NO. 94293-5

SUPREME COURT OF THE STATE OF WASHINGTON

PUGET SOUNDKEEPER ALLIANCE,

Petitioner,

v.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY; and STATE OF WASHINGTON, POLLUTION CONTROL HEARINGS BOARD,

Respondents.

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY'S ANSWER TO PETITION FOR REVIEW

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I. INTRODUCTION

The Department of Ecology issued a National Pollutant Discharge Elimination System (NPDES) Permit to Seattle Iron and Metals that set limits on the amount of specific pollutants, including polychlorinated biphenyls (PCBs), that Seattle Iron is allowed to discharge to the Lower Duwamish River. The Permit instructed Seattle Iron to measure its compliance with these discharge limits using analytical tests specified by the Environmental Protection Agency (EPA) in federal regulation. The test specified in federal regulations for PCB measurement is Method 608, which Ecology required in the Permit.

Puget Soundkeeper Alliance (PSA) appealed the Permit to the Pollution Control Hearings Board, arguing that a different, more sensitive, testing method should have been required. The Board, however, concluded that Ecology had correctly required Method 608, as it is the only EPA-approved test listed in the federal regulation. In an unpublished opinion, the Court of Appeals affirmed, and PSA now petitions this Court for review.

Review should be denied because the criteria for granting review in RAP 13.4(b) are not met. There are no prior decisions of either this Court or the Court of Appeals addressing the testing method for PCBs, and consequently, the Court of Appeals decision below does not conflict

with anything. Additionally, the issue raised is not of substantial public interest because the outcome is dictated by federal and state regulation, both of which require the use of Method 608. Moreover, as the only testing method for PCBs approved by EPA, use of Method 608 is presumptively consistent with the public interest.

Contrary to PSA's Petition, the discharge limit for PCBs in Seattle Iron's Permit is not at issue here. Under the Board's ruling, the discharge limit for PCBs was set at the human health criteria, the most stringent limit possible, which at the time the Permit was issued was 0.00017 µg/L. This aspect of the Board's ruling was not appealed. Seattle Iron's NPDES Permit does not authorize the discharge of any toxicant in a toxic amount. The sole issue here is whether the testing method for routine monitoring of PCBs in the Permit is lawful. This narrow question does not merit review.

II. STATEMENT OF THE ISSUE

Was Ecology's use of Method 608 as the testing method for polychlorinated biphenyls (PCB)s in the Seattle Iron Permit lawful, when that Method is the only testing method approved by the Environmental Protection Agency for PCBs?

III. STATEMENT OF THE CASE

Seattle Iron is an auto shredding and metal recycling operation located on the Lower Duwamish River. *Puget Soundkeeper Alliance v.*

Dep't of Ecology, Slip Op. at 2.(Attached as App. A) [1] The industrial operations at Seattle Iron produce two different wastewater discharges. The first is a mix of wastewater from its shredding and extraction process, mixed with some stormwater (in combination referred to as "process water"), which is collected and treated before being discharged to the Lower Duwamish River. *Id.* at 2-3. Other areas on Seattle Iron's property, including rooftops and parking lots, produce only stormwater runoff, which, at the time the Permit was issued, did not receive treatment, but joined the treated wastewater at the point of discharge to the river. *Id.*

The Lower Duwamish River has been the site of major industrial activity for more than 100 years, resulting in extensive contamination of the waterway. *Id.* at 2. Elevated levels of hazardous contaminants can be found in river sediments, as well as in fish and shellfish tissue. *Puget Soundkeeper Alliance v. Dep't of Ecology*, PCHB No. 13-137c, at 3 (July 23, 2015) (Board Decision)(Attached as App. B). Contaminants of concern in the Lower Duwamish include PCBs. *Id.* at 3–4.

PCBs are manmade chemicals used in a wide variety of products. *Id.* at 4. Although banned above certain concentrations in the late 1970s, PCBs persist in manufactured products and the environment and are toxic.

[1] To simplify review, this briefing cites to the Court of Appeals' and the Board's unchallenged Findings of Fact as much as possible, rather than directly to the administrative record. Citations to the administrative record when required are to AR and the Bates numbered page.

Id. PCBs also accumulate in fish tissue, and human exposure to PCBs by way of fish consumption of resident fish and shellfish is a public health concern. *Id.* There are numerous historic sources of PCBs along the Lower Duwamish, including the Seattle Iron property. *Id.* at 6.

Ecology is the state water pollution control agency for all purposes of the federal Clean Water Act. RCW 90.48.260(1). As part of its regulatory responsibilities, Ecology administers the NPDES permit program. RCW 90.48.260(1)(a); *Puget Soundkeeper Alliance v. Pollution Control Hearings Board*, 189 Wn. App. 127, 137, 356 P.3d 753 (2015). NPDES permits allow for the discharge of wastewater containing pollutants to surface waters, provided the discharges are compliant with the permit terms and consistent with state and federal law. 33 U.S.C. § 1342(a)(1)–(2), WAC 173-220-010, -020; Slip Op. at 7. NPDES permits contain limits on the amount of any specific pollutant that a facility is allowed to discharge. WAC 173-201A-510(1). These limits are set so that a facility's discharge will meet state water quality standards. WAC 173-220-130(1)(b); Slip Op. at 8.

In order to measure compliance with their discharge limits, NPDES permits require monitoring for pollutants. EPA specifies the laboratory methods used for this testing. 40 C.F.R. § 122.44(i)(l)(iv); *see also* 40 C.F.R. § 136.1(a) ("The procedures prescribed herein shall . . . be

used to perform the measurements indicated whenever the waste constituent specified is required to be measured."). EPA approves test methods by way of formal rulemaking, which subjects any new method to public review and comment. *See, e.g.,* Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures, 75 Fed. Reg. 58,024 (Sept. 23, 2010) (excerpt attached as App. C).

Pursuant to its delegated authority under state law, Ecology has promulgated regulations governing the NPDES permit program. *See* WAC 173-220. In addition to the NPDES requirements, state water quality regulations reference and require the use of EPA approved test methods:

> The analytical testing methods for these numeric criteria must be in accordance with the *"Guidelines Establishing Test Procedures for the Analysis of Pollutants" (40 C.F.R. Part 136)* or superseding methods published. The department may also approve other methods following consultation with adjacent states and with the approval of the USEPA.

WAC 173-201A-260(3)(h).

EPA-approved Method 608 is the laboratory method specified in federal regulation for testing for the presence of PCBs. 40 C.F.R. § 136, App. A; Board Decision at 25. While not approved by EPA for compliance testing, other methods for detecting the presence of PCBs have been developed. Board Decision at 25. Two of these additional

methods, Method 8082 and Method 1668C, were discussed by the Board in its Decision on the Seattle Iron Permit.

The Board found that the three methods, 608, 8082, and 1668C varied in their ability to detect PCBs in Seattle Iron's discharge. *Id.* at 25–26. Method 8082A and Method 1668C are more sensitive than Method 608 in that they are able to detect PCBs at smaller amounts than Method 608. However, neither Method 8082A nor Method 1668C is approved by EPA for permit compliance purposes. 40 C.F.R. § 136, App. A; Slip Op. at 11; Board Decision at 25.

In 2010, EPA had proposed rulemaking to add Method 1668C to 40 C.F.R. part 136, but ultimately declined to do so. 77 Fed. Reg. 29,763 (May 18, 2012) (excerpt attached as App. D). EPA received comments critical of Method 1668C when it published its proposed changes. *Id.* Commenters were critical of the inter-laboratory study relied on by EPA. *Id.* Comments were also received on the adverse effects of the method on compliance monitoring, and concerns about data reporting and costs. *Id.*

PSA appealed the NPDES Permit issued by Ecology to the Board on several grounds, including the testing method. PSA argued that a more sensitive test than Method 608 should be used. The Board, however, concluded that Method 608 was the only EPA-approved analytical method

for compliance monitoring for PCBs, and upheld the use of Method 608 in the Permit. Board Decision at 34–35.

PSA appealed the Board's decision directly to the Court of Appeals. In a unanimous unpublished opinion, the Court of Appeals held that Ecology's requirement for the use of Method 608 in Seattle Iron's NPDES Permit was lawful. Slip Op. at 15. The Court of Appeals reasoned that federal law requires that monitoring be done using methods approved under 40 C.F.R. part 136. *Id.* The court found that Method 608 is the only approved method for PCBs in the federal regulation, and therefore under the regulatory definition, Method 608 is also a method sufficiently sensitive for the purpose of monitoring. *Id.*

IV. REASONS WHY REVIEW SHOULD BE DENIED

The Supreme Court should deny PSA's Petition. The Court of Appeals properly held that it was "lawful for Ecology to issue an NPDES permit that calls for the use of Method 608 to test PCBs." *Id.* Also, the question presented here is not of substantial public interest because the outcome is dictated by state and federal regulations. The policy arguments advanced by PSA in its Petition do not establish a basis for review as they cannot override the dictates of state and federal regulation. And finally, contrary to PSA's argument, the Court of Appeals' decision in this case is

consistent, not in conflict, with its prior decision in *Puget Soundkeeper Alliance*,189 Wn. App at 127. As the Court of Appeals correctly found, Ecology's inclusion of Method 608 in the Seattle Iron Permit is lawful.

A. This Case Does Not Present an Issue of Substantial Public Importance Because Ecology's Use of Method 608 is Mandated by Federal and State Regulation

Ecology's choice of the method used to test for PCBs in NPDES permits is determined by state and federal law. EPA requires that:

> The procedures prescribed herein shall, except as noted in §§ 136.4, 136.5, and 136.6, be used to perform the measurements indicated whenever the waste constituent specified is required to be measured for.

40 C.F.R. § 136.1.[2] The federal regulation specifies that reports required to be submitted by dischargers under the NPDES permit must utilize test procedures found in 40 C.F.R. §§ 136.4, 136.1(a)(2).

Federal regulations governing permit requirements state that monitoring for permit compliance must be:

> According to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters.

[2] 40 C.F.R. §§ 136.4–136.6 is the approval process for use of unlisted methods. As the Court of Appeals noted, Ecology has the optional ability to seek approval of a test method other than those listed in 40 C.F.R. part 136 pursuant to the regulation. The Board properly determined it had no authority to require Ecology to seek such optional approval. Board Decision at 35; Slip Op. at 14 n.13.

40 C.F.R. § 122.44(i)(1)(iv). A method is "sufficiently sensitive" when "[t]he method has the lowest [method minimum detection level] of the analytical methods approved under 40 CFR part 136."[3] 40 C.F.R. § 122.44(i)(l)(iv)(A)(2). Method 608 is the only method approved for PCB analysis, so there is no other approved procedure with a lower method minimum level.

State water quality standards mirror the federal regulations, requiring that EPA-approved methods found in 40 C.F.R. part 136 are used for monitoring:

> The analytical testing methods for these numeric criteria must be in accordance with the *"Guidelines Establishing Test Procedures for the Analysis of Pollutants" (40 C.F.R. Part 136)* or superseding methods published. The department may also approve other methods following consultation with adjacent states and with the approval of the USEPA.

WAC 173-201A-260(3)(h). The Court of Appeals correctly held that use of Method 608 in Seattle Iron's Permit is lawful.[4]

PSA ignores the specific provisions of federal and state regulation to advocate for the use of a different test method. The federal regulation

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[3] The detection limit means the "minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero." 40 C.F.R. § 136.2(f).

[4] Below, PSA also contended that the more sensitive testing method 1668C was a "superseding method" within the terms of the regulation. The Court of Appeals, however, correctly rejected this argument and PSA does not raise it again in its Petition. Consequently, this argument cannot form the basis for review. RAP 13.7(b); *Clam Shacks of America, Inc. v. Skagit Cty.*, 109 Wn.2d 91, 98, 743 P.2d 265 (1987).

states that the methods found in 40 C.F.R. part 136 "shall" be used for required testing. The use of the word "shall" in a regulation is presumptively imperative and creates a duty rather than confers discretion. *Crown Cascade, Inc. v. O'Neal*, 100 Wn.2d 256, 261, 668 P.2d 585 (1983). PSA glosses over the fact that in 2012 EPA declined to add Method 1668C to 40 C.F.R. part 136 after it first proposed, in 2010, to do so. EPA's decision was based in part on negative public comments it received regarding problems with Method 1668C. Should EPA eventually choose to modify 40 C.F.R. part 136 to include Method 1668C, the method would then be available for PCB testing for permit compliance. But until that occurs, federal and state regulations require the use of Method 608 for permit compliance. The Court of Appeals correctly held as such.

B. PSA's Arguments Cannot Overcome Clear Statutory Requirements to Use Approved Test Methods

PSA makes a variety of policy arguments in its Petition to the effect that the public interest requires a more stringent testing method. *See* 10–11, 13–15. These arguments are unavailing as they do not establish a legal basis for deviating from the requirements of the regulation.

1. State and federal law both equally protect surface waters from the discharge of toxic pollutants

PSA reads a great deal into the Court of Appeals' discussion in *Puget Soundkeeper Alliance*, 189 Wn. App. at 127 (*PSA I*) on the regulatory prohibitions against the discharge of toxic pollutants. Although *PSA I* describes the state statute, RCW 90.48.520, as more "categorical" than the federal statute, the court never said that this "categorical" nature makes state law "more stringent" than federal law, as PSA claims. Petition at 5, 12, 14, 16. In fact, what the court said was "[b]oth federal and state statutes are definitive in prohibiting the discharge of toxic pollutants into receiving waters." *PSA I*, 189 Wn. App. at 149 (citing 33 U.S.C. § 1251(a)(3) and RCW 90.48.520). The court went on to decide the case on the specific terms of Whole Effluent Toxicity regulation, not on its broader discussion of water quality statutes.[5]

While under the Clean Water Act a state does have the option to regulate more stringently than federal standards, it is not required to, especially here where both state and federal law prohibit the discharge of toxic pollutants. 33 U.S.C. § 1370. PSA cannot use the general prohibitions against the discharge of pollutants to overcome the specific

[5] Likewise, the *PSA I* court's statements on the State Environmental Policy Act (SEPA) must be considered dicta. *PSA I*, 189 Wn. App. at 148. No SEPA issues were pled, briefed, or argued in the case, and the court's observations concerning SEPA compliance were not "involved in the case or essential to its determination." *State ex rel. Lemon v. Langlie*, 45 Wn.2d 82, 89, 273 P.2d 464 (1954).

requirement in the regulation that Ecology use EPA-approved methods for compliance testing in permits. *See Kustura v. Dep't of Labor & Indus.*, 169 Wn.2d 81, 88, 233 P.3d 853 (2010) (stating that a specific statute will supersede a general one when both apply). Nor do state policy declarations control over the more specific regulatory provisions adopted to implement those general declarations. *Cf. Puget Soundkeeper Alliance v. Dep't of Ecology*, 102 Wn. App. 783, 790, 9 P.3d 892 (2000) (stating that declarations of policy do not control over more specific statutory provisions adopted to implement those general declarations). The Court of Appeals properly denied PSA's attempt to read the requirement for the use of EPA approved methods out of the state regulation.

2. The permit does not allow the discharge of PCBs in excess of the express water quality based limit

The Board found that the discharge limit for PCBs in Seattle Iron's Permit should be set at the applicable human health criteria of 0.00017 µg/L. Board Decision at 47. Discharges that contain a higher amount of PCBs are prohibited. AR 3259–60.[6] "Any discharge of any pollutant more frequent than or at a level in excess of that identified and authorized by the permit shall constitute a violation of the terms and

[6] Citation is to pages 6 and 7 of the Permit under appeal at the Board hearing, authorizing discharges from Seattle Iron subject to the specified limits. The Board's Decision modified the PCB limits in the two discharges (Outfalls 001 and 002) to 0.00017 µg/L. Board Decision at 47.

conditions of the permit." WAC 173-220-150(1)(c). This regulatory prohibition against the discharge of pollutants does not change based on the sensitivity of the test method used for routine monitoring.

PSA implies that use of the required Method 608 for routine monitoring will mean that PCBs will not be detected in Seattle Iron's discharge. PSA's own evidence at hearing belies that concern. In April 2014 Ecology issued a Notice of Violation to Seattle Iron for violations of permit limits for several pollutants, including PCBs. AR 1327–29. The notice lists six instances between October 2013 and March 2014 when PCBs were detected. AR 1328. The levels of PCBs in the discharge were all detected at levels above method detection limit for Method 608.[7]

Outside of the context of routine discharge monitoring, other activities on the Lower Duwamish River are being conducted as part of the ongoing river cleanup. Board Decision at 27. For instance, King County, the City of Seattle, and Ecology have done extensive work using methods more sensitive than Method 608 for PCB detection in these non-routine studies and activities. *Id.* Ecology's ability to issue enforcement for

[7] The method detection limit for Method 608 is 0.25 µg/L. Board Decision at 24. The method detection limit is the limit at which the target chemical can be reliably detected, but not necessarily reliably quantified. Board Decision at 26. As PSA indicates, the practical quantitation limit for Method 608 is 0.50 µg/L. Petition at 9. The practical quantitation limit is a statistical calculation which results in a reliable measure of the amount of the pollutant. Board Decision at 26. The practical quantitation limit is always higher than the method detection limit.

discharges that exceed the limits found in the permit is not limited to data developed only through routine compliance monitoring. Ecology is able to utilize all sources of data when exercising its enforcement discretion.

Not only is Method 608 capable of detecting PCBs in Seattle Iron's discharge, there is no basis to suggest that data derived using methods other than Method 608 cannot be the basis for enforcement of a violation of a discharge limit. The use of the required PCB detection method for routine monitoring does not alter the enforceability of the discharge limit for PCBs in Seattle Iron's Permit.

C. There is No Conflict With Other Court of Appeals' Decisions Requiring This Court's Intervention

PSA's Petition also attempts to manufacture a conflict between two decisions from the Court of Appeals in order to argue there is reason for this Court to accept review. No such conflict exists. Both cases present the question of whether Ecology's actions were consistent with its own regulations. Both cases held that Ecology was required to follow its own rules. In the case at bar, Ecology followed its own rules and used the method required by regulation to test for PCBs in Seattle Iron's discharge Permit. No further review by this Court is necessary.

In *PSA I*, the Court of Appeals reviewed a NPDES permit condition that required the permittee to conduct Whole Effluent Toxicity

(WET) testing on its discharge. *PSA I*, 189 Wn. App. at 132. The WET regulations, WAC 173-205, stated that compliance with state water quality standards was achieved when "the most recent acute toxicity test has shown no statistically significant difference in response [of the test organisms] between the acute critical effluent concentration and a control." WAC 173-205-070(1). The permit issued by Ecology in *PSA I*, however, contained a WET test condition that assessed compliance only after a second test was conducted. *PSA I*, 189 Wn. App. at 133. The Court of Appeals found that this permit condition directly conflicted with the regulation requiring the results of "the most recent" test to be the measure of compliance with water quality standards. *Id.* at 149. The court held that the regulations' plain language determined the outcome, and concluded that NPDES permits must be consistent with state water quality standards. *Id.* at 151–52.

In so holding, the Court of Appeals relied on the text of the WET regulations. The court said first that the regulation "plainly states that a failed WET test means that 'the effluent has failed the test for compliance with the whole effluent acute toxicity limit.'" *Id.* at 149. The court went on to state "[t]hus, a single failed WET test based on a statistically significant difference in survival shows that a discharge has occurred in violation of both federal and state statutes. In addition, 40 C.F.R. section 122.4 and

RCW 90.48.520 each prohibit issuing NPDES permits that allow violations of state water quality standards." *Id.* Therefore, the court found the permit condition at issue "contradicts applicable state and federal statutes, as well as a federal rule." *Id.*

The Court of Appeals' decision below presents no conflict with the court's decision in *PSA I*. The two cases deal with entirely different issues and regulations. If anything, the decisions in the two cases are fully consistent because both require Ecology to follow its own regulations in issuing NPDES permits. As described above, both the federal and state regulations at issue in this case provide that the methods used to test a permitted discharge for specific pollutants must be those published in 40 C.F.R. part 136. Method 608, not Method 1668C, is the method listed in the federal regulation for the testing of PCBs.

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V. CONCLUSION

The Court of Appeals committed no error when it concluded that Ecology was required to follow federal and state regulations that mandate the use of Method 608 for PCB testing in NPDES permits. PSA's Petition should be denied.

RESPECTFULLY SUBMITTED this 23rd day of May, 2017.

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CERTIFICATE OF SERVICE

I certify under penalty of perjury under the laws of the state of Washington that on May 23, 2017, I caused to be served the Department of Ecology's Answer to Petition for Review in the above-captioned matter upon the parties herein via U.S. mail and using the Appellate Court Portal filing system, which will send electronic notification of such filing to the following:

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I certify under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

DATED this 23rd day of May 2017, in Olympia, Washington.

Gretchen Clark

GRETCHEN CLARK
Legal Assistant

APPENDIX A

Puget Soundkeeper Alliance v. Dep't of Ecology, No. 48267-3-II,
Slip Op. (February 22, 2017)

197 Wash.App. 1078

NOTE: UNPUBLISHED OPINION, SEE WA R GEN GR 14.1

Court of Appeals of Washington, Division 2.

PUGET SOUNDKEEPER ALLIANCE, Appellant,
v.
STATE of Washington, DEPARTMENT OF ECOLOGY; and State of Washington Pollution Control Hearings Board, Respondents.

No. 48267–3–II
|
February 22, 2017

Appeal from Thurston Superior Court, 15–2–01575–1, Honorable Gary R. Tabor, Judge.

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UNPUBLISHED OPINION

Maxa, A.C.J.

*1 Puget Soundkeeper Alliance (Soundkeeper) appeals the decision of the Pollution Control Hearings Board (Board) to uphold in part a National Pollutant Discharge Elimination System (NPDES) permit issued by the Washington Department of Ecology (Ecology) to Seattle Iron and Metals (SIM) for SIM's wastewater and stormwater discharges into the Lower Duwamish Waterway. Soundkeeper challenges the permit provisions that (1) require discharges to be tested for polychlorinated biphenyls (PCBs)[1] using Method 608 instead of the more sensitive Method 1668C, and (2) establish limitations on copper and zinc levels in untreated stormwater discharges based on the benchmarks in Ecology's 2009 Industrial Stormwater General Permit (General Permit) instead of based on site-specific water quality standards for those substances.

1 PCBs are a group of manmade chlorinated organic chemicals that contain multiple individual compounds ("congeners") and are highly toxic to humans and animals.

We hold that (1) SIM's permit properly required the use of Method 608 for testing PCBs because we defer to Ecology's determination that Method 608 is the testing method approved by the United States Environmental Protection Agency (EPA) and allowed under Washington law; and (2) substantial evidence does not support the Board's conclusion that there was insufficient data to calculate site-specific water quality-based effluent limitations (WQBELs), and Washington law requires that SIM's discharges be subject to WQBELs instead of the less restrictive limitations based on the General Permit. Accordingly, we affirm in part and reverse in part the Board's decisions on the two challenged NPDES permit provisions. We remand to Ecology for revision of the effluent limitations for copper and zinc consistent with this opinion.

FACTS

SIM's Discharges into Lower Duwamish Waterway

SIM operates an auto shredding and metal recycling facility adjacent to the Lower Duwamish Waterway (LDW). The SIM facility is located in the LDW federal and state cleanup site, which includes the approximately 5.5 mile stretch of the Duwamish River that flows into Elliot Bay. The LDW is heavily contaminated because of major industrial activity in the area over the last 100 years. Ecology is the lead agency for source control at the LDW site.

SIM's operations produce two types of water that must be discharged from the facility. A mix of wastewater from SIM's operations and some stormwater (referred to as "outfall 001") is collected and treated before discharge. Stormwater runoff from rooftops and parking lots (referred to as "outfall 002") is not treated before discharge. SIM discharges both the treated wastewater and the untreated stormwater into the LDW. SIM's discharges into the LDW are recognized as a possible source of contaminants in the LDW sediments.

NPDES Permit

Ecology first issued an NPDES permit specific to the SIM site in 2007. The 2007 permit imposed WQBELs for SIM's treated discharges from outfall 001, with numeric effluent

limits for cooper, zinc, total PCBs, and other pollutants. That permit did not regulate SIM's discharge of untreated stormwater from outfall 002.

*2 On September 16, 2013, Ecology issued an NPDES waste discharge permit to SIM relating to the discharges of both outfall 001 and outfall 002 into the LDW.[2] The permit imposed daily limitations for PCBs, copper, zinc, and other contaminants at both outfalls.

2 The permit was first issued in 2007, but NPDES permits expire after five years and must be reissued. On August 26, 2014, before the Board's review, Ecology modified certain portions of the permit. The Board reviewed the permit as modified, but still referred to it as the "2013 permit" in its ruling.

Regarding PCBs, the permit imposed daily limitations of 0.0089 micrograms per liter (µg/L) for outfall 001 discharges. That limitation was based on the PCB human health criteria of 0.00017 µg/L adjusted for a dilution factor for the "mixing zone," the area surrounding the discharge point where wastewater mixes with receiving water.[3] The permit stated that Method 8082A would be used to test PCB levels in outfall 001.[4]

3 Pollutant concentrations within mixing zones may exceed the numeric standards without penalty on the theory that the pollutants will dilute quickly into the receiving water.

4 Before the Board hearing, Ecology modified the 2013 NPDES permit for outfall 001 and replaced the requirement to use Method 8082A with the requirement to use Method 608.

For outfall 002, the permit imposed a daily PCB limitation of 0.25 µg/L, significantly higher than the PCB human health criteria used for outfall 001. This limitation was determined based on the detection limit of Method 608, the EPA-approved analytical test that Ecology required for outfall 002 PCB testing. The limitation level represented the minimum value that Method 608 could detect.

Regarding copper and zinc, Ecology's permit writer Ed Abassi calculated WQBELs for outfall 001 using historical data from the site. But for outfall 002, Ecology had only two data points because that discharge had not previously been regulated. Instead of calculating WQBELs, Abassi imported numeric benchmark values from the 2009 General Permit. The General Permit is an NPDES permit that Ecology issued to regulate more than 1,000 facilities statewide that discharge industrial stormwater. Using the General Permit benchmarks, Ecology imposed daily limitations of 14 µg/L for copper and 117 µg/L for zinc in outfall 002 discharges.

Board Appeal

On October 14, 2013, Soundkeeper filed a petition for Board review of certain portions of SIM's permit. Soundkeeper challenged (1) the inclusion of a mixing zone for PCBs, (2) the imposition of different PCB limits for outfall 001 and outfall 002, (3) the use of Method 608 for PCB testing instead of more sensitive methods, and (4) the imposition of limits on copper and zinc levels for outfall 002 based on General Permit benchmark values instead of site-specific WQBELs. The Board reviewed the permit, as modified by Ecology, during a four-day hearing in March 2015.

The Board entered extensive findings of fact and conclusions of law. The Board agreed with Soundkeeper that Ecology could not grant a mixing zone for PCBs because the LDW was known to be saturated by PCBs and PCBs do not dilute easily. The Board also agreed with Soundkeeper that there was no basis for Ecology to impose higher PCB limits for outfall 002 than for outfall 001. The Board remanded the permit to Ecology for correction of the discharge limitations for PCBs.[5]

5 The Board did not state what PCB limitation should be imposed on remand for outfall 002. Presumably, the limitation will be the same as for outfall 001: 0.00017 µg/L.

*3 However, the Board rejected Soundkeeper's two other challenges. The Board ruled that the use of Method 608 for PCB testing was consistent with existing law because Method 608 was the only method approved by the EPA. The Board also ruled that Ecology's use of the General Permit's benchmark values to impose limitations on daily copper and zinc levels in outfall 002 discharges was reasonable and that those limitations were consistent with applicable law. The Board deferred to Ecology's determination that it lacked sufficient data to develop site-specific limitations.

APA Appeal

Soundkeeper petitioned for judicial review in the superior court, and this court granted its petition for direct review of the Board's order. Ruling Accepting Direct Review, *Puget Soundkeeper All. v. Dep't of Ecology,* No. 45609–3–II, at 3

(Wash. Ct. App. Dec. 22, 2015).

ANALYSIS

A. STANDARD OF REVIEW

The Administrative Procedures Act (APA) governs our review of agency decisions, which includes decisions by the Board. RCW 34.05.510; *Cornelius v. Dep't of Ecology*, 182 Wn.2d 574, 584–85, 344 P.3d 199 (2015). We can provide direct review of an environmental board's decision if that board files a certificate of appealability. RCW 34.05.518(1).

Under the APA, we may grant relief from the Board's order based on one of nine reasons listed in RCW 34.05.570(3), including that the order is (1) outside the agency's statutory authority, (2) based on an erroneous interpretation or application of the law, (3) unsupported by substantial evidence, (4) inconsistent with an agency rule, or (5) arbitrary and capricious. RCW 34.05.570(3)(b), (d), (e), (h), (i). The party challenging the Board's decision has the burden of demonstrating the invalidity of that decision. RCW 34.05.570(1)(a).

We review questions of law and an agency's application of the law to the facts de novo. *Cornelius*, 182 Wn.2d at 585. We give great weight to an agency's interpretation of a statute when the statute is ambiguous and falls within the agency's area of expertise, if the interpretation does not conflict with the statutory language or intent. *Puget Soundkeeper All. v. Pollution Control Hr'gs Bd.*, 189 Wn. App 127, 136, 356 P.3d 753 (2015). We show the same deference to an agency's interpretation of its own regulations. *Id.* More specifically, Ecology's interpretation of environmental statutes is entitled to great weight "[g]iven that the legislature designated Ecology as the agency to regulate the State's water resources." *Snohomish County v. Pollution Control Hr'gs Bd.*, —— Wn.2d ——, 386 P.3d 1064, 1075 (2016). And the Board's review of Ecology's actions also is entitled to deference. *Id.*

However, we are not bound by an agency's interpretation of the law. *Puget Soundkeeper All.*, 189 Wn.2d at 136; *see also* RCW 34.05.570(3)(d). "[D]eference to an agency is inappropriate where the agency's interpretation conflicts with a statutory mandate." *Dep't of Labor & Indus. v. Granger*, 159 Wn.2d 752, 764, 153 P.3d 839 (2007).

B. LEGAL PRINCIPLES

1. General Water Quality Policy

The goal of the federal Clean Water Act (CWA)[6] is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" and attain water quality which provides for the protection and propagation of fish, shellfish, and wildlife. 33 U.S.C. § 1251(a)(2). The CWA expresses "the national policy that the discharge of toxic pollutants in toxic amounts be prohibited," 33 U.S.C. § 1251(a)(3), and states that "the discharge of any pollutant by any person shall be unlawful," except as authorized by specified statutory provisions. 33 U.S.C. § 1311(a).

6 The CWA's formal name is the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1388.

*4 The CWA prohibits any discharge of pollutants into the nation's waters unless the discharge is made according to the terms of an NPDES permit. 33 U.S.C. §§ 1311(a), 1342[7]. Congress authorized the EPA to delegate the NPDES permitting program to the states. 33 U.S.C. § 1342(b). The EPA delegated authority to Ecology to implement the NPDES permitting program in Washington. RCW 90.48.260(1). The legislature has recognized that Ecology has "[c]omplete authority to establish and administer" the program. RCW 90.48.260(1)(a); *Snohomish County*, 386 P.3d at 1067.

7 33 U.S.C. § 1342 has been amended since the events of this case transpired. However, these amendments do not impact the statutory language relied on by this court. Accordingly, we do not include the word "former" before 33 U.S.C. § 1342.

The Washington legislature also has adopted a water quality policy, which seeks to "maintain the highest possible standards to insure the purity of all waters of the state." RCW 90.48.010. And RCW 90.48.520 states, "In no event shall the discharge of toxicants be allowed that would violate any water quality standard, including toxicant standards, sediment criteria, and dilution zone criteria."

2. NPDES Permit Compliance with Water Quality Standards

Under federal law, NPDES permits must impose limits on discharges as necessary to meet water quality standards set by both state and federal statutes and regulations. 33 U.S.C. § 1311(b)(1)(C); *Snohomish County*, 386 P.3d at 1067. Specifically, State agencies may not issue NPDES permits if "the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA" or if "the imposition

of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." 40 C.F.R. § 122.4(a), (d).

Similarly, WAC 173–220–130(1)(b)(i) provides that any NPDES permit shall apply and ensure compliance with limitations necessary to "[m]eet water quality standards ... pursuant to any state law or regulation." And WAC 173–201A–510(1) states that NPDES permits "must be conditioned so the discharges authorized will meet the water quality standards" and that no permit can be issued that "causes or contributes to a violation of water quality criteria."

These provisions demonstrate that the purpose of the NPDES permitting system is to ensure compliance with state water quality standards. *Port of Seattle v. Pollution Control Hr'gs Bd.*, 151 Wn.2d 568, 603, 90 P.3d 659 (2004). The Washington legislature has "in no uncertain terms" prohibited Ecology from issuing NPDES permits that allow discharges of toxic substances in violation of applicable standards. *Puget Soundkeeper All.*, 189 Wn. App at 138. As a result, "NPDES permits may be issued only where the discharge in question will comply with state water quality standards." *Port of Seattle*, 151 Wn.2d at 603.

Finally, WAC 173–220–150(1)(c) provides that each NPDES permit shall require that "*[a]ny discharge of any pollutant* ... at a level in excess of that identified and authorized by the permit" constitutes a violation of permit terms and conditions. (Emphasis added.) Under this regulation, NPDES permits must require that *each discharge* comply with applicable water quality regulations. *See Puget Soundkeeper All.*, 189 Wn. App at 138.

3. Washington Water Quality Standards

Washington has developed its own water quality standards. *Port of Seattle*, 151 Wn.2d at 590. These standards include narrative water quality statements and numeric criteria for toxic substances. *Id.*

***5** WAC 173–201A–240(1) provides the narrative water quality standard governing discharges of toxic substances.[8]

> Toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department.

See also Puget Soundkeeper All., 189 Wn. App at 138–39.

8 WAC 173–201A–240 has been amended since the events of this case transpired. However, these amendments do not impact the statutory language relied on by this court. Accordingly, we do not include the word "former" before WAC 173–201A–240.

WAC 173–201A–240(5) and the attached Table 240 provide specific numeric water quality standards for numerous toxic substances. The human health criteria for PCBs is 0.00017 µg/L. WAC 173–201A–240(5), tbl.240. The toxic substances criteria for marine water aquatic life for copper is 4.8 µg/L (acute) and 3.1 µg/L (chronic) and for zinc is 90 µg/L (acute) and 81 µg/L (chronic).[9] WAC 173–201A–240(5), tbl.240.

9 "Acute" refers to short-term exposure, and "chronic" refers to long-term exposure. WAC 173–201A–020. The permit's "daily" limits relate to acute limits.

C. USE OF METHOD 608 FOR TESTING PCB LEVELS

SIM's NPDES permit requires the use of Method 608, an EPA-approved PCB testing method, to measure PCBs in discharges from outfall 002. But the minimum detection limit of Method 608 is only 0.25 µg/L and Method 608 has a practical quantitation limit (PQL) of 0.5 µg/L.[10] This PQL is significantly higher than the PCB human health criteria of 0.00017 µg/L.[11]

10 The PQL represents the lowest level at which a pollutant concentration *reliably* can be quantified.

11 Ecology imposed an effluent limitation for PCBs of 0.25 µg/L on outfall 002 discharges based on the minimum detection limit of Method 608. However, the Board ruled that this high detection limit did not justify imposing a higher effluent limit than the 0.00017 µg/L limitation for outfall 001. The Board remanded to Ecology for the revision of effluent limits for PCBs. Presumably, on remand Ecology will impose the 0.00017 µg/L limitation for outfall 002.

Soundkeeper argues that Ecology violated Washington law by issuing an NPDES permit that required the use of

Method 608, because that method is not sensitive enough to determine whether SIM's discharges violated the applicable water quality standard for PCBs. Soundkeeper claims that Ecology could not lawfully have issued the permit unless it specified the use of Method 1668C, a more sensitive test that can quantify PCB concentrations in the range of the water quality standard. Ecology argues that it was required to specify Method 608 in the permit under WAC 173–201A–260(3)(h) because it is the only testing method approved by the EPA. We agree with Ecology.

1. Legal Principles

Under federal law, monitoring must be done using "sufficiently sensitive" test methods. 40 C.F.R. § 122.44(i)(1)(iv). A method is sufficiently sensitive when either (1) the method minimum level is at or below the effluent limit established in the permit for the measured pollutant or (2) the method has the lowest minimum level of the analytical methods approved under 40 C.F.R. part 136 for the measured pollutant. 40 C.F.R. § 122.44(i)(1)(iv)(A)(1)–(2).

***6** Washington law provides additional regulations regarding testing methods. WAC 173–201A–260(3) outlines how Ecology should set and measure water quality criteria. When setting numeric criteria for water quality, Ecology "will give consideration to the precision and accuracy of the sampling and analytical methods used, as well as the existing conditions at the time." WAC 173–201A–260(3)(g). Further, WAC 173–201A–260(3)(h) provides:

> The analytical testing methods for these numeric criteria must be in accordance with the " '*Guidelines Establishing Test Procedures for the Analysis of Pollutants*' " (*40 C.F.R. Part 136*) or superseding methods published. [Ecology] may also approve other methods following consultation with adjacent states and with approval of the [EPA].

This regulation allows the use of a testing method that is (1) listed in 40 C.F.R. Part 136, (2) a superseding method that has been published, or (3) approved for use by Ecology following consultation with the EPA.

Method 608 is listed in 40 C.F.R. Part 136 for monitoring PCBs, but Method 1668C is not. 40 C.F.R. 136, app. A. And Ecology has not approved Method 1668C for testing PCBs.

The EPA developed Method 1668C with the intention of listing it as an approved PCB testing method in 40 C.F.R. Part 136. The EPA also "published" Method 1668C for use in CWA programs. In April 2010, the EPA stated:

> The Office of Science and Technology (OST) in EPA's Office of Water developed Method 1668C ... for use in Clean Water Act (CWA) programs. *EPA is publishing this Method* for users who wish to measure PCBs as congeners now, and in 2010, EPA expects to publish a proposal in the *Federal Register* for public comment to add this Method to other CWA Methods published at 40 CFR Part 136.

Administrative Record (AR) at 2751 (emphasis added).

Although the EPA proposed rulemaking to add Method 1668C to the list in 40 C.F.R. Part 136, it chose not to add the method. The EPA did not reject Method 1668C, but merely deferred approval. The EPA noted that it "is aware that this method is being used in some states in their regulatory programs and by other groups for some projects with good success." AR at 3587. But the EPA stated that it was "still evaluating the large number of public comments and intends to make a determination on the approval of this method at a later date. ... This decision does not negate the merits of this method for the determination of PCB congeners in regulatory programs." AR at 3587.

2. Interpretation of WAC 173–201A–260(3)(h)

The Board concluded that Ecology's specification of Method 608 as the PCB testing method in SIM's NPDES permit was consistent with WAC 173–201A–260(3)(h) because Method 608 is the only method the EPA has approved. Soundkeeper argues that Ecology could have required Method 1668C for PCB testing because that method qualifies as a "superseding method[ ] published" under WAC 173–201A–260(3)(h).

To interpret agency regulations, we apply the same principles used to interpret statutes. *Puget Soundkeeper All.*, 189 Wn. App. at 136. Statutory interpretation is a matter of law that we review de novo. *Jametsky v. Olsen*, 179 Wn.2d 756, 761, 317 P.3d 1003 (2014). The purpose of statutory interpretation is to determine and give effect to the legislature's intent. *Gray v. Suttell & Assocs.*, 181 Wn.2d 329, 339, 334 P.3d 14 (2014). To determine legislative intent, we first look to the plain language of the statute, considering the text of the provision, the context of the statute, related provisions, and the statutory scheme as a whole. *Id.* If a statutory term is undefined, we may use a dictionary to determine its plain meaning. *Nissen v. Pierce County*, 183 Wn.2d 863, 881, 357 P.3d 45 (2015).

*7 The parties apparently agree that Method 1668C is a "published" method. The question is whether Method 1668C is a "superseding" method. WAC 173–201A–260(3)(h) does not define the term "superseding." Supersede has numerous dictionary definitions, including "[1] to make obsolete, inferior, or outmoded, [2] to make superfluous or unnecessary, [3] to take the place of and outmode by superiority: supplant and make inferior by better or more efficiently serving a function." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 2295 (2002).

Soundkeeper argues that Method 1668C falls within the definition of a superseding method. Method 1668C has a PQL as low as 0.000022 µg/L.[12] Method 608's PQL is only 0.5 µg/L. Because Method 1668C's detection limit is much lower than Method 608's detection limit, Method 1668C can be considered a superior testing method that can take the place of Method 608.

12 Method 1668C tests each of the 209 congeners that comprise the total PCBs individually, so the PQL may vary among the congeners.

But Ecology emphasizes that the EPA decided not to add Method 1668C to the list in 40 C.F.R. Part 136, and therefore Method 1668C cannot be said to have "superseded" the approved Method 608. Method 608 is not "superfluous or unnecessary" because it is still the only EPA-approved testing method. Ecology also argues that WAC 173–201A–260(3)(h)'s reference to a superseding method refers only to new *versions* of methods already included in 40 C.F.R. Part 136, not entirely new methods.

The term "superseding method" is ambiguous. But Ecology and the Board have interpreted WAC 173–201A–260(3)(h) as not applying to Method 1668C. Because the regulation is ambiguous and its interpretation falls within Ecology's area of expertise, we will defer to Ecology's interpretation of its own regulation.[13] *See Snohomish County*, 386 P.3d at 1075.

13 Under WAC 173–201A–260(3)(h), Ecology also could use Method 1668C in NPDES permits if it approved that method after consulting with adjacent states and with the approval of the EPA. But the regulation states that Ecology "may" give such approval, WAC 173–201A–260(3)(h), and the Board noted that it had no authority to require Ecology to seek EPA approval of a different method.

We hold that under Ecology's interpretation of WAC 173–201A–260(3)(h), Method 1668C is not a published superseding method, and therefore Ecology could not consider that method for use in SIM's NPDES permit.

3. Use of Method 608

Soundkeeper also argues that even if Method 608 is the only approved method for testing PCBs, Washington law precludes Ecology from using Method 608 because it is not sensitive enough to enforce compliance with water quality standards. Soundkeeper's position is that Ecology's only lawful option is to refuse to issue the NPDES permit. We disagree.

The human health criteria for PCBs is 0.00017 µg/L. WAC 173–201A–240(5), tbl.240. Ecology adopted that standard as the effluent limitation for outfall 001, and the Board ruled that there was no justification for a higher effluent limitation at outfall 002. The problem is that Method 608 has a PQL of 0.5 µ g/L. This means that Method 608 cannot detect when the PCB levels in SIM's discharges are higher than the 0.00017 µg/L limitation but less than 0.5 µg/L. Therefore, Soundkeeper argues that the use of Method 608 is improper because it potentially would allow SIM to discharge PCBs in concentrations that would violate the water quality standards in its NPDES permit.

But Soundkeeper's argument is inconsistent with federal and state law regarding testing methods. Federal law requires that monitoring be done using "sufficiently sensitive" test methods. 40 C.F.R. § 122.44(i)(1)(iv). Under 40 C.F.R. § 122.44(i)(1)(iv)(A)(2), a method is sufficiently sensitive when it has the lowest minimum level of the analytical methods approved under 40 C.F.R. part 136 for the measured pollutant. Method 608 is the only approved method for PCBs, and therefore it necessarily is the method with the lowest minimum level.

*8 We hold that it is lawful for Ecology to issue an NPDES permit that calls for the use of Method 608 to test PCBs.

D. EFFLUENT LIMITATIONS FOR COPPER AND ZINC IN OUTFALL 002

In developing effluent limitations for copper and zinc discharges from outfall 002, Ecology imported numeric benchmark values from the 2009 General Permit. Use of the General Permit benchmarks resulted in daily effluent limitations of 14 µg/L for copper and 117 µg/L for zinc. These limitations are significantly higher than what Soundkeeper asserts site-specific WQBELs would be—daily limits of 4.8 µg/L for copper and 90 µg/L for zinc.

Soundkeeper argues that the Board erred in allowing

Ecology to use copper and zinc limitations taken from the General Permit, which it characterizes as technology-based limitations, instead of calculating site-specific WQBELs. Ecology argues that the permit had to apply copper and zinc limitations taken from the General Permit because there was insufficient data for the permit writer to calculate site-specific WQBELs. Ecology also claims that the General Permit limitations were water quality-based, not technology-based. We agree with Soundkeeper.[14]

[14] The Board stated that Ecology considered the copper and zinc limitations to be interim limitations. Soundkeeper argues, and Ecology concedes, that the technology-based copper and zinc limits cannot be justified as interim limits because they are not part of a compliance schedule.

1. Imposition of Effluent Limitations

When addressing the discharge of pollutants in an NPDES permit, Ecology must first determine whether an effluent limitation is required. An NPDES permit must contain effluent limits for a pollutant if there is a reasonable potential that a discharge will contain the pollutant in excess of water quality standards. 40 C.F.R. § 122.44(d)(1)(iii). A permit writer determines if an effluent limitation must be included in the permit by conducting a reasonable potential analysis: whether a facility's discharge will cause, has the reasonable potential to cause, or will contribute to a violation of water quality standards. 40 C.F.R. 122.44(d)(1)(ii), (iv).

Ecology's Permit Writer's Manual contains instructions for conducting a reasonable potential analysis. In order to perform a statistical reasonable potential analysis, a permit writer must develop an estimate of variability over time for each pollutant in a discharge. The most commonly used estimator is the coefficient of variation (CV), which is based on site discharge data. The CV is also used in the formula for calculating effluent limits for a permit.

Here, permit writer Abassi stated that in order to accurately calculate a CV, he needed at least 10 to 12 data points. But only two data points from SIM's outfall 002 discharge were available. Abassi testified that based on the lack of outfall 002 data, he could not calculate a CV and therefore could not perform a statistical reasonable potential analysis.

However, the Board concluded that Ecology actually *did* perform a reasonable potential analysis and determined that SIM's outfall 002 discharges had the reasonable potential to exceed water quality standards. The Board stated that although Abassi did not perform a statistical calculation of reasonable potential, he nevertheless decided that effluent limitations were necessary. And the Board noted that Abassi's supervisor testified that Abassi's evaluation of the outfall 0002 discharge was the equivalent of a reasonable potential analysis.

***9** Ecology does not dispute the Board's conclusion that Abassi essentially conducted a reasonable potential analysis and that effluent limitations were required for zinc and copper for outfall 002 in SIM's NPDES permit. The question here is how to calculate those limitations.

2. Calculation of Effluent Limitations

Once Ecology determines that an effluent limitation is required, it next must determine the level of that limitation. Ecology claims that Abassi had insufficient data to develop WQBELs for copper and zinc at outfall 002. Abassi testified that because he could not calculate a CV, he could not calculate site-specific effluent limits. The Board deferred to "Ecology's technical determination that it lacked sufficient monitoring data for SIM's untreated stormwater discharge to develop site-specific numeric effluent limits." Clerk's Papers (CP) at 50. And the Board concluded that Abassi's decision to rely on the General Permit under these circumstances was reasonable.

Under the APA, we may grant relief from an agency order if it is not supported by substantial evidence. RCW 34.05.570(3)(e). Substantial evidence does not support the Board's conclusion for three reasons. First, Ecology did not make a "technical determination" that it had insufficient data to develop site-specific limitations. Abassi did testify about the absence of sufficient data, but primarily in the context of his inability to calculate a CV for a specific effluent limit and to conduct a statistical reasonable potential analysis.

Ecology points to Abassi's statement that he would not use two data points "for enforcement or for limit." Report of Proceedings at 537. But this is Abassi's only reference to insufficient data in the context of developing effluent limitations. Further, Abassi did not expressly state that he was forced to use the General Permit benchmarks because he had insufficient data. He simply stated that the effluent limits in the permit came from the General Permit and that they seemed accurate and protective. This testimony did not establish a "technical determination that it lacked sufficient monitoring data" to develop site-specific limitations. CP at 50.

Second, the evidence shows that Abassi could have calculated site-specific WQBELs for outfall 002 despite the lack of data. Soundkeeper's expert, Allan Chartrand, testified that effluent data was not necessary to calculate

water quality-based limits for an NPDES permit. Ecology's Permit Writer's Manual states that when there are fewer than 20 data points available to calculate a CV, a default CV of 0.6 may be used instead of a calculated CV. Therefore, Abassi could have calculated site-specific WQBELs using the default CV. Ecology does not address why this default CV was not used.

Third, Abassi testified that assuming a finding of reasonable potential, he could have determined the WQBELs for outfall 002. He stated that he would have used the human health calculations in Ecology's fact sheet: water quality standards for copper of 4.8 µg/L (acute) and 3.1 µg/L (chronic) and water quality standards for zinc of 90 µg/L (acute) and 81 µg/L (chronic). Because the Board found that Ecology had determined that SIM's discharges had the reasonable potential to exceed water quality standards, this testimony means that Abassi did have sufficient information to determine site-specific WQBELs for outfall 002.

***10** We hold that the Board's conclusion that Ecology lacked sufficient data to develop site-specific effluent limits for outfall 002 is not supported by sufficient evidence. Because this conclusion depends on an evaluation of the applicable facts rather than an interpretation of statutes or regulations, we do not give special deference to Ecology or the Board on this issue. *See Port of Seattle*, 151 Wn.2d at 594 (stating the standard of review for factual findings inherently includes an element of deference to the Board). As a result, we hold that the Board erred in concluding that Abassi acted reasonably when he relied on the General Permit.

3. Inadequacy of NPDES Permit Limitations

The Board concluded that the effluent limits in the NPDES permit for copper and zinc, which were based on the General Permit benchmarks, were consistent with applicable law. Soundkeeper argues that Washington law requires Ecology to use the lower site-specific WQBELs instead of the higher General Permit limitations. We agree with Soundkeeper.

Initially, Ecology argues that the limitations based on the General Permit were consistent with applicable law because they were in fact water quality-based limitations. Ecology claims that these limitations are water quality-based because the General Permit benchmarks involved pollutant discharge levels that would not exceed water quality standards for the likely pollutants found in industrial stormwater and were designed to protect water quality in the majority of receiving water conditions.

However, the Board referred to the limitations based on the General Permit benchmark as technology-based limits. Ecology does not challenge the Board's reference to the permit limitations as technology-based. In addition, Ecology's own fact sheet for SIM's NPDES permit refers to the limitations as technology-based.

More significantly, even if the General Permit limitations were based on water quality standards generally applicable to all industrial dischargers, Ecology does not explain why those limitations complied with Washington law. The evidence shows that the limitations Ecology imposed do not comply with the specific water quality standards applicable here.

Both Abassi and Chartrand' testified that properly calculated WQBELs for the 002 outfall would have been the same as the water quality criteria in WAC 173–201A–240(5), Table 240: 4.8 µg/L (acute) and 3.1 µg/L (chronic) for copper and is 90 µg/L (acute) and 81 µg/L (chronic) for zinc.[15] But the permit limitations were significantly higher: daily limitations of 14 µg/L for copper and 117 µg/L for zinc. Therefore, SIM's NPDES permit would allow the discharge of pollutants in concentrations that would far exceed established water quality standards.

15 Normally the water quality criteria are adjusted to account for a mixing zone and dilution to develop WQBELs. But for the untreated wastewater at outfall 002, there was no mixing zone and no dilution factor. This means that the water quality criteria would have been the effluent limit.

As stated above, Washington law is clear that Ecology cannot issue NPDES permits that would allow discharges of toxic substances that would violate applicable water quality standards. RCW 90.48.520; *Port of Seattle*, 151 Wn.2d at 603; *Puget Soundkeeper All.*, 189 Wn. App at 138. Therefore, we hold that the Board erred in concluding that the effluent limitations in SIM's NPDES permit—which were significantly higher than the water quality standards—were consistent with applicable law.

CONCLUSION

We affirm in part and reverse in part the Board's rulings on the proper PCB testing method and on the effluent limitations for copper and zinc. We remand to Ecology for revision of the effluent limitations for copper and zinc consistent with this opinion.

***11** A majority of the panel having determined that this opinion will not be printed in the Washington Appellate

Reports, but will be filed for public record in accordance with RCW 2.06.040, it is so ordered.

SUTTON, J.

All Citations

Not Reported in P.3d, 197 Wash.App. 1078, 2017 WL 702504

We concur:

WORSWICK, J.

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APPENDIX B

Puget Soundkeeper Alliance v. Dep't of Ecology,
PCHB No. 13-137c, (July 23, 2015)

POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

PUGET SOUNDKEEPER ALLIANCE, Appellant, v. STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY; and SEATTLE IRON & METALS CORP., Respondent.	PCHB No. 13-137c FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

INTRODUCTION

Puget Soundkeeper Alliance (PSA) appealed the National Pollutant Discharge Elimination System Waste Discharge (NPDES) Permit No. WA0031968 (Permit), issued by the Department of Ecology (Ecology) to Seattle Iron & Metals Corporation (SIM) for the discharge of wastewater and stormwater to the Lower Duwamish Waterway (LDW).

PSA asserts that the effluent limitations and conditions included in SIM's Permit violate applicable law and are insufficient to protect both surface water and sediment quality in the LDW. Prior to the hearing, PSA filed a motion for partial summary judgment which sought to invalidate the Permit on multiple grounds. The Pollution Control Hearings Board (Board) determined that genuine issues of material fact precluded a ruling on summary judgment.

The Board held a hearing in this matter on March 16-19, 2015, at its offices in Tumwater, Washington. The members of the Board hearing the matter were Chair Joan M. Marchioro, Kay M. Brown, and Thomas C. Morrill, with Administrative Appeals Judge Kristie C. Elliott

presiding at the hearing. Attorneys Richard A. Smith and Claire E. Tonry represented PSA. Assistant Attorney General Gordon Karg represented Ecology. Attorneys Stephen Parkinson and Matthew J. Stock represented SIM. Pennington Court Reporting provided court reporting services.

The Board received the sworn testimony of witnesses, admitted exhibits, and heard arguments on behalf of the parties. Written closing arguments were filed on April 6, 2015. Having fully considered the record, the Board enters the following:

FINDINGS OF FACT

1.

SIM operates an auto shredding and metal recycling operation on multiple adjacent properties on the east bank of the LDW near River Mile (RM) 2.5. Ex. E-11. SIM has operated on the LDW since moving to this general location in 1999. Operations on-site include the mechanical reduction and extraction of recoverable metal from auto shredder residue. Recovered metals are stockpiled, handled, sorted, and sold for use by other processors, while the non-metallic portion of auto shredder residue is disposed of at a landfill. As part of these operations, SIM discharges wastewater and stormwater to the City of Seattle's storm drain system, which then discharges to the LDW. Ex. E-2 at 5-8.

2.

PSA is a nonprofit citizen's organization founded in 1984 with the mission to preserve and protect the waters of Puget Sound. PSA has an interest in ensuring that discharge permits will be protective of the water and sediment quality, and that permit terms and conditions are

clearly and effectively tailored for purposes of enforcement. PSA patrols the Duwamish Waterway by boat in order to monitor discharges to the river. Wilke Testimony; Frederickson Testimony. During its patrols near SIM's facility, PSA members have observed SIM's discharge foaming or creating a colored film on the water and scrap metal from SIM's grabber falling into the LDW. Fredrickson Testimony; Exs. P-61, P-62, P-63.

3.

In conjunction with upland sources of contamination, the LDW constitutes a designated cleanup site under state and federal law, known as the LDW Site. The LDW Site is the approximately 5.5 mile stretch of the Duwamish River that flows into Elliot Bay. Ex. E-2 at 8. The LDW has served as Seattle's major industrial corridor since the early 1900s. Its heavy industrial use over the past century resulted in extensive contamination of the waterway. Exs. E-2 at 8-9, E-8 at 1-2. On September 13, 2001, the U.S. Environmental Protection Agency (EPA) placed the LDW Site on the National Priorities List, the list of the nation's most contaminated sites. Certain portions of the Duwamish Waterway are also listed on the state's 303(d) list, which Ecology prepares under the federal Clean Water Act (CWA), 33 U.S.C. § 1313(d), to identify water bodies that do not meet water quality standards. Chartrand Testimony; Exs. P-90, P-91. Source investigations and remedial actions for the LDW Site are ongoing. Exs. E-8 at 1, P-95 at 4.

4.

Hazardous substances can be found at elevated levels in LDW sediments and in fish and shellfish tissue in the LDW. Exs. E-8 at 22-31, P-89 (Tables 26, 28, 30), P-94 (Table A-1). The

four types of contaminants that pose the greatest risk to human health in the LDW are arsenic, polycyclic aromatic hydrocarbons (PAHs), dioxins/furans, and polychlorinated biphenyls (PCBs). Ex. E-8 at 39.

5.

PCBs are man-made chemicals that were widely used in electric transformers, hydraulic fluids, paint additives, plasticizers, adhesives, and fire retardants prior to being banned in the late 1970s. They are highly toxic and persist in the environment. They also bioaccumulate and biomagnify, which means they increase in concentration both in individual organisms and with each successive level of the food chain. PCBs do not readily dissolve in water but rather accumulate in fatty tissue in living organisms and in sediments or particulates in the organic substrate. Exposure to PCBs is linked to liver toxicity in adults, and thyroid dysfunction and adverse developmental effects in children exposed in the womb. Chartrand Testimony; Ex. P-95 at 9, 15.

6.

Due to elevated levels of PCBs found in LDW seafood tissue, the Washington Department of Health (DOH) concluded that "[e]ating even minimal amounts of resident seafood from the LDW would result in exposure to PCBs at levels of public health concern. For this reason, consumption of LDW resident seafood (fish and shellfish that live in the LDW) is a *public health hazard.*" Ex. P-95 at 9 (emphasis original). A DOH-issued Fish Advisory is now in place warning the public not to eat resident fish, shellfish, or crab from the Duwamish River. Exs. P-97, P-98.

7.

A coordinated federal-state strategy for cleaning up the LDW Site is underway. The overall approach includes: (1) early identification and cleanup of the most contaminated areas of the waterway, (2) controlling sources of contamination to the waterway, and (3) implementation of a final cleanup remedy for the In-waterway Portion of the Site. Ex. E-8 at 1.

8.

EPA is the lead agency for investigation and cleanup of the In-waterway Portion of the Site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601. In November of 2014, EPA issued a Record of Decision that selected the final remedy for the In-water Portion of the LDW Site. The Selected Remedy includes dredging and capping of the most contaminated areas that remain in the waterway, application of enhanced natural recovery for areas with more moderate contamination, and reliance on monitored natural recovery to further reduce concentrations over time in areas with lesser contamination. Ex. E-8 at 119-20. "The intent of the Selected Remedy is to reduce contaminant concentrations in sediments, surface water, and fish and shellfish tissue to the extent practicable, and to minimize reliance on fish and shellfish consumption advisories to reduce human exposure from ingestion of contaminated resident fish and shellfish." Ex. 8 at 13. The goal is also that "[o]ver time, the integrated approach of CERCLA and longer-term clean water actions is expected to result in attainment of applicable surface water quality criteria and uses designated under the CWA." Ex. E-8 at 14. The designated uses under the CWA for the LDW include fish and shellfish harvesting. E-8 at 34.

9.

Ecology is the lead agency for source control for the LDW Site. Ex. P-88 at 3. "The source control strategy focuses on controlling contamination that affects LDW sediments." *Id.* at 4. Ecology released a broad plan entitled "LDW Source Control Strategy" in 2004, followed by a more specific "East Source Control Action Plan for RM 2.3-2.8" in 2009. Mercury, PCBs, PAHs, dioxins/furans, and organo-tin compounds are considered to be the major contaminants of concern in sediments associated with RM 2.3–2.8. Exs. P-85, P-88.

10.

The area near SIM is not slated for active cleanup of PCBs in sediment and is not on the 303(d) list for PCBs. McCrea Testimony, Shervey Testimony. SIM's materials acceptance policy disallows the acceptance of any material knowingly containing PCBs. Geiselbrecht Testimony. However, sediment samples collected in the LDW indicate the presence of PCBs near the SIM facility at concentrations above the Sediment Quality Standards, WAC 173-204-300, -350. Exs. P-15 at 3, P-88 at 29; Chartrand Testimony.

11.

While there are numerous historic sources for the PCBs in the LDW and the presence of contaminants in sediment near the SIM facility could be related to past operations by previous property owners and/or other businesses in the area, PCBs are found in the types of materials processed by SIM. As a result, SIM is recognized as a potential source of contaminants that may contribute to recontamination of sediments at or near its facility. McCrea Testimony, Horner Testimony, Geiselbrecht Testimony; Ex. P-88 at 23-31. Elevated levels of PCBs have been

found in stormwater drainage facilities and other surface locations onsite or in SIM's vicinity. Although additional sources contribute stormwater to these drainage facilities, EPA and the City of Seattle have indicated there is a need to implement effective source control measures at SIM's facility. Exs. P-15, P-21, P-26.

12.

Prior to 2007, SIM's discharge to the LDW was authorized under the Industrial Stormwater General Permit (ISGP) in effect at the time. Starting in 2007, Ecology issued individual NPDES permits to SIM. Abbasi Testimony. The NPDES permit issued to SIM in 2007 (2007 Permit) imposed water quality-based effluent limitations (WQBELs) for SIM's treated discharges to Outfall 001, with numeric effluent limits for copper, lead, zinc, total PCBs, and total petroleum hydrocarbons. Ex. P-4 at 5. The 2007 Permit did not authorize a mixing zone for the treated discharge and did not regulate SIM's discharge of untreated stormwater. Ex. P-4.

13.

SIM's failure to meet certain effluent limits in the 2007 Permit resulted in Ecology issuing a Notice of Violation and Administrative Order (Order) in July 2008. Ex. E-2 at 1. The Order covered SIM's violations of the 2007 Permit effluent limits occurring between December 2007 and June 2008 and for an unauthorized discharge. *Id.* at 12-14. Addressing some of the noncompliance issues, SIM made several improvements to its treatment system. Geiselbrecht Testimony. The improvements included increasing detention capacity, improving the filtration system and adding pretreatment. *Id.*

14.

The individual NPDES Permit issued to SIM in 2013 (2013 Permit) is at issue in this appeal. The 2013 Permit was subsequently modified and reissued in 2014.[1] Ex. E-2 at 11-12. The 2013 Permit's effective period runs from October 1, 2013 to October 1, 2018. Ex. E-1. *Id.* at 25.

15.

The 2013 Permit covers two separate effluent streams that originate from SIM's facility and which are physically combined prior to discharge. The first effluent stream, Outfall 001, includes stormwater and some processed wastewater from SIM's industrial areas and the roof of its maintenance building. This effluent is treated prior to discharge (treated wastewater). The second effluent stream, Outfall 002, includes stormwater from most facility roofs and a parking lot. The effluent from Outfall 002 is not treated prior to discharge (untreated stormwater). Ex. E-2 at 5-8.

16.

An NPDES permit writer must determine whether effluent limits are necessary for a facility's discharges. Ecology's Water Quality Permit Writer's Manual (Manual) and EPA's Technical Support Document provide guidance for determining whether an effluent limit is necessary and, if so, how to calculate such a limit. Exs. E-4 at VII-8-VII-17; P-108 at 50-51.

[1] The Board consolidated for review the two appeals brought by PSA on the Permit's issuance and reissuance in 2013 and 2014, respectively, and this decision will refer to the Permit as the "2013 Permit." Ecology also modified the Permit on March 12, 2015, which is the subject of a separate appeal by PSA. *Puget Soundkeeper Alliance v. Ecology*, PCHB No. 15-050. The Board's decision in this case only considers the 2013 Permit as modified in 2014, and does not address the 2015 Permit modification.

Regarding the first question, is an effluent limit required, the permit writer is to determine whether the discharge has a reasonable potential to cause or contribute to a violation of water quality standards. *Id.* If the analysis shows that there is a reasonable potential, then the permit writer evaluates whether there is sufficient information to develop a numeric effluent limit for the pollutant(s) of concern. *Id.* When sufficient information exists, Ecology uses that information to calculate WQBELs. Abbasi Testimony.

17.

In drafting the 2013 Permit, Ecology's permit writer, Hamid "Ed" Abbasi, performed a reasonable potential analysis on SIM's treated wastewater discharge and determined that there was a reasonable potential for that discharge to adversely impact surface water quality. Mr. Abbasi calculated WQBELs for copper, lead, mercury, silver, zinc, and PCBs using historical data from the site. Abbasi Testimony. The 2013 Permit contains numeric effluent limits for those parameters applicable to SIM's treated wastewater. Ex. E-1 at 6.

18.

The numeric effluent limits for total PCBs in SIM's treated wastewater, which are based on human health criteria, are 5.1 ng/L average monthly and 8.9 ng/L maximum daily. The 2013 Permit also imposes a maximum daily Total Suspended Solids (TSS) limit of 10 mg/L as an additional effort to protect sediment quality. Exs. E-1 at 6, E-2 at 15. According to Ecology, since PCBs attach to solids, limiting the particulate discharge from SIM's treatment system will limit the amount of PCBs discharged. Ecology testified that SIM's treatment system is effective in extracting large particles, and thus using a TSS limit of 10 mg/L will result in a discharge of a

small quantity of small particles and fewer PCBs. Abbasi Testimony, Shervey Testimony, Ex. E-2 at 15.

19.

The 2013 Permit also allows a mixing zone for SIM's treated wastewater. *Id.* at 8. A mixing zone authorizes a limited area in the receiving water where certain numeric water quality criteria can be exceeded. Use of a mixing zone in the 2013 Permit resulted in applying dilution factors that raised the calculated limits for copper, lead, mercury, silver, zinc, and PCBs by a factor of 5.3 in the acute zone and 30.2 in the chronic zone. Abbasi Testimony, Ex. E-1 at 8. For example, the applicable ambient human health water quality criteria for PCBs is 0.00017 µg/L. Applying a mixing zone with a 30.2 dilution factor increases the effluent limit from the 0.00017 µg/L water quality standard to the 5.1 ng/L (.00051 µg/L) figure set forth in the Permit. Ex. E-1 at 6; Chartrand Testimony. The size of the 2013 Permit's acute and chronic mixing zones are the maximum allowed under Ecology's regulation, WAC 173-201A-400(7), (8). Ex. E-1 at 8.

20.

The 2013 Permit adds discharge limits for SIM's untreated stormwater effluent under Condition S1.B. Ex. E-1 at 7. The new requirements were added, in part, to address concerns raised by the City of Seattle and EPA regarding potential contamination from fugitive dust on SIM's roof and employee parking lot. Ex. P-26. When selecting effluent limits for SIM's untreated stormwater discharge, Mr. Abbasi evaluated the available data. Because the 2013 Permit constituted the first time that Ecology imposed effluent limits on that discharge, SIM's

permit application contained just two data points representing samples taken from roof runoff. Sampling conducted by EPA and the City of Seattle provided Ecology with one additional sample result. Mr. Abbasi concluded that there was insufficient data to conduct a reasonable potential analysis, which is a statistical-based calculation. Based on the available data, Mr. Abbasi concluded that the untreated stormwater was not clean and effluent limits should be imposed on that discharge. Abbasi Testimony.

21.

The numeric effluent limits for the untreated stormwater, with the exception of the limit for PCBs, were taken from the ISGP. Mr. Abbasi considered the use of ISGP benchmarks to be a conservative approach that would be protective of the LDW because the ISGP applies to other facilities in the area, and the benchmarks in the ISGP had been used for those facilities for approximately ten years. Abbasi Testimony, Exs. E-1 at 7 and E-2 at 40. In addition, he determined that the same benchmarks had been used in the multi-sector general permit issued by EPA throughout the country. Abbasi Testimony. For total PCBs in the untreated stormwater discharge, the 2013 Permit imposes a limit of .25 µg/L. Ex. E-1 at 7. This limit is a method detection limit rather than a WQBEL. The detection limit is based on the use of Method 608 for testing for the presence of PCBs. Ex. E-1, at 7.

22.

The 2013 Permit also requires SIM to develop an engineering report that addresses fugitive dust control, runoff from roofs and parking lots, and the potential for dust to be tracked out of the facility on vehicle tires. Ex. E-1 at 19-20. Initially, SIM's engineering report was due

four months after the effective date of the Permit (January 1, 2014), with construction of a treatment system to be completed by June 1, 2014, and an operations and maintenance plan prepared by January 1, 2015. Ex. E-2 at 30-31. SIM requested that Ecology extend the compliance schedule for one year because the company had been unable to obtain sufficient data on the stormwater runoff from the building roofs to develop the engineering report and construct a treatment system. Ecology concluded that SIM's request was appropriate and modified the Permit establishing a new compliance schedule and allowing SIM to submit its engineering report in two phases. Under Condition S9, SIM is required to submit its engineering reports and complete construction of the treatment system by June 1, 2015. The operations and maintenance manual is required to be completed by January 1, 2016. Abbasi Testimony, Shervey Testimony; Exs. E-1 at 20, E-2A at 1.

23.

SIM is also required to put in place best management practices (BMPs) to meet the technology-based limits for Outfall 002. Ecology considers the effluent limits in the 2013 Permit for the untreated stormwater to be interim limits as those limits will be modified based on the engineering report, the effectiveness of the BMPs and the data collected by SIM under the terms of the 2013 Permit. Shervey Testimony.

24.

PSA raises several objections to the effluent limits in the 2013 Permit applicable to both the treated wastewater and the untreated stormwater discharges. With regard to treated wastewater discharges from Outfall 001, PSA objects to Ecology granting SIM a mixing zone.

PSA asserts that the mixing zone does not meet the requirements of WAC 173-201A-400, particularly with regard to PCBs. LaLiberte Testimony; Chartrand Testimony. PSA claims that the discharge of PCBs from SIM's facility will result in the contamination or recontamination of sediments in the LDW. Chartrand Testimony.

25.

In order to allow the use of a mixing zone, Ecology must determine what, if any, dilution factor can be applied to an effluent concentration in light of the specific ambient pollutant concentration of the receiving water and the requirement that water quality criteria have to be met at the edge of any allowable regulatory mixing zone. Ahmed Testimony. Ecology's regulations provide that the use of mixing zones is limited:

> No mixing zone shall be granted unless the supporting information clearly indicates the mixing zone does not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the waterbody, result in damage to the ecosystem, or adversely affect public health as determined by the department.

WAC 173-201A-400(4).

26.

The permit writer must also consider the effect of a discharge to surface water on the quality of aquatic sediments. Ex. E-4 at IX-1. Ecology's Manual provides guidance on the derivation of effluent limits to protect aquatic sediments from contamination. The initial screening-level evaluation of a discharge's potential to impact sediments consists of a narrative evaluation and technical evaluation and is primarily based on readily available qualitative and quantitative information. "In general, facilities handling or producing known contaminants that

are commonly associated with pollution problems are considered to have a potential for causing sediment contamination and will generally undergo a detailed evaluation by the [Sediment Management Unit]." Ex. E-4 at IX-18.

27.

The Manual sets out a narrative evaluation that "may be used to identify facilities that have a low potential for sediment impacts, based on the general characteristics of the facility and the nature of the discharge." *Id.* at IX-20. The narrative evaluation is a two-step process. Under Step 1, "a discharge is generally considered not to have a risk for causing adverse sediment impacts if the facility has all of the following three characteristics: [a] a freshwater discharge to marine water, and [b] has secondary wastewater treatment or equivalent, and [c] discharges to an area with an average tidal velocity of 1 cm/sec or greater." *Id.* at IX-24 (emphasis original). If any of the three factors is not applicable, the permit writer proceeds to Step 2, which consists of a more thorough evaluation of the nature of the facility and the particular constituents in its discharge. *Id.* If the facility meets any of the criteria in Step 2, the discharge is "generally considered to have a risk for causing adverse sediment impacts." *Id.* One criterion under Step 2 is whether the discharge "has the potential to include toxic substances that may accumulate in the sediment." *Id.*

28.

Ecology conducted a narrative evaluation of SIM's discharge, concluding the analysis into potential sediment impacts after answering all three questions in Step 1 in the affirmative. Abbasi Testimony, Shervey Testimony. On this basis, Ecology determined that a mixing zone

could be applied to SIM's discharge without creating a reasonable potential to cause adverse sediment impacts. In making this initial determination, Mr. Abbasi considered no additional data regarding SIM's discharge and its potential to impact sediments, nor any data related to LDW fish tissue, water column, or sediment quality conditions. Abbasi Testimony; Shervey Testimony; Ex. S-2.

29.

The Board finds that Mr. Abbasi's analysis of the potential for SIM's discharge to cause sediment impacts with respect to PCBs was insufficient. Despite available information on PCB contamination in the LDW, sediment sampling data from stormwater catch basins on and in the vicinity of SIM's facility showing elevated levels of PCBs, and the presence of PCBs in SIM's own discharge, Mr. Abbasi ended his analysis at the conclusion of Step 1. The Board finds that Ecology's Screening-Level Evaluation of the Potential for Sediment Impacts form (Ex. E-4 at IX-20) fails to require an appropriate analysis of toxic pollutants such as PCBs, which bioaccumulate, biomagnify, persist in the environment and are not soluble. By concluding the analysis after Step 1, Ecology made no inquiry as to whether SIM's discharge "has the potential to include toxic substances that may accumulate in the sediment' and, therefore, did not thoroughly evaluate whether SIM's discharge posed a risk of causing adverse sediment impacts. Ex. E-4 at IX-24.

30.

In support of its challenge to the 2013 Permit's mixing zone, PSA presented the testimony of Allan B. Chartrand, a Senior Environmental Scientist with expertise in toxicology

and contaminated sediments. Ex. P-67. Mr. Chartrand opined that, due to the nature of SIM's discharge and the state of contamination in the LDW, Ecology should have elevated the reasonable potential inquiry. Mr. Chartrand testified that Ecology should have considered all available information and performed a higher-level technical review to assess potential sediment impacts. Such analysis would take into consideration the available tissue/sediment/water quality monitoring data, DMR data for SIM's discharge, information on the state of contamination and remedial actions required in the LDW at or near SIM's facility, data on PCB levels in catch basins/storm drains in the vicinity of SIM, fish advisory data, and partitioning behavior of PCBs. Mr. Chartrand testified that considering the available information, in his opinion a mixing zone for SIM's discharge was not appropriate as the discharge has a high potential to cause or contribute to adverse sediment impacts. Chartrand Testimony.

31.

Mr. Chartrand also testified that the application of a mixing zone for dilution of contaminants is inappropriate for PCBs. Persistent, bioaccumulative contaminants (PBTs), such as PCBs, do not effectively dilute as they move away from a source. EPA recognizes that mixing zones may be inappropriate for PBTs like PCBs. Chartrand Testimony; Exs. P-111 at Section 5.1.2, P-112 (63 Fed. Reg. 36791), P-115 at 11, P-131. EPA's mixing zone guidance emphasizes that a state's determination to authorize a mixing zone must be accompanied by a determination that there is available assimilative capacity in the receiving water. Chartrand Testimony; Ex. P-112 (63 Fed. Reg. 36742, 36787, 36791). According to EPA:

> The impacts of bioaccumulative compounds may extend beyond the boundaries of a given mixing zone with resulting impairment of a water body's designated uses, particularly where stationary species (e.g. shellfish) are present, where uncertainties exist regarding the assimilative capacity of a water body or where bioaccumulation in the food chain is known to be a problem. Sediment contamination has also become a major concern in both flowing and non-flowing water bodies. Concerns about sediment contamination require additional attention since typical mixing zone evaluations focus only on water column toxicity. The effects of persistent and bioaccumulative pollutants may not be detected for some distance from the point of discharge, well outside the mixing zone, or possibly not in the water column at all.

Ex. P-112 (63 Fed. Reg. 36791). The "assimilative capacity" of a water body "is the difference between the background level of a pollutant and the highest level that would comply with the water quality criterion." *Id.* at 36793.

32.

In Mr. Chartrand's opinion, the available information indicates that the LDW's assimilative capacity for additional PCBs is exhausted and the effluent limit for PCBs should be no more that the chronic water column criteria protective of human health (0.00017 µg/L). The mixing zone authorized for SIM's discharge allows a 30-fold increase in the allowable concentration and loading of PCBs discharged to the LDW. Mr. Chartrand testified that this will likely increase environmental damage to a water body already beyond assimilative capacity for PCBs. Chartrand Testimony; Exs. P-111 at Section 5.1.2, P-112 (63 Fed. Reg. 36791); P-115 at 11, P-131.

33.

Jerry Shervey, supervisor of the Industrial Wastewater Permit Writing Unit in Ecology's Northwest Regional Office, testified that water column data on background levels for PCBs in

the Duwamish River were lacking at the time the 2013 Permit was written. As a result, Ecology was unable to determine whether the LDW had available assimilative capacity for additional PCBs. At the time the 2013 Permit was being drafted, the stretch of river in question was not listed on the state's 303(d) list for PCBs. Shervey Testimony.

34.

Water column monitoring data recently published by King County shows that PCB levels in the Green River above the Duwamish River exceed applicable human health criteria. Mr. Shervey acknowledged that this more recent data suggests the LDW lacks additional assimilative capacity for PCBs, and that it would probably not be appropriate to grant a mixing zone in the future. Shervey Testimony; *see also* Chartrand Testimony.

35.

In addition to challenging Ecology's authorization of a mixing zone, PSA also questioned the accuracy of the Mixing Zone Study prepared by SIM's consultant and adopted by Ecology to establish the mixing zone in the 2013 Permit. Exs. S-1, E-1. The Mixing Zone Study describes the computer program used to model SIM's effluent discharge, identifies the variables used as model inputs to characterize the discharge and ambient flow environment, and recommends numeric effluent limits for various parameters based on the dilution factors derived from the model. Ex. S-2.

36.

The computer model applied by SIM's consultant was Version 6 of the Cornell Mixing Zone Expert System (CORMIX) model. Geiselbrecht Testimony. The environmental factors

reviewed in the Mixing Zone Study include the existing level of certain contaminants in the LDW, the shape of the LDW at the discharge location, data on tides and currents near the discharge location, the size and shape of the discharge pipe, the height of the discharge pipe in relation to the surface of the river, the constituents in the effluent, the effluent flow rate, the effluent temperature, and the wind speed near the discharge location. Exs. S-2 at 3-2 to 3-6, S-6 at 24; Geiselbrecht Testimony. The Mixing Zone Study reviewed 16 discharge scenarios. Three of the scenarios were modeled "as surface flow scenarios where the outfall is submerged at the surface of the receiving water body." S-2 at 4-8. After analyzing the 2008 LDW tide data and considering the intermittent nature of SIM's discharge, SIM's consultant determined that the submerged outfall surface flow scenario is a rare occurrence and that the version of CORMIX used in the study was unable to evaluate a partially-submerged outfall geometry. In light of those conclusions, the three submerged outfall surface flow scenarios were excluded from further analysis. The three excluded scenarios would have led to more stringent dilution factors if they had been included in the analysis. Ahmed Testimony; Ex. S-2 (Table 4.1). The Mixing Zone Study recommended a minimum dilution factor of 5.3 at the acute boundary and of 30.2 at the edge of the regulatory mixing zone. Ex. S-2 at 6-1.

37.

PSA's mixing zone expert, David LaLiberte, testified that the model used to develop the mixing zone in the 2013 Permit was an incorrect version of CORMIX and that many of the inputs used in the model were inaccurate. Mr. LaLiberte criticized the exclusion of the three flow scenarios as a misuse of CORMIX. In his opinion, excluding the three flow scenarios

improperly increased the dilution factor. Mr. Laliberte identified numerous other mistakes that he believed were made in the Mixing Zone Study. He testified that the discharge type was incorrectly characterized in terms of whether it was jet-like or spray-like. Mr. LaLiberte also questioned the assumed distance between the discharge pipe and the surface water and the assumption that the discharge always went directly into the surface water rather than landing on rocks on the bank of the river. He also testified that the assumed discharge was too cold, the assumed wind action was too strong, and the assumed current velocity and tidal action was too great. In Mr. LaLiberte's opinion, all of these errors result in a mixing zone dilution factor that is too high, leading to effluent limitations in the 2013 Permit that are not restrictive enough to protect the LDW. LaLiberte Testimony, Ex. S-4.

38.

Dr. Alison Geiselbrecht, SIM's consultant who oversaw the CORMIX modeling in the Mixing Zone Study, testified that the excluded flow scenarios had minimal impact on the calculation of the dilution factor because those scenarios would not normally take place in any significant number of events at the facility. She testified that any inaccuracies in the figures used in the model concerning the distance between the discharge point and the surface water were due to limitations in the model, rather than mistakes in the characterization of the discharge. CORMIX will only accept certain parameters because it is modeling a rectangular box, whereas river beds have contours that are much more irregular. Geiselbrecht Testimony; Ex. S-6 at 44-45.

39.

Dr. Geiselbrecht also testified that the figures used in the Mixing Zone Study for temperature, wind speed, current velocity, and tidal action were either accurate or were sufficiently accurate as to not materially impact the validity of the calculated dilution factor. In response to Mr. LaLiberte's critiques, SIM's consultant ran new calculations for the mixing zone using a newer version of CORMIX, Version 8, and determined that there was no need for any changes to the mixing zone set forth in the Permit. Geiselbrecht Testimony; Ex. S-5. Dr. Geiselbrecht testified that CORMIX 8 was capable of modeling a partially submerged outfall. Geiselbrecht Testimony.

40.

Mr. Abbasi asked Anise Ahmed, an environmental engineer with Ecology's Environmental Assessment Program, to review the Mixing Zone Study. Dr. Ahmed is familiar with mixing zone models, including CORMIX, and acts as a consultant to Ecology's NPDES permit writers. Dr. Ahmed testified that he had responsibility for approving the Mixing Zone Study on behalf of Ecology. The Water Quality Program is responsible for determining the dilution factor to include in an NPDES permit. Ahmed Testimony.

41.

Discussing the excluded critical discharge scenarios, Dr. Ahmed testified that he would have considered all of those conditions in a mixing zone analysis. EPA reviewed the Mixing Zone Study and expressed its concerns to Dr. Ahmed that exclusion of the three critical discharge scenarios resulted in less stringent dilution factors. Ahmed Testimony. Dr. Ahmed

told SIM's consultant and Mr. Abbasi that if those scenarios were excluded from the analysis then, consistent with the recommendation in the Mixing Zone Study, SIM should evaluate whether it could limit its discharge at times when the outfall was partially submerged. Dr. Ahmed did not review any engineering analysis prepared by SIM on this issue. After his initial review of the Mixing Zone Study, Dr. Ahmed provided comments on the study and a revised report was prepared. Dr. Ahmed testified that SIM's consultants addressed all of his concerns in the final report. Ahmed Testimony.

42.

SIM's Stormwater Treatment Engineering Report, dated April 9, 2010, included an evaluation of the percentage of time the site discharges treated wastewater to the LDW while the outfall is submerged. Ex. S-8 (Appendix L). Using data from 2008, the study stated that such discharges occurred 0.561 percent of the time. *Id.* Based on its determination that the three critical flow scenarios are rare occurrences and could be ignored, SIM's Stormwater Treatment Engineering Report did not include the requested evaluation of whether it would be possible to minimize discharges at times when the outfall was submerged. *Id.*; Geiselbrecht Testimony.

43.

The 0.561 percent figure was calculated by comparing the number of hours the outfall was both submerged and discharging with the total number of hours in the applicable month. The calculation represents the percentage of time the outfall is expected to be discharging when it is submerged in any given month. *Id.*; Shervey Testimony. Mr. Shervey agreed that another way to calculate the percentage of time that SIM discharges when the outfall is submerged is to

divide the number of hours the outfall was submerged and discharging by the total number of hours the outfall actually was discharging during the month. Mr. Shervey testified that SIM's use of the total hours in each month rather than just the amount of time there was an actual discharge was appropriate because the discharge limits are based on a steady-state, rather than intermittent, discharge. Concluding that SIM's engineering report demonstrated that the three critical discharge scenarios were rare and applying Permit Writer's Manual's guidance concerning mixing zones, Ecology agreed that those scenarios could be excluded from SIM's mixing zone analysis. Shervey Testimony. A similar analysis was not performed to evaluate the rarity of the other discharge scenarios modeled. *Id.* As noted above, SIM's Stormwater Treatment Engineering Report did not evaluate the possibility of minimizing discharges at times when the outfall was submerged. Ex. E-8.

44.

PSA also challenged the 2013 Permit's effluent limits for untreated stormwater. Mr. Chartrand testified that, in his opinion, Ecology had not completed a reasonable potential analysis for that discharge. According to Mr. Chartrand, the levels allowed for PCBs, copper, zinc, and mercury in the untreated stormwater will cause impacts to water and sediment quality in light of the history of exceedances at or near the facility. Ex. P-16, 17, 21, 22, 24, Chartrand Testimony. Mr. Chartrand stated that the effluent limits for metals in the untreated stormwater are technology-based limits and are less protective than water quality-based limits. Finally, Mr. Chartrand testified that for PCBs the effluent limit should not be a method detection limit of 0.25

µg/L, rather the effluent limit should be the human health criteria limit of 170 picograms per liter (.00017 µg/L). Chartrand Testimony.

45.

Mr. Abbasi testified that in evaluating SIM's untreated stormwater discharge, he reviewed the available monitoring data. Because there were only three data points, he concluded that he could not perform a statistical-analysis of the discharge's reasonable potential. Mr. Abbasi also concluded that SIM's discharge was "not clean" and required the imposition of numeric effluent limits. Mr. Abbasi used the ISGP's benchmarks as interim numeric limits for Outfall 002. Abbasi Testimony; Ex. E-1 at 7. While Mr. Abbasi did not conduct a statistical calculation for a reasonable potential analysis, his supervisor testified that the analysis performed by Mr. Abbasi to determine the effluent limits for the untreated stormwater was equivalent to a reasonable potential analysis. Shervey Testimony.

46.

PSA challenges the analytical testing methods prescribed by the 2013 Permit for determining the presence of PCBs in SIM's discharges. The effluent limit for total PCBs in SIM's untreated stormwater is 0.25 µg/L. Ex. E-1 at 7. This limit represents the minimum value that the approved analytical test, Method 608, can detect. Abbasi Testimony. Although there are other analytical tests for PCBs, such as Methods 8082A and 1662, Ecology is required to use the current EPA-approved analytical testing method. WAC 173-201A-260(3)(h). Ecology selected Method 608 for SIM's untreated stormwater discharge because it is the only method approved by

EPA for use in NPDES permits for compliance purposes. Abbasi Testimony; Shervey Testimony.

47.

Effluent discharged at Outfall 001 is required to be analyzed under Method 8082A, while effluent discharged at Outfall 002 is analyzed under Method 608. Ex. E-1 at 6-7. PSA argues that those methods are insufficient to assess compliance with effluent limits and to ensure that there is no potential for PCBs in SIM's discharges to adversely impact sediment. Ann Bailey, a Senior Environmental Scientist with EcoChem, Inc., testified that the appropriate method to require is Method 1668, which detects PCBs at much lower concentrations than either Method 608 or 8082A. Bailey Testimony.

48.

The parties presented testimony regarding the three analytical testing methods used for detecting PCBs. The oldest, Method 608, is the only method approved by EPA for use in NPDES permits for compliance purposes. Method 8082A, while not approved for compliance in NPDES permits, is a method that EPA has used for years in solid waste testing. It is a more sensitive testing method than Method 608, and is the analytical testing method used by the City of Seattle and Ecology's toxics cleanup program for source tracing in the LDW. McCrea Testimony; Shervey Testimony. The most recently developed method is Method 1668. It is the most sensitive testing method for detecting the presence of PCBs in water and is approximately ten times more expensive than Methods 608 or 8082A. EPA has not approved Method 1668 for use in NPDES permits and, at the time the 2013 Permit was being written, only one lab in the

United States, located in Florida, was accredited to perform this method. Ecology did not consider the use of Model 1668 in the 2013 Permit. Ex. E-1, Shervey Testimony, Bailey Testimony.

49.

All testing methods have a method detection level (MDL), considered the lowest level at which the concentration of a substance can reliably be detected. Using the MDL, the Practical Quantitation Limit (PQL) is then statistically calculated. The PQL represents the lowest level at which a concentration can be detected where the accuracy (precision and bias) of the detection achieves the objectives of the intended purpose. If the effluent limit specified in the 2013 Permit is less than PQL, then the effluent limit effectively becomes the PQL of the testing method. Bailey Testimony, Ex. E-1 at 6, 7, 52, 53.

50.

For the treated wastewater discharged at Outfall 001, the 2013 Permit specifies the use of Method 8082A and explains that the PQL for Method 8082A is 0.1 µg/L and the MDL is 0.017 µg/L. Ecology elected to use PQL to determine compliance with the effluent limits for total PCBs. Ex. E-1 at 6. Accordingly, if the measured effluent concentration for PCBs is less than the PQL, SIM must report less than 0.1 µg/L on the discharge monitoring report form. *Id.* For the untreated stormwater discharged at Outfall 002, the 2013 Permit specifies the use of Method 608 and explains that the final maximum daily total PCB limit (0.25 µg/L) is based on the MDL for Method 608. Ex. E-1 at 6-7.

51.

Mr. Shervey testified that Method 608 is the only method for testing PCBs currently approved by EPA for use in NPDES permits for compliance monitoring and that WAC 173-201A-260(3)(h) requires Ecology to use the analytical testing method specified by EPA in the current code of federal regulations. Under that rule, Ecology can use other analytical testing methods with the approval of EPA. Shervey Testimony. Mr. Shervey explained that Ecology included Method 8082A in the 2013 Permit because the agency felt that it needed to detect PCBs in effluent at lower levels than Method 608 would allow. Method 8082A is used extensively in the LDW for source tracing by EPA, King County, the City of Seattle and Ecology's clean-up program, and is used in administrative orders issued by Ecology's Water Quality Program. In addition, the method is commonly available and affordable. SIM agreed to use Method 8082A to analyze its treated effluent from Outfall 001. Shervey Testimony.

52.

Ecology subsequently determined it was legally incorrect to require SIM to use Method 8082A as the agency had not obtained EPA approval. Prior to the hearing, Ecology modified the 2013 Permit, replacing the requirement to use Method 8082A for the treated effluent with Method 608.[2] Mr. Shervey testified that requesting blanket approval from EPA to use Method 8082A in the Duwamish River would be a good proposal because the method is already being used by several government agencies, including Ecology. Shervey Testimony.

[2] PSA appealed this modification to the Board. *See Puget Soundkeeper Alliance v. Ecology*, PCHB No. 15-050. This decision does not address the propriety of Ecology's recent modification of the 2013 Permit.

53.

The parties disagree on whether the 2013 Permit requires "all known, available, and reasonable methods of prevention, control, and treatment" (AKART). WAC 173-201A-020. To implement AKART for stormwater permits, Ecology considers what the known and utilized treatment systems are for the particular industry or similar industries within the state or sometimes across the entire country. Ecology keeps a reference list of known, proven technologies for stormwater treatment and requires that an applicant's engineer prepare a report for Ecology's review that examines different treatment alternatives and identifies technologies best suited to the facility. Ecology considers economic feasibility if the facility identifies a viable treatment alternative but may reject that treatment technology on the basis of cost. Shervey Testimony.

54.

PSA's expert Dr. Richard Horner asserted that the 2013 Permit does not require AKART for SIM's facility. Dr. Horner, an engineer with experience advising on BMPs for scrap metal facilities like SIM, believes that SIM's treatment system is being overloaded by the amount of pollutants directed to it and is not being operated effectively. He testified it is very unlikely, for example, that SIM cleans its catch basins frequently enough, and noted that SIM's Stormwater Pollution Prevention Plan states only that catch basins will be cleaned with no mention of frequency. Dr. Horner also suggested that SIM could utilize an enhanced sand treatment system, which operates on the principle of coagulating and flocculating solids so they are more easily filtered. Because Dr. Horner did not perform an analysis of SIM's treatment system he was not

able to offer an opinion on whether specific changes to the system were necessary. Horner Testimony, Ex. P-45.

55.

Dr. Horner's primary opinion is that SIM should be required to cover and contain its operations as part of implementing appropriate source control and BMPs to avoid or minimize stormwater contamination. He explained that enclosing operations would be more effective than treatment, but could also improve the efficacy of the treatment system such that changes to the system may not be necessary. Dr. Horner did not assess the feasibility or cost associated with enclosing operations at SIM's facility. He did testify that several auto shredders in other states have enclosed their operations. In Dr. Horner's opinion, this demonstrates that covering an auto shredding facility constitutes AKART and SIM should be required to meet that standard. Horner Testimony; Exs. P-72, P-74, P-80, P-120.

56.

Mr. Shervey did not agree with Dr. Horner's assessment that meeting AKART requires that SIM enclose its operations. He recognized that SIM could better operate its treatment system to achieve more consistent compliance with effluent limits, and that improvements to the system may be warranted. Mr. Shervey acknowledged that enclosing operations at the facility, thereby reducing or eliminating stormwater contact, could improve the efficacy of the system. However, only limited evaluation of the feasibility for enclosing operations has been performed to date. While containment may be a consideration in the future, Ecology is still evaluating the

treatment system's performance under the 2013 Permit, and has made no determinations yet on whether changes might be needed. Shervey Testimony.

57.

The Board finds that Ecology performed an AKART analysis for the 2013 Permit. Mr. Abbasi visited another large scrap metal facility in Washington. He also required SIM to submit an engineering report that addressed AKART. Abbasi Testimony. The report addressed available technologies and reviewed stormwater processes at other facilities. Ex. S-8. The report discussed roofing the entire facility as a technology for controlling stormwater. Roofing the facility was rejected as infeasible because the roof would need to be 6.47 acres in size and the placement of support pillars would disrupt or prohibit necessary facility operations. The size of the roof would also make it prohibitively expensive, with a "conceptual cost of $28 to $37 million." Ex S-8 at 4-24; Abbasi Testimony.

58.

Ecology concluded that, through treatment of its wastewater discharged from Outfall 001 by use of a Dissolved Air Flotation (DAF) treatment system, along with the addition of a pre-treatment system and other proposed enhancements, SIM is implementing AKART. SIM's treatment system uses DAF to remove oil that is present from processing automobiles. This is followed by a mixing tank, which mixes settling chemicals called flocculants, into the waste stream. The mixture is allowed time to settle and for the particles to come together. Finally, the liquid is run through a sand filter to remove the particles that have been accumulated together. Abbasi Testimony; Shervey Testimony; Ex. P-45.

59.

For Outfall 002, Ecology used an adaptive management approach to implement AKART. SIM is required to implement BMPs such as cleaning the roofs and drains on a regular basis. The 2013 Permit sets effluent limits for runoff from the roofs and drains. Ecology also required SIM to conduct a study of runoff from roofs and the employee parking lot and to submit engineering reports assessing measures to be implemented for dust control and application of BMPs. A treatment system for Outfall 002's discharge must be constructed by June 1, 2015. Abbasi Testimony, Shervey Testimony, Exs. E-1 at 19-20, E-2.

60.

Any Conclusion of Law deemed to be properly considered a Finding of Fact is hereby adopted as such.

Based upon the foregoing Findings of Fact, the Board enters the following:

CONCLUSIONS OF LAW

1.

The Board has jurisdiction over the subject matter and the parties pursuant to RCW 43.21B.110(1)(d). The burden of proof is on the appealing party as to the issues in the case. WAC 371-08-485(3). The Board considers the matter *de novo*, giving deference to Ecology's expertise in administering water quality laws and on technical judgments, especially where they involve complex scientific issues. *Port of Seattle v. Pollution Control Hearings Board*, 151 Wn.2d 568, 593-94, 90 P.3d 659 (2004). Similarly, Ecology's interpretations of water quality statutes and its own regulations are entitled to great weight, unless such interpretation conflicts

with the statute's plain language. *Id.* at 593-94. Pursuant to WAC 371-08-540(2), "[i]n those cases where the board determines that the department issued [an NPDES] permit that is invalid in any respect, the board shall order the department to reissue the permit as directed by the board and consistent with all applicable statutes and guidelines of the state and federal governments."

2.

The CWA was enacted with the broad policy objective of restoring and maintaining the chemical, physical, and biological diversity of the nation's waters. One action in furtherance of this goal was creation of the NPDES permit program. *Puget Soundkeeper Alliance v. Ecology,* 102 Wn. App. 783, 788, 9 P.3d 892 (2000). To serve those ends, the CWA prohibits the discharge of any pollutant by any person unless done in compliance with provisions of the Act and/or in compliance with an NPDES permit. 33 U.S.C. §§ 1311(a) and 1342. Pursuant to RCW 90.48.260, the legislature authorized Ecology to implement and enforce all programs necessary to comply with the CWA, 33 U.S.C. § 1251. Such powers include the authority to administer the NPDES permit program (ch. 173-220 WAC) and to establish water quality standards for surface water (ch. 173-201A WAC).

3.

The issues identified for resolution in the Pre-Hearing Order are:[3]

1. Is National Pollution Discharge Elimination System (NPDES) Permit No. WA0031968, issued September 16, 2013 and modified August 26, 2014, to Seattle Iron and Metals Corp. (SIM), ("the permit"), inconsistent with applicable law, including 33 U.S.C. § 1311(b)(1)(C), 40 C.F.R. § 122.44, RCW 90.48.520, WAC 173-201A-010, -260, and -510, and WAC 173-204, because the effluent

[3] PSA voluntarily withdrew Issues 5, 8, 9, 12b, and 12c.

limitations and other conditions pertaining to the discharge from outfall 001 are inadequate to ensure that discharges do not cause or contribute to violations of water quality and sediment quality standards?

2. Is the permit inconsistent with applicable law, including 33 U.S.C. § 1311(b)(1)(C), 40 C.F.R. § 122.44, RCW 90.48.520, WAC 173-201A-010, -260, and -510, and WAC 173-204, because the effluent limitations and other conditions pertaining to the discharge from outfall 002 are inadequate to ensure that discharges do not cause or contribute to violations of water quality and sediment quality standards?

3. Is the permit's authorization of discharge of PCBs inconsistent with applicable law, including WAC 173-201A-010, -260, and -510, and WAC 173-204, because it does not ensure that discharges will not cause or contribute to violations of applicable water quality and sediment standards?

4. Is the permit inconsistent with applicable law, including 40 C.F.R. § 122.44(d), requiring reasonable potential analysis?

6. Is the permit inconsistent with applicable law, including WAC 173-201A-400, in its authorization and sizing of mixing zones?

7. Is the permit inconsistent with applicable law, including 40 C.F.R. §§ 122.4 and 122.44 and 33 U.S.C. § 1308, because the laboratory analysis method specified for PCB discharge concentrations is inadequate to determine compliance with appropriate water quality-based effluent limitations?

10. Is the permit inconsistent with applicable law concerning AKART requirements, including RCW 90.52.040 and WAC 173-220-130, because it does not require the implementation of AKART?

11. Is the compliance schedule, including the provisions of condition S9, inconsistent with applicable law, including 40 C.F.R. § 122.62(a)(4), WAC 173-201A-510 and WAC 173-220-140, and WAC 173-220-190?

12. Are the following portions of the permit unreasonably vague and confusing:
    a. requirements concerning shoreline cleanup and barge loading, including conditions S8, S9, and S15?

A. Pursuant to existing regulations, Ecology is required to use Method 608 (Issue 7)

4.

The 2013 Permit requires the use of different analytical testing methods to detect the presence of PCBs in discharges from Outfall 001 and Outfall 002. For Outfall 001, Ecology requires the use of the Method 8082A, while Method 608 is required to be used for discharges from Outfall 002. As described above, Method 8082A is a more sensitive testing method than Method 608. EPA developed a third analytical test method, Method 1668, which is more sensitive than Methods 608 or 8082. The state Surface Water Quality Standards, ch. 173-201A WAC, identify the procedures Ecology is to use when applying the appropriate water quality criteria for a waterbody. With respect to analytical testing methods, the standards state:

> The analytical testing methods for these numeric criteria must be in accordance with the "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*" (*40 C.F.R. Part 136*) or superseding methods published. The department may also approve other methods following consultation with adjacent states and with the approval of USEPA.

WAC 173-201A-260(3)(h). At this time, EPA has approved only Method 608 for use in NPDES Permits. Shervey Testimony, Bailey Testimony. Ecology may petition EPA for approval of an alternative test procedure. 40 C.F.R. §136.4; WAC 173-201A-260(3)(h).

5.

While acknowledging that EPA has designated Method 608 for compliance monitoring in NPDES permits, PSA asserts that Ecology should be required to seek EPA's approval to use Method 1668 in SIM's 2013 Permit. According to PSA, Ecology's failure to pursue that option constitutes a violation of the stated policies of the state Water Pollution Control Act (WPCA),

which direct the agency to use its powers to protect and preserve the quality of the state's waters. RCW 90.48.010. PSA requests that the Board remand the 2013 Permit and require Ecology to address this error.

6.

The Board reviews the terms of an NPDES permit to determine if it is "invalid in any respect," and whether it is consistent with applicable legal requirements. WAC 371-08-540(2); *Pierce County v.* Ecology, PCHB Nos. 12-093c and 12-097c (Order on Summary Judgment, Oct. 2, 2013); *Copper Development v. Ecology*, PCHB No. 09-135 through 09-141, (Order on Summary Judgment, Jan. 5, 2011). The policy declarations in the WPCA do not "control over the more specific statutory provisions adopted to implement those general declarations" and those declarations "have no operative force in and of themselves." *Puget Soundkeeper Alliance v. State of Washington, Department of Ecology*, 102 Wn. App. 783, 790, 9 P.3d 892 (2000).

7.

The Board concludes that the 2013 Permit is consistent with the provision of the state Surface Water Quality Standards requiring the use of the EPA-approved analytical test method published in the Code of Federal Regulations. WAC 173-201A-260(3)(h). The analytical test for PCBs currently approved by EPA for compliance monitoring in NPDES permits is Method 608. The evidence presented showed that Method 8082A is widely used in the Duwamish River and is more sensitive than Method 608. While Mr. Shervey testified that seeking EPA approval of Method 8082A for use in the Duwamish River would constitute a good proposal, the Board lacks the authority to require Ecology to petition EPA for approval to use Method 8082A.

B. Reasonable potential analysis performed for SIM's discharges and technology-based numeric effluent limits for Outfall 002 are appropriate (Issues 2, 3 and 4)

8.

As described above, when preparing an NPDES permit, the permit writer is to determine if the discharge has a reasonable potential to cause or contribute to a violation of water quality standards. 40 CFR §122.44(d)(1)(i); Exs. E-4 at VII-18-VII-15, P-108 at 50-51. If it is determined that the discharge contains a pollutant that has the reasonable potential to cause or contribute to a violation, then the permit must include an effluent limit for that pollutant. 40 CFR §122.44(d)(1)(iii). Where development of a numeric effluent limit is infeasible, the permit shall contain BMPs to control or abate the discharge of the pollutant. 40 CFR §122.44(k).

9.

In preparing the 2013 Permit, Mr. Abbasi performed a reasonable potential analysis on SIM's treated wastewater discharges from Outfall 001. Finding there was a reasonable potential the discharge would violate water quality standards, Mr. Abbasi calculated WQBELs for various pollutants and included numeric effluent limits for those parameters in the 2013 Permit. Abbasi Testimony; Ex. E-1 at 6. PSA presented no evidence controverting these facts.

10.

PSA asserted that Mr. Abbasi failed to conduct a reasonable potential analysis on SIM's untreated stormwater discharges from Outfall 002. Relying on EPA's guidance document, Mr. Chartrand opined that Ecology did not need effluent data to perform the analysis or to determine permit limits and, in his opinion, SIM's untreated stormwater discharge had the potential to

violate water quality standards. Chartrand Testimony; Ex. P-108 at 50-51. Mr. Abbasi testified that he evaluated the available sampling data for that discharge and concluded there were insufficient data points to perform a statistical calculation of reasonable potential. Mr. Abbasi also concluded that because SIM's untreated stormwater discharge was "not clean," he needed to impose numeric effluent limitations in the 2013 Permit. Abbasi Testimony; Ex. E-1 at 7. Mr. Abbasi's supervisor, Mr. Shervey, testified that while Mr. Abbasi did not conduct a statistical analysis of reasonable potential, his evaluation of the untreated stormwater discharge was the equivalent of a reasonable potential analysis. Ecology considers the effluent limits on Outfall 002 to be interim limits which will be modified based on the engineering report, the effectiveness of the BMPs, and the data collected by SIM under the terms of the 2013 Permit. Shervey Testimony.

11.

The Board concludes that Ecology performed a reasonable potential analysis on SIM's discharges from Outfall 001 and 002 as required by applicable law. *See* 40 C.F.R. § 122.44(d). Ecology found that SIM's discharges had the reasonable potential to exceed water quality standards and imposed numeric effluent limits on each discharge stream. Ex. E-1 at 6-7. The Board defers to Ecology's technical determination that it lacked sufficient monitoring data for SIM's untreated stormwater discharge to develop site-specific numeric effluent limits.

12.

Given the absence of sufficient monitoring data, Ecology could have imposed narrative effluent limits on the discharge from Outfall 002 in the form of BMPs but elected to impose

numeric limits instead. 40 C.F.R. 122.44(k)(3). Mr. Abbasi's decision to use the technology-based benchmark limits from the ISGP as numeric effluent limits for SIM's untreated stormwater was reasonable. The 2013 Permit represents the first time Ecology imposed numeric effluent limits on SIM's untreated stormwater. Ecology considers the limits interim in nature and the technology-based limits will be replaced with water quality-based limits derived from the monitoring data collected by SIM under the terms of the 2013 Permit. Shervey Testimony. With the exception of the effluent limit for PCBs, discussed below in Section E, the Board concludes that the numeric effluent limits imposed on SIM's untreated stormwater discharge from Outfall 002 are consistent with applicable law.

C. The 2013 Permit requires implementation of AKART and the extension of the compliance schedule for the engineering report was consistent with applicable law (Issues 10 and 11)

13.

The WPCA requires that all state and federal discharge permits incorporate permit conditions requiring AKART. RCW 90.48.520; 90.58.010; *see also* RCW 90.52.040 and RCW 90.54.020(3)(b). Ecology's rules define AKART as "the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge." WAC 173-201A-020. The Washington Court of Appeals has further clarified that the "reasonableness" prong of AKART limits Ecology "to requiring a system that is both economically and technically feasible." *Puget Soundkeeper Alliance v. State of Washington,* 102 Wn. App. 783, 792-793, 9 P.3d 892, 897 (2000).

14.

Relying on the testimony of its expert, Dr. Horner, PSA claims that the 2013 Permit fails to implement AKART. According to Dr. Horner, enclosure of SIM's operations in a roofed building constitutes AKART for an auto shredding facility. Dr. Horner based his opinion regarding AKART on his determination that several auto shredding facilities in other states had enclosed all or part of their facilities. Dr. Horner did not evaluate whether enclosing SIM's operations would be technologically or economically feasible. Dr. Horner testified that he believed that SIM's treatment system was being overloaded by pollutants from the site and suggested the addition of sand filtration. However, he did not perform a specific evaluation of SIM's existing treatment system and could not opine whether that system required improvement. Horner Testimony.

15.

The Board concludes that PSA did not meet its burden on this issue. The evidence presented by PSA did not establish that that enclosure of all or part of SIM's operations constituted AKART. As stated above, AKART limits Ecology to requiring a system that is both technologically and economically feasible. PSA did not assess the technological or economic feasibility of enclosing SIM's operations. While PSA disagreed with the costs contained in SIM's engineering report, Ex. S-8, it did not provide contrary evidence. Nor did PSA present evidence demonstrating that Ecology erred in determining that SIM's use of a DAF treatment system constituted AKART.

16.

The Board also concludes that the 2013 Permit requires AKART for SIM's untreated stormwater discharged at Outfall 002. The 2013 Permit requires SIM to prepare a Stormwater Pollution Prevention Plan incorporating applicable BMPs from Ecology's stormwater manual and to implement those BMPs at its facility. Ex. E-1 at 22-27. Mr. Abbasi testified that the 2013 Permit's use of BMPs to address stormwater discharged to Outfall 002 constituted AKART. Abbasi Testimony. Under WAC 173-226-070(1)(d), AKART may be imposed through use of BMPs.

17.

Conditions S8 and S9 of the 2013 Permit require SIM to prepare an engineering report evaluating AKART for fugitive dust control and treatment of runoff from roofs and employee parking lots. SIM is required to complete construction of an approved treatment system by June 1, 2015. Ex. E-1 at 19-20. As provided by WAC 173-220-140, Ecology can impose a compliance schedule for AKART implementation that achieves compliance at the earliest possible date. Ecology initially required SIM to submit its engineering report by January 1, 2014, and complete construction of the selected treatment system by June 1, 2014. SIM requested that Ecology extend the compliance schedule because the company was unable to collect sufficient monitoring data to complete the engineering report. Abbasi Testimony. Under WAC 173-220-190(2):

> The department may, upon request of the permittee, modify a schedule of compliance or an operating condition in an issued permit if it determines good and valid cause exists for such revision (such as an act of God, strike, flood,

> materials shortage, or other event over which the permittee has little or no control and for which there is no other reasonably available remedy).

See also 40 C.F.R. § 122.62(a)(4). Ecology concluded that, under the circumstances, SIM's request was appropriate. Abbasi Testimony. Ecology modified the Permit in 2014 to extend the compliance schedule. Exs. E-1 at 20, E-2A at 1.

18.

PSA asserts that a compliance schedule can only be modified under the limited circumstances listed in the regulation. According to PSA, because SIM's inability to collect sufficient monitoring data did not result from an "act of God" or a similar event that SIM could not control, modification of the compliance schedule was not legally justified. The Board concludes that PSA reads the regulation too narrowly. The terms PSA relies on are preceded by the qualifying phrase "such as," which is a term of enlargement rather than restriction. *Cf. Pacific Topsoils, Inc. v. Ecology*, 157 Wn. App. 629, 642, 238 P.3d 1201 (2010), review denied, 171 Wn.2d 1009 (2011) ("includes" is a term of enlargement). The regulation provides Ecology with discretion to grant an extension where the agency finds that "good and valid cause exists." WAC 173-220-190(2). The evidence presented supports Ecology's granting of SIM's request to extend the compliance schedule. The Board concludes that modification was consistent with the requirements of applicable law.

D. Exclusion of critical conditions in mixing zone analysis was not supported by evidence (Issue 6)

19.

The 2013 Permit authorizes a mixing zone for treated wastewater discharged from Outfall

001. Ex. E-1 at 8. The term "mixing zone" refers to the use of the assimilative capacity of natural systems as part of an effective pollution control strategy. *Puget Soundkeeper Alliance v. Ecology*, PCHB Nos. 05-150, 05-151, 06-034 & 06-040 (Finding of Fact, Conclusions of Law, and Order, Jan. 26, 2007)(n. 10). EPA regulations provide that states may include in their state standards implementation policies that include mixing zones. 40 C.F.R. § 131.13. The authority to grant mixing zones in Washington NPDES permits is found in WAC 173-201A-400. The regulation provides that mixing zones may be granted "as appropriate" in discharge permits, but only *after* a discharge meets AKART, and only if "the supporting information clearly indicates a mixing zone would not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the water body, result in damage to the ecosystem or adversely affect public health as determined by [Ecology]." WAC 173-201A-400(2), (4). Mixing zones are meant to be exceptions to water quality standards and, as such, they must be carefully limited in their application. WAC 173-201A-400(7), (8).

20.

PSA asserts that SIM does not meet the regulatory requirements for obtaining a mixing zone and that the Mixing Zone Study which developed the dilution factors is flawed. With the exception of PCBs, discussed below in Section E., and the exclusion of critical discharge scenarios from the Mixing Zone Study, the Board concludes that PSA has not met its burden on this issue. The mixing zone applies to SIM's discharge of treated wastewater from Outfall 001. As discussed above, the Board finds that SIM has implemented AKART for its discharge from Outfall 001. The evidence also established that SIM's consultant used the appropriate version of

the CORMIX model for the site in the Mixing Zone Study. Responding to Mr. LaLiberte's criticism of various data inputs (*e.g.*, wind speed, water temperature), SIM's consultant reran the model using the current version, CORMIX 8, and concluded that use of revised data did not substantially change the dilution factors previously calculated. Geiselbrecht; Ex. S-2. SIM's consultant also rebutted Mr. LaLiberte's assertion that several physical characteristics of the outfall used in the model were incorrect. *Id.*

21.

The granting of a mixing zone, which allows the discharge of pollutants at a greater concentration than the calculated effluent limit, is an exception to the water quality standards and is to be granted sparingly. WAC 173-201A-400(7), (8). Exclusion of the three critical discharge scenarios resulted in a higher dilution factor, allowing SIM to discharge pollutants into the LDW at greater levels. EPA expressed concerns to Ecology about the exclusion of those scenarios. Ecology's own mixing zone expert, Dr. Ahmed, testified that he would have considered all of those critical conditions in the mixing zone analysis. Dr. Ahmed stated that he accepted the exclusion of those scenarios based on the Mixing Zone Study's recommendation that the SIM's Stormwater Treatment Engineering Report would evaluate the possibility of minimizing discharges when the outfall was partially submerged. Ahmed Testimony. The report, however, did not evaluate ways to minimize the occurrence of discharges when the outfall was partially submerged as Dr. Ahmed had anticipated. Instead, SIM's Stormwater Treatment Engineering Report's evaluation of this issue consisted of calculating the percentage of time the system was discharging to a submerged outfall and determining that it occurred less than one percent of the

time. Based on this analysis, the report summarily concluded that it is unfeasible to develop "system and logic controls to anticipate and adjust for these conditions[.]" Ex. S-8 at 6-5.

22.

The Board concludes that the evidence presented did not support Ecology's reliance on SIM's assertion that the three critical conditions were properly excluded from the mixing zone analysis. According to Ecology's Guidance for Conducting Mixing Zone Analyses, "each critical condition (by itself) has a low probability of occurrence." Ex. E-5 at 2. The evidence does not support exclusion of the three critical conditions on the basis that they are rare events.

23.

SIM calculated the likelihood that the omitted critical conditions would happen as less than one percent by predicting the number of instances in which the system would discharge to a submerged outfall and then dividing that number by the total hours in the time period that was measured. The calculation used precipitation information to predict discharges and then looked at tidal data to determine whether a predicted discharge event would occur when the water level at the discharge point was equal to or greater than ten feet. Ex. S-8, Appendix L. When questioned whether the SIM calculation should have included every hour of the time period in the estimate of how likely the critical conditions were to occur, Mr. Shervey testified that SIM's calculation was acceptable because Ecology bases discharge limits on a steady-state discharge. Shervey Testimony. It is unclear to the Board how an assumption of steady-state discharge is consistent with a calculation that is based on predicted discharges during limited predicted events. Dividing a limited number of predicted events by the total hours of the time period may

give an inaccurate representation as to the actual probability of occurrence for the omitted critical conditions.

24.

The Board remands the 2013 Permit to Ecology for reconsideration of the mixing zone analysis for all parameters, with the exception of PCBs, consistent with this opinion. WAC 371-08-540(2). According to Dr. Geiselbrecht, the latest version of the mixing zone model, CORMIX 8, is capable of modeling a partially submerged outfall. Whether the revised mixing zone analysis incorporates the three excluded critical discharge scenarios or the model is re-run using CORMIX 8 is left to Ecology's discretion.

E. SIM's discharge of PCBs does not satisfy requirements for regulatory mixing zone (Issues 3 and 6)

25.

PSA asserts that Ecology's granting of a mixing zone for SIM's discharge of PCBs is contrary to the requirements of WAC 173-201A-400. Based on the evidence presented at the hearing, the Board concludes that PSA has met its burden of proof on this question. The evidence established that elevated levels of PCBs can be found in LDW sediments and fish and shellfish tissue. Exs. E-8 at 22-31, P-89 (Tables 26, 28, 30), P-94 (Table A-1). A DOH Fish Advisory is in effect warning the public against eating resident fish, shellfish, and crab from the Duwamish River. Exs. P-95, P-97, P-98. EPA and Ecology are actively engaged in clean-up efforts in the LDW, which includes controlling sources of contamination to the waterway. Ex. E-8 at 1. EPA and City of Seattle sediment samples in catch basins on or in the vicinity of SIM's

facility showed elevated levels of PCBs. Exs. P-15, P-21. Those results led EPA and the City of Seattle to inform SIM of its need to implement effective source control measures to address the discharge of PCBs from its site. *Id.*; Ex. P-26. Because PCBs are found in the types of materials processed by SIM, it is recognized as a potential source of contaminants that may contribute to recontamination of sediments at or near its facility. McCrea Testimony, Horner Testimony, Geiselbrecht Testimony; Ex. P-88 at 23-31. Mr. Abbasi was aware of this information when drafting SIM's 2013 Permit. Abbasi Testimony.

26.

As discussed above, a mixing zone is an exception to the water quality standards that should only be granted in limited instances. WAC 173-201A-400(7), (8). Given their persistence and ability to bioaccumulate and biomagnify, a mixing zone for PCBs should rarely, if ever, be granted. EPA has expressed concerns regarding the appropriateness of mixing zones for PBTs such as PCBs. Exs. P-111 at Section 5.1.2, P-112 (63 Fed. Reg. 36791); P-115 at 11, P-131. When developing an NPDES permit, the permit writer "must consider the effect of the proposed discharge to surface water on the quality of aquatic sediments and limit the concentrations that cause an exceedance of the sediment quality standards[.]" Ex. E-4 at IX-1; WAC 173-204-400.

27.

As stated above, the Board finds that Mr. Abbasi's evaluation of the potential impacts of SIM's discharge on sediment quality in the LDW was inadequate. Ecology failed to present evidence clearly indicating that a mixing zone for SIM's discharge of PCBs into the LDW

"would not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the water body, result in damage to the ecosystem, or adversely affect public health as determined by the department." WAC 173-201A-400(4). The contaminated status of the LDW is undisputed. Ecology itself is engaged in significant source control efforts intended to stop the introduction of contaminants, including PCBs, into the LDW. The granting of a mixing zone to SIM for PCBs is counterproductive to that effort. The Board concludes that Ecology's granting of a mixing zone for PCBs is contrary to the requirements of WAC 173-201A-400.

28.

In addition to its contention that there should be no mixing zone for PCBs, PSA also asserts that the effluent limit for PCBs in both discharges should be the human health criteria of 0.00017 µg/. Chartrand Testimony. The 2013 Permit contains different numeric effluent limits for PCBs for each discharge stream. The effluent limit for discharges of PCBs from Outfall 001, absent application of the dilution factor from the mixing zone, is 0.00017 µg/L. Ex. E-1 at 6. For Outfall 002 the effluent limit for PCBs is 0.25 µg/L. *Id.* at 7. This limit is based on the method detection limit for Method 608, the test required by the 2013 Permit, and is not a WQBEL. Ecology provided no evidence supporting different effluent limits for PCBs based on their presence in one discharge stream as opposed to another. While the Board concluded that the technology-based limits from the ISGP were acceptable interim limits for Outfall 002, the effluent limit for PCBs for that discharge is not based on technology and does not warrant the same conclusion.

29.

The Board recognizes that different testing methods can detect PCBs at different levels of concentration. The Board is also aware that Method 608 is the only testing method currently approved by EPA for use in NPDES permits for compliance purposes. However, those facts in and of themselves do not support a higher effluent limit for PCBs in SIM's discharge to Outfall 002. Mr. Shervey testified that requesting approval from EPA to use the more sensitive Method 8082A throughout the Duwamish River would be a worthy proposal as it is currently being used by several government agencies. Although the Board lacks the authority to require Ecology to petition EPA to allow the use of Method 8082A, we encourage Ecology to consider making such a request. The Board remands the 2013 Permit to Ecology for revision of the effluent limits for PCBs consistent with this decision.

F. 2013 Permit Conditions S8, S9, and S15 (Issue 12(a))

30.

In Issue 12(a), PSA challenged Conditions S8, S9, and S15 of the 2013 Permit governing shoreline cleanup and barge loading. The only evidence presented by PSA that touched on Issue 12(a) was brief testimony stating that a PSA member observed scrap metal fall into LDW when being loaded onto a barge and two photographs of SIM's crane with scrap metal in the grabber. Fredrickson Testimony; Exs. P-64, P-65. The Board concludes that PSA did not meet its burden of proof on Issue 12(a).

31.

Any Finding of Fact deemed to be a Conclusion of Law is hereby adopted as such.

Having so found and concluded, the Board enters the following

ORDER

Having concluded that portions of NPDES Permit No. WA0031968 are invalid, the Board REMANDS the Permit to Ecology pursuant to WAC 371-08-540, for reissuance consistent with this opinion:

1. Ecology and SIM shall revise the mixing zone analysis for all parameters, with the exception of PCBs, consistent with this opinion.
2. Ecology shall modify Condition S1.A consistent with this opinion.
3. Ecology shall modify Condition S1.B consistent with opinion.

SO ORDERED this 23rd day of July, 2015.

POLLUTION CONTROL HEARINGS BOARD

JOAN M. MARCHIORO, Chair

THOMAS C. MORRILL, Member

KAY M. BROWN, Member

APPENDIX C

Excerpt from 75 Fed. Reg. 58,024 (September 23, 2010)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 136, 260, 423, 430, and 435

[EPA–HQ–OW–2010–0192; FRL–9189–4]

RIN 2040–AF09

Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing changes to analysis and sampling test procedures in wastewater regulations. These changes will provide increased flexibility to the regulated community and laboratories in their selection of analytical methods (test procedures) for use in Clean Water Act programs. The changes include proposal of EPA methods and methods published by voluntary consensus standard bodies, such as ASTM International and the Standard Methods Committee and updated versions of currently approved methods. EPA is also proposing to add certain methods reviewed under the alternate test procedures program. Further, EPA is proposing changes to the current regulations to clarify the process for EPA approval for use of alternate procedures for nationwide and Regional use. In addition, EPA is proposing minimum quality control requirements to improve consistency across method versions; corrections to previously approved methods; and changes to sample collection, preservation, and holding time requirements. Finally, EPA is proposing changes to how EPA cites methods in three effluent guideline regulations.

DATES: EPA must receive your comments on this proposal on or before November 22, 2010.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OW–2010–0192, by one of the following methods:

- *http://www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *E-mail: OW-Docket@epa.gov,* Attention Docket ID No. EPA–HQ–OW–2010–0192.
- *Mail:* Water Docket, U.S. Environmental Protection Agency, Mailcode: 2822T, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Attention Docket ID No. EPA–HQ–OW–2010–0192. Please include a total of 3 copies.
- *Hand Delivery:* Water Docket, EPA Docket Center, EPA West Building Room 3334, 1301 Constitution Ave., NW., Washington, DC, Attention Docket ID No. EPA–HQ–OW–2010–0192. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information by calling 202–566–2426.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OW–2010–0192. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the Water Docket in the EPA Docket Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is 202–566–1744, and the telephone number for the Water Docket is 202–566–2426.

FOR FURTHER INFORMATION CONTACT: Lemuel Walker, Engineering and Analysis Division (4303T), USEPA Office of Science and Technology, 1200 Pennsylvania Ave., NW., Washington, DC 20460, 202–566–1077, (*e-mail: walker.lemuel@epa.gov*), or Meghan Hessenauer, Engineering and Analysis Division (4303T), USEPA Office of Science and Technology, 1200 Pennsylvania Ave., NW., Washington, DC 20460, 202–566–1040 (*e-mail: hessenauer.meghan@epa.gov*).

SUPPLEMENTARY INFORMATION:

A. General Information

1. Does this action apply to me?

This proposed rule could affect a number of different entities. Potential regulators may include EPA Regions, as well as States, Territories and Tribes authorized to implement the National Pollutant Discharge Elimination System (NPDES) program, and issue permits with conditions designed to ensure compliance with the technology-based and water quality-based requirements of the Clean Water Act (CWA). These permits may include restrictions on the quantity of pollutants that may be discharged as well as pollutant measurement and reporting requirements. If EPA has approved a test procedure for analysis of a specific pollutant, the NPDES permitee must use an approved test procedure (or an approved alternate test procedure) for the specific pollutant when measuring the required waste constituent. Similarly, if EPA has established sampling requirements, measurements taken under an NPDES permit must comply with these requirements. Therefore, entities with NPDES permits will potentially be regulated by the actions in this rulemaking. Categories and entities that may potentially be subject to the requirements of today's rule include:

Category	Examples of potentially regulated entities
State, Territorial, and Indian Tribal Governments ...	States, Territories, and Tribes authorized to administer the NPDES permitting program; States, Territories, and Tribes providing certification under Clean Water Act section 401.
Industry	Facilities that must conduct monitoring to comply with NPDES permits.
Municipalities	POTWs that must conduct monitoring to comply with NPDES permits.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists types of entities that EPA is now aware that could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by this action, you should carefully examine the applicability language at 40 CFR 136.1 (NPDES permits and CWA) and 40 CFR 403.1 (Pretreatment standards purpose and applicability). If you have questions regarding the applicability of this action to a particular entity, consult the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. What should I consider as I prepare my comments for EPA?

1. *Submitting Confidential Business Information (CBI).* Do not submit this information to EPA through *http://www.regulations.gov* or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

C. Abbreviations and Acronyms Used in the Preamble and Proposed Rule Text

ASTM: ASTM International
ATP: Alternate Test Procedure
CFR: Code of Federal Regulations
CWA: Clean Water Act
EPA: Environmental Protection Agency
FLAA: Flame Atomic Absorption Spectroscopy
HRGC: High Resolution Gas Chromatography
HRMS: High Resolution Mass Spectrometry
ICP/AES: Inductively Coupled Plasma-Atomic Emission Spectroscopy
ICP/MS: Inductively Coupled Plasma-Mass Spectrometry
MS: Mass Spectrometry
NPDES: National Pollutant Discharge Elimination System
QA: Quality Assurance
QC: Quality Control
SDWA: Safe Drinking Water Act
SM: Standard Methods
STGFAA: Stabilized Temperature Graphite Furnace Atomic Absorption Spectroscopy
USGS: United States Geological Survey
VCSB: Voluntary Consensus Standards Body
WET: Whole Effluent Toxicity

Table of Contents

I. Statutory Authority

EPA is proposing today's rule pursuant to the authority of sections 301(a), 304(h), and 501(a) of the Clean Water Act ("CWA" or the "Act"), 33 U.S.C. 1311(a), 1314(h), 1361(a). Section 301(a) of the Act prohibits the discharge of any pollutant into navigable waters unless the discharge complies with a National Pollutant Discharge Elimination System (NPDES) permit issued under section 402 of the Act. Section 304(h) of the Act requires the Administrator of the EPA to "* * * promulgate guidelines establishing test procedures for the analysis of pollutants that shall include the factors which must be provided in any certification pursuant to [section 401 of this Act] or permit application pursuant to [section 402 of this Act]." Section 501(a) of the Act authorizes the Administrator to "* * * prescribe such regulations as are necessary to carry out this function under [the Act]." EPA generally has codified its test procedure regulations (including analysis and sampling

requirements) for CWA programs at 40 CFR part 136, though some requirements are codified in other Parts (*e.g.*, 40 CFR chapter I, subchapters N and O).

II. Summary of Proposed Rule

EPA's regulations at 40 CFR part 136 identify test procedures that must be used for the analysis of pollutants in all applications and report under the CWA NPDES program as well as State certifications pursuant to section 401 of the CWA. Included among the approved test procedures are analytical methods developed by EPA as well as methods developed by voluntary standards development organizations such as ASTM International and by the joint efforts of the Standard Methods Committee which is comprised of three technical societies (American Public Health Association, American Water Works Association and the Water Environment Federation) and produce *Standard Methods for the Examination of Water and Wastewater.* EPA approves analytical methods (test procedures) for measuring regulated pollutants in wastewater. Regulated and regulatory entities use these approved methods for determining compliance with NPDES permits or other monitoring requirements. Often, these entities have a choice in deciding which approved method they will use because EPA has approved the use of more than one method. This rule proposes to add to this list of approved methods. Associated with the proposed approved methods are their regulated analytes (parameters) within the method. Some of these proposed methods introduce new technologies to the NPDES program, while others are updated versions of previously approved methods. These additions will improve data quality and provide the regulated community with greater flexibility. Further, EPA is aware that organizations sometimes republish methods to correct errors or revise the description. These changes do not affect the performance of the method. Therefore, if there are changes for methods in this proposed rule before publication of a final rule, EPA will include the updated versions. In the tables at Section 136.3, EPA lists the parameters in alphabetical order. To better identify new parameters proposed in this rule EPA added some of these parameters, such as bisphenol A and nonylphenol, at the end of these lists. In the final rule, EPA may choose to reorder the listings to arrange all parameters alphabetically.

A. Changes to 40 CFR 136.3 To Include New EPA Methods and New Versions of Previously Approved EPA Methods

EPA is proposing to add new EPA methods that require new technologies to its Part 136 test procedures. EPA also is proposing new versions of already approved EPA methods with technologies that have been in use for many years. The new EPA methods and new versions of EPA approved methods are described in the following paragraphs.

1. EPA is proposing a new version of EPA Method 1664, 1664B: N-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT–HEM; Non-polar Material) by Extraction and Gravimetry for use in CWA programs. In addition, EPA is proposing to amend the RCRA regulations at 40 CFR 260.11, which currently specify use of method 1664A, to additionally specify the revised version, 1664B.

Currently, Method 1664A is used as a required testing method to determine eligibility of materials for certain conditional exclusions from RCRA regulations under 40 CFR 260.20 and 260.22. These exclusions are known as "delistings." These delistings provide that certain wastes generated at particular facilities are no longer classified as hazardous wastes under RCRA. When delistings are granted by EPA, the Agency describes them, along with applicable conditions, in appendix IX to 40 CFR part 261.

A number of delistings specify, among other things, the following test method: "Method 9070A (uses EPA Method 1664, Rev. A)." This testing method must be used by waste generators to determine if their wastes are an oily waste for delisting purposes. The language used in Appendix IX reads this way because Method 9070A in SW–846 (including on the SW–846 Web site, *http://www.epa.gov/epawaste/hazard/testmethods/sw846/pdfs/9070a.pdf*) simply reads that Method 1664A is to be used. Thus, although Method 9070A is cited, it is actually Method 1664A. Method 9070A does not exist independently of Method 1664A.

Once this rule becomes final, we would encourage future delistings, if applicable, to cite the test method as "Method 9070A (uses Method EPA 1664, Rev. B)." EPA is not proposing to amend delistings granted in previous years that reference Method 1664A at this time, since it would require additional review to assess the need for such a change and an analysis of each delisting.

Oil and Grease is a method-defined parameter that measures hexane extractable material (HEM) using n-hexane (85% minimum purity, 99.0% minimum saturated C6 isomer, residue < 1mg/L.) Before the use of Freon® was banned, EPA defined oil and grease as Freon®-extractable material. To replace Freon® for oil and grease determinations (64 FR 26315, May 14, 1999) EPA conducted extensive side-by-side studies of several extracting solvents on a variety of samples to determine how the values compared to Freon®-extractable material values.

In today's proposed rule, EPA describes six oil and grease methods, and proposes only the three methods in Table IB that use n-hexane to extract the sample because the solvent-defined definition of oil and grease measurements precludes use of any other extraction solvent or extraction technique. Without extensive side-by-side testing, permit writers, permitees, and data reviewers lack a basis for comparing HEM permit limits or measurements to values obtained with other extraction solvents or techniques. EPA lacks information about whether permit writers or permitees would value having more ways to extract oil and grease samples, or about how much effort they or others would be willing to exert to determine if the alternate values were equal to HEM values or convertible to HEM values by a conversion factor.

Although solvents may not be changed, EPA has described some allowable changes to the proposed EPA Method 1664B. This method describes (1) modifications allowable for nationwide use without prior EPA reviews (cf. documentation procedures described at 40 CFR 136.6), and (2) describes modifications not allowable including the use of any extraction solvent other than n-hexane or determination technique other than gravimetry. Although Method 1664B allows use of alternate extraction techniques, such as solid phase extraction (SPE) some discharges or waste streams may not be amenable to SPE. For these samples, 1664B should be applied as written. Conditioning of the solid-phase disk or device with solvents other than n-hexane (*e.g.*, alcohol, acetone, etc) is allowed, only if this solvent(s) is completely removed from the SPE disk or device prior to passing the sample through the SPE disk or device.

2. EPA is proposing to include in Table IB new EPA Method 200.5 and clarifying that the axial orientation of the torch is allowed for use with EPA Method 200.7. EPA Method 200.5 "Determination of Trace Elements in

Drinking Water by Axially Viewed Inductively Coupled Plasma—Atomic Emission Spectrometry" employs a plasma torch viewed in the axial orientation to measure chemical elements (metals). It also includes performance data for the axial configuration that is not in Method 200.7 because the axial technology torch results were not available when Method 200.7 was developed. For some elements the axial orientation results in greater sensitivity and lower detection limits than the radial orientation. EPA now authorizes the use of Method 200.5 in testing under its Safe Drinking Water Act Program (73 FR 31616, June 6, 2008). Approval of Method 200.5 and the flexibility within Method 200.7 will allow laboratories to use either axial instruments or radial instruments to measure metals in water samples.

3. EPA is proposing to add EPA Method 525.2, an updated version of EPA Method 525.1, in Table IG (Test Methods for Pesticide Active Ingredients) as an additional approved method for all parameters for which EPA has previously approved Method 525.1. Further, EPA is soliciting comment on whether EPA should substitute Method 525.2 for Method 525.1.

EPA is proposing to include Pesticide Methods from Table IG in Table ID (Test Procedures for Pesticides). Specifically, EPA is proposing to add EPA Method 525.2 for the same pesticides for which EPA has approved Method 525.1 in Table IG. Both methods use GC/MS methodology.

EPA is proposing to add some of the Pesticide Active Ingredients methods in Table IG that have been in use for more than 10 years to Table ID for general use. These methods are:

a. EPA Method 608.1, "The Determination of Organochloride Pesticides in Municipal and Industrial Wastewater." This is a gas chromatographic (GC) method used to determine certain organochlorine pesticide compounds listed in industrial and municipal discharges. This method measures chlorobenzilate, chloroneb, chloropropylate, dibromochloropropane, etridiazole, PCNB, and propachlor.

b. EPA Method 608.2, "The Determination of Certain Organochlorine Pesticides in Municipal and Industrial Wastewater." This is a GC method used to determine certain organochlorine pesticides compounds in industrial and municipal discharges. This method measures chlorothalonil, DCPA, dichloran, methoxychlor, and permethrin.

c. EPA Method 614, "The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater." This is a GC method used to determine organophosphorus compounds in industrial and municipal discharges. This method measures azinphos methyl, demeton, diazinon, disulfoton, ethion, malathion, parthion methyl, and parathion ethyl.

d. EPA Method 614.1, "The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater." This is a GC method used to determine organophosphorus compounds in industrial and municipal discharges. This method measures dioxathion, EPN, ethion, and terbufos.

e. EPA Method 615, "The Determination of Chlorinated Herbicides in Municipal and Industrial Wastewater." This is a GC method used to determine chlorinated herbicides compounds in industrial and municipal discharges. This method measures 2,4-D, dalapon, 2,4-DB, dicamba, dichlorprop, dinoseb, MCPA, MCPP, 2,4,5-T, and 2,4,5-TP.

f. EPA Method 617, "The Determination of Organohalide Pesticides and PCBs in Municipal and Industrial Wastewater." This is a GC method used to determine organohalide compounds in industrial and municipal discharges. This method measures aldrin, α-BHC, β-BHC, γ-BHC (lindane), captan, carbophenothion, chlordane, 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, dichloran, dicofol, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, isodrin, methoxychlor, mirex, PCNB, perthane, strobane, toxaphene, trifluralin, PCB–1016, PCB–1221, PCB–1232, PCB–1242, PCB–1248, PCB–1254, and PCB–1260.

g. EPA Method 619, "The Determination of Triazine Pesticides in Municipal and Industrial Wastewater." This is a GC method used to determine triazine pesticides compounds in industrial and municipal discharges. This method measures ametryn, atraton, atrazine, prometon, prometryn, propazine, sec-bumeton, simetryn, simazine, terbuthylazine, terbutryn.

h. EPA Method 622, "The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater." This is a GC method used to determine organophosphorus pesticides compounds in industrial and municipal discharges. This method measures azinphos methyl, bolstar, chlorpyrifos, chlorpyrifos methyl, coumaphos, demeton, diazinon, dichlorvos, disulfoton, ethoprop, fensulfothion, fenthion, merphos, mevinphos, naled, parathion methyl, phorate, ronnel, stirofos, tokuthion, and trichloronate.

i. EPA Method 622.1, "The Determination of Thiophosphate Pesticides in Municipal and Industrial Wastewater." This is a GC method used to determine thiophosphate pesticides compounds in municipal and industrial discharges. This method measures aspon, dichlofenthion, famphur, fenitrothion, fonophos, phosmet, and thionazin.

j. EPA Method 632, "The Determination of Carbamate and Urea Pesticides in Municipal and Industrial Wastewater." This is a high-performance liquid chromatographic (HPLC) method used to determine carbamate and urea pesticide compounds in industrial and municipal discharges. This method measures aminocarb, barban, carbaryl, carbofuran, chlorpropham, diuron, fenuron, fenuron-TCA, fluometuron, linuron, methiocarb, methomyl, mexacarbate, monuron, neburon, oxamyl, propham, propoxur, siduron, swep.

4. EPA is proposing to add in Table IC EPA Method 1614A, "Brominated Diphenyl Ethers in Water, Soil, Sediment, and Tissue by HRGC/HRMS." EPA developed this method to determine 49 polybrominated diphenyl ether (PBDE) congeners in aqueous, solid, tissue, and multi-phase matrices. These ethers are used in brominated flame retardants. This method uses isotope dilution and internal standard high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS). This method allows use of a temperature-programmed injector/vaporizer and a short column to improve recoveries of the octa-, nona-, and decabrominated diphenyl ethers.

5. EPA is proposing to add in Table IC EPA Method 1668C, "Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS." This method determines individual chlorinated biphenyl congeners in environmental samples by isotope dilution and internal standard high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS). Current Part 136 methods only measure a mixture of congeners in seven Aroclors—PCB–1016, PCB–1221, PCB–1232, PCB–1242, PCB–1248, PCB–1254, and PCB–1260. EPA Method 1668C can measure the 209 individual PCB congeners in these mixtures. EPA developed Method 1668 for use in wastewater, surface water, soil, sediment, biosolids, and tissue matrices.

EPA first published Method 1668 in 1999 and it is being used in several environmental applications, including

NPDES permits. EPA based today's proposed version, 1668C, on the results of an interlaboratory validation study (EPA 2010a, b), peer reviews (EPA 2010c), and user experiences. In the development and subsequent multi-laboratory validation of this method, EPA has evaluated method performance characteristics, such as selectivity, calibration, bias, precision, quantitation and detection limits. For example, EPA has observed that detection limits and quantitation levels are usually dependent on the level of interferences and laboratory background levels rather than instrumental limitations. Thus, the published minimum levels of quantitation are conservative estimates of the concentrations at which a congener can be measured with laboratory contamination present (EPA 2010d).

EPA recognizes that the performance of this Method may vary among the 209 congeners, and in different matrices. This is typical of multi-analyte methods because not all chemicals respond identically to extraction and clean up techniques, or have identical instrument responses. In a study of data comparability between two laboratories on samples collected from the Passaic River in New Jersey, in which 151 PCB congeners were identified and measured, accuracy as measured by analysis of a NIST SRM was 15% or better. Recoveries of the PCB congeners ranged from 90% to 124% and averaged 105%; precision ranged from 4.2% to 23% (Passaic River 2010).

This PCB method and the polybrominated diphenyl ether (PBDE) Method 1614A are performance-based methods. This means that users have the flexibility to modify the method to adapt to the sometimes unique characteristics of the user's sample. There is flexibility to modify the sample preparation steps to remove substances that interfere with measurement of the PCB congeners. A consequence of this flexibility is that, after customizing a performance-based method for a specific sample or application, the user should continue to use the same customized procedures on these samples or applications to maintain data comparability.

EPA Method 1668C, the interlaboratory study report, and peer reviews are in the docket for today's rule and on EPA's CWA methods Web site at *http://www.epa.gov/waterscience/methods*. EPA lists Method 1668C in Table IC as the parameter, "PCBs 209 Congeners."

6. EPA is proposing to update in Table IH EPA Method 1622, "Cryptosporidium in Water by Filtration/IMS/FA" and EPA Method 1623, "Cryptosporidium and Giardia in Water by Filtration/IMS/FA" to reflect changes made in the December 2005 versions of these methods. EPA's drinking water program uses the 2005 versions of the methods. The methods allow the flexibility to choose among several types of filters, quality controls, and stains, as well as clarification on measuring sample temperatures, quality control sample requirements and use of quality control sample results, minimizing carry-over debris, analyst verification procedures and sample condition criteria upon receipt. This method substitution necessitates a change in the holding temperature (Table II) for *Cryptosporidium and Giardia* from 0–8 °C to refrigerate between 1–10 °C.

7. EPA is proposing in Table IH revised versions of EPA Methods 1103.1, 1106.1, 1600 (also in Table IA), 1603, and 1680 to correct technical errors. Specifically, for Methods 1103.1 and 1603, tryptone broth should be tryptone water (section 12.4.3). In addition, in Tables 2 and 3, respectively, of these two methods, the positive control organism for the cytochrome oxidase reagent has been changed to *P. aeruginosa* from *E. faecalis*, and the negative control organism for Simmons citrate agar has been changed to *S. flexneri* from *E. coli* for more definitive results. In section 7.5.2 of Method 1603, the formula for magnesium chloride hexahydrate should have a dot before the waters rather than an alpha sign ($MgCl_2 \cdot 6H_2O$). In Methods 1106.1 and 1600, in Tables 6 and 7, respectively, the true spiked Enterococci "T (CFU/100 mL)" in the spiked sample based on the lot mean valued provided by the manufacturer should be 32 instead of 11.2. In Method 1680, the lactose for Lauryl Tryptose Broth (LTB) should be 5.0 g, not 25.0 g (section 7.6.1), and the dipotassium hydrogen phosphate for EC medium should be 4.0 g, not 44.0 g (section 7.7.1).

8. EPA is proposing to add Method 1627, "Kinetic Test Method for the Prediction of Mine Drainage Quality." The method is a standardized simulated weathering test that provides information to predict the quality of mine drainage from coal mining operations or weathering. The method also can be a tool with which to generate data in the design and implementation of best management practices and treatment processes needed by mining operations to meet U.S. EPA discharge requirements at 40 CFR part 434. Other publications have referred to this method generically as the ADTI Weathering Procedure 2 (ADTI–WP2). EPA lists Method 1627 in Table IB as "Acid Mine Drainage." The method is suitable for determinations of probable hydrologic consequences and to develop cumulative hydrologic impact assessment data to support Surface Mining Control and Reclamation Act (SMCRA) permit application requirements. Although this method is directed toward the coal mining industry and regulatory agencies, the method may be applicable to highway and other construction involving cut and fill of potentially acid-producing rock. This method may be used to predict the water quality characteristics (*e.g.*, pH, acidity, metals) of mine site discharges using observations from sample behavior under simulated and controlled weathering conditions. The method was developed and evaluated in single, multiple and interlaboratory method validation studies in laboratories representing the mining industry, private sector, federal agencies, and academia.

9. EPA proposes to approve EPA Method 624, "Purgeables," for definitive measurements of acrolein and acrylonitrile in wastewater. Currently this method is approved only to screen samples for the presence of acrolein and acrylonitrile. Footnote 4 to Table IC requires that the analyst confirm occurrences with either EPA Method 603 or 1624 because, when EPA promulgated this method, EPA believed the confirmatory step was necessary. Commenters on a previous proposed rule to amend part 136 (69 FR 18166, April 6, 2004) requested that EPA allow use of Method 624 for definitive determination of acrolein and acrylonitrile in wastewater without a confirmatory step and provided EPA with data. EPA has considered this comment and after reviewing additional data (Test America 1, 2) is proposing to revise the listing of Method 624 in Table IC to remove footnote 4 that requires a confirmatory analysis.

B. Changes to 40 CFR 136.3 To Include New Standard Methods and New Versions of Approved Standard Methods

EPA is proposing to revise how we identify approved methods that are published by the Standard Methods Committee. Currently in the tables at 136.3(a), EPA lists these methods in one or more columns as being in the 18th, 19th, 20th printed compendiums, or in the On-line editions published by the Standard Methods Committee. EPA identifies which versions are approved by the printed edition in which the

APPENDIX D

Excerpt from 77 Fed. Reg. 29,763 (May 18, 2012)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 136, 260, 423, 430, and 435

[EPA–HQ–OW–2010–0192; FRL–9664–6]

RIN 2040–AF09

Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule modifies the testing procedures approved for analysis and sampling under the Clean Water Act. EPA proposed these changes for public comment on September 23, 2010. The changes adopted in this final rule fall into the following categories: New and revised EPA methods and new and revised methods published by voluntary consensus standard bodies (VCSB), such as ASTM International and the Standard Methods Committee; updated versions of currently approved methods; methods reviewed under the alternate test procedures (ATP) program; clarifications to the process for EPA approval for use of alternate procedures for nationwide and Regional use; minimum quality control requirements to improve consistency across method versions; corrections to previously approved methods; and revisions to sample collection, preservation, and holding time requirements. Finally, EPA makes changes to three effluent guideline regulations.

DATES: This regulation is effective on June 18, 2012. The incorporation by reference of these methods is approved by the Director of the Federal Register on June 18, 2012. For judicial review purposes, this final rule is promulgated as of 1:00 p.m. (Eastern time) on June 1, 2012 as provided at 40 CFR 23.2 and 23.7.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OW–2010–0192. All documents in the docket are listed on the *http://www.regulations.gov* Web site. Although listed in the index, some information is not publically available, *e.g.*, CBI or other information whose disclosure is restricted by statute. Certain other materials, such as copyrighted material, are not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy at the HQ Water Docket Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is 202–566–1744, and the telephone number is 202–566–2426 for the HQ Water Docket.

FOR FURTHER INFORMATION CONTACT: For information regarding the changes to inorganic chemical methods, contact Lemuel Walker, Engineering and Analysis Division (4303T), USEPA Office of Science and Technology, 1200 Pennsylvania Ave. NW., Washington, DC 20460, 202–566–1077 (email: *walker.lemuel@epa.gov*). For information regarding the changes to organic chemical methods, contact Maria Gomez-Taylor, Engineering and Analysis Division (4303T), USEPA Office of Science and Technology, 1200 Pennsylvania Ave. NW., Washington, DC 20460, 202–566–1005 (email: *gomez-taylor.maria@epa.gov*). For information regarding the changes to microbiological and whole effluent toxicity methods, contact Robin Oshiro, Engineering and Analysis Division (4303T), USEPA Office of Science and Technology, 1200 Pennsylvania Ave. NW., Washington, DC 20460, 202–566–1075 (email: *oshiro.robin@epa.gov*).

SUPPLEMENTARY INFORMATION:

A. General Information

1. Does this action apply to me?

EPA Regions, as well as States, Territories and Tribes authorized to implement the National Pollutant Discharge Elimination System (NPDES) program, issue permits with conditions designed to ensure compliance with the technology-based and water quality-based requirements of the Clean Water Act (CWA). These permits may include restrictions on the quantity of pollutants that may be discharged as well as pollutant measurement and reporting requirements. If EPA has approved a test procedure for analysis of a specific pollutant, the NPDES permittee must use an approved test procedure (or an approved alternate test procedure if specified by the permitting authority) for the specific pollutant when measuring the required waste constituent. Similarly, if EPA has established sampling requirements, measurements taken under an NPDES permit must comply with these requirements. Therefore, entities with NPDES permits will potentially be affected by the actions in this rulemaking. Categories and entities that may potentially be affected by the requirements of today's rule include:

Category	Examples of potentially affected entities
State, Territorial, and Indian Tribal Governments.	States, Territories, and Tribes authorized to administer the NPDES permitting program; States, Territories, and Tribes providing certification under Clean Water Act section 401; State, Territorial, and Indian Tribal owned facilities that must conduct monitoring to comply with NPDES permits.
Industry	Facilities that must conduct monitoring to comply with NPDES permits.
Municipalities	POTWs or other municipality owned facilities that must conduct monitoring to comply with NPDES permits.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists types of entities that EPA is now aware of that could potentially be affected by this action. Other types of entities not listed in the table could also be affected. To determine whether your facility is affected by this action, you should carefully examine the applicability language at 40 CFR 122.1 (NPDES purpose and scope), 40 CFR 136.1 (NPDES permits and CWA) and 40 CFR 403.1 (Pretreatment standards purpose and applicability). If you have questions regarding the applicability of this action to a particular entity, consult the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. What process governs judicial review of this rule?

Under Section 509(b)(1) of the Clean Water Act (CWA), judicial review of today's CWA rule may be obtained by filing a petition for review in a United States Circuit Court of Appeals within 120 days from the date of promulgation of this rule. For judicial review purposes, this final rule is promulgated as of 1 p.m. (Eastern time) on June 1, 2012 as provided at 40 CFR 23.2. The

requirements of this regulation may also not be challenged later in civil or criminal proceedings brought by EPA.

C. Abbreviations and Acronyms Used in the Preamble and Final Rule

AOAC: AOAC International
ASTM: ASTM International
ATP: Alternate Test Procedure
CFR: Code of Federal Regulations
CWA: Clean Water Act
EPA: Environmental Protection Agency
FLAA: Flame Atomic Absorption Spectroscopy
HRGC: High Resolution Gas Chromatography
HRMS: High Resolution Mass Spectrometry
ICP/AES: Inductively Coupled Plasma-Atomic Emission Spectroscopy
ICP/MS: Inductively Coupled Plasma-Mass Spectrometry
ISO: International Organization for Standardization
MS: Mass Spectrometry
NIST: National Institute of Standards and Technology
NPDES: National Pollutant Discharge Elimination System
QA: Quality Assurance
QC: Quality Control
SDWA: Safe Drinking Water Act
SM: Standard Methods
SRM: Standard Reference Material
STGFAA: Stabilized Temperature Graphite Furnace Atomic Absorption Spectroscopy
USGS: United States Geological Survey
VCSB: Voluntary Consensus Standards Body
WET: Whole Effluent Toxicity

Table of Contents

I. Statutory Authority

EPA is promulgating today's rule pursuant to the authority of sections 301(a), 304(h), and 501(a) of the Clean Water Act ("CWA" or the "Act"), 33 U.S.C. 1311(a), 1314(h), 1361(a). Section 301(a) of the Act prohibits the discharge of any pollutant into navigable waters unless the discharge complies with a National Pollutant Discharge Elimination System (NPDES) permit issued under section 402 of the Act. Section 304(h) of the Act requires the Administrator of the EPA to "* * * promulgate guidelines establishing test procedures for the analysis of pollutants that shall include the factors which must be provided in any certification pursuant to [section 401 of this Act] or permit application pursuant to [section 402 of this Act]." Section 501(a) of the Act authorizes the Administrator to "* * * prescribe such regulations as are necessary to carry out this function under [the Act]." EPA generally has codified its test procedure regulations (including analysis and sampling requirements) for CWA programs at 40 CFR part 136, though some requirements are codified in other Parts (*e.g.*, 40 CFR Chapter I, Subchapters N and O).

II. Summary of Final Rule

The following sections describe the changes EPA is making in today's final rule.

A. New EPA Methods and New Versions of Previously Approved EPA Methods

This rule approves new EPA methods and new versions of already approved EPA methods. The following discussion briefly describes the EPA methods added today to Part 136.

1. Oil and grease. Today's rule adds a new version of EPA Method 1664, 1664 Revision B: n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT–HEM; Non-polar Material) by Extraction and Gravimetry for use in CWA programs. Today, EPA is also amending the RCRA regulations at 40 CFR 260.11, which currently specify the use of Method 1664 Rev. A, to provide additionally for use of the revised version, 1664 Rev. B. As stated in the preamble to the proposal (75 FR 58026, Sept. 23, 2010), EPA encourages that future delistings cite "Method 1664 Rev. B" while delistings already granted may continue to use Method 1664 Rev. A.

On December 14, 2011, EPA published a notice of data availability (NODA) on a new method for oil and grease for use in Clean Water Act programs (see 76 FR 77742). This method, ASTM D–7575–10, uses a different extractant (a membrane filter instead of n-hexane for the extraction of oil and grease material) and a different measurement technique (infrared absorption instead of gravimetry) from the extractant and measurement technique of currently approved methods for oil and grease. The new method was discussed in the September 23, 2010 notice but EPA did not propose it for use as an approved method to be codified at 40 CFR 136.3 because oil and grease is a method-defined parameter. By definition, the measurement results of method-defined parameters are specific to the described method and are not directly comparable to results obtained by another method. However, since publication of the Methods Update Rule proposal, the Agency received additional data and information about this method and is re-considering whether it should add this

method to the list of approved methods for oil and grease at 40 CFR 136.3. In the NODA, EPA proposed to include ASTM D–7575 for the measurement of oil and grease based on comments received in response to its September 23, 2010 proposal and the additional data. EPA will make a decision on the inclusion of the new method once it reviews the public comments received in response to the NODA and will then publish that decision in a separate **Federal Register** notice.

2. Metals. Today's rule adds EPA Method 200.5 (Revision 4.2): "Determination of Trace Elements in Drinking Water by Axially Viewed Inductively Coupled Plasma—Atomic Emission Spectrometry" to Table IB. The rule also clarifies that the axial orientation of the torch is allowed for use with EPA Method 200.7. Thus, EPA will allow the use of axial instruments or radial instruments to measure metals in water samples.

3. Pesticides. Today's rule adds EPA Method 525.2 to Table IG (Test Methods for Pesticide Active Ingredients) as an additional approved method for all parameters for which EPA has previously approved EPA Method 525.1, and also adds Methods 525.1 and 525.2 to Table ID for the same parameters for which EPA had previously approved Method 525.1 in Table IG. The rule also adds some of the methods for Pesticide Active Ingredients (Table IG) to applicable parameters listed in Table ID for general use. These methods are:

a. EPA Method 608.1, "The Determination of Organochlorine Pesticides in Municipal and Industrial Wastewater." This method measures chlorobenzilate, chloroneb, chloropropylate, dibromochloropropane, etridiazole, PCNB, and propachlor.

b. EPA Method 608.2, "The Determination of Certain Organochlorine Pesticides in Municipal and Industrial Wastewater." This method measures chlorothalonil, DCPA, dichloran, methoxychlor, and permethrin.

c. EPA Method 614, "The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater." This method measures azinphos methyl, demeton, diazinon, disulfoton, ethion, malathion, parathion methyl, and parathion ethyl.

d. EPA Method 614.1, "The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater." This method measures dioxathion, EPN, ethion, and terbufos.

e. EPA Method 615, "The Determination of Chlorinated Herbicides in Municipal and Industrial Wastewater." This method measures 2,4-D, dalapon, 2,4-DB, dicamba, dichlorprop, dinoseb, MCPA, MCPP, 2,4,5-T, and 2,4,5-TP.

f. EPA Method 617, "The Determination of Organohalide Pesticides and PCBs in Municipal and Industrial Wastewater." This method measures aldrin, α-BHC, β-BHC, γ-BHC (lindane), captan, carbophenothion, chlordane, 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, dichloran, dicofol, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, isodrin, methoxychlor, mirex, PCNB, perthane, strobane, toxaphene, trifluralin, PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, and PCB-1260.

g. EPA Method 619, "The Determination of Triazine Pesticides in Municipal and Industrial Wastewater." This method measures ametryn, atraton, atrazine, prometon, prometryn, propazine, sec-bumeton, simetryn, simazine, terbuthylazine, and terbutryn.

h. EPA Method 622, "The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater." This method measures azinphos methyl, bolstar, chlorpyrifos, chlorpyrifos methyl, coumaphos, demeton, diazinon, dichlorvos, disulfoton, ethoprop, fensulfothion, fenthion, merphos, mevinphos, naled, parathion methyl, phorate, ronnel, stirofos, tokuthion, and trichloronate.

i. EPA Method 622.1, "The Determination of Thiophosphate Pesticides in Municipal and Industrial Wastewater." This method measures aspon, dichlofenthion, famphur, fenitrothion, fonophos, phosmet, and thionazin.

j. EPA Method 632, "The Determination of Carbamate and Urea Pesticides in Municipal and Industrial Wastewater." This method measures aminocarb, barban, carbaryl, carbofuran, chlorpropham, diuron, fenuron, fenuron-TCA, fluometuron, linuron, methiocarb, methomyl, mexacarbate, monuron, monuron-TCA, neburon, oxamyl, propham, propoxur, siduron, and swep.

4. Microbiologicals. Today's rule approves the 2005 versions of EPA Method 1622, "Cryptosporidium in Water by Filtration/IMS/FA" and EPA Method 1623, "Cryptosporidium and Giardia in Water by Filtration/IMS/FA" in Table IH for ambient water.

The rule approves revised versions of EPA Methods 1103.1, 1106.1, 1600, 1603, and 1680 in Table IH. The rule also approves the revised version of EPA Methods 1600, 1603 and 1680 in Table IA. We corrected technical errors in these revisions.

5. Non-Conventionals. Today's rule adds EPA Method 1627, "Kinetic Test Method for the Prediction of Mine Drainage Quality" to Table IB as a new parameter termed "Acid Mine Drainage."

6. Organics. Today's rule approves EPA Method 624, "Purgeables," for the determination of acrolein and acrylonitrile in wastewater and revises footnote 4 to Table IC to specify that the laboratory must provide documentation about its ability to measure these analytes at the levels necessary to comply with associated regulations.

B. New Standard Methods and New Versions of Approved Standard Methods

This rule approves the following Standard Methods (SM) for certain pollutants currently listed in Table IB at Part 136. Laboratories performing measurements using any of the approved Standard Methods must follow the quality control (QC) procedures specified in the 20th or 21st edition of Standard Methods. Below is a list of the Standard Methods added to Table IB in Part 136:

1. SM 5520 B–2001 and SM 5520 F–2001, Oil and Grease, gravimetric
2. SM 4500–NH_3 G–1997, Ammonia (as N) and TKN, automated phenate method
3. SM 4500–B B–2000, Boron, curcumin method
4. SM 4140 B–1997, Inorganic Ions (Bromide, Chloride, Fluoride, Orthophosphate, and Sulfate), capillary ion electrophoresis with indirect UV detection
5. SM 3114 B–2009, Arsenic and Selenium, AA gaseous hydride
6. SM 3114 C–2009, Arsenic and Selenium, AA gaseous hydride
7. SM 3111 E–1999, Aluminum and Beryllium, direct aspiration atomic absorption spectrometry
8. SM 5220 B–1997, Chemical Oxygen Demand (COD), titrimetric
9. SM 3500–Cr B–2009, Chromium, colorimetric method
10. SM 4500–N_{org} D–1997, Kjeldahl Nitrogen, semi-automated block digestor colorimetric
11. SM 3112 B–2009, Mercury, cold vapor, manual
12. SM 4500–P C–1999 and SM 4500–P H–1999, Phosphorus, Total, automated ascorbic acid reduction
13. SM 4500–P E–1999 and SM 4500–P F–1999, Phosphorus, Total, manual, and automated ascorbic acid reduction
14. SM 4500–O B, D, E and F–2001, Oxygen, Dissolved, Winkler
15. SM 4500–O D–2001, Oxygen, Dissolved, Winkler

16. SM 4500–O E–2001, Oxygen, Dissolved, alum flocculation modification
17. SM 5530 B–2005, Phenols, manual distillation
18. SM 5530 D–2005, Phenols, colorimetric
19. SM 3500–K C–1997, Potassium, Total, selective electrode method
20. SM 2540 E–1997, Residues—Volatile, gravimetric
21. SM 4500–SiO_2 E–1997 and SM 4500–SiO_2 F–1997, Silica, Dissolved, automated molybdosilicate
22. SM 4500–SO_4^{2-} C–1997, D–1997, E–1997, F–1997 and G–1997, Sulfate, gravimetric, and automated colorimetric
23. SM 4500–S^{2-} B–2000 and C–2000, Sulfide, sample pretreatment

C. New ASTM Methods and New Versions of Previously Approved ASTM Methods

The rule approves the following ASTM methods for existing pollutants and ASTM methods for new pollutants to 40 CFR part 136, Table IB for inorganic compounds, and Table IC for organic compounds.

1. ASTM D2036–09 (B), Cyanide—Total, Cyanide amenable to cholorination
2. ASTM D6888–09, Cyanide—Available, flow injection and ligand exchange
3. ASTM D7284–08, Cyanide—Total, flow injection
4. ASTM D7511–09, Cyanide—Total, segmented flow injection
5. Free cyanide is added as a new parameter (24A in Table IB); two ASTM methods (D4282–02 and D7237–10) are approved, in addition to a new version of OIA 1677(2009) for this parameter. D4282–02 is a Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion, and Method D7237–10 is a Standard Test Method for Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection.
6. ASTM D888–09 (A), Oxygen Dissolved, Winkler
7. ASTM D7573–09, Organic Carbon—Total, combustion
8. ASTM D7065–06, Five new chemicals in water: Nonylphenol (NP), Bisphenol A (BPA), p-tert-Octylphenol (OP), Nonylphenol Monoethoxylate (NP1EO), and Nonylphenol Diethoxylate (NP2EO), Gas Chromatography/Mass Spectrometry

D. New Alternate Test Procedures at 40 CFR 136.3

The rule approves eight methods submitted to EPA for review through the alternate test procedures (ATP) program and deemed acceptable based on the evaluation of documented method performance. The eight methods approved are added to Table IB:

1. Hach Company's Method 10360 Luminescence Measurement of Dissolved Oxygen in Water and Wastewater and for Use in the Determination of BOD_5 and $cBOD_5$, Revision 1.2 dated October 2011
2. In-Situ Incorporated's Method 1002–8–2009 Dissolved Oxygen Measurement by Optical Probe
3. In-Situ Incorporated's Method 1003–8–2009 Biochemical Demand (BOD) Measurement by Optical Probe
4. In-Situ Incorporated's Method 1004–8–2009 Carbonaceous Biochemical Oxygen Demand (CBOD) Measurement by Optical Probe
5. Mitchell Method M5271 dated July 31, 2008 for turbidity
6. Mitchell Method M5331 dated July 31, 2008 for turbidity
7. Thermo Scientific's Orion Method AQ4500 dated March 12, 2009 for turbidity
8. Easy (1–Reagent) Nitrate Method dated November 12, 2011 for nitrate, nitrite and combined nitrate/nitrite

E. Clarifications and Corrections to Previously Approved Methods in 40 CFR 136.3

The rule also clarifies the procedures for measuring orthophosphate and corrects typographical or other citation errors in Part 136. Specifically, the rule clarifies the purpose of the immediate filtration requirement in orthophosphate measurements (Table IB, parameter 44), which is to assess the dissolved or bio-available form of orthophosphorus (*i.e.*, that portion which passes through a 0.45-micron filter)—hence the requirement to filter the sample immediately upon collection (*i.e.*, within 15 minutes of collection). EPA has added a footnote (24) to Table II providing this clarification. The rule also corrects missing citations to the table of microbiological methods for ambient water monitoring which are specified in Table IH at 40 CFR 136.3. When EPA approved the use of certain microbiological methods on March 26, 2007 (72 FR 14220), EPA inadvertently omitted fecal coliform, total coliform, and fecal streptococcus methods from the table. This omission is corrected in today's rule.

F. Revisions in Table II at 40 CFR 136.3(e) to Required Containers, Preservation Techniques, and Holding Times

The rule revises some of the current requirements in Table II at 136.3(e).

1. The rule revises footnote 4 of Table II to clarify the sample holding time for the Whole Effluent Toxicity (WET) samples for the three toxicity methods by adding the following sentence: "For static-renewal toxicity tests, each grab or composite sample may also be used to prepare test solutions for renewal at 24 h, 48 h, and/or 72 h after first use, if stored at 0–6 °C, with minimum head space." In addition, EPA will post on the WET Web site corrections to errata in the "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" manual (EPA 2010e).
2. The rule revises the cyanide sample handling instructions in Footnote 5 of Table II to recommend the treatment options for samples containing oxidants described in ASTM's sample handling practice for cyanide samples, D7365–09a.
3. The rule revises the cyanide sample handling instructions in Footnote 6 of Table II to describe options available when the interference mitigation instructions in D7365–09a are not effective, and to allow the use of any technique for removal or suppression of interference, provided the laboratory demonstrates and documents that the alternate technique more accurately measures cyanide through quality control measures described in the analytical test method.
4. The rule revises footnote 16 of Table II instructions for handling Whole Effluent Toxicity (WET) samples by adding two sentences: "Aqueous samples must not be frozen. Hand-delivered samples used on the day of collection do not need to be cooled to 0 to 6 °C prior to test initiation."
5. The rule revises footnote 22 to Table II to read "Sample analysis should begin as soon as possible after receipt; sample incubation must be started no later than 8 hours from time of collection."
6. The rule adds three entries at the end of Table II with the containers, preservation, and holding times for the alkylated phenols, adsorbable organic halides, and chlorinated phenolics. When EPA proposed ASTM D7065–06 for the alkylated phenols, commenters noted that EPA did not include preservation and holding time information in Table II. When EPA moved EPA Methods 1650 and 1653

from 40 CFR part 430 to Table IC, EPA inadvertently omitted the associated parameters to Table II, and is correcting this omission in today's rule. The Table II information for containers, preservation, and holding times for these three new entries are taken from the approved methods.

G. Revisions to 40 CFR 136.4 and 136.5

This rule changes §§ 136.4 and 136.5 to clarify the procedures for obtaining review and approval for the use of alternate test procedures (alternate methods or ATPs) for those methods for which EPA has published an ATP protocol (there are published protocols for chemistry, radiochemical, and microbiological culture methods). In particular, it establishes separate sections outlining the procedures for obtaining EPA review and approval for nationwide use of an ATP (§§ 136.4), and the procedures for obtaining approval for limited use of an ATP (§§ 136.5).

In addition, this rule adds language to Part 136.5 to clarify the purpose and intent of limited use applications. This provision only allows use of an alternate method for a specific application at a facility or type of discharge. The Regional Alternate Test Procedure (ATP) Coordinator or the permitting authority, at his/her discretion, may grant approval to all discharges or facilities specified in the approval letter. However, the appropriate permitting authority within a state may request supporting test data from each discharger or facility prior to allowing any such approvals.

Today's rule further clarifies that the limited use provision cannot be used to gain nationwide approval and is not a way to avoid the full examination of comparability that is required for alternate test procedures when EPA considers a method for nationwide use with the ultimate goal of listing it as an approved CWA method at 40 CFR part 136. As further clarification, in the event that EPA decides not to approve a method proposed for nationwide use, the Regional ATP Coordinator or the permitting authority may choose to reconsider any previous limited use approvals of the alternate method. Based on this reconsideration, the Regional ATP Coordinator or the permitting authority will notify the user(s) if the limited use approval is withdrawn. Otherwise, the limited use approvals remain in effect.

H. Revisions to Method Modification Provisions at 40 CFR 136.6

This section allows users to make certain modifications to an approved method to address matrix interferences without the extensive review and approval process specified for an alternate test procedure at 136.4 and 136.5. Today's rule revises 136.6 to provide more examples of allowed and prohibited method modifications. The intent of today's revisions is to clarify those situations in which an ATP is required and those where it is not. Analysts may use the examples to help assess the need for a formal ATP, and in the event an ATP is not needed to document that their modification is acceptable and does not depart substantially from the chemical principles in the method being modified.

In response to comments, EPA has included additional examples of allowed and prohibited method modifications and has made some revisions to the text language as discussed in Section III below.

I. New Quality Assurance and Quality Control Language at 40 CFR 136.7

EPA is specifying "essential" quality control elements at § 136.7 for use in conducting an analysis for CWA compliance monitoring. This new language is added because auditors, co-regulators, laboratory personnel, and the regulated community have noted the variations in quality assurance (QA) and quality control (QC) procedures practiced by laboratories that use 40 CFR part 136 methods for compliance monitoring. Some of these methods are published by voluntary consensus standards bodies, such as the Standard Methods Committee, and ASTM International. Standard Methods and ASTM are available in printed or electronic compendia, or as individual online files. As mentioned in the proposal, each organization has a unique compendium structure. QA and QC method guidance or requirements may be listed directly in the approved consensus method, or, as is more often the case, these requirements are listed in other parts of the compendium.

Regardless of the publisher, edition, or source of an analytical method approved for CWA compliance monitoring, analysts must use suitable QA/QC procedures whether EPA or other method publishers have specified these procedures in a particular Part 136 method, or referenced these procedures by other means. These records must be kept in-house as part of the method testing documentation. Consequently, today's rule clarifies that an analyst using these consensus standard body methods for reporting under the CWA must also comply with the quality assurance and quality control requirements listed in the appropriate sections in that consensus standard body compendium. EPA's approval of use of these voluntary consensus standard body methods contemplated that any analysis using such methods would also meet the quality assurance and quality control requirements prescribed for the particular method. Thus, not following the applicable and appropriate quality assurance and quality control requirements of the respective method means that the analysis does not comply with the requirements in EPA's NPDES regulations to monitor in accordance with the procedures of 40 CFR part 136 for analysis of pollutants.

For methods that lack QA/QC requirements (as specified in this new section at 40 CFR 136.7), whether developed by EPA, a vendor, or a consensus standard body, analysts can refer to and follow the QA/QC published in several public sources. Examples of these sources include the relevant QA/QC sections of an equivalent approved EPA method, or voluntary consensus standards published as Part 136 approved methods (*e.g.*, Standard Methods, ASTM International, and AOAC). In addition to and regardless of the source of the laboratory's or method's QA and QC instructions, for methods that lack QA/QC requirements, EPA is adding requirements at 136.7 to specify twelve essential quality control elements that must be in the laboratory's documented quality system unless a written rationale is provided to explain why these quality control elements are inappropriate for a specific analytical method or application. These twelve essential quality control checks must be clearly documented in the written SOP (or method) along with a performance specification or description for each of the twelve checks, as applicable to the specific method. EPA has clarified the language in this section in response to public comments. The revised language is discussed in section III below.

J. Revisions at 40 CFR Part 423 (Steam Electric Power Generating Point Source Category)

The rule revises the 40 CFR part 423 definitions for total residual chlorine and free available chlorine at §§ 423.11(a) and 423.11(l) to allow the use of "chlorine—total residual" and "chlorine—free available" methods in § 136.3(a), Table IB, or other methods approved by the permitting authority.

III. Changes Between the Proposed Rule and the Final Rule

Except as noted below, the content of the final rule is the same as that of the proposed rule.

A. EPA Is Not Adding EPA Method 1614A

The Agency proposed to add Method 1614A, "Brominated Diphenyl Ethers in Water, Soil, Sediment, and Tissue by HRGC/HRMS." EPA developed this method to determine 49 polybrominated diphenyl ether (PBDE) congeners in aqueous, solid, tissue, and multi-phase matrices. This method uses isotope dilution and internal standard high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS). The commenters were divided on whether EPA should approve this method. Two commenters stated that Method 1614A would be a valuable addition to the list of approved methods, while two other commenters stated that the method has not been sufficiently validated for use in Clean Water Act programs. Upon further evaluation of the data supporting the use of this test procedure and the peer review comments, EPA agrees with those commenters who stated that additional validation data are needed to fully characterize the performance of this method for various matrices and has decided not to include Method 1614A in today's final rule.

B. Deferral of Action on EPA Method 1668C

The Agency proposed to add EPA Method 1668C, "Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS." This method measures individual chlorinated biphenyl congeners in environmental samples by isotope dilution and internal standard high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS). As discussed in the proposal, Part 136 methods for chlorinated biphenyls (PCBs) only measure a mixture of congeners in seven Aroclors—PCB–1016, PCB–1221, PCB–1232, PCB–1242, PCB–1248, PCB–1254, and PCB–1260, while Method 1668C can measure the 209 PCB congeners in these mixtures.

EPA began development of this method in 1995, initially covering 13 congeners labeled "toxic" by the World Health Organization. In 1999, EPA expanded the scope of the method to include all 209 PCB congeners. The method has been used to support several studies, including the 2001 National Sewage Sludge Survey and the National Lake Fish Tissue Survey. Since 1999, EPA has revised the method to incorporate additional information and data collected such as the results of an inter-laboratory validation study, peer reviews of the method and the validation study data, additional QC performance criteria and MDL data, and user experiences. In the development and subsequent multi-laboratory validation of this method, EPA evaluated method performance characteristics, such as selectivity, calibration, bias, precision, quantitation and detection limits. The Agency is aware that this method is being used in some states in their regulatory programs and by other groups for some projects with good success. For example, in a study of data comparability between two laboratories on samples collected from the Passaic River in New Jersey, in which 151 PCB congeners were identified and measured, accuracy, as measured by analysis of an NIST SRM, was 15% or better. Recoveries of the PCB congeners ranged from 90% to 124% and averaged 105%; precision ranged from 4.2 to 23% (Passaic River 2010). This type of data shows that recoveries and precision for this method are within the performance achievable with other approved methods.

EPA received comments from thirty-five individuals or organizations on this method. Of these commenters, five (three states, one laboratory, and one laboratory organization) supported the approval of this method. Some states indicated that they are already requiring this method for use in permits and for other purposes. On the other hand, industry and industry groups/associations were critical of the method for various reasons. Commenters opposing the method provided a detailed critique of the method, the inter-laboratory study, the peer reviews and the other supporting documentation. Among the criticisms of the inter-laboratory study, commenters argued that: (1) EPA did not produce documentation supporting changes to the method approved by EPA for the interlaboratory study, (2) the raw data for wastewater and biosolids was poor and is not fit for use in a comprehensive interlaboratory study, (3) EPA cited certain guidelines such as ASTM but deviated from those guidelines (*e.g.,* used only one Youden pair per matrix), (4) the peer reviewers' qualifications were questioned, (5) the addendum and the pooled MDLs/MLs were not subjected to peer review, (6) MDL/ML are flawed, the process to calculate MDLs/MLs for congeners that co-elute was flawed, the MDL/ML ignored the ubiquitous problem of background contamination, and (7) the validation study did not include all matrices in the method (soil and sediment excluded). In addition, some commenters also suggested that EPA should first promulgate new detection and quantitation procedures. Further, commenters raised questions about possible adverse effects of this new method on compliance monitoring as well as concerns about data reporting and costs.

EPA is still evaluating the large number of public comments and intends to make a determination on the approval of this method at a later date. In the meantime, the Agency has decided to go forward with the promulgation of the other proposed analytical methods to expedite their implementation by the regulated community and laboratories. This decision does not negate the merits of this method for the determination of PCB congeners in regulatory programs or for other purposes when analyses are performed by an experienced laboratory.

C. EPA Is Not Adding ASTM Methods D7574–09 and D7485–09

In today's rule, EPA is not adding two proposed ASTM methods, ASTM D7574–09 "Standard Test Method for Determination of Bisphenol A (BPA)," and ASTM D7485–09 "Standard Test Method for Determination of NP, OP, NP1EO, and NP2EO." These two methods involve liquid chromatography and tandem mass spectrometry (LC/MS/MS). The methods have been tested by a single laboratory in several environmental waters, and may be useful for many applications. However, EPA has decided to postpone approval of these two methods for general use until completion of a full inter-laboratory validation study designed to fully characterize the performance of these methods across multiple laboratories and matrices.

D. Revisions and Clarifications to EPA Method 200.7

EPA Method 200.5 "Determination of Trace Elements in Drinking Water by Axially Viewed Inductively Coupled Plasma—Atomic Emission Spectrometry" employs a plasma torch viewed in the axial orientation to measure chemical elements (metals). As stated earlier in today's rule, EPA is adding Method 200.5 for some metals in Table IB. Both Methods 200.5 and 200.7 are acceptable methods under Part 136 and both methods employ ICP/AES technology. However, Method 200.5 includes performance data for the axial configuration that is not in Method 200.7 because the axial technology torch

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