IN RE CITY OF KEENE

NPDES Appeal No. 21-03

ORDER DENYING REVIEW

Decided June 17, 2022

Syllabus

The City of Keene, New Hampshire, ("City") petitions the Environmental Appeals Board ("Board") to review a Clean Water Act ("CWA" or "Act") National Pollutant Discharge Elimination System ("NPDES") permit ("Final Permit") issued by the United States Environmental Protection Agency Region 1 ("Region"). The Final Permit authorizes the City to discharge effluent from the Keene Wastewater Treatment Plant, a publicly owned treatment works, to the Ashuelot River in Swanzey, New Hampshire.

The issues before the Board are whether the Region clearly erred or abused its discretion with respect to three aspects of the permitting decision: (1) the pH effluent limit, (2) the aluminum effluent limit and denial of the City's request for a special condition related to aluminum, and (3) the denial of the City's request for a special condition related to copper.

Held: The Board concludes, based on the administrative record, that the City has not demonstrated that review of the Final Permit is warranted on any of the grounds presented. As such, the Board denies the petition for review in all respects.

1. *Effluent limit for pH*

The City's challenges to the pH limit fail either because of procedural reasons or because the City does not carry its burden of showing the Region clearly erred or abused its discretion in setting the limit.

The City fails to demonstrate that the Region clearly erred or abused its discretion in setting the pH limit without applying the natural causes exception in the state water quality standards for pH. The Region appropriately relied on New Hampshire's approved CWA section 303(d) list, which includes the Ashuelot River as impaired for pH, in determining that the low pH of the receiving water is not "due to natural causes" within the meaning of New Hampshire's water quality standards and the 303(d) listing methodology. New Hampshire's water quality standards define "naturally-occurring conditions" as

"conditions that exist *in the absence* of human influences," and the record supports the Region's conclusion that it was precluded from determining that the natural causes exception applied. Any uncertainty as to the relative contributions of natural and human-induced sources to the low pH of the receiving water does not alter the analysis where there is some human influence. The Region applied the water quality standards as written.

The City's argument that applying the existing water quality standards will allegedly result in harm to aquatic life is beyond the scope of a permit appeal to the Board. New Hampshire's water quality standards are developed through a state rulemaking process and then approved by EPA pursuant to section 303(c)(2) of the CWA and must protect designated uses including aquatic life. The City's claim here that the effluent limit harms aquatic life is fundamentally a challenge to the water quality standards. The City could have raised issues regarding harm in comments on, or in a proceeding challenging, the water quality standards. In any event, the City's arguments alleging harm to aquatic life are unsupported by the record. The Region responded to all significant comments and adequately explained its rationale for the pH limit.

The City's claim that the Region improperly deferred to the State instead of making its own determination regarding the effluent limit for pH is untimely and does not otherwise warrant review. The City did not raise the issue of deferral to the State in its initial petition, and, even if it had, the City has not demonstrated clear error or an abuse of discretion on this basis.

Challenges that the City presented at oral argument to the language of the Final Permit's special condition for pH are similarly untimely. Regardless, the City has not demonstrated that the Region abused its discretion by failing to include the requested language in the Final Permit.

2. *Effluent limit and requested special condition for aluminum*

The Region appropriately established an effluent limit for aluminum based on the aluminum criteria contained in New Hampshire's existing water quality standards. The Region's reliance on those standards, which have been approved by the Region, is consistent with the CWA and supported by the administrative record. The City's contention that the Region should, instead, calculate the aluminum limit based on recommended criteria in EPA's non-binding guidance, which New Hampshire may or may not choose to adopt, is contrary to the Act. In its response to comments, the Region detailed its basis for establishing the aluminum limit, and the City failed to address the Region's explanation. Any challenges to New Hampshire's water quality standards or the Region's approval of those standards are beyond the scope of an appeal to the Board, and the City's argument that the aluminum criteria in the State's water quality standards do not apply to waters with a low pH such as the Ashuelot River has not been preserved and nonetheless is without merit.

The Region gave due consideration to, but ultimately rejected, the City's request to add a special condition to the Final Permit related to a site-specific aluminum study. The Region's decision not to add the special condition, which would have pre-committed the Region to accept the results of a yet to be conducted study, is reasonable, consistent with the CWA, and supported by the record. Two new arguments concerning the request, which the City raised for the first time in its reply brief, are untimely and without merit. The City has presented no persuasive legal arguments as to why the Region's decision not to include the special condition constitutes clear error or an abuse of discretion.

3. *Requested special condition for copper*

The Region gave due consideration to, but ultimately rejected, the City's request for a special condition providing pre-authorization of a site-specific approach and acceptance of the results, in order to revise the permit limit based on the results. The Region's decision, and its explanation in its response to comments, that it will not commit to a future permitting outcome is reasonable, consistent with the CWA, and cogently explained. The City has failed to demonstrate that the Region clearly erred or abused its discretion in deciding not to add the requested special condition to the Final Permit.

Before Environmental Appeals Judges Aaron P. Avila, Wendy L. Blake, and Mary Kay Lynch.

Opinion of the Board by Judge Lynch:

I. *STATEMENT OF THE CASE*

The City of Keene, New Hampshire ("City") petitions the Environmental Appeals Board ("Board") to review a Clean Water Act ("CWA" or "Act") National Pollutant Discharge Elimination System ("NPDES") permit ("Final Permit") issued by the United States Environmental Protection Agency ("EPA" or "Agency") Region 1 ("Region") on September 13, 2021. The Final Permit authorizes the City to discharge effluent from the Keene Wastewater Treatment Plant ("Keene WWTP"), a publicly owned treatment works, to the Ashuelot River in Swanzey, New Hampshire.

The issues before the Board are whether the Region clearly erred or abused its discretion with respect to three aspects of the permitting decision: (1) the pH effluent limit, (2) the aluminum effluent limit and denial of the City's request for a special condition related to aluminum, and (3) the denial of the City's request for a special condition related to copper. For the reasons discussed below, the Board finds that the City has not demonstrated that the Region's permitting decision was

clearly erroneous or an abuse of discretion. Accordingly, the City's petition for review is denied.

II. *PRINCIPLES GOVERNING BOARD REVIEW*

Section 124.19 of Title 40 of the Code of Federal Regulations governs Board review of an NPDES permit. In any appeal from a permit decision issued under part 124, the petitioner bears the burden of demonstrating that review is warranted. *See* 40 C.F.R. § 124.19(a)(4). "[A] petition for review must identify the contested permit condition or other specific challenge to the permit decision and clearly set forth, with legal and factual support, petitioner's contentions for why the permit decision should be reviewed." *Id.* § 124.19(a)(4)(i). In considering a petition filed under § 124.19, the Board evaluates whether a petitioner has met threshold procedural requirements, including whether each issue raised has been preserved for Board review. 40 C.F.R. § 124.19(a)(2)-(4); *In re Gen. Elec. Co.*, 17 E.A.D. 434, 445 (EAB 2018). A petitioner satisfies the preservation requirement by demonstrating that the issues and arguments it raises on appeal were raised previously—either in comments submitted on the draft permit during the public comment period or at a public hearing. 40 C.F.R. §§ 124.13,.19(a)(4)(ii); *see Gen. Elec.*, 17 E.A.D. at 445. It is not enough for a petitioner to simply repeat comments previously submitted on the draft permit. A petitioner must demonstrate why the permit issuer's response to those objections is clearly erroneous or warrants review. 40 C.F.R. § 124.19(a)(4)(ii); *see, e.g.*, *In re City of Taunton Dep't of. Pub. Works*, 17 E.A.D. 105, 110-11 (EAB 2016), *aff'd*, 895 F.3d 120 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 1240 (2019).

The Board has discretion to grant or deny review of a permit decision. 40 C.F.R. § 124.19; *see In re Avenal Power Ctr., L.L.C.*, 15 E.A.D. 384, 394-95 (EAB 2011) (citing Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980)), *vacated & remanded on other grounds sub nom. Sierra Club v. EPA*, 762 F.3d 971 (9th Cir. 2014). Ordinarily, the Board will deny a petition for review and thus not remand the permit unless the underlying permit decision is based on a clearly erroneous finding of fact or conclusion of law, or an exercise of discretion that the Board, in its discretion, should review. 40 C.F.R. § 124.19(a)(4)(i). In considering whether to grant or deny a petition for review, the Board is guided by the preamble to the regulations authorizing appeal under part 124, in which the Agency stated that the Board's power to grant review "should be only sparingly exercised," and that "most permit conditions should be finally determined at the [permit issuer's] level." Consolidated Permit Regulations, 45 Fed. Reg. at 33,412.

When evaluating a challenged permit decision for clear error, the Board examines the administrative record that serves as the basis for the permit to determine whether the permit issuer exercised "considered judgment." *E.g.*, *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 191, 224-25 (EAB 2000); *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417-19 (EAB 1997). The permit issuer must articulate with reasonable clarity the reasons supporting its conclusion and the significance of the crucial facts it relied on when reaching its conclusion. *E.g.*, *In re Shell Offshore, Inc.*, 13 E.A.D. 357, 386 (EAB 2007). As a whole, the record must demonstrate that the permit issuer "duly considered the issues raised in the comments" and ultimately adopted an approach that "is rational in light of all information in the record." *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342 (EAB 2002); *accord In re City of Moscow*, 10 E.A.D. 135, 142 (EAB 2001); *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567-68 (EAB 1998), *pet. for review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999). Similarly, the Board will uphold a permitting authority's reasonable exercise of discretion if that decision is cogently explained and supported in the record. *See, e.g.*, *In re Guam Waterworks Auth.*, 15 E.A.D. 437, 443 n.7 (EAB 2011) (discussing abuse of discretion standard); *Ash Grove*, 7 E.A.D. at 397 ("[A]cts of discretion must be adequately explained and justified.").

On matters that are fundamentally technical or scientific in nature, the Board typically defers to a permit issuer's technical expertise and experience, as long as the permit issuer adequately explains its rationale and supports its reasoning in the administrative record. The Board does not find clear error simply because the petitioner presents a difference of opinion or alternative theory. *In re City of Lowell*, 18 E.A.D. 115, 132 (EAB 2020); *In re Russell City Energy Ctr., L.L.C.*, 15 E.A.D. 1, 12, 39-42, 66 (EAB 2010), *pet. for review denied sub nom. Chabot-Las Positas Cmty. Coll. Dist. v. EPA*, 482 F. App'x 219 (9th Cir. 2012); *In re Dominion Energy Brayton Point, L.L.C.*, 12 E.A.D. 490, 510, 560-62, 645-47, 668, 670-74 (EAB 2006); *see, e.g.*, *NE Hub Partners*, 7 E.A.D. at 570-71.

III. *STATUTORY AND REGULATORY FRAMEWORK*

A. *Relevant CWA Provisions and Implementing Regulations*

Congress enacted the CWA "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a), 33 U.S.C. § 1251(a). To help achieve this objective, the Act prohibits the discharge of pollutants into the waters of the United States, unless authorized by an NPDES permit or other specified provision of the Act. *See* CWA §§ 301(a), 402, 33 U.S.C.

§§ 1311(a), 1342. Section 402 of the CWA authorizes EPA (or the state or tribe, in approved state or tribal programs) to issue permits for the discharge of pollutants, provided that certain statutory requirements are satisfied. CWA § 402, 33 U.S.C. § 1342. The Region issues NPDES permits for discharges in the State of New Hampshire.

B. *NPDES Permits, Effluent Limitations, and Water Quality Standards and Criteria*

The CWA and its implementing regulations prohibit EPA from issuing a permit that does not ensure compliance with the water quality standards of both the state where the discharge originates and all affected states. *See* CWA §§ 301(b)(1)(C), 401(a)(1)-(2), 33 U.S.C. §§ 1311(b)(1)(C), 1341(a)(1)-(2); 40 C.F.R. §§ 122.4(d), .44(d)(1). Specifically, the regulations require that the permit include conditions "necessary" to "[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality." 40 C.F.R. § 122.44(d)(1). And the CWA's anti-backsliding requirements prohibit a permit from being renewed, reissued, or modified with less stringent limitations or conditions than those contained in the previous permit except in compliance with one of the specified exceptions to those requirements. CWA §§ 303(d)(4), 402(o), 33 U.S.C. §§ 1313(d)(4), 1342(o); 40 C.F.R. § 122.44(*l*).

All permits must include effluent limits that control pollutant discharges by restricting the types and amounts of particular pollutants a permitted entity may lawfully discharge. CWA §§ 301, 303, 304(b), 402, 33 U.S.C. §§ 1311, 1313, 1314(b), 1342; 40 C.F.R. pts. 122, 125, 131. The CWA provides for two different kinds of permit effluent limitations: those based on the technology available to control or treat a pollutant and those necessary to attain and maintain water quality standards that apply to the receiving waterbody. CWA § 301(b), 33 U.S.C. § 1311(b). Technology-based effluent limitations generally are established on an industrywide basis, whereas water quality-based effluent limitations, such as those relevant in this matter, are developed in the context of individual permit decisions to meet water quality standards applicable to the receiving waters. *Id.*

Water quality standards are promulgated by states and subject to EPA approval. CWA § 303(c), 33 U.S.C. § 1313(c). Water quality standards include three components: (1) the "designated uses" of a water body, such as public drinking supply, recreation, or wildlife habitat; (2) "water quality criteria," expressed in numeric or narrative form, specifying the quantities of various

pollutants that may be present in the water body without impairing the designated uses; and (3) an "antidegradation" provision that protects existing uses and high-quality waters. *See* CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.10-.12. States are required to review their water quality standards at least once every three years and to modify existing standards or adopt new standards as appropriate. CWA § 303(c)(1), 33 U.S.C. § 1313(c)(1); 40 C.F.R. § 131.20(a).[1] The results of the review and any revisions to the standards must be submitted to EPA for review, and the Agency must approve the modifications before they can take effect. CWA § 303(c)(2), 33 U.S.C. § 1313(c)(2); 40 C.F.R. § 131.20(c).

In a separate process under section 304(a), the Agency publishes and periodically updates guidance containing recommendations for states to use in establishing criteria for surface water quality that accurately reflect the latest scientific knowledge on the impacts of pollutants on human health and the environment. CWA § 304(a), 33 U.S.C. § 1314(a). As part of its triennial review of water quality standards, states must consider, but need not adopt, EPA's recommended criteria. 40 C.F.R. §§ 131.11(b), .20(a). States may incorporate EPA's recommended criteria, incorporate adjusted criteria that reflect site-specific conditions, or rely on other scientifically defensible methods that protect designated uses. *Id*. § 131.11. An existing EPA-approved water quality standard remains in effect until EPA approves a change or promulgates a more stringent water quality standard. *Id.* § 131.21(e).

C. *Impaired Waters and Total Maximum Daily Loads*

In addition to regulating discharges by requiring effluent limits in NPDES permits, CWA section 303(d) requires states to undertake separately a process to

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[1] The applicable regulation governing state review and revision of water quality standards provides as follows:

> The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards * * * and, as appropriate modifying and adopting standards. * * * [I]f a State does not adopt new or revised criteria for parameters for which EPA has published new or updated CWA section 304(a) criteria recommendations, then the State shall provide an explanation when it submits the results of its triennial review to the Regional Administrator.

40 C.F.R. § 131.20(a).

identify waters where the technology-based effluent limitations and other CWA pollution controls are not stringent enough to achieve applicable water quality standards. CWA § 303(d), 33 U.S.C. § 1313(d). The identified waters are commonly referred to as "impaired" waters and are prioritized on a list that is commonly referred to as a "303(d) list." The CWA and its implementing regulations require states to submit an updated 303(d) list to EPA for approval every two years and require EPA to approve or disapprove that list. CWA § 303(d)(2), 33 U.S.C. § 1313(d)(2); 40 C.F.R. § 130.7(d).

Once a water is identified on the 303(d) list, the state begins a planning process for bringing those waters into compliance with water quality standards. This process includes setting priorities for establishing total maximum daily loads ("TMDLs") for individual pollutants in the impaired waters. CWA § 303(d)(1)(C), 33 U.S.C. § 1313(d)(1)(C). Where TMDLs have not been established, water quality-based effluent limitations in NPDES permits still must comply with applicable water quality standards. In discussing the relationship between NPDES permitting and TMDLs, EPA has explained that the applicable NPDES rules require the permitting authority to establish necessary effluent limits, even if 303(d) listing determinations and subsequent TMDLs lag behind. NPDES; Surface Water Toxics Control Program, 54 Fed. Reg. 23,868, 23,878-79 (June 2, 1989); *see In re City of Taunton Dep't of. Pub. Works*, 17 E.A.D. 105, 115 (EAB 2016), *aff'd*, 895 F.3d 120 (1st Cir. 2018), *cert. denied.*, 139 S. Ct. 1240 (2019); *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 604-05 (EAB 2010) (expressly rejecting idea that permitting authority cannot proceed to determine permit effluent limits where TMDL has yet to be established), *pet. for review denied*, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 569 U.S. 972 (2013).

IV. *FACTUAL AND PROCEDURAL SUMMARY*

A. *City of Keene Wastewater Treatment Plant and Receiving Waters*

The City owns and operates the Keene WWTP located in Swanzey, New Hampshire. City of Keene, N.H., *Wastewater Treatment Plant: NPDES Permit No. NH0100790 Draft Permit Comments*, at IN-1 (July 17, 2020) (A.R. C.3) ("City's Cmts."); Region 1, U.S. EPA *NPDES Permit No. NH0100790 Fact Sheet*, at 1 (May 20, 2020) (A.R. B.4) ("Fact Sheet"). The Keene WWTP collects and treats sanitary and industrial wastewater from the City of Keene and the Towns of

Marlborough and Swanzey.[2] Fact Sheet at 12. The Keene WWTP is designed to treat up to six million gallons per day of wastewater. *Id.* The average flow, however, is approximately 3,490,000 gallons per day, to which the Towns contribute approximately 175,000 gallons per day. *See id.* at 12-13.

The Keene WWTP treats wastewater using activated sludge aeration, a process whereby the wastewater is aerated and then pumped into clarifiers in which sludge settles out of the wastewater. *Id.* at 13. The aeration and settling process is repeated and then the remaining wastewater is disinfected with ultraviolet light. *Id.* Since 1997, the City has also adjusted the pH of the effluent using a chemical feed system. City's Cmts. at 3-1. Following treatment, the wastewater flows through an underground pipe for approximately 500 feet before being discharged via two pipes approximately fifty feet apart to the Ashuelot River. Fact Sheet at 13.

The Ashuelot River runs through southwestern New Hampshire, from its headwaters in Washington, New Hampshire to its confluence with the Connecticut River in Hinsdale, New Hampshire. *Id.* at 14; N.H. Dep't of Envtl. Servs., *N.H. Volunteer River Assessment Program 2010 Ashuelot River Watershed Water Quality Report*, at 13 (Feb. 2011) (A.R. C.3.g) ("2010 VRAP Report"). The Connecticut River ultimately flows to the Long Island Sound. Fact Sheet at 14.

B. *Relevant New Hampshire Water Quality Standards, Criteria, and Impairment Listings*

In accordance with the CWA, New Hampshire has established water quality standards for its waters, including the Ashuelot River. *See generally* N.H. Code Admin. R. Ann. Ch. Env-Wq 1700. Under these standards, waters are classified into two categories: (1) Class A waters that have the highest quality, and (2) Class B waters that have the second highest quality. N.H. Rev. Stat. Ann. § 485-A:8; N.H. Code Admin. R. Ann. Env-Wq 1703.01(a); *see also* N.H. Dep't of Envtl. Servs., *2018 Section 305(b) and 303(d) Consolidated Listing and Assessment Methodology*, at 5 (Jan. 3, 2020) (A.R. G.3) ("2018 CALM"); N.H. Dep't of Envtl.

[2] The Towns of Marlborough and Swanzey are listed as co-permittees because they own and operate wastewater collection systems that flow into the Keene WWTP. Fact Sheet at 1, 12. The Towns are therefore required to comply with certain permit requirements regarding operation and maintenance of the collection system and prevention of discharges from the collection system. *Id.* at 12. Neither Town has filed a petition for review of the Final Permit.

Servs., *2020 Section 305(b) and 303(d) Consolidated Listing and Assessment Methodology*, at 5 (Oct. 16, 2020) (A.R. G.2) ("2020 CALM"). Discharge of sewage or waste into Class A waters is prohibited, while wastewater may be disposed of into Class B waters provided it has received adequate treatment and will not be harmful to aquatic life. N.H. Rev. Stat. Ann. § 485-A:8(I)- (II). The segment of the Ashuelot River into which the City discharges is a Class B water.[3] Fact Sheet at 14. Class B waters are designated to be used for fishing, swimming, other recreation, and, with adequate treatment, for drinking water supplies. N.H. Rev. Stat. Ann. § 485-A:8(II). In addition, all surface waters must "provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife, and for recreation in and on the surface waters." N.H. Code Admin. R. Ann. Env-Wq 1703.01(c).

To support these designated uses, New Hampshire has developed criteria for various pollutants and characteristics. *Id.* pt. 1703. New Hampshire's criterion for pH, included in the State's water quality standards, provides that "the pH of class B waters shall be 6.5 to 8.0 unless due to natural causes."[4] *Id.* at 1703.18(b). The State's water quality standards regulation defines "[n]aturally-occurring conditions" to mean "conditions that exist in the absence of human influences." *Id.* at 1702.28. Criteria for toxic substances include acute and chronic thresholds for protection of freshwater aquatic life. *See id*. at 1703.21(b) tbl. 1703-1. For aluminum, the acute criterion in New Hampshire's water quality standards is 750 micrograms per liter (μg/L) and the chronic criterion is 87 μg/L, expressed in terms of acid-soluble aluminum. *Id*. at 1703.21 tbl. 1703-1, .22(s). These criteria are based on EPA's 1988 recommended Ambient Water Quality Criteria for Aluminum that New Hampshire incorporated into the State's water quality standards. *See id*. at 1703.21(b); Office of Water, U.S. EPA, *Ambient Water Quality Criteria for Aluminum*, at 10 (Aug. 23, 1988) (A.R. J.2) ("1988 Criteria"). For copper, the acute

[3] The segment runs from the Keene WWTP to the confluence of the Ashuelot River with the South Branch of the Ashuelot River. Fact Sheet at 7.

[4] As background, "pH is an expression of hydrogen ion (H+) activity in an aqueous solution, using a logarithmic scale of 0 to 14 standard units. Solutions with pH 7.0 are neutral, while those with pH less than 7.0 are acidic and those with pH greater than 7.0 are basic." *In re Town of Concord Dep't of Pub. Works*, 16 E.A.D. 514, 528-29 n.9 (EAB 2014); Fact Sheet at 22.

criterion in New Hampshire's water quality standards is 2.9μg/L, and the chronic criterion is 2.3μg/L. N.H. Code Admin. R. Ann. Env-Wq 1703.21(b) tbl. 1703-1.

As relevant here, New Hampshire reviewed and updated its water quality standards in 2016. Vol. XXXVI No. 21 N.H. Rulemaking Reg. 1 (May 26, 2016); Vol. XXXVI No. 49 N.H. Rulemaking Reg. 21 (Dec. 8, 2016). New Hampshire submitted the revised standards to EPA on December 12, 2016, and EPA approved the standards on January 29, 2021. Letter from Ken Moraff, Dir., Water Div., Region 1, U.S. EPA, to Robert R. Scott, Comm'r, N.H. Dep't of Envtl. Servs. 1 (Jan. 29. 2021) (A.R. H.1) ("Standards Approval Letter"). As noted above, these standards remain in effect until EPA approves revised standards. *See* 40 C.F.R. § 131.21(e).

New Hampshire has determined that the segment of the Ashuelot River to which the Keene WWTP discharges does not meet the water quality standards for pH and copper. Fact Sheet at 7. The State submitted—and on February 25, 2020, EPA approved—New Hampshire's 2018 CWA section 303(d) list of water quality-impaired segments.[5] N.H. Dep't of Envtl. Servs., *New Hampshire 2018 303(d) List of Impaired Waters*, at 28 (2018) (A.R. G.1) ("303(d) List"); Letter from Ken Moraff, Dir., Water Div., Region 1, U.S. EPA, to Robert R. Scott, Comm'r, N.H. Dep't of Envtl. Servs. (Feb. 25, 2020) (A.R. H.3) ("303(d) List Approval Letter"). The State listed the segment from the Keene WWTP to the South Branch as "marginally impaired" for pH. Fact Sheet at 14; 303(d) List at 28; 2018 CALM at 14; 2020 CALM at 15. The pH impairment has a low TMDL priority, and the State has not yet developed a TMDL for the segment. 303(d) List at 28; Fact Sheet at 7, 14. The State determined there was insufficient information to list the segment as impaired due to copper. Fact Sheet at 14.

As set forth in more detail below, the Region established effluent limits for the Keene WWTP in order to ensure compliance with the State's water quality standards. *See* CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C). The Region relied on the State's 303(d) impairment listing for the receiving water in establishing the pH limit. *See* Region 1, U.S. EPA, *Response to Comments for*

[5] The 303(d) list is based on water quality data from various sources including data collected by the State and through the Volunteer River Assessment Program, which uses trained volunteers to collect water quality data. 2018 CALM at 17-19; *e.g.*, 2010 VRAP Report at 10.

NPDES Permit No. NH0100790, at 22 (Sept. 13, 2021) (A.R. A.2) ("Resp. to Cmts."). The aluminum limit resulted from the Region's determination that a reasonable potential exists that the discharge from the Keene WWTP will cause or contribute to an exceedance of the applicable water quality criteria. Fact Sheet at 32. The Region noted that the receiving water has been identified as violating the water quality standard for copper for aquatic life. *Id*. at 7. The Region previously determined that discharge of effluent from the Keene WWTP has the reasonable potential to cause or contribute to exceedances of the water criteria for copper and retained a copper limit. *Id*. at 32.

C. *Permit History*

The Keene WWTP is authorized to discharge treated effluent to the Ashuelot River pursuant to an NPDES permit issued by the Region. The Region last issued a permit to the City in 1994 and again in 2007 before issuing the Final Permit, dated September 13, 2021, under challenge in this appeal. Region 1, U.S. EPA, *Final Permit, NPDES Permit No. NH0100790* (Apr. 15, 1994) (A.R. B.16.g) ("1994 Permit"); Region 1, U.S. EPA, *Final Permit, NPDES Permit No. NH0100790* (Aug. 24, 2007) (A.R. B.16.a) ("2007 Permit").[6]

On June 21, 2012, the City applied for reissuance of the 2007 Permit. Fact Sheet at 4. The Region deemed the City's application complete and administratively extended the permit during the permit review process. *Id.*; *see* 40 C.F.R. § 122.6(a). On May 20, 2020, the Region issued a draft permit.

[6] The City petitioned for review of the 2007 Permit, raising objections to the phosphorus, copper, lead, and zinc limits. *In re Keene Wastewater Treatment Plant*, NPDES Appeal No. 07-18, at 2 (EAB Mar. 19, 2008) (Order Denying Review) ("*Keene I*"). After the City filed its petition challenging the 2007 Permit, the Region withdrew the challenged effluent limits for copper, lead, and zinc. *See id.* The Board dismissed the City's petition with regard to the withdrawn limits, and because the Region withdrew the challenged effluent limits for copper, lead, and zinc, the 1994 Permit limits for those pollutants remained in effect for the entire term of the 2007 Permit. *See In re City of Keene Wastewater Treatment Facility*, NPDES Appeal No. 07-18, at 1-2 (EAB Dec. 5, 2007) (Order Noticing Partial Withdrawal of Permit and Dismissing Portion of Petition for Review as Moot); Region 1, U.S. EPA, *Response to Comments for NPDES Permit No. NH0100790*, at 29 (Sept. 13, 2021) (A.R. A.2). Subsequently, the Board denied the City's challenge to the phosphorus limits, holding that the City had failed to confront the Region's response to comments on that issue. *Keene I* at 18-19, 25-26.

Region 1, U.S. EPA, *Draft Permit, NPDES Permit No. NH0100790* (May 20, 2020) (A.R. B.3) ("Draft Permit"). Relevant to this appeal, the Draft Permit retained the 2007 Permit limit for pH, added an effluent limit for aluminum, and included an effluent limit for copper based on the inclusion of a copper limit in prior permits.[7] *See* Fact Sheet at 29-32. The Draft Permit also included two special conditions: one regarding potential modification of the pH limit,[8] and the other establishing, among other things, a compliance schedule for the aluminum limit that delays its

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[7] As the Region explained in its response to comments, the 2007 limits for copper never took effect because the Region withdrew them following the City's 2007 appeal. Resp. to Cmts. at 29. Thus, the copper limits established in the 1994 Permit—6.2 μg/L (chronic) and 8.2 μg/L (acute)—have remained in effect, and, at the City's request, the Region corrected the Final Permit to retain those existing limits. *Id.*; *see* City's Cmts. at 5-1. As the Region explained in the response to comments, the Draft Permit mistakenly used chronic and acute limits for copper of 5.9 μg/L and 7.9 μg/L respectively. Resp. to Cmts. at 29. As discussed in footnote 13 below, the Region corrected this mistake in the Final Permit.

[8] The pH special condition in the Draft Permit provided:

> The pH range may be modified if the Permittee satisfies the conditions set forth in Part I.I.5 below. Upon notification of an approval by [the New Hampshire Department of Environmental Services ("NHDES")], EPA will review and, if acceptable, will submit written notice to the Permittee of the permit change. The modified pH range will not be in effect until the Permittee receives written notice from EPA.

Draft Permit at 17. Part I.I.5 of the Draft Permit stated:

> The pH range of 6.5 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the Permittee can demonstrate to NHDES-[Water Division]: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the Permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-[Water Division]. In no case, shall the above procedure result in pH limits outside the range of 6.0 – 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 C.F.R. § 133.102(c).

Id. at 22.

effective date for three years.[9] Draft Permit at 17, 22. When the Region issued the Draft Permit in May 2020, it requested public comment on the Draft Permit,

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[9] The aluminum special condition in the Draft Permit provided:

> The new effluent limit for total aluminum shall be subject to a schedule of compliance whereby the limit takes effect three years after the effective date of the permit.[Note] For the period starting on the effective date of this permit and ending three (3) years after the effective date, the Permittee shall report the monthly average and daily maximum aluminum concentration on the monthly [discharge monitoring report]. After this initial three (3) year period, the Permittee shall comply with the monthly average total aluminum limit of 108 μg/L ("final aluminum effluent limit"). The Permittee shall submit an annual report due by January 15th of each of the first three (3) years of the permit that will detail its progress towards meeting the final aluminum effluent limit.
>
> At a minimum, the Permittee shall include the following in the annual report:
>
> a. An evaluation of all other potentially significant sources of aluminum in the sewer system and alternatives for minimizing these sources.
>
> b. An evaluation of alternative modes of operation at the wastewater treatment facility in order to reduce the effluent levels of aluminum
>
> If during the three-year period after the effective date of the permit, New Hampshire adopts revised aluminum criteria, but EPA has not yet approved such criteria, then the Permittee may request a permit modification, pursuant to 40 C.F.R. § 122.62(a)(3), for a further delay in the effective date of the final aluminum effluent limit. If new criteria are approved by EPA before the effective date of the final aluminum effluent limit, the Permittee may apply for a permit modification, pursuant to 40 C.F.R. § 122.62(a)(3), to revise the time to meet the final aluminum effluent limit and/or for revisions to the permit based on whether there is reasonable potential for the facility's aluminum discharge to cause or contribute to a violation of the newly approved aluminum criteria.
>
> [Note]: The final effluent limit of 108 μg/L for aluminum may be modified prior to the end of the three-year compliance schedule if warranted by the new criteria and a reasonable potential analysis, and if

initially through June 18, 2020, and later extended the comment period until July 20, 2020. N.H. Dep't of Envtl. Servs. and U.S. EPA Region 1, *Extension of Public Notice* (June 18, 2020) (A.R. B.7).

The City and two other entities timely submitted comments on the Draft Permit during the comment period.[10] Resp. to Cmts. at 1. Some of the City's comments are relevant to this appeal. *First*, the City asked the Region to add language to the pH special condition confirming that EPA would accept the results of a site-specific study and to consider data on the pH of the receiving water. City's Cmts. at 3-1 to 3-4. The City asserted that the majority of pH data that it presented to EPA had a pH below 6.5 Standard Units ("S.U.") and argued that the disparity between the pH of the receiving water and the pH of the Keene WWTP effluent could create a curtain wall and adversely impact fish migration routes. *Id*. *Second*, the City requested that the Region delete the proposed effluent limit for aluminum and add another special condition to the Final Permit related to the collection of site-specific data on aluminum in the receiving water. *Id.* at 4-1 to 4-2. *Third*, the City requested that the Region clarify the permit limit for copper and add a special condition related to revising the copper limit to reflect site-specific criteria. *Id.* at 5-1 to 5-2.

On September 13, 2021, the Region issued the Final Permit along with its response to comments document. Region 1, U.S. EPA, *Final Permit, NPDES Permit No. NH0100790* (Sept. 13, 2021) (A.R. A.1) ("Final Permit"); Resp. to Cmts. The Final Permit retained the pH effluent limit of 6.5 to 8.0 S.U. from the 2007 Permit and the pH special condition language that was in the Draft Permit. Final Permit at 3, 17, 22. For aluminum, the Final Permit included an average monthly (i.e., chronic) effluent limit of 109 μg/L total recoverable aluminum based

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> consistent with anti-degradation requirements. Such a modification would not trigger anti-backsliding prohibitions, as reflected in CWA § 402(o) and 40 C.F.R. § 122.44(*l*), provided that such modification is finalized before the final limit takes effect.

Draft Permit at 17 (the quoted footnote in the Draft Permit was mistakenly numbered "3"—the numbering was corrected to "2" in the Final Permit).

[10] The other two commenters were the Connecticut Department of Energy and Environmental Protection and the Ashuelot River Local Advisory Committee, an organization representing ten towns along the Ashuelot River corridor. Resp. to Cmts. at 1, 46.

on the State's existing water quality standards[11] and retained the special condition that, among other things, established a three-year compliance schedule for the limit.[12] *Id.* at 3, 17. For copper, the Final Permit included an average monthly (chronic) limit of 6.2 μg/L and a daily maximum (acute) limit of 8.2 μg/L for total recoverable copper.[13] *Id.* at 3. The Region declined to add the special condition regarding a site-specific study and a potential site-specific effluent limit for aluminum that the City had requested in its comments. The Region also did not

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[11] The Draft Permit included a slightly more stringent effluent limit for total recoverable aluminum of 108 μg/L. Draft Permit at 3. As the Region explained in its response to comments, it revised the limit upward to 109 μg/L in the Final Permit based on its revised estimate of the Ashuelot River's estimated 7Q10 low flow. Resp. to Cmts. at 18; *see also* EPA Region 1's Resp. to the Pet. for Review 13 (Jan. 15, 2021) ("Resp. Br."). The "7Q10 low flow" is the mean low flow over seven consecutive days that occurs, on average, once every ten years. Fact Sheet at 15. Although the City challenges the Final Permit's inclusion of the aluminum limit, it does not challenge the Region's recalculation of the limit based on the revised low flow estimate.

[12] In its response to comments, the Region stated that it established the compliance schedule because the aluminum limit is a new requirement for the City and explained that the City may apply to further extend the effective date of the aluminum limit "under certain circumstances." Resp. to Cmts. at 25. Those circumstances relate to the possibility that the State may update its existing water quality criteria for aluminum. In accordance with section 304(a) of the CWA, 33 U.S.C. § 1314(a), EPA most recently updated its recommended Ambient Water Quality for Aluminum in 2018. *See* Office of Water, U.S. EPA, *Final Aquatic Life Ambient Water Quality Criteria for Aluminum* (Dec. 2018) (A.R. J.1). However, New Hampshire's existing criteria are based on the Agency's previous recommendations, which were issued in 1988 and that are incorporated into the State's water quality standards. *See* Resp. to Cmts. at 25. In recognition that the State may, during the three-year compliance period, revise its standards to reflect the Agency's 2018 guidance, the special condition includes a process whereby the City may either seek a further extension of the effective date of the aluminum limit or request a modification of the limit, if warranted, should the State do so. Final Permit at 17; Resp. to Cmts. at 25.

[13] As discussed in footnote 7, above, the Region corrected the Final Permit to retain the effluent limits for copper that are currently in existence, 6.2 μg/L (chronic) and 8.2 μg/L (acute). *See* Resp. to Cmts. at 29-30. The Region explained in its response to comments that it recalculated the mass balance equation used for its reasonable potential analysis by inputting the existing limits and determined that "more stringent limits are not necessary." *Id.* at 30.

add the special condition requested for copper. *See* Resp. to Cmts. at 30-31. The City's petition for review followed issuance of the Final Permit.[14]

V. *ANALYSIS*

The City, in its petition, argues that the Region clearly erred or abused its discretion with regard to three provisions in the Final Permit. First, the City argues that the Region failed to consider its comments in establishing the pH effluent limit in the Final Permit and requests the Board impose a limit of 6.0 to 8.0 S.U. instead of 6.5 to 8.0 S.U.[15] Second, the City seeks review of the aluminum effluent limit

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[14] The City filed a Notice of Appeal on September 24, 2021, together with an unopposed motion for an extension of time to file its opening brief. The Board granted the motion, and the City filed its petition for review on November 15, 2021. The Region filed its response brief on December 15, 2021, and, pursuant to an order granting an extension of time, the City filed its reply brief on January 6, 2022. The Region sought leave to file a surreply, arguing that the City raised new arguments in its reply brief, contrary to the regulations governing permit appeals. *See* 40 C.F.R. § 124.19(c). Without deciding whether the reply brief raised new arguments, the Board granted the motion for leave, and the Region filed its surreply brief on February 2, 2022. The Board heard oral argument via videoconference on April 7, 2022.

[15] The City's requested relief related to pH has shifted from what was in its comments to the relief requested in its petition for review. In its comments on the Draft Permit, the City requested additional language in the Final Permit "indicating that development of a site-specific study to evaluate if either of the written conditions apply to the City's discharge is an accepted approach" and including "confirmation that EPA shall accept the results of the study." City's Cmts. at 3-1. The petition for review, however, seeks remand to the Region for review of the record and "imposition of 6.0 to 8.0 S.U. pH range instead of 6.5 to 8.0 S.U[.]" Pet. at 27. At oral argument, Counsel for the City indicated that the City is challenging both the pH limit and the language of the pH special condition. Oral Arg. Tr. at 13. This may be the City's current position, but it remains the case that the City's comments on the Draft Permit nowhere argued for the imposition of 6.0 to 8.0 S.U. pH range instead of 6.5 to 8.0 S.U. It was not until the petition filed with the Board that the City made this specific request. In fact, as discussed below, the City's comments lack the specificity and information necessary to support such a permit limit. And while the City collected and submitted data as part of it comments, the data suffers from a lack of specificity, including information about collection methods, precise

and the Region's decision not to include the City's requested special condition for aluminum. Third, the City argues that the Region should have included a special condition for copper. The Region challenges the petition on threshold procedural requirements under 40 C.F.R. part 124 as well as the merits. The Board will address any threshold procedural failures in the context of each of the three challenges to the permit. For the reasons explained below, the Board concludes, after a thorough consideration of the administrative record and the arguments raised by the parties, that the City's arguments fail for procedural reasons in some instances, and that the City does not carry its burden of demonstrating that the Region clearly erred, abused its discretion, or that review is otherwise warranted on any of the grounds presented.

A. The City Has Not Demonstrated That the Region Clearly Erred or Abused Its Discretion in Setting the pH Limit

The City argues that the natural causes exception in the state water quality standards for pH applies because, it asserts, low pH in the Ashuelot River is "naturally occurring." City of Keene Petition for Review 15-16 (Nov. 15, 2021) ("Pet."). The City clarified its position that the pH level it references "is (at the very least in part) due to natural causes." City of Keene's Reply Brief in Support of Petition for Review 5 (Jan. 6, 2022) ("Reply Br."). While the parties do not appear to dispute that the majority of samples for pH in the receiving water is less than the lower bound of the pH range in the State's water quality standards for class B waters, the parties disagree on the cause of the low pH and the Region's application of the State's water quality standards. *See* EPA Region 1's Response to Petition for Review 16 (Dec. 15, 2021) ("Resp. Br."). The Region based the permit limit for pH on New Hampshire's approved 303(d) list, which included the Ashuelot River as impaired for pH. The Region first argues that the 303(d) listing alone is sufficient evidence that the receiving water's low pH is not due to "natural causes" because if the low pH was due to "natural causes" the Ashuelot River would not be on the list as impaired for pH as it would not be in violation of the

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locations for the City's 2018 testing data, and other relevant parameters. Moreover, there is no information submitted by the City that explains the reason why some data samples are low pH values and whether the low values are due to natural causes. *See* City's Cmts. at 3-1 to 3-4. As explained in detail below, no information in the City's comment on pH, including the data submitted, would cause the Board to override the Region's reliance on the 2018 303(d) impairment determination and a more recent NHDES determination on impairment.

State's water quality standard. The Region maintains that the 303(d) listing of the Ashuelot River is dispositive of the pH impairment and that it has no obligation in a permitting proceeding to "look behind the face of a 303(d) listing to determine the precise causes of impairment." *Id*. at 21. The Region further maintains that because of the 303(d) impairment listing, it was bound to apply the established numeric water quality range for pH, and this appeal is an attack on the 303(d) listing decision and established water quality standard. *Id.* at 19-21. The Region argues, among other things, that the City's challenge to the 303(d) listing and water quality standards are beyond the scope of this appeal. *Id.* at 20-21. As explained below, we find that the City's arguments on the pH range fail either because of procedural reasons or because the City does not carry its burden of showing that the Region clearly erred or abused its discretion in setting the pH limit.

1. *The Region Properly Relied on the 303(d) List*

The City contends that the Region erred in establishing the pH limit because the Region failed to consider information presented in the City's comments on the Draft Permit, which the City argues demonstrates the "naturally occurring" low pH of the receiving water. Pet. at 16. In its comments on the Draft Permit, the City stated that the pH of a majority of samples of the receiving water was below 6.5 S.U. and requested that the Region consider data the City and the Voluntary River Assessment Program ("VRAP") collected documenting the low pH. City's Cmts. at 3-1 to 3-4, app. B. The City argued that the low pH was naturally occurring, citing language in the 2007 through 2010 VRAP reports stating "lower pH measurements are likely the result of natural conditions such as the soils, geology, or the presence of wetlands in the area." *Id.* at 3-2 (emphasis omitted). In response, the Region stated that the upstream pH values do not represent a natural condition because, as noted above, the receiving water is impaired for pH. Resp. to Cmts. at 22. The City fails to demonstrate that this conclusion was clearly erroneous or an abuse of discretion.

The Board has previously held that when determining the need for a water quality-based effluent limitation, a region may properly rely on a CWA section 303(d) impairment listing. *See In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 597 (EAB 2010), *pet. for review denied*, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 569 U.S. 972 (2013). Development of the 303(d) list is a process separate from the issuance of NPDES permits and has its own opportunities for public comment. *See, e.g.*, 303(d) List Approval Letter attach. at 3 (noting that New Hampshire accepted public comments on a draft version of

its 2018 303(d) list).[16] EPA must also review and approve or disapprove the 303(d) list, and EPA approved New Hampshire's list. 303(d) List Approval Letter at 1. Accordingly, a permit appeal such as this is not the proper forum to challenge the State's 303(d) listing decisions or EPA's approval of the State's 303(d) list. *In re Ariz. Pub. Serv. Co.*, 18 E.A.D. 245, 301 (EAB 2020) ("The Board has made clear that it is not the proper forum for challenges to section 303 actions."); *In re City of Moscow*, 10 E.A.D. 135, 160-61 (EAB 2001) (Board jurisdiction "does not ordinarily extend to considerations of the validity of prior, predicate regulatory decisions that are reviewable in other fora").

Furthermore, the inclusion of the receiving water on the 303(d) list supports the Region's conclusion that the low pH of the receiving water at issue in this appeal is not "due to natural causes" within the meaning of New Hampshire's water quality standard codified at N.H. Code Admin. R. Ann. Env-Wq 1703.18(b). The purpose of the 303(d) list is for the state to submit to EPA a list of all water bodies for which effluent limitations and technology-based point source controls are insufficient to meet applicable water quality standards. 33 U.S.C. § 1313(d)(2). New Hampshire's water quality standard for pH has two components: a numeric pH range and a narrative exception for waters with pH outside the specified range "due to natural causes." N.H. Code Admin. R. Ann. Env-Wq 1703.18(b); *see also* 40 C.F.R. § 122.44(d)(1) (requiring that permits contain conditions necessary to achieve water quality standards, "including State narrative criteria for water quality"). Thus, in order to list a water body as impaired for pH, the State necessarily determined both that (1) there is an excursion of the numeric pH range, and (2) the exception for natural causes does not apply. *See* 2018 CALM at 16-17. New Hampshire has listed the receiving water at issue in this appeal as impaired for pH, 303(d) List at 28, and the Region reasonably concluded that New Hampshire had determined that the low pH was not due to natural causes.

2. *The Region Applied the Water Quality Standards as Written*

In response to the Region's reliance on the 303(d) list, the City argues that the Region failed to apply the water quality standard as written. Reply Br. at 6-7. The City argues that if New Hampshire "wanted the exception to apply only in

[16] When asked at oral argument whether the City had commented on the 303(d) list, counsel for the City did not know. Or. Arg. Tr. at 64. A review of the administrative record in this case would indicate that the City did not comment on the 303(d) list. *See* 303(d) List Approval Letter attach. at 5-7 (listing commenters).

situations where natural causes were the *sole* cause of the pH levels being low, it simply needed to add a single word – only or solely." *Id.* at 7. We do not find this argument persuasive. The Board typically defers to a state's interpretation of its own regulations. *In re City of Sandpoint Wastewater Treatment Plant*, 17 E.A.D. 763, 773 (EAB 2019); *In re Teck Cominco Alaska Inc.*, 11 E.A.D. 457, 489 (EAB 2004); *see City of Moscow*, 10 E.A.D. at 154. New Hampshire's water quality standards define "naturally-occurring conditions" as "conditions that exist *in the absence* of human influences." N.H. Code Admin. R. Ann. Env-Wq 1702.28 (emphasis added).[17] As discussed below, the record supports a finding that the Region applied the State's water quality standards as written and did not find that the "natural causes" exception the City requested applied in this case.

The New Hampshire CALM document, referenced above in note 17, describes how the State assesses waters for inclusion on the 303(d) list and specifically addresses how to determine if a source is natural and falls within the definition of "naturally-occurring conditions" in the State's water quality standards at Env-WQ 1702.28. 2018 CALM at 16-17. It explains that naturally occurring conditions are those that "exist in the absence of human influences" and makes clear that this approach is consistent with EPA guidance. *Id.* at 16. The CALM document specifically states that a water body receiving pollutants from both natural and anthropogenic sources and failing to meet the applicable water quality standard will be listed as impaired. *Id.* Conversely, a waterbody will not be listed if there are only natural sources of a pollutant, and the applicable standard includes a natural conditions provision. *See id.* at 16-17. New Hampshire has applied the interpretation of "naturally occurring conditions" as the absence of human influences to the exception for "natural causes" in the pH standard, noting that pH values between 8.0 and 8.5 are considered naturally occurring in tidal waters unless

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[17] The New Hampshire pH water quality standard relevant here provides that "the pH * * * shall be 6.5 to 8.0 unless due to natural causes," N.H. Code Admin. R. Ann. Env-Wq 1703.18(b), and the record is clear that New Hampshire uses the terms "naturally occurring conditions" and "due to natural causes" interchangeably. For example, New Hampshire's Consolidated Listing and Assessment Methodology ("CALM") describes how the State assesses waters for inclusion on the 303(d) list and in addressing "naturally occurring conditions," the CALM document also uses the phrase "due to natural sources" indicating the state uses the terms interchangeably. 2018 CALM at 16-17.

We also note that the City uses the phrase "naturally occurring" throughout its petition. Pet. at 3, 5, 13, 15-16, 18, 27.

there is evidence they are due to human activity. *See id.* at 17. The CALM document supports the Region's interpretation of natural causes as the absence of human influences and its conclusion that the low pH of the receiving water is not due to natural causes.

Having determined that the Region properly interpreted and applied the water quality standard as providing an exception for natural causes only in the absence of human influences, we find that the record supports the Region's reliance on the 303(d) listing to conclude that it was precluded from determining that the natural cause exception applied. The City's comments and petition relied on language from VRAP reports stating that the lower pH is "likely the result of natural conditions." City's Cmts. at 3-1; Pet. at 9, 17. While the VRAP reports do identify natural causes, they also identify at least one anthropogenic cause: acidic precipitation. *See, e.g.*, 2010 VRAP Report at 15.[18] Immediately after the language about natural conditions that the City quotes, the VRAP reports state: "Rain and snow falling in New Hampshire is relatively acidic, which can also affect pH levels; after the spring melt or significant rain events, surface waters will generally have a lower pH." *Id.* The reports also indicate that acidic precipitation is "human-induced." *E.g., id.*, app. B at 1. In its reply, the City states that "[t]he parties agree * * * that low pH is (at the very least in part) due to natural causes." Reply Br. at 5. Further, at oral argument, the City acknowledged that "there is some anthropogenic deposition * * * from air emissions." Oral Argument Transcript 14 (Apr. 7, 2022) ("Oral Arg. Tr.").

The Region's conclusion that it was precluded from determining that the natural cause exception applied is further supported by correspondence in the record. When asked about the City's request for a pH study to modify the pH limit, NHDES responded that "there is ongoing anthropogenic acid deposition and * * * long-term historical deposition." Email from Hayley Franz, Permits Eng'r, Wastewater Eng'g Bureau, Water Div., N.H. Dep't of Envtl. Servs., to George Papadopoulos, U.S. EPA 2 (Aug. 11, 2020, 9:03 a.m.) (A.R. F.4.) ("NHDES

[18] The same statements are included in the 2007, 2008, and 2009 reports. N.H. Dep't of Envtl. Servs., *N.H. Volunteer River Assessment Program 2009 Ashuelot River Watershed Water Quality Report*, at 16 (Jan. 2010) (A.R. C.3.f.); N.H. Dep't of Envtl. Servs., *N.H. Volunteer River Assessment Program 2008 Ashuelot River Watershed Water Quality Report*, at 20 (Feb. 2009) (A.R. C.3.e.); N.H. Dep't of Envtl. Servs., *N.H. Volunteer River Assessment Program 2007 Ashuelot River Watershed Water Quality Report*, at 18 (Feb. 2008) (A.R. C.3.d.).

Email"). The Region noted these statements in further support of its conclusion that the pH levels in the receiving water were "not 'due to natural causes.'" Resp. Br. at 19; *see* Resp. to Cmts. at 22. The Region's rationale was explained in the response to comments and supported by evidence in the record of human influences on pH. *See Upper Blackstone*, 14 E.A.D. at 643-46 (finding Region did not err in rejecting argument that aluminum was naturally occurring where petitioner failed to address anthropogenic sources). The City therefore has not demonstrated clear error or an abuse of discretion in how the Region applied the State's water quality standard for pH.

3. *The Region Appropriately Established the pH Limit Despite Uncertainty*

The City further argues that the lack of certainty regarding the contributions of human and natural sources undermines the Region's conclusion that the receiving water is impaired and the low pH is not due to natural causes. Pet. at 17-18. The Region argues, to the contrary, that the uncertainty precludes it from applying the natural causes exception and therefore requires an effluent limit consistent with the 6.5 to 8.0 S.U. range in the water quality standard. Resp. Br. at 18-19 (citing *Upper Blackstone*, 14 E.A.D. at 606; *In re Dominion Energy Brayton Point, L.L.C.*, 13 E.A.D. 407, 426 (EAB 2007), *pet. for review voluntarily dismissed*, No. 07-2059 (4th Cir. Jan. 4, 2008)). The Board has previously held that "scientific uncertainty is not a basis for delay in issuing an NPDES permit." *Upper Blackstone*, 14 E.A.D. at 606; *see also Dominion Energy*, 13 E.A.D. at 424-433 (holding that Region's "conservative (i.e., more protective) approach" to establishing permit limits was reasonable in light of scientific uncertainty). As discussed above, the Region properly interpreted the water quality standard as providing for an exception only in the absence of human influences on the pH of the receiving water. The City acknowledges and the record reflects that there are both natural and human-induced sources of the low pH. *See, e.g.*, NHDES Email at 2; 2010 VRAP Report at 15; Reply Br. at 5-7; Oral Arg. Tr. at 14. Uncertainty as to the relative contributions of each of those sources does not alter the analysis where, as here, there is at least some human influence. The Region's application of the water quality standard's pH range of 6.5 to 8.0 was therefore not clearly erroneous or an abuse of discretion.

4. *The Alleged Harm to Aquatic Life Is Not Properly Before the Board*

The City further argues that the disparity between the receiving water and the effluent could produce a "curtain wall" of higher pH near the outfall, which may adversely affect fish migration. City's Cmts. at 3-1. On appeal, the City argues

that the Region ignored the City's comments on the effect on aquatic life of the effluent adjusted to meet the pH range required by the permit.[19] Pet. at 19-20. In response, the Region argues that it was not required to respond because any alleged harm constitutes a challenge to the water quality standards, which is beyond the scope of an appeal to the Board. Resp. Br. at 23. We agree with the Region.

New Hampshire's water quality standards are developed through a state rulemaking process and then approved by EPA pursuant to CWA section 303(c)(2), 33 U.S.C. § 1313(c)(2). A state's water quality standards must be protective of the designated uses for the water body. *See* CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. § 131.5(a)(2) (criteria for EPA review of state-adopted water quality standards include "[w]hether the State has adopted criteria that protect the designated water uses based on sound scientific rationale"). The designated uses of the receiving water include protection of aquatic life. N.H. Rev. Stat. Ann. § 485-A:8(II); N.H. Code Admin. R. Ann. Env-Wq 1703.01(c). As noted earlier, New Hampshire's water quality standards for the receiving water include a pH range of 6.5 to 8.0 S.U. unless due to natural causes. These standards, including

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[19] The City also argues that the pH effluent limit violates New Hampshire's water quality standard requiring that "[a]ll surface waters shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife * * *." N.H. Code Admin. R. Ann. Env-Wq 1703.01(c). The Region asserts this argument was not preserved for review because it was not raised during the comment period. Resp. Br. at 20 n.5. We agree. New Hampshire's water quality regulations, including the cited provision, were available to the City at the time it commented on the Draft Permit, and the City waived the argument by failing to raise it in its comments. *See In re City of Lowell,* 18 E.A.D. 115, 191, n.45 (EAB 2020) (finding that Petitioner waived argument based on permit renewal regulation by failing to cite the regulation in its comments); *see also In re City of Attleboro Wastewater Treatment Plant*, 14 E.A.D. 398, 444 (EAB 2009) ("[P]etitioners are required to raise all reasonably ascertainable issues during the public comment period * * *."); *City of Moscow*, 10 E.A.D. at 149-50 (declining to consider issue that petitioner did not raise in comments and did not argue was unascertainable). In any event, as discussed below, the City's argument constitutes a challenge to the pH water quality standard, which is beyond the scope of an appeal to the Board.

Similarly, the City's statement that "aquatic life in the Ashuelot River is adapted to the naturally low pH conditions" was not raised in the comments, Pet. at 10, and in any event, is not supported by the record. Resp. Br. at 20, n.6.

both the designated uses and the specific pH range, have been approved by EPA. Standards Approval Letter at 1.

The Board has consistently denied review of challenges to water quality standards or other predicate decisions raised in permit appeals. *See, e.g.*, *Ariz. Pub. Serv.*, 18 E.A.D. at 301; *City of Moscow,* 10 E.A.D. at 161. In *City of Moscow*, the petitioner argued that the Region failed to consider its argument that TMDL-based effluent limitations in the permit would harm water quality.[20] 10 E.A.D. at 167. The Board denied review, stating "we see Petitioner's argument, at bottom, as another challenge to the TMDL" and "we will not entertain a challenge of the TMDL * * *." *Id.* Likewise, the City's claim here that the effluent limit harms aquatic life is fundamentally a challenge to the water quality standards. New Hampshire's water quality standards require a pH range of 6.5 to 8.0 S.U. in the receiving water, and the Final Permit incorporates the same pH range as an effluent limit. *See* N.H. Code Admin. R. Ann. Env-Wq 1703.18(b); Final Permit at 3. The City could have raised harm issues in comments on, or in a proceeding challenging, the water quality standards. The City's arguments regarding alleged harm to aquatic life are not properly before the Board in this permit appeal.

5. *The Region Adequately Explained Its Rationale for the pH Limit and Responded to All Significant Comments*

The City claims that the Region clearly erred or abused its discretion by failing to consider data and explain its rationale for establishing the pH limit. For example, the City claims that the Region failed to consider site-specific data documenting the naturally occurring low pH of the Ashuelot River and the associated potential negative water quality impacts flowing from the imposition of a high pH range. Pet. at 15-16. The City claims that the Region ignored "reams of data" on the low pH in the river and failed to articulate the basis for concluding that the low pH is not a "naturally occurring condition." *Id.* at 17. We have explained above the record and legal support for the Region's decision on pH, including that the allegation of harm to aquatic life is beyond the scope of an appeal to the Board. The City simply fails to demonstrate why the Region's reliance on the existing EPA-approved 303(d) list and recent NHDES determination is clearly erroneous or

[20] There, Petitioner alleged that implementing effluent limits based on a waste load allocation established by the TMDL would cause the facility to cease discharging, and that the resulting reduction in flow would harm aquatic life. *City of Moscow,* 10 E.A.D. at 167.

an abuse of discretion. Instead, the City makes technical arguments that are both unsupported and beyond the scope of an appeal to the Board.

First, a permitting authority is only required to respond to "significant comments" and materials submitted during the public comment period. 40 C.F.R. § 124.17(a)(2). And with respect to technical challenges, the Board has stated that we expect "a petitioner to present us with references to studies, reports, or other materials that provide relevant, detailed, and specific facts and data about permitting matters that were not adequately considered by a permit issuer." *In re Envtl. Disposal Sys., Inc.*, 12 E.A.D. 254, 291 (EAB 2005). Moreover, the Board has stated that the regulation governing response to comments in a permit proceeding "does not require the permit issuer to respond to each comment in an individualized manner" and that the response to comments "can be in proportion to the substantive merit of the comments." *In re Indeck-Elwood*, *L.L.C.*, 13 E.A.D. 126, 167-68 n.80 (EAB 2006).

In the instant case, the City's comments lacked specificity and technical analysis and otherwise did not support its allegations. In terms of the pH data collected by the City in 2018 and through the VRAP, those data merely indicate that the pH of the receiving water is, at times, below the permit's required pH for the effluent. *See* City's Cmts. at 3-2 to 3-4, app. B. The data do not support the City's allegation that the low pH is naturally occurring. As discussed above, the only information the City presented regarding the source of low pH is the 2007 to 2010 VRAP reports. *See* City's Cmts. at 3-2. But, as noted above at Part V.A.2, those reports expressly provide that acidic precipitation entering the receiving water is human-induced. The Region states that it reasonably relied on more recent and probative information including the 303(d) listing, which identifies the receiving water as impaired for pH, and correspondence from NHDES, which confirms that there is ongoing and historical acid deposition. 303(d) List at 28; NHDES Email at 2; Resp. Br. at 22-23. The Region's consideration and explanation of the pH range in the water quality standards and its discussion of the state's communication on the inapplicability of the natural causes exception was adequate. *See, e.g.*, Resp. to Cmts. at 22; *see also* Fact Sheet at 22.

The City's allegation that the pH effluent limit adversely affects fish migration is, as discussed above, beyond the scope of an appeal to the Board. In any event, the record is devoid of specific information or citations to studies, reports, or other technical analysis to which the Region could respond. *See, e.g.*, Pet. at 10 (stating "[s]cientific studies document that aquatic life is vulnerable to adverse impacts from abrupt change or fluctuations in pH," but citing no studies in

support of this position).[21] At oral argument, the Board asked what studies supported the City's statement regarding adverse impacts from abrupt changes in pH. Oral Arg. Tr. at 17. In response, Counsel for the City stated "I think that in the reply * * * we provided that citation." *Id.* However, no study is cited in the reply brief. *See* Reply Br. at 5-9. Because this claim about harm is beyond the scope of this appeal, and given the City's lack of specificity supporting this claim, the City has failed to demonstrate that a specific response from the Region was required. We conclude that the Region provided a reasonable explanation for the pH limit and the City has not demonstrated clear error or an abuse of discretion on this basis.

6. *The City's Claim That the Region Improperly Deferred to the State Is Untimely and Does Not Otherwise Warrant Review*

In its reply brief, the City argues for the first time that the Region improperly deferred to NHDES instead of making its own determinations regarding the pH effluent limitation. *See* Reply Br. at 3-4, 7. The City notes that New Hampshire does not have an approved program to issue NPDES permits, and that it is therefore the Region's responsibility to issue a permit ensuring compliance with the state's water quality standards. *Id.* at 3-4.

The Board will not consider this argument because it was not timely raised in the petition. The regulations governing permit appeals require that the petitioner identify each basis for review in the petition; a "[p]etitioner may not raise new issues or arguments in the reply." 40 C.F.R. § 124.19(a)(4), (c)(2). The City did not raise the issue of deferral in its initial petition or identify the Region's reliance on NHDES as a basis for challenging the pH effluent limit. In response to the Region's Motion for Leave to File a Surreply, the City argues that it was not aware of the extent to which the Region relied on NHDES until the Region filed its response brief. City of Keene, N.H. Objection to EPA Region One Mot. For Leave

[21] The petition cites back to the City's comments, which describe the 2018 pH data collected by the City, the VRAP pH data, and whole effluent toxicity ("WET") testing results. Pet. at 10; City's Cmts. at 3-1. Regarding the WET testing, the Region concluded the WET test results did not provide a basis for a less stringent pH limit, Resp. to Cmts. at 22, and NHDES had also previously evaluated the results of the WET testing and concluded they did not support lowering the pH range, Email from Hayley Franz, Permits Eng'r, Wastewater Eng'g Bureau, Water Div., N.H. Dep't of Envtl. Servs., to Aaron Costa, City of Keene (Dec. 18, 2018, 10:55 a.m.) (A.R. F.16).

to File Surreply 3-4 (Jan. 25, 2022). The Region's response to comments, however, repeatedly cited statements by NHDES to support its conclusions regarding the pH effluent limitation. Resp. to Cmts. at 22. For example, the Region stated in the response to comments that "NDHES has determined that the permittee has not satisfied either condition" to adjust the pH limit, that "NHDES is unable to precisely differentiate contributions of the natural and anthropogenic contributions to low pH," and that "NHDES states that while there are signs of improvement there is ongoing anthropogenic acid deposition." *Id.* Based on these statements, the record shows that the City had notice that the Region was relying at least in part on NHDES's technical determinations regarding the pH standards. The City could have raised its objection to this reliance in the petition and failed to do so. The Board therefore declines review of this issue as untimely raised in the reply brief.

Even if the City had properly raised the issue of deferral, the City has not demonstrated clear error or an abuse of discretion on this basis. Under the CWA, even those states that do not have approved programs to issue NPDES permits are required to establish water quality standards and to evaluate their waters and list those that fail to meet water quality standards. *See* CWA § 303(a), (d), 33 U.S.C. § 1313(a), (d). As noted above, the Board generally affords deference to a state's interpretation of its own regulations. *City of Sandpoint*, 17 E.A.D. at 773; *Teck Cominco*, 11 E.A.D. at 489; *see City of Moscow*, 10 E.A.D. at 154 (holding that a Region must have a "compelling reason" for not following a state's interpretation of a state regulation). Because the interpretation of the water quality standards and development of the 303(d) list were functions, in the first instance, within the purview of the State, the Region did not clearly err in relying, at least in part, on the State's determination. EPA must review, and approve or disapprove, the 303(d) list and water quality standards, and EPA approved New Hampshire's list and standards. Furthermore, to the extent the Region relied on the State's technical determination as to the cause of low pH in the river, the record supports the Region's agreement with the State. The Region did not err in relying on predicate decisions that it had already approved or technical determinations that were supported by the record.

7. *The City's Claims Regarding the Special Condition for pH*

As noted above, the City's arguments on pH shifted between its comments and the petition. The City's comments sought language in the final permit stating that a site-specific pH study "is an accepted approach" to determining whether the conditions apply and "confirmation that EPA shall accept the results of the study." City's Cmts. at 3-1. The petition, however, shifts focus to the pH effluent limit and

does not include an argument about the language in the special condition for pH. Pet. at 15-20, 27. The relief the City requests from the Board in its petition is the imposition of a pH limit of 6.0 to 8.0 S.U. *Id.* at 27. But in response to the Board's question at oral argument as to the scope of its pH challenge, Counsel for the City indicated that the City was challenging both the limit and the language of the special condition. Oral Arg. Tr. at 13. There was, however, no meaningful discussion of the City's proposed special condition for pH in the pleadings, and arguments raised at oral argument are untimely. *See In re City of Lowell*, 18 E.A.D. 115, 183 (EAB 2020).

Putting aside the lack of any meaningful discussion or analysis of the City's proposed special condition language for pH in its petition, the City has not demonstrated that the Region abused its discretion by failing to include the City's requested language in the Final Permit. As noted previously, this permit does have a special condition for pH, but, in its comments, the City sought language that EPA would accept the results of a study yet to be conducted. City's Cmts. at 3-1. The Region declined to include the requested language in the special condition for pH, observing that NHDES determined that the City is "neither eligible to perform a pH study nor receive a pH adjustment at this time." Resp. to Cmts. at 22. And the Draft and Final Permits allowed for the potential future modification of the pH limit if the Permittee satisfies the permit's requirements for a demonstration project. The Draft and Final Permits state that "the scope of any demonstration project" that the City conducts "must receive prior approval from NHDES-WD," and that "[u]pon notification of an approval by NHDES, EPA will review and, if acceptable, will submit written notice to the Permittee of the permit change." Draft Permit at 17, 22; Final Permit at 17, 22; *see also* Resp. to Cmts. at 22. The City has failed to demonstrate that the Region's decision to review the yet to be conducted study before committing to a permit modification was clearly erroneous or an abuse of discretion.

B. *The City Has Not Demonstrated That the Region Clearly Erred or Abused Its Discretion in Setting the Effluent Limit for Aluminum*

The City challenges two aspects of the Region's permitting decision with respect to aluminum. *First*, the City contests the Region's decision to calculate an effluent limit for aluminum based on what the City characterizes as "obsolete science." *Second*, the City contests the Region's decision not to add to the Final Permit a special condition that would authorize the City to conduct a site-specific study on aluminum. The special condition that the City requested would have required the Region to accept the results of that study and potentially modify the

effluent limit based on those results. For the reasons given below, we find that the City has neither demonstrated that the Region clearly erred nor that the Region abused its discretion with respect to the effluent limit for aluminum, and we deny review on this issue.

1. *The Region Appropriately Established an Effluent Limit for Aluminum to Comply with New Hampshire's Existing, and Approved, Water Quality Standards*

Based on its determination that effluent from the Keene WWTP has the reasonable potential to cause or contribute to a violation of New Hampshire's existing water quality standards, the Region established an effluent limit for aluminum calculated to comply with the water quality criteria, which are a component of the State's approved water quality standards. *See* Fact Sheet at 32 & app. B; *see also* Resp. to Cmts. at 25. Given that the aluminum limit is a new requirement for the City, the Region also established a three-year compliance schedule. Final Permit at 17; *see* Resp. to Cmts. at 25; Fact Sheet at 32. During the initial three years after the effective date of the Final Permit, the City must submit annual reports detailing its progress toward meeting the aluminum limit, but the City is not required to comply with the limit until the end of that three-year period. Final Permit at 17.

The Final Permit also includes two mechanisms that allow the City to seek a permit modification pursuant to 40 C.F.R. § 122.62(a)(3) in the event New Hampshire revises its water quality standards for aluminum during the initial three-year compliance period.[22] If New Hampshire adopts revised criteria during the three-year compliance period but EPA *does not approve* those criteria before the compliance period expires, the City may seek a delay in the effective date of the aluminum limit. *Id*. at 17. Alternatively, if New Hampshire adopts revised criteria

[22] As discussed below, New Hampshire's existing water quality standards incorporate the criteria for aluminum recommended by EPA in its 1988 guidance document. *See* 1988 Criteria. In 2018, EPA issued updated guidance that states may use in establishing water quality criteria for aluminum. *See* Office of Water, U.S. EPA, *Final Aquatic Life Ambient Water Quality Criteria for Aluminum 2018* (Dec. 2018) (A.R. J.1). States are not required to adopt the new criteria and may, with approval, incorporate adjusted criteria or rely on other scientifically defensible methods to protect designated uses. *See* 40 C.F.R. § 131.11(b). Though it may do so in the future, at this time New Hampshire has not revised its criteria for aluminum.

and EPA *approves* those criteria before the three-year period expires, the City may either seek a delay in the effective date for the limit or request a modified limit, depending on whether a reasonable potential exists for the facility's effluent to cause or contribute to a violation of the revised aluminum criteria. *Id*. The Final Permit includes language stating that any modification of the aluminum limit prior to the end of the three-year period would not trigger anti-backsliding prohibitions under section 402(o) of the CWA and 40 C.F.R. § 122.44(*l*) "provided that such modification is finalized before the final limit takes effect." *Id*. at n.2. For the reasons discussed below, we conclude that the City's arguments on the aluminum limit and requested special condition fail either for procedural reasons or because the City has not carried its burden of showing the Region clearly erred or abused its discretion.

a. *The Region's Reliance on New Hampshire's Existing Water Quality Standards, Which Have Been Approved by the Region, Is Consistent with the Clean Water Act and Supported by the Administrative Record*

The City argues that the Region clearly erred by basing the aluminum limit on the criteria for aluminum contained in New Hampshire's existing water quality standards. Pet. at 20-25. The City contends that the Region should have, instead, based the aluminum limit on revised guidance for aluminum criteria that the Agency issued in 2018. *See* Office of Water, U.S. EPA, *Final Aquatic Life Ambient Water Quality Criteria for Aluminum 2018* (Dec. 2018) (A.R. J.1).

We disagree. The Region is required by the CWA and its implementing regulations to issue NPDES permits that will ensure compliance with existing state water quality standards. Section 301(b)(1)(C) of the Act provides that permits must include conditions "necessary to meet water quality standards * * * established pursuant to any State law." 33 U.S.C. § 1311(b)(1)(C). A permit cannot be issued "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." 40 C.F.R. § 122.4(d). And permit issuers must establish water quality-based effluent limits that "ensure that[] * * * [t]he level of water quality to be achieved by limits on point sources * * * is derived from, and complies with[,] all applicable water quality standards." *Id*. § 122.44(d)(1)(vii)(A).

The City's contention that the Region should calculate the aluminum limit in the Final Permit based on non-binding guidance, which the State may or may not choose to adopt, instead of on existing water quality standards that have been approved by EPA is contrary to the Act. The Region is required to establish permit

terms—including effluent limits—to ensure compliance with the State's approved water quality standards. As we noted in Part IV.B, above, New Hampshire last reviewed and updated its water quality standards in 2016, and the Region approved those standards in 2021. Those EPA-approved standards remain in effect until such time as EPA either approves revised state standards or promulgates applicable federal standards that are more stringent. *Id*. § 131.21(e). Until that time, the Region is bound by New Hampshire's existing water quality standards. *See In re City of Moscow*, 10 E.A.D. 135, 166 (EAB 2001).

In arguing that the Region clearly erred or abused its discretion with respect to the aluminum limit, the City appears to misinterpret the basis for the limit. At its core, the City's argument rests on its belief that the Region based the permit limit on the Agency's 1988 recommendations for aluminum criteria when it should have, instead, based the limit on the Agency's updated 2018 recommendations. *See* Pet. at 20 ("The Final Permit uses the 1988 aluminum chronic criterion, instead of EPA's updated criterion to develop the Final Permit Limit of 109 μg/L for Total Recoverable Aluminum."); *see also id*. at 22-23. The key point that the City misses is that the Region did not base the effluent limit for aluminum on the Agency's 1988 criteria recommendations—the Region based the aluminum limit, as required by the CWA, on the State's existing water quality standards that incorporated those 1988 recommendations. That is an important distinction. As the Region explained in its response to comments:

> The Draft Permit established a limit for effluent aluminum because * * * EPA determined that there is [a] reasonable potential that the effluent levels could cause or contribute to a violation of New Hampshire's current aluminum criteria, *i.e*., the WQS [water quality standards] with which the permit must ensure compliance.

Resp. to Cmts. at 25.

The City is wrong when it asserts that the Region should elevate recommendations contained in Agency guidance issued under section 304(a) of the CWA over the State's existing water quality standards, which the Region has approved and are enforceable. *See* Pet. at 23; *see also In re City of Lowell*, 18 E.A.D. 115, 153-54 (EAB 2020) (noting that the permit issuer's interpretation of CWA requirements is not "called into question" by an argument that a guidance document discusses an alternate model or method of addressing pollutants); *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3rd 9, 22 (1st Cir. 2012) (explaining that in the context of science-based agency decisionmaking, a permit issuer does not have to wait indefinitely for "better science" before issuing a

permit). In fact, the Region is *required* to devise effluent limits to comply with existing state water quality standards, even if those state standards may be revised at some point in the future to incorporate updated recommendations by the Agency. As the Board has previously observed, "[t]he permit issuer's obligation is to ensure that the permit contains effluent limitations and conditions that comply with state water quality standards of all affected states, not EPA's guidance." *In re City of Attleboro Wastewater Treatment Plant*, 14 E.A.D. 398, 438 (EAB 2009). Further, a permit issuer "ha[s] no obligation to wait, before proceeding with [an] NPDES permit reissuance action, until such uncertain future time as [a state] may choose to revise its aluminum water quality standards." *In re Town of Concord Dep't of Pub. Works*, 16 E.A.D. 514, 525 (EAB 2014); *see also In re Dominion Energy Brayton Point, L.L.C.*, 12 E.A.D. 490, 616 (EAB 2006) (permit issuers must "apply the CWA statute and implementing regulations in effect at the time the final permit decision is made" (quoting *In re Phelps Dodge Corp*., 10 E.A.D. 460, 478 n.10 (EAB 2002))).

Based on our review of the administrative record, we understand that New Hampshire is considering revising its existing water quality standards to revise its aluminum criteria. S*ee* Resp. to Cmts. at 25; E-mail from Hayley Franz, Permits Eng'r, Wastewater Eng'g Bureau, Water Div., N.H. Dep't of Envtl. Servs., to George Papadopoulos, U.S. EPA, (Dec. 18, 2019, 1:55 p.m.) (A.R. F.14). Nevertheless, as the Region has recognized, revision of the standards is not a *fait accompli*, s*ee* Oral Arg. Tr. at 47-48, and until such time as the State modifies its water quality standards and the Region approves those modifications, the existing standards remain in effect, *see* 40 C.F.R. § 131.21(e).

Rather than addressing the Region's primary reason and explanation for establishing the Final Permit's aluminum limit—i.e., that is it was bound to apply the State's existing approved water quality standards—the City focuses its arguments on challenging the State's existing water quality standards for aluminum. We explain below that such a challenge is beyond the scope of a permit appeal to the Board but first note that the City's challenges fail to rebut the Region's response to comments detailing its rationale for establishing the aluminum limit and its legal obligation to apply the State's existing water quality standards. *See* Resp. to Cmts. at 25. In its petition, the City reiterates many of the same objections it made during the comment period on the Draft Permit as to why the Region should have looked to the EPA's 2018 recommendations for aluminum criteria when deciding whether to impose an aluminum limit. *See, e.g.*, City's Cmts. at 4-2 (arguing that an aluminum limit "based on superseded science would be an error and would prevent Keene the ability to take advantage of the newly developed and

more appropriate criteria"); Pet. at 21 ("EPA's circumventing its own guidance in favor of outdated, non-compliant state rules is clear error."). It is not enough to reiterate comments that were previously submitted during the public comment period without explaining why the Region's response was insufficient. *See* 40 C.F.R. § 124.19(a)(4)(ii). This failure to address the Region's response to comments, particularly on such a central issue, is fatal to the City's argument. *See In re City of Taunton Dep't of Pub. Works,* 17 E.A.D. 105, 154 (EAB 2016), *aff'd*, 895 F.3d 120 (1st Cir. 2018), *cert. denied.*, 139 S. Ct. 1240 (2019); *In re City of Pittsfield*, NPDES Appeal No. 08-19, at 10-11 (EAB Mar. 4, 2009) (Order Denying Review), *aff'd*, 614 F.3d 7 (1st Cir. 2010).

b. *The City's Challenge to Predicate Decisions by the Region Is Beyond the Scope of an Appeal to the Board*

In its petition, the City criticizes the Agency's 1988 recommendations for aluminum criteria and further appears to challenge the legitimacy of the New Hampshire water quality standards that incorporate those recommendations. Pet. at 21-24. For example, the City argues that "state WQS [water quality standards] must be based on 'sound scientific rationale,' which New Hampshire's aluminum chronic criterion is not." *Id*. at 21. The City further states that "[t]here is longstanding and significant regulatory controversy undermining the validity of the aluminum chronic criteria," that a "one-size-fits-all approach is sometimes not sufficiently protective of aquatic life and at other times needlessly stringent," that a water quality standard that is "based on what was thought to have been sound science decades ago does not mean that it still is," and that the criterion adopted in the standards is "not technically defensible" because it does not accurately account for the bioavailability of aluminum. *Id*. at 21-23.

As we discussed in Part V.A.4, above, the Board is not the proper forum for challenges to New Hampshire's water quality standards or the Region's approval of those standards. The regulations governing this appeal authorize the Board to hear challenges to contested permit conditions. 40 C.F.R. § 124.19(a)(4)(i). The Board does not consider challenges to "the validity of prior, predicate regulatory decisions that are reviewable in other fora." *City of Moscow*, 10 E.A.D. at 160-61; *see also In re Ariz. Pub. Serv. Co*., 18 E.A.D. 245, 301-02 (EAB 2020) (citing cases).

The City's challenge to New Hampshire's water quality standards, including the criteria for aluminum incorporated into those standards, and the

Region's prior approval of those standards, is beyond the scope of a permit appeal to the Board, and we deny review as to that challenge.

c. *The City's Argument that the Aluminum Criteria in the State's Water Quality Standards Do Not Apply to Waters with a Low pH Has Not Been Preserved and Is Without Merit*

In its petition, the City argues that the Agency's 1988 recommendations for aluminum criteria "do[] not apply to receiving waters with the pH below 6.5, like the Ashuelot." Pet. at 22. In its reply brief, the City carries this argument one step further and contends that the State's existing numeric water quality standards for aluminum, which incorporate the Agency's 1988 criteria, also do not apply to this permitting action. Reply Br. at 9-11. We find that the issue of whether the 1988 recommendations apply to the receiving water has not been preserved for review. *See* 40 C.F.R. § 124.19(a)(4)(ii) (a petitioner must demonstrate "that each issue being raised in the petition was raised during the public comment period" unless there is a reason why the issue was not required to be raised); *see also id*. § 124.13 ("All persons * * * who believe any condition of a draft permit is inappropriate * * * must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period."); *City of Attleboro*, 14 E.A.D. at 405 (petitioner "must demonstrate that any issues and arguments it raises on appeal have been preserved for Board review"); *City of Moscow*, 10 E.A.D. at 149 ("[O]nly those issues and arguments raised during the comment period can form the basis for an appeal before the Board."). We find the argument that the State's numeric water quality standards do not apply, and cannot be used, in this permitting process to be untimely because the City raised it for the first time in its reply brief. *See* 40 C.F.R. § 124.19(c)(2) ("Petitioner may not raise new issues or arguments in the reply."); *see also In re Springfield Water & Sewer Comm'n*, 18 E.A.D. 430, 457 n.12 (EAB 2021); *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 126 n.9 (EAB 1999).

Even were we to find that the City's arguments concerning the alleged inapplicability of the 1988 criteria recommendations and the State's existing numeric water quality standards were preserved for review and timely raised, we would nevertheless find those arguments to be without merit. There is nothing in the plain language of the New Hampshire water quality standards for aluminum, set forth at N.H. Code Admin. R. Env-Wq 1703.21(b) and 1703.22, that limits their applicability to waters within a specific pH range. If the State had intended to limit the numeric water quality criteria for aluminum to waters with a pH above 6.5 S.U., the State would have written that into the standard. But it did not.

Moreover, the Agency reasonably explained that the 1988 recommended criteria document "addresses the toxicity of aluminum to freshwater organisms in waters in which the pH is between 6.5 and 9.0, because the water quality criterion for pH states that a pH range of 6.5 to 9.0 appears to adequately protect freshwater fishes and bottom-dwelling invertebrate fish food organisms from the effects of the hydrogen ion." 1988 Criteria at 1 (internal citation omitted). In its response brief, the Region further explained this statement, noting that "the 1988 guidance did not include waters with pH below 6.5 S.U. because at such pH levels the low pH itself would impact aquatic life, not because aluminum is not toxic at low pH levels." Resp. Br. at 31. Accordingly, we conclude that there is nothing clearly erroneous with the Region's explanation or its reliance on the State's water quality standard for aluminum, as written.

Similar to what we observed with respect to the City's challenge to the Region's reliance on a 303(d) impairment listing, a permit issuer is not required to "look behind the face" of an approved water quality standard. *See* Part V.A.1, above; *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 597 (EAB 2010), *pet. for review denied*, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 569 U.S. 972 (2013); *see also City of Moscow*, 10 E.A.D. at 161. As counsel for the Region stated at oral argument, "the permit writer applies the water quality standards as written" and "in this permit proceeding * * * it's appropriate simply to apply the currently effective water quality standards." Oral Arg. Tr. at 52. And it is beyond the scope of the Board's review to second-guess the Region's prior approval of the state water quality standards.[23] *See* 40 C.F.R. § 131.21(e).

[23] In its petition, the City also criticizes EPA's 1988 recommendations for chronic criteria for aluminum because they were "based on a dataset of only two species of invertebrates and one fish species." Pet. at 11-12. In contrast, the City observes, the 2018 recommendations are "based on data from nine new species." *Id*. Not only was this issue not preserved for review because it was not raised during the comment period, *see* 40 C.F.R. § 124.19(a)(4)(ii), it is also legally irrelevant. New Hampshire incorporated EPA's 1988 recommended criteria into its water quality standards and the Region approved those standards. The Region is required to establish effluent limits based on those

The role of the Board is to determine whether the Region clearly erred or abused its discretion when establishing the aluminum limit in an individual permit, not to determine the validity or merits of a state's water quality standards. The City's arguments are based on a fundamentally flawed legal framework, and, for the reasons provided above, we conclude that the City's arguments are untimely and, in any event, the Region neither clearly erred nor abused its discretion with respect to the aluminum limit.

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standards. *See* 40 C.F.R. § 122.44(d)(1)(vii)(A); *see also* 54 Fed. Reg. 23,868-01, 23,879 (June 2, 1989).

The City advances yet another argument in its petition based on the 2018 recommended criteria for aluminum. The City argues that based on calculations it performed using hypothetical data, establishing an effluent limit for aluminum using the Agency's 2018 recommendations would not violate the State's water quality standards. Pet. at 11-13, 20-21. The Region contends that this argument is irrelevant because the City improperly relied on a methodology in a guidance document rather than that contained in the State's existing water quality standards, that the comment itself lacked specificity as to the source of the inputs and validating data, and that it was not a significant comment that warranted a response under 40 C.F.R. § 124.17(a)(2). Resp. Br. at 30-31. The Region further maintains that this argument in the petition also is untimely as it is based on information that was not included in the comments submitted during the public comment period. *Id*. at 31-32. We agree with the Region that this argument is not material in the proceeding. For reasons similar to those discussed in Part V.A.5, above, this argument is not based on a significant comment and was not one that required a response by the Region. Indeed, such "hypothetical data" and lack of specificity in the information provided failed to provide a predicate for analysis, review, or response. The governing regulations and Board precedent require more, particularly in a challenge to technical issues. *See* 40 C.F.R. § 124.17(a)(2); *In re City of Lowell*, 18 E.A.D. 115, 191 n.45 (EAB 2020); *In re Indeck-Elwood*, *L.L.C.*, 13 E.A.D. 126, 167-68 n.80 (EAB 2006); *In re Envtl. Disposal Sys., Inc.*, 12 E.A.D. 254, 291 (EAB 2005). We find that due to a lack of specificity in the comments as to the source of inputs for the hypothetical data and other information that would allow the Region to verify the calculation, this argument was not preserved for review. *See City of Lowell*, 18 E.A.D. at 167. In any event, the Region's obligation was to calculate the aluminum limit based on the aluminum criteria in the State's existing water quality standards.

2. *The City Has Not Demonstrated That the Region Clearly Erred or Abused Its Discretion by Declining to Include the City's Requested Special Condition for Aluminum in the Final Permit*

The City argues that the Region clearly erred in setting the aluminum limit by failing to account for site-specific data on acid soluble and total recoverable aluminum.[24] Pet. at 24-25. Specifically, the City contends that "the Final Permit should include a special condition allowing [the City] to request a preliminary study evaluating the fraction of acid soluble aluminum to total recoverable aluminum, and allow modification of the Final Permit aluminum limit to reflect the site-specific data." *Id*. at 24.

During the comment period on the Draft Permit, the City made the following request:

> Keene respectfully requests that the Final Permit include language under a special condition that Keene has the option to submit a

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[24] As background, EPA recommends that state water quality criteria be based on acid-soluble dissolved metals, which are generally more bioavailable and, thus, more toxic. *See* Memorandum from Martha G. Prothro, Acting Assistant Adm'r for Water, U.S. EPA, to Water Mgmt. Div. Dirs, Envtl. Servs. Div. Dirs., Regions I-X, U.S. EPA at 2 (Oct. 1, 1993) ("Metals Policy"). By regulation, most effluent limits in NPDES permits must be expressed in terms of "total recoverable metal," which includes both dissolved metal as well as metal that is bound to particulate matter. 40 C.F.R. § 122.45(c); *see* Office of Water, U.S. EPA, EPA Doc. No. 823-B-96-007, *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* at ii, vi (June 1996) ("Metals Translator Guidance"); Metals Policy at 2. A translation factor is used to account for metal in particulate form when developing a total recoverable metal effluent limit that will satisfy water quality criteria expressed as acid-soluble dissolved metals. *See* Metals Translator Guidance at 1. Accordingly, the State's existing aluminum criteria is expressed in terms of acid-soluble metal, and the aluminum limit in the Final Permit is expressed in terms of total recoverable metal. The Region explained that since there was no site-specific data showing the fraction of downstream aluminum in the acid-soluble form for this permitting action, it assumed a one-to-one ratio between total recoverable aluminum in the effluent and acid-soluble aluminum in the receiving water. Fact Sheet at 31-32; *see* Resp. Br. at 12-13; Metals Policy attach. 2 *Guidance Document on Dissolved Criteria: Expression of Aquatic Life Criteria* 1 (Oct. 1993) (stating "[a] factor of 1.0 is used to convert aquatic life criteria for metals that are expressed on the basis of the acid-soluble measurement to criteria expressed on the basis of the total recoverable measurement").

> request to pursue a preliminary study evaluating the fraction of acid soluble aluminum to total recoverable aluminum. If Keene pursues this type of a study, additional language is requested to be in the Final Permit that the results of the study would be accepted and that a permit modification may be made to reflect site-specific limits.

City's Cmts. at 4-2.

The Region did not add the requested special condition to the Final Permit. In its response to comments, the Region explained that the scope of such a study would first need to be reviewed and approved by the appropriate office within NHDES. Resp. to Cmts. at 26. The Region stated that if NHDES were to approve of the study and its results, the Region "would consider a permit modification to increase the limit based on this new information." *Id*. For the reasons discussed below, the City has not demonstrated that the Region clearly erred or abused its discretion by declining to include in the Final Permit the City's requested special condition for aluminum.

a. *The Region's Decision Not to Add the Special Condition Requested by the City Is Reasonable, Consistent with the CWA, and Supported by the Record*

The decision whether to include a special condition in an NPDES permit falls within the scope of the permit issuer's discretion. *See Town of Concord*, 16 E.A.D. at 535 (holding that Region possessed discretion to include special condition in a NPDES permit allowing permittee to submit additional data and seek modified effluent limit). Here, we find the Region acted reasonably and did not abuse its discretion in deciding not to add to the Final Permit the special condition the City requested.

The conditional wording of the request that the City submitted with its comments on the Draft Permit makes it somewhat difficult to discern precisely what it is the City was seeking. *See* City's Cmts. at 4-2. At oral argument, Counsel for the City sought to explain its position:

> [W]hat the City is asking for is a clear mechanism to obtain site-specific data, have it reviewed in consultation with [NH]DES and EPA and then have a mechanism whereby, if acceptable to [NH]DES and to EPA, the permit limit is adjusted without there having been an already effective permit limit that would be subject to permit modification and/or anti-backsliding analysis.

Oral Arg. Tr. at 23. Responding to the Region's contention that the City is seeking to "hardwire" a permit modification into the Final Permit, Resp. Br. at 36, Counsel suggested that there had been a "misunderstanding" and that the City is "only asking that the EPA lay out the mechanism, not the outcome." Oral Arg. Tr. at 25-26; *see also* Reply Br. at 13 (arguing that the requested special condition "would establish a clear mechanism providing for use of site-specific data to adjust Keene's aluminum effluent limit").

However, the City's position in this proceeding before the Board is at odds with what it requested during the comment period. In its written comments on the Draft Permit, the City asked the Region to add a special condition saying that "the results of the study *would* be accepted." City's Cmts. at 4-2 (emphasis added). In essence, the City was asking the Region to pre-commit to accepting the results of a hypothetical study that had not yet been approved by the state regulators, much less conducted. The City may not now, at this late stage, re-frame that request to convert it into something different.

The Region gave due consideration to the City's request but rejected it, setting forth its reasoning in the response to comments. *See* Resp. to Cmts. at 26. The Region's decision not to pre-commit to accepting the results of a study in the abstract is reasonable. As Counsel for the City acknowledged at oral argument, there is nothing in the CWA or its implementing regulations that would prevent the City from proceeding with such a study, assuming NHDES provides the requisite authorization to do so, and then submitting the results to the Region in support of a permit modification. *See* Oral Arg. Tr. at 25.

Further, contrary to the City's argument that the Region erred in setting the aluminum limit by failing to account for site-specific data on acid soluble and total recoverable aluminum, the City never provided site-specific data and the Region reasonably relied on all data that was reasonably available at the time the permit was developed. *See Upper Blackstone*, 690 F.3d at 22 ("[N]either the CWA nor EPA regulations permit the EPA to delay issuance of a new permit indefinitely until better science can be developed, even where there is some uncertainty in the existing data."). The City has presented no persuasive legal arguments as to why the Region's decision not to include such a special condition constitutes clear error or an abuse of discretion.

b. *The Two New Arguments Raised by the City in Its Reply Brief Are Untimely and Without Merit*

In its reply brief, the City argues for the first time that the Region clearly erred because (1) the Board has approved similar special conditions in other NPDES permits, and (2) failure to include a special condition may bar the Region from establishing a revised effluent limit under anti-backsliding requirements. Reply Br. at 13. As we discussed at Part V.B.1.b, above, a petitioner may not raise new issues or arguments in the reply brief. 40 C.F.R. § 124.19(c)(2); *see Springfield Water & Sewer*, 18 E.A.D. at 457 n.12; *Knauf Fiber Glass,* 8 E.A.D. at 126 n.9. We find both of the City's new arguments to be untimely and, in any event, without merit.

With respect to the City's argument that the Board has approved similar special conditions in other permitting actions, the Board has consistently held that disparity in permit requirements is "legally irrelevant" to a permit challenge because "permits are issued on an individual basis, taking into account individual differences where appropriate."[25] *In re City of Port St. Joe*, 7 E.A.D. 275, 304 n.44 (EAB 1997); *see also Springfield Water & Sewer*, 18 E.A.D. at 459; *City of Lowell*, 18 E.A.D. at 160; *City of Attleboro*, 14 E.A.D. at 425.

We also find unpersuasive, for two reasons, the City's argument that failure to include the special condition would prevent the Region from imposing a less stringent effluent limit due to the prohibition on backsliding under section 402(o)

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[25] The City's reliance on the Board's decision *In re Town of Concord Dep't of Public Works*, 16 E.A.D. 514 (EAB 2014) is also misplaced because the facts concerning the permit at issue in the *Town of Concord* appeal are distinguishable from the factual landscape before us in this appeal. *See* Reply Br. at 13. Petitioner in *Town of Concord* argued that the Region had abused its discretion by including in an NPDES permit a special condition that allowed the permittee to submit new data in support of a request to modify the permit's pH limit. 16 E.A.D. at 535. In our decision in that appeal, the Board held that the Region acted within its discretion by including the special condition. *Id*. Unlike the facts in the matter currently before us, where the Region decided not to include a requested special condition, the permit at issue in *Town of Concord* already included the special condition and the question before the Board was whether the Region had abused its decision by including it. *See id*. As a further distinction, the special condition in *Town of Concord* authorized the permittee to submit additional data and request a permit modification but did not include—as here—an obligation by the Region to accept the results of a yet to be conducted study. *See id*.

of the Act. 33 U.S.C. § 1342(o). *First*, should the City seek modification of the aluminum limit after the compliance period has ended—that is, after the effluent limit has taken effect—the existence of a special condition in the permit would not obviate the Region's statutory duty to undertake an anti-backsliding analysis.[26] The prohibition on backsliding, subject to certain exceptions, is a statutory requirement that cannot be nullified by permit language. CWA § 402(o), 33 U.S.C. § 1342(o); *see* 40 C.F.R. § 122.44(*l*); *In re City of Ruidoso Downs*, 17 E.A.D. 697, 704-705 (EAB 2019), *pet. for review denied sub nom*., *Rio Hondo Land & Cattle Co. v. EPA*, No. 19-9531 (10th Cir. Apr. 29, 2021).

Second, should the City seek modification of the limit before the three-year compliance period has expired—that is, before the limit has taken effect—the Final Permit includes language in a special condition for aluminum specifically indicating that the backsliding requirements will not be triggered.[27] Final Permit at 17 n.2.

For the reasons given above, we find that the City has not demonstrated clear error or abuse of discretion with respect to the Region's decision not to add to the Final Permit the requested special condition. The Region gave due consideration to the City's requested special condition but ultimately rejected it, reasonably deciding not to agree in advance to accept the results of a hypothetical study in order to modify the permit terms based on those results. Should the City choose to proceed with the study, there is nothing that would prevent it from doing so, and the Region has provided assurance that it would consider a request for a permit modification should the data from the study warrant a revision to the effluent limit for aluminum. *See* Final Permit at 17 & n.2; Resp. to Cmts. at 25-26.

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[26] The Final Permit also includes language specifying that any permit modification must be warranted by reasonable potential analysis and consistent with applicable anti-degradation requirements. Final Permit at 17 n.2.

[27] The special condition for aluminum that is included in the Final Permit sets forth the applicable permit modification regulations. *See* Final Permit at 17.

C. *The City Has Not Demonstrated That the Region Clearly Erred or Abused Its Discretion by Declining to Include in the Final Permit a Special Condition on Copper*

In its comments on the Draft Permit, the City asked the Region to add a special condition indicating that the City may seek modification of the effluent limit for copper based on site-specific conditions. Specifically, the City commented as follows:

> [The City] respectfully requests that language be included as a special condition in the Final Permit indicating that Keene may submit a permit modification request to apply for site-specific effluent copper limits, including the WER [Water Effect Ratio] and the BLM [Biotic Ligand Model]. If Keene decided to move forward with a site-specific approach, Keene also respectfully requests that additional language be included in the Final Permit indicating that the results of a site-specific approach will be accepted and a permit modification may be made to reflect revised effluent limits.

City's Cmts. at 5-2. Thus, under the City's requested condition the Region would provide advanced authorization for the City to pursue a site-specific approach for developing copper criteria and agree to "accept the results" of that approach, should the City pursue it.[28]

The Region considered the City's request but declined to add the special condition to the Final Permit. As we discussed in Part V.B.2.a, above, the decision whether to add a special condition to a permit is discretionary. *See In re Town of Concord Dep't of Pub. Works*, 16 E.A.D. 514, 535 (EAB 2014). Here, the City

[28] The City's comments reference two methods that are approved under the New Hampshire water quality standards for evaluating the bioavailability of copper and, thus, its toxicity: the Water-Effect Ratio and the Biotic Ligand Model. *See* N.H. Code Admin. R. Ann. Env-Wq 1703.22(d). The Water-Effect Ratio compares the bioavailability of copper in receiving waters versus in laboratory test waters. Office of Water, U.S. EPA, *Aquatic Life Ambient Freshwater Quality Criteria – Copper* 4 (Feb. 2007) (A.R. J.5) ("2007 Copper Criteria"); s*ee also* Office of Water, U.S. EPA, *Streamlined Water-Effect Ratio Procedure for Discharges of Copper* 1 (Mar. 2001) (A.R. J.4). The Biotic Ligand Model involves analysis of the accumulation of toxic metals on fish gills and other physiologic structures. *See* 2007 Copper Criteria at 2, 5-6.

fails to establish that the Region either clearly erred or abused its discretion in deciding not to include the condition.

In its response to comments, the Region explained that if site-specific copper criteria are developed for a given waterbody, those criteria "automatically become[] the enforceable ambient criteria for that waterbody (or portion thereof) and can be used for computing effluent limits in * * * discharge permits" without the need to formally adopt the criteria through regulation. Resp. to Cmts. at 30. The Region explained that the City "may submit a study plan for site[-] specific[] copper criteria to NHDES for review" and that "[i]f the plan and results are approved by NHDES, the revised criteria may be used to modify the permit limits." *Id*. However, the Region did not agree to the City's request to essentially agree in advance to accept the results of that site-specific approach, finding such an approach unreasonable. Specifically, the Region stated that it:

> [D]oes not believe it would be reasonable to include a special permit condition accepting a future permit modification request, without first having the opportunity to evaluate that request. To do otherwise would be conjectural. [The Region's] mind is open and it has not prejudged the merits of a future request, if any.

Id. at 31.

In its petition, the City argues that because the Region recognizes "the propriety of setting the criterion using WER or BLM and then reassessing that criterion every five years within the life of a[n] NPDES Permit," the Region's decision not to include a special condition requiring the acceptance of those criteria is "internally inconsistent." Pet at 26-27. However, as the Region points out, the City appears to conflate the development of site-specific *criteria* for copper with the development of an *effluent* limit for copper. *See* Resp. Br. at 37. There is a translation step involved, and Counsel for the City acknowledged this at oral argument.[29] Oral Arg. Tr. at 27-28. As the Region explains, "[t]his is not a

[29] Counsel for the City raised a new argument at oral argument that the Region's position that a translation step is required between the water quality standards and effluent limit for copper is somehow inconsistent with the Region's approach to aluminum and pH. Oral Arg. Tr. at 67-68. As noted above, arguments raised at oral argument are untimely, and the Board will not consider them. *See In re City of Lowell*, 18 E.A.D. 115, 183 (EAB 2020). Further, we note that the requests for the special conditions involved different parameters and different contexts,

mechanical process, but one that requires the exercise of technical judgment by the permit writer and advice of legal counsel based upon actual information in the administrative record." Resp. Br. at 37. In short, water quality criteria are not the same as effluent limits, and even if site-specific copper criteria for the receiving water are developed, the Region still must fulfill its obligation under the CWA to develop effluent limits necessary to meet water quality standards.[30] *See* CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C); 40 C.F.R. § 122.44(d)(1), (5). The Region's decision, and its explanation in its response to comments, for declining to include the special condition was reasonable, and the City failed to demonstrate clear error or abuse of discretion on these grounds.

We observe that the City's position with respect to its request for a copper special condition appears to have shifted over the course of this permitting proceeding. During the comment period, the City asked the Region to add language to the Final Permit "indicating that the results of a site-specific approach *will* be accepted and a permit modification *may* be made to reflect revised effluent limits." City's Cmts. at 5-2 (emphasis added). In contrast, in its petition the City requests that the Board remand the Final Permit to the Region with direction to "[a]llow[] *implementation of site-specific effluent copper limits* established compliant with the processes discussed in EPA's Response to Comments as an alternative effluent copper limit." Pet. at 27 (emphasis added). And then, in its reply brief, the City re-characterizes its request as being for "a special condition that automatically implements the permit modification *process*, not the *outcome*."[31] Reply Br. at 15. The City cannot modify its request at this late stage—it is obligated to raise all "reasonably ascertainable issues and submit all reasonably available arguments supporting [its] position" during the comment period. 40 C.F.R. § 124.13. To allow the City to alter the substance of its argument in its reply brief in such a way that the argument takes on new and fundamentally different contours would be akin to allowing the City to present a new argument in its reply brief, which is impermissible under the governing regulations. *See* 40 C.F.R. § 124.19(c)(2); *In*

[30] The Region further noted that "any potential change in the permit limit based on site-specific copper criteria would also be subject to anti-backsliding requirements at CWA §§ 402(o) and 303(d)(4)." Resp. to Cmts. at 30.

[31] In a footnote in its reply brief, the City indicates it is also challenging "the copper standard itself." Reply Br. at 3 n.1. It is not entirely clear if the City intends to suggest that it is contesting the Final Permit's effluent limit for copper, but we find nothing in the petition to support that argument.

re City of Lowell, 18 E.A.D. 115, 157 n.22 (EAB 2020). In any event, even if the City's reply brief correctly characterizes the City's initial request in its comments, there is no basis in the record to find that the Region clearly erred or abused its discretion in declining to include such a special condition.

We conclude that the City has not demonstrated that the Region clearly erred or abused its discretion by declining to add the requested special condition for copper to the Final Permit. The Region's position that it will not commit to a future permitting outcome is rational, consistent with the Act, and cogently explained in the record. The Region gave due consideration to the City's request for a special condition but ultimately rejected it, reasonably deciding not to agree in advance to accept the results of a yet to be conducted site-specific approach to establishing copper criteria in order to revise the permit limit based on those results.

VI. *CONCLUSION*

For the reasons given above, the Board denies the petition for review in its entirety.[32]

So ordered.

[32] We have considered all the allegations in the petition and deny review as to all of them, whether or not they are specifically discussed in the opinion.