IN RE SAN JACINTO RIVER AUTHORITY

NPDES Appeal No. 09-09

ORDER DENYING REVIEW IN PART & REMANDING IN PART

Decided July 16, 2010

Syllabus

San Jacinto River Authority ("SJRA") petitioned the Environmental Appeals Board ("Board") to review various aspects of a modified Clean Water Act National Pollutant Discharge Elimination System ("NPDES") permit ("Modified Permit") issued to SJRA by U.S. Environmental Protection Agency, Region 6 ("Region"). The National Association of Clean Water Agencies, a trade organization representing nearly 300 publicly owned treatment works in the United States, is participating in the proceedings as amicus curiae.

Although the Texas Commission on Environmental Quality ("TCEQ") is authorized to administer the NPDES program, in this case, the Region objected to a permit TCEQ had proposed, and the Region assumed the exclusive authority to process SJRA's permit application under CWA § 402(d)(4) and 40 C.F.R. § 123.44(h)(3). The Modified Permit authorizes SJRA to discharge effluent from the Woodlands Wastewater Treatment Plant No. 1, a publicly owned treatment works operated by SJRA, into a tributary of the San Jacinto River Basin in Montgomery County, Texas. TCEQ waived state certification of the Modified Permit.

SJRA's appeal centers on the Region's decision to impose, in the permit, effluent limits and conditions for whole effluent toxicity, or WET. Through WET testing, living aquatic organisms – in the Modified Permit the fathead minnow and *C. dubia*, a common water flea – are exposed to an effluent sample and evaluated for any changes in the biological effects to the organisms over time, specifically on survival (lethality), and growth and reproduction (sublethality).

Held: The Board denies review in part and remands the Modified Permit in part.

The Board concludes that the administrative record lacks a complete and cogent analysis of how the Region applied the Texas water quality standards to the permitting decision. Specifically, the Region failed to clearly articulate whether 30 Texas Administrative Code § 307.6(e)(2)(D) is part of the Texas water quality standards. If section 307.6(e)(2)(D) is part of the Texas water quality standards, the administrative record lacks a clear articulation of how, in establishing the sublethal *C. dubia* WET limit, the Region applied and complied with the provision. If it is not part of the water quality standards, the Region did not clearly explain the basis for any such conclusion. The Board is left to guess as to the Region's rationale for assuming, without explaining, that the procedural aspects of 30 Texas Admin. Code § 307.6(e)(2)(D) can be divorced from the narrative statements in section 307.6(e)(1). Because the record does not reflect that the Region exer-

cised "considered judgment" in determining that a sublethal *C. dubia* WET limit is necessary to implement the Texas water quality standards, the Board remands the Modified Permit provisions imposing the *C. dubia* WET limit. Because of the nature of the remand, the Board expresses no opinion on the merits of the technical analyses that led the Region to include a *C. dubia* WET limit.

The Board concludes that the Region did not clearly err in including conditions requiring use of the "no observed effect concentration" approach to report fathead minnow WET test results, and the Board denies review of the relevant provisions in the Modified Permit.

The Board concludes that the Region failed to articulate in the administrative record its analysis for the new conditions in the introductory paragraphs of the fathead minnow WET test reporting requirements, which were not included in the draft Modified Permit. The Modified Permit is remanded to the Region to either delete the added reporting conditions or provide an explanation of why the new conditions are appropriate.

The Board concludes that the Region inadequately explained in the administrative record why, after multiple fathead minnow WET test failures, a demonstration of significant sublethal effects at 75% effluent or lower, rather than a 40% reduction in response, is the precursor for initiating a sublethal toxicity reduction evaluation for fathead minnow. The Board remands the relevant Modified Permit conditions.

Before Environmental Appeals Judges Edward E. Reich, Kathie A. Stein, and Anna L. Wolgast.

Opinion of the Board by Judge Stein:

Petitioner, San Jacinto River Authority ("SJRA"), seeks review pursuant to 40 C.F.R. § 124.19 of certain aspects of a National Pollutant Discharge Elimination System[1] ("NPDES") permit decision issued to SJRA by U.S. Environmental Protection Agency ("EPA" or "Agency"), Region 6 ("Region"). The National Association of Clean Water Agencies ("NACWA"), a trade organization representing nearly 300 publicly owned treatment works in the United States, is participating in the proceedings as amicus curiae.

SJRA's appeal centers on the Region's decision to impose, in the permit, effluent limits and conditions for whole effluent toxicity, or WET. In brief, through WET testing, living aquatic organisms are exposed to an effluent sample and evaluated for any changes in the biological effects on the organism over time, specifically on survival (lethality) and growth and reproduction (sublethality).[2]

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[1] Under the Clean Water Act ("CWA" or "Act"), persons who discharge pollutants from point sources into waters of the United States must have a permit for the discharge to be lawful. CWA § 301, 33 U.S.C. § 1311. The NPDES program is the principal program under the CWA. CWA § 302, 33 U.S.C. § 1342.

[2] WET is discussed in greater detail in footnote 7, *infra*.

For the reasons that follow, the Environmental Appeals Board ("Board") denies review in part and remands the permit in part.

I. *ISSUES ON APPEAL*

SJRA asserts that the Board should review the permit decision for seven reasons:

(1) The Region improperly imposed WET limits for lethality and sublethality of *C. dubia*, a common water flea, contravening: (a) the Texas Commission on Environmental Quality's Implementation Procedures that the Region previously approved as protective of the Texas water quality standards ("WQS"), (b) SJRA's 2008 sublethal toxicity evaluation, which demonstrated that salinity in the source water caused sublethal WET test failures, and thus, the effluent was excluded from the Texas WQS definition of "toxicity," and (c) the evidentiary record in a Texas hearing;

(2) The Region set an improper compliance period for the *C. dubia* WET limits;

(3) The Region improperly defined a permit violation as a single failure of the *C. dubia* WET test because: (a) WET test results are variable, (b) the permittee may have no ability to control the cause of toxicity or prevent future violations, and (c) the permit provisions for WET testing of another species show that the Region should have used a more conservative regulatory approach;

(4) The Region included unclear and confusing *C. dubia* WET limit reporting provisions; and

(5) The Region improperly declined to use the "South Carolina percent effect" approach in lieu of the "no observed effect concentration" approach for reporting *C. dubia* and fathead minnow WET test results;

(6) The Region improperly imposed new *C. dubia* and fathead minnow WET test reporting requirements not previously provided in the draft permit;[3] and

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[3] NACWA, participating as amicus curiae, adds that the Region's permit decision presents two important policy considerations that the Board, in its discretion, should review. NACWA asserts that: (1) the Region has improperly reversed its position as to the legal validity of the Texas WET permitting procedures, as set forth in the Texas Commission on Environmental Quality's Implementation Procedures that the Region explicitly approved in 2002 and (2) the Region has substituted its interpretation of the Texas WQS in place of Texas's interpretation of its own standards, effectively creating a new WQS without following the procedures in CWA section 303(c). Amicus Curiae Brief of National Association of Clean Water Agencies at 1-3.

(7) The Region set an improper trigger for commencing a sublethal toxicity reduction evaluation for the fathead minnow species.

These assertions present the following issues for the Board to consider:

1. Does the administrative record reflect that the Region exercised "considered judgment" in determining that a sublethal *C. dubia* WET limit was necessary to implement the Texas WQS?

2. Did the Region clearly err in including the contested permit conditions to regulate WET?

II. *STANDARD OF REVIEW*

The Board generally will not grant review of NPDES permit decisions unless the permit conditions at issue are based on clearly erroneous findings of fact or conclusions of law or involve important policy considerations that the Board, in its discretion, should review. 40 C.F.R. § 124.19(a); *see also In re Hecla Mining Co.*, 13 E.A.D. 216, 223 (EAB 2006); *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 332-33 (EAB 2002) ("*D.C. MS4*"); *In re City of Irving Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 111, 122 (EAB 2001), *pet. for review denied*, *City of Abilene v. U.S. EPA*, 325 F.3d 657 (5th Cir. 2003) (consolidated with *City of Irving v. U.S. EPA*). The Board analyzes petitions for NPDES permit review guided by the caution in the preamble to the Part 124 permitting regulations that the Board's power of review "should be only sparingly exercised." Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980). In addition, EPA policy favors final adjudication of most permits at the permit issuer's level. *Id.*

In evaluating a permit appeal, the Board looks to the administrative record on which the permit was based to determine whether the permit issuer exercised his or her "considered judgment." *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417-18 (EAB 1997); *In re Austin Powder Co.*, 6 E.A.D. 713, 720 (EAB 1997). The Board has repeatedly emphasized that the permit issuer must articulate with reasonable clarity the reasons for its conclusions and the significance of the crucial facts it relied upon in reaching those conclusions. *Ash Grove Cement*, 7 E.A.D. at 417-18; *Austin Powder*, 6 E.A.D. at 720. "Without an articulation by the permit writer of his analysis, [the Board] cannot properly perform any review whatsoever of that analysis and, therefore, cannot conclude that it meets the requirements of rationality." *D.C. MS4*, 10 E.A.D. at 342-43 (quoted in *In re Shell Offshore, Inc.*, 13 E.A.D. 357, 386 (EAB 2007)). *See generally Shell Offshore*, 13 E.A.D. at 386 (discussing "considered judgment" standard).

Those seeking review of a permit provision bear the burden of demonstrating that review is warranted. 40 C.F.R. § 124.19(a)(1)-(2). Petitioners must not only demonstrate that the issues on which they seek review were raised during the public notice and comment period, *see id.* § 124.13, but also explain, in their petitions, why the permit issuer's responses were clearly erroneous, an abuse of discretion, or otherwise warrant Board review. *Id.* § 124.19(a); *e.g.*, *In re Scituate Wastewater Treatment Plant*, 12 E.A.D. 708, 733 (EAB) (citing *In re Newmont Nev. Energy Inv., LLC*, 12 E.A.D. 429, 470-72, 487-88 (EAB 2005)), *appeal dismissed per stipulation of parties*, No. 06-1817 (1st Cir. 2006). The permit issuer, for its part, must "[b]riefly describe and respond to all significant comments on the draft permit." 40 C.F.R. § 124.17(a)(2). "[A] response to comments must address the issues raised in a meaningful fashion, and * * * the response, though perhaps brief, must nonetheless be clear and thorough enough to adequately encompass the issues raised by the commenter." *In re Wash. Aqueduct Water Supply Sys.*, 11 E.A.D. 565, 585 (EAB 2004) (construing 40 C.F.R. § 124.17(a)(2)); *e.g.*, *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 174-81 (EAB 2000).

Additionally, the Board assigns a heavy burden to those seeking review of issues that are essentially technical in nature. *In re City of Moscow*, 10 E.A.D. 135, 142 (EAB 2001). For those technical issues, the Board determines whether the record demonstrates that the permit issuer considered the issues raised in the comments and whether the approach the permit issuer ultimately adopted is rational in light of all of the information in the record. If the Board is satisfied that the permit issuer gave due consideration to the comments received and adopted an approach in the final permit decision that is rational and supportable, the Board typically will defer to the permit issuer's position. Clear error or reviewable exercise of discretion are not established simply because the petitioner presents a different opinion or alternative theory regarding a technical matter, particularly when the alternative theory is unsubstantiated. *Scituate Wastewater Treatment Plant*, 12 E.A.D. at 718 (quoting *In re MCN Oil & Gas Co.*, UIC Appeal No. 02-03, at 25-26 n.21 (EAB Sept. 4, 2002) (Order Denying Review)); *D.C. MS4*, 10 E.A.D. at 334; *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 568 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999).

III. *FACTUAL AND PROCEDURAL HISTORY*

A. *Factual History*

On January 29, 2009, the Region[4] proposed a modification to an NPDES permit the Region issued on September 28, 2007, authorizing SJRA to discharge effluent from the Woodlands Wastewater Treatment Plant No. 1, a publicly owned treatment works operated by SJRA, into a tributary of the San Jacinto River Basin in Montgomery County, Texas.[5] (Proposed Permit) Authorization to Discharge under the National Pollutant Discharge Elimination System, NPDES Permit No. TX0054186 (Jan. 29, 2009) ("Proposed Modified Permit") (A.R. 59). The only comments the Region received on the draft permit modification were those made by SJRA. The Region prepared a response to SJRA's comments ("Response to Comments") on April 16, 2009, and issued the final permit modification ("Modified Permit") on July 24, 2009. NPDES Permit No. TX0054186 Response to Comments 2 (Apr. 16, 2009) ("RTC") (A.R. 121); Authorization to Discharge under the National Pollutant Discharge Elimination System, NPDES Permit No. TX0054186 (July 24, 2009) ("Modified Permit") (A.R. 120). The Texas Commission on Environmental Quality ("TCEQ") waived state certification of the Modified Permit.[6] RTC at 2 (citing Letter from L'Oreal W. Stepney, TCEQ, to Miguel I. Flores, U.S. EPA (Mar. 9, 2006) (A.R. 64)); *see* CWA § 401(a), 33 U.S.C. § 1331(a); 40 C.F.R. § 124.53(c).

As part of the permit conditions, the Region included water quality-based toxics controls, specifically those regulating WET.[7] The permit conditions require

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[4] Although the Texas Commission on Environmental Quality ("TCEQ") is authorized to administer the NPDES program, in this case, the Region objected to a permit TCEQ had proposed in December 2005, and in April 2006, the Region assumed the exclusive authority to process SJRA's permit application under CWA section 402(d)(4) and 40 C.F.R. § 123.44(h)(3). Letter from Claudia V. Hosch, Chief, NPDES Permits Branch, U.S. EPA Region 6, to Donald R. Sarich, Division Manager, SJRA 1 (Apr. 13, 2006) (A.R. 5); Memorandum of Agreement between the Texas Natural Resource Conservation Commission [now TCEQ] and the U.S. Environmental Protection Agency, Region 6, Concerning the National Pollutant Discharge Elimination System (Sept. 14, 1998)) (authorizing Texas Pollutant Discharge Elimination System program) (A.R. 90).

[5] Background on the September 28, 2007 permit is provided in an earlier Board decision, *In re San Jacinto River Authority*, NPDES Appeal No. 07-19, at 4 (EAB Mar. 28, 2008) (Order Dismissing Petition for Review).

[6] The certification process is explained in Part IV.A.1, *infra*.

[7] "The WET approach [to water quality-based toxics control] is useful for complex effluents where it may be infeasible to identify and regulate all toxic pollutants in the discharge or where chemical-specific pollutant limits are set, but synergistic effects are suspected to be problematic." Office of Water, U.S. EPA, *NPDES Permit Writer's Manual* at 94 (1996). WET testing is described in detail in the Agency's *Technical Support Document for Water Quality-based Toxics Control*. *See* Office of Water, U.S. EPA, EPA /505/2-09-010, *Technical Support Document for Water Quality-based Toxics*
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WET tests using the fathead minnow and *C. dubia*, a common water flea, and a WET limit using *C. dubia*. Additional provisions set forth the effective dates of the WET tests and limit, the methods and other requirements for reporting WET test results, and the consequences of WET test failures.

B. *Procedural History Before the Board*

SJRA filed its petition for review of the Modified Permit ("Petition") on August 24, 2009. After the Board granted an extension of time, the Region responded to the petition on December 3, 2009. NACWA then sought, and the Board granted, the opportunity to participate as amicus curiae. On June 7, 2010, the Board heard oral argument from the parties and NACWA.

IV. *ANALYSIS*

A. *Does the Administrative Record Reflect that the Region Exercised "Considered Judgment" in Determining that a Sublethal C. dubia WET Limit Was Necessary to Implement the Texas WQS?*

1. *The NPDES Program*

The Clean Water Act ("CWA" or "Act") requires each state to establish WQS designed to protect the public health or welfare, enhance water quality, and advance the Act's purposes. CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A). WQS "serve as the goals for the water body and the legal basis for the water quality-based NPDES permit requirements under the CWA." Combined Sewer Overflow Control Policy, 59 Fed. Reg. 18,688, 18,694 (Apr. 19, 1994). WQS consist of (1) the designated use of a water body segment; (2) an antidegradation policy; and (3) the water quality criteria, which are numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body segment without impairing the designated uses of that water body segment. CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A);

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Control § 1.3, at 4-18 (Mar. 1991) (A.R. 79). In general, WET tests expose living aquatic organisms of a particular species to various concentrations of sample wastewater, usually from a facility's effluent stream, to evaluate their biological effects – growth, survival, and reproduction – on the organisms over a set period of time. *Id.* § 1.3, at 4. Observations are made at predetermined exposure periods. *Id.* At the end of the test, the responses of the test organisms are used to estimate the effects of the test effluent sample. *Id.* Effects on growth and reproduction, as statistically compared to a control group of organisms exposed to a zero concentration of effluent, are considered sublethal effects. *Id.* Effects on the survival of the test organisms are considered lethal effects. *Id.* WET tests may be either acute (ninety-six hours or less in duration) or chronic (typically full life-cycle, but shortened to seven days by EPA and referred to as short-term chronic tests). *Id.*

40 C.F.R. §§ 131.10-.12; *see* Office of Water, U.S. EPA, *NPDES Permit Writer's Manual* § 6.1.1, at 89 (1996).

NPDES permits issued pursuant to the Act regulate the discharge of pollutants from point sources into navigable waters. CWA §§ 301(a), 402, 33 U.S.C. §§ 1311(a), 1342. NPDES permits must include effluent limits "necessary to meet water quality standards * * * established pursuant to any State law or regulations." CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C). Effluent limits to control toxicity may be technology-based or water quality-based. *See* CWA §§ 301(b)(1)(A), (b)(1)(C), 302, 33 U.S.C. §§ 1311(b)(1)(A), (b)(1)(C), 1312; 40 C.F.R. § 122.44(d). The latter must be included in an NPDES permit when the permitting authority determines that technology-based controls are insufficient to attain or maintain applicable state water quality standards. For those permits requiring water-quality based controls, the permitting authority must further determine, using the procedures in 40 C.F.R. § 122.44(d)(1)(ii), whether the discharge "has the reasonable potential to cause, or contributes to an in-stream excursion above [the state] narrative criterion within a[] * * * [s]tate water quality standard. 40 C.F.R § 122.44(d)(1)(v). If so, the permit must include effluent limits for WET. *Id*.

EPA may in certain circumstances object to a proposed state permit and, as occurred in this case,[8] assume the authority from an otherwise authorized state to issue a particular permit. CWA § 402(d)(2), (4), 33 U.S.C. § 1342(d)(2), (4). "An EPA objection is, in essence, a determination that certain conditions which are not included in a proposed State permit are necessary to carry out the requirements of the Clean Water Act." NPDES; Revision of Regulations, 44 Fed. Reg. 32,854, 32,877 (June 7, 1979); *see also* 40 C.F.R. § 123.44(d) (enumerating grounds on which objection to issuance of proposed permit must be based). Congress granted the Agency authority to object to a state-issued NPDES permit and then to issue a permit for that source in accordance with the CWA so as "to avoid the impasses which may * * * result when the Administrator [of the U.S. EPA] objects to the issuance of a permit which is contrary to the provisions of the [A]ct and the State is unwilling to issue a permit to the point source which is consistent with the provisions of the [A]ct." S. Rep. No. 95-370, at 73 (1977).[9]

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[8] *See* footnote 4, *supra.*

[9] In its objection to TCEQ's proposed 2005 permit, the Region found that the proposed state permit lacked the following: (1) appropriate requirements to address lethal toxicity; (2) a toxicity reduction evaluation requirement to identify the causative toxicant(s) and control(s) related to sublethal toxicity; and (3) adequate measures to monitor persistent sublethal test failures. Letter from Miguel I. Flores, Director, Water Quality Protection Division, U.S. EPA Region 6, to Dan Eden, Deputy Director, Office of Permitting, Remediation and Registration, TCEQ (Jan. 6, 2006) (A.R. 1). The Region recommended additional conditions providing for a WET limit effective within ninety days after a test result showed statistically significant lethal effects to *C. dubia* at or below effluent dilutions of 85% or

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In rendering a permitting decision, "[w]hen the Region reasonably believes that a state water quality standard requires a more stringent permit limitation than that specified by the State, the Region has an independent duty under CWA § 301(b)(1)(C) to include the more stringent permit limitation." *In re City of Jacksonville*, 4 E.A.D. 150, 158 (EAB 1992). Because of this independent obligation to ensure that the permit contains limits protective of state WQS, the Region is not required to adopt or adhere to the findings or recommendations of the state.

The NPDES regulations allow the Region "the discretion to determine what conditions are necessary to implement a [s]tate [WQS], and a [s]tate is allowed to agree or disagree with that determination through the certification process." *In re J&L Specialty Prods. Corp.*, 5 E.A.D. 31, 62 (EAB 1994) (construing 40 C.F.R. § 124.53). The CWA requires that the permit applicant obtain a certification from the state where the discharge originates validating the permit's compliance with the pertinent federal and state water pollution control standards. CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1). The permitting authority may not issue the permit until the state issues or waives certification. *Id.*; 40 C.F.R. § 124.53(a).

In cases where, as here, the state has waived certification, leaving the Region "to exercise its own judgment in establishing permit conditions to implement the [s]tate [WQS]," the Board will uphold the Region's interpretation of the state WQS if it is reasonable. *J&L*, 5 E.A.D. at 62; *e.g.*, *In re Am. Cyanamid Co.*, 4 E.A.D. 790, 801 (EAB 1993); *In re Miami-Dade Water & Sewer Auth. Dept.*, 4 E.A.D. 133, 145 (EAB 1992). NACWA argues that the discretion described in *J&L* exists only when the state has the same position as EPA. EAB Oral Arg. Tr. at 37 ("Tr."). Contrary to NACWA's arguments, the Board in *J&L* did not limit the deference toward the Region's determination only to situations where the state waived certification of an EPA permit and EPA and the state shared the same position on the contested condition.[10] Rather, the Board looks to whether the Re-

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less, immediate initiation of a sublethal toxicity reduction evaluation, and increased *C. dubia* monitoring frequency from once per quarter to once per month. *Id.* Finally, the Region stated, "If EPA were to issue this permit, it would include these conditions except that it would include a limit for sublethal toxicity rather than requiring a toxicity reduction evaluation." *Id.*

[10] NACWA asserts that, in *J&L*, the issues to which EPA objected in the state-issued permit were not the WET limit and biomonitoring issues that were challenged in the EPA-issued permit, and in fact, EPA and the state shared the same position on the WET limit and biomonitoring issues. Tr. at 37-39. Moreover, NACWA contends that this was the basis for the Board's decision. *Id.* at 38.

In *J&L*, U.S. EPA Region 5 objected to an Ohio EPA-issued NPDES permit. *J&L*, 5 E.A.D. at 39. After exclusive authority to issue the permit passed to Region 5, and for reasons that the Board could not discern from the administrative record, Ohio EPA prepared an extraneous draft permit in December 1990. *Id.* at 40 n.13. In February 1991, the Region also prepared a draft permit, which was nearly identical to Ohio EPA's unexplained and extraneous draft permit, except that the Region's draft permit contained more stringent effluent limitations for nickel. *Id.* In *J&L*, the Board concluded that
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gion's interpretation of the state WQS is reasonable.

2. *The Texas Surface Water Quality Standards*

The Texas Surface Water Quality Standards are set forth at 30 Texas Administrative Code sections 307.1 through 307.10. The general narrative criteria in section 307.4(d) provide for "[c]riteria to protect aquatic life from chronic toxicity" and refer to section 307.6. 30 Texas Administrative Code § 307.4(d). Chronic toxicity is toxicity that "continues for a long-term period after exposure to toxic substances. Chronic exposure produces sub-lethal effects, such as growth impairment and reduced reproductive success, but it may also produce lethality." *Id.* § 307.3(a)(10).

Section 307.6 "establishes criteria and control procedures for specific toxic substances and total toxicity." *Id.* § 307.2(a)(6) (describing section 307.6). Specifically, "[c]hronic total toxicity, as determined from biomonitoring of effluent samples, [is] precluded." *Id.* § 307.6(e)(1). Subsection (e)(2) further provides "[g]eneral provisions for controlling total toxicity." *Id.* § 307.6(e)(2). "Dischargers whose effluent has a significant potential for exerting toxicity in receiving waters [are] required to conduct [WET] biomonitoring at appropriate dilutions." *Id.* § 307.6(e)(2)(A). If WET test results show that the discharge "exceed[s] the restrictions on total toxicity," then the permittee must "conduct a toxicity identification evaluation and toxicity reduction evaluation." *Id.* § 307.6(e)(2)(D). "As a result of a toxicity reduction evaluation," or TRE, the permitting authority may establish additional permit conditions, such as WET limits. *Id.* In limited circumstances, adverse effects to living organisms, such as those effects arising from exposure to dissolved salts in source water, are excluded from the definition of "toxicity," and thus, the effluent is not subject to WET regulation. *Id.* § 307.3(a)(65) (providing source water exclusion).

The WET chapter of TCEQ's Implementation Procedures in many respects parallels the Texas WQS. *See* Water Quality Division, TCEQ, RG-194 *Procedures to Implement the Texas Surface Water Quality Standards* 101-132 (rev. Jan. 2003) ("Implementation Procedures") (A.R. 78). The Implementation Procedures provide greater specificity as to when a WET limit may be imposed after repeated

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"J&L * * * failed to demonstrate that the Region's decision * * * [wa]s an unreasonable exercise of discretion * * * . Indeed, as noted elsewhere in this opinion in connection with other issues, the permit conditions challenged by J&L * * * are substantially identical to the ones contained in the December 1990 permit prepared by Ohio EPA and submitted to the Region." *Id.* at 62. The Board's decision in *J&L* did not turn on whether Region 5 and Ohio EPA shared the same position with respect to the WET limit and biomonitoring issues. Rather, the Board noted the draft permit anomaly to bolster its conclusion that the Region's decisionmaking was reasonable, not, as NACWA argues, to limit the discretion afforded to the Region in decisionmaking. *See id.*

test failures and after conducting a TRE: reasonable potential for the effluent to violate the narrative criteria must exist, and no other toxicity control measure is identified. *Id.* at 113. Both the Region and SJRA agree that the Implementation Procedures are guidance or policy. Petition for Review of NPDES Permit Issued by Region 6 at 22-26 ("Petition") (referring to "TCEQ WET Policy"); Region 6's Memorandum in Opposition to San Jacinto River Authority's Petition for Review at 23-24 ("Region's Mem."); Tr. at 10, 18; *see also* Implementation Procedures at i ("This is a guidance document * * * ."). SJRA and the Region also both devote a significant portion of their briefs to supporting or refuting allegations that the Region inadequately followed the Implementation Procedures. Because the Board's decision here turns on whether the administrative record reflects the Region's considered judgment in determining that a sublethal *C. dubia* WET limit was necessary to implement the WQS, i.e., the applicable regulations, the Board refrains from discussing the guidance document's applicability to the permitting decision at issue.

3. *Region's Determination of the Need for a Sublethal WET Limit*

The Region's determination to include a sublethal *C. dubia* WET limit in the Modified Permit relied on 40 C.F.R § 122.44(d)(1)(v). NPDES Permit No. TX0054186 Fact Sheet at 3 ("Fact Sheet") (construing 40 C.F.R. § 122.44) (A.R. 60). Section 122.44(d)(1)(v) provides that unless a chemical-specific limit is shown to sufficiently attain and maintain the numeric and narrative state WQS, "when a permitting authority determines * * * that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative criterion within an applicable State water quality standard, the permit must include effluent limits for whole effluent toxicity." 40 C.F.R § 122.44(d)(1)(v); Fact Sheet at 26. The Region construed the Texas narrative WQS to "provide protection against chronic total toxicity." Fact Sheet at 13 (citing 30 Texas Administrative Code Section 307.4(d), 307.6(b)(2), 307.6(b)(4), 307.6(e)(1)).

As to 30 Texas Administrative Code § 307.6(e)(2)(D), the Region stated in the Fact Sheet:

> The Texas WQS provide that a toxicity reduction evaluation (TRE) should be conducted prior to the imposition of a WET limit, however the standards, at 30 [Texas Administrative Code] § 307.6(e)(2)(D), do not restrict a permittee from performing a self-imposed TRE at any time, nor do they preclude additional TRE activities during a compliance schedule to meet a limit based on effluent toxicity.

Fact Sheet at 26. In the Fact Sheet, the Region appears to construe it as permissible, rather than mandatory, to conduct a toxicity identification evaluation ("TIE")

and TRE prior to imposing a WET limit. The Region's Response to Comments cites 30 Texas Administrative Code § 307.6(e)(2)(D), but only to articulate that the provision "provide[s] that total toxicity limits (WET limits) may be a condition of the permit if toxicity biomonitoring results (WET tests) indicate that the discharge exceeds total toxicity restrictions. Thus, it is clear that * * * the [Texas] WQS themselves require WET limits in the permit if the discharge has demonstrated sublethal toxicity." RTC at 11-12 (citations omitted). There is no additional legal analysis or explanation in either the Fact Sheet or the Response to Comments of how, if at all, the Texas regulation that "precludes" chronic toxicity in section 307.6(e)(1) should be read in concert with the language in section 307.6(e)(2)(D) that seemingly requires a TRE and TIE prior to imposing a WET limit.

Pursuant to 40 C.F.R. §§ 122.44(d)(1)(i), (ii), and (v), the Region assessed the effluent's potential to exceed what the Region construed to be the narrative criteria in the Texas WQS, in this case, the potential to cause sublethal effects. Fact Sheet at 13, 25 (explaining and providing results of Region's "reasonable potential calculation"). The Region used procedures described in the Agency's *Technical Support Document for Water Quality-based Toxics Control*. Fact Sheet at 16 (citing Office of Water, U.S. EPA, EPA /505/2-09-010, *Technical Support Document for Water Quality-based Toxics Control* (Mar. 1991) ("TSD") (A.R. 79)). The Region's data for the reasonable potential evaluation produced a result where the "Reasonable Potential Value" exceeded the "Effluent Critical Dilution," leading the Region to conclude that reasonable potential for sublethal toxicity existed. Fact Sheet at 25; *see also* TSD, box 3-2, at 53. The Region's data for the reasonable potential evaluation consisted of the results of *C. dubia* sublethal WET tests that SJRA conducted between April 8, 2003 and June 30, 2008.[11] Fact Sheet at 25 & app. G ("SJRA's effluent demonstrated significant sub-lethal effects in 41 of 59 tests performed over the past five years, with toxicity demonstrated at all effluent concentrations tested * * * ."). Based on: (1) the finding that reasonable potential for chronic toxicity existed; (2) the Texas WQS mandate to preclude chronic or sublethal toxicity; and (3) the 40 C.F.R. § 122.44(d)(1)(v) requirement for a WET limit upon finding reasonable potential for toxicity, the Region estab-

[11] The D.C. Circuit affirmed the ability of *C. dubia* sublethal WET test results to accurately predict instream sublethal effects of effluent. *Edison Elec. Inst. v. EPA*, 391 F.3d 1267, 1269 & n.1, 1273 (D.C. Cir. 2004); *see also* RTC at 16 (responding to comment that "[t]here are no studies that have shown that intermittent failures of only the sublethal endpoint are predictive of instream impacts"). "Before implementing a test method, EPA must establish that the measured characteristic bears a rational relationship to real-world conditions; the available studies reasonably support such a conclusion with regard to chronic toxicity." 391 F.3d at 1274. The Court concluded that the Agency ratified the *C. dubia* sublethal WET test method after "years of scientific studies, negotiation, and public notice-and-comment, and [the ratification] represents the agency's expert judgment regarding the implementation of the aims of the Clean Water Act." *Id.*

lished a sublethal *C. dubia* WET limit in the Modified Permit. Region's Mem. at 23; Fact Sheet at 26.

At oral argument, the Region did not provide any meaningful legal analysis on how 30 Texas Administrative Code Section 307.6(e)(2)(D) should be read together with 30 Texas Administrative Code Section 307.6(e)(1), which precludes chronic total toxicity, or why the TIE and TRE provision in section 307.6(e)(2)(D) is not to be read in tandem with section 307.6(e)(1). Instead, the Region presented a new and alternative argument, namely, that if it was subject to 30 Texas Administrative Code Section 307.6(e)(2)(D) and the regulation required a TIE and TRE prior to setting a sublethal WET limit, the Region had satisfied those requirements. The Region asserted that SJRA did conduct TREs and TIEs before the Region set the WET limit in the Modified Permit, and that SJRA "can do the toxicity reduction evaluation" during the three-year compliance period[12] in the Modified Permit before the WET limit becomes effective. Tr. at 51-52, 53, 54 ("They have done the TRE/TIEs, they've been doing them for years."). The Region did not identify the specific TREs and TIEs but stated that they were in the record. *Id.* at 55.

In the Fact Sheet, the Region mentioned in passing that SJRA conducted TREs and TIEs that failed to identify specific toxicants, but the Region did not connect these TREs and TIEs with section 307.6(e)(2)(D) or the Region's determination to include a WET limit. *See* Fact Sheet at 26. Essentially, the administrative record does not identify the specific TIEs and TREs that the Region allegedly relied upon, and the first time that the Region identified TIEs and TREs other than SJRA's TRE-like 2008 sublethal toxicity evaluation[13] appears to be in the

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[12] Both the Fact Sheet and the Factual Background section of the Region's opposition to the Petition also discussed the compliance period, which the Region described as an "opportunity to identify and correct toxicity." Fact Sheet at 27. It is doubtful that, on the present record, the Region intended the compliance period to satisfy a requirement to conduct a TIE and TRE prior to establishing a WET limit. Fact Sheet at 26 ("EPA is providing a three-year compliance schedule to allow for any additional evaluations of process modifications that may be appropriate prior to the WET limit becoming enforceable. EPA believes that a compliance schedule, including time to identify and reduce sources of toxicity from the effluent, would be consistent with both the Texas WQS and EPA regulations."); Region's Mem. at 19 ("During the three year [compliance] period, SJRA could perform any additional studies, construction or investigations of its pollutant contributors that it may deem appropriate."). Language in section 307.6 (e)(2)(D) suggests that the compliance period was intended to provide time not to conduct TIEs and TREs but rather to meet permit conditions such as WET limits that were established *after* conducting TIEs and TREs. *See* 30 Texas Administrative Code § 307.6(e)(2)(D) ("Where conditions may be necessary to prevent or reduce effluent toxicity, permits shall include a reasonable schedule for achieving compliance with such additional conditions.").

[13] In 2005, SJRA "instituted an aggressive sublethal toxicity evaluation program," Petition at 10, which at oral argument SJRA stated was the effective equivalent of a TRE. Tr. at 22 ("[W]e have performed essentially a sublethal TRE."). Notably, the 2008 sublethal toxicity evaluation ("STE") did not identify a specific toxicant and instead identified the source water as the cause of the sublethal

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response to the Petition, where the Region acknowledged that the Texas WQS required the permittee to conduct a TIE and TRE if there were indications of either lethal or sublethal toxicity, and that "following such tests, additional conditions, including WET limits, may be included in the permit." Region's Mem. at 10. The Region then merely cited TIEs and TREs that SJRA identified in its Petition. *Id.* at 11 (citing Petition at 5-6, although the relevant discussion appears on pages 6 and 7). In the relevant section of the Petition, SJRA had stated that it conducted TREs in 1991 and 1998 in response to WET test results that indicated lethal toxicity between 1989 and 1991 and again in 1998. Petition at 6-7.

To the extent that the Region now asserts that it relied on the 1991 and 1998 TREs in satisfaction of a requirement to conduct a TIE and TRE prior to setting the sublethal *C. dubia* WET limit in the Modified Permit, such an assertion comes too late. The Region's reliance on the TREs was initially made at the oral argument, and the Region did not explicitly address in either its response to the Petition or earlier in the administrative record that the older, unidentified TIEs and TREs satisfy the 30 Texas Administrative Code Section 307.6(e)(2)(D) seeming requirement to conduct a TIE and TRE prior to setting a WET limit. *See* Fact Sheet at 26 (citing 30 Texas Administrative Code § 307.6(e)(2)(D) but not discussing TRE as predicate to WET limit). Moreover, there is no explanation in the administrative record of the Region's rationale for allegedly relying on the 1991 and 1998 TREs, which focused on *lethal* toxicity, Petition at 6, to establish a *sublethal* WET limit. Finally, the 1991 and 1998 TREs were completed over a decade prior to the preparation of the draft Modified Permit, and the Region has not explained whether and how such data would still be relevant a decade later.

The administrative record lacks a complete and cogent analysis of how the Region applied the Texas WQS to the permitting decision at issue. Of particular concern is that the Region appears unsure, and has certainly failed to clearly articulate, whether 30 Texas Administrative Code Section 307.6(e)(2)(D) is part of the Texas WQS, and if not, why not. For instance, at oral argument, the Region appeared several times to be on the brink of stating that 30 Texas Administrative Code Section 307.6(e)(2)(D) was not part of the Texas WQS.[14] Essentially, the

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WET test failures. *See* Petition at 32 ("The 2008 STE explains that variability of the WET test organisms' sensitivity to the ionic characteristics of SJRA's water supply, including high alkalinity and low hardness, is the cause of the reported test failures."). The Region did not dispute the characterization of the 2008 STE as the equivalent of a TRE, and even referred to the 2008 STE as a TRE at the oral argument. Tr. at 56. However, the Region contended that SJRA conducted the 2008 STE for the purpose of establishing that salinity was the cause of the sublethal toxic effects. *Id.* at 67 ("[W]e believe that was more to try to establish that they met the exemption for high dissolved salts.").

[14] Counsel for EPA initially stated that the Texas WQS consist of "designated uses, criteria to protect those uses and [an] anti-degradation [policy]" but not "this predicate requirement for a toxicity
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Board is left to guess as to the Region's rationale for assuming, without explaining, that the procedural aspects of section 307.6(e)(2)(D) can be divorced from the narrative statements in section 307.6(e)(1). Alternatively, if section 307.6(e)(2)(D) is part of the Texas WQS, the Region did not adequately explain how it applied or complied with the TIE/TRE provision, and if the Region did not comply with that provision, the reason for not doing so. Moreover, an argument in the alternative that the Region *did* follow the TIE/TRE provision in section 307.6(e)(2)(D) would conflict with the silence in the administrative record on this point. Finally, to the extent that the Region did follow section 307.6(e)(2)(D), the administrative record lacks a clear articulation of how the Region applied the provision to establish a sublethal *C. dubia* WET limit. Although the Fact Sheet states that SJRA conducted TREs and TIEs that failed to identify toxicants, the administrative record does not identify these studies or explain how they satisfied section 307.6(e)(2)(D).

The Region states that "the issue about harmonizing the state regulation [30 Texas Administrative Code §] 307.6[(e)(1)] with the provision about toxicity reduction evaluations and [§ 307.6](e)(2)[(D)]" was not raised during the comment period, and thus, is not preserved for review. Tr. at 70; *see also* Region's Mem. at 26 (arguing that issues concerning the parallel provisions in the Implementation Procedures were not preserved for review). Nonetheless, the Region's considered judgment in determining to establish a sublethal *C. dubia* WET limit is not reflected in the administrative record, where the Region must provide an analysis of the statutory and regulatory provisions it relied upon in the permitting process. This analysis must include an articulation of what the Region considered to be the applicable narrative criterion of the Texas WQS – and why – and explain whether the TIE/TRE provision of section 307.6(e)(2)(D) is applicable, and if not, why not. Moreover, once the Region explains the applicable regulatory provisions, it must apply those provisions to the facts of the case and exercise consid-

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(continued)
reduction evaluation." Tr. at 71. He then stated that the predicate requirement "was approved as part of the Water Quality Standards." *Id.* Earlier, co-counsel for EPA stated the following in an exchange with the Board:

Q: [Y]ou referenced [30 Texas Administrative Code § 307.6](e) where it talks about toxicity and (2)(D) of that is the provision that SJRA referred to earlier as the trigger for the TIE and the TRE. And I'm wondering whether in your view that provision is also part of the Water Quality Standards?

A: Well, we look at the Water Quality Standards and we look at the ["]preclude["]; that means none, that means limits.

Q: So everything that follows that is not really part of the Water Quality Standards?

A: Well, no.

Id. at 50-51.

ered judgment. *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417-18 (EAB 1997); *In re Austin Powder Co.*, 6 E.A.D. 713, 720 (EAB 1997).[15] Accordingly, the Board remands to the Region those provisions in the Modified Permit imposing a *C. dubia* WET limit.

Because of the nature of the remand, the Board expresses no opinion on the merits of the Region's technical analyses that led to the inclusion of the *C. dubia* WET limits in the Modified Permit. The Board recognizes the Region's concerns regarding WET test data demonstrating significant sublethal effects. Tr. at 60; Fact Sheet at 25. To the extent that such concerns remain after remand of the Modified Permit, the Region should explain any relevant data and their significance in the context of the Region's analysis of the applicable WQS. Finally, because the administrative record for the Modified Permit is at best incomplete, the Board does not reach the question of the source water exclusion's applicability.[16]

B. *Did the Region Clearly Err in Including the Contested Permit Conditions to Regulate WET?*

SJRA contests permit provisions that set forth the effective dates of the WET tests and limit, the methods and other requirements for reporting WET test results, and the consequences of WET test failures. Based on the foregoing discussion concerning the Region's determination to include a WET limit in the Modified Permit and the associated remand, a present controversy pertaining to the challenged permit conditions regulating the sublethal *C. dubia* WET limit does not exist for the Board to review. These Modified Permit conditions are: Part I.B (effective date of the sublethal *C. dubia* WET limit); Parts I.A.1 and II.E (use of the "no observed effect concentration" approach to report *C. dubia* WET test results); Part II.E (*C. dubia* WET test reporting requirements in the condition's introduction); Part II.E.1.c (permit violation upon single failure of *C. dubia* WET

[15] As noted earlier, the Board finds it unnecessary to address in this decision the issues SJRA raised about the Implementation Procedures. Notably, at oral argument SJRA conceded that a permitting authority could impose a sublethal WET limit "after a full toxicity reduction evaluation has been performed by the permitee and if that evaluation shows that there is no other control that is available." Tr. at 11. Should a new permit decision be prepared following remand, it is unclear whether issues pertaining to the Implementation Procedures will persist. However, the Region should also adequately explain in the administrative record the reasons for applying or not applying the Implementation Procedures. *See id*. at 23 (counsel for SJRA stating "I don't believe that EPA is bound by the [I]mplementation [P]rocedures. * * * When [EPA] has a reasonable basis for deviation from them and it provides an adequate justification for that, it can do that.").

[16] As previously mentioned, some types of adverse effects, such as those caused by concentrations of dissolved salts in source water, are excluded from the definition of "toxicity" and thus not subject to WET regulation. 30 Tex. Admin. Code § 307.3(a)(65) (providing source water exclusion). SJRA claims that its 2008 STE demonstrated that the exemption applied in this case.

test); and Part II.E.3.b (*C. dubia* WET limit reporting provisions). Accordingly, the Board declines to reach the merits of these issues.

Several Modified Permit conditions that concern fathead minnow WET testing remain at issue as they do not concern WET limits. They are: (1) Parts I.A.1 and II.D (use of the "no observed effect concentration" approach to report fathead minnow WET test results); (2) Part II.D (fathead minnow WET test reporting requirements); and (3) Part II.D.2.a.iii (trigger for conducting sublethal fathead minnow TRE). For each of the remaining contested permit conditions, the Board considers whether the record demonstrates that the Region considered the issues raised in the comments and whether the Region's ultimate approach is rational in light of all of the information in the record. As noted earlier in this decision, if the Board is satisfied that the permit issuer gave due consideration to comments received and adopted an approach in the final permit decision that is rational and supportable, the Board typically will defer to the permit issuer's position.

1. *Parts I.A.1 and II.D: Use of the "No Observed Effect Concentration" Approach to Report Fathead Minnow WET Test Results*

Standardized procedures for WET testing provide that test results of the fathead minnow WET testing requirement are expressed as either the "no observed effect concentration" ("NOEC") or IC_{25}.[17] 40 C.F.R. § 136.3(a) tbl. 1A ("parameter and units" column). The Region also explained in the Fact Sheet that "[t]he WET Methods Manual describes two equally acceptable methods [to measure, analyze and express WET test results]: hypothesis testing, using the No Observable Effect Concentration approach; and point estimation, for example using the Inhibition Concentration." Fact Sheet at 14-15 (citing Office of Water, U.S. EPA, EPA-821-R-02-013, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* § 9.1-.2 (Oct. 2002) (A.R. 80)). In a lengthy discussion, the Region explained why it selected the NOEC approach. Fact Sheet at 14-21.

[17] The NOEC is the highest concentration of toxicant, in terms of percent effluent, that causes no observable (i.e., statistically significant) adverse effect on the test organisms. Office of Water, U.S. EPA, EPA /505/2-09-010, *Technical Support Document for Water Quality-based Toxics Control* § 1.3, at 4 (Mar. 1991) (A.R. 79). The inhibition concentration, or IC, is one of several statistical endpoints used to measure, analyze and express WET test results. IC is the point estimate of the effluent concentration that would cause a specified reduction in a measurement such as reproduction or growth. Thus, IC_{25} refers to the point estimate of effluent concentration that would cause 25% reduction in the growth of the test organism. Office of Water, U.S. EPA, EPA-821-R-02-013, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* § 9.1-.2 (Oct. 2002) (A.R. 80).

Parts I.A.1 and II.D of the Modified Permit require results of fathead minnow WET tests to be reported using the NOEC approach. SJRA commented that the Percent Effect ("PE") approach that EPA approved for use in South Carolina should be used to report WET test results because the NOEC approach is limited. SJRA Comments to Proposed NPDES Permit No. TX0054186 Modification at 13 ("Comments") (A.R. 127). In the Response to Comments, the Region based its rejection of the PE approach on the approach not having obtained full Agency approval. RTC at 19. The Region elaborated:

> The 40% benchmark has been disallowed as not being adequately protective. The balance of the South Carolina approach is an IC_{25} (point estimate testing) which that State has adopted for its use. Texas and four other States in EPA Region 6 have elected to continue to use the NOEC approach (hypothesis testing), which is equally supported by EPA's WET test methodologies.

Id.

The Petition relies entirely on an unsubstantiated "personal communication" to allege that the Region's aforementioned description in the Response to Comments of the South Carolina approach is inaccurate. Petition at 56. Citing personal communication with an employee at the South Carolina Department of Health and Environmental Control, SJRA's argument that the Region clearly erred by not using the South Carolina approach consists solely of that employee's description of the South Carolina WET program.[18] *Id.*

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[18] The Petition states:

> Based on personal communications with Mr. Vernon Beaty with the South Carolina Department of Health and Environmental Control, the current status of the South Carolina WET program is as follows:
>
> EPA has disapproved the statistical method originally proposed by South Carolina regarding how the dose-response curve is drawn through the test results for the multiple dilutions used in the test. However, the interpretation of the dose-response curve with respect to determining whether a test is classified as a Pass or a Fail is based on a Percent Effect value and not a Point [E]stimate, contrary to the statement in the 2009 RTC. In addition, the 40% Percent Effect value is, in fact, still used when determining permit compliance. A permittee is in compliance with its permit if the average Percent Effect for all tests conducted during a reporting period does not exceed 25% at the critical dilution and if the maximum Percent Effect reported for any test during the testing period does not exceed 40% at the critical dilution.

Petition at 56.

While SJRA and the Region disagree on which portion of the South Carolina approach has been invalidated, the summary SJRA provided as its argument is at best anecdotal. In light of the promulgated standardized testing procedures prescribing the expression of test results as either NOEC or IC_{25} and the information provided in the record, SJRA's arguments do not persuade the Board that the Region's preference for the NOEC approach is irrational. Due to the highly technical nature of this issue, the Board defers to the Region's position and denies review of these permit conditions.

2. *Part II.D (Introduction): Fathead Minnow WET Test Reporting Requirements*

The second paragraph in the introduction to Modified Permit Part II.D appears to be entirely new and contains reporting requirements that were not present in the Draft Modified Permit.[19] *Compare* Draft Modified Permit pt. II.D. *with* Modified Permit pt. II.D. Because of the new language, SJRA lacked the opportunity to comment. *See* Petition at 62. Unlike five enumerated changes from the draft permit modification that the Region identified on the first two pages of the Response to Comments, the Region did not similarly note the additional language that SJRA challenges.[20] SJRA now challenges the reporting requirement provisions because their inclusion was not adequately explained and because they "impose unduly burdensome reporting requirements." *Id.* Specifically, SJRA argues

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[19] The second paragraph of Modified Permit Part II.D states:

> A copy of the full report for every WET test initiated (whether pass, fail, invalid, split sample, or terminated early for any reason) must be submitted to EPA within 30 days of completion of the test. In addition, for any test in which a significant difference from the test control (lethal or sublethal effects) is detected in the 25%, 33%, 44% and/or 59% effluent concentration(s), the permittee shall provide EPA written notice of the test results within ten days of the test termination and prior to submitting the test results on the Discharge Monitoring Report for that reporting period.

Modified Permit Part II.D

[20] Generally, these five changes are:

1. The removal of the phrase "or below" from four specific permit sections;

2. The addition of a footnote to a provision referring to Outfall 002;

3. A change in monitoring frequency for Outfall 002;

4. A change in the sample type for Outfall 002; and

5. Allowing Outfall 002 to use samples from Outfall 001 when Outfall 002 is discharging.

RTC at 2.

that the new provisions duplicate other reporting requirements and that SJRA may not be able to meet the reporting deadlines because SJRA may not receive the required test reports from the testing laboratory within the mandated time period. *Id.*

The permit issuer must, at the time that a final permit decision is issued, also issue a response to comments that specifies the draft permit provisions, if any, that "have been changed in the final permit decision, and the reasons for the change[s]." 40 C.F.R. § 124.17(a)(1). Documentation and explanation in the administrative record of any changes between the draft and final permits is critical to reflect the Region's considered judgment of the permitting decision, and "[w]here the permit issuer fails to adequately identify and explain changes to the permit as 40 C.F.R. § 124.17(a)(1) requires, the Board has not hesitated to remand the permit to the permitting authority for further consideration." *In re ConocoPhillips Co.*, 14 E.A.D. 768, 780 (EAB 2008) and cases cited (discussing 40 C.F.R. § 124.17(a)(1)).

The entirety of the Region's response to SJRA's allegations is "SJRA identifies two additional typographical errors, * * * and the Region agrees to revise the permit accordingly." Region's Mem. at 71 (citing Petition at 61-63). The Region does not identify the typographical errors in the condition. The Region's stated intent to "revise the permit accordingly" is similarly vague. Even if the Region's response to the Petition illuminated why it added the provisions in Modified Permit Part II.D and addressed SJRA's concern that the requirement is unduly burdensome, "allowing the permit issuer to supply its rationale after the fact, during the briefing for an appeal, does nothing to ensure that the original decision was based on the permit issuer's 'considered judgment' at the time the decision was made." *ConocoPhillips*, 14 E.A.D. at 785. Accordingly, the Region failed to adequately identify the new conditions in Modified Permit Part II.D and to provide a rationale for the changes, in contravention of 40 C.F.R. § 124.17(a)(1), and the Board remands to the Region the introduction to Modified Permit Part II.D.

3. *Part II.D.2.a.iii: Sublethal Fathead Minnow TRE*

Part II.D.2.a.iii applies when a fathead minnow WET test demonstrates significant sublethal effects at or below the critical dilution, 78%. Modified Permit pt. II.D.2. After a WET test indicates sublethal effects at or below the critical dilution, the permittee is required to conduct three additional tests on a monthly basis for the next three consecutive months if testing is not already conducted monthly. *Id.* pt. II.D.2.a.i. The challenged condition provides:

> If any two of the three additional tests demonstrates significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}) requirements as specified in Item 5 of

> this section. The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required for failure to perform the required retests.

Id. pt. II.D.2.a.iii. "Item 5," which is cited in the condition, provides further information regarding the execution of a TRE. *Id.* pt. II.D.5.

SJRA commented that the sublethal TRE should be initiated when "any two of the three retests demonstrates 40% sublethal effects at the highest effluent dilution tested," Comments at 26, rather than upon "demonstrat[ion] of significant sublethal effects at 75% or lower." Modified Permit pt. II.D.2.a.iii. SJRA also commented on the initiation date of the sublethal TRE. Comments at 26. The Board discusses each comment in turn.

a. *Initiation of the Sublethal TRE*

SJRA's comments conclude that a TRE should be initiated upon indication of 40% reduction in the sublethal response in the highest effluent dilution, rather than demonstration of significant sublethal effects at 75% effluent or lower, because "[i]t is not possible to do the TIE studies that are typically necessary to perform a TRE unless there is at least a 40% reduction in the sublethal response, in the highest effluent dilution." Comments at 26. SJRA argues that the NOEC approach to reporting WET test results "does not provide information on the magnitude of the [toxic] effect. It is possible to have a 20 to 25 [p]ercent effect at any NOEC concentration. A 20-25 [p]ercent [e]ffect is not sufficient to support sublethal TRE studies." Petition at 59; *see also* Comments at 26 ("[A] reduction in response as low as 20% can be considered statistically significant."). SJRA also asserts that the laboratory used for SJRA's 2008 sublethal toxicity evaluation, described in footnote 13, *supra*, "recommended that there must be at least a 40 Percent Effect in order to conduct TIE studies." Petition at 59.

Thus, SJRA's comment essentially is that a TIE is a necessary predicate of a TRE, and a TIE cannot be conducted unless there is a 40% reduction in the sublethal response in the highest effluent dilution. In response, the Region simply disagreed with SJRA's unsupported statement that "[i]t is not possible to do the TIE studies that are typically necessary to perform a TRE unless there is at least a 40% reduction in the sublethal response, in the highest effluent dilution." RTC at 26. A subsequent statement in the Response to Comments reflects that the Region possibly misconstrued the crux of SJRA's comment. The Region stated that the permit's TRE requirements "do not include any requirement to perform toxicant identification studies or to identify the specific pollutant(s) responsible for the toxicity." *Id.*

Although the Region initially stated that "[a]ll significant toxic events should be investigated to the maximum level reasonably possible," the Response to Comments did not address the reason for disagreeing with SJRA's comment. *Id.* The Region also did not explain the connection between evidence of significant sublethal effects at 75% effluent and a TRE, or the Region's preference for using evidence of significant sublethal effects at 75% effluent or lower over evidence of a 40% reduction in response as the trigger for conducting a TRE. *Id.* The Response to Comments concluded with the aforementioned statement that the Modified Permit did not require a TIE prior to initiation of a TRE. *Id.*

The Region's Response to Comments merely disagrees with SJRA's comment. The response neither provides a reasoned basis nor directs the reader to portions of the administrative record that provide a reasoned basis for requiring a demonstration of significant sublethal effects at 75% effluent or lower, rather than a 40% reduction in response, to be the precursor for initiating the sublethal TRE. Although a response to comments may be brief, the Region's response falls short of meaningfully addressing the issue SJRA raised. *E.g.*, *In re Wash. Aqueduct Water Supply Sys.*, 11 E.A.D. 565, 585 (EAB 2004); *see also* Part II, *supra* (discussing contents of response to comments). Finally, there is no indication in the administrative record of the Region's considered judgment in developing this permit condition. *See, e.g.*, *In re Shell Offshore, Inc.*, 13 E.A.D. 357, 386 (EAB 2007); *see also* Part II, *supra* (discussing considered judgment). For these reasons, the Board remands to the Region those portions of Modified Permit Part II.D.2.a.iii that require a demonstration of significant sublethal effects at 75% effluent or lower, rather than a 40% reduction in response, to be the precursor for initiating the sublethal TRE.

b. *Date to Initiate Sublethal Fathead Minnow TRE*

SJRA commented that in the event that it must initiate a sublethal fathead minnow TRE, the date provided in the Modified Permit for doing so is incorrect. Petition at 59; Comments at 26. The Region failed to address this comment in the Response to Comments, but, in its response to the Petition, the Region recognized the incorrect date and stated that it will revise the Modified Permit to reflect that "[a] TRE for sublethal toxicity measured using the fathead minnow must be initiated upon the second retest failure." Region's Mem. at 70. Based on this representation, the Board denies review of this issue and directs the Region to make the necessary changes to correct the date.

V. *CONCLUSIONS OF LAW*

Based on the foregoing discussion, the Board concludes the following:

1. The administrative record does not reflect that the Region exercised "considered judgment" in determining that a sublethal *C. dubia* WET limit is necessary to implement the Texas WQS;

2. Because the Board concludes that the administrative record does not reflect that the Region exercised "considered judgment" in determining that a WET limit is necessary to implement the Texas WQS, the Board does not reach the merits of the permit conditions regulating the sublethal *C. dubia* WET limit;

3. The Region did not clearly err in requiring use of the NOEC approach to report fathead minnow WET test results to regulate WET in Modified Permit Parts I.A.1 and II.D;

4. As to Modifed Permit Part II.D (Introduction), the Region failed to articulate in the administrative record its analysis for the new conditions in the introductory paragraphs of the fathead minnow WET test reporting requirements; and

5. As to Modified Permit Part II.D.2.a.iii, the Region inadequately explained in the administrative record why a demonstration of significant sublethal effects at 75% effluent or lower, rather than a 40% reduction in response, is the precursor for initiating the sublethal TRE for fathead minnow.

VI. *ORDER*

NPDES Permit No. TX0054186 is remanded to the Region to provide further analysis of the statutory and regulatory basis for establishing the sublethal *C. dubia* WET limit. This analysis must include an articulation of what the Region considered to be the applicable narrative criterion of the Texas WQS – and why – and explain whether the TIE/TRE language in 30 Texas Administrative Code Section 307.6(e)(2)(D) is applicable, and if not, why not. The Region then must apply this legal analysis to the facts of this case.

The Region also must either delete the added reporting conditions in the Introduction to Modified Permit Part II.D (thereby eliminating any question as to whether the conditions are unduly burdensome) or provide an explanation of why

the conditions are appropriate.[21] Part II.D.2.a.iii of the Modified Permit is remanded to the Region to provide a reasonable basis for determining that a demonstration of significant sublethal effects at 75% effluent or lower, rather than a 40% reduction in response, is the precursor for initiating the sublethal TRE for fathead minnow. Consistent with the discussion in Part IV.B.3.b, *supra*, the Region is directed to make all necessary corrections to the erroneous sublethal fathead minnow TRE initiation dates listed in Modified Permit Part II.D.2.a.iii.[22]

Finally, the Board denies review of conditions in Modified Permit Parts I.A.1 and II.D requiring use of the NOEC approach to report fathead minnow WET test results.

So ordered.

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[21] The Board observes that some of the contested permit conditions establishing the *C. dubia* WET limit – of which the Board does not reach the merits here – parallel the remanded conditions pertaining to fathead minnow WET testing. To the extent that the Region's decision on remand includes WET testing using *C. dubia* or another indicator species, the Region should seek to conform any conditions intended to be parallel.

[22] An administrative appeal of the Region's decision on remand is required to exhaust administrative remedies under 40 C.F.R. § 124.19(f)(1). Any such appeal must be limited to the issues considered on remand and any modifications made to the Modified Permit as a result of the remand. With respect to the challenged conditions that pertain to the sublethal *C. dubia* WET limit, of which the Board does not reach the merits here, the Board specifically preserves SJRA's right to raise these arguments again in an appeal of the determination on remand.