# IN RE CITY OF MARLBOROUGH, MASSACHUSETTS, EASTERLY WASTEWATER TREATMENT FACILITY

NPDES Appeal No. 04-13

***ORDER DENYING PETITION FOR REVIEW IN PART AND REMANDING IN PART***

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Decided August 11, 2005

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Syllabus

In a petition dated October 18, 2004, the Town of Sudbury, Massachusetts ("Sudbury"), seeks review of a final National Pollutant Discharge Elimination System Permit ("Permit") issued to the City of Marlborough, Massachusetts, on September 16, 2004. The Permit, issued jointly by United States Environmental Protection Agency, Region I (the "Region") and the Massachusetts Department of Environmental Protection authorizes continued discharges from Marlborough's Easterly Wastewater Treatment Facility. Sudbury seeks review of certain conditions in the Permit relating to limitations on phosphorus discharges, and asserts that certain permit conditions, also concerning limitations on phosphorus, were improperly omitted from the Permit.

In particular, Sudbury raises the following seven objections to the final permit decision: (1) the use of a 60-day rolling average to measure compliance with the Permit's final phosphorus limitation of 0.1 mg/l between the months of April and October is not sufficiently stringent to achieve water quality standards; (2) the Permit's interim phosphorus limit of 0.5 mg/l between the months of April and October is not sufficient to meet water quality standards; (3) the Permit's use of an "interim seasonal average" limit to measure compliance with the Permit's 0.5 mg/l interim seasonal phosphorus discharge limit is not sufficiently stringent to meet water quality standards; (4) the Permit's phosphorus limit of 0.75 mg/l from November 1 through March 31 is not sufficient to achieve water quality standards; (5) the Permit should contain a winter discharge limitation applicable to orthophosphorus (dissolved phosphorus) from November 1 through March 31; (6) the Permit impermissibly fails to require adaptive management measures to control phosphorus discharges; and (7) the Permit erroneously fails to provide opportunities for public review, participation, or comments on the deliverables required by the Permit's compliance schedule.

Held: The Permit is remanded. On remand, the Region must either provide an explanation for including the requirement that the Permit's interim phosphorus discharge limitation be measured using an "interim seasonal average phosphorus limit" or modify this requirement of the Permit (issue 3 above). The Region added this requirement to the final permit without specifying its reasons. Under 40 C.F.R. § 124.17(a)(1), in responding to public comments, the Region must specify the reasons for any changes to the draft permit. The Region has failed to do so. Further, absent such an explanation, it does not appear that

the record reflects the "considered judgment" necessary to support the applicable permit determination.

In addition, on remand, the Region must either demonstrate how, in light of the potential for releases of phosphorus from sediment in the Hop Brook ponds, the Permit, as written, will ensure compliance with applicable water quality standards, or modify the Permit to satisfy the regulatory requirements of 40 C.F.R. § 122.4(d), which prohibit issuing a permit when permit conditions cannot ensure compliance with applicable water quality standards (issue 6 above). Although the Permit states that the facility's discharge "shall not cause a violation of the water quality standards of the receiving waters," the record before the Board does not indicate whether the Permit's 0.1 mg/l phosphorus limitation, by itself, will meet the state's water quality standards. With regard to the likelihood that imposition of the 0.1 mg/l phosphorus limitation will be sufficient to meet water quality standards, the Region states that such a result may be possible. A mere possibility of compliance, however, does not "ensure" compliance.

Sudbury's petition for review is denied in all other respects, either because the issues were not raised during the comment period, Sudbury failed to adequately specify why the Region's responses to these issues during the comment period were clearly erroneous, or because Sudbury has failed to convince the Board that the Region's permit determination was clearly erroneous or otherwise warrants review.

***Before Environmental Appeals Judges Scott C. Fulton, Kathie A. Stein, and Edward E. Reich.***

***Opinion of the Board by Judge Stein:***

## **I.** *INTRODUCTION*

In a petition dated October 18, 2004, which it filed with the Board on October 19, 2004,[1] the Town of Sudbury, Massachusetts ("Sudbury"), seeks review of a final National Pollutant Discharge Elimination System ("NPDES")[2] Permit ("Permit") issued to the City of Marlborough, Massachusetts ("Marlborough"), on September 16, 2004. *See* Petition for Review (Oct. 19, 2004) ("Petition"). The Permit, issued jointly by United States Environmental Protection Agency, Region I (the "Region") and the Massachusetts Department of Environmental Protection ("MADEP"),[3] authorizes continued discharges from Marlborough's Easterly Was-

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[1] Documents are "filed" with the Board on the date they are *received*.

[2] Under the Clean Water Act ("CWA"), persons who discharge pollutants from point sources into waters of the United States must have a permit in order for the discharge to be lawful. CWA § 301, 33 U.S.C. § 1311. The National Pollutant Discharge Elimination System program is one of the principal permitting programs under the CWA. *See* CWA § 402, 33 U.S.C. § 1342.

[3] Although EPA issues NPDES permits in Massachusetts, the state maintains permitting authority under Massachusetts law. *See* Mass. Gen. L. ch. 21, § 43 (2004); Mass. Regs. Code tit. 314
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tewater Treatment Facility ("Facility").[4] Sudbury, which is located downstream from the Facility, seeks review of certain conditions in the Permit relating to limitations on phosphorus discharges, as well as asserting that certain permit conditions, also concerning limitations on phosphorus, were improperly omitted from the permit. *See* Petition at 2. In a response filed on December 3, 2004, the Region argues, *inter alia*, that the Board should deny the Petition because Sudbury has not satisfied its burden of demonstrating that review is warranted under 40 C.F.R. § 124.19. *See* Response to Petitions for Review of Permit Determination at 17-24 (Dec. 3, 2004) ("Region's Response"). For the reasons stated below, the Permit is remanded in part and the Petition is denied in part.[5]

## **II.** *FACTUAL AND PROCEDURAL BACKGROUND*

The Facility is a 5.5 million gallon per day ("mgd") wastewater treatment facility discharging wastewater effluent into Hop Brook. Hop Brook then flows northeast through four instream ponds — Hager Pond, Grist Mill Pond, Carding Mill Pond, and Stearns Mill Pond ("the ponds") — until it reaches the Sudbury River. *See* 2004 Fact Sheet at 1-3, Exhibit 10 to Region's Response ("Fact Sheet").[6] The Facility's effluent comprises between 50% and 99% of the flow in Hop Brook, depending on the time of year, and approximately 95% of the phosphorus load. *Id*. at 3. It is undisputed that both Hop Brook and the ponds suffer from eutrophication, driven primarily by nutrients such as phosphorus entering the Brook. *Id*. Eutrophication is a process by which a water body suffocates from receiving more nutrients (such as phosphorus) than it can assimilate. The excess nutrients promote the growth of nuisance algae and aquatic plants that then decay in a process generating strong odors and resulting in lower dissolved oxygen levels. *See id.* When left unchecked, eutrophication is a serious problem that can deplete the oxygen necessary for aquatic life to survive. In the present case, the problems associated with this condition include reduced aesthetic value, odor from decaying vegetation, severely limited usability of the ponds for recreational

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(2004). When the Region issues an NPDES permit in Massachusetts, MADEP jointly issues a permit under state law. *Id.; see also In re Westborough*, 10 E.A.D. 297, 300 n.2 (EAB 2002).

[4] Until issuance of the present permit on September 16, 2004, Marlborough had been operating under a permit issued in September of 1988.

[5] In an unpublished order dated March 11, 2005, the Board denied another petition for review of the Permit in this matter, filed by the City of Marlborough, Massachusetts. *See In re City of Marlborough* (Order Denying Petition for Review), NPDES Appeal No. 04-12 (EAB, March 11, 2004). For convenience, and to the extent relevant in the present context, the Board will repeat the factual and procedural background provided in the March 11 order.

[6] The exhibits accompanying the Region's Response will be referred to as "R. Exh." followed by the exhibit number.

activities, and the degradation of the system as a suitable habitat for fish and other desirable aquatic fauna. *See* ENSR International, *Nutrient Impact Evaluation of Hop Brook in Marlborough and Sudbury, Massachusetts* 1 (Oct. 2000) (R. Exh. 6).

MADEP has designated the portion of Hop Brook into which the Facility discharges as a "Class B" water body. Fact Sheet at 2. Under Massachusetts water quality standards, Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. Further, the waters "shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses * * * [and] shall have consistently good aesthetic value." Mass. Regs. Code tit. 314, § 4.05(3)(b) (2004); Fact Sheet at 2. In addition to water quality criteria specific to Class B waters, Massachusetts imposes minimum narrative water quality criteria applicable to all surface waters. In relevant part, the narrative criteria provide:

> (a) Aesthetics — All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.
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> (b) Bottom Pollutants or Alterations — All surface waters shall be free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom, interfere with the propagation of fish or shellfish, or adversely affect populations of non-mobile or sessile benthic organisms.
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> (c) Nutrients — Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication * * * .

Mass. Regs. Code tit. 314, § 4.05(5)(a)-(c).[7] During the permitting process, the Region determined that eutrophication caused by phosphorus loading has resulted in violations of the Massachusetts water quality standards for Hop Brook, including the above-cited narrative water quality criteria. *See* Fact Sheet at 3. The

[7] The state anti-degradation provisions contain an additional requirement related to cultural eutrophication (i.e., over-enrichment of nutrient levels caused by human activities) requiring that any existing point source discharge containing nutrients in concentrations that encourage eutrophication apply the "highest and best practical treatment to remove such nutrients." Mass. Regs. Code tit. 314, § 4.04(5) (2004).

Region found that although both storm water runoff and sediment also released phosphorus into Hop Brook, "the vast majority of phosphorus entering Hop Brook is from the facility." *Id*. at 4. Because of the impairment, and after evaluating technical guidance as well as studies about the effects of phosphorus on Hop Brook, the Region determined that a phosphorus effluent limitation of 0.1 milligrams per liter ("mg/l") for the period of April 1 through November 30 was necessary to achieve the state's water quality standards. *See* Permit Cond. I.A.1 (R. Exh. 13). The Permit also contains a compliance schedule for meeting the phosphorus limit.[8] *See* Permit Conds. I.A.1, .2 n.6, I.E.

On November 13, 2001, the Region and MADEP issued a draft permit for public comment. *See* R. Exh. 20. After receiving comments, the Region, in consultation with MADEP, notified interested parties that they would revise the draft permit and distribute a new draft permit for public comment. *See* Letter from Elizabeth F. Mason, Senior Assistant Regional Counsel, EPA Region I (Mar. 18, 2002) (R. Exh. 22). The Region and MADEP issued a revised draft permit on December 12, 2003 (hereinafter "Draft Permit"), and sought public comment. *See* Draft Permit (R. Exh. 23). The Region and MADEP held a public hearing on January 14, 2004. *See* Hearing Transcript (Jan. 14, 2004) (R. Exh. 25). On September 8, 2004, MADEP certified the Draft Permit in accordance with section 401(a) of the CWA, 33 U.S.C. § 1341(a). *See* Letter from Glen Haas, Director, Division of Watershed Management, MADEP, to Brian Pitt, Chief, Massachusetts NPDES Permit Program Unit, U.S. EPA Region I (Sept. 8, 2004) (R. Exh. 27).[9] Thereafter, on September 16, 2004, the Region and MADEP issued the Permit along with a response to comments. Sudbury's petition for review followed.[10]

## **III.** *DISCUSSION*

### A. *Standard of Review*

In proceedings under 40 C.F.R. § 124.19(a), the Board generally will not grant review unless the petition for review establishes that the permit condition in question is based on a clearly erroneous finding of fact or conclusion of law, or

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[8] Under the compliance schedule, full compliance with the Permit's total phosphorus limitation of 0.1 mg/l is required within forty-eight months of the issuance date.

[9] Section 401(a)(1) of the CWA requires all NPDES permit applicants to obtain a certification from the appropriate state agency that the permit will comply with all applicable federal effluent limitations and state water quality standards. *See* CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1). The regulations provide that EPA may not issue a permit until the state in which the discharge originates grants or waives certification. 40 C.F.R. § 124.53(a).

[10] With the Board's permission, the Conservation Law Foundation filed an amicus brief in this matter. Brief of Conservation Law Foundation, Amicus Curiae (Jan. 28, 2005).

involves an exercise of discretion or an important policy consideration that the Board determines warrants review. 40 C.F.R. § 124.19(a); *see In re Carlota Copper Co.*, 11 E.A.D. 692, 708 (EAB 2004); *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 333 (EAB 2002). The Board analyzes NPDES permits guided by the preamble to the part 124 permitting regulations, which states that the Board's power of review "should be only sparingly exercised." 45 Fed. Reg. 33,290, 33,412 (May 19, 1980); *accord In re Teck Cominco Alaska, Inc.*, 11 E.A.D. 457, 472 (EAB 2004). Agency policy favors final adjudication of most permits at the regional level. 45 Fed. Reg. at 33,412; *see also Carlota*, 11 E.A.D. at 708; *Teck Cominco*, 11 E.A.D. at 472. The petitioner bears the burden of demonstrating that review is warranted. 40 C.F.R. § 124.19(a)(1)-(2); *see In re Amerada Hess Corp.*, 12 E.A.D. 1, 8 (EAB 2005).

In addition, a petitioner must demonstrate that any issues being raised before this Board were preserved for review. In so doing, a petitioner must, among other things, show that any issues being raised were raised with sufficient specificity during the public comment period. 40 C.F.R. §§ 124.13, .19(a); *Carlota*, 11 E.A.D. at 726-27. This burden rests squarely with the petitioner — "'It is not incumbent upon the Board to scour the record to determine whether an issue was properly raised below.'" *Amerada Hess*, 12 E.A.D. at 8 (quoting *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 250 n.10 (EAB 1999)). Further, as the Board has repeatedly stated, to obtain review, "petitioners must include specific information in support of their allegations. It is not sufficient simply to repeat objections made during the comment period; instead, a petitioner 'must demonstrate why the [permit issuer's] response to those objections (the [permit issuer's] basis for its decision) is clearly erroneous or otherwise warrants review.'" *In re Steel Dynamics, Inc.*, 9 E.A.D. 740, 744 (EAB 2001) (quoting *In re LCP Chems.*, 4 E.A.D. 661, 664 (EAB 1993)); *see also Amerada Hess*, 12 E.A.D. at 8-9; *Carlota Copper*, 11 E.A.D. at 708-09.

B. *Sudbury's Petition*

Sudbury asserts that certain Permit limitations relating to phosphorus discharges are clearly erroneous because they are not adequate to satisfy state water quality standards. *See* Petition at 17-28. In particular, Sudbury raises the following seven objections to the final Permit decision: (1) the use of a 60-day rolling average to measure compliance with the Permit's final phosphorus limitation of 0.1 mg/l between the months of April and October is not sufficiently stringent to achieve water quality standards, Petition at 18-19; (2) the Permit's interim phosphorus limit of 0.5 mg/l between the months of April and October is not sufficient to meet water quality standards, *id*. at 19; (3) the Permit's use of an "interim seasonal average" limit to measure compliance with the Permit's 0.5 mg/l interim seasonal phosphorus discharge limit is not sufficiently stringent to meet water quality standards, *id*. at 20; (4) the Permit's phosphorus limit of 0.75 mg/l from November 1 through March 31 is not sufficient to achieve water quality stan-

dards, *id*. at 20-21; (5) the Permit should contain a winter discharge limitation applicable to ortho (dissolved) phosphorus from November 1 through March 31, *id*. at 21-22; (6) the Permit impermissibly fails to require adaptive management measures to control phosphorus discharges, *id*. at 22-23; and (7) the Permit erroneously fails to provide opportunities for public review, participation, or comments on the deliverables required by the Permit's compliance schedule, *id*. at 24. We will address each of these issues in turn.

1. *Sixty-Day Rolling Average*

Condition I.A.1 of the final Permit includes a final phosphorus discharge limitation of 0.1 mg/l for the period of April 1 through November 30. *See* Final Permit (R. Exh. 13). Although Sudbury does not contest this limit, it objects to a footnote to this limit stating that compliance will be measured using a 60-day rolling average limit. *See* Petition at 18 (citing Permit Conds. I.A.1, .2 n.6). According to Sudbury, by using a 60-day rolling average limit, "compliance with the Permit during April and May cannot be determined until the June monitoring report is submitted. Thus, applying the 60-day rolling average limit to the months of April and May results in there being effectively no applicable compliance measure during those months." *Id*. Sudbury argues that the 60-day rolling average limit is therefore insufficient to meet applicable water quality standards and should be changed to require that compliance with the 0.1 mg/l phosphorus limit be measured according to either a monthly average or a 60-day continuous rolling average, "which is reported continuously and which applies year-round." *Id*. at 19.

As the Region points out, however, the Response to Comments addresses Sudbury's concerns regarding the Permit's 60-day rolling average limitation. In particular, in response to a comment questioning whether the 60-day rolling average limit was sufficiently protective and how compliance would be determined during the first 59 days, the Region stated:

> The 60 day rolling average allows some flexibility for infrequent short term exceedances of the permit limit that may be difficult to prevent. Short term exceedances are unlikely to result in a significant response in the receiving water relative to aquatic plant growth. Long term exceedances would likely result in a violation of the rolling average limit. While compliance with the permit cannot be determined until the June discharge monitoring report is submitted, compliance for the month of June and July will depend upon good performance in April and May. The permit language has been clarified relative to reporting requirements for April and May. For April and May, in addition to reporting the maximum daily value for the month, the monthly average value must be reported (*see*

> footnote 6 for Conditions I.A.1 and I.A.2 of the permit). For all other months, the maximum daily value for the month and the maximum 60 day rolling average value for the month shall be reported.

Response to Comments at 17 (R. Exh. 30). Thus, the Region appears to address Sudbury's concerns by providing a rationale for the rolling average and adding a requirement to the Permit for monthly reporting. Because Sudbury has failed to indicate why the Region's response is clearly erroneous or otherwise warrants review, review is denied on this issue.[11] *See In re Amerada Hess Corp.*, 12 E.A.D. 1, 8-9 (EAB 2005) (petitioners may not simply repeat objections made during the comment period but must demonstrate why the response to the objections is clearly erroneous or otherwise warrants review).

2. *Interim Phosphorus Limit*

Permit Condition I.A.1 establishes a limitation on total phosphorus discharges of 0.1 mg/l. The Permit, however, contains an interim limit of 0.5 mg/l. In particular, the Permit states:

> The permittee shall comply with the 0.1 mg/l limit in accordance with the schedule contained in Section E below. Upon the effective date of the permit, and until the date specified in Section E below for compliance with the final limit of 0.1 mg/l, an interim seasonal average total phosphorus limit of 0.5 mg/l shall be met. Consistent with Section B.1 of Part II of the Permit, the Permittee shall properly operate and maintain the phosphorus removal facilities at the Facility to obtain the lowest effluent concentration possible.

Permit Cond. I.A.1, .2 n.6. While conceding that this condition allows for only a transitional limit, Sudbury nevertheless contends that the condition is erroneous and that any interim limit should be at least as stringent as the Facility's current operating phosphorus discharges. Petition at 19-20. Sudbury also states that there is no basis in the administrative record for the selection of the 0.5 mg/l interim discharge limit. *Id.* at 20.

In its Petition, Sudbury states that it, along with the Hop Brook Protection Association ("HBPA"), submitted comments during the comment period. *See* Peti-

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[11] To the extent that Sudbury is objecting to any use of a 60-day rolling average, Sudbury has failed to establish that the Permit condition at issue was clearly erroneous or otherwise warrants review.

tion at 4-5 (citing "Written Correspondence of Town of Sudbury Containing Comments on 2003 Draft Permit, dated January 23, 2004" ("Town's Comments") (attached as Exhibit C to Petition), and "Written Correspondence of the [HBPA] Containing Comments on 2003 Draft Permit, dated January 23, 2004" ("HBPA Comments") (attached as Exhibit D to Petition)). The Petition states that "[t]he Town's Comments and the HBPA Comments collectively raised the issues presented in this Petition, and provided support for those issues as outlined below." Petition at 5. Therefore, it is to these two documents that we look to determine whether Sudbury's objections to the 0.5 mg/l interim phosphorus limitation were raised during the comment period.

After reviewing both Sudbury's and HBPA's Comments, we conclude that Sudbury's objections to the 0.5 mg/l interim phosphorus limitation were not raised below. Sudbury's comments make no mention of the interim limit. The only mention of the interim limit in HBPA's comments concerns the length of time the interim limitation will remain in effect. In particular, HBPA takes "specific issue" with, among other things, "[t]he permit requirement which grants to the City an inordinately long time to reduce phosphorus levels in the discharge to the [applicable] discharge limitations * * * ." HBPA Comments at 7. HBPA asserted that the permit should accelerate the deadlines for compliance with the more stringent limitation. *Id*. at 13.[12] Nowhere in its comments does HBPA raise the specific issues on which Sudbury now seeks Board review. Because these issues were reasonably ascertainable but were not raised during the public comment period on the Draft Permit, the issues have not been preserved for review by the Board. 40 C.F.R. § 124.19(a); *In re BP Cherry Point*, 12 E.A.D. 210, 218-20 (EAB 2005); *see also In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 250 n.10 (EAB 1999) (burden is on the petitioner to establish that issues were raised during the comment period; "It is not incumbent upon the Board to scour the record to determine whether an issue was properly raised below."). Accordingly, review is de-

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[12] In its Response to Comments, the Region responded to HBPA's comments regarding acceleration of the deadline for compliance with the Permit's 0.1 mg/l phosphorus limitation as follows:

> While we acknowledge the long delay in issuing the permit, the agencies believe that the 48 month schedule is a reasonable schedule. Within 24 months the permittee must appropriate funding, complete planning and design of the necessary facility upgrades, and initiate construction. The permittee then has 24 months to complete construction and learn how to operate the upgraded facility in order to achieve the permit limits. While it might be possible to reduce the schedule by a few months, it is unlikely that it could be reduced enough such that the 0.1 mg/l phosphorus limit could be achieved during the critical growing season in 2007.

Response to Comments at 13-14. Sudbury does not assert, and the record does not reflect, that the Region's response on this issue was clearly erroneous or otherwise warrants review.

nied on these issues.[13]

3. *Interim Seasonal Average Limitation*

As indicated in the above-quoted portion of Permit Condition I.A.1 note 6, compliance with the Permit's 0.5 mg/l interim phosphorus limitation from April through October is measured using an "interim seasonal average." Permit Cond. I.A. 1, 2 n.6 (R. Exh. 13). Sudbury states that this provision was not present in the Draft Permit, and is not sufficiently stringent to achieve compliance with applicable water quality standards. Petition at 20. According to Sudbury, compliance should be measured using a monthly average. Sudbury also asserts that this requirement is impermissibly vague. *Id*.

Sudbury is correct that the phrase "interim seasonal average" did not appear in the Draft Permit. Rather, the Draft Permit stated only that on the effective date of the permit, "an interim limit of 0.5 mg/l shall be met." Draft Permit Cond. I.A.1., .2 n.6 (R. Exh.23). Presumably, under the Draft Permit, compliance with the interim limit was to be measured in the same way as the Permit's 0.1 mg/l phosphorus limit, i.e., using a 60-day rolling average limit. *See id.* The final Permit maintains the use of the 60-day rolling average for measuring the 0.1 discharge limit, but would measure compliance with the 0.5 mg/l interim limit using an "interim seasonal average total phosphorus limit." *See* Permit Cond. I.A.1, .2 n.6 (R. Exh.13).

The only explanation for the change consists of one sentence in the Region's Response to Comments. In particular, in responding to a comment by Marlborough expressing concern that the 0.5 mg/l interim limit would "open[] the City to potential violations, despite its best effort," the Region and MADEP stated that "[t]he agencies have modified the language relative to the interim limit to indicate that the 0.5 mg/l limit is a seasonal average limit." Response to Comments at 6. Under 40 C.F.R. § 124.17(a)(1), in responding to public comments, the Region

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[13] As the Board has recently stated, the requirement that an issue must have been raised during the comment period in order to preserve it for review is not an arbitrary hurdle placed in the path of potential petitioners. *See In re BP Cherry Point*, 12 E.A.D. 210, 219 (EAB 2005). Rather, the requirement serves an important function related to the efficiency and integrity of the overall administrative permitting scheme. *Id*. The intent of the rules is to ensure that the permitting authority first has the opportunity to address permit objections and to give some finality to the permitting process. *In re Sutter Power Plant*, 8 E.A.D. 670, 687 (EAB 1999). As we have explained, "'[t]he effective, efficient and predictable administration of the permitting process demands that the permit issuer be given the opportunity to address potential problems with draft permits before they become final.'" *In re Teck Cominco, Alaska, Inc*, 11 E.A.D. 457, 479 (EAB 2004) (quoting *In re Encogen Cogeneration Facility*, 9 E.A.D. 244, 249-50 (EAB 1999)). "In this manner, the permit issuer can make timely and appropriate adjustments to the permit determination, or, if no adjustments are made, the permit issuer can include an explanation of why none are necessary." *In re Essex County (N.J.) Res. Recovery Facility*, 5 E.A.D. 218, 224 (EAB 1994).

must specify the reasons for any changes to the draft permit. By so doing, "the Region ensures that interested parties have an opportunity to adequately prepare a petition for review and that any changes in the draft permit are subject to effective review." *In re Amoco Oil Co.*, 4 E.A.D. 954, 980 (EAB 1993). Because the Region has failed to explain why it apparently agreed with Marlborough's above-quoted comment and decided to change the terms of the permit, we believe a remand is appropriate. *See id.* (remanding permit where the Region's mere concurrence with a comment failed to provide adequate explanation for a change in draft permit and, thus, failed to provide the parties "with an opportunity to prepare an adequately informed challenge to the permit addition"). Further, absent such an explanation, it does not appear that the record reflects the "considered judgment" necessary to support the applicable permit determination. *See In re Austin Powder Co.*, 6 E.A.D. 713, 720 (EAB 1997). As the Board has previously stated, a permit issuer must articulate with reasonable clarity the reasons for its conclusions and must adequately document its decisionmaking. *See In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417-18 (EAB 1997) (remanding RCRA permit because permitting authority's rationale for certain permit limits was not clear and therefore did not reflect considered judgment required by regulations); *Austin Powder*, 6 E.A.D. at 720 (remand due to lack of clarity in permitting authority's explanation).

Because the Region has failed to provide a sufficient explanation for the apparent change in the manner in which compliance with the Permit's interim phosphorus limit will be measured, the Permit is remanded. On remand, the Region must either provide an explanation for requiring that the Permit's interim phosphorus limitation be measured using an "interim seasonal average total phosphorus limit," or modify this provision of the Permit.

4. *Winter Phosphorus Limit*

Permit Condition I.A.2 establishes a phosphorus limitation of 0.75 mg/l for the months of December through March.[14] In its Petition, Sudbury alleges that this

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[14] The Fact Sheet contains the following explanation for the winter phosphorus limitation:

> The permit also establishes a monthly average phosphorus limit of 0.75 mg/l from December 1 through March 31 (the "winter limit"). This limit is the same as that contained in the 1988 permit and is being maintained both for anti-backsliding purposes and to minimize the accumulation of phosphorus in receiving water sediments. According to [an October 2000 report prepared by ENSR International for MADEP on nutrient loadings in Hop Brook (R. Exh. 6)], the pattern of total phosphorus in pond sediment suggests that the sediments are highly nutrient-enriched and will support dense rooted plant growth if other factors (mainly light) are favorable. Due to the lack of plant growth in the winter period that

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limitation is not sufficiently stringent to meet applicable water quality standards, and should be at least as stringent as the Permit's 0.5 mg/l interim seasonal phosphorus limitation for the months of April through October. *See* Petition at 20-21. In addition, Sudbury argues that once the final discharge limit of 0.1 mg/l goes into effect, this limit should apply all year in order to ensure compliance with water quality standards. *Id*. at 21.

In response to comments on the Draft Permit questioning whether the higher winter phosphorus limitation was sufficiently protective of water quality standards, the Region stated as follows:

> The intent of the winter phosphorus limit is to ensure that the particulate fraction of the total phosphorus discharged is very small in order to minimize the potential for any significant accumulation of phosphorus in the sediments. This is based on the assumption that the dissolved fraction of the total phosphorus will pass through the system given the short detention time of the ponds and the lack of plant growth during the winter period. It is the agencies' expectation that with a winter limit of 0.75 mg/l total phosphorus, the particulate fraction will be less than 10% of the total. If the data indicates that the particulate fraction is greater than 10% of the total, the winter phosphorus limit may be reduced in future permitting actions. In addition, if a mass balance analysis of the fate of phosphorus in the Hop Brook system during the winter period indicates that dissolved phosphorus could be accumulating in the ponds, the winter period phosphorus limit may be reduced in future permitting actions. The agencies will pursue the necessary resources in order to conduct the mass balance analysis. If necessary, the permittee may be asked to conduct the analysis through the authority of Section 308 of the Clean Water Act.

Response to Comments at 13. Because Sudbury has failed to articulate why the Region's response is clearly erroneous or otherwise warrants review, review is

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> can accumulate dissolved phosphorus in the impoundments, the primary concern is to minimize particulate phosphorus that could settle and accumulate in the impoundment sediments. Accordingly, an orthophosphorus (dissolved phosphorus) monitoring requirement has also been included in order to determine the particulate fraction of phosphorus that is being discharged and to ensure that it is minimal.

Fact Sheet at 7 (R. Exh. 10).

denied on this issue. *See In re Amerada Hess Corp.*, 12 E.A.D. 1, 8 (EAB 2005). Moreover, as the Board has previously stated, the Board traditionally assigns a heavy burden to petitioners seeking review of issues that are essentially technical in nature. *See In re Teck Cominco Alaska, Inc.*, 11 E.A.D. 457, 473 (EAB 2004). Although Sudbury disagrees with the Region's rationale for including a lower winter phosphorus discharge limitation, Sudbury has failed to meet its burden of demonstrating that this determination is clearly erroneous or otherwise warrants Board review. Review is therefore denied.

5. *Winter Ortho (Dissolved) Phosphorus Limitation*

Sudbury objects to the absence of a discharge limitation applicable to ortho (dissolved) phosphorus in the final Permit. Petition at 21-22. Although Permit condition I.A.2 includes a reporting requirement for ortho phosphorus during the months of December through March, it does not include a discharge limitation during this period.[15] According to Sudbury, the Region has failed to justify the absence of a discharge limitation. *Id.* at 21.

Because this issue was not specifically raised during the comment period, it was not preserved for review. *See In re BP Cherry Point*, 12 E.A.D. 210, 218-20 (EAB 2005). Although both Sudbury and HBPA objected to the Permit's higher winter phosphorus discharge limitation and to the rationale for such a limitation,[16] the comments did not raise a specific objection to the lack of discharge limitation on orthophosphorus. Accordingly, review is denied on this issue.[17]

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[15] The Permit does not contain an orthophosphorus limitation for the period of April 1 through November 30.

[16] As the previously quoted portions of the Response to Comments and Fact Sheet make clear, part of the Region's rationale for including a higher winter phosphorus discharge limitation is that, according to the Region, the winter discharge will have a higher proportion of dissolved oxygen that will flow through the watershed without causing further significant nutrient accumulation in the ponds. While HBPA objected to the Region's conclusions in this regard during the comment period, this objection related to the Permit's inclusion of the higher winter phosphorus limit rather than the absence of a limitation on dissolved phosphorus. Moreover, as stated above, although Sudbury disagrees with the Region's determination relating to dissolved phosphorus, Sudbury has failed to meet its burden of establishing that this determination is clearly erroneous or otherwise warrants Board review. *See In re Teck Cominco Alaska, Inc.*, 11 E.A.D. 457, 473 (EAB 2004) (the Board traditionally assigns a heavy burden to petitioners seeking review of issues that are essentially technical in nature).

[17] We note that the Region has stated that the winter phosphorus limit may need to be reduced in the future "[i]f the data indicates that the particulate fraction [of total phosphorus] is greater than 10% of the total." Response to Comments at 13 (R. Exh. 30). In such a circumstance, we would expect that, if appropriate, the Region will take steps to modify the Permit.

6. *Adaptive Management*

Sudbury argues that by failing to include additional mandatory control measures, such as a mandatory adaptive management program in the receiving waters to control eutrophication, the Permit fails to ensure compliance with applicable water quality standards.[18] Petition at 22-23. In particular, Sudbury argues that in order to meet state water quality standards the Permit must include additional measures designed to remove the phosphorus in the sediment of the affected ponds. *Id*. at 23.

In responding to comments on this issue during the comment period, the Region stated:

> The agencies concur that there is a potential for water column release of phosphorus that has accumulated in the sediments to affect both the magnitude and timing of algal reductions. *The likelihood of achieving water quality standards, and therefore avoiding the need for additional treatment, would be enhanced by remediating the sediment sources of phosphorus*. The purpose of the adaptive management approach, as described in the fact sheet, is to allow the permittee to pursue the most cost effective means of achieving water quality standards.
>
> If the [Permittee] ultimately chooses not to pursue sediment remediation, and if water quality standards are still not being met, the permit may be reissued with a lower phosphorus limit in order to enhance recovery of the sediments. Also, as stated in the fact sheet, for the agencies to look favorably upon a proposal to pursue sediment remediation, the evaluation and implementation plan must be developed as soon as possible. *The agencies will make a determination upon expiration of this permit relative to the need for a lower phosphorus limit* * * * . Therefore, although the agencies are not requiring any studies related to sediment remediation at this time, it is in the [Permittee's] interest to conduct those studies prior to its next permit reissuance.

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[18] As described in the Fact Sheet, the Permit's "adaptive management" approach includes the 0.1 mg/l phosphorous limitation, followed by further voluntary studies to be conducted "as soon as possible" after permit issuance. After further study, the Region and MADEP will determine whether additional measures are necessary to meet water quality standards. *See* Fact Sheet at 6-7. According to Sudbury, this process should be a mandatory part of the Permit.

> We recommend in the fact sheet that the permittee consider what additional treatment technologies may be necessary in the future while determining what treatment technologies to pursue in order to achieve the 0.1 mg/l phosphorus limit.

Response to Comments at 12 (R. Exh. 30) (emphasis added). In discussing the Permit's 0.1 mg/l final summer phosphorus discharge limit and the need for additional remediation measures, the Fact Sheet states:

> Because the state water quality standards do not have numeric instream criterion for phosphorus, there is some discretion available to the permitting agencies for determining the instream phosphorus level needed to meet the narrative criteria and the designated uses. At the same time, there is strong evidence in the record that in order to fully support the designated uses, total phosphorus concentrations in the Hop Brook system have to be significantly reduced. *EPA and [MADEP] believe it may be possible to meet the numeric and narrative criteria and attain [designated] uses if the discharge is limited in the summer months to 0.1 mg/l.* The [EPA and MADEP] propose to take an "adaptive management" approach in this case and to require the permittee to reduce its phosphorus to 0.1 mg/l, after which the [EPA and MADEP] will evaluate whether additional treatment is needed. Because tighter limits and additional treatment could be necessary in the future, EPA and [MADEP] recommend that the Permittee seriously consider the following points.
>
> First, [EPA and MADEP] strongly recommend that the Permittee design and construct treatment facility improvements necessary to achieve the 0.1 mg/l phosphorus limit that are technically and economically compatible with adding additional treatment that may be necessary in the future. Treatment to achieve effluent phosphorus levels less than 0.1 mg/l typically requires a combination of treatment technologies allowing for the phased implementation of facility improvements.
>
> Second, a significant amount of the phosphorus discharged by the [Facility] has accumulated in the sediment of the Hop Brook Ponds. The accumulated phosphorus can be released from the sediment during the summer growing season through chemical processes and/or physi-

> cal disturbances. It is widely agreed that internal recycling of phosphorus will affect both the magnitude and the timing of algal reductions. *The Permittee's potential to meet water quality standards with a seasonal limit of 0.1 mg/l, and to avoid the need for additional treatment, will be enhanced by taking steps to reduce sediment phosphorus recycling*. The Permittee is strongly encouraged to complete a comprehensive evaluation of the sediment remediation/dam removal alternatives. Implementing a comprehensive sediment management program, in conjunction with achieving total phosphorus concentrations of 0.1 mg/l, would maximize the potential for water quality improvements sufficient to preclude the need for additional treatment facility improvements.
>
> *In order for EPA and [MADEP] to make a determination relative to attainment of water quality standards prior to reissuance of the next permit, any evaluation of sediment remediation alternatives, and development of an implementation plan and schedule should be completed as soon as possible after issuance of this permit.*

Fact Sheet at 6-7 (R. Exh. 10) (emphasis added).

Based on the record before us, it is unclear whether the Permit complies with the regulatory prohibition on issuing a permit "when imposition of conditions cannot *ensure* compliance with the applicable water quality requirements." 40 C.F.R. § 122.4(d) (emphasis added). Although the Permit itself states that the Facility's discharge "shall not cause a violation of the water quality standards of the receiving waters," (Permit Cond. I.A.1), the record does not indicate whether the Permit's 0.1 mg/l phosphorus limitation, by itself, will meet the state's water quality standards. With regard to the likelihood that imposition of the 0.1 mg/l phosphorus limitation will be sufficient to meet water quality standards, the Region states that such a result may be possible,[19] but a mere possibility of compliance does not "ensure" compliance.

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[19] *See* Fact Sheet at 6; *see also* Response to Comments at 4 ("[T]he agencies believe that the 0.1 mg/l phosphorus limit in conjunction with the 'adaptive management' approach described in the fact sheet, *may* improve water quality to the point where achieving water quality uses is possible. * * * In the absence of sediment remediation, it *may be necessary* to further reduce the point source phosphorus limit." ) (emphasis added); Fact Sheet at 7 (stating that the potential to meet water quality standards with a seasonal limit of 0.1 mg/l "will be enhanced by taking steps to reduce sediment phosphorus recycling"); Response to Comments at 12 (same).

The Region has conceded that significant amounts of phosphorus have accumulated in the sediment of the Hop Brook ponds and that this phosphorus can be released during the summer season. Fact Sheet at 7. The Region has further stated that the phosphorus discharge limitation may not be sufficient to control nutrient levels due to "the significant amount of phosphorus that will continue to recycle from the sediments for many years" and that "it may be necessary to further reduce the point source phosphorus limit." Response to Comments at 4. Without further explanation, this text would suggest that the Region harbors concern that a discharge limitation, by itself, may not be sufficient to meet water quality standards. Nonetheless, the Permit does not contain any provisions requiring that Marlborough study or otherwise address the potential for phosphorus releases from the sediment in the Hop Brook ponds during the term of this Permit; nor does the Permit contain any provisions requiring further action, evaluation, or modification in the event that water quality standards are not achieved despite compliance with the 0.1 mg/l phosphorus limitation.[20] Rather, as indicated above, the Region merely states that "it is in the [Permittee's] interest" to conduct studies relating to sediment remediation, with the need for lower phosphorus limits to be determined at the expiration of the permit. Response to Comments at 11-12. Although the Region states that, upon Permit expiration, it will determine whether additional treatment is needed to attain water quality standards, it is simply unclear from the record before us whether this Permit will ensure compliance with water quality standards.[21]

Although, as previously stated, the Board traditionally assigns a heavy burden to petitioners seeking review of issues that are essentially technical in nature, *see, e.g., In re Teck Cominco Alaska, Inc.*, 11 E.A.D. 457, 473 (EAB 2004), we nonetheless do look to determine whether the record demonstrates that the Region duly considered the issues raised in the comments and whether the approach ultimately adopted by the Region is rational in light of the information in the record. *See In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342 (EAB 2002)("*DCMS4*"). Under the circumstances of this case, the Region has failed to demonstrate, in response to specific comments on this issue, that the Permit will "ensure" compliance with applicable Massachusetts water quality standards. Accordingly, the Permit is remanded. On remand, the Region must either demonstrate that the Permit, as written, will ensure compliance with water quality

[20] The Permit itself does not clearly require modification if water quality standards are not met by the end of the Permit's four-year compliance schedule, but rather states that the Permit may be modified upon a demonstration that a presumably lower "alternative permit limit will achieve water quality standards." Permit Cond. I.A.1, .2 n.6.

[21] Our concern is magnified by the recognition that Marlborough for almost two decades operated under a permit issued in 1988. Thus, it is possible that Marlborough might operate under the terms of this Permit for many years.

standards, or make appropriate modifications to the Permit.[22] *See In re Teck Cominco*, 11 E.A.D. at 491-94 (remanding permit modification where the Region failed to satisfy its duty of ensuring compliance with applicable water quality standards); *DCMS4*, 10 E.A.D. at 343 (remanding permit where the Region failed to support its conclusion that the permit would "ensure" compliance with water quality standards and questioning whether the Region's statement that the permit is "reasonably capable" of achieving water quality standards comports with prohibition against issuing permits that do not ensure compliance with water quality standards).

We emphasize that we are not concluding that a supportable basis for the Region's permit determination on this issue does not exist. Rather, we conclude only that if such a basis exists, the Region has not sufficiently explained where or how it is reflected in the record before us.

7. *Public Review and Participation*

Permit Condition I.E contains a compliance schedule for meeting the Permit's 0.1 mg/l final phosphorus discharge limitation. The condition requires that the Permittee submit periodic status reports to EPA and MADEP on the progress of Facility improvements required to achieve the final phosphorus limitation. Sudbury argues that this Permit condition should also require the Permittee to provide such status reports to interested members of the public and allow for public comments. Petition at 24. However, as this argument was not raised during the comment period, it was not preserved for review. *See In re BP Cherry Point*, 12 E.A.D. 210, 218-20 (EAB 2005). Moreover, as the Region states in its response, "[c]itizens already have a right to inspect or obtain copies of publically available material maintained by EPA, subject to certain exceptions [not applicable here]." Region's Response at 83. Review is therefore denied.

## **IV.** *CONCLUSION*

For the reasons stated above in Parts III.B.3 and III.B.6, the Permit is remanded. On remand, the Region must either provide an explanation for including the requirement that the Permit's interim phosphorus discharge limitation be mea-

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[22] Although, as stated earlier, MADEP certified the Draft Permit in accordance with section 401(a) of the CWA, 33 U.S.C. § 1341(a), *see supra* note 9 and accompanying text, when the Region reasonably believes that a state water quality standard requires a more stringent permit limitation than that reflected in a state certification, the Region has an independent duty under section 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C), to include more stringent permit limitations. *See In re City of Moscow*, 10 E.A.D. 135, 151 (EAB 2001); *see also* 40 C.F.R. § 122.44(d)(1), (5). Moreover, as we stated in *DCMS4*, the Region cannot rely exclusively on the state certification where, as here, there is countervailing evidence in the record. *See DCMS4*, 10 E.A.D. at 343.

sured using an "interim seasonal average phosphorus limit" (*see* Permit Condition I.A.2 n.6) or modify this requirement of the Permit. In addition, on remand, the Region must either demonstrate how, in light of the potential for releases of phosphorus from sediment in the Hop Brook ponds, the Permit, as written, will ensure compliance with applicable water quality standards, or modify the Permit to satisfy the regulatory requirements of 40 C.F.R. § 122.4(d). If the Region decides to modify these Permit conditions, then, depending on the nature of the modifications and to the extent required by law, it should provide the public with an opportunity to comment on the proposed modifications.[23] Sudbury's petition for review is denied in all other respects.

So ordered.

[23] Although 40 C.F.R. § 124.19 contemplates that additional briefing typically will be submitted upon a grant of review, a direct remand without additional submissions is appropriate where, as here, it does not appear as though further briefs on appeal would shed light on the issue. *See, e.g., In re Amerada Hess*, 12 E.A.D. 1, 21 n.39 (EAB 2005). An administrative appeal of the determination on remand is required to exhaust administrative remedies under 40 C.F.R. § 124.19(f)(1). Any such appeal shall be limited to the issues on remand.