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June 30, 2015

VIA EAB eFILING SYSTEM

Ms. Eurika Durr Clerk of the Board U.S. Environmental Protection Agency Environmental Appeals Board 1200 Pennsylvania Avenue, N.W. Mail Code 1103M Washington, D.C. 20460-0001

Re: City of Taunton – Wastewater Treatment Plant Reply to EPA's Response to the Petition for Review of NPDES Permit No. MA0100897

Dear. Ms. Durr:

Attached please find for filing, the City of Taunton's Reply to EPA's Response to the Petition for Review of NPDES permit No. MA0100897 issued to the Taunton Wastewater Treatment Plant by Environmental Protection Agency, Region 1.

The reply has been prepared in compliance with the formatting and length requirements contained in the Environmental Appeals Board's Practice Manual.

Thank you for your assistance with this filing.

Very truly yours,

Phlys Rosen

Philip Rosenman

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

In re:

City of Taunton Department of Public Works NPDES Appeal No. 15-08

Permit No. MA0100897

CITY OF TAUNTON WASTEWATER TREATMENT PLANT'S REPLY IN SUPPORT OF ITS PETITION FOR REVIEW OF NPDES PERMIT ISSUED BY REGION 1

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June 30, 2015

TABLE OF CONTENTS

I.	Int	<u>roduction</u>
II.	Ar	<u>gument</u> 1
	a.	EPA's Untimely (Post Hoc) Introduction of New Information Severely Prejudices Taunton and Violates NPDES Rules
	b.	EPA Failed to Use the Applicable Water Quality Standards and CALM Document
	c.	EPA's Decision to Write-Out the Causation Requirement Is Inconsistent with State and Federal Law
	d.	EPA's "Existing Impairment" Permitting Decision Cannot Be Harmonized with State/EPA 303(d) Listing Determinations/Approvals
	e.	EPA Plainly Violated Requirement to Utilize Current Data and Available Studies
	f.	EPA Failed to Demonstrate that Taunton Has Reasonable Potential to Violate Nutrient WQSs
	g.	Sentinel Approach Flaws 15
	h.	EPA's Assertions of "Waiver" Are Baseless 18
	i.	EPA's New Information Demonstrates the Inappropriateness of Regulating TN
	j.	EPA Never Provided a Timely Justification for Year Round Nutrient Limitations
	k.	EPA's Rejection of Taunton's Affordability Analysis Was Arbitrary 20
	l.	Copper Limitations Failed to Account for Available Dilution
	m.	Wastewater Flow Limit Is Beyond EPA Authority 21
	n.	Interim TN Limit Was Miscalculated 22
	0.	Flow-Tiered WQBELs Are Allowed under the CWA 22
	p.	<i>Iowa League of Cities'</i> Ruling Applicable to Taunton

TABLE OF AUTHORITIES

CASES

Am. Paper Inst. v. United States EPA, 996 F.2d 346 (D.C. Cir. 1993)
<i>Envtl. Integrity Project v. EPA</i> , 425 F.3d 992 (D.C. Cir. 2005)
In re Amoco Oil Co., 4 E.A.D. 954 (EAB 1993)
In re Dist. Of Columbia Water and Sewer Auth., 13 E.A.D. 714 (EAB 2008) 4, 18
In re GSX Servs. of SC. Inc., 4 E.A.D. 451 (EAB 1992)
In re Lorazepam & Clorazepate Antitrust Litig. v. Mylan Labs., Inc., 631 F.3d 537 (D.C. Cir. 2011)
<i>Nat'l Ass'n of Clean Water Agencies v. EPA</i> , 106, 734 F.3d 1115 (D.C. Cir. 2013)
Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967 (2005) 6
<i>New York v. Heckler</i> , 742 F.2d 729 (2d Cir. 1984)
Sugar Cane Growers Co-op of Florida v. Veneman, 289 F.3d 89 (D.C. Cir. 2002)
<i>Texas Oil & Gas Ass'n v. EPA</i> , 161 F.3d 923 (5th Cir. 1998) 17
Upper Blackstone Water Pollution Abatement Dist. v. EPA, 690 F.3d 9 (1st Cir. 2012) 15

STATUTES AND RULES

33 U.S.C. § 1251(e)	4
33 U.S.C. § 1311(b)(1)(C)	4
33 U.S.C. § 1312(a)	
40 C.F.R. Part 25	1, 4
40 C.F.R § 25.4(b)	3
40 C.F.R. § 124.8	4
40 C.F.R. § 124.8(b)	1, 3
40 C.F.R. § 122.44(d)	passim

(1)(ii)	40 C.F.R.
	40 C.F.R.
	40 C.F.R.
4)	40 C.F.R.
	40 C.F.R.
(2)	40 C.F.R.
	314 CMR
	314 CMR
	314 CMR

I. INTRODUCTION

As detailed specifically below, Respondent's, United States Environmental Protection Agency ("EPA" or "the Agency"), Response to the City of Taunton's ("the City" or "Taunton") Petition, like its Response to Comments document ("RTC"), is a dissembling assemblage of inconsistent and conclusory responses that (a) fabricate new positions, (b) defy the laws of physics, (c) ignore well-settled federal law, and (d) conflict with determinations expressly reserved to MassDEP.¹ Moreover, EPA's Response concedes that it did not reveal key analyses and rationales until the comment period had closed in violation of applicable public participation requirements. Therefore, this Board should grant review and remand the Permit back to Region 1 consistent with the objections raised in Taunton's Petition.²

II. ARGUMENT

a. EPA's Untimely (*Post Hoc*) Introduction of New Information Severely Prejudices Taunton and Violates NPDES Rules

In its Petition, Taunton repeatedly noted that EPA failed to include numerous key analyses and considerations in its Fact Sheet ("FS"), which were withheld from the public until EPA issued the RTC. *See* Petition, at 8-11, 25-27. EPA's Response never denies that any of this occurred. Such actions and omissions are a blatant violation of 40 C.F.R. § 124.8(b) (detailing contents and requirements of the FS) and 40 C.F.R. Part 25 (regulations detailing minimum public participation requirements for EPA actions including NPDES permitting) and prevented the public's timely consideration of the new information. These withheld information and undisclosed analyses include, *inter alia*:

¹ Additionally, EPA ignored dozens of key factual and legal claims made in the City's Petition. While some of these "non-responses" have been incorporated in this Reply, Attachment 79 provides a full list of these unrebutted factual and legal claims.

² In conjunction with this Reply brief, the City will soon file a Motion to Appoint a Technical Advisor/Expert and a Motion to Supplement the Administrative Record.

- Analysis on Brayton Point closure on DO and algal growth; *See* RTC at 3, 64-65.
- Analysis of post-2006 water quality data and nutrient load reductions from TE and MHB; *See* RTC at 57, 109-110, 114.
- A claim that the SMAST data can't be used to conduct a DO/TN regression analysis, but yet can be used to select MHB16 as the "sentinel" site based on a claimed DO/TN relationship; *See* RTC at 51, 54, 90-92, 94, 96, 98-100, 102.
- A claim that selection of MHB 16 as a sentinel site is proper and consistent with MEP methods despite all of the admitted hydrodynamic/watershed differences between TE and MHB; *See* RTC at 48, 78.
- A claim that the reduced TN loads, decreased temperature, and decreases in algal growth in Narragansett Bay/TE/MHB since 2006 had no effect on setting the TN limitation in the UTE; *see* RTC at 3, 63-65, 107, 112.
- A claim that EPA's methodology was consistent with the MEP process and published TMDLs (even after EPA received Dr. Howes' letter). *See* RTC at 50, 55, 99; EPA Resp. at 9.

See Att. 80, List of New/Conclusory EPA Claims and Information in RTC.³ Then, merely days before the <u>appeal deadline</u>, EPA released thousands of new pages of data and analyses that were directly relevant to the conclusions in Taunton's permit. *See* Petition, at 16, 66, 73-78. These documents included six memoranda – many of which were authored well before the issuance of the final permit – that outline EPA's revised positions. EPA never denies that Taunton repeatedly asked EPA for this information (Petition, at 8-11, 25-27), or that its late release prevented the City from providing EPA with timely responses to the new information.⁴ Rather, EPA simply contends that because the new information "responded" to comments raised by the City, it didn't

³ See also Att. 82, Kirby Affidavit (documenting major errors and anomalies in EPA's latest analyses, which would have be submitted to EPA had the new information been provided in a timely fashion).

⁴ Given the undisputed record on this issue, it was a clear "abuse of discretion" for EPA to not reopen the comment period to address the previously unavailable analyses. EPA Resp., at 26.

need to reopen the permit. EPA Resp., at 25-27.⁵ EPA's argument does nothing to refute the clear procedural error associated with Taunton's permit. 40 C.F.R. § 124.8(b); 40 C.F.R § 25.4(b) (mandating early public access to such information); Petition, at 25-27.

The City was undeniably prejudiced by EPA's last minute attempts to bolster its record with extensive new rationalizations and analyses. First, Taunton had no meaningful opportunity to review and comment on any of EPA's new analyses. *Nat'l Ass'n of Clean Water Agencies v. EPA*, 106, 734 F.3d 1115, 1148 (D.C. Cir. 2013) (purpose of notice-and-comment provision is "to ensure that affected parties have an opportunity to participate in and influence agency decision making at an early stage, when the agency is likely to give real consideration to alternative ideas."). This due process harm constitutes prejudice regardless of whether EPA would have ultimately changed its position. *See Sugar Cane Growers Co-op of Florida v. Veneman*, 289 F.3d 89, 97 (D.C. Cir. 2002) ("[F]ailure to comply with notice and comment cannot be considered harmless if there is any uncertainty at all as to the effect of that failure.").

Second, EPA's purposeful action has precluded Taunton's ability to create a full record for review on these new positions. Compounding this harm is the fact that EPA's Response repeatedly claims that Taunton "waived" arguments raised in its supplemental comments that were generated in response to EPA's new positions. *See, e.g.*, EPA Resp., at 27 ("The Board has noted that a permitting authority is under no obligation to even consider comments received after the comment period, let alone respond to them. The only relevant inquiry here into whether comments are "timely," is whether they were filed during the comment period."); *id.*, at 30 ("Petitioner for the first time on appeal claims that this 10 ug/l algal level would meet a 5 mg/l

⁵ If EPA's position were the Administrative Procedure Act's standard, all "post hoc" rationalizations and/or new analyses would be acceptable "responses." Clearly, this is not the governing jurisprudence. *See, e.g., Envtl. Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005) (explaining that the logical-outgrowth doctrine does not "apply where interested parties would have had to divine the agency's unspoken thoughts").

DO standard, relying on a University of Rhode Island Powerpoint presentation. Petr. Att. 16. Petitioner failed to preserve the arguments it now makes on its Attachment 16 (a full copy of that document as included as Ex. K).").

In short, after preventing public review of the new information, EPA is now seeking to shield itself from any review of the new positions. An agency's untimely public identification of the bases for its action <u>cannot</u> be used to establish a waiver defense. *See New York v. Heckler*, 742 F.2d 729, 738 (2d Cir. 1984) ("Where the Government's secretive conduct" is present, not enforcing judicial review restrictions "until such time as plaintiffs had a reasonable opportunity to learn the facts concerning the cause of action"). EPA's failure to follow its rules to ensure that Clean Water Act ("CWA") public participation mandates are met represents clear error.⁶ 33 U.S.C. § 1251(e); 40 C.F.R. Part 25; 40 C.F.R. § 124.8.

b. EPA Failed to Use the Applicable Water Quality Standards and CALM Document

As explained in Taunton's Petition, the TN limitation must be based on the *applicable* MassDEP water quality standards ("WQSs"). Petition, at 2 (*citing* CWA § 301(b)(1)(C), 40 C.F.R. § 130.7(b)(4); 40 C.F.R. § 122.44(d)(1)).^{7,8} Moreover, because the *applicable WQSs* in this case are narrative, Taunton explained why MassDEP's Consolidated Assessment Listing Methodology ("CALM") document must also be followed by EPA. Petition, at 5-6. In its

⁶ See Petition, at 1-2, 26 *citing* various EAB cases noting the impropriety of introducing new information after comment period (*In re Dist. Of Columbia Water and Sewer Auth.*, 13 E.A.D. 714, 758-760 (EAB 2008); *In re Amoco Oil Co.*, 4 E.A.D. 954, 980-981 (EAB 1993); *In re GSX Servs. of SC. Inc.*, 4 E.A.D. 451, 467 (EAB 1992).

⁷ EPA's Response elsewhere acknowledges that the applicable MassDEP WQSs are controlling. *See* EPA Resp., at 2-4, § II.A.1 – "Applicable Massachusetts and Rhode Island WQS"; *see also* EPA Resp., at 5 ("The Region concluded that they are, consequently, failing to attain the WQS described above").

⁸ Specifically, Taunton explained that (1) "states possess the primary authority to establish WQSs" (Petition, at 3); (2) EPA is to defer to the states on issues of WQSs (*see* Petition, at 6 and n.4 (*American Paper Inst., In re Ina Road Water Pollution Control Facility, Kentucky Waterways Alliance, Marathon Oil Co.*)); and (3) where narrative criteria are developed, states are required to define how the narrative criteria are to be implemented. Petition, at 5 (40 C.F.R. § 131.11(a)(2)). EPA's Response does not dispute any of these well-settled legal principles.

Response, EPA ignores the *applicable* WQS argument, but claims that the CALM document doesn't control. EPA Resp., at 18-19, 24. As explained below, EPA's argument against the CALM document and the need for a site-specific causal demonstration runs afoul with the Agency's own regulations and guidance documents.

EPA's silence regarding the *applicable* WQS issue is telling. As noted by Taunton in its Petition, the *applicable* MassDEP water quality standards (314 CMR 4.05(5)(a), 314 CMR 4.05(5)(c), and 314 CMR 4.02) specify the need for demonstrating that the pollutant of concern (TN) is "producing," "results in," "causing," or "contributing" to the impairment at issue (chl-a and dissolved oxygen violations). Petition, at 3, n.4. Stated differently, the *applicable* WQSs only implicate nutrients when they are creating or threatening to create a specific impairment to the waterbody at issue. The mere fact that TN has, in other circumstances, been linked to impairments in other waterbodies has never been an acceptable justification to conclude that TN is violating or expected to violate the applicable MassDEP narrative criteria in the waterbody at issue.⁹ This understanding is reiterated in the CALM document, which was developed by MassDEP pursuant to federal law (40 C.F.R. § 131.11(a)(2) and 40 C.F.R. part 130), and specifies that, in order to find a narrative criteria violation, there must be, at a minimum, (1) elevated nutrient concentrations, and (2) indicators of nutrient enrichment (*e.g.*, nuisance growth of primary producers). Petition, at 4-6; Att. 2, at 21.¹⁰

Knowing that its FS analysis never made this "cause and effect" demonstration, EPA asserts that the CALM document is used strictly for the impairment identification process (Part

⁹ Similarly, EPA does not dispute that the 3-5 ug/l chlorophyll-a "excessive" plant growth thresholds used by EPA have never been used by MassDEP to define "nuisance growth of primary producers." Petition, at 14, 20.

¹⁰ Thus, as explained later in this Reply (*infra*, 9-10), given their shared reliance on the *applicable* WQS, it is inherently impossible to have dramatically different outcomes in the 303(d) listing process and water quality-based permitting under § 122.44(d). In fact, under 40 C.F.R. § 130.12(a), EPA is mandated to ensure that the two determinations are not "in conflict."

130 regulations) and not for WQS interpretation or the permitting process (Part 122 regulations). *See* EPA Resp., at 18-19 ("Petitioner, furthermore, offers no evidence to indicate that MassDEP ever intended for its CALM to serve as a WQS guidance for translating narrative into numeric criteria, or as a substitute for a reasonable potential analysis—and why would it have? EPA is the permitting authority in Massachusetts tasked with making such determinations. The CALM is a listing guidance."); *id.*, at 24 ("EPA ... is not required to use a CALM document to determine whether a WQBEL is "necessary."). EPA's position is, in a word, specious. EPA's own guidance directs states to establish specific procedures for interpreting narrative standards and to include those procedures in CALM documents:

Where a state, territory, or authorized tribe adopts narrative criteria for non-toxic pollutants to protect designated uses, it should provide information identifying the method by which it intends to regulate point sources discharges on water quality limited segments based on such narrative criteria in the state, territory, or authorized tribe's WQS or alternatively in other implementing regulations or policies and procedures documents such as the continuous planning process of consolidated assessment and listing methodology.

See Att. 2, EPA CALM Guidance, Chap. 3, 3-4 (emphasis added).¹¹ Contrary to EPA's self-

serving argument, the "narrative criteria interpretation statement" in MassDEP's CALM controls both impairment decisions under § 303(d) and water quality permitting decisions under 40 C.F.R. § 122.44(d). EPA is not free to modify regulatory requirements for the sake of convenience. *See Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005) ("Unexplained inconsistency is... a reason for holding an interpretation to be an arbitrary and capricious change from agency practice under the Administrative Procedure

Act."). Therefore, as EPA plainly failed to use the applicable WQSs for nutrients as described in

¹¹ See also 40 C.F.R. § 131.11(a)(2) ("Where a State adopts narrative criteria ..., the State must provide information identifying the method by which the State intends to regulate point source discharges ... based on such narrative criteria. Such information may be included as part of the standards or may be included in documents generated by the State in response to the Water Quality Planning and Management Regulations (40 CFR part 35).") (emphasis added).

the MassDEP CALM document and, instead, relied on its own interpretation to impose nutrient restrictions, EPA's permit action is based on a clear error of law.

c. EPA's Decision to Write-Out the Causation Requirement Is Inconsistent with State and Federal Law

In its Petition, Taunton noted how "*both* §122.44(d) and the state's narrative criteria specifically state the need to address causation and not presume that nutrients were causing a giving condition (periodic low DO)." Petition, at 21. EPA disagrees that a causation requirement is expressed in 40 C.F.R. § 122.44(d). *See* EPA Resp., at 15-17. However, EPA never disputes that the applicable narrative WQS, by its plain language, requires a causation demonstration. *Supra*, at 5. As 40 C.F.R. § 122.44(d) is plainly controlled by the "applicable standard," EPA's objection is meritless. Beyond that, EPA's argument is directly at odds with decades of water quality-based permitting guidance and constitutes a blatant deconstruction of the intended meaning of the words "reasonable potential."

Specifically, EPA asserts that the words "reasonable potential" obviate the need to demonstrate a causal relationship between TN and the claimed impairment in TE (low DO). EPA Resp., at 15-17. The words "reasonable potential," however, do no such thing. As explained in EPA guidance, the phrase "reasonable potential" is merely an analysis framework for projecting or calculating effluent quality to assess whether a violation of WQSs may exist:

Reasonable potential is where an effluent is projected or calculated *to cause an excursion above a water quality standard* based on a number of factors including, as a minimum, the four factors listed in 40 C.F.R. § 122.44(d)(1)(ii).

See Att. 81, Technical Support Document for Water Quality-Based Toxics Control, EPA/505/2-90-001 (March 1991), at xxi (glossary) (emphasis added). Contrary to EPA's "no causation theory," the 1991 TSD, EPA's water quality-based permitting "bible," explicitly states that "[t]he purpose of this [guidance document] is to provide the most current procedural recommendations and guidance for identifying, analyzing, and controlling adverse water quality impacts *caused* by toxic discharges to the surface waters of the United States." *Id.*, at xxiii (introduction) (emphasis added). Dozens of causation demonstrations are then presented in the 1991 TSD.

While 40 C.F.R. § 122.44(d) doesn't specify the level of scientific certainty, the phrase "reasonable potential" was not intended to allow the imposition of limitations based simply on speculation that a discharger is causing or contributing to an impairment. EPA's spurious claim aside, the entire CWA is premised on the idea of regulating when "necessary" (assessing causes and effects) to ensure one is regulating the proper pollutant at the proper level. For instance:

- All EPA WQS/criteria are based on a cause/effect demonstration or set at the level necessary to protect use; [See 40 C.F.R. § 131.3(c); 40 C.F.R. § 131.2(a)]
- Water quality-based effluent limitations issued when dischargers are interfering with attainment of water quality; [CWA § 302(a)]
- EPA guidance on nutrient regulation for estuaries explicitly requires cause and response relationship; [*See* Att. 65, EPA Estuarine Criteria Guidance at 7-5, *passim*]
- EPA guidance providing how to use ambient data to make valid cause and effect predictions for nutrients. [*See* Att. 59, EPA Stressor Response Guidance, at 6, 32]

The NPDES permitting program merely integrates these aspects of the CWA (*e.g.*, water quality standards, impairment listings, etc.); it isn't an independent program that creates additional effluent restrictions without a site-specific demonstrated need. Put differently, EPA can't just arrive at the permitting stage and do what it pleases. Petition, at 6 (*American Paper Inst.*). The point is simple – without some reasonable cause/effect analysis accounting for the major factors influencing impairment of concern, which EPA agrees that it does not possess in this case, there is no objective basis to determine (1) if the pollutant is part of the problem, (2) if

something else is responsible, and/or (3) how much control is needed. Accordingly, EPA's decision to impose stringent TN limitations without attempting to demonstrate a scientifically defensible causal link between TN, chlorophyll-a, and DO for the Upper Taunton Estuary ("UTE") was inconsistent with both the controlling MassDEP WQSs and applicable EPA guidance and, therefore, constitutes clear legal error.

d. EPA's "Existing Impairment" Permitting Decision Cannot Be Harmonized with State/EPA 303(d) Listing Determinations/Approvals

EPA's Response claims that there was "strong evidence of pervasive eutrophic conditions throughout the TE and MHB" and "that both the TE and MHB have reached their assimilative capacity for nitrogen and are suffering from the adverse water quality impacts of nutrient overenrichment, including cultural eutrophication." EPA Resp., at 7, 5.¹² That is to say, EPA based the limit on a claim of <u>existing</u> widespread eutrophic conditions; EPA <u>did not</u> base the need to limit on some projected need in the future. In this regard, and as previously argued by the City (Petition, at 13-16), EPA's TN limitation is directly at odds with the 303(d) list generated by MassDEP and approved by the same EPA office issuing the permit, which found no such "pervasive eutrophic conditions." Clearly, someone is lying.

In attempting to dodge this inconsistency, EPA first claims that the City argued that "EPA is precluded from issuing a WQBEL for a pollutant that does not appear as the cause of an impairment on MassDEP's Section 303(d) list." EPA Resp., at 19. To be clear, the City <u>never</u> made this argument. Rather, Taunton stated:

That is not to say Section 303(d) decisions strictly govern all permit actions under 40 C.F.R. § 122.44(d). Rather, where a state has repeatedly confirmed and EPA has repeatedly approved that waters are not nutrient impaired, simply responding that a low DO 'designation does not amount to a conclusion that nutrients were not the cause of low DO conditions' is hardly evidence that Taunton's discharge is causing or contributing to a TE-wide narrative criteria exceedance. EPA must

¹² Despite these claims, EPA later admits there is no "current information" for TE. EPA Resp., at 23, 58; RTC, at 58.

provide a site-specific analysis using applicable MassDEP procedures, current data, and studies to demonstrate why MassDEP's decision was misplaced and the minor DO exceedance is due to excessive algal growth.

Petition, at 15-16. EPA subsequently agreed that MassDEP's 303(d) impairment listing "merits consideration." EPA Resp., at 18. However, the requisite consideration referenced by EPA never occurred in any of its FS or RTC analyses. Likewise, EPA simply ignored the City's reference to the EPA regulation explicitly requiring consistency between the 303(d) listing process and the issuance of permits. Petition, at 16; 40 C.F.R. § 130.12(a) ("[n]o NPDES permit may be issued which is in conflict with an approved Water Quality Management (WQM) plan."). Considering that MassDEP CALM document and 303(d) listing decisions for TE are part of the WQM plan, EPA's silence is telling.¹³

Thus, where MassDEP has repeatedly listed other nearby estuarine waterbodies as nutrient impaired, repeatedly declined to list TE as nutrient impaired, and EPA approved such determinations based on current information, EPA must do more than speculate about the scope of MassDEP's approved impairment listing. Unless EPA can point to some new data or analysis, there is no basis to conclude that the listing determination, which does <u>not</u> include a nutrient impairment, is wrong. Given EPA's failure to meet this burden, as well as EPA's complete failure to issue a permit that is "consistent" with the 303(d) list, remand of the permit is proper.¹⁴

¹³ EPA attempts to cast doubt on the MassDEP 303(d) listings (as well as its own 303(d) list approvals) by implying that the watershed has not been assessed since 2001. EPA Resp., at 20. EPA's reference to the "Taunton River Watershed Assessment Report" is completely dissembling. The fact that MassDEP hasn't done a full-watershed evaluation of TE and MHB since 2001 does not mean MassDEP hasn't been considering any of the new information, datasets, and evaluations for the system as they become available.

¹⁴ Under 40 C.F.R. §§ 130.7(b) & (d) and 40 C.F.R. § 130.10, EPA has an obligation to approve 303(d) determinations based on current data and/or latest information. One wonders what, if any, purpose a 303(d) list approval serves, if EPA promptly turns around and issues limitations, which are not based on any recent data or information, in conflict with the 303(d) list.

e. EPA Plainly Violated Requirement to Utilize Current Data and Available Studies

Taunton argued that EPA failed to comply with 40 C.F.R. § 122.44(d) by failing to utilize current water quality/plant performance information in evaluating "reasonable potential" and failed to have its analyses reflect the available site-specific studies for the system. Petition, at 16-20. This argument was premised on the plain language of EPA's regulation, which requires the permit writer to "use procedures which account for *existing controls* on point and nonpoint sources of pollution ... [and] the dilution of the effluent in the receiving water." 40 C.F.R. § 122.44(d)(1)(ii) (emphasis added). Proper consideration of the current information is critical because there have been numerous changes to the MHB/TE system since the SMAST survey and system hydrodynamics are known to control low DO conditions. For instance, EPA's response confirms that, since 2006 (1) the temperature in TE has decreased as result of the Brayton Point plant closure, see RTC at 64-65 (2) Narragansett, MHB and UTE system inputs of TN have declined, see RTC at 63-64 (3) loadings from CSO discharges to the upper and lower TE have declined, see RTC at 63-64 and (4) algal levels in MHB have declined, see RTC at 3, 107, 112. Each of these improvements would unquestionably reduce algal levels and/or improve DO levels in TE. For instance, in mandating elimination/reduction of the Brayton Point thermal discharges, EPA stated:

[I]t is likely that BPS's thermal discharge directly and indirectly reduces dissolved oxygen concentrations in Mount Hope Bay. First, raising the temperature of water reduces the solubility of oxygen in it. Simply put, warmer water holds less oxygen than colder water. Second, bacterial degradation of organic matter, a process called respiration, which uses oxygen, increases with temperature. Third, the thermal discharge can create a thermocline in the water column that would limit aeration of the bottom waters. EPA believes that thermal discharge from BPS is contributing to low dissolve oxygen concentrations in MHB.

11

See Att. 68, EPA RTC on Brayton Point NPDES Permit No. MA0003654, Oct. 3, 2003, at III-61. However, EPA <u>did not</u> account for any of these changed conditions in its FS.¹⁵ In fact, the record shows that EPA does not have any post-2006 data or "current information" showing a nutrient induced algal growth/DO impairment currently exists in TE. EPA Resp., at 21-24. EPA's analysis is "frozen in time."

EPA's Response is disturbingly disingenuous regarding the claim that the Agency considered "more current and detailed data" and the "best information reasonably available" to determine that the billion dollars plus spent on system improvements since 2006 are insignificant. EPA Resp, at 9, 21-24. First, the 2010 data referenced by EPA were from MHB, whereas EPA's permit derivation analysis focused solely on the UTE. RTC, at 64. Thus, the 2010 MHB data presented in the FS are irrelevant to confirming whether and to what extent ongoing impairments exist in the UTE or how water quality affecting that area has changed in the past decade. Second, the 2010 "data plot" prepared by EPA – from MHB – unquestionably confirms that the overall algal levels in MHB have significantly decreased over time. *See* Att. 82, Kirby Affidavit, ¶15; RTC, at 112-113. In any event, even the 2010 data do not reflect the major improvements to the system – TN reductions (mandated by RIDEM and EPA), the thermal reductions from Brayton Point, many of the CSO reduction measures – that had yet to be implemented. The fact that EPA's RTC claims to have subsequently performed such analyses merely demonstrates the gross deficiencies of the published FS. *Supra*, at 1-2.

In summary, EPA has provided no credible demonstration that its analyses accounted for current water quality conditions, permit restrictions, or current studies regarding the factors controlling low DO and algal growth in this system, as required by 40 C.F.R. § 122.44(d). This is

¹⁵ Given the limited algal growth and minor nature of the DO exceedances occurring in the UTE found by SMAST, EPA did not dispute that even a small change in water quality would have greatly improved conditions and/or eliminate the impairment in TE. Petition, at n.15.

particularly troubling given EPA's recognition that numerous factors affecting plant growth and DO have changed for the better. Accordingly, EPA's use of decade-old information was clear legal error and EPA's conclusory claim that it properly accounted for the updated conditions was clear factual error. The Board should remand the permit and direct EPA to conduct the necessary analysis in a scientifically credible fashion.

f. EPA Failed to Demonstrate that Taunton Has Reasonable Potential to Violate Nutrient WQSs

Lost in EPA's push to eliminate the causal demonstration from its costly permitting decisions is the fact that EPA's approach does not even meet the relaxed 40 C.F.R. § 122.44(d) standard proposed by EPA to replace causation. Specifically, the TN limitation issued to Taunton was not shown to be "necessary" to any "degree of certainty greater than a mere possibility." EPA Resp., at 16. For instance, EPA originally claimed it had a model predicting DO effects. See Att. 1, Final FS, at Att. A at 1. Similarly, EPA claimed to have an analysis linking TN to DO/plant growth in TE. See Att. 1, Final FS, at 21-30. However, in its Petition (and earlier in its comments), the City pointed out that the "model" was simply a TN loading analysis tabulating how much TN is transported in to UTE and that EPA had no objective analysis linking the pollutant of concern to the biological response variables associated with nutrient impairment. See Petition at 21-23 n.20; accord. RTC at 51. EPA nowhere denies these assertions. Similarly, the City's experts pointed out that TN reductions, and other system improvements (e.g., temperature), have reduced, the need, to the extent there ever was any, for a TN limit. See Att. 42, 43. Though EPA made the conclusory assertion that improvements have not altered the need for the Taunton's TN limit (RTC at 61-65), EPA did not and has not prepared any analysis to back up this statement. See Att. 80, List of New/Conclusory EPA Claims and Information in



RTC. It is perfectly clear from the data first introduced by EPA in its RTC that neither TN nor algae growth is controlling low DO, which occurs extensively at high and low TN/algal levels:



These analyses provide further confirmation that stratification, not algal levels is the factor controlling low DO conditions throughout the estuary. Numerous hydrodynamic studies existed confirming this conclusion. *See* Att. 82, Kirby Affidavit, ¶18; Att. 43, Swanson Report. Why EPA ignored these findings to claim algal levels are primarily responsible for the DO conditions is unknown. In any event, EPA's failure to demonstrate that (a) excessive algae presently exists in TE, (b) post-2006 TN reductions to TE and MHB have failed to reduce algal levels and improve DO, and (c) existing algal levels in the UTE are having a meaningful impact on the DO regime, stand in stark contrast to the Board's and First Circuit's decision in *Upper Blackstone* whereby EPA found "a clear correlation between nitrogen loadings, dissolved oxygen impairment, and chlorophyll a levels" in the receiving waterbodies. Petition, at 24 n.21; *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 25 (1st Cir. 2012). Thus, even if the Board were to accept EPA's relaxed demonstration for imposing a limit under 40 C.F.R. § 122.44(d), the speculation and admittedly deficient data set used to impose the TN limit on Taunton falls short of that standard.

g. Sentinel Approach Flaws

Taunton argued extensively in its comments and Petition that (1) the sentinel approach, as used by EPA Region 1, has no accepted basis in science or federal guidance on estuary nutrient evaluation, and (2) EPA did not follow the MEP approach, as EPA completely failed to evaluate the fundamental hydrodynamic and physical/loading differences between the Sakonnet River sentinel site and the UTE. *See* Petition, at 29-31, 32-33, 34-35. Taunton's position was backed up by three independent expert opinions (Dr. Howes (MEP Director), Dr. Swanson (system hydrodynamicist), Dr. Chapra (Tufts Univ.)) as well as the Great Bay Peer Review that thoroughly rejected a similar effort, financed by Region I, as naive and scientifically

15

indefensible. *See* Atts. 44, 43, 42, 62, 63. EPA Headquarters even confirmed that it possessed no information indicating that the Region's "sentinel" approach had been "public[ly] noticed," "peer reviewed" or found to be "scientifically defensible" by EPA. *See* Atts. 51 & 52, EPA FOIA Responses on Sentinel Method.

EPA's Response to the City's objections was a conglomeration of baseless procedural objections, conclusory and dissembling responses, and blatant fabrications. In each case, EPA's arguments are easily dispatched. First, as explained both above and below (*supra*, at 3-4; *infra*, at 18), EPA's "waiver" argument¹⁶ is absurd, as Taunton's comments extensively addressed the missing technical assessments in EPA's analysis. *See e.g.*, Att. 15, RTC, at 36-113; Att. 84, Waiver Claims List.

Second, EPA's position that its reference/sentinel approach was defensible and the multiple expert opinions did not merit any further consideration is conclusory.¹⁷ As noted above, Taunton has repeatedly argued that the selection of MHB16 as the reference/sentinel site was improper because MHB16 exhibits dramatically different hydrodynamics than TE. This critique was echoed by several independent experts, as well as Dr. Howes – the Director of the program EPA claims to have been following. EPA itself acknowledged the major differences between the two sites (EPA Resp, at 12, 28-29), but does not present any objective evidence to refute these experts or show why the differences are minor.¹⁸ That EPA would continue to claim that it

¹⁶ EPA Resp., at 28 ("The argument that EPA's approach to selecting a reference location was inconsistent with the MEP process was not presented anywhere below, and is accordingly waived.").

¹⁷ See e.g., EPA Resp., at 10 ("This [reference/sentinel] approach is consistent with EPA guidance regarding the use of reference conditions for the purposes of developing nutrient water quality criteria."); *see also*, Att. 80, List of New/Conclusory EPA Claims and Information in RTC.

¹⁸ In a memo to the file, EPA's permit writer, Ms. Susan Murphy, claims Dr. Chapra, one of the nation's foremost experts, created a flawed analysis. *See* EPA Resp., Att. O/15. Putting aside the slew of conclusory statements in this memorandum, there is no basis to conclude this permit writer has anywhere near the expertise of Dr. Chapra on this issue, particularly in light of the facially deficient FS originally developed by EPA.

followed MEP procedures in the face of Dr. Howes' letter is particularly astounding and <u>per se</u> arbitrary and capricious. *See Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 935 (5th Cir. 1998) (basing a regulatory action "on a study [that is] not designed for the purpose and is limited or criticized by its authors ... is arbitrary and capricious and a clear error of judgment."). EPA's admitted sole criterion for choosing its sentinel station was that the station met DO standards in 2004 and 2005, regardless of where or why this occurred. EPA Resp, at 10 ("EPA determined that DO standards were met at MHB16, and that a TN concentration of 0.45 mg/l... would therefore be used as a threshold protective of the DO water quality standard of 5.0 mg/l..."). Under this rubric, EPA could have picked a location offshore in the Atlantic as its "sentinel" site.

Finally, EPA's Response tries to sidestep an absolutely fatal analytical error regarding the selection of its sentinel site. That is, EPA originally claimed that the sentinel/reference location exhibited <u>lower</u> algal growth than UTE. *See* FS, at 23. This fact was essential as EPA repeatedly asserted that excessive algal growth caused the low DO condition. *See* RTC, at 34, 46, 68, 78; FS at 19-26, 30; *see also*, Att. 83, EPA May 7, 2015 letter to City ("controlling [algal] growth is key to controlling cultural eutrophication and attaining the DO criteria"). However, the City noted that a comparison of the chlorophyll-a levels in UTE and MHB16 reveals that the sentinel location has a significantly <u>higher</u> chl-a concentration than the sites in UTE. *See* Petition, at 32; RTC, at 80. This irrefutable evidence should confirm TN is not controlling chlorophyll-a or DO in UTE. However, in an attempt to avoid this fatal flaw, EPA now argues that "TE is more vulnerable to DO depletion from chlorophyll-a than MHB." EPA Resp., at 23. How this all occurs is simply unexplained. Apparently, the oxygen demanding capabilities of algae are dramatically different in the TE than at the sentinel site 11 miles away. If so, such "chubby algae" would be a major scientific finding that EPA should present to the scientific community.

17

Alas, there is no objective explanation regarding how this is possible; this is just another afterthe-fact EPA "scientific" fabrication designed to misdirect the Board. *Supra*, at n.2.

Accordingly, EPA's selection/application of the sentinel/reference site was an error of law and fact that warrants the Board's review and remand of the TN limit in Taunton's permit.

h. EPA's Assertions of "Waiver" Are Baseless

In the midst of various arguments, EPA asserts a "waiver" defense to deflect the gross procedural and substantive permitting deficiencies that have been identified and challenged in Taunton's Petition. EPA Resp., at 24, 28, 30, 31, 36, 40, 45. As confirmed by Attachment 84, Waiver Claims List, EPA's waiver claims are baseless because either (1) Taunton provided detailed comments on the issue prior to the close of the comment period, or (2) Taunton raised the argument for the first time in its Petition because EPA did not introduce the disputed claim or new information until its RTC document. In either case, one cannot rationally claim that Taunton "waived" the issue. *Supra*, at 4, n.6 (*Heckler*, *In re Dist. Of Columbia Water and Sewer Auth., In re Amoco Oil Co., In re GSX Servs. of SC. Inc.*).

i. EPA's New Information Demonstrates the Inappropriateness of Regulating TN

In its RTC, EPA introduced, for the first time, 2011 RIDEM data. RTC at 56, 57; EPA Resp., at 4, Ex. G. These data, like the original data used by EPA, confirm that DO is not being controlled by algal levels. Specifically, the continuous bottom DO data, which EPA now claims is the most important (EPA Resp., at 5, 10), exhibit no meaningful relationship, whatsoever, to the algal level present, as confirmed by the chart below.



These data confirm, beyond a shadow of a doubt, that extremely low DO frequently occurs, even when waters meet EPA's definition of "excellent" water quality – 3-5 ug/l chlorophyll-a. Moreover, these data also explain why the MHB16 sentinel site meets the minimum DO objective despite having an algal level much higher than the UTE – 12 ug/l versus 7 ug/l, respectively. The reason for this, which has been repeatedly ignored by EPA, is that stratification, not the algal level, controls whether or not low DO occurs in the MHB and TE system. *Supra*, at 15; Att. 82, Kirby Affidavit, at ¶18.

In short, the new data supplied by EPA clearly do not support the need for a TN limitation. To the contrary, they confirm that EPA's focus on TN as the "root cause" of low DO in this system is a grossly incorrect determination.

j. EPA Never Provided a Timely Justification for Year Round Nutrient Limitations

EPA's assertion that the FS "explicitly articulated [the] rationale ... for year round nutrient controls" is absurd. EPA Resp., at 36. The referenced portion of the FS was simply part of a general introduction section that provided background information on estuarine systems. It is indisputable that the RTC was the first place EPA issued a justification for imposing year round TN limits. RTC, at 19-20. The meritless nature of this rationale notwithstanding, as no reasonable notice for the basis of the provision was contained in the FS, this provision must be remanded as violating 40 C.F.R. § 124.8(b)(4).

k. EPA's Rejection of Taunton's Affordability Analysis Was Arbitrary

In support of an extended compliance schedule, EPA admits that the City submitted an updated affordability analysis based on information that was developed by the City following post-comment period discussions with EPA. EPA Resp., at 38. However, EPA's newly minted rationale for discarding that analysis is plainly in error. *Id.* The fact that the new costs "represented a significant increase over prior cost estimates" certainly does not mean that the new costs were unreliable. EPA nowhere indicates that the source of these new costs – items not included in previous analyses – was improper. Rather, EPA simply concluded, with no meaningful analysis that the costs were "speculative and unsupported." *See* EPA Resp. at Ex. O/15, Apr. 9, 2015 Memorandum by D. Pincumbe. The City's updated estimate (*See* EPA Resp., at Ex. P) contained new costs consistent with EPA's guidance. EPA's conclusory rejection of that information to preclude an 18-year schedule of compliance was clear error.

I. Copper Limitations Failed to Account for Available Dilution

Taunton argued that EPA completely failed to account for the tidal flow occurring at the point of discharge. Petition, at 39-40. EPA's Response acknowledges that the additional "average tidal flow" is 6 cfs, which EPA indicates would increase the applicable effluent limit by

20

1.5 ug/l. EPA Resp., at 39. Thus, it is clear that the applicable permit limit has been miscalculated in failing to consider tidal dilution. EPA's RTC contained a "post hoc rationalization" speculating why the available tidal dilution should not be allowed. EPA Resp., at 39-40. As 40 C.F.R. § 122.44(d)(1)(ii) plainly requires EPA to account for the "dilution ... in the receiving waters" in setting limits, and Taunton has had no opportunity to address EPA's latest speculative claims for disallowing tidal dilution, the Board should remand this provision for further comment and analysis.

m. Wastewater Flow Limit Is Beyond EPA Authority

EPA's Response provided no legal basis for including a flow limit in the permit and offered no dispute of the City's claim that such a limit is beyond EPA's statutory authority. Accordingly, this limit must be removed from the permit as a matter of law. EPA's sole basis for disputing the argument was that the City waived its argument. EPA Resp., at 40. However, for the reasons explained above (supra, at 3-4, 18), no such waiver occurred. Specifically, the City was never on notice of the basis for the flow provision since the FS was silent on the issue. Moreover, it did not become apparent to Taunton that EPA was intent on enforcing the flow limit until EPA insisted that the effluent flow cannot increase without an anti-degradation analysis. Att. 25, H&A 2/17/15 Supp. Comm; RTC, at 14. It was at this point, that the City realized EPA was attempting to enforce the flow provision, which had <u>never</u> occurred before. Finally, jurisdictional arguments such as EPA's statutory authority to impose a limit cannot be waived. See In re Lorazepam & Clorazepate Antitrust Litig. v. Mylan Labs., Inc., 631 F.3d 537, 540-41 (D.C. Cir. 2011) ("A corollary, long established, is that a party does not waive a jurisdictional objection by failing to raise it, at least so long as the jurisdictional defect appears on the face of the record."). Thus, Taunton's challenge was not untimely.

21

n. Interim TN Limit Was Miscalculated

EPA presents no data that disputes the mathematical fact that, for all practical purposes, a 3 mg/l growing season average (final limit) is equivalent to the maximum monthly limit of 5 mg/l (interim limit). Petition, at 38. Any assertion to the contrary is completely specious. Therefore, EPA has not established a less restrictive interim limitation as specified in the RTC (at 28) and the imposition of a 5 mg/l TN maximum monthly interim limit is clear error.

o. Flow-Tiered WQBELs Are Allowed under the CWA

EPA has conceded that its original RTC response (flow-tiered limits are not allowed) is in error. EPA Resp., at 43. As such limits are plainly allowed under the Act (Petition, at 42; Atts. 60 & 70), the Board should remand the permit to allow for the establishment of such limits in regulating peak flows from the facility. On a side note, EPA's unreferenced assertion that it possesses "analyses regarding the significance of POTW loads and WQS exceedances during wet weather" (EPA Resp., at 43) is a complete fabrication. No such analyses exist or have been presented to Taunton.

p. Iowa League of Cities' Ruling Applicable to Taunton

This matter is ripe for review as EPA has informed the public that it is only proper to challenge the Agency's *ILOC* decision position in individual permits affected by EPA's position. *See* Att. 85, EPA Motion to Dismiss in *CRR v. EPA*. Consequently, this issue is properly before the EAB.

Respectfully submitted,

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June 30, 2015

Statement of Compliance with the Word/Page Limitation

In accordance with 40 C.F.R. § 124.19(d)(1)(iv) & (d)(3), Taunton hereby certifies that its Reply Brief does not exceed 7,000 words. Specifically, not including the transmittal letter, caption, table of contents, table of authorities, figures, signature block, table of new attachments, statement of compliance with the word limitation, or certification of service, Taunton's Reply contains **6,998 words**.

TABLE OF ATTACHMENTS (Cont.)

- **79.** Factual and Legal Arguments Never Addressed By EPA Region 1in Response to Petition for Review
- **80.** List of New Claims Raised in RTC and Conclusory Statements Unsupported by Analysis in the Record (Including Obviously Incorrect "Technical" Statements)
- 81. USEPA. March 1991. Technical Support Document for Water Quality-Based Toxics Control, EPA/505/2-90-001. Available at http://water.epa.gov/scitech/datait/models/upload/2002_10_25_npdes_pubs_owm0264.pd f.
- 82. Affidavit of Benjamin M. Kirby June, 30 2015.
- 83. Letter Ken Moraff to Thomas Hoye Re: City of Taunton NPDES Permit TN Limit (05/07/15)
- 84. List of Waiver Claims
- 85. Excerpts EPA Motion to Dismiss in CRR v. EPA (10/02/14)

CERTIFICATE OF SERVICE

Undersigned hereby certifies that on this day, June 30, 2015, a copy of the foregoing City of Taunton's Reply to EPA's Response to the Petition for Review of NPDES Permit No. MA0100897 was served on the parties identified below by U.S. first-class mail, postage prepaid:

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Dated on the 30th day of June, 2015.

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