

Response: Aside from this violation, the permittee has been in compliance with its WET limits. We will maintain the testing requirement at 2 per year with one species. If there are future toxicity violations, we could modify the permit to increase the WET testing requirements, but do not feel that such a change is justified at this time.

Comment #11: The final permit should include limits for settleable solids based on antibacksliding provisions of the CWA. (Similar comment made for Grafton)

Response: Since the permittee has not violated this parameter in the last two years and since this parameter is used as a measure of operational control rather than an indicator of a water quality problem, this limit will be removed from the permit.

Comment #12: Due to the highly toxic nature of chlorine on aquatic life, we recommend that the permit require the facility to plan for future implementation of a dechlorination system or alternative disinfection. (Similar comment also made for Millbury)

Response: The EPA and DEP cannot require specific pollutant removal technology but can only impose end of pipe limits that will lead permittees to the removal technology of their choice. Also see response to I.5.

Comment #13: A monitoring requirement for nitrite and nitrate should be included in the final permit. The Blackstone River is on the state's 303 (d) list for excessive nutrients, low DO and turbidity. (Similar comment made for Grafton and Millbury)

Response: See the response to G.10. Monitoring has been included..

Comment #14: We recommend a 6 mg/l minimum level of DO in the permit. The facility is discharging pollutants that contribute to DO demand and a higher DO level at the discharge may help alleviate some of the facility's negative impacts. (Similar to comments made for Grafton, Northbridge and Millbury)

Response: See response to comment G.5.

For Grafton:

Comment #15: The WET testing should be expanded to include two species. The facility has experienced testing failures in the past and closer examination of the toxic effects of the effluent would be prudent in order to protect aquatic organisms in the receiving water.

Response: The EPA and DEP feel that 4 WET tests per year with one species will provide us with enough information to determine whether this effluent exhibits toxicity and/or elevated levels of pollutants. The permittee had previously demonstrated that its effluent was not toxic to the fathead minnow that had been tested. The permit modification of January 22, 1992 made this change.

For Northbridge:

Comment #16: It is not clear why the flow limit is being increased to 2.0 MGD. There is no indication of any physical increase to the plant capacity to warrant this action. The change will do nothing to encourage the elimination of I/I.

Response: See the response to comment to G.15.

For Millbury:

Comment #17: Is the design flow 1.6 or 2.7 MGD? The reason for an increase in permitted flow is not clear. A change in permitted flow should be based on changes in the plant's physical capacity of which there has been none. The change will do nothing to encourage elimination of I/I.

Response: See response to Comment G.16.

J) Comments submitted by the Blackstone River Valley National Heritage Corridor Commission on 2/17/99:

Comment #1: Section 9 of Public Law 99-647 requires that any federal entity conducting or supporting activities directly affecting the Corridor consult with the Commission and, as practicable, coordinate their actions to assure consistency with Heritage Corridor purposes.

Response: It is EPA's and DEP's intention to notify the Commission of any actions we take which may affect the Corridor and we welcome and consider any suggestions you would have and assure that they will be reflected in our decision making process.

Comment #2: We would recommend that EPA consider proposing these (permit) limits for an interim period of two years and then re-evaluate whether they have been effective in improving water quality.

Response: Although we have chosen not to issue these permits for a shorter time period, significant non-compliance with these limits could allow us to take some form of compliance action whose goal would be to lead the permittee to compliance within the five year period. NPDES permits also have reopener clauses which allow us to modify or to revoke and reissue permits based on new information, non-compliance or other appropriate reasons. The Northbridge and UBWPAD plant are also undergoing facilities planning which will take the better part of 2 years and then additional time will be needed to follow through on plant upgrades. There will also be follow up monitoring conducted as part of the phased TMDL implementation whose results and recommendations may not be completed within 2 or 3 years.

Comment #3: The complexity of the Blackstone River, due to its industrial history and its physical alterations complicates the ability to determine the impact these limits will have on the overall quality of the water. Therefore, it is critical that state and federal environmental agencies continue to research and evaluate what else can be done to improve the water quality of the river. The federal government must continue to provide support for community based waste reduction programs and better management practices that help to reduce the amount of pollutants being generated.

Response: There are several actions being undertaken toward these goals. In addition to the reissuance of these NPDES permits, the EPA recently created a River Navigator position for the Blackstone River. This individual will work with regulatory bodies and community leaders to address efforts to restore the Blackstone River. The Massachusetts EOE Blackstone Watershed team also has an established group that meets regularly to address a range of issues.

K) Comments submitted by Donna M. Williams of the Massachusetts Audubon Society on 2/19/99:

Comment #1: Our greatest concern about these permits is the 25% SOD credit based on future improvements. How was the 25% figure arrived at? What assurances do we have that any improvements in SOD will be made and how will they be measured?

Response: This is a phased WLA that will require follow up monitoring (sediment oxygen demand measurements at a minimum) to determine if more stringent limits are needed. EPA and/or MADEP will conduct follow up SOD monitoring, after treatment improvements have been implemented. A similar follow up study on the French River in Massachusetts indicated a significant improvement in SOD. The 25% estimate was based on the French River experience.

Comment #2: In order to track (SOD) improvements, we offer two suggestions: Establish a mechanism to account for off-site numbers and tie the permit to the credit by considering the draft permit limits and the 25% SOD credit as interim limits, to be reviewed at a half-way point in the life of the permit. If real time sampling upstream shows improvements, then the limits stand. If not, then reduce the SOD credit and reduce the limits.

Response: See the preceding response. If the follow up monitoring indicates that more stringent limits are needed then the permits can be reopened and modified.

Comment #3: Nitrogen is a significant problem and may be contributing to excessive productivity and DO concerns in Narragansett Bay, yet the permits do not address nitrogen limits. The BRI concluded that 78% of the annual nitrogen load to the Bay occurs during dry weather and over 90% of the dry weather load is from point sources. It is unclear why the agency would wait a minimum of another 5 years before addressing this problem.

Response: See the responses to Comment G.10 and G.13. This data in addition to the Narragansett Bay modeling work will provide us with the information necessary with which to better determine whether other nutrient limits or requirements should be required in these permits.

L) Comments submitted by Christopher Scholl of the Norton Company on 2/17/99:

Comment #1: The draft permit discharge limit for copper of 7.2 ug/l (monthly average) for the UBWPAD is not practical or enforceable and therefore should be modified to an achievable standard. Even if all industrial discharges were eliminated, the UBWPAD discharge would still exceed this limit. Please note that industries that do not use copper would be required to treat for copper with expensive state of the art treatment systems because the levels in the potable water exceed the discharge limits.

Response: These are the water quality based limits which are calculated from the current chronic and acute water quality criteria which are based on extensive toxicity testing.

Comment #2: To the best of my knowledge, the actual impact of copper in the discharge has not been determined through toxicity testing. Before establishing a copper limit, toxicity testing should be performed to determine the impact of copper on the receiving stream.

Response: Toxicity testing in itself will not necessarily pinpoint one or two parameters which are causing the toxicity. Previous measurement of copper in the discharge show that this discharge has the potential to cause or contribute to the instream water quality violations for copper and that is why limits have been established.

ATTACHMENT A

Revised 7Q10 calculation for the Uxbridge WTF based on waste load allocation:

7Q10 @ Blackstone River near Uxbridge =

Blackstone River upstream flow -

(UBWPAD permitted flow - UBWPAD summer flow) -

(Milbury WTP permitted flow - Milbury WTP summer flow) -

(Grafton WTP permitted flow - Grafton WTP summer flow) -

(Northbridge WPCF permitted flow - Northbridge summer flow)

= 117.15 cfs - 32.35 cfs - 0.76 cfs - 0.13 cfs - 1.22 cfs

= **82.7 cfs (53.3 MGD)**

(Northbridge-MA0100722)

ATTACHMENT B

METALS LIMITS DERIVATION

Parameters: Copper, Lead and Zinc

Water Quality Criteria: Hardness dependent; See equation below

$$e^{(X [\ln(h)] + Y)}$$

(Acute, specific coefficients for cadmium, copper and zinc)

	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>
Where:	X = 0.9422	X = 1.273	X = 0.8473
	Y = - 1.464	Y = - 1.460	Y = 0.8604

h = Hardness = 50 mg/l as CaCO₃
ln = natural logarithm

Thus;

$$e^{(.9422 [\ln(50)] - 1.464)} = e^{(1.273 [\ln(50)] - 1.46)} = e^{(0.8473 [\ln(50)] + 0.8604)} =$$

9.22 ug/l 33.8 ug/l 65 ug/l

Flow Dilution: 1.18 : 1

Daily Maximum Effluent Limitations:

$$1.18 (9.22 \text{ ug/l}) = 1.18 (33.8 \text{ ug/l}) = 1.18(65.0 \text{ ug/l}) =$$

11 ug/l 40 ug/l 77 ug/l

These will be the maximum daily limits for these three metals based on the dilution available at the discharge flow.