

EXHIBIT D



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December 15, 2005

US EPA
Massachusetts Office of Ecosystem Protection (CIP)
Suite 1100
1 Congress Street
Boston, MA 02114-2023

Sirs:

On behalf of the Town of Northbridge, Camp Dresser & McKee welcomes the opportunity to comment on the draft NPDES permit recently issued by your office. Having reviewed the permit, the Town has determined that compliance with the new phosphorus limits of 0.2 mg/l in the summer and 1.0 mg/l in the winter could require the investment of as much as \$3 million, and have a significant increase in its annual operating costs to reduce the amount of phosphorus in its effluent by a tiny amount. Under current flow conditions, the daily reduction in phosphorus achieved by the new limit is about the same as the amount of phosphorus found in a 50 pound bag of commonly used lawn fertilizer.

Because the Town has recently completed a \$9 million upgrade to its wastewater facility, the new permit was carefully reviewed to see how these new and more stringent limits were justified. This review suggests that there is no new information presented to justify the more stringent limitations. More importantly, the permit appears to have abandoned the results of the Blackstone River Initiative studies, which has been consistently described as a trend-setting attempt at watershed level pollution control.

The major problem with this permit is that it ignores the work on phosphorus control done by EPA, DEP, RIDEM and others to develop the 1.0 mg/l permit limit contained in the Town's current permit. The existing 1.0 mg/l permit limit was established using a wasteload allocation study and mathematical model of the River developed under the Blackstone River Initiative, and was shown to be protective of the water quality standards in the receiving water¹. The wasteload allocation study evaluated 11 control strategies in order to select the strategy upon which the current 1.0 mg/l permit limit is based. The wasteload allocation study also establishes post implementation activities, when it says:

Post implementation monitoring should focus on evaluating SOD reduction levels at key locations and the effect of any changes made to Fisherville Dam, as well as how treatment improvements at the WWTF are being translated into water quality improvements in the River².

¹ Blackstone River Watershed Dissolved Oxygen Wasteload Allocation for Massachusetts and Rhode Island, November 1997, USEPA, MADEP and RIDEM

² IBID, page 23



US EPA
December 15, 2005
Page 2

Northbridge has undertaken improvements at its treatment plant to conform to the limits established in its current permit, and understands that other communities along the River either have also done so, or are in the process of so doing. Thus, they would have thought that this permit would continue with the 1.0 mg/l permit limit, and would have incorporated more stringent limits only after the recommendations of the wasteload allocation had been followed.

It is understood that new limits might be appropriate if new information were presented to justify the more stringent limit. However, we note that there is no new information presented; river water quality data from as far back as the early 1990's is being used, in conjunction with literature references from the mid 1980's and early 1990's about the possible effects of different levels of phosphorus on receiving streams. These data and references were both available at the time of the last permit, so it surprises us that they show up now, rather than in the last permit. We would think that the Blackstone-specific analyses conducted as part of the Blackstone River Initiative would be a far more appropriate approach to solving the River's problems. On this basis, the draft permit should be modified to reflect a 1 mg/l permit limit in the summer and a monitor only requirement in the winter, consistent with the current permit and the wasteload analyses conducted as a result of the Blackstone River Initiative.

More specific comments on the permit are as follows:

The discussion on the bottom of page 5 of the Fact Sheet concerning RIDEM's analysis of nutrients is incorrect and misleading. The Fact Sheet claims that RIDEM conducted modeling to estimate nitrogen loads from Massachusetts sources. In fact, RIDEM conducted no such modeling. RIDEM did analyze data from various sources to reach some general conclusions concerning the sources of nitrogen discharged to Rhode Island Waters. These conclusions are considered faulty by some, including dischargers in Rhode Island who are appealing RIDEM's permit modifications, and by the Massachusetts Department of Environmental Protection, amongst others.

The discussion on page 6 of the document concerning the applicability of 314 CMR 4.04(5) is incorrect. According to The Massachusetts Department of Environmental Protection that section applies only to lakes and ponds. While proceedings are underway to possibly expand the applicability of this section to all waters, such expansion is now only proposed, and hearings will not be held on this matter until 2006. See <http://www.mass.gov/dep/water/laws/wqssum.htm> , which states in part that

Nutrients/Control of Eutrophication 314 CMR 4.05(5)(c): Cultural eutrophication now is addressed in the narrative nutrient criteria. The resulting provision is expanded to ensure that all surface waters, not just lakes and ponds, are protected from excessive nutrients.



US EPA
December 15, 2005
Page 3

The last paragraph on page 6 recites information concerning the EPA's ecoregional nutrient criteria, and then claims that limits based on those criteria (as well as limits based on the State's HBPT) are not being established at this time. If the permit writer believes this to be true, then either the discussion does not belong in the document, or an expanded discussion should be included that would explain why such steps are not now being taken. Such discussion should include information concerning the Commonwealth's programs for the development of Massachusetts specific nutrient criterion presently being developed, and the schedule for completion of this work.

The first sentence of the second paragraph on Page 7 suggests that EPA has produced a total phosphorus criterion for receiving waters. This is incorrect; the Gold Book referenced in this paragraph clearly indicates that there is no such criterion. See <http://www.epa.gov/waterscience/criteria/goldbook.pdf> , specifically the discussion on Phosphate Phosphorus, which concludes with the following:

“No national criterion is presented for phosphate phosphorus for the control of eutrophication”

While the Gold Book does describe a variety of approaches that should be considered, including concentration values, Vollenweider loading rates, and a generic description of the factors influencing eutrophication induced by phosphorus, none of the approaches are criterion in the context of the EPA's Quality Criteria for Water. Indeed, the document can generally be said to endorse an approach similar to that embodied in the Blackstone River Initiative, which was the basis for the 1.0 mg/l summer limit now found in the existing permit.

Contrary to the discussion presented in the last paragraph of page 6, the Fact Sheet says, at the top of page 7 that the summertime phosphorus limitation is based upon the State's Highest and Best Practicable Treatment standard. As mentioned above, this is not now a water quality standard in Massachusetts applicable to streams, and thus cannot be used as a rationale for including the limit in the permit.

The first full paragraph on page 8 presents the basis for the 1 mg/l winter time phosphorus limit. The section indicates that the purpose of the limit is to prevent higher levels of phosphorus that would otherwise be discharged in the winter from accumulating in the sediments. However, the logic presented in the paragraph clearly supports the conclusion that no winter time limit is warranted: it claims that the vast majority of the phosphorus discharged from the treatment plant would be in the form of dissolved phosphorus, which will pass through the system given the lack of plant growth in the winter. This being the case,



US EPA
December 15, 2005
Page 4

and contrary to the assertions of the paragraph, there would be no need for winter time phosphorus control. If the Agency believes that other phosphorus fractions are a water quality problem, it should present calculations showing that these fractions do cause problems, and should compare that to the phosphorus load from all other sources in the same time frame to validate their conclusions.

The last paragraph on page 8 discusses limits and sampling requirements for coliform bacteria. As is mentioned in the Fact Sheet, the Town has had exemplary compliance with the coliform standard, with only one violation in the past two years. Thus, we think that the additional sampling for coliform called for in this permit is an unwarranted expense: had the Town shown a history of non-compliance, then it would make sense to increase the frequency of testing, but the performance of the system argues otherwise. Accordingly, it is requested that the testing level be maintained at twice per week, consistent with the existing permit.

Should you have any questions on these matters, please do not hesitate to contact us at 617-452-6000.

Very truly yours,

John J Gall, Jr.
Vice President
Camp Dresser & McKee Inc.

cc: Paul Hogan, MADEP, Worcester, MA
Richard Sasseville, Town of Northbridge
James Madigan, Town of Northbridge