or proposed) for exceeding methylmercury in fish tissue. In addition, upstream sections of the Spokane River are not on Washington's 303(d) list for methylmercury (current or proposed); nor on Idaho's Final 2018/2020 305(b) Integrated Report for the Spokane River - from Coeur d'Alene Lake to Post Falls Dam.

In response to this comment, Ecology evaluated a reasonable potential for the discharge to cause or contribute to excursions above the fish tissue criterion for methylmercury assuming that the receiving water failed to meet the methylmercury criterion. Ecology used guidance from its Permit Writer's Manual which recommends calculating a reasonable potential for methylmercury using the chronic aquatic life criterion for mercury of 0.012 ug/L applied at the end-of-pipe. This analysis showed no reasonable potential. The final fact sheet includes the results of this determination under Appendix D, Reasonable Potential Spreadsheet – No Mixing Zone.

## **24. Unclassified Comments**

### **Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-11**

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 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.

**Commenter: Kaiser Aluminum Washington, LLC - Comment B-1-12 (testimony provided at each of the public hearings)**

My name is Brent Downey and I am the manager of environmental affairs at Kaiser's Trentwood facility. I'd like to thank you for this opportunity to participate and provide comments on Kaiser's draft NPDES permit. Kaiser is committed to continuing to work closely with the Department of Ecology and other stakeholders during this very important process.

We have operated in Spokane Valley for more than 75 years, and proudly employ over 950 people. Being a good steward of the environment is important to Kaiser, our employees, and their families.

Kaiser and hundreds of other Washington State manufacturers, counties, and cities are confronting legacy PCB issues, caused by historical, lawful use of PCB products until they were banned in the late 1970s. We recognize that any level of PCBs creates public concerns. We have been and continue to be committed to protecting and improving water quality in Spokane River. Kaiser does not use PCBs in its manufacturing process, and has been actively addressing legacy sources of PCBs at the Trentwood site. We continue to remove PCBs from our permitted discharge and are continuing to develop and deploy innovative, new technologies to further reduce PCB levels, water usage, and discharges to the Spokane River. In cooperation with Ecology and with agency oversight, Kaiser operates a walnut shell filtration system and is developing PCB destruction technology that if successful will reset the standard for addressing PCBs.

In addition, 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 has reduced its water usage by 30% and discharge to the river by 40% even as the facility's production levels have increased.

Again, Kaiser appreciates Ecology's consideration of our comments, which will be provided in written form on the draft permit and looks forward to continuing to work with Ecology, EPA, and other stakeholders to protect the Spokane River. Thank you.

#### **Response on Unclassified Comments**

Ecology acknowledges and appreciates Kaiser's commitment and efforts in reducing PCBs discharged from their facility.