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Submitted online at http://ws.ecology.commentinput.com/?id=gEtjc and via email to roca461@ecy.wa.gov

RE: Boise White Paper LLC’s NPDES Permit Renewal; Individual NPDES Permit No. WA0003697.

Columbia Riverkeeper (“Riverkeeper”) submits these comments on the Washington Department of Ecology’s (“Ecology”) proposal to renew National Pollutant Discharge Elimination System Permit No. WA0003697 (hereinafter, the “Draft Permit”) for Boise White Paper LLC’s paper mill near Wallula, Washington (hereinafter, the “Wallula mill” or “mill”).

Riverkeeper works to protect and restore the Columbia River and all life associated with it, from the headwaters to the Pacific Ocean. Riverkeeper represents over 12,000 members and supporters in Oregon and Washington and regularly comments on decisions impacting water quality in the Columbia River, including draft NPDES permits. Riverkeeper’s members boat, swim, and catch and eat fish from the Columbia River nearby and downstream from the Wallula mill’s wastewater outfall.

The Wallula mill is a significant industrial point source on the Columbia River. Conventional and toxic pollutants from the mill’s effluent have the potential to seriously harm human and environmental health. Because this permit may govern the mill’s discharges for the next decade, Ecology’s permitting decisions will have a significant and lasting effect on the water quality and environmental health of the Columbia River.

I. The Permit must ensure compliance with the Columbia River dioxin TMDL.

The Columbia River contains unhealthy levels of dioxin—an extremely toxic, persistent, and bioaccumulative chemical linked to cancer and developmental defects. Paper mills, like the Wallula mill, are the main source of dioxin pollution in the Columbia River. To protect people who eat Columbia River fish from dioxin poisoning, the U.S. Environmental Protection Agency (“EPA”) set limits on the amount of dioxin that the Wallula mill, and other chlorine-bleaching
pulp mills, can discharge (hereinafter, the “Dioxin TMDL”).

EPA determined that the Wallula mill could discharge, on average, only .25 milligrams (“mg”) of dioxin per day. Ecology’s Draft Permit, however, allows the mill to discharge up to .78 mg of dioxin per day. For the following reasons, the Draft Permit does not adequately protect people from dioxin poisoning or comply with state and federal law governing NPDES permits.

a. The final permit must implement the Wallula mill’s waste load allocation in the Dioxin TMDL.

The final permit must contain effluent limits for dioxin that ensure that the Wallula mill will not exceed the mill’s waste load allocation (“WLA”) from the Dioxin TMDL. This is a basic tenant of Clean Water Act permitting, but neither the Draft Permit nor the Fact Sheet mention the Columbia Basin Dioxin TMDL—much less explain how the effluent limit in the Draft Permit will meet the mill’s WLA. Rather, the Fact Sheet states that the permit’s dioxin limit is “Technology” based, as opposed to a water-quality-based WLA. Riverkeeper is therefore compelled to ask: did Ecology use the WLA from the dioxin TMDL to create the dioxin effluent limit in the Draft Permit? From a common-sense perspective, the Draft Permit’s maximum daily limit of .78 mg of dioxin conflicts with the Dioxin TMDL’s WLA of .25 mg per day. Please explain how Ecology arrived at the .78 mg/day limit for dioxin in the Draft Permit.

b. The final permit’s effluent limits for dioxin should be revised follow Ecology practice for other pulp mills, EPA guidance, and 40 C.F.R. 122.45(d)(1).

At the least, Ecology should use the same approach to set dioxin effluent limits for the Wallula mill that Ecology has implemented, at EPA’s request, for similar mills on the Columbia in recent years. Under this approach, the final permit would contain an average monthly dioxin limit of .25 mg/day, as well as a maximum daily limit much lower than the proposed .78 mg. EPA recommends an average monthly limit for dioxin—not just a daily maximum—to ensure compliance with the TMDL’s waste load allocation over the long term. Furthermore, federal regulations require Ecology to apply an average monthly limit for dioxin in the permit. Riverkeeper recommends that Ecology review the discussions of this issue in the “Response to Comments” sections of Ecology’s most recent permitting fact sheets for the Longview Weyerhaeuser mill (WA0000124) (p. 97) and the GP Camas mill (WA0000256) (pp.70–71). Ecology should recalculate the Wallula mill’s average monthly and maximum daily limits for

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1 See U.S. EPA, Total Maximum Daily Load (TMDL) for 2,3,7,8-TCDD in the Columbia River Basin, p. 3-9 (1991).
2 Id.
3 See Draft Permit, p. 6.
4 Fact Sheet, p. 49.
6 40 C.F.R. 122.45(d)(1).
dioxin using the approached used for the GP Camas mill; a maximum daily dioxin limit of .78 mg—based on one annual sample—is not sufficient to ensure compliance with the mill’s WLA.

c. **Is the required sampling methodology (Method 1613) sensitive enough to determine whether the mill is complying with its nominal dioxin limits?**

Ecology should explain, in the Fact Sheet’s “Response to Comments,” the Wallula mill’s functional limit for dioxin discharges. To wit, will the functional limit on the mill’s dioxin discharge be the permit’s effluent limits or, instead, the practical quantitation or detection limit of the prescribed testing methodology? In footnotes regarding the dioxin effluent limits, the Draft Permit states:

“Analysis . . . must be conducted in accordance with Method 1613: Tetra- through Octachlorinated Dioxin and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A or an approved equivalent method. The Permittee must achieve a detection level less than or equal to 10 [picograms per liter] at secondary effluent. Compliance with the mass loading 2,3,7,8 TCDD daily limit shall be demonstrated if the 2,3,7,8 TCDD concentration is 10 parts per quadrillion (ppq) or less, or non-detect at a detection limit of 10 ppq or less.”

Unfortunately, the Fact Sheet contains no discussion of Method 1613, its sensitivity, any other more-sensitive methods to test for dioxin, or how to calculate the mill’s daily dioxin discharge based on the dioxin concentration in “secondary effluent” (which Riverkeeper understands to mean effluent from the bleach plant).

Accordingly, Riverkeeper requests that Ecology answer the following questions, and address their implications, in the Fact Sheet’s “Response to Comments” section:

1. How is the dioxin concentration in the bleach plant effluent used to calculate the daily mass of dioxin discharged by the mill?

2. Is Method 1613’s practical quantitation limit (which appears to be 10 picograms per liter) sufficiently sensitive to determine whether the mill is discharging less than .25 mg/day of dioxin?

3. How many milligrams of dioxin would the mill discharge each day if the concentration of dioxin in the bleach plant effluent was 10 picograms per liter?

4. Assuming the bleach plant effluent contains 10 picograms of dioxin per liter, what production limit (perhaps measured in kraft pulp through the bleach plant or daily paper

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7 Draft Permit, p.7.
8 Id.
production) would ensure that the mill discharged no more than .25 mg of dioxin per day? Such a production limit could be necessary to ensure that the mill meets its dioxin WLA, if the sampling methodology can only detect dioxin concentrations down to 10 picograms of dioxin per liter.

5. How sensitive would the testing methodology need to be to determine whether the mill was meeting the dioxin effluent limits in the permit?

6. Are more sensitive testing methodologies available? What are they, and what are their quantitation limits? If they exist, why doesn’t the permit require their use?

d. Ecology should explain why the Wallula mill cannot adopt total chlorine free technology.

Finally, Ecology should have considered whether switching to total chlorine free technology would be reasonable and, therefore, required. Every NPDES permit issued by Ecology must require the permittee to apply “[a]ll known, available, and reasonable methods of prevention, control, and treatment” to decrease pollution discharges.9 This standard, commonly called “AKART,” is the underlying legal standard for technology-based effluent limits in NPDES permits issued by Ecology. The use of total chlorion free technology would eliminate the mill’s production of dioxins and some other toxics, but the Fact Sheet never even mentions this possibility. Instead, Ecology cites 17-year-old federal standards for nonconventional pollution control technologies at Kraft pulp mills, 40 C.F.R. 430.24, and purports to use those standards to create the technology-based limits in the Draft Permit—without even asserting, much less explaining, why those standards still constitute AKART for the Wallula mill.10 Technology to keep some of the most toxic chemicals on earth out of the Columbia River is known and available; Ecology must explain why it would not be “reasonable” for the mill to use this technology.

II. The Wallula mill’s thermal pollution exacerbates the Columbia River’s temperature problems.

The Columbia River at Wallula is frequently too hot for salmon and steelhead during the summer, and the mill’s effluent is even hotter than the river. In the summer of 2015, 250,000 adult sockeye salmon died in the Columbia River. Most of those fish died between John Day and McNary Dams, just downstream from Wallula. The EPA admitted that most of those sockeye died because the Columbia River was too hot. Ecology has determined that salmon and steelhead in this part of the Columbia River need water that is cooler than 20° C for rearing and

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9 WAC 173-216-110(1)(a); WAC 173-216-020(1).
10 Fact Sheet, pp. 26–28.
migration. The river temperature in August can reach at least 21.7º C, and the mill’s effluent can reach 35.1º C. Undeterred by these disturbing numbers and recent temperature-related fish kills, Ecology intends to allow the Wallula mill to discharge unlimited, unmonitored amounts of hot effluent into a river that is already violating water quality standards for temperature. Despite several pages of discussion in the Fact Sheet, Ecology is simply authorizing a discharge that will cause or contribute to violations of water quality standards, in violation of WAC 173-201A-510.

First, Ecology’s use of, and reliance on, a mixing zone for temperature violates Ecology’s own rules and guidance about mixing zones. The Fact Sheet explains that, among other requirements, a mixing zone is only appropriate if: “The discharge/receiving water mixture [would] not exceed water quality criteria outside the boundary of a mixing zone.” The Fact Sheet then summarily asserts that Ecology conducted an analysis of all pollutants and “concluded the discharge/receiving water mixture will not violate water quality criteria outside the boundary of the mixing zone if permit limits are met.” With respect to temperature pollution, this assertion is nonsensical: the receiving water already violates the water quality standard, so it is physically impossible for a mixture of the even-hotter effluent and the receiving water to meet the 20º C standard. Without conceding Ecology’s implied assertion that mixing zones are legally-valid Clean Water Act implementation tools, Riverkeeper points out that authorizing a mixing zone for a pollutant in a receiving water that is impaired for that pollutant violates the theory behind mixing zones—the receiving water simply has no assimilative capacity. Accordingly, Ecology cannot authorize a mixing zone for temperature, and the relevant point of compliance for assessing whether the mill’s discharge meets the temperature water quality standard is the end of the pipe, not the edge of the chronic mixing zone.

Ecology attempts to avoid the plain meaning of WAC 173-201A-510(1) by relying on a .3 ºC degree warming increment described at WAC 173-201A-200(1)(c)(i). Ecology’s reliance on WAC 173-201A-200(1)(c)(i) is misplaced. First, the ‘.3 ºC increase’ exception only applies when the receiving water is violating the applicable temperature standard “due to natural conditions.” However, EPA determined that the Columbia’s summertime temperature exceedances are frequently caused by humans, primarily by hydroelectric dams and climate change. Second, WAC 173-201A-200(1)(c)(i)’s ‘.3 ºC increase’ exception is for “human actions considered cumulatively”—it is not applicable to each point source. The Fact Sheet

11 WAC 173-201A-200; Table 602.
12 Fact Sheet, p. 42.
13 See WAC 173-201A-510(1) (“No waste discharge permit can be issued that causes or contributes to a violation of water quality criteria”).
14 Fact Sheet, p. 34; see also WAC 173-201A-400(5) (“Water quality criteria shall not be violated outside of the boundary of a mixing zone as a result of the discharge for which the mixing zone was authorized.”).
15 Fact Sheet, p. 34.
asserts that “When Ecology has not yet completed a TMDL, our policy allows each point source to warm water at the edge of the chronic mixing zone by 0.3°C.” This so-called policy—which the Fact Sheet neither provides not cites—is patently illegal because it contradicts WAC 173-201A-200(1)(c)(i)’s plain language and intent. Ecology’s unwritten policies cannot contradict formally promulgated regulations, especially when those regulations are state water quality standards that must be reviewed and approved by EPA and NMFS. Ecology cannot rely on a cumulative or individual .3 °C increment to claim that the Wallula mill’s discharge meets water quality standards for temperature.

Accordingly, Ecology may not permit the mill’s discharge to contribute to the Columbia’s temperature problems. Ecology must set the mill’s effluent limit for temperature at or below the 20° C numeric water quality standard, at least until EPA issues a temperature TMDL with a WLA for the mill’s temperature pollution. Ecology should also require monitoring and reporting of the temperature of the mill’s effluent to ensure compliance with the temperature limit.

Conclusion

The final permit should ensure that the Wallula mill meets the waste load allocation in EPA’s Dioxin TMDL and does not contribute to the Columbia River’s ongoing temperature problems. We look forward to Ecology’s responses and hope that the renewed permit will help create a cleaner, safer Columbia River.

Sincerely,

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17 Fact Sheet, p. 40.
cc’d via email:

- Laurie Davies, Program Manager, Waste 2 Resources Program, Washington Department of Ecology.
- Karen Burgess, Leader of State Oversight for State-Issued NPDES Permits in Region 10, U.S. Environmental Protection Agency.
- Audie Huber, Intergovernmental Affairs Manager, Department of Fisheries, Confederated Tribes of the Umatilla Indian Reservation.
- McClure Tosch, Remediation and Restoration Specialist, Yakama Nation Fisheries.