response suggests that the average concentration in the river above the 001A discharge has been observed as 0.132 mg/L, thereby indicating that there is no dilution available. *See* RTC, R#F22, p. 60.

The data cited by EPA fails to consider the distribution of the complete MassDEP Smart dataset. The EPA cites only 4 out of a total 25 observations collected at this station upstream of UBWPAD (BS09C). One of these four observations (11/20/2003) exceeds 0.1 mg/L (0.33 mg/L) while the other three are less than 0.1 mg/L. The arithmetic mean of these four datapoints is skewed by this individual high value. In fact, out of all 25 observations collected from 2000 through 2005, this single high value is the only observation that exceeds 0.1 mg/L (the other 24 observations are less than 0.1 mg/L) suggesting that this datapoint could be considered an outlier. The mean and median of all 25 observations are 0.067 and 0.053 mg/L, respectively, indicating that there is likely to be dilution of the UBWPAD discharge.

4. Region 1 Refused To Consider The Model Developed By The District, Did Not Adequately Consider Water Quality Models Suggested By EPA's Science Advisory Board And Watershed Action Plan

The United States Geological Survey (USGS) and the District have undertaken development of hydrologic and water quality models suggested by the EPA's SAB and the Watershed Action Plan.[11] The USGS is undertaking the hydrologic simulation model in concert with the Rhode Island Water Resources Board, and with the cooperation and sponsorship of the District. The District has undertaken the development of the HSPF water quality model (building on the HSPF quantity model developed by USGS), including additional wet and dry

[11] *See* EPA-SAB-EPEC-98-001, Evaluation of the Blackstone River Initiative, p. 2; and 2004 Blackstone River Watershed Five-Year Action Plan.

weather sampling, the installation of continuous recording analytical devices and the integration of the extensive volunteer data sets into the program. The model simulates the conditions of the Blackstone River over a ten year period, and was developed explicitly to address the issues raised in EPA's SAB review of the prior BRI studies. A technical advisory committee, consisting of Dr. Linfield Brown, Dr. William Walker and Richard Baker, was formed in the fall of 2007 to provide guidance and technical comments on the Blackstone River model calibration approach, process and results. The District made the Region aware of their modeling efforts and noted that significant results were expected in the near future. The District requested that the record on the Permit be kept open such that these new results could be considered. The Region refused this request, choosing instead to move forward with limits based on approaches far more simplistic than even those on which the BRI studies were based.

Significant outputs from the USGS and District models have become available. *See* Exhibit G. This information provides highly useful information concerning the annual variability in nutrient loadings, the cumulative effects of various nutrient control strategies and the importance of non-point sources. The studies point out the clear need to assess control of all sources of nutrients before embarking on strategies which are singularly focused on point source control strategies. To do otherwise can lead to the expenditure of significant local funds and increased use of scant energy resources without returning the implicit promised benefit of water quality in compliance with the CWA. Until the Region considers this modeling information, and gains the associated understanding it should provide with respect to the affect of the various

plant upgrades and permit adjustments on the water quality of the Blackstone River, there is inadequate and unreliable factual basis for imposing stricter phosphorus limits.

5. Region 1 Disregards Its Own Prior Study Of The Blackstone River And Approaches Used In Other Massachusetts Studies Of Nutrient Enrichment.

Regardless of which version, 1996 or 2007, of the Massachusetts Water Quality Standards (314 C.M.R. § 4.00) is applied here, the 0.75 mg/L phosphorus limit has been shown to be appropriate and adequate. The existing QUAL2E model has indicated that at extreme low flow conditions (as compared to seasonal average values) with the existing phosphorus limit of 0.75 mg/L and with 25 % reduction in sediment phosphorus flux, that chlorophyll a levels would be reduced substantially from 66 ug/L to 22 ug/L. The increased seasonal average flow would undoubtedly have mitigated algal growth further (e.g., dilution and reduced residence time) resulting in even lower chlorophyll a levels. Seasonal chlorophyll a was directly used in the Charles River as a measure of cultural eutrophication.

F. The Winter Fecal Coliform Limit And Associated Year-Round Disinfection Requirement Is Based On Clear Errors Of Fact And/Or Conclusions Of Law.

The Region's imposition of year-round fecal coliform limits, and the required disinfection to achieve those limits, is not necessary to meet applicable water quality standards, is contrary to common sense, and is unsupported by science.

The final permit retains fecal coliform effluent limitations of 200 colony forming units ("cfu")/100 ml as a monthly geometric mean and 400 cfu/100 ml as a daily maximum for the period of April 1 through October 31. In addition, it imposes new fecal coliform limits during

the period of November 1 through March 31: 571 cfu/100 ml as a monthly geometric mean and 1429 cfu/100 ml as a daily maximum. Although the Permit does not expressly require it, year-round disinfection would be necessary to meet the imposed limits. The final permit bases the year-round fecal coliform limits and disinfection requirement solely upon the Rhode Island recreational water quality standards. There are no designated bathing beaches along the Blackstone, Providence, and Seekonk Rivers in either Massachusetts or Rhode Island. Even if winter disinfection were necessary to protect primary contact recreation in Rhode Island, there are no places for engaging in such which might be impacted by the District's discharge. The winter effluent limit has been set to protect a use that does not occur in areas not designated for that use.

Based upon very limited sampling, EPA indicated that it "believes that the discharge from UBWPAD, being the dominant point source on the river, has the reasonable potential to cause or contribute to violations of Rhode Island's Water Quality Standards." Fact Sheet, p. 8.[12] However, although exceedances of Rhode Island's standards may have occurred during the non-recreation season, the data are wholly insufficient to support the Region's conclusion that the District's discharge causes or contributes to any such exceedance. The District raised this concern in its comments on the draft permit:

> Rhode Island water quality standards governing fecal coliform are designed to protect bathing waters from bacterial contamination. There is no evidence, however, that the District's discharge adversely affects water quality in Rhode Island during the non-swimming season. In fact, there are no designated bathing waters on the Blackstone River in Rhode Island. In the absence of evidence that

[12] The District believes the Fact Sheet will be included in the Administrative Record to be provided by Region 1, but reserves the right to supplement the record if necessary.

> the District's discharge has a reasonable potential to exceed Rhode Island water quality standards, the CWA does not authorize the imposition of water quality-based effluent limits based on those standards.

RTC, C#F49, pp.110-111; *See* also RTC, C#F25, p. 63.

Pursuant to 40 C.F.R. § 122.44(d)(1), a water quality-based permit requirement is justified only for "pollutants or pollutant parameters ... which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." In this instance, EPA has not presented sufficient data to demonstrate that the District's discharge, if not disinfected during the winter months, would cause or contribute to a violation of bacteria criteria in Rhode Island.

First, the age and limited size of the dataset makes it difficult to support any valid conclusions concerning the effect of the UBWPAD discharges. As described in the Fact Sheet and its response to the District's comments, EPA relied on a very limited number of wet and dry weather sampling events. The wet weather sampling consisted of only three events and was gathered between five and six years ago. RTC, R#F25, pp 63-64. The dry weather data are more recent (winter 2005-2006), but consists of only four data points. Fact Sheet, p. 8.

Second, fecal coliform bacteria interact within a natural water system in a complex fashion. There are many sources – including significant contributions from storm water runoff – that must be adequately considered and studied. Fate and transport also is a factor, particularly in situations where the applicable water quality standard applies many miles downstream of a particular discharge, and cannot be reduced to a simple formula. The District commented that

the coliform limitation for the winter time, if it is required, should reflect both the die-off and dilution afforded the District's discharge at the Rhode Island state line. The Region has accepted that the die-off is an appropriate factor to consider, but has dismissed the concept of dilution. Their rationale for rejecting dilution is as follows:

> We do not believe that we can establish limits that account for dilution because of the multitude of other sources of bacteria in the river that effectively eliminates the dilution benefit of higher flows.

RTC, R#F25, p. 63.

This is flawed logic that effectively puts the entire burden of coliform compliance on the District. If there are other sources of coliform in the River, then Region 1 should take steps to control those sources. This further undermines the Region's approach, where data and models are selectively and inconsistently used to uphold effluent limits that no one set of data or calculations can support.

It is necessary to understand these issues to determine whether one particular point source discharge in Massachusetts has the reasonable potential to cause or contribute to violations of water quality criteria downstream in Rhode Island. However, rather than seeking to study and understand bacteria loading and fate and transport in a dynamic system to justify a reasonable potential determination, EPA applied a simplistic analysis to reach an unjustified conclusion. This is contrary to the CWA requirements.

The CWA does, as the Region notes in its Response to Comments, direct EPA to consider the views of the downstream state concerning whether a discharge would result in violations of the state's water quality standards. However, in considering downstream state

standards, the Region must exercise its own judgment and analysis in determining the impact on a downstream state, not merely implement that state's regulation in its stead. Here, given the absence of any real evidence connecting the District's discharge to impairment of designated uses, the CWA does not authorize the imposition of water quality-based effluent limits based on the Rhode Island standards.

The District appreciates that the Region has acknowledged the die-off of bacteria that occurs between UBWPAD and the state line, and accordingly adjusted the winter fecal coliform limits. However, the Region's willingness to adopt the die-off rate suggested in UBWPAD's response to the draft permit also serves to highlight the Region's selective use and interpretation of data. The Region refused to accept the validity of the die-off rate's associated flow and resultant concentration data from the same study. This further undermines the Region's approach, where data and models are selectively and inconsistently used to uphold effluent limits that no one set of data or calculations can support.

The fecal coliform standards imposed defy both logic and science. In setting the effluent limits for fecal coliform at the levels in the final permit, the Region is clearly in error, attempting to protect a non-existent use with unsound science. For these reasons, the Board should vacate the fecal coliform effluent limits and remand to the Region with an order to eliminate any winter disinfection requirement.

G. Region 1's Refusal to Incorporate Compliance Schedules For The Nitrogen And Phosphorus Limits In The Permit Is Arbitrary And Capricious, An Abuse Of Discretion, And Not Supported by Law

In the Fact Sheet, Region 1 acknowledged that UBWPAD would be unlikely to be able to immediately comply with the proposed nitrogen and phosphorus limits, and that the Region would work with the District "to develop a schedule for the planning, design and construction of facilities necessary to meet the specified limits and that takes into account currently ongoing facilities upgrades." *See* Fact Sheet, p. 7. In its comments on the draft permit, UBWPAD requested that Region 1 include compliance schedules in the final permit. *See* RTC, C#F46, p. 88. However, rather than incorporating compliance schedules into the final permit, Region 1 instead responded that it would work with UBWPAD to develop a schedule for compliance concerning both limits in a separate administrative order. Region 1 provided the following rationale for this approach:

> Compliance schedules to meet water quality based effluent limits may be included in permits only when the state's water quality standards clearly authorize such schedules and where the limits are established to meet a water quality standard that is either newly adopted, revised or interpreted after July 1, 1977. As noted in the Fact Sheet supporting the draft permit, EPA recognizes that it is unlikely that UBWPAD will be able to comply immediately with the water quality based effluent limits proposed for total nitrogen and phosphorus. With regard to nitrogen, the limits on total nitrogen are necessary to ensure compliance with the Rhode Island Water Quality Standards, not Massachusetts Water Quality Standards. Rhode Island has not included provisions in its Water Quality Regulations for surface waters allowing for schedules in permits. Rhode Island's practice is to incorporate any appropriate schedules in an Administrative Compliance Order or a Consent Agreement. While Massachusetts Water Quality Standards do allow schedules in permits, the decision of whether to include a compliance schedule is discretionary. *See* 314 C.M.R. § 4.03(1)(b)(indicating that a "permit may, when appropriate, specify a schedule leading to compliance..."). [1] Thus, even if only Massachusetts standards were applicable, the standards do not mandate that a schedule be included in the permit itself. In

> this matter, there are many overlapping issues related to the planning, design and construction of facilities to meet the limits for phosphorus and nitrogen. Indeed, as MassDEP notes in its comment, the schedules for nitrogen and phosphorus should be consistent from an engineering and economic standpoint. Compliance issues should be handled comprehensively based on the best information when more is known about such issues as modes of compliance and costs. In light of these overlapping issues and the fact that Rhode Island standards do not include provisions allowing for schedules, EPA intends to issue a compliance schedule to meet both the phosphorus and nitrogen limits in a separate administrative order.
>
> [1] The Mass. Standards referenced above are those adopted in 2007. By letter dated September 19, 2007, EPA approved certain modifications to the Mass. Standards, including modifications to the cited provision related to compliance schedules. Like the 1996 version of the Standards, however, the 2007 version provides that incorporation of schedules into permits is discretionary.

RTC R#E2, p. 19. *See also* RTC R#F21, p. 58 and RTC R#F46, p. 90.

However, Region 1's rationale is faulty in several key aspects. First, as acknowledged by Region 1, Massachusetts rules provide clear authority to issue schedules of compliance in permits:

> A permit may, when appropriate, specify a schedule leading to compliance with the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53 and The Clean Water Act, 33 U.S.C. § 1251 et seq, and the NPDES regulations at 40 C.F.R. Part 122. Any such schedule shall require compliance as soon as possible, but not later than the applicable statutory deadline under 33 U.S.C. 1251 § 301(b), unless modified in accordance with the provisions of 33 U.S.C. 1251 § 301(i) or (k). 314 C.M.R. § 3.11(2)(a)(10) and 3.11(10).

While it is true that the Massachusetts compliance schedule provision is discretionary, in this case, Region 1 has abused its discretion by failing to provide a compliance schedule when it has the clear authority to do so and has expressly determined that the discharger cannot immediately meet the new limits imposed in the Permit.

The Commonwealth's position with respect to a schedule for this permit is abundantly clear: it proposed a schedule and process for achieving compliance with its water quality

standards for phosphorus. Absent a compelling argument otherwise, this schedule and process should be incorporated in the Permit, in deference to the Commonwealth's interpretation of its own standards. In response to the Commonwealth's proposal, EPA contends that there are many overlapping issues related to the planning, design and construction of these facilities. While this may well be true, that is no justification for not including the schedule in the Permit, unless the Agency believes the schedule proposed by the Commonwealth is inappropriate.

Region 1's desire to address both phosphorus and nitrogen in a single administrative order could be achieved through other less prejudicial means, and is not sufficient justification to deny UBWPAD a compliance schedule within the Permit itself. The Region improperly assumes that Rhode Island permitting regulations must be followed. In fact, UBPWAD believes that the Region has authority to provide compliance schedules in the Permit for both nitrogen and phosphorus, as discussed in more detail below. However, even if the Region is correct in its interpretation concerning a nitrogen compliance schedule, the desire for consistency should not prevent the Region from including a phosphorus compliance schedule in the Permit. There is no reason that consistency could not be maintained by including an appropriate compliance schedule for phosphorus in the Permit, and including a similar schedule for nitrogen in any later administrative order.

Further, the unnecessary denial of a compliance schedule prejudices the District, by placing it in the position of being instantly out of compliance with the new permit, subjecting it to the threat of enforcement and the potential for citizen suits. Although Region 1 has stated that it will provide compliance schedules in an administrative order, such an order was not in place at

the time that Region 1 issued the final permit. Furthermore, an administrative order is an enforcement tool rather than a compliance tool. Such orders expressly provide that they do not constitute a waiver or modification of the terms and conditions of the Permit, meaning that UBWPAD would be deemed to be out of compliance with the Permit. In contrast, a compliance schedule in a permit recognizes that a discharge is being given a period of time to come into compliance with a new permit limit, and is not in violation of the limit during the period the compliance schedule is in effect. This status is far preferable to the enforcement option, and is authorized by law. Therefore, it was an abuse of discretion for Region 1 to summarily deny the compliance schedules in the Permit.

As it concerns Rhode Island's position on compliance schedules, it was arbitrary and capricious for Region 1 to rely on a faulty interpretation of the Rhode Island regulations as its basis for refusing to incorporate compliance schedules in UBWPAD's permit. In its Response to Comments on the draft permit, Region 1 states that Rhode Island interprets its regulations to not allow compliance schedules in permits, but instead to authorize such schedules only in enforcement orders. However, Region 1 never properly explains the basis of this interpretation, which clearly conflicts with the plain language of the Rhode Island regulations:

> The permit may, when appropriate, specify a schedule of compliance leading to compliance with the State and Federal Acts and all other applicable authority for these regulations.

12 190 3 R.I. Code R. § 20.1.

Although it is not set forth in Region 1's explanation, Rhode Island appears to interpret federal law to prohibit compliance schedules for water quality-based effluent limitations (such as

those imposed in the District's permit for nitrogen and phosphorus) because the CWA's statutory deadline for achieving such limits has already passed. If so, this is a clear error in interpretation of applicable federal law. 40 C.F.R. § 122.47(a) authorizes compliance schedules in permits allowed by the applicable state regulations and if the applicable CWA deadline has not passed. For limits based on water quality standards, U.S. EPA has determined that compliance schedules are available for such limits as long as the applicable standards were adopted, revised, or interpreted after July 1, 1977. Region 1 acknowledged this determination in its Response to Comments on the Permit. RTC, R#E2, p. 19. Authority for this interpretation is based upon CWA Section 301(b)(1)(C) ("no later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards") and the decision by the Administrator in *In the Matter of Star-Kist Caribe, Inc.* (April 16, 1990), as upheld by the Environmental Appeals Board (May 26, 1992).

Regarding UBWPAD's permit, Region 1 has stated that the limits on total nitrogen are necessary to ensure compliance with the Rhode Island water quality standards. As explained in greater detail in another section of this petition, Region 1 developed the nitrogen limits based upon its numeric translator of Rhode Island's narrative standard for cultural eutrophication. This numeric translator was developed and established during this permitting process, and thus was adopted, revised, or interpreted after July 1, 1977. Therefore, compliance schedules are clearly authorized in the Permit, and it was arbitrary and capricious for Region 1 to deny a compliance schedule to UBWPAD.

Furthermore, even if one were to defer to the Region's interpretation of Rhode Island's regulations – *i.e.*, that the rules do not authorize compliance schedules in permits, but only through administrative orders – Region 1 is not bound by the Rhode Island permitting rules as it concerns issuance of a permit by Region 1 to a discharger in Massachusetts with new, more stringent effluent limits based upon the region's interpretation of Rhode Island's narrative water quality standards. As authority for imposition of the nitrogen limits, Region 1 cites 40 C.F.R. § 122.4(d) ("No permit may be issued ... [w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States").

Region 1 misstates its authority under that section. Compliance schedules are not "water quality requirements" covered by the regulations. Contrary to Region 1's assertion, 40 C.F.R. § 122.4(d) prohibits EPA-issued permits that cannot ensure compliance with all state "water quality requirements" – not compliance with all state regulations. EPA never clarified the intent behind the "water quality requirements" language in its regulations; however, case law indicates that the "water quality requirements" refers only to water quality standards. *Arkansas v. Oklahoma*, 503 U.S. 91 (1992); *In re: District of Columbia Water and Sewer Authority*, 13 E.A.D. __ (EAB 2008) (reconsideration denied); *In re: Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 626 (EAB 2006); *In re: City of Marlborough Massachusetts, Easterly Wastewater Treatment Facility*, 12 E.A.D. 235, 251 (EAB 2005); *In re: Carlota Copper Company*, 11 E.A.D. 692, 737 (EAB 2004) (violation of antidegradation portion of water quality standards); *In re: Teck Cominco Alaska Incorporated, Red Dog Mine*, 11 E.A.D. 457, 486 (EAB 2004) (compliance with water quality criteria alone is not sufficient to satisfy § 122.4(d), must

demonstrate compliance with water quality standards). In other words, EPA is not allowed to issue a permit that cannot ensure compliance with state water quality standards.

"Water quality standards" are "provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses." 40 C.F.R. § 131.3(i). "Criteria" are "elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use." 40 C.F.R. § 131.3(b). Neither of these limiting definitions extends to a compliance schedule or "schedule of compliance"; which is separately defined as "a schedule of remedial measures included in a 'permit', including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the CWA and regulations." 40 C.F.R. § 122.2.

Therefore, as long as the UBWPAD permit can clearly[13] ensure compliance with all water quality standards while using a compliance schedule, then Region 1 is not bound by 40 C.F.R. § 122.4(d) to deny that compliance schedule. All information indicates that UBWPAD's permit, including a compliance schedule, should not be disallowed using 40 C.F.R. § 122.4(d). In this case, it was an abuse of discretion for Region 1 to refuse to provide compliance schedules in UBWPAD's permit. As Region 1 acknowledges, the District will not be able to immediately comply with the nitrogen and phosphorus limits in the final permit. Thus, Region 1 must have a solid rationale for refusing to provide compliance schedules in the Permit. However, Region 1's explanation for denying compliance schedules is based upon improper interpretation of relevant

[13] *In re: Teck Cominco*, 11 E.A.D. at 477 (must ensure compliance with water quality standards with sufficient clarity to allow the EAB to review the decision).

federal and state laws, and as such, the Permit should be revised to incorporate compliance schedules for nitrogen and phosphorus if the limits in the Permit are allowed to stand.

H. The Sampling And Monitoring Requirements Are Unrealistic And Over Burdensome

1. Whole Effluent Toxicity (WET) Testing

The Permit requires that the District conduct WET Testing four times per year, during the second weeks of January, April, July and October, and twice per year during a period when outfall 001A is in use. The District remains concerned by the rigid schedule for testing required by the Region. While the District appreciates the need to ensure that testing dates are not chosen so as to give a false picture of the effluent, strict adherence to this schedule may prove difficult or impossible at times. Whether it is the vacation of a key employee or an extreme weather event such as a blizzard, any number of now-unforeseen events could prevent testing during the weeks prescribed by the Region. The District asks that language is added to the Permit indicating that the Region understands that scheduling accommodations may need to be made occasionally, that they are open to permitting changes as needed and indicating the process and criteria for obtaining approval of such minor variations.

2. Outfalls 001 And 001A Wet Weather Discharge Testing

Under wet weather conditions, when outfall 001A is active, grab samples are to be taken for fecal coliform during the first hour of discharge and every three hours for the duration of the discharge thereafter. The wet weather event testing required under the Permit ignores the realities of fecal coliform testing procedures and consequently is unduly burdensome on the District. Such frequent coliform testing is not even required for drinking water. *See* 40 C.F.R. §

141.21(a)(2). First of all, the type of tests which need to be performed during wet weather events must be handled by skilled lab personnel, rather than operational staff. Media for Petri dishes must be prepared and set, samples taken and appropriately handled and stored for analysis. The frequency of the testing required by the Permit means that lab personnel will be on-call on a 24 hour basis. Personnel must be able to report to the plant and begin sampling on an hour's notice, and then, because the test takes 24 hours to develop, must be available to count the colonies 24 hours after each sample was taken throughout the course of the wet weather event. While there is a Colilert test for fecal coliform which could be performed by personnel already at the plant on a 24 hour basis, that test has not yet been approved by EPA.

Massachusetts has been moving towards an *E. coli* standard, which not only is felt to be a truer picture of infection, but also allows testing during wet weather events to be done with an approved Colilert test. This test can be performed by staff who are already on location 24 hours a day, rather than have to call lab personnel in for the duration of the event plus 24 hours. The Colilert test is of comparable precision to the required protocol; therefore, the District requests that the wet weather testing protocol described in Part I.A.1. of the Permit be replaced with the Colilert test.

3. Cold Weather Denitrification

Footnote 9 of Part I.A.1. indicates, "The permittee shall operate the treatment facility to reduce the discharge of total nitrogen during the months of November – April to the maximum extent possible." The Region clarified in its Response to Comments that this footnote means that:

> The permit requires UBWPAD to use all available equipment, except carbon source addition and operate in a manner that allows for denitrification. As detailed in Response #A13 above, EPA has not established an effluent limit for the winter period. The facility is expected to operate in a manner that allows for denitrification during the November through April period while meeting all other permit requirements including the winter phosphorus limit.

RTC, R#F34, p. 71.

The District strongly objects to this open-ended requirement, which leaves the District in the uncomfortable position of never knowing whether or not it will be deemed in compliance based upon someone else's interpretation of the "maximum extent possible" or "to reduce the discharge of total nitrogen." While the District understands the Region's goals with regard to this language, footnote 9 should be replaced with language such as "The permittee shall operate the treatment facility during the months of November - April which, in the best judgment of the District, manages total nitrogen output in such a manner as to ensure compliance with effluent limits."

4. Clarification Of Ammonia Limit

The District, in its comments on the draft permit sought to clarify which of the two ammonia limits listed in Part I.A.1. would be controlling. The Region clarified that both limits are to be met at all times. The District objects to the imposition of this dual-limit. The Region has not offered any justification as to why both limits are necessary or why the mass limit alone is inadequate. The Region has failed to adequately respond to the question, and has clearly erred in deciding to impose two limits on ammonia without any discussion in the draft permit, the Fact Sheet or the Response to Comments as to what function having both mass and concentration

limits will serve. Accordingly, the Board should vacate these limits and remand to the Region for further consideration.

5. Total Residual Chlorine

The District appreciates the Region's clarification of the total residual chlorine ("TRC") effluent limitations and reporting requirements. The District understands that grab samples only are to be used for determining compliance with the effluent limits. The District further understands that the Region shares our doubts about the reliability of TRC continuous monitors and that accordingly, any data reported from a TRC continuous monitor is for informational purposes only.

6. Total Copper

The District strongly objects to the total copper limit as expressed in the final permit. The District has commented that the effluent limits for copper should reflect the recently approved Massachusetts Water Quality Standard for copper. RTC, C#F39, p.72. In response, the Region acknowledges that a) the Rhode Island Standard is currently more stringent than the Massachusetts Standard and b) that Rhode Island is presently evaluating changes to its copper standards. RTC, R#D1, p.13-14. Region 1 observes that the limit proposed in the draft permit, when coupled with the 20 % reduction in copper observed in the course of the 28 miles of river from the District's discharge to the Massachusetts-Rhode Island border, is believed adequate to meet the Rhode Island standard at the state line. The Region's analysis ignores, however, that the limit applied to the District's discharge in the Permit reflects the dilution at the point of discharge, and not at the Rhode Island border, where the dilution is larger owing to a larger

watershed drainage area. The Permit should be revised to take dilution at the Rhode Island border into account.

7. Total Cadmium

As noted by New England Plating in their comments on the draft permit, the cadmium levels imposed by the Region are below levels currently detectable by available technology. The Region, in its response, notes its obligation to protect aquatic life and that the difficulty with detecting these low levels of cadmium are specific to wastewater. "As new analytical methods are developed and approved by EPA the ability to detect lower levels will enhance our ability to ensure that aquatic life are protected." RTC, R#G12, p. 120. The District believes that it is not appropriate to impose standards now based on what technology may or may not be able to detect in the coming years. Should such technology become available, and testing show that levels protective of aquatic life are being exceeded, then it may be appropriate to seek a revision to the Permit at that point. However, to impose this limit in advance of technology which can detect an exceedance of that limit seems foolhardy at best. Accordingly, this requirement should be stricken from the Permit.

8. Total Aluminum

The District objects to any aluminum monitoring being imposed. No such monitoring was raised as a possibility in the draft permit, and thus the District had no previous opportunity to comment upon the impact of such a requirement. Aluminum salts are not used for treatment at the plant and are unlikely to be used as they would impair other processes used at the plant. Yet, the agency seeks to impose a monitoring requirement for aluminum on the basis that the effluent

levels of aluminum in the District's discharge as reported in the whole effluent toxicity tests "have ranged from 70-240 ug/L". In fact, from 1998 through the end of 2006, the values ranged from 20- 240 mg/L, and averaged 63 ug/L, and the high value of 240ug/L happened in April of 2005 when river flows were very high and would serve to significantly dilute the effluent concentration. Before imposing this requirement, the agency should establish that the instream values are sufficiently close to the criterion that this testing is warranted. As this has not yet been established, this requirement is unwarranted and should be stricken from the Permit.

9. Total Lead

The District objects to any lead monitoring being imposed. No such monitoring was raised as a possibility in the draft permit, and thus the District had no previous opportunity to comment upon the impact of such a requirement. Furthermore, data collected to date show the District to be consistently below levels of concern with regard to lead. This requirement is unwarranted and should be stricken from the Permit.

10. Total Nickel

The District objects to any nickel monitoring being imposed. No such monitoring was raised as a possibility in the draft permit, and thus the District had no previous opportunity to comment upon the impact of such a requirement. Furthermore, data collected to date show the District to be consistently below levels of concern with regard to nickel. Indeed, nickel levels have been so consistently low that previous requirements for nickel were dropped from the Permit when it was renewed in 1999. This requirement is unwarranted and should be stricken from the Permit.