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Via U.S. Mail and e-mail: tstu461@ecy.wa.gov

Mr. Ted Sturdevant
Director
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Re: Request for Dispute Resolution
Spokane River and Lake Spokane Dissolved Oxygen TMDL Water Quality
Improvement Plan

Dear Mr. Sturdevant:

Inland Empire Paper Company ("IEP") requests dispute resolution on the Spokane River and Lake Spokane Dissolved Oxygen Total Maximum Daily Load Water Quality Improvement Report, Revised February 2010 (Pub. No. 07-10-073) ("TMDL") pursuant to Department of Ecology WQP 1-25.

IEP is a party to the March 7, 2007, Memorandum of Agreement ("MOA") regarding Foundational Concepts, Managed Implementation Plan, and Dissolved Oxygen TMDL for the Spokane River. (Appendix D). IEP was a participant in the Spokane River Collaborative Process Technology Work Group that led to the adoption of the MOA and has committed to implementing cutting edge technology and source reduction to achieve the highest possible water quality standards in the Spokane River and Lake Spokane. Under the MOA, the Department of Ecology ("Ecology") is obligated to adopt a TMDL and implementation plan for the TMDL consistent with the Foundational Concepts document dated June 30, 2007.

IEP regrets that Ecology has fallen so far short of its commitments in the MOA. There is no justification for Ecology's determination that IEP can achieve a monthly maximum average of 50 µg/L and a seasonal average phosphorus limit of 36 µg/L. IEP is not aware of any water quality treatment technology that would allow it to achieve this limit. Nor is IEP aware of any source reductions or available non-point source reductions that would afford a reasonable opportunity to comply with the proposed waste load allocation in the TMDL. IEP has asked Ecology in several public and private meetings to identify where credits for non-point source reductions are available for IEP to achieve its proposed allocation. Ecology has been unable to

identify any legitimate opportunities that would provide IEP with certainty that the delta can be achieved.

1. Request for Dispute Resolution

(a) Ecology has erroneously determined that treatment technology is available to IEP that can achieve a 36 µg/L seasonal average of phosphorus concentration in its discharges.

The central decision in the TMDL is the conclusion that IEP can achieve a seasonal average phosphorus discharge level of 36 µg/L through water quality treatment. This decision drives the TMDL and yet there is no discussion anywhere in the TMDL as to the basis for this decision as applied to IEP.

This decision is arbitrary and capricious and is not supported by substantial evidence. As part of the Collaborative Process Technology Work Group, IEP conducted pilot testing of numerous state-of-the-art tertiary treatment technologies at its facility. The results of that testing demonstrated that IEP, with aggressive application of treatment technology and management, may be able to achieve an average effluent level for total phosphorus between 70 and 100 µg/L.¹ IEP may not be able to achieve an average of 50 µg/L even with substantial reductions in water use and water re-use in its industrial processes. It is unreasonable to conclude that IEP can ever achieve a seasonal average of 36 µg/L. The pilot testing demonstrated that IEP will not be able to achieve the same level of phosphorus removal as municipal Waste Water Treatment Plants (“WWTP”) using the same technologies. IEP was orders of magnitude higher in chemical use and was unable to attain equivalent levels of reduction. This was confirmed with the results at other facilities during the collaborative process, two reviews of treatment technology presented to Ecology in a 2005 study of exemplary WWTPs by CH2M Hill and HDR,² and in a memorandum dated September 28, 2005, from Ross & Associates (included as Appendix L in the TMDL). IEP argued against a 50 µg/L limit at the time and maintains that it can only achieve 100 µg/L with any confidence.

The conclusion that IEP can achieve a seasonal average phosphorus discharge level of 36 µg/L is apparently derived from Appendix J to the TMDL, a March 2009 memorandum by EPA staff. However, the memorandum is not discussed anywhere in the body of the TMDL.

Ecology cannot rely on the EPA memorandum, TMDL Appendix J, to conclude that treatment technology available to IEP can routinely achieve a seasonal average of 36 µg/L. It is clear from the public record in this matter that the EPA analysis resulted from a two week effort to justify a number, rather than any impartial or professional evaluation of the performance data.³

¹ Douglas P. Krapas, *IEP Pilot Study Report: Tertiary WWT Pilot Trials for Ultra-Low Phosphorus Removal*, June thru July, 2005 and November thru December, 2005.

² CH2M Hill, *Technical Memorandum Evaluation of Exemplary WWTPs Practicing High Removal of Phosphorus* (Nov. 21, 2005).

³ E-mail from Brian Nickel (Mar. 24, 2009).

The analysis relies, for example, on a marketing statement by a vice president of business development for a contractor: Veolia Water North America.⁴ More important, the EPA memorandum does not analyze the treatment technology at a single comparable pulp and paper mill anywhere in the Country.

IEP also objects to both the reliance on and use of the Region 10 report on treatment technology principally authored by David Ragsdale: *Advanced Wastewater Treatment to Achieve Low Concentrations of Phosphorus* (Region 10, April 2007). Mr. Ragsdale, referring to the Spokane River Collaborative Process, was quoted as saying that “[t]hey came up with a new process and I’m not supposed to talk about it. I have a difference of opinion than the official agency perspective.”⁵

Mr. Ragsdale, apparently acting based on his “difference of opinion,” prepared the April 2007 report without public notice or any involvement by the dischargers or their consultants. Furthermore, the analysis included active participation by an attorney representing the Sierra Club and a vendor of treatment technology.⁶

IEP also objects to the biased use of discharge monitoring data in the 2009 EPA memorandum. The 2009 memorandum uses data from a 2008 EPA report on nutrient removal technologies, but relies on a subset of that data: just 3 facilities out of 29 full-scale treatment plants. The three plants selected are among the three smallest plants evaluated in the 2008 report and are not representative of the flows or configurations of the plants operating in the Spokane River basin. Furthermore, none of the selected facilities included any industrial application or, more pertinently, any pulp and paper mill applications.

Ecology is well aware that IEP will have significant difficulties attempting to achieve a phosphorus maximum monthly average of 50 µg/L even with internal water conservation, reclamation and re-use. This was confirmed through extensive pilot testing of a wide cross section of state-of-the-art phosphorus treatment technologies. Testing and optimization of IEP’s full-scale Trident HS system has further substantiated the difficulties in attaining phosphorus reduction of IEP’s effluent.

There was recognition and agreement amongst the stakeholders, EPA, and Ecology that IEP’s effluent differs significantly from municipal wastewater treatment facilities and that there were limitations to IEP’s phosphorus treatment capabilities. This understanding was considered in the previous version of the scenarios that included IEP’s Total Phosphorus Waste Load

⁴ In contrast to the marketing statements of Veolia’s Vice President of Business Development, see Appendix J at 2, IEP’s concerns regarding EPA’s analysis are based on actual use of Veolia treatment technology. IEP included Veolia technology in its pilot testing and the technology averaged two to three times the proposed WLA.

⁵ J. Hagengruber, “*Scientist Departure Taints River Cleanup Plan*,” SPOKESMAN REVIEW (Sept. 10, 2007), available at <http://www.spokesmanreview.com/local/story.asp?ID=208812&page=all>.

⁶ “*Advance Wastewater Treatment to Achieve Low Concentration of a Phosphorus*,” EPA 910-R-07-002, at 2. The document also claims that Ken Merrill, an Ecology employee, was consulted on the report.

Allocation (“WLA”) at 50 µg/L. To our knowledge, there was no concern expressed by any party to this consideration in the scenarios.

It was also understood that IEP should not be treated the same as the POTWs in the TMDL modeling assumption. The modeling assumptions under Scenario #1 originally retained a 50 µg/L seasonal average for IEP, while the municipalities were assumed to be able to treat to a monthly maximum of 50 µg/L.⁷ IEP confirmed with both Ecology and EPA that this would be the modeling assumption for Scenario #1.⁸ Ecology has instead conferred higher proportional wasteload allocations to the City of Spokane and Spokane County simply because they may monitor more frequently under their permits. There is absolutely no equity in assuming, erroneously, that IEP can achieve the same phosphorus removal as the municipal WWTPs and then grant the municipal dischargers higher mass loadings than all other dischargers.

Finally, the TMDL will not be legally defensible if the essential regulatory decision in this matter rests on Appendix J. One measure of this document is whether it would ever be accepted as part of an engineering report under WAC 173-240-130. IEP cannot imagine a circumstance where Ecology would accept from a permit applicant the use of marketing statements and selective use of data to establish performance capabilities for a proposed treatment system. Ecology has not addressed this concern anywhere in its response to comments. It is simply insufficient for Ecology to dismiss the errors and omissions in this record under the rubric that it made an equitable assessment of responsibility under the TMDL.

The dispute resolution panel should address specifically what “equitable” decision was made and the basis for the “equitable” assessment by Ecology.

(b) Ecology has unlawfully applied dissolved oxygen criteria for natural water bodies to Lake Spokane, which is a reservoir.

Lake Spokane is a man-made reservoir that is formed by a hydroelectric dam, Long Lake Dam. Constructed in 1915, the dam is the largest hydroelectric development on the Spokane River and is located approximately 25-30 miles northwest of the city of Spokane. It operates with a regulated reservoir, Lake Spokane, which is approximately 23.5 miles long with a maximum depth of 180 feet and a 5,060-acre impounded surface area at normal full pool elevation of 1,536 feet.⁹

⁷ “Setting Phosphorus Targets in the Spokane TMDL to meet Dissolved Oxygen Criteria,” April 1, 2009. On page 2, under item (3), it states:

Set the Discharger phosphorus wasteload allocations based on two TMDL scenarios:

- Scenario #1: 50 µg/L for all sources except Kaiser (35 µg/L)
- Scenario #2: 35 µg/L for all Washington sources except Inland Empire and Idaho sources (all remain at 50 µg/L)

⁸ E-mail exchange between Doug Krapas and DOE (May 2009).

⁹ B. Cusimano, *Spokane River and Lake Spokane (Long Lake) Pollutant Loading Assessment for Protecting Dissolved Oxygen*, at 61 (February 2004) (“Cusimano 2004”); Steve Blewett, *A History of The Washington Water*

Physical, chemical, and biological processes in the reservoir, even without additional human impacts due to pollution, are different than what they would be if the river were free flowing.¹⁰ The reservoir is usually completely mixed or un-stratified until the beginning of June because of the large amount of inflow water due to spring snowmelt conditions that significantly increase flows in the Spokane River.¹¹ The reservoir thermally stratifies from June through September and stagnation of deep water results in low dissolved oxygen (“DO”) concentrations near the lower portion of the reservoir in the summer and early fall.¹²

In a free flowing river, without the presence of the Long Lake Dam, the impacts from dischargers including IEP would not cause a violation of the dissolved oxygen criteria.¹³

The dissolved oxygen criteria are set forth in WAC 173-201A-200(1)(d) (Table (1)(d)). In accordance with WAC 173-201A-200(1)(d)(ii), for lakes, “human actions considered cumulatively may not decrease the dissolved oxygen levels more than 0.2 mg/L below *natural conditions*.” (Emphasis added).

Because Lake Spokane results from the operation and maintenance of Long Lake Dam it is not a “natural condition” as defined under the state water quality standards. Ecology has specifically recognized this fact and this interpretation of its water quality standards:

Reservoirs with a mean detention time of greater than 15 days are treated as lakes under the water quality standards. The water quality standards for lakes are often based on maintaining natural conditions, but the fact is the dam and the “lake” behind it are not natural. This means that Ecology cannot treat dam effects to water quality as natural.¹⁴

Ecology also made this interpretation clear in its response to comments on a draft guidance document for water quality certifications for hydroelectric projects:

Dams are held accountable for the water quality of the downstream waters and the requirement is to meet the assigned water quality standards for the river downstream of the impoundment. It is only within the impoundment itself that a different approach is being

Power Company 1889 to 1989 (1989); Spokane River Draft Environmental Assessment, Volume I (July 2005) and Spokane River Draft Environmental Assessment, Volume II (Feb. 2005).

¹⁰ Cusimano 2004, at 61.

¹¹ Cusimano 2004, at 32.

¹² HDR, Preliminary Draft Environmental Assessment, p. 5-125 (2005).

¹³ WDOE, *Water Quality Certifications for Existing Hydropower Dams-Guidance Manual* at 28, Publication No. 04-10-022 (March 2005).

¹⁴ WDOE, *Water Quality Certifications for Existing Hydropower Dams-Guidance Manual* at 28, Publication No. 04-10-022 (March 2005).

taken. Within the reservoir the water quality and physical habitat conditions will take on the characteristics of a lake. The requirement to achieve the highest attainable water quality with these reservoirs reflects the requirement in the water quality standards for lakes and reservoirs – where human effects are generally not allowed to cause any substantial changes from natural conditions. **And this requirement is written the way it is because of the recognition that the reservoir itself is not a natural condition.**¹⁵

The use designation also provides that dissolved oxygen measurements should be taken to “represent the dominant aquatic habitat.” WAC 173-201A-200(1)(d)(iv). This requirement for measuring dissolved oxygen is important when considering a reservoir since the deep hypoxic layer created by an impoundment is not likely to have ever been suitable habitat, let alone the dominant aquatic habitat. Ecology staff has acknowledged internally that achieving the highest attainable water quality standards in a reservoir requires some assessment of net biological benefits. “[I]f the largest net improvement in water quality was obtained by focusing on creating improvements in a deep hypoxic layer of a reservoir, but most of the species of concern rely on the epilimnion and metalimnion (upper layers), then maximizing the water quality improvement in the hypolimnion may not really represent the highest attainable condition.”¹⁶

On October 24, 2008, Ecology issued a letter styled as an “interpretative guidance” on the application of the state water quality standards to reservoirs (Appendix 1). The letter opens with the proposition that “natural conditions” are defined as “the water quality conditions absent any human-caused pollution.” The letter then makes an enormous illogical leap by suggesting that because reservoirs can meet the definition of “lakes,” that such reservoirs are “treated the same as lakes.”

The letter then claims that this syllogism is “consistent with the way we determine natural conditions in temperature TMDLs.” This statement is not accurate. IEP has not been able, in fact, to find a single temperature TMDL related to a reservoir that treated the impoundment as a natural condition for water quality modeling.¹⁷

If there is any doubt as to how Ecology actually interprets its standards, it is made clear on the second page of the letter: **“the dam and the lake behind it are not natural, since they**

¹⁵ C. Maynard, *WDOE Water Quality Certifications for Existing Hydropower Dams Guidance Manual Comments and Responses*, at 12 (Feb. 2005) (emphasis added).

¹⁶ Conceptual Staff Draft, undated.

¹⁷ Department of Ecology staff has made similar conclusions. See 11/28/07 e-mail from Susan Braley to Paul Pickett (“The precedence has been NOT to model the reservoir for temperature natural background above the dam when it is treated as a lake. We did not model reservoir temperatures for Baker Lake, the Lewis River dams, Rife Lake (on Cowlitz) and Cushman. According to Chris’ Reservoir Table, Packwood Lake is the only reservoir that we are requiring modeling for natural pre-dam temperature.”).

were created by human actions.” Ecology then admits in the letter that “Ecology cannot treat the effects of dams on water quality as natural.”

It is accordingly unlawful for Ecology to define the effects of the Long Lake Dam impoundment as “natural” for the purposes of the state water quality criteria for dissolved oxygen. The thermal stratification of Lake Spokane in critical summer months results from human actions. The depressed dissolved oxygen levels in the deeper areas of the reservoir are not therefore natural conditions and cannot be used for the application of the dissolved oxygen criteria.

The TMDL, for example, confirms that there is no obligation for strict compliance with the DO criteria in the lake. There is no specific assignment of a load allocation to the dam operator. Therefore, there is no obligation on the part of the dam operator to achieve DO criteria that only apply to natural lakes. The TMDL makes clear, at page 46, that the dam operator is only subject to a requirement to “**improve** dissolved oxygen impairments that occur in the reservoir downstream” of the compliance point for dischargers. Likewise, the implementation plan for the TMDL states, at page 70, that it is the dam operator’s responsibility “**to counteract** the impacts of the impoundment on dissolved oxygen levels.”

IEP and other dischargers to the Spokane River are subject to the same standard with respect to dissolved oxygen levels in the reservoir as the dam operator. Ecology may require dischargers to “improve” dissolved oxygen conditions or “counteract” dissolved oxygen sags, but it is not the obligation of dischargers, any more than it is an obligation of the dam operator, to strictly comply with DO criteria that only apply to natural water bodies.

(c) Ecology has violated state and federal law by adopting new phosphorus criteria for the Spokane River without rule making or federal approval of changes to the state water quality standards.

Washington State Water Quality Standards establish a phosphorus criterion in the Spokane River. Under those standards, the average euphotic zone concentration of total phosphorus (as P) shall not exceed 25 µg/L during the period June 1 to October 1. WAC 173-201A-602 (Table 602 WRIA 54). Ecology cannot disregard this criterion without rule making under the state Administrative Procedures Act, and approval by EPA under the Clean Water Act—which it has not done.

Ecology is also legally barred from imposing EPA eco-region criteria as water quality criteria in Washington without rule making and formal EPA approval of a revision to the state water quality standards under the provisions of the Clean Water Act. Again, Ecology has not taken these required steps.

The TMDL imposes an entirely new criteria based on EPA eco-region criteria that have never been adopted as state water quality criteria. Ecology has not followed its own regulations regarding the development of nutrient standards under WAC 173-201A-230, or complied with

the requirements of the state Administrative Procedure Act and Clean Water Act for adopting new water quality standards.

Even if Ecology is authorized to use the EPA eco-region criteria in developing the TMDL, it is apparent that the criteria have not been properly applied. The Spokane River at Nine Mile Dam is on the border of two EPA eco-regions: the Columbia Plateau and Northern Rockies. It is inappropriate, however, to derive a standard from the EPA eco-region criteria based on mapping alone. More important is the contrast between actual ecological conditions.

Furthermore, the data used for the EPA guidance and the accuracy of the results have not been verified. Ecology's TMDL is therefore not supported by verified data.

More important, EPA cautions that states need to evaluate the guidance criteria in light of specific designated uses that need to be protected. As such, it is improper for Ecology to simply apply the guidance criteria without a more specific analysis of how it applies to the Spokane River.

These concerns are set forth in two e-mail messages from Idaho DEQ staff and incorporated herein by reference. The dispute resolution panel should address the specific concerns raised in these e-mail messages.¹⁸

The dispute resolution panel should also address the justification for how the eco-region criteria are actually applied in the TMDL analysis. Scenario #1 is justified because it meets the 10 µg/L eco-region criteria 65% of the time under the water quality model. The results from Scenario #2 indicate that the eco-region criterion is met 62% of the time, a difference of less than one-week. Why is this slight difference in achieving the ad-hoc phosphorus criteria a deciding factor in the selection of Scenario #1 for establishing WLAs?

2. Prior Consideration of the Request for Dispute Resolution

Each of the foregoing requests for dispute resolution has been raised formally and informally with the Department. The final TMDL and response to comments largely ignored IEP's comments and failed to address the specific questions re-stated above.

3. Applicable Law and Regulations

The Department of Ecology is required to respond to all comments submitted on the TMDL. Pursuant to 40 CFR section 130.7(c)(ii) and the 1997 Memorandum of Agreement between the Department of Ecology and EPA, Ecology must ensure that the TMDL submittals to EPA include Responsiveness Summaries to public comments as described in 40 CFR section 25.8. Under 40 CFR section 25.8 the response to comments must include "the agency's specific

¹⁸ E-mail exchange between Robert Steed and John Tindall (April 13, 2009).

responses in terms of modifications of the proposed action or an explanation for rejection of proposals made by the public.”

Ecology’s obligation to respond to public comments is heightened by the lack of transparency in the TMDL as to the source and basis for WLAs. What information does Ecology have that IEP can achieve a monthly average of 50 µg/L? How is it “equitable” to assign IEP a WLA that it cannot achieve with technology and where there are no readily available delta elimination opportunities to achieve compliance with the WLA?

The TMDL simply fails to provide an explanation as to the core decision by Ecology that IEP can meet a seasonal average of 36 µg/L in phosphorus loading. The TMDL includes the EPA analysis of treatment technology from March 2009 as Appendix J but does not discuss that document anywhere in the body. Ecology does not disclose whether it agrees or disagrees with the weak and baseless conclusions of the EPA memorandum. Nor does the TMDL disclose whether Ecology has adopted the EPA conclusions simply as a means to force dischargers to fund non-point source reductions. More important for the dispute resolution process, the only information in the record regarding the treatment technology available to IEP is contained in IEP pilot testing. The EPA memorandum does not address treatment technology at a pulp and paper mill.

Ecology cannot legally adopt a TMDL, and EPA cannot approve a TMDL, under the Clean Water Act, 33 U.S.C. section 1313(d)(1)(C), that is arbitrary and capricious. The TMDL here will be arbitrary and capricious if it does not consider an important aspect of the problem or runs counter to the evidence before the agencies.

A TMDL with load allocations for non-point sources of pollution must also include reasonable assurance that the load allocations can be achieved.¹⁹ Because the TMDL does not, it violates EPA guidelines.

4. Prior Correspondence

The issues raised in this request for dispute resolution were included in the comment letter submitted by IEP on the draft TMDL.

5. Relief Requested

IEP has never wavered in its commitment to advanced water quality treatment and aggressive phosphorus removal from its effluent. As a private business IEP requires regulatory certainty that its investment will allow it to remain in business. The TMDL does not provide this certainty. It inequitably assumes that IEP can achieve a monthly maximum average that is not substantiated by extensive research and knowledge about treatment technology available to a pulp and paper mill. It is inequitable to treat IEP as if it was operating a municipal WWTP. IEP cannot achieve the same levels of phosphorus removal and does not have the ability to rely on

¹⁹ EPA Guidelines for Reviewing TMDLs Under Existing Regulations issued in 1992 (May 20, 2002)

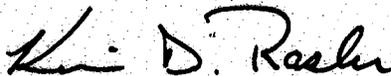
higher future flows and effluent offsets to achieve its waste load allocation. IEP requests that Ecology provide IEP with a technologically achievable waste load allocation.

6. Oral Presentation

IEP requests an opportunity to present its case for dispute resolution in person before the dispute resolution panel as provided in WQP 1-25 at Ecology headquarters. IEP reserves the right to be represented at the oral presentation by its employees, its consultants, and attorneys.

IEP assumes that the dispute resolution panel will be neutral and will not be briefed or otherwise confer with Ecology staff or any other party regarding the matters subject to this request for dispute resolution other than through written submissions that are copied to IEP and oral presentations to the panel in an open proceeding. Please advise me immediately if the panel intends to confer with Ecology staff or others independently on matters that are subject to the foregoing dispute resolution request.

Sincerely,



Kevin D. Rasler
President and General Manager

Enclosures

cc: Kelly Susewind, WDOE (ksus461@ecy.wa.gov)
Jim Bellatty, WDOE (jbel461@ecy.wa.gov)