BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: BIO-OREGON PROTEIN, INC. (nka PACIFIC BIO PRODUCTS – WARRENTON, LLC.) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT No. 101804	RESPONDENT BIO-OREGON'S EXCEPTIONS AND BRIEF OAH Case No. 2022-ABC-05366 Agency Case No. WQ/I-NWR-2022-031

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I. INTRODUCTION

Bio-Oregon Protein, Inc., nka Pacific Bio Products – Warrenton, LLC ("Bio-Oregon") seeks review of the Oregon Department of Environmental Quality's ("DEQ") National Pollutant Discharge Elimination System ("NPDES") Permit Number 101804 ("Permit") issued to Bio-Oregon's Warrenton Facility ("Facility") at 1935 NW Warrenton Drive, Warrenton, OR 97146.

Bio-Oregon is a special seafood processor and producer of high-end fish meal, oils, and bonemeal. Bio-Oregon's Facility in Warrenton uses a special process that it innovated to turn otherwise inedible byproducts of harvested fish, shrimp, and crab (like bone, carcass, and shells that ordinarily would go to landfill) into nutrient-rich animal and plant food. As one of the only industry players capable of making use of this otherwise unusable byproduct, Bio-Oregon plays a unique and irreplaceable role in the seafood industry. It provides a public benefit by making use of seafood byproducts that would otherwise be disposed of as waste.

Bio-Oregon has operated in Warrenton for decades. As part of its process, Bio-Oregon must discharge water from its Facility into Mile 7 of the Columbia River, sitting next to the mouth of the Pacific Ocean. DEQ has long known of—and, indeed, approved of—Bio-Oregon's processes and discharges. For decades, DEQ permitted Bio-Oregon to continue operations with reasonable discharge limitations (primarily water flow and pH limitations).

But recently, for reasons unknown to Bio-Oregon, DEQ has done an about-face and imposed unprecedented and unreasonably stringent discharge limitations in its recent NPDES Permit that threaten Bio-Oregon's very existence. To be clear, Bio-Oregon has not changed its processes or otherwise altered the content of its discharge since the last time DEQ issued an NPDES permit. Nonetheless, DEQ now is requiring Bio-Oregon, for the first time, to comply with stringent and inapplicable technology requirements as well as unnecessary limits on metals, bacteria, and temperature discharges, and unreasonable monitoring requirements.

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Bio-Oregon does not, of course, contend that no limits should apply at all. To the contrary, Bio-Oregon is committed to operating an environmentally safe and friendly facility and stands ready to comply with reasonable regulations that Bio-Oregon can feasibly comply with and that will protect the Columbia River.

That said, some of DEQ's new limits are neither possible for Bio-Oregon to comply with nor will reasonably protect the Columbia River. This is especially true for DEQ's new technology-based limitations, which DEQ misapplied to Bio-Oregon and which Bio-Oregon cannot achieve *even if* it adopted available and affordable technologies. DEQ applies effluent limitations to Bio-Oregon that were written for an entirely different kind of facility—which uses different equipment and processes entirely different species of fish—and recommends that Bio-Oregon adopt mere "good housekeeping" measures to meet the newly applied effluent limitations. But, in fact, because of the differences between Bio-Oregon's facility and the facilities for which these limits were originally intended, Bio-Oregon *cannot* meet such limits by simply adopting "good housekeeping" or similar available measures. Rather, given Bio-Oregon's unique facility and processes, Bio-Oregon would have to adopt impossibly expensive, untested, and/or (absurdly) pollution-*causing* technologies to meet DEQ's limits. Because these limits do not make sense and are not possible for Bio-Oregon to comply with, Bio-Oregon objects to them in the Permit.

Similarly, DEQ's Permit includes new metals limits on Bio-Oregon that based on simple misreading of data and that impose limits so low that, in at least some cases, available lab equipment cannot even capably and reliably test for and detect such small quantities of metals. Bio-Oregon further objects to certain other limits in the Permit that, as explained below, are unreasonable, impracticable (or impossible) to comply with, and/or unnecessary for protecting the Columbia River.

Throughout the Permit application process, Bio-Oregon has tried to explain to DEQ why these specific limits are unnecessary and erroneously applied, and that they suddenly

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endanger Bio-Oregon's operations after decades of compliance. But DEQ has largely ignored or rebuffed Bio-Oregon's feedback and questions. Bio-Oregon was left with no option but to challenge the Permit through a contested case hearing.

But after going through these proceedings, a late-substituted administrative law judge ("ALJ")—who did not even attend the multi-day hearing—blanketly rejected all of Bio-Oregon's arguments with little apparent understanding of the evidence, the applicable regulatory regime, and Bio-Oregon's position. Bio-Oregon now seeks review by the Environmental Quality Commission ("EQC") of both the challenged limits in the Permit and the fairness of the contested case proceeding itself.

In this proceeding, the EQC must decide not just whether the ALJ committed legal error (as she did), but also whether the Permit is consistent with the public policies, aspirations, and statutory directives applicable to the agency. DEQ's decisions of whether to impose unprecedented, arbitrary, and crippling restrictions on a good Oregon business—indeed, an employer of dozens of people for decades in a community that urgently needs those jobs—are not determinations that should be left to permit-writers and the administrative judges (who are not DEQ employees) that review their permits. These are policy decisions for the agency's policy-making body: the EQC. In this proceeding, the EQC must decide, yes, whether the ALJ erred, but also whether the punitive and draconian course undertaken by DEQ staff is truly consistent with the agency's mission.

For the reasons below, DEQ's unprecedented limits in the Permit, and the ALJ's blanket affirmance of the Permit, are inconsistent with law, outside DEQ's discretion, and unsupported by substantial evidence and/or reason. Bio-Oregon respectfully asks the EQC to review the Permit, the ALJ's Proposed and Final Order, and Bio-Oregon's objections and strike the unsupportable and unreasonably stringent limits from the Permit (and, if necessary, order a renewed contested case hearing before an ALJ).

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II. EXECUTIVE SUMMARY

NPDES permits allow discharge into Oregon waters subject to, generally, three categories of requirements: (1) technology-based effluent limits ("TBELs"), (2) water-quality-based effluent limits ("WQBELs"), and (3) monitoring requirements. For decades, DEQ has known of Bio-Oregon's activities and processes and required only mild TBELs and WQBELs related to, mainly, pH and flow. But in Bio-Oregon's most recent application to renew its NPDES permit, DEQ unexpectedly introduced certain unprecedented TBELs, WQBELs, and monitoring requirements that DEQ has never imposed previously. Some of DEQ's new limits are even so extreme, errant, unreasonable, and/or stringent that they endanger Bio-Oregon's continued operations.

Bio-Oregon accordingly seeks review of those particular burdensome, inapplicable, and unreasonable provisions. Specifically, Bio-Oregon challenges:

(1) DEQ's new TBELs;

(2) DEQ's new WQBELs regarding metals (specifically, copper, mercury, zinc, and thallium), enterococcus bacteria, and temperature; and

(3) DEQ's new monitoring requirements regarding dissolved oxygen, total suspended solids, oil and grease, ammonia, alkalinity, hardness, VOCs, and cyanide, and DEQ's new requirements that Bio-Oregon engage in regular whole-effluent-toxicity testing.

As summarized below (and discussed in detail thereafter), these limits are without support in the law, outside the range of DEQ's discretion, inconsistent with DEQ own rules, position, and past practice, and without support in substantial evidence and substantial reason.

TBELs: DEQ imposed the new and unprecedented TBELs in violation of the law and without substantial evidence in the record. To impose TBELs, DEQ must first identify applicable "effluent limitation guidelines" ("ELGs"), either from pre-set federally-created guidelines by the Environmental Protection Agency ("EPA"), or from a case-specific analysis of Bio-Oregon's Facility (or both). DEQ must then use the applicable ELGs to

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calculate TBELs for Bio-Oregon. DEQ, however, failed to follow this process correctly. For one, DEQ applied improper ELGs that were created by EPA for an entirely different industry—menhaden and anchovy processors—even though it is undisputed that Bio-Oregon's Facility processes neither menhaden nor anchovy (Bio-Oregon processes mostly Pacific whiting, which are significantly different than menhaden and anchovy, require different processes, and for which EPA has not created ELGs). DEQ further failed to engage in sound and sufficient case-by-case analyses regarding Bio-Oregon's other processes (for, specifically, shrimp and crab shells). DEQ finally failed to adequately consider what technologies were available, effective, and affordable to Bio-Oregon to comply with the new TBELs. This failure caused DEQ to set unreasonably stringent TBELs for which, in reality, there are no feasible technologies available for Bio-Oregon to adopt that would allow Bio-Oregon to comply with the Permit.[1]

WQBELs: DEQ imposed numerous water-quality-based effluent limits regarding metals (copper, mercury, zinc, and thallium), enterococcus bacteria, and thermal loading in Bio-Oregon's effluent. The limits are unsupported by law, outside DEQ's authority and discretion, and unsupported by substantial evidence and reason. In particular:

<u>*Metals*</u>: DEQ erroneously imposes stringent metals content limits that are so low that Bio-Oregon cannot reasonably monitor and measure for them, let alone comply with them. Notably, most of DEQ's mercury limits have no evidentiary basis whatsoever because they are based on a simple misreading of lab data. When read correctly, the data do *not* show the presence of detectable mercury in most of Bio-Oregon's discharge points, making the mercury limits inappropriate. DEQ also imposes the other metals limit based on inherently unreliable data. Finally, DEQ

[1] To be clear, Bio-Oregon is not opposed to the inclusion of appropriate TBELs in its Permit. Rather, Bio-Oregon is opposed to the application of inappropriate TBELs that are not tailored to Bio-Oregon's Facility and that are impossible for Bio-Oregon to meet.

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imposes some limits, including methylmercury limits and the requirement that Bio-Oregon adopt a Mercury Minimization Plan, based on fundamentally flawed and unsound analysis that *any* trace amounts of metal has a "reasonable potential" to contribute to exceedances of water quality standards in the Columbia River. DEQ reached this conclusion without even considering what the Columbia River's water quality standards are, whether the Columbia is already close to exceeding those standards, and whether Bio-Oregon is doing anything to add the metals to its effluent (versus whether the metals were already in the Columbia River to begin with).

Heat: DEQ imposes stringent temperature restrictions on Bio-Oregon, with which Bio-Oregon cannot comply during much of the year. These temperature restrictions are outside DEQ's discretion and not supported by substantial evidence. For one, the temperature limits are based on faulty data and methods. Moreover, DEQ failed to even consider whether to award credits and adjustments to Bio-Oregon that would allow Bio-Oregon to comply with the limits, even though such credits and authorized adjustments are available and designed specifically for stakeholders like Bio-Oregon. DEQ offered no reasons for refusing to consider such credits and adjustments. DEQ's unexplained refusal to consider these issues contravenes the spirit (and terms) of the law and was an abuse of discretion.

Enterococcus Bacteria: DEQ imposes unreasonably stringent bacteria limits that are not in accordance with law and are outside DEQ's discretion. For the first time in Bio-Oregon's history, and without any valid explanation, DEQ has changed its position regarding Oregon's bacteria regulations and now applies them to Bio-Oregon after years of interpreting the regulations to exclude Bio-Oregon from the regulation. In all events, DEQ's new interpretation of the regulation is in violation of the plain language of the law and should be rejected accordingly.

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Monitoring Requirements: DEQ imposed several new monitoring requirements that are legally unnecessary and not supported by substantial evidence or reason. For instance, the Permit imposes strict requirements for Bio-Oregon to routinely monitor effluent for dissolved oxygen, total suspended solids, oil and grease, ammonia, alkalinity, hardness, volatile organic compounds ("VOCs"), and cyanide, even though the law does not mandate these requirements and no evidence exists that Bio-Oregon will discharge these substances in many discharge points of its Facility. Additionally, DEQ improperly requires Bio-Oregon to engage in regular testing for whole-effluent-toxicity, even though the evidence does not reflect that Bio-Oregon's total effluent is toxic or there is a significant risk that it will become toxic.

Further, setting aside the lack of legal and evidentiary justification for the above limits, the EQC should strike the limits and modify the Permit as a matter of public policy. Ultimately, DEQ seeks to set extreme limits that would make only a negligible difference in the Columba River while very likely putting Bio-Oregon's Facility out of business entirely. That would be, undoubtedly, a net environmental loss for Oregon and the seafood industry, given Bio-Oregon's unique role in converting unusable byproduct (that would otherwise be hauled to landfills by trucks) into a reusable nutrient resource that feeds plants and animals. To whatever extent Bio-Oregon could continue operating under DEQ's restrictions (a remote and impossibly expensive possibility), Bio-Oregon would have to adopt measures that, ironically, would likely have a far more environmentally adverse net effect on the Columbia River than without them. For example, the ALJ proposed that Bio-Oregon could employ a large, gas-guzzling barge to move tanks of effluent to the Pacific Ocean (where the water would have flowed from the River anyway). Even if that were feasible (which it is not), it would be more, not less, damaging to the environment than allowing Bio-Oregon's effluent to flow from the mouth of the Columbia River into the Pacific Ocean, as it does today. For all

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these reasons, the EQC should reject the challenged TBELs, WQBELs, and monitoring requirements in the Permit.

Finally, to the extent the EQC does not strike some of the challenged limits in the Permit on the merits, the EQC should nonetheless strike those limits in the Permit or, at the very least, order a renewed contested case hearing regarding those limits because of fundamental procedural errors that occurred during the contested case hearing process. Specifically, although a particular ALJ, Judge Jennifer Rackstraw, presided over most of the contested case proceeding and the contested hearing from February 28 through March 3, 2023, ALJ Rackstraw was not the ALJ who ultimately issued the Proposed and Final Order in this case. Instead, months after the hearing record closed in this case and the issues were deemed to be under advisement, the Oregon Office of Administrative Hearings ("OAH") reassigned the case to a new ALJ, Judge Samantha Fair, who issued the Proposed and Final Order despite not having participated in any other part of the proceedings (including the hearing). Moreover, OAH failed to give Bio-Oregon notice of this change. This violated Oregon law, which requires the same ALJ who hears the evidence to also decide the issues. It also violated Bio-Oregon's rights to have notice of its decisionmaker and to have opportunity to raise objections to its decisionmaker and request a different one.

III. BACKGROUND

A. Bio-Oregon and its Warrenton Facility

Bio-Oregon's Facility has been a fixture in the Northern Oregon Coast community since the 1940s, more than 70 years. (A2 at 3–4; 03/01 pm Humphries Test.) It employs 17–20 people in the offseason and approximately 35 people during its busiest times of the year. (*Id.*)

Today, the Facility uses a special process that involves inputting byproduct from primary seafood processing companies (fish carcasses, shrimp shells, crab shells, and the like)—byproducts which would otherwise be hauled to landfills—and extracting protein from

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the byproduct to create high-end fish meal usable in high-end pet food and plant food. (*Id.*) DEQ has long been aware of this special process and, to this day, recognizes that it is "unique" to Bio-Oregon, innovated entirely by Bio-Oregon over decades, and that Bio-Oregon's "unique equipment and methodologies developed over nearly 80 years of operations differentiate Bio-Oregon from all other known fishmeal facilities." (A2 at 4.) The Facility thus serves an important purpose in the seafood processing industry by being one of the only (if not the only) operations that takes otherwise-unusable byproduct and turns it into a usable and economically viable organic substance. (*Id.*)

Bio-Oregon's Facility primarily processes fish, crab shells, and shrimp shells. (*Id.*) Roughly 85% of the fish that it processes are Pacific whiting. (*Id.*) Most remaining byproducts processed by the Facility are shrimp and crab shells, salmonids, and mixed bottom fish species. (*Id.*) The Facility generally does not process other fish types. (*Id.*) Pacific whiting, shrimp, and crab byproduct arrives at the Facility from other local seafood processing companies where it is ground and cooked. (Occhipinti Decl. ¶ 3.) Bones are separated and turned into bone meal. Leftover liquid is put into a centrifuge to extract fish oil. (*Id.*) Remaining protein slurry is dried and turned into fish meal. (*Id.*) The exact process flow used varies depending on the type of species being processed. (*See* Hammer Decl. Ex. 2 at 32–33, 38–41 (TBEL Report at 27–28 & Figs. 1–4) (describing, in detail, the process flow for fish protein, shrimp shells, crab shells, and green crab backs).) Bio-Oregon's goal is to utilize as close to 100% of the organic matter as possible to turn into useful product, thus minimizing waste and maximizing economic utility of a natural resource. (Occhipinti Decl. ¶ 3.)

Because the Facility operates in a special space in the seafood processor industry—and further because the Facility processes almost entirely Pacific whiting, shrimp, and crab shells—the Facility's operations are substantially different from other seafood processors and even other fish meal plants. Some major differences are as follows:

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- Fish matter processed by the Facility are substantially less oily than those of other processors. For instance, many fish meal processors around the country process menhaden or anchovy fish, which are considered "oily" fish. Pacific whiting fish processed by the Facility, in contrast, carry just 2% of the oil content of menhaden and anchovy. (Humphries Test.; DeWitt Test.).
- Unlike a traditional fish meal plant, the Facility does not process whole fish. Rather, the Facility receives fish carcasses that have already been scraped for fish meat. (*Id.*) As a result, the Facility uses different cooking, deboning, dewatering, drying, and other processes than a traditional fish meal plant. (*Id.*)
- The Facility produces a different product than other fish meal processors. The Facility does not produce fish meal, but rather high-end, high-protein, low ash, high digestibility products. (*Id.*) The Facility does not use metals in its processes. (*Id.*)
- Unlike traditional fish meal plants, the Facility does not own and operate a solubles plant. (Hammer Test.)

The Facility has three discharge pipes that carry wastewater from the Facility, called "effluent," into Mile 7 of the Columbia River (which is right near the mouth of the Columbia River to the Pacific Ocean). (A2 at 6–8.) The Facility's discharge pipes are called "outfalls," named "Outfall 001," "Outfall 002," and "Outfall 003." (*Id.*; *see also* A2 at 6–7.) Each outfall discharges effluent from different parts of the Facility. Outfall 001 discharges boiler blowdown and stormwater; Outfall 002 discharges seafood processing wastewater and stormwater; Outfall 003 discharges effluent from the Facility's air scrubber (which takes water from the Columbia River, runs it through Bio-Oregon's scrubber machine for odor control, and later discharges it). (*Id.*)

B. NPDES Permits

Because Bio-Oregon must discharge effluent into receiving water, the company needs to obtain an NPDES permit to lawfully continue operating the Facility. NPDES Permits are a function and requirement of the Clean Water Act of 1972 ("Clean Water Act," "Act," of "CWA"). *See* 33 U.S.C. § 1311(a) (1982). The Clean Water Act requires that, for a facility to lawfully discharge effluent into a receiving body of water that is considered a "pollutant"

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under the Act, the facility must be permitted to do so by an appropriate regulatory body, subject to appropriate "effluent limitations."

The Clean Water Act imposes "effluent limitations" through two main programs. The first program concerns water-quality based limitations, which are based on the actual amounts and kinds of pollutants contained in effluent water itself. *See* 33 U.S.C. §§ 1312, 1313. The second program concerns technology-based standards, which are based on the amount of pollution reduction that available technology can achieve. *See* 33 U.S.C. §§ 1311(b), (e), 1314(b). In addition to these limitations, the Clean Water Act also sets requirements that facilities monitor their effluents for potential pollutants. *See id.* §§ 1314, 1318, 1342(a)(2).

NPDES permits enforce these federal requirements in addition to applicable state requirements. 33 U.S.C. § 1342(a)(1), (b)(3). Permits are issued only so long as the point source meets all applicable effluent limitations. *Id.* § 1342(a)(1). Permit writers may rely on national standards to set effluent limitations in NPDES permits; however, if no national standards exist for a particular category of limit or industry, a permit writer must use, on a case-by-case basis, "best professional judgment" to impose "such conditions as the permit writer determines are necessary to carry out the provisions of [the Clean Water Act.]" *Id.*

C. Bio-Oregon's Prior NPDES Permits

Historically, the Facility has held a series of NPDES permits for wastewater discharge between 1968 and 2007, all which were significantly different from the Permit here. (*See* Permit Fact Sheet at 7.) Bio-Oregon's first permit was issued in 1968 (before the NPDES program began) by DEQ's predecessor, the Oregon Sanitary Authority. (A2 at 7.) That permit was eventually renewed under the NPDES program in the 1970s. Those permits included limits for only flow and pH. (*Id.*)

For the next several decades, Bio-Oregon timely renewed its NPDES permits, and DEQ continued to impose limits for only flow and pH. (*Id.*) Bio-Oregon substantially

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expanded its facility in 1988 and, as a result, DEQ issued a Permit Action Letter in 1993 requiring some additional monitoring concerning Bio-Oregon's new technology. (*Id.*) DEQ did not require additional limits at that time. *(Id.*) Bio-Oregon satisfactorily monitored its effluent for years in accordance with DEQ's specifications. It eventually became clear that Bio-Oregon's new technology was not discharging types and levels pollutants that were of concern, so DEQ ultimately relieved Bio-Oregon of the monitoring requirements. (*Id.*) Bio-Oregon continued renewing NPDES permits, and DEQ continued limiting Bio-Oregon's Facility for only flow and pH. (*Id.* at 7–8.)

Bio-Oregon's most recent NPDES permit was issued in 2007. (A2 at 8.) Like previous permits, the 2007 NPDES permit included only limits for flow and pH. It did not impose limits for other parameters. (*Id.*; Wentworth Decl. Ex. 1 at 2.)

D. Bio-Oregon Timely Applied for a Renewed NPDES Permit and Submitted, as Required by DEQ Rules, a Third-party Scientific Report of its Facility

In 2012, Bio-Oregon timely prepared to reapply for a renewed NPDES permit. A requirement of reapplication was that Bio-Oregon obtain third-party testing of the contents of the Facility's effluent for any pollutants that were believed to present. In previous application submissions (including in 2007), Bio-Oregon represented to DEQ that it did not believe many pollutants were located in the Facility's effluent, and that Bio-Oregon had not materially changed its process by 2012; nonetheless, DEQ inappropriately directed Bio-Oregon, in its 2012 application, to test for various new pollutants, including metals. (A7.) In compliance with DEQ's directives, Bio-Oregon collected effluent samples and contracted with Columbia Analytical Services (Columbia) to analyze the tests.

Columbia performed its analysis in August 2011 and completed its report (the "2011 Analytical Report" or "Analytical Report") on August 29, 2011. (A8.) Columbia analyzed four samples of effluent from each of the Facility's three Outfalls, analyzing twelve samples

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in total. (*Id.*) Columbia analyzed each sample for potential pollutants and produced the results in the final Analytical Report. (*Id.*)

The Analytical Report indicated that some substances were detected in some samples of the Facility's effluent, including fecal coliform bacteria in all Outfalls, total zinc and total copper in all Outfalls, total thallium in Outfalls 001 and 002 (but in just one of four samples for each Outfall), total mercury in Outfall 001 (in just two of four samples of Outfall 001), and some trace oils, grease, salts, acidity, cyanide, and suspended solids in various samples. (A8 at 15–20, 34–35, 50–54, 69–75, 90–95). For many substances—like mercury detected in the effluent of Outfall 001—the amount of substance detected was so small that it was at or near the very detection limit at which the lab equipment could measure. (A8 at 15, 69). Many samples collected failed to reliably detect these substances altogether. (A8 at 15–17, 50–52, 69–75, 90–92, 94–95).

Even though Columbia's final Analytical Report included a boilerplate assurance that Columbia's "analyses were performed consistent with [Columbia's] quality assurance program" and "samples were received in good condition and consistent with the accompanying chain of custody form," (A8 at 1, 5, 21, 36, 40, 55, 59, 76, 80, 96, 111), Bio-Oregon observed several irregularities that caused Bio-Oregon to question the reliability of the Analytical Report. For instance, some of the sampling results did not meet the minimum requirements of reliability as defined in 40 CFR Part 136, as reflected by the analytical reports provided to DEQ in 2011. (A8; 03/02 Wentworth.) Moreover, many test results showed quantities of substances at the minimum threshold of capable detection, putting such results at the threshold of reliability. (Hammer Test.) Columbia also noted high salt and solids content in many samples, requiring Columbia to compensate by drastically diluting many samples as it performed the tests. (A8 at 5, 40, 59, 80).

The Analytical Report also contained case narratives that undermined the reliability of data collected. Among the most alarming deficiencies were narratives reflecting that

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"there was no QA/QC analysis performed" for some samples and that "there was a method blank that was not analyzed." (03/02 Wentworth.) It was thus impossible for Bio-Oregon or DEQ to verify that "samples were collected properly" and "were analyzed within the standard deviations that were allowed for an accredited lab." (*Id.*) This was especially concerning, given the extremely high sensitivity of some tests and the extremely trace amounts of metals being tested. For example, Columbia tested for mercury—a metal found in trace amounts literally everywhere in the world—by seeking to detect quantities that were fractions of millionths of a gram. (*E.g.*, A8 at 15 (testing for ug/L)). Such trace amounts of mercury could potentially exist on even the disposable gloves worn to collect samples; thus, contamination was a real risk. (03/02 pm Wentworth.) As the Analytical Report lacked narratives demonstrating reliability on such matters, the findings of the Analytical Report were not reliable, especially concerning metals testing.

In preparing and completing the 2011 Analytical Report, other sources of water or other parts of the Facility's processes were not analyzed. For instance, although trace metals were detected in some of the Facility's effluent, the Facility's intake water from municipal sources was not analyzed to determine if that water contained the same quantity of substance as it flowed into the Facility (before later becoming effluent). (*See* A8.) Nor were any samples collected or analyzed of Bio-Oregon's equipment or processes inside the Facility. (*See id.*) Such testing would have provided valuable context for Bio-Oregon to understand the sources of such pollutants, since metals are not added, manufactured, or otherwise used in processing activities at the Facility.

E. NPDES Permit No. 101804

Bio-Oregon timely submitted its application for a renewed permit on May 18, 2012. (A1 at 1.) Nine years after Bio-Oregon timely applied for a renewed permit in 2012, DEQ issued a draft proposed version of the Permit. DEQ issued the final Permit nearly ten years after Bio-Oregon submitted its application, on February 17, 2022. (A1.)

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In Bio-Oregon's view, the Permit represents sweeping overreach by DEQ—especially as to the unprecedented, improperly developed, and unreasonably stringent technology-based effluent limits ("TBELs") and the unreasonably stringent metals limits imposed by the Permit (among other limits).

For the first time in the Bio-Oregon's 70-year history, DEQ imposed TBELs based on a series of fish meal effluent limitation guidelines ("ELGs") developed by EPA almost one-half a century ago, in 1975, based on effluent data from facilities entirely different from Bio-Oregon that process menhaden fish on the Gulf and Atlantic Coasts and anchovy on the West Coast, *see* 40 CFR § Part 408, Subpart O ("Fish Meal ELGs" or "Fish Meal ELG regulations"). (Permit Fact Sheet at 16–17.) DEQ also purported to conduct a case-specific, best professional judgment ("BPJ") analysis of Bio-Oregon's processing of shrimp and crab shells to create TBELs specific to those processes—however, DEQ ultimately concluded that the Fish Meal ELGs applied to shrimp and crab because the products and processes were "similar enough" to those described in the Fish Meal ELGs (raising questions about the legitimacy of DEQ's case-specific analysis). (A2 at 18.) DEQ performed n*o true BPJ analysis whatsoever* to Bio-Oregon's processing of shrimp and crab shells, contrary to law. (*Id.*) DEQ then used these ELGs to create unprecedented and unreasonable TBELs for BOD_5, TSS, and oil/grease, with which Bio-Oregon cannot realistically comply.

The Permit also includes unprecedented limits for metals (copper, mercury, zinc, thallium) and related monitoring requirements for metals and VOCs. (*See* Permit at 7–9). The Permit sets average monthly and daily maximum limits for the metals found in the effluent of each Outfall, along with the requirement to adopt a "Mercury Minimization Plan" ("MMP") and to monitor effluent for various substances. (A1 at 4–6, 11–17; Brandstetter Test.)

Schedule A of the Permit also establishes unprecedentedly stringent effluent limits for enterococcus bacteria for each Outfall, which DEQ has never so applied previously. (A1 at 4–6.) Relatedly, Schedule C of the Permit required Bio-Oregon to complete feasibility

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studies to identify treatment options for enterococcus bacteria by March 1, 2024; select a treatment option by June 1, 2024; and achieve compliance with the enterococcus bacteria effluent limits by October 1, 2026. (*Id.* at 23.) Schedule B of the Permit further requires Bio-Oregon to perform unreasonable weekly and monthly testing for enterococcus. (*Id.* at 11–17.) All these limitations came as a surprise to Bio-Oregon, given that (1) DEQ's application of the enterococcus limits reflected a fundamental change in how DEQ has interpreted and applied its bacteria regulations, without any clear or stated reason for the change, and (2) Bio-Oregon was never even tested for enterococcus (it was tested only for fecal coliform), such that the limits lacked any basis in evidence.

The Permit also sets unprecedented thermal load limits for the aggregate discharge from the three Outfalls at a monthly average of 55 million kcal/day. (A1 at 6.) Because DEQ set the Permit thermal load limit as a monthly average, the Facility can exceed the WLA on a daily basis so long as the monthly average meets the WLA limit. (Burkhart Test.) The Permit set daily maximum temperature limits of 35.6°C for Outfall 002 and 32°C for Outfall 003. (A1 at 5–6.) Bio-Oregon did not object to these maximum temperature limits for the Outfalls. (Burkhart Test.)

Finally, the Permit requires Bio-Oregon to monitor (1) Outfall 001's effluent for BOD_5, TSS, oil/grease, ammonia, alkalinity and hardness; (2) Outfall 002's effluent for alkalinity and hardness, and (3) Outfall 003's effluent for BOD_5, TSS, oil/grease, ammonia and alkalinity as CaCO3. (A1 at 11–15.) Bio-Oregon must also monitor effluent for VOCs and cyanide and conduct annual Whole Effluent Toxicity ("WET") testing. (A1 at 8, 20–22.)

F. Bio-Oregon Tried, Unsuccessfully, to Work with DEQ to Revise the Permit

Bio-Oregon found several limits in the Permit to be unreasonable and practically impossible for Bio-Oregon to comply with at the Facility. Bio-Oregon attempted to engage constructively with DEQ about the Permit, both before and after its issuance. (*E.g.*, R004

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(including comments submitted by Bio-Oregon in March and September 2021); 03/01 Feldman Test. (confirming he was aware that Bio-Oregon requested additional time before the contested case hearing to provide additional information about technology-based effluent limitation issues and that DEQ declined to provide that additional time).)

DEQ, however, ignored or rebuffed Bio-Oregon's efforts. (*E.g.*, A3 (identifying roughly 20 categories of critique, for which DEQ made "no changes" in response); 03/02 pm Wentworth Test. (Feldman initially engaged with Bio-Oregon but then reduced communication and the process was characterized by "confusion and inconsistency").) Bio-Oregon was left with no choice but to seek relief through contested case hearing proceedings.

IV. PROCEDURAL FACTS

A. Contested Case Proceedings

Bio-Oregon filed a timely request for hearing to challenge certain conditions of the Permit. Bio-Oregon raised 10 issues:

1. Whether DEQ improperly included limits or set limits too low on total copper, mercury, zinc and thallium for Outfall 001. (Permit Schedules A.1 and C and Table A.1.)

2. Whether DEQ erred in applying OAR 340-041-0009(6) when setting enterococcus bacteria limits in the Permit for Outfalls 001 through 003. (Permit Schedules A.1, A.2, A.3, and C and Tables A.1, A.2, and A.3.)

3. Whether DEQ erroneously applied 40 CFR §§ 408.150 to 408.157 (fish meal effluent limitation guidelines (Fish Meal ELGs)) to develop technology-based effluent limitations (TBELs) for biological oxygen demand (BOD5), total suspended solids (TSS), oil and grease (oil/grease) for Outfall 002, or alternatively, whether DEQ erred in its application of the factors listed in 40 CFR § 125.3(d). (Permit Schedules A.2 and C and Table A.2.)

4. If the Fish Meal ELGs are inapplicable, whether DEQ failed to exercise BPJ in establishing TBELs for Outfall 002 by:

   i. Not engaging in a technical case-by-case analysis;

   ii. Not evaluating the total cost of the application in relation to the effluent reduction benefits; or

   iii. Applying incorrect regulatory factors. 40 CFR § 125.3(c) and (d) and 40 CFR § 401.16. (Permit Schedules A.2 and C and Table A.2.)

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5. Whether DEQ erred in denying an allocation of the thermal load reserve capacity of the Columbia River's total maximum daily load (TMDL) to Bio-Oregon to meet its wasteload allocation (WLA). OAR 340-041-0002.

6. Whether DEQ erred in not providing an intake credit for the thermal load of the incoming water for Outfall 003. OAR 340-045-0105. (Permit Schedules A.4 and C and Table A.4.)

7. Whether DEQ erred in setting heavy metal limits and monitoring requirements for Outfalls 002 and 003 and not providing an intake credit for metals present in the intake water for Outfalls 002 and 003. (Permit Schedules A.2, A.3, A.6 and B.1 and Tables A.2, A.3 and B.1.)

8. Whether DEQ erred in imposing monitoring requirements at Outfalls 001 and 003 for BOD5, TSS, oil/grease, ammonia, alkalinity and hardness and at Outfall 002 for alkalinity and hardness. (Permit Schedules B.3, B.4 and B.5 and Tables B.2, B.3, and B.4.)

9. Whether DEQ erred in imposing monitoring requirements and at the scheduled frequency rate for volatile organic compounds (VOCs) and cyanide. (Permit Schedule B.9 and Tables B.8 and B.9.)

10. Whether DEQ erred in imposing whole effluent toxicity (WET) testing requirements at Outfalls 001 through 003. (Permit Schedule B.11, Tables B.10, B.11 and B.12.)

DEQ moved for summary determination on all issues raised by Bio-Oregon. On February 9, 2023, ALJ Kate Triana issued a Ruling on Motion for Summary Determination ("MSD Ruling"). In the MSD Ruling, ALJ Triana denied each of DEQ's motions for summary determination. The matter proceeded to contested case hearing on February 28 and March 1–3, 2023 before a different ALJ—ALJ Rackstraw.

ALJ Rackstraw held the contested case hearing from February 28 through March 3, 2023 by video-conference. Ms. Chase represented Bio-Oregon. Ms. Lloyd and Ms. Saylor represented DEQ. Testifying on behalf of DEQ were:

- Tiffany Yelton-Bram, DEQ water quality source control section manager for the northwest region;
- David Feldman, DEQ senior NPDES permit writer;
- Erich Brandstetter, DEQ senior permit policy consultant;
- Aron Borok, DEQ water quality variance specialist;

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- Robert Burkhart, DEQ senior water quality analyst; and
- Jeffrey Linzer, DEQ senior NPDES permit writer.

Testifying on behalf of Bio-Oregon were:

- Dan Humphries, who has more than 40 years of experience working at the Facility and has been the general manager of the Facility for the last 15 years. He drew upon his extensive knowledge about the Facility's operations and processes in his testimony.
- Dr. Christina DeWitt, PhD, is the Interim Director for the Coastal Oregon Marine Experient Station, and the Director of the Seafood Research and Education XCenter that is part of the Coastal Oregon Marine Experient Station in Astoria. She obtained her PhD in Food Science and Technology from Oregon State University in 2000. Her food science research focuses on seafood, including Pacific whiting. (*See also* R014 (DeWitt CV).)
- Steven Hammer, PE, Steven Hammer is the Principal Engineer at SLR Consulting who focuses primarily on wastewater discharge permitting, wastewater treatment engineering, and similar projects. He has been assisting clients with NPDES permit issues for more than 20 years and working with Bio-Oregon on their renewal of this Permit since 2011, including providing environmental engineering services in connection with this Permit. (*See also* R007.)
- Amy Wentworth, the Director of Environmental Health and Safety at Pacific Seafood. In that role, she manages environmental compliance at Bio-Oregon's Facility.

After four days of oral argument and the parties' presenting extensive live testimony, the evidentiary record closed on March 3, 2023. On April 12, 2023, Bio-Oregon filed an Initial Closing Memorandum and DEQ filed a Closing Brief. On April 26, 2023, Bio-Oregon filed a Responsive Closing Memorandum and DEQ filed a Closing Reply Brief. The record closed on April 26, 2023, after the receipt of the final closing briefs.

On August 15, 2023, OAH reassigned the matter to ALJ Samantha Fair after ALJ Rackstraw became unavailable to write the proposed order. The record does not disclose why ALJ Rackstraw became unavailable and Bio-Oregon does not know why the ALJ who

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presided over the hearing did not issue the resulting decision. From publicly available sources, including the Oregon State Bar Directory, it appears that ALJ Rackstraw continues to work as an ALJ for OAH, even today. ALJ Fair purported to have reviewed the record in its entirety; she prepared the Proposed and Final Order.

B. ALJ's Proposed and Final Order

The ALJ issued the Proposed and Final Order on October 17, 2023. In blanket fashion, the ALJ rejected all of Bio-Oregon's arguments and objections and affirmed all provisions of the Permit. Bio-Oregon now objects to many findings and conclusions within the ALJs Proposed and Final Order.

V. EXCEPTIONS AND PROPOSED ALTERNATIVE FINDINGS OF FACT

A. Legal Standards

Oregon law prohibits DEQ from taking final action that erroneously interprets a provision of law or goes outside the range of discretion delegated to DEQ by law. ORS 183.482(8)(a)–(b). Oregon law also prohibits DEQ from taking final action that is inconsistent with an agency rule, an officially stated agency position, or a prior agency practice to the extent the inconsistency is not explained. ORS 183.482(8)(b).

DEQ further may not take action unsupported by substantial evidence. ORS 183.482(c). Action is supported by substantial evidence if "the record, viewed as a whole, would permit a reasonable person to make that finding." ORS 183.482(8)(c). As part of the substantial evidence review, the court must review the Commission's Order for substantial reason—"'that is, we determine whether the [agency] provided a rational explanation of how its factual findings lead to the legal conclusions on which the order is based."' *Bandon Pac., Inc. v. Envtl. Quality Comm'n*, 273 Or App 355, 362, 359 P3d 394, 398 (2015) (quoting *Arms v. SAIF*, 268 Or App 761, 767, 343 P3d 659 (2015)).

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B. Objections to Findings of Fact

Pursuant to OAR 340-011-0575(4)(a), Bio-Oregon objects to the findings of fact in the ALJ's Proposed and Final Order, as represented in full in the Appendix, which Bio-Oregon incorporates herein.

C. Objections to Conclusions of Law

Pursuant to OAR 340-011-0575(4)(a), Bio-Oregon objects to the conclusions of law in the ALJ's Proposed and Final Order, as represented in full in the Appendix, which Bio-Orgon incorporates herein.

VI. ARGUMENT

A. Technology-Based Effluent Limitations ("TBELs") (Issues 3, 4)

The Permit imposes unprecedented and unreasonably stringent TBELs that are inconsistent with law, DEQ's discretion and past practices, and are not supported by substantial evidence and reason. The Permit would impose TBELs from, purportedly, two categories effluent limit guidelines ("ELGs"). The first category of ELGs is pre-set by EPA for regulating, specifically, menhaden fish meal facilities on the Gulf and Atlantic Coasts and anchovy fish meal facilities on the West Coast. DEQ imposed these TBELs based on Bio-Oregon's processing of organic matter from Pacific whiting fish, which DEQ determined to be like anchovies and menhaden. The second category of ELGs was purportedly derived from DEQ's case-specific, BPJ analysis of Bio-Oregon's methods of processing shrimp and crab shells at the Facility.

Bio-Oregon objects to DEQ's imposition of each category of ELGs. As discussed below, it was improper for DEQ to rely on EPA's anchovy and menhaden Fish Meal ELGs to set TBELs for Bio-Oregon, which processes neither anchovies nor menhaden. DEQ also failed to conduct a sufficient and reasonable case-by-case analysis to determine case-specific ELGs for Bio-Oregon's shrimp and crab shell processes. Bio-Oregon addresses each issue below in turn.

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1. ELGs based on Bio-Oregon's processing of Pacific Whiting

For certain industries, EPA has analyzed the specific processes and technologies available to stakeholders in those industries and created "effluent limitation guidelines" ("ELGs"), which state regulators may use to efficiently set appropriate TBELs for those stakeholders in such industries. (*See* A5 at 84–85 ("[EPA] establishes national effluent guidelines for a specific industrial sector by regulation after considering an in-depth engineering and economic analysis of the industrial sector. * * * [The] entire process involves data collection, rigorous data review, engineering analysis, and public comment.").). EPA's ELGs are highly specific to a particular industry and location of that industry and based on data particular to that industry. Where EPA has not analyzed and set ELGs for a particular industry, state regulators are required to do a case-specific analysis of those industries and their facilities in their state to set appropriate TBELs. (A5 at 81 ("Without applicable effluent guidelines for the discharge or pollutant, permit writers must identify any needed TBELs on a case-by-case basis[.]"); Feldman Test.)

As noted, EPA has created ELGs for the specific industries that process menhaden on the Gulf and Atlantic Coasts and anchovies on the West Coast. To create these ELGs, EPA in 1975 collected data related to industries that process menhaden fish meal on the Gulf and Atlantic Coasts and anchovy fish meal on the West Coast. EPA analyzed those data and created ELGs for those specific industries in those regions. (A16 at 26, 66, 91–95). EPA codified those ELGs into 40 CFR Part 408, Subpart O (§§ 408.150–157). State regulators may accordingly use 40 CFR Part 408, Subpart O to efficiently set TBELs for facilities in their states that process anchovy fish meal or menhaden fish meal in the appropriate regions without having to independently derive new ELGs for those specific industries. (Linzer Test.)

It is undisputed that Bio-Oregon's Facility does not process anchovies or menhaden, nor is Bio-Oregon's Facility located on the Gulf or Atlantic Coasts. (*See* A2 at 18; PFO at 5, ¶ 2.). Bio-Oregon processes Pacific whiting, for which EPA has not promulgated any ELGs.

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Because EPA has not created applicable ELGs for Bio-Oregon's processes, DEQ should have set TBELs for Bio-Oregon based on a case-specific ELGs for the Facility. But rather than do a case-specific analysis for Bio-Oregon's Pacific whiting processes, DEQ took a shortcut by applying EPA's anchovy and menhaden ELGs to set TBELs for these processes. As explained below, this was error for multiple reasons.

a. The EPA's Fish Meal ELGs do not apply to Bio-Oregon's processing of Pacific Whiting as a matter of law.

DEQ's unprecedented application of EPA's menhaden and anchovy ELGs to Bio-Oregon is an incorrect application of law and abuse of DEQ's discretion. In applying ELGs to calculate TBELs in NPDES permits, DEQ must follow any applicable terms of state and federal statutes and regulations. When applying regulations, the regulation's plain terms control. *Safe Air for Everyone v. EPA*, 488 F.3d 1088, 1097 (9th Cir. 2007) (plain meaning of a regulation governs); *see also id.* (citing *Christensen v. Harris County*, 529 U.S. 576, 588 (2000) (agency guidance documents and interpretations "should not be considered when the regulation has a plain meaning").

As noted, EPA's menhaden and anchovy ELGs are codified in chapter 40 of the Code of Federal Regulations ("CFR"), sections 408.150 through 408.157, which unequivocally limit their application to only:

> "discharges resulting from the processing of *menhaden on the Gulf and Atlantic Coasts* and the processing of *anchovy on the West Coast* into fish meal, oil and solubles."

40 CFR § 408.150 (Applicability; description of the fish meal processing subcategory) (emphases added).

Here, the plain terms of 40 CFR § 408.150 unambiguously apply to *only* menhaden and anchovy fish meal. They cannot be reasonably read as applying to other fish meal (let alone Pacific whiting fish meal). Indeed, other sections in Subpart O (sections 408.151–157) repeatedly refer to "menhaden or anchovy fish meal" and not other fish meal. *E.g.*, 40 CFR

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§ 408.152(a), (b). This reading is reinforced by the regulatory history of 40 CFR Subpart O. *See* 40 FR 21, at 4583 (Jan 30, 1975) ("This subpart *is limited to* the major portion of the fish meal processing industry which encompasses the reduction of menhaden and anchovy to meal, oil, and solubles." (emphasis added).) It was therefore improper for DEQ to apply the ELGs in 40 CFR Subpart O to Bio-Oregon.

Despite the plain wording of the regulation, the ALJ affirmed DEQ's application of anchovy and menhaden ELGs, reasoning that, "because the raw fish product and the processes of the Facility were substantially similar to those facilities studied by the EPA * * *, DEQ appropriately applied the Fish Meal ELGs to the Facility. *See* 40 CFR § 125.3(c)(1)." (PFO at 29). This was error. Nothing in 40 CFR Subpart O, or 40 CFR § 125.3 (cited by the ALJ), authorizes DEQ to apply the menhaden and anchovy ELGs to other industries, even where "the raw fish product and the processes of the Facility were substantially similar to" menhaden and anchovy fish meal processes. By concluding that DEQ could apply 40 CFR Subpart O to Bio-Oregon merely because Bio-Oregon's processes were "substantially similar," the ALJ effectively added words to the regulation in contravention of law.

Because DEQ contravened the law and exceeded its authority in applying EPA's menhaden and anchovy EGLs to Bio-Oregon, the EQC should strike the TBELs based on those ELGs from the Permit.

b. Even if the Fish Meal ELGs could be applied, DEQ's decision to apply them to Bio-Oregon's processing of Pacific whiting is not supported by substantial evidence.

Even if 40 CFR § 408.152(b) allowed for EPA's menhaden and anchovy ELGs to apply to other industries, it was still error for DEQ to apply them to the Facility, given the many key differences between Bio-Oregon's Pacific whiting processes and the menhaden and anchovy processes regulated by EPA. DEQ applied the menhaden and anchovy ELGs primarily based on its determination that "the same basic equipment and process steps

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yielding wastewater with the same conventional pollutants in similar concentrations and treatability as are found today by Oregon fish meal processors." (A2 at 17.) That factual conclusion is wholly unsupported by the evidence in the record.

There are many fundamental differences between anchovy and menhaden processes and Bio-Oregon's unique methods of processing Pacific whiting. Such differences encompass both the characteristics of Bio-Oregon's inputs (both in condition and species) and the processes used to create fish meal. As both Mr. Humphries and Ms. DeWitt testified, the nature of the fish that arrive at traditional facilities is fundamentally different from the nature of fish that arrive at the Bio-Oregon's Facility. Bio-Oregon's Facility does not process whole fish—instead, it receives fish that has already been filleted and gutted. As such, enzymes in the fish are already breaking the fish down, leading to significantly different scientific properties in Bio-Oregon's input fish compared to menhaden and anchovy facilities (which input whole fish). (03/01 pm Humphries Test; 03/01 pm DeWitt.) It is not reasonable to conclude that the degree of effluent reduction attainable at the Facility would be comparable to that at a facility that starts with whole fish. (03/01 pm DeWitt Test.)

Further, as Mr. Hammer and Mr. Humphries testified, the processes and equipment used at the Facility is fundamentally different from those at a traditional fish meal plant. As just a few examples: (1) the cooking technique used is different, (2) the deboning technique is different, (3) the dewatering technique is different, (4) the drying technique is different. (03/01 pm Humphries Test.) DEQ's counsel reviewed the process steps described in the Permit Fact Sheet (A2 at 80), and Mr. Humphries confirmed that the majority of the process steps listed (including several that DEQ had concluded apply to the Facility) were wholly inapplicable. (*Id.*) Also, unlike a traditional meal plant, the Facility can run at high volumes and then "turn down" operations and run on small volumes. (*Id.*) That year-round operation, with intense seasonal variation, is different from a traditional fish meal plant, which can only run at very high volumes and is not capable of starting and stopping throughout the year to

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process smaller volumes of material. (*Id.*) And the end product produced is also fundamentally different—it contains different protein levels and the Facility's product is not a commodity fish meal. (*Id.*; *see also* R006 at 6 (SLR TBEL Development Report).)

In addition, the fish species (anchovy and menhaden) evaluated by EPA have significantly different characteristics than the leftover fish (predominantly Pacific whiting) that the Facility processes. Unlike anchovy and menhaden, Pacific whiting is not an oily fish species—it is a lean fish species. (03/01 pm DeWitt Test.) As a result, its enzymes are particularly "problematic" from a food processing standpoint—they break down quickly, and they are water soluble. (*Id.*) Because of the aggressiveness of the enzyme that is in the muscle of Pacific whiting, the enzymes become solubilized in the water in a way that is going to be "very difficult to remove from the waste stream." (*Id.*) As a result, it would be much harder to treat the Facility's effluent for removal of BOD_5 and TSS than it would be to treat effluent from a facility that processes whole menhaden or anchovy. (*Id.* (more soluble proteins expected from Pacific whiting, and more soluble proteins expected from species that is already ground than a species that is processed whole; such proteins will be difficult to remove). In addition, as a result, the wastewater flow and characteristics from the Facility are "significantly different than the wastewater described by the EPA" in developing the Fish Meal ELGs. (R006 at 13; 3/02 am Hammer.)

For all these reasons, it was not reasonable for DEQ to conclude that Bio-Oregon's processes were substantially like facilities that process menhaden or anchovy fish meal. DEQ's application of EPA's menhaden and anchovy ELGs to Bio-Oregon's Facility was unreasonable, not supported by the evidence, and outside DEQ's discretion. EQC should strike DEQ's TBELs in the Permit based on those ELGs.

2. ELGs based on Bio-Oregon's processing of shrimp and crab shell

While DEQ applied menhaden and anchovy ELGs for Bio-Oregon's processing of Pacific whiting, DEQ recognized that EPA had created no ELGs for shrimp and crab shells.

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Accordingly, DEQ purported to perform a case-by-case analysis of Bio-Oregon's shrimp and crab shell processes to set appropriate case-specific ELGs. As explained below, however, DEQ's case-by-case analysis was insufficient and, indeed, essentially nonexistent.

To perform an appropriate case-by-case analysis under 40 CFR § 125.3(c)(2), DEQ must conduct a thorough and reliable analysis that considers several factors specific to Bio-Oregon. DEQ must consider factors specific to Bio-Oregon's processes, including the "process employed," any applicable "process changes," the "age of equipment and facilities involved." 40 CFR § 125.3(d)(1). DEQ must also consider what technologies are available to Bio-Oregon and feasible for Bio-Oregon to use, the "appropriate technology for" Bio-Oregon "based upon all available information," the "total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application," the "engineering aspects of the application of various types of control techniques," and any "[n]on-water quality environmental impact (including energy requirements)." 40 CFR § 125.3(c)(2)(i), (d)(1). DEQ must also consider, as a catch-all, "[a]ny unique factors relating to" Bio-Oregon. 40 CFR § 125.3(c)(2)(ii).

Despite these requirements, DEQ failed to perform a proper case-by-case analysis of Bio-Oregon's Facility. As presented in the Fact Sheet (A2), DEQ purported to evaluate six applicable regulatory factors required by 40 CFR § 125.3. However, as shown by the Fact Sheet, DEQ's evaluation of those factors is perfunctory at best. Moreover, DEQ failed soundly evaluate "[t]he process employed" by Bio-Oregon's Facility. 40 CFR § 125.3(d)(1)(iii). DEQ relied heavily on a comparator chart developed by DEQ in comparing Bio-Oregon's Facility to other fish meal facilities. (A2 at 80.) That chart, however, inaccurately describe the processes at the Facility. (*See* 03/01pm Humphries Test.) In general, traditional fish meal plants do not process shells as Bi-Oregon does. (03/01pm Humphries Test; *see also* R006). Bio-Oregon's processes were described in depth by Mr.

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Humphries (who manages the Facility and has for years) and Mr. Hammer, including in his TBEL Development Report (R006).

DEQ also failed to sufficiently consider technologies available and feasible to Bio-Oregon. Rather than conduct due diligence by considering "appropriate technology" that was feasible for specifically Bio-Oregon "based upon all available information," 40 CFR § 125.3(c)(2)(i), DEQ relied on EPA's ELG Development Document in considering appropriate technologies and, based on that document, determined that "good housekeeping practices" were sufficient to significantly reduce effluent without significant cost. (A2 at 75; see also 03/01 am Linzer ("We relied on EPA's cost analysis development documents as well as the ELG development document").)

Assuming the ELG Development Document could be applied to the Facility at all, Mr. Hammer explained that DEQ's application of the ELG Development Document was erroneous in at least two ways. First, DEQ took the position that "good housekeeping"—which "consists of educating the plant personnel to use good water conservation and solids handling practices"—would reduce pollutant loading of certain parameters by 95%. (A2 at 75.) However, this was a misreading of the ELG Development Document, which actually says that good housekeeping (for a facility with a solubles plant, which Bio-Oregon does not have) would only reduce BOD pollutant loading by 5%. (A16 at 400, Table 152.) Indeed, this appears to be the only issue about which the ALJ disagreed with DEQ. The ALJ ultimately entered a finding of fact consistent with the ELG Development Document, not DEQ's reading of it. (PFO at 17 ¶ 59.)

Second, the ELG Development Document provides that good housekeeping practices are the recommended treatment technology for facilities with a solubles unit. (A16 at 29.) The Facility undisputedly has no solubles unit, so that recommended treatment technology is inapplicable.

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Notably, Mr. Hammer provided these and other critiques to DEQ back in 2021 regarding DEQ's proposed TBELs. (Hammer Test.; R004.) Mr. Hammer even proposed a more thorough and compliant TBEL development process. (*Id.*) DEQ, however, did not revise the Permit in response to that feedback. (R004 at 22–25.) At the contested case hearing, Mr. Hammer testified about his TBEL Development Report, which outlines what an appropriate methodology would look like for development of a site specific TBEL using BPJ through the process outlined in federal law. (R006 at 6.)

After completing its purported case-by-case analysis to create case-specific ELGs for shrimp and crab shells, DEQ reached a conclusion that was a striking coincidence: the appropriate ELGs for shrimp and crab shells just so happened to be "the same ELGs to apply to the concentrated fish protein processing" which DEQ had derived from EPA's menhaden and anchovy ELGs for Bio-Oregon's Pacific whiting. Surely, this result calls into question the sincerity and validity of DEQ's purported case-by-case analysis of Bio-Oregon's shrimp and crab shell processes.[2]

Rather than rely on data from the Fish Meal ELG development process in the 1970s, DEQ should have developed authentic case-specific TBELs for Bio-Oregon's shrimp shell, green crab shell, and dehydrated crab shell processes. (R004 at 27; R006 at 8 (shrimp shell, crab shell, and green crab back processes "do not have representative ELGs published by EPA"); *see also id.* at 8–9 (not reasonable to assume that liquids produced by these operations is the same as that produced in the fish protein process or that it could be treated with a solubles plan, nor is it reasonable to assume a solubles plant could be feasibly operated at the Facility).) In contrast, Bio-Oregon's environmental consultant Steve Hammer presented an example of what an appropriate TBEL analysis would look like, following the

[2] To the extent it reflects that DEQ in fact applied EPA's menhaden and anchovy ELGs to shrimp and crab shells, this was legal error for the reasons discussed above.

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EPA Permit Writer's manual methodology. (R0006; *see id.* at 13–14.) DEQ should have adopted Mr. Hammer's proposed TBEL analyses and TBELs instead.

3. DEQ failed to adequately consider available technologies

Finally, in using the above ELGs to create appropriate TBELs for Bio-Oregon, DEQ failed to consider appropriate technologies, technology alternatives, and technology costs and effectiveness for reducing the Facility's pollutants. As noted, DEQ concluded primarily that just "good house-keeping" would be appropriate to achieve DEQ's unreasonably stringent TBELs, capable of reducing pollutants by 95%. (A2 at 75.)

Notably, the ALJ rejected this suggestion, finding that "good housekeeping" would reduce pollutants by only 5%, not 95% as suggested by DEQ. (PFO at 17 ¶ 59.) That is not a small difference, and DEQ's serious error—apparently acknowledged by the ALJ—undermines to a significant degree the use of the Fish Meal ELGs in developing TBELs.

One might reasonably wonder how the ALJ could have upheld the Permit's TBELs despite DEQ's serious mistake. The answer is that she compounded the mistake with an error of her own: rather than requiring DEQ to offer additional feasible technological alternatives, the ALJ improperly shifted the burden of finding technological alternatives to Bio-Oregon. The ALJ found that, "to address the more stringent requirements under the current permit, Bio-Oregon will need to consider more effective treatment measures than the minimal measures the Facility currently utilizes." (PFO at 24.) In response to Bio-Oregon's evidence that no such technologies were available, affordable, and effective, the ALJ found Bio-Oregon's position "unpersuasive" and reasoned that "there was no evidence of any studies that demonstrated such measures" as screening, filtering, and "dissolved air flotation process[es]" commonly used in the industry "would be ineffective." *Id.* The ALJ also suggested that other facilities that processed fish meal "would barge their stickwater to prevent excessive pollutants from entering the plant's effluent." *Id.*

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This gets the proper legal analysis exactly backwards. EPA's regulations require *DEQ*, not Bio-Oregon, to consider the availability, cost, and effectiveness of treatment technologies in setting TBELs. 40 CFR § 125.3. Bio-Oregon does not bear the burden of determining whether available, feasible, and effective treatment measures exist. But by reasoning that *Bio-Oregon* had failed to sufficiently prove the negative that no other technologies were available, DEQ and the ALJ effectively shifted the burden of finding appropriate technologies to Bio-Oregon. Thus, both DEQ's and the ALJ's analysis of available technologies is a legally incorrect application of EPA's TBEL requirements.

This improper shift of burden violates the law and exceeds DEQ's legal authority and discretion. And without evidence from DEQ that technologies exist that are available, feasible, and effective to allow Bio-Oregon to meet the Permit's TBELs, DEQ's TBELs are not reasonably supported by the substantial evidence and reason. Indeed, the ALJ's suggestion that other technologies may be available appears to be merely a product of the ALJ's free speculation, not evidence in the record. As such, the EQC should strike the TBELs from the Permit.

B. Water-Quality-Based Effluent Limitations (Issues 1, 2, 5, 6, 7)

1. Heavy Metals (Issues 1, 7)

The Permit also imposes unprecedentedly low metal limits for Bio-Oregon's effluents. For Outfall 001, the Permit sets limits for total copper, total mercury, total zinc, and total thallium. For Outfall 002, the Permit sets limits for total copper, total mercury, and total zinc. For Outfall 003, the Permit set limits for total mercury. The Permit further imposes a requirement that Bio-Oregon adopt a Mercury Minimization Plan (MMP), subject to DEQ's review and approval.

These limits are so unreasonably low that they are virtually impossible to monitor and control. For context, the limits imposed for each metal are far below what is considered safe for human consumption in drinking water. (Bio-Oregon's Opposition to DEQ's Motion for

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Summary Determination at 21.) Bio-Oregon has contacted laboratories across Oregon and could not find even one capable of detecting metals at the levels enumerated in the Permit. Because of these unreasonably low limits and virtual impossibility to monitor or control them, the levels in the Permits essentially make it impossible for Bio-Oregon to continue operating.[3]

DEQ imposed the metals limits pursuant to 40 CF § 122.44(d), which require an NPDES permit to include limits to "control all pollutants * * * which the Director 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." DEQ imposed the metals limits in the Permit because DEQ determined that certain metals in the Facility's effluent—specifically, mercury, thallium, zinc, and copper—had a "reasonable potential" to "contribute to an" exceedance of water quality standards merely on account that these metals had been detected in trace amounts in the Facility's effluent.

These limits are improper for several reasons. First, the limits are based primarily on the fact that metals could be merely detected in the effluent of each of the Facility's Outfalls 001, 002, and 003. However, the determination that metals could be detected was, for certain metals, a misreading of data—in fact, those metals *were not* detected in the effluent of some

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[3] Bio-Oregon's parent company, Pacific Seafood, operates seafood processing facilities that are subject to NPDES permits or equivalent wastewater discharge permits across the country (including in Washington, California, and Alaska), in Canada, and in the Gulf of Mexico. Occhipinti Decl. ¶ 4.) None of those seafood processing facilities are subject to heavy metals limits or even monitoring requirements. (*Id.*) Upon receipt of DEQ's proposed Permit, Bio-Oregon set out to find others in the shoreside seafood processing industry to find out what would be needed to comply with the Heavy Metal limits found in the Permit. (*Id.* ¶ 6.) It could not find any other members of our industry in the world who were subject to similar requirements. (*Id.*) Bio-Oregon's understanding is that no other state in the United States, or province in Canada, requires discharge limits or monitoring of metals for shoreside seafood processors like Bio-Oregon. (*Id.*) Despite retaining a full-time environmental engineering firm, and contacting consultants, engineers, and scientists, and researched water treatment technologies, Bio-Oregon has not been able to find any treatment technology or system—cost effective or otherwise—that would allow Bio-Oregon to comply with the Heavy Metal limits of the Permit. (*Id.* ¶ 9.) As it stands today, once the Heavy Metals limits go into effect, Bio-Oregon will not be able to operate the Facility. (*Id.* ¶ 9.)

Outfalls. Moreover, in general, much of the metals data (even if read correctly) is simply too unreliable to justify the imposition of NPDES metals limits. Further, DEQ's determination that the supposedly detected metals had a "reasonable potential" to "contribute to an exceedance" of water quality standards is based on an unprecedented and insufficient analysis that is not consistent with the law and is outside DEQ's discretion.

a. DEQ's misread key data in imposing mercury limits

Some of the metals limits in the Permit are imposed based on a simple misreading of data. DEQ imposed mercury limits for all three of the Facility's Outfalls 001, 002, and 003 based on the determination that mercury had been detected in the effluents of all three outfalls and that, therefore, the effluents of those outfalls had a reasonable potential to contribute to the exceedance of water quality standards in the receiving body of water. (A2 at 30–32; Brandstetter Test.)

DEQ's finding was wrong at least for Outfalls 002 and 003. Properly reading the data collected from those outfalls, mercury was *not detected* in effluent of Outfalls 002 and 003.

The only evidence of mercury testing in this case was the data provided in Columbia's 2011 Analytical Report (represented in the record by Exhibit A8).[4] The 2011 Analytical Report showed that, for each of Bio-Oregon's Outfalls, Columbia collected four samples. To test each sample, Columbia used a method capable of potentially detecting quantities of mercury as low as 0.2 micrograms per liter (ug/L) (that is, 0.2 millionths of a gram per liter of water). (*E.g.*, A8 at 15.) However, the testing process sometimes produced readings that were not scientifically valid enough to reliably detect and indicate the presence of mercury. (*See* Hammer Test.) Where a test could not reliably detect mercury, the result used a marker of either "U" or "ND," next to the reported mercury quantity, to indicate that

[4] DEQ did not perform its own testing for mercury or other metals at the Facility—DEQ relied entirely on the 2011 Analytical Report.

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the quantity of mercury reported was unreliable and that, in fact, mercury could not be reliably detected in that sample.[5]

The test results for mercury produced by Columba were as follows:

Sample	Mercury Result	Marker of Non-Detection?	Citation
Outfall 001, Sample #1	0.2 ug/L		A8 at 15
Outfall 001, Sample #2	0.2 ug/L	"U"	A8 at 50
Outfall 001, Sample #3	0.3 ug/L		A8 at 69
Outfall 001, Sample #4	--	"ND"	A8 at 90
Outfall 001, Sample #1	0.8 ug/L	"U"	A8 at 16
Outfall 001, Sample #2	2 ug/L	"U"	A8 at 51
Outfall 001, Sample #3	4 ug/L	"U"	A8 at 70
Outfall 001, Sample #4	--	"ND"	A8 at 94
Outfall 001, Sample #1	0.2 ug/L	"U"	A8 at 17
Outfall 001, Sample #2	0.2 ug/L	"U"	A8 at 52
Outfall 001, Sample #3	0.2 ug/L	"U"	A8 at 71
Outfall 001, Sample #4	--	"ND"	A8 at 91

In short, mercury was detected in *just two* samples for Outfall 001. And for those, *one* of the samples was at the minimum limit detectable by the testing method used, and the other was just 0.1 micrograms per liter above that minimum detectable limit. All other *ten* samples, including all those taken from Outfalls 002 and 003, did not reliably detect mercury.

[5] For unknown reasons, Columbia changed the visual formatting of its test result documents in August 2011, midway through its sampling and testing of the Facility's effluent. In early August 2011, Columbia used the marker "U" to indicate "undetected." (A8 at 38.) By late August 2011, Columbia used the marker "ND" to indicate "Not detected." (A8 at 97.) Columbia also stopped reporting any number reflecting the mercury result whenever using a marker showing that mercury could not be detected. There is no evidence in the record showing these two terms are different; both simply mean that mercury was not reliably detectable in the sample.

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DEQ misread this data and determined that mercury was detected across multiple samples, for all three Outfalls. (A2 at 30–32; Brandstetter Test.) And the ALJ adopted DEQ's misreading when affirming the Permit. The ALJ expressly found that the 2011 Analytical Report showed that, for Outfall 001, the testing showed "two samples at 0.2 ug/L[,] one sample at 0.3 ug/L[,] and one undetected sample"; for Outfall 002, the testing showed mercury "at the reporting limit level on three occasions (0.8 ug/L, 2 ug/L, and 4 ug/L) and undetected on one occasion"; and for Outfall 003, the testing showed "three samples at 0.2 ug/L and one undetected sample." (PFO at 9–10 ¶ 30.)

That was error. The 2011 Analytical Report expressly stated that, when the marker "U" or "ND" appeared next to a test result for a metal, that meant that the metal was not detected in the sample. (A8 at 38 ("U[:] The analyte was analyzed for, but was not detected (Non-detect") at or above the MRL/MDL."); A8 at 97 ("ND[:] Not Detected").) Mr. Hammer explained discussed this testing and marker system at length in his testimony and confirmed that, properly reading the 2011 Analytical Report, the data showed mercury was present in only two of the 12 samples collected, and only in outfall 001. (Hammer Test.)

DEQ never rebutted this testimony (including through its witness, Erich Brandstetter, who discussed the Permit's mercury limitations). DEQ submitted no evidence into the record supporting its alternative interpretation of the data ignoring the well-defined markers of "non-detection." Bio-Oregon's evidence likewise does not support interpreting the 2011 Analytical Report as DEQ did. Thus, there is no evidence whatsoever in the record supporting DEQ's determination and the ALJ's finding that mercury was found to be present in Outfalls 002 and 003. The EQC should correct this misreading and enter the proposed alternative findings of fact. The EQC should further strike the Permit's mercury limits for Outfalls 002 and 003, which lack any support in the record.

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b. Even where DEQ did not misread data in 2011 Analytical Report, it was improper for DEQ to rely on the data because it was unreliable.

Even where DEQ correctly read parts of the 2011 Analytical Report, DEQ nonetheless erred in relying on it to set metals limits in the Permit. Abundant evidence reflects that the 2011 data relied on by DEQ is unreliable.

For one, the only two mercury samples which detected quantifiable mercury in the effluent registered amounts at the minimum (0.2 ug/L) or near the minimum (0.3 ug/L) of the test's capabilities. As Mr. Hammer explained, where the quantifiable amounts of mercury detected are so near the minimum, the results are far less reliable, and one generally should "hesitate" to rely on it.[6] (03/02 am Hammer test.; *see also* A8.) The reliability of these readings was further undermined by DEQ's own witness, Erich Brandstetter, who testified that, "if there are a lot of non-detects, that can affect the analysis," and that, to obtain reliable test results, "the important thing is that you don't get * * * much non-detects." (Brandstetter Test.) Erich Brandstetter repeatedly doubled down on this testimony, once noting that, "if we have a lot of non-detects we'd have a problem." (Brandstetter Test.) Considering both Mr. Hammer's and Erich Brandstetter's testimony together, in combination with a correct reading of the 2011 Analytical Report (which shows 10 out of 12 "non-detects" and two "detects" close to the minimum quantifiable limit), it becomes clear that *all* mercury tests for Outfalls 001, 002, and 003 are too unreliable to reasonably support the mercury limits in the Permit. The EQC should accordingly strike the mercury limits as not reasonably supported by the evidence.

[6] Even though the ALJ that issued the Proposed and Final Order had not observed Mr. Hammer's live testimony at the hearing, she discounted his credibility and testimony on this matter on the basis that his "opinion was not definitive" and he has "no experience in the drafting of NPDES permits." (PFO at 21.) But it is unclear how Mr. Hammer's lack of experience drafting NPDES permits and choice to not speak in absolute terms raises doubts about his ability to, more generally, interpret and discuss the general validity of scientific data (which no party disputed he was eminently qualified to do, and which was all he was doing in discussing the 2011 Analytical Report).

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The 2011 Analytical Report indicates other ways in which the sampling results from 2011 failed to meet the minimum requirements for reliability as defined in 40 CFR Part 136, as explained by Amy Wentworth at the contested case hearing. (*See generally* A8; 03/02 Wentworth Test.) As just one example, the Analytical Reports contained case narratives that undermined the reliability of the data collected, including "that there was no QA/QC analysis performed, there was a method blank that was not analyzed," etc. (03/02 Wentworth.) As a result, it is impossible for Ms. Wentworth or DEQ to verify that "the samples were collected properly," or that "they were analyzed within the standard deviations that were allowed for at an accredited lab." (*Id.*) Ms. Wentworth also explained how the guidance that she received from DEQ's NPDES Permit Writer Emma Pritchard in 2022 connection with permit renewals for Pacific Seafood's other Oregon facilities—including essentially a "clean room" type collection environment—illuminated the risk of background contamination during collection of dissolved metals. (03/02 Wentworth; R19, R20.)[7] Such procedures were not in place in 2011. (03/02 Wentworth.)

DEQ further failed to consider the data from the 2011 Analytical Report for certain parameters, like dissolved copper, arsenic, mercury, zinc. Instead, DEQ had only data for the total recoverable parameters for those same metals. (A2 at 48–58; 03/02 pm Wentworth Test.) The measurements for the dissolved fraction is "almost always lower" compared to the total recoverable amounts of those same metals (03/02 pm Wentworth Test.) But DEQ did not have Bio-Oregon collect that data in 2011: It simply assumed (unreasonably) that the numbers for dissolved would be the same as the total recoverable data that it did have and imposed heavy metals limits based on those inapplicable data and flawed assumptions.

[7] Because the limits at issue are so low, even the disposable gloves worn to collect the samples could have sufficient trace amounts of metals from their manufacture that could contaminate the sample. (03/02 pm Wentworth.)

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Although Bio-Oregon raised these issues with the ALJ, the ALJ did not address many of them. The ALJ merely noted that Columbia included a certificate in the report reflecting that it met Columbia's quality assurance standards (although the ALJ did not explain what those specifically were, notwithstanding that the report clearly identified interferences like salts and solids) and that, based on the ALJ's reading of the report, it did not contain "obvious errors." Without more, this does not establish the scientific reliability of data in the report, nor does it address Bio-Oregon's points above. For all these reasons, DEQ should not have relied on the 2011 Analytical Report, even where DEQ read the report correctly. DEQ's metals limits in the permit (and the ALJ's blanket affirmance of those limits) are not reasonably supported by the evidence.

c. DEQ's "reasonable potential analysis" for methylmercury was flawed, inconsistent with law, and outside of DEQ's discretion.

As noted, DEQ set limits and required Bio-Oregon to adopt an MMP after determining that methylmercury detected Bio-Oregon's effluent had "reasonable potential" of "contributing to the exceedance of water quality standards" in the Columbia River. (A2 at 20–32.) In addition to the above problems with DEQ's finding that the Facility's effluent contains metals, DEQ's analysis and determination that methylmercury had "reasonable potential to contribute to the exceedance of water quality standards" was flawed, legally incorrect, not reasonably based on evidence, and outside DEQ's discretion.

DEQ reached its "reasonable potential" conclusion after performing a "reasonable potential analysis," or "RPA." An "RPA" is a special process recommended by the EPA to determine whether pollutants in effluent have a "reasonable potential" to contribute to exceeding water quality standards in a receiving body of water. DEQ's RPA conducted in this case, however, suffered from numerous problems and was not a proper basis for establishing the metals limits in the Permit. To understand why, it helps to examine DEQ's

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RPA process as compared to EPA's recommended RPA process (which DEQ purported to follow).

The EPA's process for conducting RPAs regarding methylmercury is set out in the EPA's *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*, EPA 823-R-10-001 (Apr 2010), available at https://www.epa.gov/sites/default/files/2019-02/documents/guidance-implement-methylmercury-2001.pdf, which DEQ and its senior permit writer, Erich Brandstetter, purportedly followed. (*See* A12 at 2.) The EPA's recommended RPA process is set out on pages 95 through 99 of the *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*. The EPA recommended process involves several steps:

- **EPA Step 1:** Determine whether any reliably quantifiable amount of metals detectable. *Id.* at 95.
- **EPA Step 2:** If so, examine the existing levels of pollutant in the receiving water (i.e., the river). If levels in the receiving body of water are already near maximum, there may be reasonable potential. If not, proceed to Step 3. *Id.* at 95–96.
- **EPA Step 3:** Consider whether the facility is doing anything to add mercury. *Id.* at 96.
- **EPA Step 4:** If so, establish "appropriate" limitations. *Id.* at 96–99.

DEQ's process, in contrast, omits most of these steps. It is described in full by the DEQ document *Internal Management Directive: Implementation of Methylmercury Criterion in NPDES Permits*, by Erich Branstetter (A12), in addition to Erich Brandstetter's testimony at the contested case hearing. DEQ's RPA process involves the following steps:

- **DEQ Step 1:** Determine whether any reliably quantifiable amount of methylmercury is detectable from at least one of four samples taken from effluent. (A12 at 2.)

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- **DEQ Step 2:** If so, examine whether the amount detected exceeds 0.005 ug/L (the minimum amount that can be detected with any degree of reliability by available testing technologies). (*Id.*)

If methylmercury is detected in at least one sample exceeding the amount of 0.005 ug/L, DEQ finds that reasonable potential exists, and sets methylmercury limits accordingly. DEQ expressly declines to consider methylmercury content and limits in receiving water. (A12 at 3.) DEQ likewise expressly declines to consider sources of methylmercury in effluent (including whether methylmercury were present in the intake water, or whether a facility's processes add methylmercury to effluent). (Brandstetter test.) Notably, DEQ declines to consider all these things notwithstanding its own regulation, OAR 340-045-0105, which requires DEQ to at least consider whether to apply intake credits.

In summary, DEQ's methylmercury RPA differs from EPA's recommended process in several ways. DEQ determines reasonable potential simply by examining whether methylmercury in effluent are even slightly measurable above the minimum traceable limit of 0.005 ug/L (five billionths of a gram per Liter). This limit is not tied to any water quality standard or health guideline—it is simply the smallest amount of methylmercury that can be detected using the most sensitive testing that science and technologies allows. DEQ does not consider (1) the quantity of methylmercury already in the receiving water, (2) what the total allowable methylmercury limits are for the receiving water, (3) whether the amount of methylmercury in the effluent, combined with the methylmercury in the receiving water, are likely to "exceed" the total allowable limit, (4) whether the methylmercury in the effluent were already in the river to begin with, or (5) whether the facility is doing anything to add or contribute methylmercury to the effluent that was not there previously.

There are many problems with DEQ's analytical approach. At the very least, DEQ's refusal to consider whether Bio-Oregon's processes add methylmercury to its effluent (or whether any methylmercury was already in Bio-Oregon's intake) incorrectly applies the law.

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As noted, DEQ imposes methylmercury limits under 40 CFR § 122.44(d), which requires limits to control pollutants that DEQ determines "are or may be discharged at a level which will *cause or have the reasonable potential to cause*, or *contribute to* an excursion above any State water quality standard[.]" (Emphasis added.) The plain language of this regulation requires DEQ to, at the very least, consider methylmercury in the Facility's intake or otherwise whether the Facility is doing anything to add methylmercury to its effluent. Logically, the Facility cannot "cause" or "contribute to an excursion above any State water quality standard" regarding methylmercury if the methylmercury in its effluent were already in the river to begin with, or if Bio-Oregon's processes do nothing to add methylmercury to the effluent.

DEQ's refusal to consider other factors—like the methylmercury content and limits of the receiving water—also falls outside DEQ's discretion under EPA's regulations. Section 122.44(d)'s language requiring limits where effluent may cause or contribute to "an excursion above any State water quality standard" demands, at least, some consideration of "State water quality standard[s]." This interpretation is reinforced by EPA's guidelines interpreting its own regulations in the *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*. As discussed, those guidelines advise permit writers to consider, among other things, the methylmercury content of receiving waters and whether the existing methylmercury content is close to the total allowable methylmercury limits for those waters. DEQ's refusal to consider these factors contravenes 40 CFR § 122.44(d).

Had EPA intended for permit writers to set methylmercury limits merely wherever methylmercury is detected, EPA easily could have written 40 CFR § 122.44(d) to say so. EPA's choice not to do so indicates that DEQ's process for conducting RPAs is not what the EPA intended and, thus, is outside DEQ's discretion.

Notably, DEQ's extraordinarily stringent methylmercury limits, and its RPA process that it applied to Bio-Oregon, is unprecedented. DEQ's past practice has been to not impose

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methylmercury limits on Bio-Oregon and other seafood processors. Indeed, this has long been consistent with the EPA's position for seafood processors. Under the EPA's relevant NPDES permit application form (Application Form 2C), methylmercury testing is not required as part of the NPDES application process for a seafood processor like Bio-Oregon.[8] (R013 at 5; 03/02 pm Wentworth.) Consistent with this, DEQ has previously declined to impose methylmercury limits on Bio-Oregon in past NPDES permits. DEQ does not explain its recent departure from EPA's recommended practices (both in its RPA process and to require methylmercury testing in NPDES permit applications) and DEQ's unprecedented methylmercury limits that are so extremely stringent and not tied to any Water Quality Standard or health criteria.

Due to these many flaws in DEQ's methylmercury RPA processes, DEQ's determinations that the Facility's effluent has "reasonable potential" to cause or contribute to "an excursion above any State water quality standard" lacks reasonable basis in evidence and reason. It is not reasonable to conclude, based on a mere finding of trace methylmercury in effluent, that methylmercury has reasonable potential to cause or contribute to an exceedance of water quality standards without consideration of any other factors. Methylmercury limits and the MMP requirement in the Permit should be stricken.

2. Thermal Load Limits (Issues 5, 6)

The Permit imposes temperature limits which are stated in terms of aggregate thermal load limits for all three of Bio-Oregon's outfalls. The limits stated in the Permit were adopted from the EPA's *Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load* ("TMDL"). The Columbia River TMDL formulates wasteload allocations ("WLAs"), which

[8] Bio-Oregon's Facility falls into primary industry category 2092, seafood processing. (03/02 pm Wentworth.) That is not one of the types of industry categories for which metals testing is even required as part of an NPDES application process. (R013; 03/02 pm Wentworth.) Stated more simply, EPA's own application form does not require toxics metals testing in connection with an NPDES permit application for a seafood processor like Bio-Oregon—EPA itself does not contemplate that a seafood processor's NPDES permit will contain metals limits.

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are derived based on "facility-specific design flow and maximum temperature data (or temperature representative of the industry sector if effluent data were not available)." (Ex. A18 at 64.) EPA set a WLA specific to Bio-Oregon of 55 million kcal/day, but the specific data it used to develop that WLA is not known. (Ex. A18 at 64.)

Bio-Oregon cannot meet that WLA during whiting season, as it explained in the permit renewal process. Bio-Oregon offered evidence at the hearing that EPA derived that value based on faulty data and methods. (R004 at 14.) Specifically, data that was used to calculate the WLA for the Facility necessarily did not reflect Bio-Oregon's existing heat load and the Facility's "heat load discharge is greater than what was used in the TMDL model." (03/03 pm Wentworth Test.; Ex. R034.)

Fortunately, the Columbia River TMDL expressly contemplates that adjustments to WLAs may be made from a "reserve allocation," that is, a portion of the heat loading reserved from allocation in the TMDL specifically for certain purposes. Appendix J to the Columbia River TMDL explains specific considerations for permit writers to translate wasteload allocations to permit limits. (Ex. A18 at 100-106.) It makes clear that a permit writer has discretion to allocate a portion of the reserve allocation to facilities if "there is new information that shows that the facility's heat load discharge is greater than what was used in the TMDL model." (*Id.* at 105.)

However, here, DEQ refused even to consider whether such an adjustment may be appropriate. This refusal is inconsistent with the terms of the Columbia River TMDL itself and, separately, an abuse of the discretion delegated to DEQ in administering the same. The ALJ then doubled-down on this error by holding as a matter of law that "DEQ does not have the authority to allocate a portion of the reserve capacity to Bio-Oregon." The ALJ is wrong; not even DEQ took this extraordinary position in the hearing. Permit writers do have discretion to allocate a portion of the reserve allocation, as the Columbia River TMDL expressly provides.

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Application of the Columbia River TMDL's WLSs to Bio-Oregon's Outfall 003 is in error for an additional reason: Outfall 003 merely returns water taken from the Columbia River that is used in a wet scrubber for odor control. But under the WLSs adopted by the Permit, Bio-Oregon receives no intake credit for the heat load from the incoming river water. Thus, the Permit requires Bio-Oregon to return to the river the same, minimally-impacted water that it removed from the river, without regard to the temperature of the incoming water.

The ALJ was dismissive of these facts based on her own erroneous conclusion that Bio-Oregon's processes must in fact substantially heat the water that flows to Outfall 003. The ALJ is wrong and, in fact, disregarded unrebutted testimony that any heat added to the water is negligible. But regardless, Bio-Oregon should receive intake credit for the heat load from the incoming river water as Bio-Oregon clearly is not responsible for that. By applying the WLSs to Bio-Oregon's Outfall 003, DEQ is imposing on Bio-Oregon an unreasonable limit that does not appropriately account for the source of the water that flows to Outfall 003: the Columbia River itself.

3. Enterococcus Bacteria Limits (Issue 2)

The Permit also imposed unprecedentedly stringent limits for enterococcus bacteria within its effluent. For all three Outfalls, the Permit provides that any enterococcus bacteria in the effluent "[m]ust not exceed a monthly geometric mean of [35/100 ml], not more than 10% of the samples may exceed 130." (Permit at 6–8.)

The only source of authority that DEQ relies upon for inclusion of this requirement in the Permit is OAR 340-041-0009(6)(a). (See A2 at 32 (relying on OAR 340-041-0009(6)(a)).) That regulation provides that "bacteria in effluent discharges associated with fecal sources may not exceed the following amounts * * * [i]n waters designated for coastal water contact recreation: (A) A monthly geometric mean of 35 enterococcus organisms per 100 mL[.]" OAR 340-041-0009(6)(a). The plain terms of OAR 340-041-0009(6)(a) show

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what is meant by "associated with fecal sources," providing examples of such facilities. Examples of fecal sources contemplated for regulation under this rule are domestic sewage treatment plants that process human waste or confined animal feeding operations that processes animal waste. As Mr. Hammer testified, enterococcus is merely an indicator species, so the presence of enterococcus does not necessarily mean that there is human waste or human pathogens present in a discharge, let alone that the discharge comes from a "fecal source." (03/02 pm Hammer Test.) OAR 340-041-0009(6) also provides that facilities whose discharges are not associated with fecal sources, like pulp and paper mills, can be excluded from bacterial limits.

The Facility is not a domestic sewage treatment plant. Nor does the Facility run a confined animal feeding operation that produces or processes animal waste. Nonetheless, DEQ concluded that the Facility is "associated with fecal sources." To support applying the rule to the Facility, DEQ offered testimony only from Aron Borok. Mr. Borok testified that, in his view, "the default assumption" DEQ makes is that a source that has "E. coli or enterococcus in its effluent" falls within the confines of the rule, and that it is then up to the permittee to "demonstrate to DEQ to justify not including a bacteria limit in its permit" through "biochemical species identification tests and results to show that the bacteria in their effluent are not those that cause gastrointestinal illness." (Borok 02/28 pm.)

DEQ's application of OAR 340-041-0009(6)(a) to the Facility is erroneous for several reasons. For one, it is inconsistent with DEQ's decades of past practice of not applying enterococcus limits to a Facility like Bio-Oregon, that does not fit the kinds of other facilities associated with fecal sources (like human sewage treatment plants or animal feeding facilities). DEQ has produced no evidence in the record justifying or explaining this change and drastic expansion of its efforts to enforce OAR 340-041-0009(6)(a). Although Mr. Borok testified that DEQ now takes the position that the presence of enterococcus in effluent warrants an automatic presumption that the effluent is "associated with fecal sources," Mr.

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Borok did not explain the reason for this marked change in position, let alone provide any kind of rational or sensible reason.

In any event, DEQ's application of OAR 340-041-0009(6)(a) is an incorrect application of the law and an exceedance of DEQ's legal authority. As noted, regulations must be applied according to their plain terms. *Matter of Compensation of Pena*, 294 Or App 740, 745, 432 P3d 382 (2018) ("Terms of common usage in the test of a rule 'should be given their plain, natural, and ordinary meaning unless specifically defined or used in some other way."). There are two reasons that DEQ's interpretation does not apply the regulation according to its plain terms. First, the clause "associated with fecal ***sources***" (emphasis added) modifies and limits the "bacteria in effluent discharges" that are subject to the regulation. But the Facility is not a "source" of fecal matter, in the sense that a sewage treatment plant is. To be sure, fecal matter may be present in small amounts at the Facility because it processes byproducts of feces-generating fish; but that is literally true of any facility where living or once-living organisms exist. The Bio-Oregon Facility is no more a "source" of fecal matter than any facility that processes food, or for that matter, any restaurant or workplace. DEQ's application of the regulation effectively strips away the clause "associated with fecal sources" as a limiting principle.

Second, the plain term "associated with fecal sources," in context, is limited by the list of examples provided. *See State v. Hutchins*, 214 Or App 260, 267, 164 P3d 318 (2007) (general terms in a rule are "limited by the enumeration of specific examples"). The examples of facilities like sewer systems, sewage treatment plants, and animal feeding and processing facilities demonstrate that "associated with fecal sources" refer to Facilities that produce or treat fecal matter. Thus applying the plain text of the rule, Bio-Oregon's Facility is not "[a] fecal source." To apply OAR 340-041-0009(6)(a) so broadly to the Facility, despite the regulation's plain language (not to mention inconsistently with past practice), is an arbitrary application of the regulation.

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DEQ's interpretation of the regulation is also not supported by substantial evidence. DEQ apparently found its interpretation of OAR 340-041-0009(6)(a) reasonable based on the opinion testimony of Mr. Borok. But there are multiple reasons why Mr. Borok's testimony is entitled to no weight and, separately, is insufficient to support the bacteria limit in the Permit. First, DEQ did not offer Mr. Borok as a witness vested with authority to interpret OAR 340-041-0009 for DEQ (as it typically does in contested cases when it wants to offer an official agency interpretation). Instead, DEQ merely represented that he was someone who had "led the most recent revisions to the bacteria standard in 2013 and 2014." (Borok 02/28 pm Test.; *see also id.* (Mr. Borok had never previously offered testimony about the meaning of this rule).) Second, as Mr. Borok admitted on cross-examination, the "default assumption" that he purported to create is contained neither in the plain text of OAR 340-041-0009, nor in any official DEQ policy. (Borok 02/28 pm Test. (A13 "does not explain official policy, no.").) Nor did DEQ communicate this assumption or purported requirement to Bio-Oregon during the permit renewal process. (*Id.*) Nor did Mr. Borok reconcile how Bio-Oregon could have known to include such information in its permit renewal application, given that the paper that Mr. Borok relied upon for his assumption was issued in 2016, years after Bio-Oregon submitted its renewal application. (*Id.*) Third, the portion of A13 that he relied upon in testifying does not even describe the subsection at issue—it instead discusses an amendment made to another subsection of the rule, OAR 340-041-0009(1), and the purpose of that discussion was to explain the rationale for why "DEQ proposes to use a monthly duration period for effluent limitations for NPDES facilities which must monitor for E.coli bacteria." (A13 at 12, 13). And the text quoted within A13 doesn't even match the version of OAR 340-041-0009(1) currently in effect, but rather, refers to a prior version of that subsection. (*Compare* A13 at 13 *with* OAR 340-041-0009(1).

Because Mr. Borok was not offered as a witness with authority to interpret the applicable rule on behalf of DEQ, because his testimony is based on a written discussion of a

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different (and apparently subsequently revised) subsection of that rule contained within a non-policy document, and because his testimony is fundamentally inconsistent with the actual plain text of the rule and manufactures an expectation for regulated entities that is nowhere expressed in written rule or policy, Mr. Borok's testimony does not support DEQ's position. For all those reasons, DEQ erred in its interpretation and application of OAR 340-041-0009(6). The regulation does not provide any basis for imposition of the bacteria limit in the Permit on this record. The bacteria limit should be stricken.

C. Monitoring Requirements (Issues 8, 9, 10)

1. Monitoring requirements for BOD5, total suspended solids, oil and grease, ammonia, alkalinity, and hardness are unnecessary

The Permit requires Bio-Oregon to monitor Outfall 001 for BOD_5, total suspended solids (TSS), oil and grease, ammonia, alkalinity as $CaCO_3$, and hardness; Outfall 002 for alkalinity as $CaCO_3$, and hardness; and Outfall 003 for BOD_5, TSS, oil and grease, total copper, and alkalinity as $CaCO_3$. (A1 at 11–15.) Bio-Oregon objects to these monitoring requirements as unnecessary and lacking support in this record.

Bio-Oregon uses no processing activities that discharges effluent to Outfall 001 or Outfall 003 that would contain the above substances, largely because neither Outfall 001 or Outfall 003 discharge process wastewater (Outfall 001 discharges boiler blowdown and Outfall 003 discharges scrubber flow). (A2 at 6–7.) Bio-Oregon also uses no copper in any of its processes. (03/02 pm Wentworth Test.) Moreover, DEQ performed RPAs for BOD_5 and ammonia and found no reasonable potential for BOD_5 for any Outfall and no reasonable potential for ammonia as to Outfall 001 (yet DEQ nonetheless requires monitoring of these outfalls for these pollutants). (A2 at 29–30.) As to alkalinity as CaCO3 and hardness, Bio-Oregon's understanding based on DEQ's testimony at the hearing is that the basis for these monitoring requirements relates to the 2011 metals data considered by DEQ in issuing the Permit and metals RPAs discussed above, which is unreliable for all the reasons discussed.

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Notably, DEQ offered no evidence that monitoring for such parameters was legally required—DEQ noted merely that it would be "help[ful]" for DEQ to interpret metals parameters for which it is requiring that Bio-Oregon independently monitor. (02/28 pm, Feldman.) In affirming the monitoring requirements, the ALJ identified no legal justification for these requirements and concluded merely (without any citation to the record or substantive explanation) that "there is a potential risk of these pollutants in the Facility's effluent." (PFO at 34.) This finding is not supported by substantial evidence in the record, nor does the ALJ's conclusion based on this finding reasonable.

In short, on this factual record, there is insufficient evidence and no reasonable factual or legal basis for imposing a monitoring requirement for these related items merely because DEQ's limited data collection set from more than eleven years ago reflects measurable levels of certain limited parameters in the discharge. (*Id.*) The requirements exceed DEQ's authority and discretion under the law and are not supported by substantial evidence in the record and substantial reason.

2. Monitoring requirements for cyanide and VOCs are unnecessary

The Permit also required that Bio-Oregon monitor for cyanide and VOCs in its effluent. (A1 at 20–21.) Bio-Oregon objects to these monitoring requirements as unnecessary and lacking support in this record.

DEQ included these monitoring requirements for no reason other than that the Facility's effluent contains trace amounts of cyanide and because at least at least one VOC (nitrogen) is actively transferred to the effluent by the air scrubber in the form of ammonia. (A2.) These, however, are not reasonable bases for imposing the monitoring requirements. For one, DEQ did not consider whether the trace amount of cyanide contained in the Facility's effluent could come from the intake water from the Columbia River. As Ms. Wentworth explained, the process and the inputs in the facility are all known and simple, and there is no reason to believe that cyanide is being introduced into the Facility's effluent

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within the Facility itself. (*See* 03/02 pm, Wentworth Test.) Because there is no reason to believe that Bio-Oregon somehow introduces cyanide to the effluent in its processes, because the process used to collect the only samples relied on by DEQ raises reliability concerns, and because Bio-Oregon is not one of the primary industries (like, *e.g.*, coke manufacturing) that are typically required to test for these materials, the requirement in that Bio-Oregon conduct effluents toxics characterization is unreasonable, unnecessary, and not required by law.

It is likewise unreasonable for DEQ to impose VOC monitoring requirements merely because Bio-Oregon uses an air scrubber that transfers nitrogen to effluent via ammonia. The inclusion of VOC monitoring requirements should be based on the potential for *toxic or otherwise harmful* VOCs to be in effluent. (*See* Wentworth Test. ("There's a difference between VOCs that smell bad and VOCs that are toxic" and the VOCs addressed in the air permit are the former type.).) The evidentiary record does not support DEQ's assumption that the processes and activities conducted at Bio-Oregon warrant the inclusion of VOC monitoring in the Permit.

3. WET testing requirements are unnecessary

Finally, the Permit includes annual WET testing requirements for the Facility's effluent. (A1 at 22, 25–32.) WET testing determines the total effect of multiple pollutants that individually may not be toxic but collectively may create a toxic effect. DEQ imposed these requirements on the basis that the Facility's effluent contained levels of copper, arsenic, and zinc, and that a purported RPA demonstrated that the levels of metals detected had potential to cause an exceedance of water quality standards. (A2.)

However, on the factual record developed at the contested case hearing, DEQ failed to show that the Permit's WET testing requirements are required by law or are at all reasonable. DEQ's evidence supporting the WET testing requirements was primarily that of Mr. Feldman, DEQ's permit writer who drafted the Permit. Mr. Feldman, however, provided no testimony specific to what substances in Bio-Oregon's effluent warranted WET testing in

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this particular instance, *i.e.*, why the characteristics of Bio-Oregon's effluent demonstrated a reasonable potential "for toxic pollutants or a combination of toxic pollutants in the facility's effluent that cumulatively have a negative impact or toxic effect on aquatic life." Instead, he testified about an EPA technical support document from 1991 (*id; see* A10) and *generally* that DEQ applied that document and DEQ's internal guidance to Bio-Oregon's Facility. (02/28 pm, Feldman; *see also* A2 at 39 (stating only that "[t]he WET testing requirements were added due to the level of toxic pollutant parameters measured in the effluent" without further detail). On cross-examination, Mr. Feldman admitted he had no information that would lead him to conclude that Bio-Oregon uses copper, arsenic, or zinc in its processes. (02/28 pm, Feldman Test.) He also could not identify any information supporting "that there would be a synergistic risk from the combination of certain chemicals," being discharged from Bio-Oregon's specific Facility. (02/28 pm Feldman Test.)

Further, Mr. Feldman's testimony must be discounted because he did not consider one of the key inputs in Bio-Oregon's effluent: water from the Columbia River. Bio-Oregon's Facility intakes water from the Columbia River, uses it in its processes, and discharges from its outfalls back into the Columbia River. (02/28 Wentworth Test.; *see also* A2 at 1, 3.) But Mr. Feldman admitted that he did not consider the composition of the river water that the Facility intakes as part of its processes, including whether that existing river water *already contained* the toxic pollutant parameters that DEQ claims justify imposition of WET testing here, and he acknowledged that "there is a possibility that the river water may contain toxic pollutants," (02/28 pm Feldman Test. ("[Q:] Okay, so the answer to my question is that river water was not part of what you had considered in determining to impose a WET test requirement, right? [A:] Correct.")

Amy Wentworth, in contrast, testified that WET testing is typically employed in "industries that handle and use listed known hazardous materials and toxic chemicals," such as oil refineries, chemical manufacturers, and metal foundries. (03/02 pm, Wentworth.) She

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confirmed that Bio-Oregon's Facility does not use any of those types of hazardous materials or toxic chemicals in its process. (*Id.*) Instead, Bio-Oregon's "process inputs" are "simple" and "well-defined:" fish, some shell, some melted ice, city water, known diluted sanitation chemicals and a small volume of bleach, and river water from the Columbia River. (*Id.*) She was not aware of any chemicals used at Bio-Oregon that would create the "synergistic effect" of toxicity that WET testing is designed to test for. She further explained that EPA's technical memorandum provided only a recommendation, not a requirement, that WET Testing be included.

Based on the record, DEQ has not shown that WET testing requirements are legally required or reasonably justified by substantial evidence or substantial reason. Inclusion of the WET testing requirements exceeds DEQ's authority and discretion under the law. The requirements should be stricken from the Permit.

D. The Permit is Not Consistent with DEQ Public Policy

The thrust of this submission is to present legal arguments about the ways in which DEQ and the ALJ erred in developing and upholding the Permit. As explained in the preceding 52 pages, the errors are multitude. But the EQC is not just a quasi-judicial body that adjudicates claims of legal error; it is the environmental policymaking body for Oregon's Executive Branch and the oversight board for DEQ. The EQC would therefore be remiss if it merely deferred to judgments made by agency staff in developing and standing behind the Permit. In addition to their technical applications of governing statutes, regulations, and rules, **agency staff made policy choices here**. The EQC should decide whether those choices are consistent with its aspirations for environmental regulation in Oregon.

The first and most significant policy choice was to impose on Bio-Oregon a set of punitive and draconian restrictions that had never before been applied to it. At one time, Bio-Oregon was considered by DEQ to be the gold-standard of environmental compliance. Indeed, the very core business of Bio-Oregon is to reduce waste by putting to use the

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byproducts of fish processing that would otherwise be disposed of in landfills. Bio-Oregon not only reduces waste by putting these byproducts to use; it manufactures the nutrient-rich fish meal that is used in premium pet food—unquestionably a social and environmental good. Bio-Oregon also employs dozens of Oregonians in well-paid manufacturing jobs that are all too scarce (and diminishing) in Oregon's coastal communities. Bio-Oregon developed this business with the approval and, indeed, cooperation of Oregon's environmental regulators. It is extraordinary that, today, DEQ proposes to impose unprecedented restrictions and costs on Bio-Oregon that threaten to put it out of business.

The particular restrictions that DEQ aims to impose simply do not make sense, whether or not they are defensible legally. Bio-Oregon's manufacturing processes are clean; they do not introduce contaminants. And, indeed, the Bio-Oregon Facility very likely causes a net *reduction* of environmental contaminants in Oregon waters. Indeed, if the Bio-Oregon Facility were not operating, the seafood byproduct that it recycles would have to be disposed of in some other way, perhaps by trucking millions of pounds of fish waste each month to another, more remote facility or by sending the waste to landfills. DEQ staff apparently prefers to the status quo a world in which Bio-Oregon is so heavily regulated that it can no longer operate—as if having restrictions on paper that govern a shuttered facility produces some social or environmental benefit. It does not.

What are the merits of the restrictions that DEQ staff would impose? They adopt a set of restrictions—ELGs—developed a half-century ago for the manufacturing of fish meal from menhaden and anchovy fish, despite that Bio-Oregon uses entirely different species of fish (mainly, the far-less-oily Pacific whiting) and despite that Bio-Oregon manufactures fish meal from byproduct, not from whole fish. Although federal regulations call for the development of ELGs that are specific to Bio-Oregon's processes, DEQ staff preferred the shortcut of imposing harsher restrictions that were designed for a completely different kind of manufacturing process.

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DEQ staff decided to apply these ELGs based on the mistaken conclusion that Bio-Oregon would be able to comply by merely undertaking better "good housekeeping" practices. In the hearing, it was revealed that this conclusion was based on a misreading of the ELG Development Document, which actually says that good housekeeping would reduce pollutant loading by only 5%, not 95% as DEQ staff had thought.

The ALJ waved away this DEQ mistake by suggesting—without evidence—that Bio-Oregon could make up the difference by loading stickwater onto a barge and dumping it in the ocean. But the problem with making up a solution without evidence is that, upon more careful consideration, one realizes that it is no solution at all. Bio-Oregon cannot feasibly barge the Facility's stickwater. There is no dock at its facility, nor, realistically, could a dock be constructed (requiring extensive Federal and State permitting with no guarantees of issuance) and barging be implemented in the dangerous, rushing waters at the mouth of the Columbia River—sometimes described as the most dangerous estuary in the world with regard to navigation. Barging is no more effective a solution than "good housekeeping," but that is no matter, according to the ALJ, because the problem of compliance is for Bio-Oregon, not DEQ, to account for. That is not the law; it is also not an appropriate perspective for a regulatory agency.

And even if barging were feasible—to be clear, it is not—the state's environmental policy board should consider whether our waters would be cleaner if stickwater with trace impurities were driven by barge into the ocean and dumped there (consider the fossil fuel impacts, just for starters), rather than flushing the same stickwater into the same ocean by allowing it to flow from outfalls located at the rushing mouth of the Columbia River. Does this agency committed to environmental protection really believe that driving water to the ocean in a gas-guzzling barge is more environmentally friendly than allowing the river's currents to carry it to the ocean?

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What's more, DEQ staff would impose unprecedentedly low metal limits for Bio-Oregon's effluents, which were developed based on data that are inaccurate and outdated—as everyone acknowledges. While DEQ and the ALJ make legal arguments to defend the use of problematic data, their methodology cannot withstand the scrutiny of commonsense.

The EQC need not be blind to these considerations. Whether or not defensible legally, the Permit is simply indefensible as a matter of public policy for our state. As the state's environmental policy board and overseer of DEQ, the EQC should invalidate the Permit for that reason as well.

E. The Contested Case Proceeding Suffered from Fatal Procedural Errors

To the extent the EQC declines to modify or strike at least some of the challenged limits in the Permit on the merits, the EQC must either disregard the rest of the Proposed and Final Order or remand the case to be retried in a second hearing due to critical procedural errors that occurred during the proceeding. Specifically, while ALJ Jennifer Rackstraw was originally assigned by OAH to preside over the contested case hearing and issue the Proposed and Final Order, OAH unexpectedly reassigned ALJ Samantha Fair to write the Proposed and Final Order after ALJ Rackstraw had presided over the hearing and the hearing record had closed. Moreover, OAH made this reassignment without any notice to Bio-Oregon. As discussed below, these actions constituted critical procedural errors that undermined the fairness of the proceedings and require the EQC to either disregard the Proposed and Final Order or, at the very least, reserve decision pending the completion of a new contested case hearing.

1. Oregon law does not permit one ALJ to preside over a contested case and a different ALJ to decide it.

OHA's assignment of ALJ Fair to the decide the case—after ALJ Rackstraw had already presided over the contested hearing—was a procedural error requiring a new hearing. Numerous provisions of Oregon law expressly require the ALJ who issues the proposed and

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final order be the same ALJ who presides over the contested case hearing. For instance, ORS 183.650 ("Orders; modification; findings of historical fact") provides that, "[i]n any contested case hearing conducted by an [ALJ] assigned from the Office of Administrative Hearings, *the* [ALJ] shall prepare and serve on the agency and all parties to the hearing a form of order, including recommended findings of fact and conclusions of law. *The* [ALJ] shall also prepare and serve a proposed order * * * ." ORS 183.650(1) (emphases added). Similarly, ORS 183.464 ("Issuance of proposed order; amendment by agency; exemptions") provides that "*the hearing officer* shall prepare and serve on the agency and all parties to a contested case hearing a proposed order, including findings of fact and conclusions of law." ORS 183.464(1) (emphasis added). DEQ's regulations are in agreement, providing that, "[f]ollowing the close of the record for a contested case hearing, *the* [ALJ] will issue a proposed order. *The* [ALJ] will serve the proposed order on each participant." OAR 340-011-0573(1) (emphases added).

The legislature's (and DEQ's) choice of words reflects that the individual who presides as ALJ over the contested case hearing must be the same who issues the proposed and final decision. The use of the definite article "the" dictates that the ALJ may not be just any ALJ, but a specific one. *See State v. Lykins*, 357 Or 145, 159, 348 P3d 231 (2015) ("Because the article 'the' is used to convey exactly who or what is being referred to, the drafters' choice to use the words 'the victim' rather than 'a victim' in OAR 213-008-0002(1)(b)(B) suggests an intent to refer to a known class of victims, such as the victim of the crime for which the defendant is being sentenced, rather than indiscriminately to all persons who might be affected by a defendant's conduct."); *State v. Lopez-Minjarez*, 350 Or 576, 583, 260 P3d 439 (2011) (reasoning that legislature's use of definite article showed intent to refer to the particular and known). And which specific ALJ? The "*hearing officer*," ORS 183.464(1) (emphasis added)—or, in other words, "the" ALJ "assigned from the [OAH]" under ORS 183.635(1) to "conduct contested case hearings." ORS 183.650(1);

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ORS 183.635(1) ("all agencies must use [ALJs] assigned from the [OAH] established under ORS 183.605 to conduct contested case hearings"). If the identity of the ALJ who decided the case did not matter, the legislature (and DEQ) could and would have provided that simply "an" ALJ can issue a proposed and final order. The fact that the statutes and rules say "the" instead of "an" confirms that the identity the ALJ matters.

Uniformity between the presiding ALJ and the deciding ALJ is no mere technicality. It is a critical requirement that ensures accuracy, fairness, and transparency in the contested case hearing and final decision. The ALJ who presides over a hearing inherently will be better equipped to find facts, draw conclusions, and decide issues accurately and fairly compared someone who does not attend the hearing. Indeed, a presiding ALJ has a statutory obligation to facilitate the full development of the record and make decisions accordingly. *See* ORS 183.417(8) (ALJs must "ensure" that "the record developed at the hearing shows a full and fair inquiry into the facts necessary for consideration of all issues properly before the presiding officer in the case and the correct application of the law to those facts"). As such, Presiding ALJs in contested hearings literally interact with the evidence they hear. They ask witnesses questions about their testimony to test witnesses' credibility and fill any gaps in ALJs' understanding of the subject matter (which is often highly specialized and complex). *See* OAR 137-003-0040(4) ("Presiding officers or decision makers * * * shall have the right to question witnesses."). Presiding ALJs also converse with counsel to better understand the issues and evaluate the parties' positions. These activities are indispensable when—especially in the face of a highly complex and specialized record, with abundant conflicting evidence—an ALJ must accurately and fairly make findings of fact that selects one party's version of events over the other. An ALJ who merely reviews a closed record cannot do these things. It is therefore no surprise that the legislature (and DEQ) drafted the applicable statutes

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and rules to require consistency of the ALJ from the contested case hearing and proposed and final order.[9]

Here, ALJ Rackstraw presided over Bio-Oregon's contested case hearing. She asked witnesses questions about their testimony to test their credibility and clarify her understanding of the evidence and subject matter. She conversed with counsel about the issues. Counsel tailored their presentation of the evidence and arguments to her. Thus, when she became "unavailable to write the proposed order," the appropriate remedy was for OAH to assign a new ALJ and reset the hearing. The failure to do so constituted a material procedural error that affected the fairness of the hearing. *See Pulito v. Oregon State Board of Nursing*, 366 Or 612, 626, 468 P3d 401 (2020) (under ORS 183.482(7), a reviewing court orders a new contested case hearing where the fairness of the proceedings "*may* have been impaired by a material error in procedure").

2. Because Bio-Oregon was given no notice of ALJ Fair's assignment, Bio-Oregon was deprived of a critical procedural right.

Even if it were permissible for OAH to reassign a different ALJ to decide the case after the hearing, the way reassignment occurred here constituted an additional and independent error. As noted, while OAH reassigned ALJ Fair to the write proposed order on August 15, 2023, Bio-Oregon received *no notice* of the reassignment. Bio-Oregon learned of the reassignment only *after* the Proposed and Final Order issued. As such, Bio-Oregon had no insight into who was ultimately deciding its case—that is, until after the hearing was over, and critical factual findings, credibility determinations, legal conclusions, and errors had been made.

[9] Moreover, the identity of the ALJ who presides over the hearing affects the parties' presentation of evidence and arguments. Throughout a contested case hearing, counsel develop and understanding of the ALJ's comprehension and analysis of the issues and tailor arguments to the presiding ALJ's specific concerns, inclinations, and questions. Counsel also makes strategic choices about how to present evidence in a way that is responsive to their particular ALJ and her perception of the case.

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This was a fundamental procedural error because Oregon law requires that parties in administrative hearings to have knowledge of the identity of their decisionmaker *during* the hearing so they can have some say over the identity of that individual. Like any judge in a court of law, ALJs in administrative proceedings must be fair, impartial, and competent, *see* OAR 137-003-0040(2), and principles of fairness entitle parties to raise objections about their decisionmaker if they believe she lacks these critical qualifications. However, if a party does not know the identity of their decisionmaker, the party cannot evaluate such matters and make informed decisions. Thus, reassigning a new ALJ to decide a contested case without giving notice to a party deprives that party of procedural fairness.

Indeed, a party's right to decide their ALJ in an administrative proceeding is especially robust in Oregon. By both statute and regulation, a party to an Oregon contested case proceeding is entitled to, upon request, be granted one "automatic" change of ALJ to preside over the contested case hearing, for any or no reason. Under ORS 183.645, "[a]fter assignment of an [ALJ] from the Office of Administrative Hearings to conduct a hearing on behalf of an agency, the chief [ALJ] *shall* assign a different [ALJ] for the hearing upon receiving a written request from any party in the contested case." ORS 183.645(1) (emphasis added). The party requesting a change of ALJ need not show good cause for the change on the first request for a change. ORS 183.645(2) ("[O]ne request for a change of assignment of [ALJ] under subsection (1) of this section may be granted by the chief [ALJ] without a showing of good cause."). This right is similarly codified by rule. Under OAR 471-060-0005 ("Request for Change of Administrative Law Judge"), "[e]very party and agency in a contested case *is entitled to* request a change of [ALJ]." OAR 471-060-0005(3) (emphasis added); OAR 137-003-0501(8) ("OAR 471-060-0005, Request for Change of Administrative Law Judge, applies to contested cases conducted by the Office of Administrative Hearings."). Where a party timely makes its "first request" for a change of ALJ to preside over the hearing, that request "shall be automatically granted." A party may make additional requests

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for changes of ALJ after the first request, but the party must show "good cause" in subsequent requests.[10] OAR 471-060-0005(2)(b), (3).

This right to one "automatic" change of ALJ is an important procedural right that is crucial for parties to have confidence in the fairness of their proceedings—especially when the result is adverse. The entitlement to one "automatic" change of ALJ gives parties agency over one of the most important components of the proceeding: the individual who decides their fate. To be sure, parties in administrative proceedings already have some limited agency in selecting their decisionmaker, in that they may always request and be granted a change of ALJ where they can show good cause (i.e., personal bias or a demonstrable conflict of interest). OAR 471-060-0005(2). But having a right to one "automatic" change in ALJ—for *any* reason (or even no reason)—affords the party the ability to select their decisionmaker even where they lack evidence sufficient to meet the stringent burden of "good cause," or when their dissatisfaction with the ALJ happens to fall just outside the narrow definition of "good cause" (i.e., a party is dissatisfied with the ALJ's familiarity with the subject matter, but not the ALJ's impartiality).[11]

Throughout the contested case proceedings with DEQ, Bio-Oregon never made a "first request" for a change of ALJ. Thus, up through ALJ Fair's reassignment, Bio-Oregon remained "entitled" to make such request and be automatically granted a change of ALJ for

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[10] "Good cause" is "any reason why an [ALJ's] impartiality might reasonably be questioned," including "personal bias or prejudice, personal knowledge of disputed facts, conflict of interest, or any of the interest that could be substantially affected by the outcome of the proceeding." OAR 471-060-0005(2)(b), (3).

[11] *See* ORS 183.615(2) ("Only persons who have a knowledge of administrative law and procedure may be employed by the chief [ALJ] as [ALJs].") *and* ORS 183.625(1) ("In assigning an [ALJ] to conduct hearings on behalf of an agency, the chief [ALJ] shall, whenever practicable, assign an [ALJ] that has expertise in the legal issues or general subject matter of the proceeding."). These concerns may not constitute "good cause" for a change of ALJ. *See* OAR 471-060-0005(2)(b) ("good cause" limited to matters like bias, conflict of interest, personal knowledge of contested issues, and so on). Nonetheless, being allowed one "no questions asked" change of ALJ gives a party recourse if they lack confidence in their ALJ's understanding of the subject matter. In general, having some say in deciding one's own decisionmaker—which the "one automatic change of ALJ" rule affords—increases party's agency in the proceeding and, thus, strengthens the party's trust the fairness of the proceeding.

any reason, had Bio-Oregon known to make such a request. Here, Bio-Oregon would have raised such an objection to ALJ Fair deciding the case—especially since she did not attend the hearing—had Bio-Oregon received notice of the change. With due respect to ALJ Fair, Bio-Oregon lacks sufficient knowledge about her expertise and experience to have confidence in her understanding of the highly specialized subject matter and issues in this case. From ordinary internet research, Bio-Oregon can gather that ALJ Fair has adjudicated other administrative hearings of various subject matters, but not necessarily the subject matter here. Because she neither has personal experience with the subject matter, and because Bio-Oregon could not observe her during the hearing, Bio-Oregon simply has no visibility from which to be confident in her understanding of the subject matter (and, sure enough, Bio-Oregon now raises objections reflecting that ALJ Fair simply misunderstood some of the evidence in this case). Moreover, Bio-Oregon has no visibility into other matters, like ALJ Fair's background, potential conflicts, potential biases, and so forth. She is listed as "inactive" on the Oregon State Bar directory. *See* https://www.osbar.org/members/membersearch_display.asp?b=904539&s=1. OAH has not published any biographic information about her on its website. All these reasons are more than enough for Bio-Oregon to reasonably desire, and be entitled to, one "automatic" change of ALJ. As noted, Bio-Oregon need not even have any reason to request and be granted such a change.

But because Bio-Oregon never had an opportunity to object to ALJ Fair's assignment until after the contested case hearing was over and the Proposed and Final Order issued, Bio-Oregon was deprived of this procedural right and, thus, procedural fairness. The EQC should accordingly disregard the Proposed and Final Order or, alternatively, order a new contested case hearing.

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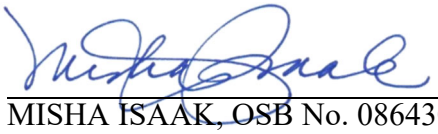
VII. CONCLUSION

For all the reasons above, the EQC should issue a Final Order that rejects the Proposed Order's Findings of Fact and Conclusions of Law to which Bio-Oregon objects. The EQC should strike the TBELs, metal limits, bacteria limits, thermal load limits, and monitoring requirements discussed above from the Permit.

DATED: February 16, 2024

STOEL RIVES LLP



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APPENDIX

Bio-Oregon objects to the following findings of fact. Where quoted findings are abbreviated, Bio-Oregon has done so for brevity and readability and does not admit portions of a finding that are omitted. For the findings of facts identified below, Bio-Oregon proposes the following alternative findings of fact. However, failure to specifically address a finding of fact should not be construed as acceptance of that fact, as many of the findings are intertwined and conceptually reliant on others.

ALJ's Finding of Fact	Objection	Proposed Alternative
11. The Facility's processes are the same as the traditional fish meal plant processes except for the following primary differences: the Facility does not unload boats; does not capture balewater (water from boats); does not capture stickwater; does not press fish solids; does not recover soluble byproducts; and decants, dries and grinds solids. (Test. of Humphries.) There were only minor difference[s] between DEQ's understanding of the Facility's processes and its actual processes. (Test. of Hammer.)	Incomplete; not supported by substantial or any evidence, in either Humphries' or Hammer's testimony or the whole record. Against the weight of the evidence. In particular, Hammer testified that DEQ understood there to be only minor differences between Bio-Oregon's processes *and the processes described in the development document of the Fish Meal ELG for traditional fish meal plants*, but that DEQ's understanding of the actual processes at Bio-Oregon were flawed. Hammer said the differences in the processes at Bio-Oregon from those defined in the Fish Meal ELGs are significant and support that the Fish Meal ELG should not apply to Bio-Oregon.	**11.** The Facility's processes are the same as the traditional fish meal plant processes except for the following primary differences: the Facility does not unload boats, but rather receives raw product in totes or trucks from other processing facilities; does not capture balewater (water from boats); does not remove solids (soluble proteins) from stickwater; does not store stickwater; does not press fish solids; does not recover soluble byproducts through evaporation or drying; does not polish oil; debones product prior to cooking; decants solids; and dries and grinds solids using dry air dryers, as opposed to steam, that separate soluble protein in the process. (Test. of Humphries.) There were significant differences between DEQ's understanding of the Facility's processes and its actual processes. (Test. of Hammer.) Indeed, Bio-Oregon's unique processing

		equipment and methodologies developed over nearly 80 years of operations differentiate Bio-Oregon from all other known fish meal facilities. (A2 at 4.)
15. The Facility has three Outfalls (001, 002, and 003) that discharge effluent directly into the lower Columbia River. (Ex. A1 at 1.) Outfall 001 discharges boiler blowdown5 and stormwater. Outfall 002 discharges stickwater, the tote-cleaning wastewater, water from the roof and ground drains, and stormwater. Outfall 003 discharges condensed scrubber water.	Not supported by substantial evidence. Descriptions of outfall discharges is not accurate and prejudicial. For example, Outfall 003 discharges Columbia River water that has been used in the air-scrubbing process.	[Delete descriptions of outfall discharges as inaccurate and unnecessary.]
19. * * * DEQ did not complete the full review process when issuing the prior Permit. (Test. of Yelton-Bram.) There were no notes in the prior Permit's file to indicate why DEQ failed to complete the review process for the prior Permit. (Test. of Feldman.)	Not supported by substantial or any evidence, in either Yelton-Bram's or Feldman's testimony or the whole record. Against the weight of the evidence.	**19.** * * * DEQ completed a full review of Bio-Oregon's processes when issuing the prior permit and determined, based on its full review, that it was necessary to set limits only related to flow and pH. (A2; A4; Humphries Test.)
23. * * * As noted in the EPA's *NPDES Permit Writers' Manual*, applications are incomplete if the listed industrial applicants do not provide the results of heavy metals testing. (A5 at 62.)	Not supported by substantial or any evidence. Nothing on page 62 or any other page of the *NPDES Permit Writers' Manual* provides that applications are "incomplete" if the applicant does "not provide the results of heavy metals testing."	**23.** * * * NPDES Permit applications do not require applicants that process pacific whiting, shrimp shells, and crab shells to provide results of heavy metals testing. (R013.)
25. * * * The effluent from Outfall 003 tested positive at the reporting limit for mercury. Based upon the concentrations of these metals in the effluent, an RPA demonstrated that all these metals had the	Not supported by substantial or any evidence. The ALJ's finding is based on a misreading of the 2011 Analytical Report, as explained below. Further, while DEQ purported to apply an RPA, that RPA was	**25.** * * * Mercury was not detected in the effluent from Outfall 003. (A8.) Because DEQ concluded that some methylmercury had been detected (even in trace amounts) in some of the Facility's effluent, DEQ concluded that there was a reasonable

reasonable potential to cause an exceedance in the water quality standards.	unsound and invalid. DEQ's conclusions thus are not reasonably supported.	potential to cause an exceedance in the water quality standards. (A2; A12.)
28. Mercury is extremely toxic to aquatic life and methylmercury (the type of mercury that accumulates in fish tissues when fish are exposed to mercury) is extremely toxic to humans that consume contaminated fish. Because methylmercury does not occur in the water, the EPA provides guidance for a narrative limit, adopted by DEQ, based upon mercury levels.	Not supported by substantial evidence. This description is incomplete and prejudicial; it is therefore prejudicial misleading.	[Delete as unnecessary and misleading.]
30. For the four samples from Outfall 001, Columbia set the reporting limit for mercury at 0.2ug/L and had the following reported results: two samples at 0.2 ug/L; one sample at 0.3 ug/L; and one undetected sample. For the four samples from Outfall 002, Columbia set the reporting limit for mercury at varying levels and found at the reporting limit on three occasions (0.8 ug/L, 2 ug/L, and 4 ug/L) and undetected on one occasion. For the four samples from Outfall 003, Columbia set the reporting limit for mercury at 0.2 ug/L and had the following reported results: three samples at 0.2 ug/L and one undetected sample.	Not supported by substantial or any evidence. The ALJ's finding is based on a misreading of the 2011 Analytical Report. The ALJ specifically failed to correctly read markers in the test results indicating that, even where certain quantities of mercury were initially reported, those quantities were unreliable because in fact the test could not reliably confirm the presence of detectable mercury (as reflected by markers of "U," for "undetected," or "ND," for "Not Detected," next to the numerical values of mercury.	**30.** For the four samples from Outfall 001, Columbia set the reporting limit for mercury at 0.2ug/L and had the following reported results: one sample at 0.2 ug/L; one sample at 0.3 ug/L; two undetected samples. For the four samples from Outfall 002, Columbia set the reporting limit for mercury at varying levels and did not reliably detect mercury in any sample. For the four samples from Outfall 003, Columbia set the reporting limit for mercury at 0.2 ug/L and did not reliably detect mercury in any sample. (A8.)
33. * * * DEQ recognized three different bacterial indicators for fecal contamination: enterococcus for coastal water contact recreation use; E. coli for freshwater contact recreation use; and	Not supported by substantial or any evidence. Finding assumes a legal conclusion. Fish are not a "fecal source" within the meaning of that term.	[Delete finding as erroneous and unnecessary.]

fecal coliform for shellfish harvesting areas. * * * The EPA concluded that water quality in the range of 30 to 35 enterococci per 100 mL "are the lowest water quality values reported to show statistically significant differences in swimming-associated illness rates." Because the recent studies mirrored the results of earlier studies, the geometric mean criteria utilized by DEQ are "effectively the same" as criteria established by EPA in 1986. These studies further demonstrated that fish can be a fecal source for bacteria that causes human gastrointestinal illness.		
34. Because plant-based enterococci are not pathogenic and not associated with fecal sources, in the 2016 Bacteria Publication, DEQ proposed excluding facilities from compliance with the rule-based bacterial limits if the facilities demonstrated that their discharges were not from fecal sources. Specifically, "DEQ would require such entities to demonstrate through biochemical species identification techniques that the effluent contains non-fecal based bacteria species." (Ex. A13 at 13.) This proposal was based upon DEQ's assumption that, if enterococcus (or the other two pathogenic indicators) was present, then it was fecal-based.	Not supported by substantial or any evidence. Finding assumes a legal conclusion. Use of the term "fecal source" (and associated terms) is inconsistent, imprecise, and therefore inaccurate.	[Delete finding as inaccurate and unnecessary.]
38. * * * Ultimately, the "EPA's goal in establishing effluent guidelines is to ensure that industrial facilities with similar	Not supported by substantial evidence. Characterization of ELGs as applying to all fish meal plants is inaccurate. ELGs are for	[Delete as inaccurate and unnecessary.]

characteristics will meet similar effluent limitations representing the best pollution control technologies or pollution prevention practices." (*Id.* at 81; emphasis added.) The EPA does not require facilities to use these technologies; instead, the EPA requires the facilities to meet the effluent limitations. (*Id.*)	the processing of menhaden and anchovy only. The description contained in this section is both over- and under-inclusive, and on that basis inaccurate.	Add: Bio-Oregon demonstrated that their species, processes, and end-products were substantially different from those studied in the Fish Meal ELGs for all the reasons discussed Bio-Oregon's June 4, 2021 and September 16, 2021 letters. (R004.)
40. In developing the ELGs for the seafood industry, the EPA utilized a subcategory for fish meal plants.12 (Ex. A16 at 26.) The EPA studied eight fish meal plants that processed Atlantic menhaden and Pacific anchovy located in California, along the Eastern Seaboard and the Gulf of Mexico. (*Id.* at 66.) The EPA found that fish meal processes commonly involved the arrival of the raw fish product, the cooking of the raw product, the pressing of the raw product to separate solids and liquids, the drying of the solids, the grinding of the solids, the decanting of the liquids and extracting of the oils, and the polishing of the oils. * * *	Not supported by substantial evidence. Characterization of ELGs as applying to all fish meal plants is inaccurate. ELGs are for the processing of menhaden and anchovy only. The description contained in this section is both over- and under-inclusive, and on that basis inaccurate.	[Delete as inaccurate and unnecessary.]
41. In setting the Best Practicable Control Technology Currently Available (BPT) limits,13 the EPA considered all factors required by 40 CFR § 125.3(d)(1). (Ex. A16 at 462.) For facilities that have no solubles unit, the EPA concluded that, at that time,14 there was no cost-effective end-of-pipe treatment available for stickwater and these facilities should barge	Not supported by substantial or any evidence. Admissible evidence presented at the hearing does not support conclusions about the adequacy of the EPA's process for setting ELGs and BPT limits. EPA standards do not contemplate barging in locations and for facilities where barging is impracticable.	[Delete as inaccurate and unnecessary.]

the stickwater to sea or to a facility with a solubles unit for by-product recovery as the cost-effective solutions for the facilities to meet the EPA's Fish Meal ELGs. (Id. at 463.) The EPA's analysis resulted in the promulgation of the Fish Meal ELGs set forth in 40 CFR Part 408, Subpart O (§§ 408.150 – 408.157). (Test. of Linzer.)		
42. DEQ performed a case-by-case BPJ analysis, considering the factors in 40 CFR § 125.3(d)(1), for the shrimp and crab shell processing at the Facility. (Ex. A2; test. of Linzer.) DEQ performed the BPJ analysis for the shell processing because it was a different process than the Facility's fish meal process. DEQ also began a case-by-case BPJ analysis for the fish meal processing. DEQ ceased this process and applied the Fish Meal ELGs promulgated by the EPA after concluding that the Facility's processes and the nature of its wastewater were similar to the facilities reviewed by the EPA in its development of the Fish Meal ELGs.[15] DEQ also found that the BPJ analysis originally initiated for the fish meal processing resulted in similar conclusions for limitations as the Fish Meal ELGs.[16] (Test. of Linzer.).	Not supported by substantial or any evidence, in either Linzer's testimony or the whole record. Against the weight of the evidence.	**42.** DEQ purported to perform a case-by-case analysis for the shrimp and crab shell processing at the Facility but ultimately relied on the Fish Meal ELGs for menhaden and anchovy fish meal promulgated by the EPA; DEQ failed to conduct the required BPJ analysis. (A2; Hammer Test.; Wentworth Test.)
42. n.16. In November 2022, Mr. Hammer completed a development report in which he provided the results of a BPJ analysis he completed. First, this development	Not supported by substantial evidence; mischaracterization of evidence; irrelevant, gratuitous, and prejudicial. In November 2022, Mr. Hammer completed a report as	[Delete as inaccurate and unnecessary.]

report, and the results of new sampling collected by Bio-Oregon in July and August 2022, was not provided to DEQ before the issuance of the renewed Permit. Therefore, the report and new data were not relevant as the Permit must be based on information available to DEQ when the Permit was issued. (Ex. R6; test. of Hammer.) Second, the evidence failed to establish that Mr. Hammer utilized EPA-approved methodology in completing his TBELs analysis. (Ex. R6; test. of Linzer.)	an example of the process for development of site-specific TBELs prepared for using BPJ. (R006 at 6.) His report stated, "because of the high variability in historical monitoring data, this facility is unique, and the technologies evaluated (DAF, AFF, and evaporation) have not been applied to a facility of this type, it is recommended that TBELs be developed during the upcoming 5-year permit cycle." (R0006 at 34.) Mr. Hammer did not complete a BPJ analysis, but rather submitted a preliminary report of a BPJ analysis and recommended that further data is collected and analyzed over the next permit cycle. (R006.)	
46. Bio-Oregon never provided data to the EPA for the development of the TMDL or the Facility's wasteload allocation (WLA). The EPA did not request such data from Bio-Oregon.	Not supported by substantial evidence. This finding is irrelevant, gratuitous, and prejudicial as such data were never requested.	[Delete as inaccurate and unnecessary.]
47. In establishing the TMDL, the EPA utilized conservative assumptions to ensure that impacts were not underestimated and to account for uncertainties in data. * * *	Not supported by substantial evidence. Characterization of EPA's assumptions as "conservative" and recited reasons for such assumptions are inaccurate. Statement of the EPA's processes as incomplete.	[Delete as inaccurate and unnecessary.]
52. * * * In 2022 or 2023, the EPA established a process for facilities to access the reserve capacity, which must be initiated by the permittee and does not allow state agencies to independently assign reserve capacity. Bio-Oregon did not request utilizing the reserve capacity in	Not supported by substantial evidence. State agencies may assign reserve capacity and Bio-Oregon did so request during relevant periods. There is no evidence of there being a formal process established by EPA to allocate the reserve capacity. A18	[Delete as inaccurate and unnecessary.]

its comments made during the applicant review period or the public comment period.	at 80 says EPA, Ecology, and DEQ will manage the reserve allocation process.	
54. The EPA did not include or provide guidance for the consideration of intake credits * * * Because the EPA did not utilize intake credits or suggest their use to enable point sources (such as Bio-Oregon) to meet the WLAs (unlike the EPA's reference to the use of the reserve capacity) in its TMDL, DEQ will not provide intake credits to point sources assigned a WLA by the EPA.	Not supported by substantial or any evidence. It is not correct that EPA standards do not contemplate use of intake credits. The statement that DEQ will not provide intake credits because EPA did not utilize them suggests an erroneous and misguided justification for DEQ's position.	[Delete as inaccurate and unnecessary.]
55. * * * The Permit set daily maximum temperature limits of 35.6°C for Outfall 002 and 32°C for Outfall 003. (Ex. A1 at 5-6.) Bio-Oregon did not object to these maximum temperature limits for the Outfalls.	Not supported by substantial or any evidence. It is not correct that Bio-Oregon did not object to maximum temperature limits. Parsing Bio-Oregon's objections and argument about the thermal load limit from maximum temperature limits is not appropriate. Throughout agency proceedings, Bio-Oregon has objected to and made arguments about the Permit's temperature limits as a whole, including their various permutations.	Bio-Oregon objects to all temperature limits imposed in the Permit.
57. * * * An RPA demonstrated that there was a reasonable potential for such discharges [of BOD_5, TSS, oil/grease and ammonia] to contribute to the exceedance of the water quality standards.	Not supported by substantial or any evidence. The ALJ's finding is based on a misreading of the 2011 Analytical Report, as explained below. Further, while DEQ purported to apply an RPA, that RPA was unsound and invalid. DEQ's conclusions thus are not reasonably supported.	**57.** * * * Because DEQ concluded that such discharges [of BOD_5, TSS, oil/grease and ammonia] had been detected (even in trace amounts) in some of the Facility's effluent, DEQ concluded that there was a reasonable potential for those discharges to cause an exceedance in the water quality standards. (A2; A12.)

60. Stickwater contains high BOD_5, TSS and oil/grease. * * * A dissolved air flotation process is commonly used in the industry and dilutes the stickwater to reduce these pollutants. * * * The implementation of these technologies would reduce BOD_5 by 50 percent, TSS by 70 percent and oil/grease by 80 percent. (Test. of Hammer; Ex. R6 at 26–29, 32.)	Not supported by substantial or any evidence. Against the weight of the evidence. Regarding the middle sentence, DAF technology has been used in the treatment of seafood processing effluent, but not for stickwater. Hammer's testimony provided premilinary, untested engineering hypotheses regarding the ability of DAF technology to reduce pollutants in stickwater.	**60.** Stickwater in the Facility's effluent contain BOD_5, TSS, and oil/grease. * * * It is estimated that the implementation of these technologies may reduce BOD_5 by 50 percent, TSS by 70 percent and oil/grease by 80 percent; however, further testing is required. (Hammer Test.; Ex. R6 at 26–29, 32.)
65. The Facility's effluent contains levels of copper, arsenic and zinc that are potentially toxic to aquatic species. Based on the presence of copper, lead, mercury, arsenic and zinc in the Facility's Outfalls, an RPA demonstrated that the metal levels had the potential to cause an exceedance in the water quality standards.	Not supported by substantial or any evidence. The Facility's effluent does not contain levels of copper, arsenic, and zinc that are potentially toxic to aquatic life.	[Delete as inaccurate and unnecessary.]

Bio-Oregon also finds the ALJ's following findings of fact incomplete and proposes the following additions to those findings:

ALJ Finding	Requested Additions
5.	The grinding process releases endogenous enzymes into the raw fish, which leads to higher hydrolysis from those materials upon arrival than in traditional fish meal plants where whole fish are delivered instead of ground. (R004.)
6.	The Facility's raw fish product also includes bones. (Test. of Humphries.)
11.	The Facility does not have an evaporator and cannot concentrate and use the stickwater because it will damage the end product. (Test. of Humphries.)
14.	The Facility's air is pumped into the scrubber tower in which water vapor caputres VOCs, including the targeted VOC nitrogen to mitigate nuisance odors. (Test. of Feldman, Humphries, and Hammer.)
24.	There were several irregularities in Columbia's work and the Analytical Report that calls into question the reliability of that document. For instance, some of the sampling results did not meet the minimum requirements of reliable as defined in 40 CFR Part 136, as reflected by the analytical reports provided to DEQ in 2011. (A8; 03/02 Wentworth.) Moreover,

	many of the test results showed quantities of substances at the lowest limit of the tests capability of detection, which put many results at the edge of what is reliable. (Hammer Test.) Columbia also noted high salt and solids content of many of the samples, which Columbia had to compensate for by drastically diluting samples as it performed tests. (A8.) The Analytical Report also contained case narratives that undermined the reliability of data collected. Among the most alarming were some narratives reflecting that "there was no QA/QC analysis performed" for some samples and that "there was a method blank that was not analyzed." (03/02 Wentworth.) It was accordingly impossible for either Bio-Oregon or DEQ to verify that "samples were collected properly" or that "they were analyzed within the standard deviations that were allowed for an accredited lab" and not contaminated or otherwise compromised. (*Id.*)
26.	Nearly all material received by Bio-Oregon originates from Pacific Seafood-owned entities that also do not introduce any copper, mercury, thallium, or zinc products in processing activities. DEQ never tested or considered data regarding whether any pollutants or contaminants could be found in the Facility's inputs or intake. (Test. of Wentworth, Branstetter.)
29.	In contrast, EPA recommends a significantly more involved RPA than what DEQ performed in this case. EPA recommends consideration of intake, inputs, existing pollutants in receiving bodies of water, total limits applicable to receiving bodies of water, and other factors that DEQ expressly declines to consider. (A12; EPA's *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*, EPA 823-R-10-001 (Apr 2010), available at https://www.epa.gov/sites/default/files/2019-02/documents/guidance-implement-methylmercury-2001.pdf, incorporated in A12 at 2.)
35.	Bio-Oregon stated it is not a sewage treatment facility nor a fecal source. (Ex. R004 at 18.)
38.	EPA's Fish Meal ELGs, specifically EPA's menhaden and anchovy ELGs for fish meal processors on the Atlantic, Gulf, and West Coasts, expressly apply only to those industries and locations and not to other industries or other locations, even if industries may have similar characteristics. For other industries (including those with similar characteristics), a proper case-by-case analysis and BPJ is required. (A16.)
59.	The barging of stickwater is impracticable as it would be unnecessarily costly to Bio-Oregon, dangerous, and, moreover, contribute considerably more pollutants into the air and water than it would mitigate. (Humphries Test.; Hammers Test.; Wentworth Test.) For all practical purposes it is not an available control technology. The barging of stickwater to the ocean is also unnecessary given that the Facility is already located at the mouth of the Columbia River to the Pacific Ocean. (A2.)
60.	Some of the technology discussed has never been tested on stickwater, so its ability to remove any pollutants in stickwater is merely estimated and untested. Further testing is required before such technology can be considered reliable for stickwater. Furthermore, even those technologies' estimated ability to remove any pollutants from stickwater would be insufficient to meet the Fish Meal ELGs, since those ELGs were not intended for stickwater discharges. And overall, given the high costs of these and other proposed technologies (requiring investments of $3 million or more), and the unverified removal efficiencies of BOD_5, TSS, and oil/grease in the Facility's stickwater, the proposed technology options

	capable of reducing BOD_5 by 50 percent, TSS by 70 percent, and oil/grease by 80 percent are not worthwhile for Bio-Oregon. (Hammer Test.; R006.)
61.	The Facility operates with an air quality permit from DEQ that includes a limit for VOCs based upon the air scrubber that transfers VOCs from the air to the effluent for the mitigation of nuisance odors. (A2.)

Bio-Oregon objects to the following conclusions of law. Where quoted conclusions are abbreviated, Bio-Oregon has done so for brevity and readability and does not admit portions of a conclusion that are omitted.) For the conclusions of law identified below, Bio-Oregon proposes the following alternative conclusions of law. However, failure to specifically address a conclusion of law should not be construed as acceptance of it, as many of the conclusions are intertwined and conceptually reliant on others.

ALJ's Conclusion of Law	Objection	Proposed Alternative
1. DEQ's limits on total copper, mercury, zinc and thallium for Outfall 001 are appropriate.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**1.** DEQ's limits on total copper, mercury, zinc and thallium for Outfall 001 are inappropriate and unreasonably stringent and should be stricken from the permit.
2. DEQ correctly applied OAR 340-041-0009(6) when setting enterococcus bacteria limits in the Permit for Outfalls 001 through 003.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**2.** DEQ failed to correctly apply OAR 340-041-0009(6) when setting enterococcus bacteria limits in the Permit for Outfalls 001 through 003. The enterococcus bacteria limits in the Permit should be stricken.
3. DEQ correctly applied the Fish Meal ELGs to develop TBELs for BOD_5, TSS, oil and grease for Outfall 002, and DEQ did not err in its application of the factors listed in 40 CFR § 125.3(d).	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**3.** DEQ failed to correctly apply the Fish Meal ELGs to develop TBELs for BOD_5, TSS, oil and grease for Outfall 002, and DEQ erred in its application of the factors listed in 40 CFR § 125.3(d). The TBELs in the permit are inappropriate and unreasonably stringent and should be stricken.

4. Because DEQ appropriately applied the Fish Meal ELGs to the Facility's effluent, DEQ was not required to establish separate TBELs for the fish processing for Outfall 002.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**4.** DEQ was required to establish separate TBELs for the fish processing for Outfall 002. Because DEQ failed to do so, the TBELs for Outfall 002 should be stricken.
5. DEQ did not err in denying an allocation of a portion of the thermal load reserve capacity of the Columbia River's TMDL to Bio-Oregon to meet its WLA.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**5.** DEQ erred in denying an allocation of a portion of the thermal load reserve capacity of the Columbia River's TMDL to Bio-Oregon to meet its WLA. Accordingly, the thermal limits in the Permit should be stricken.
6. DEQ did not err in denying an intake credit for the thermal load of the incoming water for Outfall 003.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**6.** DEQ erred in denying an intake credit for the thermal load of the incoming water for Outfall 003. Accordingly, the thermal limits in the Permit should be stricken.
7. DEQ did not err in setting heavy metal limits and monitoring requirements for Outfalls 002 and 003 and did not err in denying an intake credit for metals present in the intake water for Outfalls 002 and 003.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**7.** DEQ erred in setting heavy metal limits and monitoring requirements for Outfalls 002 and 003 and in denying an intake credit for metals present in the intake water for Outfalls 002 and 003. Accordingly, the metals limits in the Permit should be stricken.
8. DEQ did not err in imposing monitoring requirements at Outfalls 001 and 003 for BOD_5, TSS, oil/grease, ammonia, alkalinity and hardness and at Outfall 002 for alkalinity and hardness.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**8.** DEQ erred in imposing monitoring requirements at Outfalls 001 and 003 for BOD_5, TSS, oil/grease, ammonia, alkalinity and hardness and at Outfall 002 for alkalinity and hardness. The monitoring requirements should be stricken.
9. DEQ did not err in imposing monitoring requirements and at the	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency	**9.** DEQ erred in imposing monitoring requirements and at the scheduled frequency

scheduled frequency rate for VOCs and cyanide.	rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	rate for VOCs and cyanide. These monitoring requirements should be stricken.
10. DEQ did not err in imposing WET testing requirements at Outfalls 001 through 003.	Erroneous interpretation of provision of law; outside the range of discretion to DEQ by law; inexplicably inconsistent with agency rule, officially stated position, and prior agency practice; not supported by substantial evidence in the record or substantial reason.	**10.** DEQ erred in imposing WET testing requirements at Outfalls 001 through 003. The WET testing requirements should be stricken.

CERTIFICATE OF FILING / SERVICE

I hereby certify that on February 16, 2024, I served the foregoing RESPONDENT BIO-OREGON'S EXCEPTIONS AND BRIEF by emailing a copy to Director Leah Feldon (Leah.FELDON@deq.oregon.gov) and Lindsay Trapp (Lindsay.TRAPP@deq.oregon.gov).

I further certify that on the same date, I served a true and correct copy of the foregoing RESPONDENT BIO-OREGON'S EXCEPTIONS AND BRIEF on the following named person(s) or parties:

By: Electronic Mail

Erin Saylor, Agency Representative
Department of Environmental Quality
700 NE Multnomah Street, Suite 600
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Erin.SAYLOR@deq.oregon.gov

By: Electronic Mail

Diane Lloyd, Assistant Attorney General
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1515 SW Ave
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DATED: February 16, 2024

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