

**BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

In re: _____)
Granite Shore Power Merrimack LLC _____)
NPDES Permit No. NH0001465 _____)
_____)

NPDES Appeal No. 20-05

**RESPONSE BY EPA REGION 1 TO PETITION FOR REVIEW
BY SIERRA CLUB AND CONSERVATION LAW FOUNDATION**

Respectfully submitted,

Mark A. Stein /s/
Mark A. Stein, Sr. Assistant Regional Counsel
Cayleigh Eckhardt, Assistant Regional Counsel
Michael Curley, Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 1
5 Post Office Square
Boston, MA 02109
Tel: (617) 918-1077 or (617) 918-1044
Email: Stein.Mark@epa.gov;
Eckhardt.Cayleigh@epa.gov
Curley.Michael@epa.gov

Of Counsel:

James Curtin, Attorney
Pooja Parikh, Attorney
Jessica Zomer, Attorney
Water Law Office, Office of General Counsel
U.S. Environmental Protection Agency
Washington, D.C. 20004

Dated: September 25, 2020

TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
TABLE OF AUTHORITIES	ii
LIST OF EXHIBITS.....	v
I. INTRODUCTION.....	1
II. LEGAL FRAMEWORK.....	2
III. STATEMENT OF FACTS	6
A. Chronology of NPDES Permitting and Related Events.....	9
B. Thermal Discharge Limits	11
C. Combustion Residual Leachate Limits	15
IV. STANDARD OF REVIEW	17
V. ARGUMENT.....	18
A. The Board Should Deny Review of the Final Permit’s Thermal Discharge Conditions...	18
1. The Board Should Deny Review of the Limits in Part I.A.11 of the Final Permit	19
2. The Board Should Deny Review of the Final Permit’s Narrative Conditions	43
B. The Region’s Technology-based Effluent Limits for Combustion Residual Leachate are Appropriate and Consistent with Law.....	52
1. Petitioners Fail to Demonstrate that the Agency Erred in Determining that the 1982 Regulations Apply to Leachate.....	53
2. <i>SWEPCO</i> Does Not Affect EPA’s Application of Applicable ELGs	56
VI. CONCLUSION.....	57

TABLE OF AUTHORITIES

CASES

Amer. Med. Ass’n v. United States, 887 F.2d 760, (7th Cir. 1989)..... 20
BASF Wyandotte Corp. v. Costle, 598 F.2d 637 (1st Cir. 1979) 20, 29
Career College Assoc. v. Riley, 74 F.3d 1265 (D.C. Cir. 1996)..... 20
City of Taunton, MA v. EPA, 895 F.3d 120 (1st Cir. 2018)..... 19
Env’t Integrity Project v. EPA, 425 F.3d 992 (D.C. Cir. 2005)..... 20
EPA v. Nat’l Crushed Stone Ass’n, 449 U.S. 64 (1980) 2
Long Island Care at Home, Ltd. v. Coke, 551 U.S. 158 (2007)..... 19, 20
Louisville Gas & Electric Co. v. Ky. Waterways Alliance, 517 S.W.3d 479 (Ky. 2017) 55
NRDC v. EPA, 279 F.3d 1180 (9th Cir. 2002)..... 19
NRDC v. Pollution Control Bd., 37 N.E.3d 407 (Ill. App. Ct. 2015) 55
Prometheus Radio Project v. F.C.C., 652 F.3d 431 (3d Cir. 2011)..... 55
Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506 (D.C. Cir. 1983) 20, 27
Southwestern Elec. Power Co. v. U.S. EPA, 920 F.3d 999 (5th Cir. 2019)..... passim
Spartan Radiocasting Co. v. FCC, 619 F.2d 314 (4th Cir. 1980) 27

ENVIRONMENTAL APPEALS BOARD DECISIONS

In re City of Attleboro, 14 E.A.D. 398 (EAB 2009) 18, 33
In re City of Lowell, NPDES Appeal No. 19-03, slip op. (EAB June 29, 2020) 32, 42
In re City of Moscow, 10 E.A.D. 135 (EAB 2001)..... 17, 18
In re City of Palmdale, 15 E.A.D. 700 (2012)..... 21, 29
In re District of Columbia Water and Sewer Authority, 13 E.A.D. 714 (EAB 2008) 19, 21
In re Dominion Energy Brayton Point, LLC, 12 E.A.D. 490 (EAB 2006)..... passim
In re Env’tl. Disposal Sys., Inc., 12 E.A.D. 254 (EAB 2005)..... 18, 32, 33
In re NE Hub, 7 E.A.D. 561 (EAB 1998)..... 18, 21, 34
In re New England Plating Co., 9 E.A.D. 726 (EAB 2001)..... 17
In re Town of Ashland Wastewater Treatment Facility, 9 E.A.D. 661 (EAB 2001) 18
In re Town of Concord, 16 E.A.D. 514 (EAB 2014)..... 21
In re Westborough, 10 E.A.D. 297 (EAB 2002)..... 53

STATUTES

33 U.S.C. § 1251..... 5
33 U.S.C. § 1311..... passim
33 U.S.C. § 1314..... 3, 5
33 U.S.C. § 1316..... 25
33 U.S.C. § 1326..... passim
33 U.S.C. § 1341..... 15, 19, 44
33 U.S.C. § 1342..... 2, 46, 54
33 U.S.C. § 1342(o)..... passim
33 U.S.C. § 1362..... 2

FEDERAL REGULATIONS

40 C.F.R. § 1.25	57
40 C.F.R. § 122.2	2
40 C.F.R. § 122.21	3
40 C.F.R. § 122.43	2
40 C.F.R. § 122.44	2
40 C.F.R. § 122.44(l)	45, 46
40 C.F.R. § 122.6	9
40 C.F.R. § 124.13	17
40 C.F.R. § 124.14	passim
40 C.F.R. § 124.19	17, 53, 57
40 C.F.R. § 125.3	passim
40 C.F.R. § 125.70	3
40 C.F.R. § 125.73	13
40 C.F.R. § 131	3
40 C.F.R. § 131.13	33
40 C.F.R. § 423.12	16, 53
40 C.F.R. § 423.13	9
40 C.F.R. Part 125, Subpart H	36
40 C.F.R. Part 423	3
40 CFR § 122.62	46, 48

STATE STATUTES

N.H. Rev. Stat. Ann. § 485-A:8(II)	4
N.H. Rev. Stat. Ann. § 485-A:8(VIII)	5

STATE REGULATIONS

314 CMR 3.00	5
314 CMR 4.00	5
314 CMR 4.05	5
N.H. Code R. Env-Wq 1702	4
N.H. Code R. Env-Wq 1703.01	4, 43
N.H. Code R. Env-Wq 1703.13	5, 26
N.H. Code R. Env-Wq 1703.19	4
N.H. Code R. Env-Wq 1707	43

FEDERAL REGISTER NOTICES

45 Fed. Reg. 33290 (May 19, 1980)	17
47 Fed. Reg. 52290 (Nov. 19, 1982)	5, 16, 54
80 Fed. Reg. 67838 (Nov. 3, 2015)	6, 9, 16

OTHER AUTHORITIES

In Re Sierra Pac. Power Co., 1975 WL 23874 (E.P.A.G.C.) (U.S. EPA, Decision of the Gen'l
Counsel No. 31 (Oct. 14, 1975) 33

LIST OF EXHIBITS

No.	AR No.	Document Title
1	AR-1886	Final NPDES Permit for Merrimack Station (“Final Permit”)
2	AR-1885	2020 Response to Comments
3	AR-1811	State Certification of 2020 Final NPDES Permit for Merrimack Station
4	AR-1534	Statement of Substantial New Questions (“2017 Statement”)
5	AR-1533	Public Notice of 2017 Reopening of the Public Comment Period
6	AR-1691	2017 Notice of Extension of Public Comment Period
7	AR-1692	2017 Notice of Second Extension of Public Comment Period
8	AR-1136	2014 Revised Draft Permit
9	AR-1135	2014 Revised Draft Permit Fact Sheet
10	AR-1137	2014 Revised Draft Permit Public Notice
11	AR-609	2011 Draft Permit (“Draft Permit”)
12	AR-608	2011 Fact Sheet
13	AR-613	2011 Fact Sheet, Attachment A-1: Map Location of Merrimack Station
14	AR-618	Determinations for the Thermal Discharge and Cooling Water Intake Structures at Merrimack Station
15	AR-236	1992 Final NPDES Permit for Merrimack Station (“1992 Permit”)
16	AR-1570	1992 Response to Comments, Reissuance of Permit No. NH 0001465, PSNH, Merrimack Station, Bow, NH
17	AR-112	Fact Sheet for the 1992 permit
18	AR-483	1985 Final NPDES Permit for Merrimack Station (“1985 Permit”)
19	AR-1642	GSP Letter: Permit Modification for Transfer of Ownership of Merrimack Station, Newington Station, and Schiller Station NPDES Wastewater Permits
20	AR-1701	EPA Letter: Transfer of NPDES Permits for Merrimack Station, Newington Station, and Schiller Station - NPDES Permit Modification
21	AR-1690	GSP Letter withdrawing the pending request for authorization in the new permit to directly discharge FGD wastewater to the Merrimack River
22	AR-1392	US Court of Appeals for the First Circuit, In Re: Sierra Club, Inc., Petitioner and PSNH, Intervenor Judgment Entered April 19, 2017, No. 16-2415
23	AR-846	PSNH Comments to EPA (2012)
24	AR-851	Conservation Law Foundation, Comments on NPDES Permit NH0001465, Merrimack Station (2012)
25	AR-1548	Cover Letter and Comments of PSNH, EPA’s Statement of Substantial New Questions, December 18, 2017

26	AR-1300	Eversource Response Letter of February 20, 2016, Review of Technical Documents Related to NPDES Permitting Determinations for the Thermal Discharge and Cooling Water
27	AR-1573	Sierra Club et al Response to Statement of Substantial New Questions for Public Comment, Merrimack Station, NPDES Permit No. NH0001465, December 18, 2017
28	AR-1577	EPRI Letter and Comments, Technical Comments in Response to Substantial New Questions, December 18, 2017
29	AR-1688	Sierra Club and CLF January 7, 2020 Letter re: Merrimack Station, Bow, NH; NPDES Permit No. NH0001465 Thermal Discharges
30	AR-1450	Sierra Club Letter re: Overdue NPDES Permit Updates for Merrimack and Schiller Stations in New Hampshire
31	AR-1360	EPA Letter re: NPDES Permits for the Merrimack Station and Schiller Station Power Plants
32	AR-1802	Meeting Notes February 20, 2018, Meeting Between Representatives of EPA Region 1 and Granite Shore Power, LLC
33	AR-1754	Memorandum Documenting September 20, 2018, Meeting Between EPA and Granite Shore Power Concerning the Merrimack Station NPDES Permit
34	AR-1665	Memorandum Documenting December 18, 2018 Meeting Between EPA and Granite Shore Power Concerning the Merrimack Station NPDES Permit
35	AR-1884	EPA Email sending draft discussion thermal discharge limits to GSP
36	AR-1785	EPA Draft for Discussion. This is attachment to AR-1884 email.
37	AR-1892	Draft for Discussion document for possible thermal discharge requirements in the final permit.
38	AR-1871	Notes on October 1, 2019 telephone conference call between EPA Region 1 and GSP
39	AR-1676	Meeting Notes Between Granite Shore Power, LLC and the EPA Region 1 Team on August 27, 2019
40	AR-1684	Merrimack NPDES Permit—Open Items Attachment for email AR#1683
41	AR-427	1991 Discussion of draft permit limits for heat. (316(a))
42	AR-1890	GSP Capacity Factor Graphs
43	AR-362	New Hampshire State Map
44	AR-1717	Monthly Generation and DMR data for 2012 through 2019
45	AR-1715	Temperature Data at Stations S0, S4, N10 for years 2004 to 2019.
46	AR-746	EPA NPDES Permit Writers' Manual
47	N/A	Notice of Uncontested and Severable Conditions Letter

I. INTRODUCTION

On May 22, 2020, Region 1 (“Region 1” or the “Region”) of the United States Environmental Protection Agency (“EPA”), working with the New Hampshire Department of Environmental Services (“NHDES”), reissued a new final National Pollutant Discharge Elimination System (“NPDES”) permit (the “Final Permit”) to the Merrimack Station power plant in Bow, New Hampshire (the “Facility”). The Facility discharges pollutants to, and withdraws water for cooling from, the Merrimack River.

Completing the Final Permit has been a marathon run over an obstacle course. The permit development process was extended by changes in applicable law, changes in critical facts, multiple lengthy public comment periods, and spin-off litigation related to the permit development. Of particular import has been the Facility’s shift from a “baseload” operation (*i.e.*, operating nearly all the time) to a seasonal peaking operation generating electricity only intermittently. The late-2017 public comment period expressly invited public comment on the import of this change for the permit. The Region found that the reduced operation greatly reduced the Facility’s impact on the river and the Final Permit reflects this. The Final Permit also satisfies applicable law and is unquestionably more environmentally protective than the Facility’s preexisting permit, issued in 1992 (the “1992 Permit”).

Nevertheless, Sierra Club and Conservation Law Foundation (“CLF”) (“Petitioners”) appeal the Final Permit’s limits on discharges of waste heat and combustion residual leachate (“leachate”).¹ As demonstrated below, Petitioners fail to establish that the challenged permit limits are based on clear errors of fact or law, or important policy issues or exercises of

¹ GSP Merrimack LLC (“GSP” or the “Permittee”), has separately appealed the Final Permit’s cooling water intake requirements. *See* EAB NPDES Appeal No. 20-06. The Region responds separately to GSP’s Petition.

discretion that the Board should review. Instead, Region 1 demonstrates that the contested limits are consistent with applicable law and rational based on information in the record. Moreover, to the extent Petitioners differ with the Region's on scientific and policy judgments, it is well established that the Board defers to reasonable conclusions of the permitting authority.²

II. LEGAL FRAMEWORK

The CWA prohibits point source discharges of pollutants to waters of the United States unless authorized by an NPDES permit or in compliance with other CWA provisions. *See* 33 U.S.C. §§ 1311(a), 1342(a). NPDES permits apply the CWA's pollution control standards directly to specific facilities, such as Merrimack Station. 33 U.S.C. § 1342(a). *EPA v. Nat'l Crushed Stone Ass'n*, 449 U.S. 64, 71 (1980).

Of relevance here, both heat and leachate are pollutants that may be discharged only if satisfying NPDES permit requirements. 33 U.S.C. § 1362(6); 40 C.F.R. § 122.2. Generally, NPDES permits limit pollutant discharges based on applicable technology standards (often referred to as effluent limitations guidelines or "ELGs") and/or water quality standards ("WQS"). Dischargers must satisfy federal technology-based standards, at a minimum, and any more stringent water quality requirements that apply. *See* 33 U.S.C. §§ 1342(a), 1311(b)(1)(C) and (b)(2).

Technology-based permit limits are determined either through application of EPA-promulgated ELGs, or on a case-by-case, Best Professional Judgment ("BPJ") basis. *See* 33 U.S.C. §§ 1342(a)(1)(A)-(B); 40 C.F.R. §§ 122.43(a), 122.44(a)(1), 125.3(c)(1)-(3). Under the

² Many of the Final Permit's provisions are unchallenged and can go into effect. Ex. 47.

CWA, toxic and non-conventional pollutants must meet both the Best Practicable Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) levels of control. *See* 33 U.S.C. §§ 1311(b)(1)(A), (b)(2)(A); 1314(b)(1)(B), (b)(2)(B). As heat is a non-conventional pollutant and leachate contains toxic pollutants, both are subject to the BPT and BAT levels of control. *See* AR-618 at 121; AR-1885 at V/4.³ Since EPA’s ELGs for steam electric power plants, such as Merrimack Station, do not include effluent limitations for waste heat discharges, *see* 40 C.F.R. Part 423, technology-based permit limits for thermal discharges are determined on a case-by-case, BPJ basis. *See In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 539 (EAB 2006).

WQS include designated uses for water bodies as well as numeric and narrative criteria and antidegradation requirements. *See* 40 C.F.R. §§ 131.10-131.12. Permitting agencies translate these water quality requirements into specific permit limits.

For discharges of heat, CWA § 316(a), 33 U.S.C. § 1326(a), also authorizes dischargers to seek “alternative” thermal discharge limits based on a *variance from* the technology-based and/or water quality-based limits otherwise applicable under CWA § 301. 40 C.F.R. § 125.70. *See also id.* § 122.21(m)(6). A variance may be granted if EPA finds that the otherwise applicable technology-based and water quality-based limits are more stringent than necessary to assure the protection and propagation of a balanced, indigenous population of fish, shellfish and wildlife in and on the receiving water (the “BIP”), *and* that alternative, less stringent limits will meet this standard of protecting the BIP. 33 U.S.C. § 1326(a); 40 C.F.R. § 125.70. *See also Dominion*, 12 E.A.D. at 500; AR-618 at 17-27.

³ To more clearly identify page ranges, Region 1 uses the following format when citing to AR-1885, the Responses to Comments: Chapter Roman numeral/Page number(s) (*e.g.*, AR-1885 at II/1-3).

CWA § 303(g) provides that “[w]ater quality standards relating to heat shall be consistent with the requirements of section 1326 of this title.” Thus, like CWA § 316(a), such WQS should, at a minimum, assure the protection and propagation of the receiving water’s BIP.

New Hampshire (“NH”) WQS create state requirements for thermal discharges mirroring the CWA’s § 316(a) biological standard. *See* AR-618 at 174-78; AR-1885 at II/10,13. Like CWA § 316(a), NH’s WQS do not specify numeric temperature criteria, *see* AR-618 at 174, but, instead, specify narrative biological criteria that may compel thermal discharge restrictions. *See id.* at 174-78. For example, NH regulations mandate that “[a]ll surface waters shall 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 R. Env-Wq 1703.01(c). *See also* N.H. Rev. Stat. Ann. § 485-A:8(II); AR-618 at 176 n.60. NH regulations also provide that “[a]ll surface waters shall be restored to meet the water quality criteria for their designated classification...and to maintain the...biological integrity of surface waters.” N.H. Code R. Env-Wq 1703.01(b). “Biological integrity,” in turn, is defined to mean “the ability of an aquatic ecosystem to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of a region.” *Id.* at 1702(7). *See also id.* at 1703.19(a) & (b); AR-618 at 176.

Not only do NH’s water quality criteria mirror CWA § 316(a), but state statute provides that NHDES must “adhere” to thermal limits recommended by EPA:

[i]n prescribing minimum treatment provisions for thermal wastes discharged to interstate waters, the department shall adhere to the water quality requirements and recommendations of the New Hampshire fish and game department, the New England Interstate Water Pollution Control Commission, or the United States Environmental Protection Agency, whichever requirements and recommendations provide the most effective level of thermal pollution control.

N.H. Rev. Stat. Ann. § 485-A:8(VIII). *See* AR-618 at 177.⁴ Moreover, NH WQS regulations dictate that “[t]emperature in class B waters shall be in accordance with N.H. Rev. Stat. Ann. § 485-A:8, II, and VIII.” N.H. Code R. Env-Wq 1703.13(b).⁵ The Merrimack River segment into which the Facility discharges heat is designated a Class B water in NH. AR-618 at 6, 176. *Thus, EPA’s recommended thermal discharge requirements are incorporated as the State temperature criteria for the receiving water at issue here.*

Leachate discharges are subject to the BPT and BAT technology standards. *See* 33 U.S.C. § 1311(b)(2)(A). EPA’s 1982 Steam Electric ELGs addressed leachate as part of the group of wastestreams called “low volume wastes” (“LVWs”). For LVWs, EPA set BPT limitations, 47 Fed. Reg. 52290 (Nov. 19, 1982), and expressly considered setting more stringent BAT limitations, but affirmatively decided not to do so. 47 Fed. Reg. at 52297, 52303. EPA made this decision because toxic pollutants were either “not detected by Section 304(h) analytical methods or other state-of-the-art methods” or “present in amounts too small to be effectively reduced by technologies known to the Administrator.” 47 Fed. Reg. at 52303; *see also id.* at 52299 (“The remaining 119 pollutants are excluded from regulation.”). Neither did EPA “reserve” the decision about setting BAT limits for LVWs, as it did for non-chemical metal cleaning waste and other wastestreams. *See id.* at 52290-91. Rather, EPA decided for scientific reasons not to set more stringent BAT limits for LVWs. Moreover, having considered establishing more stringent BAT limitations for LVWs but declining to do so, EPA did not, as it could have, then direct permitting authorities to prepare site-specific BAT limits on a BPJ basis until national standards

⁴ Of the agencies mentioned, only EPA recommended thermal pollution control requirements here. AR-618 at 177-78.

⁵ Massachusetts WQS have a similar provision. *See* 314 CMR 4.05(b)(2)(c) (“alternative effluent limitations established in connection with a variance for a thermal discharge issued under 33 U.S.C. § 1251 (FWPCA, § 316(a)) and 314 CMR 3.00 are in compliance with 314 CMR 4.00.”).

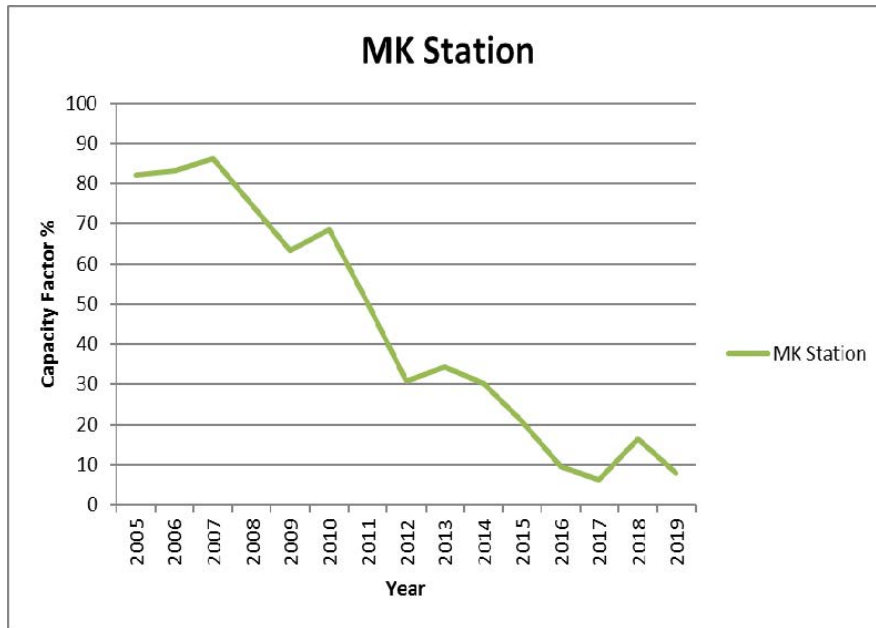
are set. Thus, in declining to set more stringent BAT limits for LVWs, the Agency determined, in effect, that BAT was no more stringent than the effective, applicable BPT limitations.

In EPA's 2015 ELGs for steam-electric power generating plants ("2015 ELGs"), EPA set BAT limits for leachate discharges "equal to the TSS [total suspended solids] limitation in the previously established BPT regulations." 80 Fed. Reg. 67838, 67841 (Nov. 3, 2015). The Fifth Circuit Court of Appeals, however, in *Southwestern Elec. Power Co. v. U.S. EPA*, 920 F.3d 999 (5th Cir. 2019) ("*SWEPCO*"), vacated and remanded these BAT limits for leachate. *Id.* at 1033. As a result of the vacatur, EPA's 1982 ELGs for LVWs again apply to leachate, and the 1982 determination regarding BAT limits for LVWs occupies the regulatory field for BAT limits for leachate. *See* 40 C.F.R. § 125.3(c)(1).

III. STATEMENT OF FACTS

The Merrimack Station power plant sits on the western bank of the Merrimack River in Bow, NH. *See also* AR-613. The Merrimack River runs approximately 116 miles south through NH and Massachusetts to the Atlantic Ocean. AR-362.

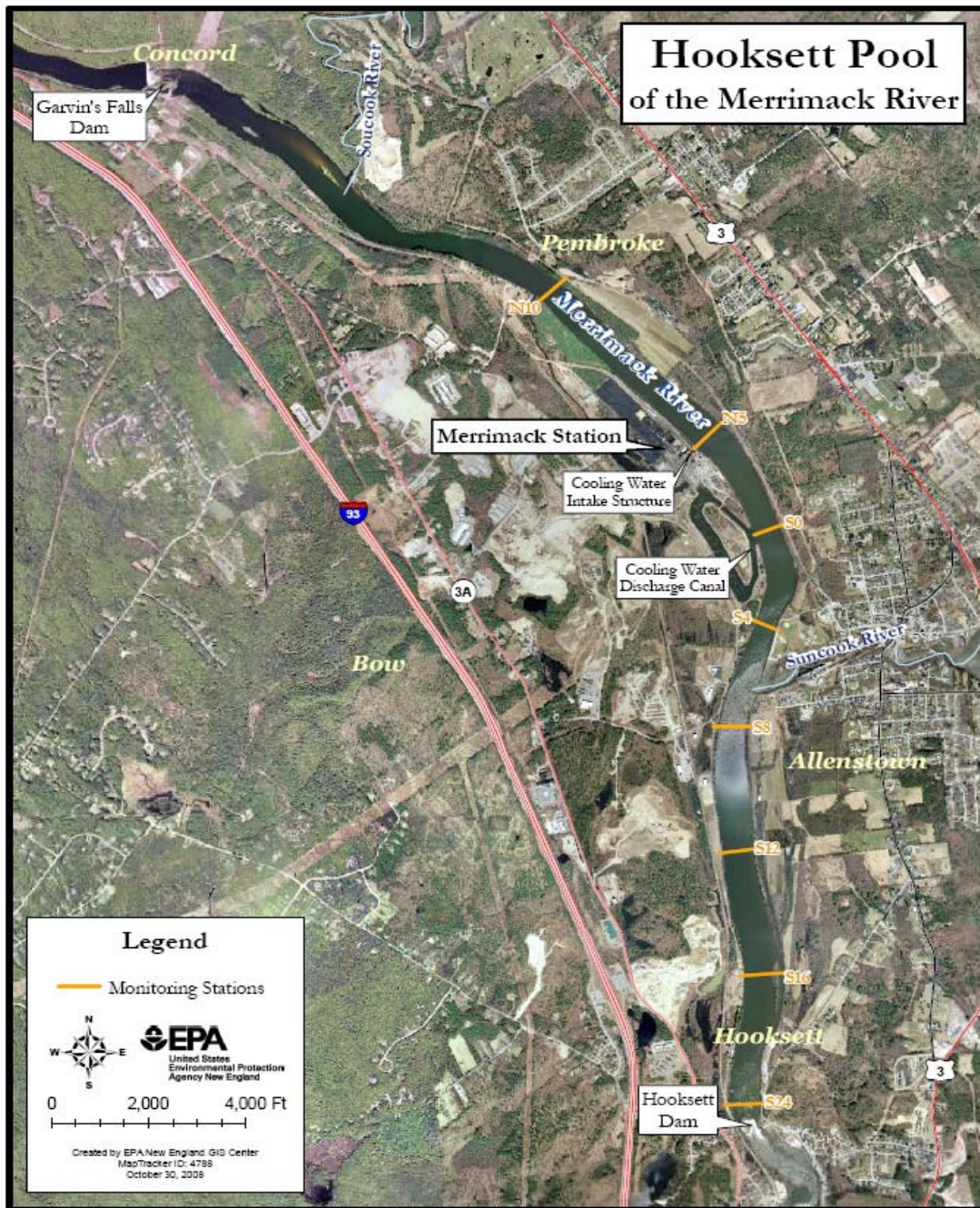
Merrimack Station began operation in the 1960s and has a maximum electrical output of approximately 478 megawatts (MW). AR-618 at 7-8. While the Facility operated for decades as a "baseload" power plant – meaning it generated electricity nearly all the time – in recent years operations have declined, as illustrated in the graph below:



AR-1890. The Facility is now a “peaking plant” generating electricity only during periods of particularly high demand in winter (primarily) and summer (less often). AR-1885 at II/113-14, 116-17, 186; AR-1534 at 8.

Merrimack Station uses a “once-through” cooling system, *see Dominion*, 12 E.A.D. at 501, withdrawing a maximum of 287 million gallons per day (“MGD”) of cooling water from, and discharging heated effluent to, an impounded segment of the Merrimack River known as the “Hooksett Pool.” AR-618 at 3-4, 7-8. Bounded upstream by the Garvins Falls Dam and downstream by the Hooksett Dam, the Hooksett Pool is approximately 5.8 miles long, and Merrimack Station lies roughly midway between the dams. *Id.* To mitigate thermal discharges, in 1972, the Facility installed a 3,901-foot (1,189 m) discharge canal equipped with 216 fountain-like power spray modules (“PSMs”). The canal and PSMs were intended to help dissipate waste heat to the atmosphere before discharge to the river, but these techniques have largely been ineffective. *See* AR-608 at 4; AR-618 at 9-11, 134. Three temperature monitoring stations are particularly important in this case: N10, representing ambient river temperatures upstream of and

unaffected by the thermal discharge; S0, inside the canal near the point of discharge and representing the discharge temperature meeting the river; and S4, about 2000 feet downstream of S0 and representing river temperatures after the discharge mixes with the River. AR-618 at 14-15, 27, 189. The figure below shows these features. *Id.* at 4.



In addition to heat, the Facility also discharges other pollutants, including leachate. AR-1886, Parts A.4 and 5; *see also* AR-1885, Chapters IV, V, and VIII. Leachate is conveyed from the Facility's ash landfill to an onsite impoundment (the "slag settling pond") for settling and commingling with other wastestreams prior to discharge. *Id.*

A. Chronology of NPDES Permitting and Related Events

Merrimack Station began operations prior to the CWA's passage and was regulated by NH. AR-618 at 8-14. EPA first issued the Facility an NPDES permit in 1975 and reissued the permit in 1979, 1985 and 1992. *Id.* at 11-14. The 1992 Permit expired in 1997 but was administratively continued. *See* 40 C.F.R. § 122.6(a).

Region 1 issued Public Service of New Hampshire ("PSNH"), the Facility's then owner, a new Draft NPDES Permit for Merrimack Station on September 30, 2011 (the "Draft Permit"). AR-609.

After learning the Facility had installed a new treatment system for its flue gas desulfurization ("FGD") wastewater, *see* AR-1135 at 6, 12, 16, Region 1 issued a revised draft permit for public comment on April 18, 2014 (the "2014 Revised Draft Permit"). *Id.*, AR-1136, AR-1137. The 2014 Revised Draft Permit solely addressed new proposed limits for FGD wastewater and related conditions. AR-1135 at 3-4.⁶

In November 2015, EPA issued the 2015 ELGs, 80 Fed. Reg. 67838, which, among other things, set new BAT limitations for several wastestreams present at Merrimack Station, such as leachate. *See* 80 Fed. Reg. at 67850-52, 67894-95 (40 C.F.R. §§ 423.13(g)(1)–(3)).

⁶ Recognizing the Facility was operating its current FGD treatment system to achieve zero discharge, GSP withdrew its request for authorization to discharge FGD wastewater. AR-1690. Thus, FGD wastewater discharges are neither authorized by the Final Permit nor at issue on appeal.

In 2016, Petitioner Sierra Club sued EPA alleging “unreasonable delay” in reissuing NPDES permits for the Merrimack Station and Schiller Station coal-burning power plants. AR-1450. *See also* AR-1360 at 1-8. The First Circuit ultimately denied Sierra Club’s petition for a writ of mandamus and dismissed the case in 2017. AR-1392

As Region 1 worked to review public comments on the Draft Permit and 2014 Revised Draft Permit, additional legal and factual developments occurred affecting the permit development. Consequently, on August 2, 2017, Region 1 exercised its discretion under 40 C.F.R. § 124.14(b) to issue a new public notice and reopen the comment period. With the public notice, the Region issued a “Statement of Substantial New Questions for Public Comment” (the “2017 Statement”) identifying issues and data available for public review and comment. AR-1533; AR-1534. The 2017 Statement discussed, and invited comment on, a variety of issues, including new thermal discharge and biological data, corrected interpretations of existing thermal discharge data, EPA’s 2015 ELGs, the imminent sale of Merrimack Station, and its evolution from baseload to peaking facility. *See* AR-1534 at 4-5.

Granite Shore Power LLC purchased the Facility from PSNH on January 10, 2018, and transferred it to its subsidiary, GSP. *See* AR-1642. Region 1 transferred the Facility’s NPDES permit to GSP the same day. AR-1701. *See also* AR-1534 at 5, 8, 69. GSP met with Region 1 in early 2018 to discuss the permit. For the first time, GSP indicated a potential willingness to accept permit limits based on the Facility’s reduced operations. AR-1802 at 3.

In April of 2019, the *SWEPCO* decision, 920 F.3d 999, vacated and remanded to EPA certain effluent limits set by the 2015 ELGs, including the BAT limitations for leachate. *Id.* at 1033. The Region then had to determine the extent to which this development affected limits for the Final Permit.

As the Region continued work on the permit in 2018 through 2020, Merrimack Station continued to operate at reduced levels. *See* AR-1890. During this time, Region 1 had additional discussions with GSP and the Petitioners, which the Region documented for the administrative record, and Petitioners sought information on both the permit and the Region’s discussions with GSP. The Region shared this information with Petitioners both informally and in response to requests under the Freedom of Information Act. *See, e.g.*, AR-1878; AR-1917; AR-1871; AR-1916; AR-1913; AR-1912; AR-1754; AR-1684; AR-1885 at II/298 (citing AR-1619; AR-1635; AR-1637; AR-1680; AR-1773; AR-1735; AR-1818). On January 7, 2020, Petitioners submitted additional comments. AR-1688. Region 1 exercised its discretion to consider and respond to these late comments in its Responses to Comments. AR-1885 at II/320-64.

Region 1 issued the Final Permit on May 22, 2020, at 12:08 PM. AR-1886 at 1 (e-signature stamp).

B. Thermal Discharge Limits

Characterizing the effects of Merrimack Station’s thermal discharge on aquatic life and determining appropriate limits have been contentious. *See* AR-618 at 8-16. For the 1992 Permit, Region 1 considered delaying issuance due to a dearth of thermal discharge information, *id.* at 14; AR-427 at 4, but instead issued the permit with new thermal and biological monitoring requirements, largely carrying over thermal limits from the prior (1985) permit. AR-618 at 14. *See also* AR-1570 at 10. The Fact Sheet for the 1992 Permit explains that the thermal limits are based on a CWA § 316(a) variance. AR-112 at 10 (“The Regional Administrator has determined that a 316(a) variance could be granted”).

Though based on a CWA § 316(a) variance, the 1992 Permit did not impose numeric, not-to-be-exceeded temperature limits. *See* AR-618, at 13-14, 27-28; AR-112 at 10. Instead of

barring thermal discharge when the river temperature criteria are exceeded, the 1992 Permit allows continued discharge provided all PSMs, which provide only limited cooling, are utilized. AR-618 at 27, 134; AR-236 at 16 (Part I.A.11.b). *See also* AR-427 at 2 (“No maximum temperature conditions were imposed – rather, the PSMs were to be fully operational during certain critical river temperatures and that the resulting thermal plume was acceptable whatever its thermal characteristics or its configuration might be.”).

The 1992 Permit also retained slightly edited versions of narrative conditions from the prior (1985) permit, one of which addressed thermal discharge effects and another which addressed WQS compliance generally. *Compare* AR-236 at 3 (Part I.A.1.g and I.A.1.b), *with* AR-483 at 3 (Parts I.A.1.g. and h.). The 1992 Permit’s narrative thermal provision at Part I.A.1.g states that “the combined thermal plumes for the station shall: (a) not block zone of fish passage, (b) not change the balanced indigenous population of the receiving water, and (c) have minimal contact with the surrounding shorelines.” AR-236 at 3. *See also* AR-618 at 14. The general narrative water quality provision at Part I.A.1.b states that “[t]he discharge shall not jeopardize any Class B use of the Merrimack River and shall not violate applicable WQS.” AR-236 at 2.

For the Draft Permit, Region 1 provided a detailed analysis of issues associated with permitting Merrimack Station’s thermal discharges. *See* AR-618, Chapters 1-9, 13. *See also* AR-608 at 3. While the Facility requested renewal of the CWA § 316(a) variance with the same thermal discharge conditions as the 1992 Permit, the Region proposed rejecting that request because the existing provisions would not satisfy CWA § 316(a). *See, e.g.*, AR-618, at 120-21. Region 1 concluded that the Permittee had failed to demonstrate either that past thermal discharges had not appreciably harmed the BIP or that, despite such harm, the future protection and propagation of the BIP was reasonably assured with the requested permit conditions. *Id.* at

121. *See also* 40 C.F.R. § 125.73(c)(1)(i),(ii); *Dominion*, 12 E.A.D. at 553 (“retrospective” and “prospective” demonstrations).

Instead of proposing a variance, the Region developed thermal conditions for the Draft Permit based on a BPJ application of the BAT technology standard and NH WQS. *See* AR-618 at 121-74. Region 1 determined that, of the available alternatives, converting the Facility’s open-cycle cooling system to a closed-cycle system using cooling towers would be the BAT year-round for reducing the Facility’s waste heat discharges. *Id.* at 172-74. The Region then set thermal limits based on the expected performance of closed-cycle cooling. *See* AR-618 at 211-12; AR-609 at 9-10 (Part I.A.5.b-c).

Region 1 also determined in-stream temperature limits that would protect aquatic life in Hooksett Pool, in compliance with the state’s WQS. AR-618 at 208-10, 212-14. Comparing the technology-based and water quality-based limits, the Region found that the former were more stringent and, therefore, governed the Draft Permit’s numeric thermal limits. *See* AR-618 at 214-15, Table 9-3, and 347. *See also* AR-609 at 9-10 (Part I.A.5.b-c). The Draft Permit also retained somewhat modified versions of the narrative thermal discharge provision from the 1992 Permit, *see* AR-609 at 25 (Part I.A.23), as well as the narrative provision requiring compliance with WQS, generally AR-609 at 23 (Part I.A.14).

With the Draft Permit, Region 1 also expressly evaluated and invited comment on an alternative permitting approach that based thermal limits on a CWA § 316(a) variance using the instream temperature limits that had been determined to meet NH’s WQS (the “2011 Variance Alternative”). AR-618 at xi, xiii-xiv, 216-17. The Region explained that setting instream temperature limits based on critical temperatures for the most sensitive resident fish could simultaneously satisfy the narrative biological criteria of both CWA § 316(a) and NH’s WQS. *Id.*

Indeed, Region 1 explained that, under state law, the Region’s recommendations for limiting thermal discharges under CWA § 316(a) would be incorporated as the State’s water quality criteria for Hooksett Pool and would, by definition, be consistent with NH WQS. *Id.*; *see id.* at xi, 177-78. The Region stated it was actively considering this option. *Id.* at xiv, 217.

Region 1 received voluminous comments on the Draft Permit from numerous interested parties. As the Region worked on other aspects of the permit, it also worked to consider comments and new information related to thermal discharges. When it reopened the public comment period and issued the 2017 Statement, the Region discussed, and expressly invited public comment on, the following thermal issues:

- a) determining thermal discharge limits in light of:
 - (i) Region 1’s corrected interpretation of thermal data evaluated for the Draft Permit;
 - (ii) new thermal and biological data submitted since the Draft Permit; and
 - (iii) new data on the presence of an invasive species, the Asian clam, in the Hooksett Pool;
- b) how, if at all, Merrimack Station’s evolution from a “baseload” facility to a seasonal “peaking” facility, typically only generating electricity intermittently in the winter and summer, should affect the final permit limits; and
- c) should PSNH’s (then) imminent sale of the Facility to GSP affect the permit?

See, e.g., AR-1534 at 4-5, 40-41. Once again, Region 1 received voluminous comments on many issues.

In the 2017 Statement, Region 1 explained that its “current view” was that the Facility’s reduced operations should not affect the permit limits because PSNH was still requesting permit conditions based on baseload operations, the Facility’s operations could increase in the future, and its effects could be significant even during seasonal operations. *Id.* The Region’s view changed, however, when GSP, the Facility’s new owner, met with the Region in early 2018 and indicated a potential willingness to accept permit limits based on reduced operations. *See AR-*

1802 at 3; AR-1885 at II/12, 117. Region 1 then began discussing with GSP the possibility of setting thermal limits under a CWA § 316(a) variance based on both the 2011 Variance Alternative and the Facility's continued reduced operations. AR-618 at 213-14, 216-17; AR-1885 at II/8. *See also, e.g.,* AR-1665; AR-1884; AR-1785; AR-1892. The basis of these limits would be that (a) the Facility would have to meet specific instream temperatures determined protective of local fish populations, (b) data showed the Facility's reduced operations had greatly reduced its thermal discharges, (c) there was evidence of recovering fish populations associated with the thermal discharge reductions, and (d) a capacity factor limit could ensure continued reduced operations, as needed to satisfy CWA § 316(a). AR-1885 at II/11-12, 14-16, 116-19, 204-05, 216-17, 337-38.

Ultimately, Region 1 issued the Final Permit with thermal limits based on a CWA § 316(a) variance – which also satisfied NH WQS – that set specific instream temperature limits based on the 2011 Variance Alternative. *Compare* AR-1886 at 17-19 (Part I.A.11), *with* AR-618 at 212-13 (Table 9-2), 216-17. *See also* AR-1885 at II/13, 120. The Final Permit also included a capacity factor limit applicable from May through September. AR-1886 at 19 (Part I.A.11, n.6). Given these new thermal limits, the Region did not retain the narrative thermal discharge provision from the Draft Permit, deeming it unnecessary and potentially ambiguous, but retained the general narrative WQS provision to address WQS issues beyond thermal discharges. *See* AR-1886 at 20 (Part I.A.12); AR-1885 at II/301, 307-09, 339. NHDES certified the Final Permit under its WQS and CWA § 401(a)(1). AR-1811.

C. Combustion Residual Leachate Limits

Turning to the development of permit limits for leachate, the 1992 Permit included limits on several wastestreams derived from the 1982 ELGs for the Steam Electric Generating Point

Source Category, including leachate. AR-236 (Part I.A.5); AR-112 at 3-4, Att. C. The 1982 ELGs regulate discharges of TSS and Oil and Grease (O&G) in leachate, based on limits for LVWs.⁷

For the Draft Permit, Region 1 also proposed technology-based effluent limits based on the applicable 1982 ELGs for several wastestreams. For example, the Region applied the TSS and O&G limits from the ELGs to all LVWs, including leachate. AR-609, Parts A.2 and A.3; *see also* AR-608 at 20-22; AR-1885 at V/28-29; 40 C.F.R. § 423.12(b). The Region also proposed BPT-based, site-specific Best Conventional Treatment Technology (“BCT”) limits for all LVWs, that were equal to those BPT limits set forth in section 423.12(b). AR-608 at 13, 20-22; AR-609, Parts A.2 and A.3; *see also* AR-1885 at V/29.

While Region 1 worked on the permit, EPA was developing and, on November 3, 2015, issued new ELGs for the Steam Electric Power Generating Category, which codified BAT effluent limitations for numerous wastestreams, including leachate. *See* 80 Fed. Reg. at 67850-52, 67894-95.

As a result, in the 2017 Statement, *see* Part III.A, *supra*, Region 1 requested comment on the 2015 ELG’s implications for the permit and explained it planned to set limits based on the 2015 ELGs if they remained in effect. The Region recognized that some requirements had been stayed, were under reconsideration by EPA, or were being challenged in federal court. *See* AR-1534 at 5, 7-8, 44-63; AR-1885 at V/29-30.

Then, in April of 2019, the Fifth Circuit vacated and remanded to the Agency certain BAT limits set by the 2015 ELGs, *SWEPCO*, 920 F.3d 999, including the BAT limitations for

⁷ Leachate falls within the 1982 rules’ definition of “low volume waste sources.” AR-1885 at V/28; *see also* 47 Fed. Reg. at 52305.

leachate, *id.* at 1033. In the absence of the 2015 BAT limits for leachate, the Region reverted to incorporating the applicable 1982 ELGs for LVWs in the Final Permit, as it had in its Draft Permit and previous 1992 Permit. AR-1885 at V/30; *see also* AR-608 at 20-22.

IV. STANDARD OF REVIEW

Under 40 C.F.R. § 124.19(a)(4)(i), the Board denies review unless the petition establishes that the challenged permit conditions are based on clear errors of fact or law or involve an exercise of discretion or an important policy consideration which the Board should, in its discretion, review. *See, e.g., In re City of Moscow*, 10 E.A.D. 135, 140 (EAB 2001). While the Board’s review authority is broad, it is to be exercised “only sparingly.” *In re New England Plating Co.*, 9 E.A.D. 726, 730 (EAB 2001) (*citing* 45 Fed. Reg. 33290, 33412 (May 19, 1980)). In an appeal to the Board, the petitioner bears the burden of demonstrating that review is warranted, *id.*, and must establish that the issue was “raised during the public comment period” unless, alternatively, it establishes the issue was not reasonably ascertainable during the comment period. *New England Plating*, 9 E.A.D. at 730-31 (*citing* 40 C.F.R. §§ 124.19(a), 124.13). Indeed, the “Board frequently has emphasized that the issue to be reviewed must have been *specifically raised* during the comment period,” *id.* at 732 (citations omitted), and in adequate detail, *see, e.g., Moscow*, 10 E.A.D. at 150 n.41. This ensures that the Region has an opportunity to respond to the issues before issuing the final permit and furthers EPA’s policy of ensuring most permit issues are resolved at the Regional level. *See, e.g., id.* at 141.

To obtain Board review, a petitioner must not only raise specific issues, it also must substantiate them. 40 C.F.R. § 124.19(a). *See also, e.g., New England Plating*, 9 E.A.D. at 737. “[M]ere allegations of error” or “vague or unsubstantiated claims” are insufficient to obtain

review. *In re City of Attleboro*, 14 E.A.D. 398, 443 (EAB 2009). A petitioner must demonstrate specific reasons why Board review is warranted and support its arguments with evidence. *Id.* The Board has also explained that “it is not sufficient merely to repeat objections made during the comment period; rather, a petitioner must also demonstrate why the permit issuer’s response to those objections...is clearly erroneous.” *Dominion*, 12 E.A.D. at 509 (citations omitted).

Finally, the Board “traditionally assigns a heavy burden to petitioners seeking review of issues that are essentially technical in nature.” *Moscow*, 10 E.A.D. at 142 (citations omitted). *See also Dominion*, 12 E.A.D. at 510, 561-62, 645-47, 670-74. Typically, in raising a technical objection, a petitioner must present the Board 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. *See, e.g., In re Env'tl. Disposal Sys., Inc.*, 12 E.A.D. 254, 289-92 (EAB 2005). A petitioner does not establish clear error or an exercise of discretion warranting review merely by presenting “a difference of opinion or alternative theory regarding a technical matter.” *In re Town of Ashland Wastewater Treatment Facility*, 9 E.A.D. 661, 667 (EAB 2001). Similarly, “[i]n cases where the views of the Region and the petitioner indicate bona fide differences of expert opinion or judgment on a technical issue, the Board will typically defer to the Region.” *In re NE Hub*, 7 E.A.D. 561, 567-68 (EAB 1998).

V. ARGUMENT

A. **The Board Should Deny Review of the Final Permit’s Thermal Discharge Conditions**

The Final Permit includes numeric thermal discharge limits, AR-1886 at 17-19 (Part I.A.11), as well as narrative water quality provisions unrelated to thermal discharge, *id.* at 20 (Part I.A.12–1.A.17). These limits protect aquatic life and water quality in the Merrimack River

consistent with applicable law and concordant with the relevant science and facts. NHDES has certified the Final Permit under its WQS and CWA § 401(a)(1). AR-1811. Nevertheless, Petitioners challenge the Final Permit’s thermal limits on procedural and substantive grounds. They attack the Final Permit’s numeric thermal limits and its treatment of narrative permit conditions. *See* Pet. at 2-3, 38-68. These challenges fail, however, to demonstrate that these permit conditions are based on either a clear error of fact or law or an exercise of discretion or a policy consideration that the Board should review.

1. The Board Should Deny Review of the Limits in Part I.A.11 of the Final Permit

a. Region 1 Did Not Abuse Its Discretion in Deciding Not to Reopen the Comment Period for Part I.A.11 of the Final Permit.

The Board applies the logical outgrowth test to discern whether EPA offered an adequate opportunity for public comment on new permit terms. It is well established in both rulemaking and permit litigation that a final action can incorporate changes from the proposed action without, in all cases, necessitating additional public comment. As the Board has explained:

[a] final permit need not be identical to the corresponding draft permit and, indeed “[t]hat would antithetical to the whole concept of notice and comment.” It is, in fact “the expectation that the final rules will be somewhat different and improved from rules originally proposed by the agency.”

In re District of Columbia Water and Sewer Authority, 13 E.A.D. 714, 758-59 (EAB 2008) (hereinafter “*WASA*”) (quoting *NRDC v. EPA*, 279 F.3d 1180, 1186 (9th Cir. 2002)). Additional notice and comment are not triggered if the final conditions of the rule or permit are a “logical outgrowth” of the proposed action. *See, e.g., Long Island Care at Home, Ltd. v. Coke*, 551 U.S. 158, 175 (2007) (final rule must be logical outgrowth of proposed rule); *City of Taunton, MA v. EPA*, 895 F.3d 120, 130 n.10 (1st Cir. 2018) (additional notice and comment not needed for final NPDES permit that differs from, but is a logical outgrowth of, the draft permit).

In the rulemaking context, the Seventh Circuit, in *Amer. Med. Ass'n v. United States*, 887 F.2d 760, 767-69 (7th Cir. 1989), stated that:

...notice need not identify every precise proposal which the agency may ultimately adopt; notice is adequate if it apprises interested parties of the issues to be addressed in the rule-making proceeding with sufficient clarity and specificity to allow them to participate in the rulemaking in a meaningful and informed manner....[T]he relevant inquiry is whether or not potential commentators would have known that an issue in which they were interested was “on the table” and was to be addressed by a final rule.

887 F.2d at 767-69. *See also Long Island Care*, 551 U.S. at 174; *BASF Wyandotte Corp. v. Costle*, 598 F.2d 637, 642-44 (1st Cir. 1979). Courts have found changes embodied in a final permit or rule to be reasonably foreseeable when they stem from a range of alternatives described with reasonable specificity by the agency at the proposal stage of proceedings. *See, e.g., Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 549 (D.C. Cir. 1983).

Certainly, an agency shall not “use the rulemaking process to pull a surprise switcheroo on regulated entities.” *Env'tl Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005). Yet, even a substantial change between a draft and final rule does not necessarily require re-notice. The crux of the issue is not whether there has been a switch between the proposed and final actions, but whether the change is truly a *surprise*. *See Long Island Care*, 551 U.S. at 175; *Career College Assoc. v. Riley*, 74 F.3d 1265, 1276 (D.C. Cir. 1996) (final rule rejecting the proposal was nevertheless a “logical outgrowth” because notice identified that definitional issue was “on the table”). Thus, the *American Medical* court explained that:

...courts have upheld final rules which differed from proposals in the following significant respects: outright reversal of the agency’s initial position; elimination of compliance options contained in an NPR;...or altering the method of calculating or measuring a quantity relevant to a party’s obligations under the rule.

887 F.2d at 767.

In *WASA*, 13 E.A.D. at 759, the Board also explained that the logical outgrowth standard is reflected in EPA regulations, including 40 C.F.R. § 124.14(b), which *authorizes*, rather than *requires*, reopening a comment period when either *permit changes* or *additions to the record* raise “substantial new questions” warranting additional public comment. Whether to reopen a comment period on this basis is at the discretion of the permitting authority. The Board reviews decisions not to reopen the comment period under 40 C.F.R. § 124.14(b) under an “abuse of discretion” standard and affords permit issuers “substantial deference.” *In re City of Palmdale*, 15 E.A.D. 700, 714 (2012). *See also NE Hub*, 7 E.A.D. at 585. The Board has also made clear that it “... consider[s] changes to draft permits on a case-by-case basis and, depending on the significance of the change, may determine that reopening the comment period is warranted...” *WASA*, 13 E.A.D. 714, 758-59 (citations omitted).

The Board has also explained that EPA considers multiple factors in deciding whether to reopen a comment period under 40 C.F.R. § 124.14(b):

[f]actors that may inform a permitting authority's decision include: “whether permit conditions have changed, whether new information or new permit conditions were developed in response to comments received during prior proceedings for the permit, whether the record adequately explains the agency's reasoning so that a dissatisfied party can develop a permit appeal, and the significance of adding delay to the particular permit proceedings.”

Palmdale, 15 E.A.D. at 715 (internal citations omitted). *See also Dominion*, 12 E.A.D. at 695. Changed permit conditions do not trigger reopening the comment period if the final conditions are a logical outgrowth of the proposal. *Palmdale*, 15 E.A.D. at 714. *See also In re Town of Concord*, 16 E.A.D. 514, 532 (EAB 2014). Moreover, as stated above, EPA considers whether permit changes are in response to comments, whether the reasoning for the changes is sufficiently explained to enable a dissatisfied party to develop an appeal, and whether further delay would be particularly undesirable. *Palmdale*, 15 E.A.D. at 715.

In this case, the Final Permit's numeric thermal discharge limits in Part I.A.11 are a logical outgrowth of the Draft Permit and do not raise substantial new questions that warrant reopening the comment period (for a fourth round of comment). Region 1 addressed this explicitly in its Responses to Comments. *See* AR-1885 at II/297-301, 326-328. Petitioners disagree with the Region but ignore or respond ineffectually to the Region's analysis.

Region 1's proposed action and supporting record, including the Draft Permit, the 2017 Statement, and the records supporting them, well identified the issues at stake so that commenters reasonably should have known that issues of concern to them were "on the table." Moreover, the Final Permit's conditions are based on these issues, clearly identified in the record, and the comments submitted about them.

While the Draft Permit proposed thermal limits based on the applicable technology-based levels of control and WQS, the Region also expressly stated that it was actively considering basing final thermal limits on the 2011 Variance Alternative, which included limits initially derived to meet applicable WQS but that would also satisfy CWA § 316(a). AR-618 at xiii-xiv, 216-17. Region 1 detailed specific permit requirements for this option, including instream temperature limits to prevent acute and chronic harm to fish. *Id.* at 212-14. The Region expressly invited public comment on this option. *Id.* at 216-17. Indeed, both Petitioner CLF and the Permittee provided such comments, addressing the WQS-based limits and the 2011 Variance Alternative. *See, e.g.,* AR-1885 at II/121-134; AR-846 at 59-61; AR-851 at 19-21; AR-1548 at 51; AR-1300 at 21-32. The Region put the 2011 Variance Alternative's limits on the table and the Petitioners' and Permittee's comments evidence that.

With the 2017 Statement, the Region reopened the comment period on many issues, including thermal discharge issues, such as new and corrected interpretations of thermal data,

new biological data, and the significance of Merrimack Station’s reduced electrical generation. *See* AR-1534 at 37-44, 68-69. Region 1 specifically explained that Facility operations had become a seasonal peaking unit and requested public comment on whether and how this should affect the permit’s limits. *Id.* at 68-69. The Region offered that “new data...reflecting current reduced operations is primarily useful if the new permit includes effluent limits reflecting this reduced operational profile...[and] would be less useful for helping to determine limits that would accommodate baseload operations, as past permit limits have and as PSNH has requested.” *Id.* at 39. It also explained that its “current” view was to continue approaching the permit as if Merrimack Station was a baseload facility because, among other reasons, PSNH continued to seek permit limits on that basis. *Id.* at 69.

In response, and again demonstrating the effectiveness of the Region’s public notice, both Petitioners and the Permittee provided additional comments on thermal discharge issues, including the Facility’s reduced operations. Petitioners commented that:

NPDES permits are set based on the facility’s potential pollution, not historical performance. Unless coupled with operation restrictions, discharge limits may not be set based on what level of operation EPA suspects Merrimack *might* engage in, but only on what level of operation it is *allowed*.

AR-1573 at 25 (emphasis added). *See also id.* at 26-27; AR-1577 at 3-14 to 3-17; AR-1885 at II/14. Thus, Petitioners opposed permit requirements based on a mere *expectation* that the Facility would operate at a reduced level but appeared open to permit requirements that would restrict operations. *See* AR-1885 at II/78-79. Meanwhile, PSNH commented that the anticipated buyer of the Facility, “Granite Shore is not willing to have, or desirous of having, Merrimack Station’s operations restricted, including based on capacity utilization.” AR-1548 at 6-7.

Yet, in discussions with Region 1 in early 2018 after acquiring Merrimack Station, GSP indicated that it planned to continue operating as a peaking plant for the foreseeable future and

was now amenable to permit limits reflecting that status. AR-1802 at 3; AR-1885 at II/80. Considering these comments and developments, the Region further assessed setting final permit limits based on the 2011 Variance Alternative coupled with a capacity limit based on the Facility's reduced operational scheme. *See* AR-1885 at II/120, 299-300. The Region discussed finalizing the permit's thermal limits in this manner with GSP, documented these discussions for the administrative record and shared that information with Petitioners at their request. The Region also discussed the permit with Petitioners. *See* AR-1684; AR-1754; AR-1872; AR-1912; AR-1913; AR-1915; AR-1916; AR-1917; AR-1885 at II/298 (citing AR-1619; AR-1635; AR-1637; AR-1680; AR-1773; AR-1735; AR-1818). In response, Petitioners submitted a detailed comment letter dated January 7, 2020, calling for limits based on closed-cycle cooling and for the comment period to be reopened if the Final Permit included limits based on the 2011 Variance Alternative with a capacity factor restriction. AR-1688 at 17, 18 n.45. Region 1 considered and responded to these comments. AR-1885 at II/296-340.

It is evident from the above facts that the thermal limits in Part I.A.11 of the Final Permit satisfy the logical outgrowth standard, and the Region did not abuse its discretion under 40 C.F.R. § 124.14(b) by not reopening the comment period on these limits. All the issues underlying the Final Permit's limits squarely "on the table" for public consideration and comment. Moreover, the limits are supported by data on plant operations, thermal discharges, and biological effects that were publicly noticed for review and comment. Furthermore, in response to comments received, new data, and further research, the Region adjusted certain values in the array of instream temperature limits and monitoring locations identified with the 2011 Variance Alternative and added a capacity factor limit, and explained all these adjustments in its Responses to Comments. *See, e.g.,* AR-1885 at II/10-16, 103-04, 298-301,

Perhaps recognizing they cannot fairly argue they could not have anticipated final thermal limits based on the 2011 Variance Alternative or reduced operations, Petitioners urge:

[t]he issue is *not* whether one could anticipate that EPA might ultimately grant a § 316(a) variance or take into account the Station's recent reduced operations. Rather, the issue is that the conditions in Part I.A.11 are both wholly new and in direct and irreconcilable conflict with the draft permits, the public notices, and the Region's own prior findings and determinations.

Pet. at 39. Thus, while acknowledging that the Region both indicated it was considering the 2011 Variance Alternative and sought public comment on the reduced operations issue, Pet. at 40, 43, Petitioners nevertheless argue the 2011 Variance Alternative conflicts with the Final Permit because the former contemplated limits that met WQS and were covered by a variance from technology-based limits, while the latter is based on a variance from *both* technology-based and water quality-based effluent limits. Pet. at 41. This argument misunderstands the law and misreads the record.

A CWA § 316(a) variance can only be granted if the alternative thermal limits reasonably assure the protection and propagation of the receiving water's BIP. CWA § 316(a). If the alternative limits meet this standard, then they support a variance from *both* technology-based limits *and* water quality-based limits. *See* 33 U.S.C. § 1326(a) (referring to variances from limits otherwise applicable under CWA §§ 301 or 306). *See also Dominion*, 12 E.A.D. at 499-500, 569. Alternative limits that assure the protection and propagation of the BIP and support a variance from otherwise applicable technology-based limits cannot somehow simultaneously fail to assure the protection and propagation of the BIP when considering water quality-based limits.

Accordingly, Region 1 never suggested the 2011 Variance Alternative Limits would not support a variance from WQS-based limits. The Region only explained that the limits it determined would satisfy NH WQS would *also* satisfy CWA § 316(a) and that the Region was

considering adopting such limits. AR-618 at xiii-xiv, 216-17. The Region noted two reasons that the limits would satisfy both NH WQS and CWA § 316(a). First, the biological standards of CWA § 316(a) (*i.e.*, assuring the protection and propagation of the BIP) and NH WQS mirror each other so that limits satisfying one also satisfy the other. AR-618 at xiii-xiv, 17-21, 175-78, 216-17. *See also* AR-1885 at II/96. Second, as explained above, under NH's WQS laws, NHDES must adhere to EPA's thermal discharge control recommendations and those recommendations become the State's water quality criteria for temperature in the receiving water. N.H. Rev. Stat. Ann. § 485-A:8(VIII); N.H. Code R. Env-Wq 1703.13(b). *See also* AR-618 at xi, 177-78; AR-851 at 18-20.

Petitioners also assert that the Region's shift of the compliance point for acute instream temperature limits from sampling station S0 to S4 is not a logical outgrowth of the Draft Permit. Pet. at 42. According to Petitioners, this shift was unforeseeable because S0 was the proposed compliance point for acute limits in the 2011 Variance Alternative and the Region's explanation for this was "unequivocal." *Id.* Petitioners read the Region's proposal too narrowly, and the logical outgrowth test does not demand that an agency maintain such a rigid grip on every detail of a proposed action.

Here, the Region adjusted the compliance point from S0 to S4 because it was warranted by an objective consideration of public comments. The 2011 Variance Alternative proposed instream temperature limits to prevent chronic and acute effects to resident fish species and, as Petitioners state, proposed S4 to measure compliance with chronic temperatures and S0 for acute temperatures. AR-618 at 213-14. One of the Permittee's experts commented, however, that using S0 was excessively stringent and recommended that S4 also be used as the compliance point for acute limits. Region 1 was persuaded and responded:

LWB generally argues that the acute, maximum protective temperature that EPA identified for yellow perch larvae (29.3°C) is overly stringent because EPA proposes Station S0 as the compliance point, which ignores that the thermal plume would be diluted and drifting larvae would be exposed to a decreasing temperature profile as they transit between Stations S0 and S4. *See* AR-1300 at 27-8. EPA agrees that there is a well-documented decrease in temperature between Station S0, where the temperature essentially reflects thermal effluent prior to mixing with the river, and S4, approximately 2,000 feet downstream from the mouth of the discharge canal. After carefully considering the intention of the acute limit for the protection of drifting larvae, EPA concluded that moving the compliance point for the acute limit from Station S0 to S4 is reasonable to account for mixing of the plume during the relatively short exposure period while continuing to provide protection for yellow perch larvae.

AR-1885 at II/129. *See also id.* at II/120, 129-131 (discussing acute limits and compliance points for larval yellow perch and larval American shad), II/54. Moreover, the Permittee's comments in AR-1300 were made available for public review and comment with Region 1's 2017 Statement. *See* AR-1534 at 40. That a proposed monitoring location could be shifted for the Final Permit to another location already specifically addressed in the Draft Permit is well within the scope of reasonably foreseeable permit changes. *See Lead Phase-Down*, 705 F.2d at 549; *Spartan Radiocasting Co. v. FCC*, 619 F.2d 314, 316 (4th Cir. 1980). The Region's decision to set S4 as the compliance point for acute limits is a logical outgrowth of the Draft Permit and its supporting record.

Petitioners also incorrectly object that the Final Permit's capacity factor limit is not a logical outgrowth. Pet. at 43. This limit applies in the warm weather season (May to September) as an alternative to the instream temperature limits for preventing *chronic* effects on fish and is satisfied if the Facility remains below a 40% capacity factor on a 45-day rolling average basis. *See* AR-1886 at 19 (Final Permit I.A.11, n.6). The capacity factor limit does not affect the Final Permit's acute limits. *Id.* Petitioners complain this limit was not part of the 2011 Variance Alternative and, therefore, could not have been anticipated.

While not part of the 2011 Variance Alternative, Region 1 disagrees that the capacity factor limit is not a logical outgrowth of the Draft Permit. At the time of the Draft Permit, Region 1 discussed controlling thermal discharges to meet the BAT standard by restricting plant operations, but ultimately rejected that option because Merrimack Station was a baseload facility and technologies existed to reduce discharges and allow full-scale generation. AR-618 at 132, 144-45, 158. By the time Region 1 issued the 2017 Statement, the Facility's operations had decreased and, as described above, the Region invited public comment regarding how, if at all, such reduced operations should affect final permit limits. AR-1534 at 68-69. Petitioners commented that Region 1 should not adjust permit limits based on reduced capacity *unless* the permit mandates such reduced operations. AR-1573 at 25-27; AR-1885 at II/14, 78-81.

When GSP informed EPA that it would support limits based on reduced operations, *id.* at I/9, II/12, Region 1 evaluated combining the chronic instream temperature limits with a capacity factor limit to apply in the warm weather months in lieu of chronic limits. *Id.* at II/14, 80-81, 117. While acute limits would prevent extreme temperatures that could cause mortality, the capacity factor limit would prevent chronic effects in warm weather by ensuring the Facility maintains a reduced operational profile associated with reduced thermal effects on the river and a recovering fish community. *See id.* at II/120. If the Facility is called upon to generate more electricity, it must ensure it meets the instream temperature limits set to prevent chronic harm to fish. *Id.* Region 1 concluded that this combination of limits would satisfy CWA § 316(a) and assure the protection and propagation of the BIP. *Id.* Thus, Petitioners themselves commented on the instream temperature limits and the idea of a capacity factor limit. Indeed, for the latter, they argued the permit should only take account of the Facility's reduced operations if a permit requirement mandated them. Having suggested it, Petitioners cannot now reasonably complain

that the Region took that approach. Although Petitioners may have preferred a different capacity factor limit, or that the limit was imposed together with the chronic limits rather than as a potential alternative for them, the Final Permit's limits are nevertheless a logical outgrowth of the permit proceeding. *See also BASF*, 598 F.2d at 642-44 (petitioners cannot complain that the final decision on an issue is not a logical outgrowth of the proposal merely because it did not adopt their favored approach).

Petitioners further complain that they would have submitted more comments, including expert analyses, if the Region had reopened the comment period again. Region 1 does not doubt this, but it was not necessary for the Region to do so. All issues raised by the Final Permit had already been subject to public review and comment. Moreover, Petitioners submitted extensive comments in their January 7, 2020, letter, and the Region considered and responded to these comments in detail. *See* AR-1885 at II/296-340; AR-1688. The Region responded specifically to Petitioners' comments about the capacity factor limit as well. AR-1885 at II/322, II/326-28. The Board should defer to the Region's technical judgment about the sufficiency of the capacity factor limit. AR-1885 at II/15, n.4.

Finally, Region 1 also considered the above-discussed factors from the Board's decision in *Palmdale*, 15 E.A.D. at 715, in deciding not to reopen the comment period for a third time under 40 C.F.R. § 124.14(b). *See* AR-1885 at II/299-300. Having previously demonstrated its willingness to reopen the comment period under section 124.14(b) in appropriate circumstances, as it did for the 2014 Revised Draft Permit and the 2017 Statement, *see* AR-1136, AR-1534, the Region reasonably decided otherwise here. While the Final Permit's thermal discharge limits differ from those in the Draft Permit, the key aspects of the 2011 Draft Permit proposal have not changed. For the Draft Permit, Region 1 rejected the request for a section 316(a) variance to

renew the 1992 Permit's limits based on baseload operations. This has not changed. In addition, the Final Permit's thermal limits are based on the 2011 Variance Alternative, which was highlighted as a permitting option for public review with the Draft Permit. The Final Permit's limits also include an operational restriction keyed to the Facility's reduced operations, and the Region's 2017 Statement invited public comment on how to factor reduced operations into the permit's limits. Petitioners commented that reduced operations should only be considered in setting permit limits if they are made a permit requirement, which the Region did. Furthermore, Region 1 has well explained its reasoning in hundreds of pages of analysis and responses to comments so that Petitioners have been able to develop their appeal.

Finally, the Region concluded it was important to avoid further delay of the permit. AR-1885 at II/300-01. Indeed, in 2016, Petitioner Sierra Club sued EPA in federal court alleging unreasonable delay in issuing the Merrimack Station permit. *Id.*; AR-1534 at 8-9. The case was ultimately dismissed, but EPA agreed that finalizing the permit was an important priority and has acted accordingly. Ultimately, the Region appropriately determined that, when issuing the Final Permit, reopening the comment period was neither necessary nor in the public interest.

b. Petitioners Identify No Clear Substantive Error of Fact or Law Underlying the Thermal Limits in Part I.A.11 of the Final Permit

Petitioners raise a scattershot series of substantive attacks on the thermal discharge limits included in Part I.A.11 of the Final Permit. None demonstrate clear error of fact or law.

i. Petitioners Show No Clear Error of Fact or Law in Region 1’s CWA § 316(a) Determination Setting the Compliance Point at Station S4 for Acute Temperature Limits, the Daily Maximum Limits, or the Acute Temperature Limits to Protect Juvenile Yellow Perch and American Shad

Petitioners first attack Region 1’s decision to move the compliance point for the acute temperature limits from S0 to S4. Pet. at 45. They object that this change does not require compliance with the WQS-based limits incorporated in the 2011 Variance Alternative.

Petitioners’ objection lacks merit. As explained above, Region 1 moved the acute limits compliance point to S4 –already used for the chronic limits – in response to scientific comments and explained its reasoning. *See* AR-1885 at II/129 (acute limit to protect larval yellow perch). *See also id.* at II/129-31 (acute limits and compliance points for larval yellow perch and larval American shad), II/54. Petitioners assert that changing the compliance point eliminates protection from acute mortality for “fish and other organisms” and contradicts the Region’s prior “findings,” Pet. at 45, and that Region 1 offers no explanation for using S4 other than that it was “intended to be representative.” Pet. at 46-47. Petitioners’ assertions are false. The Region cogently explained why using S4 protects organisms from acute mortality:

[i]n most cases, the combination of acclimation temperature, the maximum daily limit at Station S4 (including the 2°C buffer), and the duration of exposure for a drifting organism traveling from S0 to S4 will be sufficiently protective to prevent mortality and, as a result, will reasonably assure the protection of the BIP. However, there could possibly be certain limited circumstances where drifting organisms exposed to elevated temperatures between Stations S0 and S4 could suffer mortality. In the event that the maximum daily limit is exceeded at Station S4, the Final Permit requires that the Facility take action (*e.g.*, reduce electrical generation) to reduce its thermal discharge and come back into compliance with the maximum daily limit within 3 hours of the excursion. This lag-time is necessary to allow the Facility to take action and for the consequence of that action to be measurable in the river. EPA finds that occurrence of the combination of conditions under which lethality could potentially occur will be limited and unusual under the limits of the Final Permit and considering the recent operations at the Facility. These reduced operations, together with the acute temperature limits (set at 2°C less than the lethal

limit) and the requirement to take action to come into compliance within 3 hours of excursion, will minimize lethality of drifting organisms and reasonably assure the protection of the BIP.

AR-1885 at II/131. *See also id.* at II/87, 129-31, 218. The Region also noted that it set the temperature limit based on the most sensitive species and life stage at each time period, so that all fish would be protected. *See id.* at II/13, 98, 136. Petitioners utterly fail to respond to this reasoning, which is fatal to their appeal on this issue. *See In re City of Lowell*, NPDES Appeal No. 19-03, slip op. at 17 (EAB June 29, 2020).

The Region also explained that “moving the compliance point for the acute limit from Station S0 to S4 is reasonable to account for mixing of the plume during the relatively short exposure period while continuing to provide protection for yellow perch larvae.” AR-1885 at II/129. While Region 1 acknowledged that some small amount of mortality to drifting larvae could occur, CWA § 316(a) does not mandate zero mortality of any organisms. *See* AR-618 at 21, 26; *Dominion*, 12 E.A.D. at 575; AR-1885 at II/27-28. The Region found that using S4 for the acute limits would meet the standard of CWA § 316(a). *Id.* at II/131.

Petitioners may disagree with the Region’s choice, but they have not confronted the Region’s analysis presented in the Responses to Comments. They merely complain that the Region’s decision is not identical to the Draft Permit proposal. This is insufficient to warrant review. *See, e.g., Lowell*, slip op. at 17 (a petitioner must confront the permit issuer’s basis for decision). At most, Petitioners express a difference of opinion about whether setting S4 as the compliance point for the acute limits is conservative enough. This is insufficient to warrant review. *See, e.g., In re Env’tl. Disposal Sys., Inc.*, 12 E.A.D. 254, 289 (EAB 2005) (“In the absence of specific, detailed evidence to the contrary, the Board will generally defer to a permitting agency’s determinations that involve application of the agency’s technical or

scientific expertise.”). In the face of a mere difference of opinion, the Board should defer to Region 1’s scientific judgment. *See, e.g., id.* at 290-91.

Petitioners also incorrectly state that the Region improperly justified moving the compliance point to S4 by claiming it is part of a “mixing zone” when no mixing zone has been legally established. Region 1’s actual explanation, however, is discussed and referenced above. *See* AR-1885 at II/129-31, II/54. Petitioners cite to the Region’s Responses to Comments, AR-1885 at II/117, but the Region plainly states there that *no formal mixing zone* – which refers to a specific regulatory mechanism under state water quality standards, *see* 40 C.F.R. § 131.13 – was delineated in this case.⁸ *See* AR-1885 at II/117. The Region only referenced the concept of a “generic mixing zone” to explain that in applying CWA § 316(a), EPA has long understood that thermal mixing in a receiving water can be accounted for in assessing whether a thermal discharge will assure the protection and propagation of the BIP. *Id.* (*citing In Re Sierra Pac. Power Co.*, 1975 WL 23874 (E.P.A.G.C.) (U.S. EPA, Decision of the Gen’l Counsel No. 31, at 2 (Oct. 14, 1975)) (“Congress specifically recognized the availability of the mixing zone concept as a mechanism for dealing with thermal discharges pursuant to section 316(a) of the Act”). *See also* AR-618 at 23. While Petitioners assert that the “generic mixing zone” created by using S4 as the compliance point will not protect fish or other organisms, Pet. at 46, this assertion is unsupported by record evidence and, thus, fails to undermine Region 1’s scientific analysis. *City of Attleboro*, 14 E.A.D. at 406, 411, 417, 443. Again, at most, Petitioners express a mere

⁸ Although, the river area extending downstream from S0 to S4 has sometimes been referred to as a “mixing zone,” *see* AR-236 at 16, it was not a delineated regulatory mixing zone within which water quality-based effluent limits could be exceeded but beyond which they could not. Thus, the term “mixing zone” was being used in a generic sense.

difference of opinion and the Board should defer to the Region's scientific judgment. *NE Hub*, 7 E.A.D. at 568.

Petitioners also complain that Region 1 noted that Station S4 was intended to be representative of spawning habitat but should not be regarded as such. Pet. at 46-47. Yet, the Region made this point in rejecting a comment from PSNH that the limit at S4 should be made *less* stringent. By treating S4 as representative of nearshore spawning habitat, Region 1 was being *more* protective of fish, not less. AR-1885 at II/126 (“even if the habitat right at Station S4 is not suitable for spawning, meeting the protective temperature limits at Station S4 will ensure that nearshore spawning habitat at and downstream from the Station S4 transect is also protected.”).

Petitioners further argue that Region 1's shift of the compliance period from hourly to daily maximum levels is “untenable” because effects can occur over less than a day's exposure. Pet. at 47. Petitioners misunderstand how the Final Permit works. The Facility must assess temperatures at S4 on an *hourly* average basis in comparison to an acute temperature defined as the “daily maximum limit” (Part I.A.11 n.4). If the hourly average value exceeds the applicable acute limit, then the Facility has 3 hours to reduce its discharges to get back below the limit at S4. AR-1886 at 19 (Part I.A.11). *See also* AR-1885 at II/15, 54, 131, 218. Thus, the permit allows, at most, a 4-hour period (*i.e.*, well less than a full day's exposure) where an exceedance of the acute limit could occur.

Finally, Petitioners complain that the Final Permit does not retain the acute temperature limits for yellow perch and American shad juveniles after July 31 despite, according to Petitioners, the Region's 2011 analysis showing “that American shad juveniles need the protective temperatures to be maintained in August and September and yellow perch juveniles

need them maintained through November 4.” Pet. at 47. Again, however, Region 1 made these changes in response to technical comments. First, the Region applied the appropriate acute limits from May through July 31 based on the most sensitive species and life stage present at the time (either American shad larvae or yellow perch *larvae*). See AR-1885 at II/15, 130-31. Second, while Region 1’s analysis for the Draft Permit did propose acute temperature limits for juvenile shad and yellow perch from August 1 through November 4, see AR-618 at 213, the Region revised this due to persuasive comments about the ability of juvenile shad and yellow perch to avoid unfavorable water temperatures and data showing that dangerous temperatures are unlikely to occur. AR-1885 at II/134. The Region explained:

EPA agrees [with the comments at AR-1300 at 29, 32] that fish kills from heat are relatively infrequent, likely to occur only when escapement to cooler water is blocked and have not been documented to have occurred at Merrimack Station. In addition, the operational changes at the Station result in a thermal plume that is limited in duration, which allows river temperatures to return to ambient levels more rapidly [and]...will not cause mortality of juvenile fish. Finally, juveniles are mobile and can avoid the thermal plume either by remaining in cooler areas of the Hooksett Pool for the relatively short periods when the plume is present or by staying at depth beneath the relatively shallow, surface-oriented plume. Therefore, the Final Permit does not establish an acute temperature limit for juvenile yellow perch or American shad in August or September.

Id. See also *id.* at II/46, II/54-55 (discussing juvenile American shad), II/56-57 (discussing juvenile yellow perch), II/122. Of course, it should be noted that Merrimack Station essentially no longer runs or discharges heat in October or November. AR-1717. Once again, Petitioners object to changes from the 2011 analysis but do not address Region 1’s analysis in the Responses to Comments. This is insufficient to establish clear error of law or fact by the Region, and the Board should defer to the Region 1’s well-supported scientific judgment on these points.

ii. Petitioners Show No Clear Error of Fact or Law in Region 1’s Capacity Factor Limitation

CWA § 316(a) allows the permitting authority to set alternative thermal discharge limits to assure the protection and propagation of the receiving water’s BIP, but neither statute nor regulation, *see* 40 C.F.R. Part 125, Subpart H, dictate precisely how to develop or structure limits under a CWA § 316(a) variance. Region 1 set the Final Permit’s limits under CWA § 316(a) based on water temperatures needed to protect fish in the river and the reduced adverse effects resulting from Merrimack Station’s decreased operations. *See, e.g.*, AR-1885 at II/13, II/48-61. The Final Permit combines instream temperature limits based on critical temperatures for the *most sensitive* resident species and life stages of fish with a capacity factor limit for the warm weather months restricting how much the Facility can operate and, therefore, how much waste heat may be discharged. *Id.* at II/15, II/120, II/327-28 (“the combination of reduced operations and protective instream temperature limits will assure the protection and propagation of the BIP.”). The permit prevents chronic effects by ensuring that the Facility does not exceed the operations limit or, if it does, requiring it to meet chronic temperature limits.

Region 1 explains the Final Permit’s thermal limits in the Responses to Comments. AR-1885 at II/13-16. Some key points:

From October through April, temperatures from the discharge do not reach or approach levels that would result in acute mortality of any life stages of fish, even under baseload operations. During this period, chronic thermal limits are designed to protect the most thermally-sensitive species and life stages (yellow perch spawning). The Final Permit establishes 7-day average, water quality-based temperature limits beginning October 1 through April 30 and applied at the compliance monitoring location downstream from the discharge (Station S4).

From May through September, the intermittent and infrequent operation of Merrimack Station limits exposure of fish to temperatures that would result in chronic, sub-lethal impacts and ensures that the conditions in the Merrimack River are protective of the BIP. ...To ensure that Merrimack Station maintains this mode

of operation, the Final Permit limits the maximum, 45-day rolling average capacity to 40% from May 1 through September 30.

If the Facility exceeds a 40% rolling average capacity within any calendar month from May through September, the Final Permit establishes chronic thermal limits that must be met and are designed to protect the most thermally-sensitive species and life stages (yellow perch eggs, larvae, and adults and American shad larvae). In the event that the capacity factor limit is exceeded, the Permittee must demonstrate that the 7-day average, water quality-based (chronic) temperature limits were met during the reporting period. In addition [] to chronic impacts, the Final Permit includes limits designed to protect drifting organisms (*e.g.*, yellow perch larvae, American shad larvae) from lethality during periods when these life stages are present in the Merrimack River. The Final Permit establishes maximum daily (acute) temperature limits that apply at the compliance point (Station S4) from May 1 through July 31 calculated based on an hourly average. *See* Response to Comment II.3.4.7.

...[T]he Final Permit's thermal discharge limits are based on a CWA § 316(a) variance, taking account of the Facility's reduced operations and using the same critical temperature approach identified in the 2011 Determinations Documentation with respect to possible water quality-based limits. EPA has determined that the combination of reduced operations and protective instream temperature limits will assure the protection and propagation of the BIP.

Id. at II/14-15. *See also id.* at II/103-04. Petitioners denigrate the capacity factor limit by calling it an "exemption," Pet. at 48, but it is not an exemption. It is a *limit* that restricts the heat that the Facility can discharge to the river by restricting its operations.⁹ AR-1885 at II/77, II/79-81. If this limit is exceeded, then an array of instream temperature limits kicks in to ensure chronic effects to the BIP are prevented. Meanwhile, the acute limits apply when acute exposures are a concern.¹⁰

Petitioners claim, without support, that the capacity factor limit will allow Merrimack Station's thermal plume to cause river temperatures to exceed the chronic limits. Pet. at 48. The

⁹ To be clear, Merrimack Station only discharges waste heat to the River when it is generating electricity. Therefore, limiting electricity generation directly restricts its effect on water temperatures.

¹⁰ Petitioners also object, Pet. at 48, that there are no limits to prevent acute effects after July 31, but the Region has already addressed this issue above. The Final Permit's acute limits are based on when the most sensitive species of *larvae* will be present, and they are not expected to be present after July 31. AR-1885 at II/15, II/130-31. With respect to juvenile organisms that are present after July 31, the Region explained that they can avoid the thermal plume as needed. *Id.* at II/46, 54-57, 122. Also, the Facility operates infrequently in the summer not at all in the fall.

chronic limits are *weekly averages*, AR-1886 at 17 (Part I.A.11), however, and even if river temperatures temporarily exceeded the chronic limit temperature, it would not necessarily mean that a weekly average limit was exceeded and a chronic effect threatened.

While Petitioners are correct that Region 1 calculated that with the 40% capacity factor (based on a 45-day rolling average), the Facility could *potentially* run for 18 days consecutively at full output, Petitioners are incorrect in claiming that Region 1 did not find that the BIP would still be protected in such circumstances. Pet. at 50. The Region explained that if the Facility ran for 18 days consecutively – which it has not done in the last 7 years – it would then have to be followed by roughly 30 days with *zero* operations to meet the capacity limit. AR-1885 at II/15 and n.4, II/103-04. *See also* AR-1715. Thus, if ambient temperatures were elevated during the hypothetical 18 days of operation, fish could, as needed, avoid the thermal plume by occupying cooler water upstream of the discharge or deeper in the water column, and once the discharge stops, the original ambient conditions would be restored and maintained with no discharge for at least 30 days. AR-1885 at II/103-04, 15 n.4. EPA concluded this would assure the protection and propagation of the BIP, albeit with some potential for temporary effects on a limited area of habitat. *See* AR-1885 at II/53-54, II/57. CWA § 316(a) does not prohibit such temporary effects if the protection and propagation of the BIP are assured. *See* AR-1885 at II/15 and n.4, II/104. *See also Dominion*, 12 E.A.D. at 549.

Petitioners express concern that temperatures could be worse during summer low-flow conditions, but Region 1's analysis accounted for the river's flow regime, including potential low flows. *See* AR-1885 at II/87, 131 (operations limit will limit thermal discharge frequency; potential for low-flow supports using 2°C buffer in setting acute temperature limits). Moreover,

the Region's review found that river temperatures have consistently met target levels under the Facility's peaking operations. *See* AR-1885 at II/15 n.4.

Petitioners also complain that EPA set the capacity factor limit at 40% when the Facility last reached that level of operation in 2013 and has operated significantly less since. Pet. at 51. The Region has explained that it set the 40% capacity factor limit to assure that the Facility would either continue operating in its peaking mode or meet all chronic limits (the acute limits apply in either case). Region 1 set the capacity factor at the high end of the range of operations that have occurred under the peaking mode so as not to unnecessarily prevent the Facility from providing electricity to the public under peak demand conditions, when the region's electric supply is under stress. *See* AR-1885 at II/11-12, II/15 n.4; AR-1871 at 1-2; AR-1676 at 3. That said, the Region agrees with Petitioners that the Facility is unlikely to run that much. AR-1885 at II/15 n.4. *See also id.* at II/114.

Petitioners also argue that even running at recent reduced capacity, Merrimack Station's thermal discharges have caused exceedances of critical temperatures reflected in the Final Permit's limits. Pet. at 51-52. Petitioners point to data from July 2016 to illustrate that temperatures at S4 exceed the permit's chronic limit of 25.1°C despite the plant operating below the 40% capacity factor limit. Petitioners' argument is misleading and incorrect. The data for that period also show that ambient temperatures in the river (at Station N10 upstream of, and unaffected by, the thermal discharge) were also near or *above* 25.1°C and, in some cases, were even above the temperatures downstream at S4. AR-1715 (Spreadsheet for July, Compare Columns F-H with L-N, Rows 375-405). Indeed, for each week during July 2016, the difference in the average weekly temperatures at N10 and S4 was less than 0.3°F (in the second week the average weekly temperature was lower at S4 than at N10). AR-1715. Likewise, the July 28,

2016, data that Petitioners cite, Pet. 52 n.194, also show that ambient temperatures at N10 were above the limit and the S4 temperature was less than 1°C greater than the ambient temperatures at N10. *Id.* Thus, Petitioners identified a time when ambient temperatures were already near or over the limit, and the claim that the temperatures at S4 were “caused” by the Facility is unsupported by the data. *See* AR-1885 at II/132-33. Indeed, Region 1 adopted the Final Permit’s “Rise in Temperature” limit to address this situation. *See id.* *See also* AR-1886 at 18, 19 (Part I.A.11, n.8).

The 25.1°C temperature was set for the most thermally sensitive species and life stage at that time in summer, adult yellow perch. Not only are other species less sensitive and not harmed by these temperatures, but yellow perch have maintained their population in Hooksett Pool, with improved abundance evident in recent years, AR-1885 at II/216-17, II/133, II/338, even though the target temperature is sometimes exceeded without the Facility operating. While PSNH’s expert commented favoring a higher limit because yellow perch can inhabit a broad range of temperatures up to 30°C, the Region concluded that because the Pool’s yellow perch population is adapted to local water temperatures, the Final Permit should retain the 25.1°C limit while building in flexibility with the above-discussed “Rise in Temperature” limit. *Id.* at II/133. *See also id.* at II/13 (“[a]s the most sensitive species, protective temperatures and time periods derived for yellow perch and American shad will also be protective of other species and the BIP”).

Petitioners’ opinion differs from Region 1’s about the protectiveness of the capacity factor limit but have demonstrated neither clear error by the Region nor any argument warranting Board review. The Board should defer to the Region’s technical judgment.

iii. Petitioners Fail to Identify Any Clear Error in Region 1’s Consideration of “Cold Shock”

Petitioners fail to show clear error of fact or law in Region 1’s consideration of “cold shock” in setting the Final Permit’s thermal limits under CWA § 316(a). “Cold shock” refers to harm an aquatic organism could experience if it inhabits warmer water and is suddenly exposed to colder water.

As Petitioners acknowledge, Pet. at 53, Region 1 discussed the issue of cold shock in the permit record. In the Draft Permit record, the Region discussed the theoretical concern about “cold shock” in the context of Merrimack Station’s then baseload operations, which involved a constant source of heated discharge throughout the colder fall and winter seasons. *See* AR-618 at 348-49. The Region concluded then that cold shock would be less of a concern if thermal discharge was reduced by closed-cycle cooling, *id.* at 349, but also stated that there was no evidence of cold shock-related fish mortalities at Merrimack Station despite past cold-weather plant shutdowns for unplanned maintenance. *Id.* Thus, while cold shock was a theoretical issue under baseload winter operations, the record did not demonstrate that the problem had occurred.

Region 1 again addressed cold shock in responding to Petitioners’ comments. The Region explained it was even less concerned about this theoretical risk given Merrimack Station’s reduced operations:

...decreasing demands for Merrimack Station’s electricity has resulted in minimal-to-no need for the Facility to operate during much of the Fall (October – early December). This allows resident species to adjust naturally to colder ambient temperatures throughout Hooksett Pool, and would prevent fish from maintaining an artificially high body temperature as they might if the plant was operating continuously from summer to winter. So, while some fish are likely to be attracted to the Facility’s elevated water temperatures, the potential for cold shock to occur would be limited to only those fish within the canal and not the Hooksett Pool proper where the plume’s temperature drops fairly quickly as it comes in contact

with the ambient river water and dissipates. Therefore, going forward, even if the Facility shuts down abruptly during the winter months, EPA does not expect there to be more than minimal impacts associated with cold shock, and such impacts would not likely affect any species at the population level and would not harm the BIP.

AR-1885 at II/112-13. Furthermore, the Region explained that temperatures drop rapidly when the thermal discharge meets the river during winter conditions, Pet. at 54-55, and the Final Permit's maximum temperature limit of 8°C – set to protect yellow perch adults, the most sensitive species present at that time, *see* AR-618 at 215 – precludes dramatically warm plumes in the river during the winter. Thus, fish *in the river* are unlikely to be subject to cold shock from very warm water suddenly going cold. The concern would be limited to fish in the discharge canal, but there is no evidence that significant numbers of fish reside in the canal for extended periods during winter months and no evidence of past cold shock fish injuries. AR-1885 at II/112 (“It is also unclear, however, from the limited data that exist, whether fish enter the discharge canal and stay there throughout the winter.”).

Petitioners express an opposing view, but do not confront Region 1's reasons or conclusions. Petitioners ignore the significance of the Facility's dormant fall operations, the absence of data establishing significant numbers of fish in the discharge canal in winter, and the lack of evidence of past fish kills from cold shock during cold-weather shutdowns at the Facility. Merely disagreeing without addressing the Region's assessment is insufficient to obtain review. *See, e.g., Lowell*, slip op. at 17. Instead, Petitioners complain that Region 1 did not review 15-minute data from the winter to see the pace of temperature decline. Yet, the Region did not have this data and saw no reason to obtain it given it was obvious discharge temperatures would decline rapidly if the Facility was generating electricity and then stopped, but the Region had also already found, as discussed above, that fish in the river would acclimate to colder water

through the fall, that discharge plume temperatures drop rapidly upon meeting the river, there is no evidence that significant numbers of fish reside in the discharge canal, and no fish kills from cold shock have been documented at the Facility. The Region reasonably concluded, for the reasons stated above, that the theoretical issue of cold shock did not require adjustments to the permit limits under CWA § 316(a).¹¹

2. The Board Should Deny Review of the Final Permit’s Narrative Conditions

a. Petitioners Fail to Show Clear Error Underlying Region 1’s Decision Not to Re-Notice the Permit Because It Does Not Retain the Narrative Thermal Discharge Provision

The record demonstrates that contrary to Petitioners’ claims, Pet. at 58-59, 62-63, the Final Permit’s CWA § 316(a) variance-based thermal limits, which do not include the narrative water quality-based thermal discharge limits from Part I.A.23 of the Draft Permit, AR-609 at 25, are a logical outgrowth of the Draft Permit and do not warrant reopening the comment period. The Draft Permit included technology-based thermal limits based on closed-cycle cooling, as well as narrative WQS-based thermal limits. *See* AR-609 at 25 (Part I.A.23, addressing “zone of passage,” thermal plume shoreline contact, avoiding acute mortality to swimming or drifting organisms, and maintenance of the BIP).¹² *See also* AR-618 at 17, 214-15. As previously discussed, these narrative provisions were derived from narrative water quality criteria and mixing zone elements in NH’s WQS, though no formal mixing zone was delineated. *See* N.H. Code R. Env-Wq 1707.02, 1703.01(c). *See also* AR-618 at 174-78, 187.

¹¹ Petitioners cite to Hodge Declaration and related documents, Pet. Atts. 36-41, in support of their argument. Pet. at 56, nn.207-09. Region 1 has moved to strike this Declaration and related documents from the record in this appeal. *See* Region 1’s Motion to Strike (Sept. 25, 2020). Even if the Board allows these documents, however, the Region’s argument on cold shock should still prevail.

¹² As discussed above, similar narrative limits also comprise part of the 1992 Permit’s CWA § 316(a) variance-based limits.

As detailed above, at the time of the Draft Permit, Region 1 notified the public that it was still considering the 2011 Variance Alternative and requested comment on this option. The 2011 Variance Alternative included WQS-based instream temperature limits designed to protect fish inhabiting the river. AR-618 at 212-14, 216-17. As the Region explained, these limits could potentially satisfy both CWA § 316(a) and State WQS because the standards mirror each other and because NH law incorporates EPA-determined variance-based limits as State temperature criteria. AR-618 at xi, xiii-xiv, 177-78, 216-17. The 2011 Variance Alternative did *not*, however, include the narrative WQS-based thermal limits. *Id.* Therefore, the possibility that thermal discharge limits derived from the 2011 Variance Alternative might not include the narrative thermal provisions was on the table in the permit proceeding. Petitioners' comments on the Draft Permit did not address this issue but could have.

Petitioners' late-submitted January 7, 2020 comments, AR-1688, did, however, argue that retaining the narrative thermal limits was important. Region 1 considered Petitioners' argument, but explained that these provisions were no longer needed because: (a) the Final Permit's stringent numeric thermal limits were sufficient to assure the protection and propagation of the BIP under CWA § 316(a); (b) these numeric CWA § 316(a) variance-based limits also satisfy State WQS; (c) including the narrative provisions along with the numeric provisions could create confusion over whether the Facility was in compliance with the permit; (d) dropping the narrative provision was consistent with the approach taken in other CWA § 316(a) variance-based permits; and (e) the State's water quality certification under CWA § 401(a)(1) did not demand retention of the narrative provisions. AR-1885 at II/301, 307-09.

Ultimately, the Final Permit's thermal discharge limits are based on a CWA § 316(a) variance closely patterned after the 2011 Variance Alternative. As such, the Final Permit's limits

are a logical outgrowth of the Draft Permit and additional public notice was unnecessary. See Part V.A.1.a, *supra*. In addition, the Region did not abuse its discretion in deciding that dropping the narrative WQS-based thermal limits did not raise substantial new questions warranting reopening the comment period under 40 C.F.R. § 124.14(b). See AR-1885 at II/300-01. Not only was this change on the table for public comment, but the Region explained the change and concluded it was important not to further delay the permit. *Id.*

b. Region 1’s Decision Not to Include the Narrative Thermal Discharge Limits in the Final Permit Violates Neither the CWA’s Anti-Backsliding Provisions nor the Substantive Standard of CWA § 316(a).

Petitioners’ argument, Pet. at 60-61, that the Final Permit violates CWA § 402(o)’s prohibition against “backsliding” by failing to retain the narrative thermal discharge provisions from the 1992 Permit, AR-236 at 3 (Part I.A.1.g), fails for several reasons. First, the narrative thermal discharge limits in the 1992 Permit were based on a CWA § 316(a) variance, and CWA § 402(o) does not apply to prior permit limits based on CWA § 316(a). Second, even if the 1992 Permit’s narrative thermal discharge conditions were considered to be based on WQS so that CWA § 402(o)(1) applied, or the Board were to somehow construe the petition to be raising a violation of the regulatory antibacksliding requirements of 40 C.F.R. § 122.44(l),¹³ neither the statutory nor regulatory antibacksliding prohibitions would be triggered because the Final Permit conditions are *more* – not less – stringent than the 1992 Permit. Finally, even if the Final Permit conditions were considered less stringent, backsliding would be permissible based on applicable exceptions to the statutory and regulatory antibacksliding prohibitions.

¹³ Petitioners only claim that the Final Permit violates the *statutory* antibacksliding prohibition, CWA § 402(o), and do not mention EPA’s antibacksliding *regulations* at 40 C.F.R. § 122.44(l). Therefore, they are foreclosed from advancing arguments based on 40 C.F.R. § 122.44(l). Nevertheless, Region 1’s responses to comments indicate why the Final Permit does not violate *any* antibacksliding requirements (*i.e.*, the Final Permit is more stringent than the 1992 Permit and exceptions apply to the prohibition on backsliding). AR-1885 at II/301, 319, 333.

Both CWA § 402(o) and 40 C.F.R. § 122.44(l)(1) prohibit renewing a permit with conditions less stringent than the prior one under certain circumstances. Petitioners only allege a violation of CWA § 402(o), Pet. at 59, but that provision is inapposite. The plain language of CWA § 402(o) indicates that it applies only to permit limits established under CWA § 402(a)(1)(B) (*i.e.*, technology-based requirements set based on BPJ) or CWA § 301(b)(1)(C) (*i.e.*, water quality-based limits),¹⁴ whereas the challenged thermal limits are neither. Specifically, the narrative thermal discharge provision in Part I.A.1.g of the 1992 Permit, AR-236 at 3, is based on CWA § 316(a), *see* AR-112 at 10 (“the Regional Administrator has determined that a 316 (a) variance could be granted...”), which is not one of the specified types of limits to which the statutory antibacksliding prohibition applies. Petitioners fail to provide any explanation why the challenged thermal discharge limits should be considered to be based on State WQS under CWA § 301(b)(1)(C) and not CWA § 316(a), or to provide any other explanation why the statutory antibacksliding prohibition applies.

Moreover, even if the 1992 Permit’s narrative thermal discharge provision is considered to be based on State WQS under CWA § 301(b)(1)(C), the Final Permit still does not trigger CWA § 402(o)’s prohibition on backsliding, as the Final Permit’s thermal limits are more – not less – stringent than the 1992 Permit limits. *See, e.g.*, AR-1885 at II/15-16, 305. First, unlike the Final Permit, the 1992 Permit has *no numeric temperature limits*; it only has numeric temperature triggers that signal the Facility when to operate the PSMs. AR-236 at 16 (Part I.A.11.b). Thus, when the targets are exceeded, the Facility can continue running at full capacity

¹⁴ The antibacksliding prohibition in 40 C.F.R. § 122.44(l)(1) applies more broadly and is not limited to preventing backsliding from BPJ technology-based limits or water quality-based limits, but Petitioners do not raise a challenge based on the regulation. Moreover, as explained above, the regulatory antibacksliding prohibition does not bar the Final Permit’s thermal conditions because they are more stringent than the 1992 Permit’s conditions. Even if the Final Permit limits were deemed less stringent, they would be authorized under applicable exceptions to the regulatory antibacksliding prohibition, including the new information and 316(a) variance-based exceptions. 40 C.F.R. §§ 122.62(a)(2), (a)(5).

as long as it operates the PSMs, which are ineffective, as Petitioners note in their comments. *See* AR 618 at vii, 13-14, 134; AR-427 at 2; AR-1885 at II/305 (“the PSM system has ‘limited cooling capacity’”). *See also* AR-851 at 7.

The Final Permit, however, requires the Facility to meet seasonal instream temperature limits based on protecting the most sensitive species and life stage present from both acute and chronic (sub-lethal) thermal effects. It also has a capacity factor limit of 40% for warm weather months, so that discharges remain at the lower levels of recent years that are associated with cooler water temperatures and a recovering fish community. AR-1885 at II/13, II/48-61. These numeric temperature and capacity factor limits are certainly more stringent than the numeric PSM trigger values in the 1992 Permit.

Petitioner’s argument rests on the fact that the Final Permit does not retain the narrative thermal discharge provision in Part I.A.1.g of the 1992 Permit pertaining to fish passage, conserving the BIP and minimizing thermal plume contact with surrounding shorelines. AR-236 at 3. Yet, removing the narrative provision does not make the Final Permit less stringent. The Final Permit’s numeric thermal limits more effectively ensure that the conditions in the narrative thermal provision are met and the BIP is protected because they are more specific, more prescriptive and are based on more detailed science. The Final Permit does not retain the narrative thermal provisions because, as the Region explained, they “are not needed and could cause confusion” in light of the Final Permit’s more specific thermal limits. AR-1885 at II/301. Petitioners’ argument that the Final Permit backslides from the 1992 Permit ignores the facts and should be rejected.

Also, even if CWA 402(o) applied to the 1992 Permit’s narrative thermal discharge provision and omitting it was considered to make the new permit less stringent than the 1992

Permit, the Final Permit would not violate the backsliding prohibition because one or more exceptions applies. First, CWA § 402(o)(2)(B)(i) provides, in pertinent part, that where CWA § 402(o)(1) applies, such as for water quality-based limits, a permit may be renewed with less stringent limits if “information is available which was not available at the time of permit issuance...and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.” As explained previously, the 1992 Permit was issued in the face of a dearth of information whereas the Final Permit was based on a wealth of thermal discharge and biological information, as well as information about the Facility’s transformation to a peaking facility. This new information provides the basis for the Region to replace the narrative provision with the Final Permit’s specific thermal discharge limits. AR-1885 at II/301.

Second, CWA § 402(o)(2)(D) provides that a permit subject to CWA § 402(o)(1) may be renewed with a less stringent limit if “the permittee has received a modification under section ... 1326 of this title” (*i.e.*, under CWA § 316(a)). Here, it is incontrovertible that the Final Permit’s thermal limits, including the decision to replace the narrative thermal discharge provision with more specific numeric thermal limits, are based on a CWA § 316(a) variance. AR-1885 at II/301. Petitioners argue that the antibacksliding exception for CWA 316(a) variances does not apply because the Final Permit is a permit *renewal*, Pet. at 61 n.225, whereas CWA § 402(o)(2)(i)(D) refers only to permit “modifications.” This argument founders on the plain language of CWA § 402(o)(2)(emphasis added) stating that “[a] permit with respect to which paragraph (1) applies may be *renewed, reissued, or modified* to contain a less stringent effluent limitation applicable to a pollutant if” the permittee has received a modification under CWA § 316(a). Obviously, the word “modification” is used in CWA § 402(o)(2)(D) in its common meaning (*i.e.*, a change) rather than, as Petitioners suggest, as the term of art defined in 40 C.F.R. § 122.62. It would

make no sense for Congress to direct that permits could be “renewed” or “reissued” with less stringent terms only if the permits are formally “modified” instead of renewed or reissued.

Petitioners also argue that dropping the narrative thermal discharge provisions violates the “safety clause” of CWA § 402(o)(3) because doing so will violate NH WQS, Pet. at 61-62, but this argument also fails. Even assuming that CWA § 402(o) applies, the Final Permit’s limits do not violate the safety clause because they do not cause violations of NH WQS. They are based on a variance from WQS, and the State regulations specifically provide that these variance-based limits are incorporated *as the State water quality criteria* for the receiving water. *See* Part II above. Accordingly, the Final Permit’s variance-based limits will not cause violations of the WQS since these limits and the WQS are, by definition, one and the same. Petitioners further argue that the Final Permit will violate WQS by “exempting” Merrimack Station from the new temperature limits in the summer, whereas the 1992 Permit required operation of the PSMs whenever instream temperature criteria were met. Yet, as explained above, the Final Permit’s capacity limit is not an exemption – it restricts Facility operations during the summer – and the combination of limits in the Final Permit, including the capacity limit, is far more stringent than the 1992 Permit. AR-1885 at II/301.

Apart from antibacksliding, Petitioners also argue that without the narrative thermal discharge provisions, the permit limits will not adequately protect the BIP to meet the substantive standard of CWA § 316(a) because zones of passage for fish will not be preserved and nearshore habitat for juvenile fish will not be protected given that the Final Permit’s capacity limit allows up to 18 consecutive days of full-scale operation in the summer and the Facility’s thermal plume could reach across the river. Pet. at 63. Yet, Region 1’s analysis contradicts these claims. The Region found that the Final Permit’s limits would result in adequate zones of

passage for fish swimming past the Facility. *See* AR-1885 at II/49, II/87, II/100, II/136, II/218. The Region also found that the Final Permit's limits would protect nearshore spawning habitat. *See* AR-1885 at II/87, II/126. Finally, the Region explained above that while the capacity factor limit would allow up to 18 days of full-scale operation – which Petitioners admit has not happened in recent summers– it would then require 30 days of *no* operation allowing the river to recover and protecting the BIP as required by CWA § 316(a). AR-1885 at II/15n.4, 103-04. Given the data showing encouraging improvements in the fish community as the Facility's thermal discharges have declined, Region 1 reasonably concluded that the Final Permit's limits would assure the protection and propagation of the BIP. Petitioners may desire an even more stringent permit, but they have not shown clear error by the Region and the Board should defer to the Region's well-supported technical determinations.

c. Petitioners Show No Clear Error by Region 1 When It Stated Its Interpretation of Part I.A.12 of the Final Permit

Part I.A.12 of the Final Permit states that “[d]ischarges and water withdrawals from Merrimack Station shall not cause a violation of the water quality standards of the receiving water.” AR-1886 at 20 (Part I.A.12). In its Comment Responses, Region 1 explained that this provision applies to WQS *other than* those related to thermal discharge. AR-1886 at II/307-09. Petitioners seek review of the provision but fail to show review is warranted. As the Region explained, the Final Permit's thermal discharge limits are based on a CWA § 316(a) variance and, therefore, need not satisfy state WQS, but in this case, they do. Furthermore, as discussed above, having developed thermal limits under CWA § 316(a), Region 1 decided not to retain the narrative thermal discharge conditions from the 1992 Permit and the Draft Permit. In light of this, the Region sought to clarify that it was retaining the general WQS compliance provision to address non-thermal aspects of the State's WQS. AR-1885 at II/307-09.

Petitioners claim the Region committed procedural error by not reopening the comment period to solicit comment on this interpretation of Part 1.A.12. They argue that “[t]he Region did not alert the public that it might decide to limit the prohibition against violating WQS only to ‘non-thermal’ standards [and t]o the contrary...stated in 2011 that it was considering either requiring compliance with the technology-based BAT standard or granting a § 316(a) variance and requiring compliance with WQS.” Pet. at 65. This argument should be rejected. Region 1 based the Final Permit on the limits presented as part of the 2011 Variance Alternative. Again, these limits are imposed pursuant to a CWA § 316(a) variance and also satisfy State WQS. Region 1 presented this option for public comment in 2011 and nothing about it is inconsistent with the Region’s interpretation of Part I.A.12 of the Final Permit. The Region did not state a different interpretation of Part I.A.12 for the Draft Permit, *see* AR-609 at 23 (Part I.A.14), and did not indicate this provision was part of the 2011 Variance Alternative. If Petitioners wanted this provision to be interpreted in a specific way in connection with the 2011 Variance Alternative, they should have commented to that effect, but they did not.

Petitioners also argue that Region 1’s interpretation violates the CWA’s antibacksliding prohibition because the 1992 Permit had a general narrative WQS compliance provision, *see* AR-236 at 2 (Part I.A.1.b), that, according to Petitioners, applied to thermal discharge. Petitioners are mistaken. The 1992 Permit had thermal limits, including narrative provisions specifically addressing thermal discharge, based on a CWA § 316(a) variance. There is no indication that the general WQS compliance provision also applied to regulate thermal discharge, which would have been unnecessary. Moreover, even if the provision in the 1992 Permit had applied to thermal discharge, the new Final Permit does not violate antibacksliding requirements for all the reasons stated above, *see* Part V.A.2.b, *supra*.

Finally, Petitioners argue that the Region cannot provide an interpretation of a permit provision that, according to them, changes the plain meaning of an otherwise unambiguous term. It is entirely appropriate for Region 1 to explain the scope of a permit term in a response to a comment, and Petitioners have not shown otherwise.

B. The Region’s Technology-based Effluent Limits for Combustion Residual Leachate are Appropriate and Consistent with Law

Petitioners claim that EPA Region 1 erred in declining to set more stringent, case-specific BAT limits for leachate discharges. Pet. at 68-75. Specifically, Petitioners argue that the Region’s leachate limits violate the CWA and regulations governing implementation of technology-based effluent limitations and are inconsistent with the recent Fifth Circuit decision in *SWEPCO*. These arguments must fail on both procedural and substantive grounds because they fail to address the Region’s rationale—that the ELGs promulgated in 1982 are applicable to discharges of leachate and must be applied in the permit—and do not otherwise demonstrate clear error or that review is warranted.

Petitioners’ argument is premised on a flawed conclusion that as a result of the Fifth Circuit’s vacatur of BAT limits for leachate, no ELGs apply to leachate, and EPA is, therefore, “required to establish BAT limits on a case-by-case basis using its best professional judgment.” Pet. at 68. The Responses to Comments and record demonstrate that the Region properly evaluated the applicability of the 1982 Steam Electric ELGs to leachate and incorporated such standards into the Final Permit, as discussed below.

As a preliminary matter, Petitioners incorrectly assert that Region 1 “established case-by-case BAT limits for combustion residual leachate.” Pet. at 68-69. In fact, several arguments presented by Petitioners are based on the potential conflict between the Agency’s alleged site-

specific (or BPJ) determination of BAT limits for leachate and *SWEPCO*. However, the Region did not conduct a case-specific inquiry based on BPJ to determine the appropriate limits for leachate. AR-1885 at V/30. Thus, to the extent that Petitioners' claims are based on a BPJ assessment that is inadequate or otherwise inconsistent with law, they must fail because the Region conducted no such assessment.

1. Petitioners Fail to Demonstrate that the Agency Erred in Determining that the 1982 Regulations Apply to Leachate

In 2019, the Fifth Circuit Court of Appeals vacated and remanded the 2015 BAT limits for leachate. Region 1 was required to assess what ELGs, if any, applied in the absence of the vacated limits. *See SWEPCO*, 920 F.3d at 1033.

The Region determined that the ELGs promulgated in 1982, including its evaluation of BAT for LVWs, apply to discharges of leachate, and the Region has no discretion to conduct a BPJ determination in lieu of applying these ELG-based limits. 40 C.F.R. §§ 125.3(a) and (c); *see also id.* § 423.12(b)(3). Region 1 clearly explained this in its Response to Comments. AR-1885 at V/30. Petitioners fail to address this rationale in their Petition and, therefore, fail to meet the procedural requirements for review. 40 C.F.R. § 124.19(a)(4)(ii); *see also In re Westborough*, 10 E.A.D. 297, 305 (EAB 2002). Even if Petitioners had satisfied the procedural threshold, nothing presented in the Petition demonstrates that Region 1's rationale and application of the 1982 regulations are in clear error or otherwise warrant review.

While Petitioners ignore the basis for the Region's application of the 1982 regulations to leachate discharges and instead conclude that the Fifth Circuit's decision in *SWEPCO* leaves the Region with no choice but to conduct a BPJ determination of BAT limits, they do, nonetheless, correctly state that permitting authorities must include, at a minimum, technology-based

requirements in an NPDES Permit. 40 C.F.R. § 125.3(a). Region 1 imposes such limits either by 1) applying the nationally promulgated regulations, 2) “on a case-by-case basis under section 402(a)(1) of the Act, *to the extent that EPA-promulgated effluent limitations are inapplicable*” (*id.* § 125.3(c)(2) (emphasis added)), or 3) through a combination of the first two methods. *Id.* § 125.3(c)(1)-(3). Thus, before the BPJ alternative becomes available to EPA, it must first determine whether EPA-promulgated effluent limitations are *applicable*.¹⁵ The EPA NPDES Permit Writers’ Manual explains that in assessing “applicability,” a permit writer “should make sure that the pollutant of concern is not already controlled by the effluent guidelines and *was not considered by EPA* when the Agency developed the effluent guidelines.” AR-746 at 5-46 (emphasis added); *see also* AR-1885 at V/30 n.9.

In light of the *SWEPCO* vacatur, the Region conducted this assessment and determined that the 1982 ELGs established that BAT should be no more stringent than BPT, and therefore, the 1982 rule must be included in the Permit:

[T]he Region has applied the [leachate] limits based on the regulations prior to, or in the absence of, the 2015 Rule. As stated above, these limits are based on the 1982 Rule, which applied TSS and O&G limits to low volume wastes (including [leachate]). In 1982, EPA *considered* setting BAT limits for low volume wastes but ultimately determined not to establish BAT limits because toxic metals in the wastestream “are present in amounts too small to be effectively reduced by technologies known to the Administrator.” 47 Fed. Reg. at 52303; *see also id.* at 52299 (“The remaining 119 pollutants are excluded from regulation.”).

BAT requirements for low volume waste are, therefore, no further control beyond BPT.

¹⁵ Petitioners point to several EPA explanations of when a BPJ assessment of BAT may be appropriate. Pet. at 70 n.252. BPJ assessments are permissible when no applicable regulations exist, 40 C.F.R. § 125.3(c)(2), and the inquiry as to whether any existing ELGs are applicable is specific to the wastestream or pollutant at issue. EPA’s determination of the applicability of ELGs to other, distinct wastestreams with separate regulatory histories has no bearing on the Agency’s assessment of ELGs applicable to leachate.

AR-1885 at V/30 (emphasis in original). Region 1 clearly explained the basis for the leachate limits. *See also id.* (“To the extent that any commenter would suggest the Region conduct a site-specific assessment of BAT limits for [leachate], this practice is foreclosed by the existence of applicable ELGs.”).¹⁶ And yet, the Petitioners do not address or attempt to refute this rationale at all in their Petition.

Instead, Petitioners focus on the Fifth Circuit’s vacatur of the 2015 BAT limits for leachate in isolation, without confronting whether existing regulations, in the absence of those now-vacated limits, are applicable and must be given renewed effect. Pet. at 68-75. Though Petitioners are correct that the 2015 BAT limits for leachate are no longer effective as a result of *SWEPCO*, Pet. at 71, their evaluation of the implications of *SWEPCO*’s vacatur is incorrect. *See* Part II *supra*.

Ultimately, the consequence of the Fifth Circuit’s vacatur of BAT limits for leachate was to reinstate the 1982 regulations. *See Prometheus Radio Project v. F.C.C.*, 652 F.3d 431, 454 n.25 (3d Cir. 2011) (explaining that vacatur of a rule means that the prior rule once again governs the regulated activity). In promulgating the 1982 regulations, EPA determined, in effect, that BAT requirements for LVW, including leachate, are no further control beyond BPT. AR-1885 at V/30; *see* Part II *supra*.

In one of Petitioners’ few attempts to confront the Region’s response to comments, they selectively cite and misinterpret the response. They suggest that Region 1 itself concluded that,

¹⁶ While not dispositive, two state court decisions have applied the 1982 ELGs in a manner consistent with Region 1’s application for leachate. *See Louisville Gas & Electric Co. v. Ky. Waterways Alliance*, 517 S.W.3d 479 (Ky. 2017); *NRDC v. Pollution Control Bd.*, 37 N.E.3d 407 (Ill. App. Ct. 2015).

in light of *SWEPCO*, it must conduct a site-specific assessment of BAT for leachate discharged at Merrimack Station. The Petitioners state:

The Region recognized in the RTC that “[u]ntil EPA takes action to address the [*Southwestern Electric Power Company*] Court’s vacatur or propose new national BAT limit(s) for” combustion residual leachate, EPA “must determine what limit(s) apply and are appropriate to regulate this wastestream.” Nevertheless, despite recognizing its requirement to consider setting more stringent BAT limits, the Region found that such limits could be set at the same level as the outdated, 1982 BPT limits....

Pet. at 72 (footnotes omitted). On the contrary, this language demonstrates that the Region explained it must conduct the necessary assessment of whether any *applicable* regulations, in the absence of the vacated 2015 limits, are in effect, AR-1885 at V/30, which is precisely what the Agency then did. In so doing, Region 1 found that after *SWEPCO*, the 1982 ELGs once again apply to leachate.

Because Region 1 is required by law to apply applicable national ELGs, its decision to include the applicable TSS limits for leachate in Merrimack Station’s Final Permit is appropriate and consistent with law. Petitioners have not demonstrated that the Region’s determination that the 1982 regulations apply was in clear error or otherwise warrants review; in fact, they have avoided the issue altogether. For these reasons, the Board must deny review.

2. *SWEPCO* Does Not Affect EPA’s Application of Applicable ELGs

Petitioners describe at length the Fifth Circuit’s decision in *SWEPCO* and complain that the limits applied to leachate in the Final Permit are inconsistent with the court’s holdings. Pet. at 72-75. Again, these claims are premised on Petitioners’ assertion that EPA must conduct a BPJ-based assessment of BAT limits for leachate. As explained above, the Region is foreclosed from conducting a site-specific, BPJ-based determination of BAT for leachate because the 1982

regulations apply. *See also* AR-1885 at V/30. To the extent that Petitioners argue that the final limits conflict with *SWEPCO*, this argument is without merit and has no bearing on the lawful application of ELG-based limits. Simply stated, the existing regulations control. The Fifth Circuit struck down the 2015 BAT limits for leachate, but it most certainly did not strike down the 1982 regulations. Petitioners themselves acknowledge and agree with this fact. Pet. at 73-74. Furthermore, nothing in *SWEPCO* bars application of the existing, applicable regulations in place of the vacated regulations, as required under 40 C.F.R. § 125.3(c)(2).

VI. CONCLUSION

For the above reasons, the Board should deny Petitioners' request for review.¹⁷

¹⁷ Petitioners' request that if the Board remands the Final Permit, it should order the Region to issue a new Draft and Final Permit within a specified timeframe is inconsistent with law and regulations, without basis, and should be disregarded. The regulations make clear that the Regional Administrator is delegated authority to issue permits, and the Board is delegated distinct authority to review such permit decisions. *See, e.g.*, 40 C.F.R. §§ 124.19(l), (o); 40 C.F.R. § 1.25(2). Ordering the prescriptive schedule requested would necessarily impede on and predetermine permit issuance, which is squarely within the Regional Administrator's purview.

STATEMENT OF COMPLIANCE WITH WORD LIMITATIONS

I hereby certify that EPA Region 1's Response to Petition for Review by Sierra Club and Conservation Law Foundation in the matter of Granite Shore Power Merrimack LLC, NPDES Appeal No. 20-05, contains less than 18,000 words in accordance with the Environmental Appeal Board's June 16, 2020 Order (NPDES Appeal No. 20-05, Docket #3). This Response contains 17,990 words, in total.

Dated: September 25, 2020

Respectfully submitted,

Mark A. Stein /s/

Mark A. Stein
Senior Assistant Regional Counsel
US Environmental Protection Agency
Office of Regional Counsel, Region I
5 Post Office Square - Suite 100

Boston, MA 02109-3912
Tel: (617) 918-1077
Fax: (617) 918-0077
E-mail: stein.mark@epa.gov

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing EPA Region 1 Response to Petition for Review by Sierra Club and Conservation Law Foundation in the matter of Granite Shore Power Merrimack LLC, NPDES Appeal No. 20-05, were served on the following persons in the manner indicated:

By Electronic Filing:

Ms. Eurika Durr
Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1201 Constitution Avenue, NW
U.S. EPA East Building, Room 3334
Washington, DC 20004

By email, by authorization of the Board:

Reed W. Super, Esq., Edan Rotenberg, Esq., and Julia Muench, Esq.
Super Law Group, LLC
180 Maiden Lane, Suite 603
New York, NY 10038
reed@superlawgroup.com
edan@superlawgroup.com
julia@superlawgroup.com

P. Stephen Gidiere III, Esq., Thomas G. DeLawrence, Esq., and Julia B. Barber, Esq.
Balch & Bingham LLP
1901 6th Avenue North, Suite 1500
Birmingham, Alabama 35203
sgidiere@balch.com
tdelawrence@balch.com
jbarber@balch.com

Dated: September 25, 2020

Mark A. Stein /s/
Mark A. Stein
Senior Assistant Regional Counsel
US Environmental Protection Agency
Office of Regional Counsel, Region I
5 Post Office Square - Suite 100
Boston, MA 02109-3912