

A. Response to Comments Concerning the Permit Process

Comments A1 & A2: In these comments, Mirant Kendall sets forth its comment numbering system, its expectation that EPA fully review and respond to these comments, and the abbreviations and terminology it uses in its comments.

Response to A1 & A2: EPA appreciates the effort Mirant Kendall has put into organizing its voluminous comments, and has adopted Mirant Kendall's numbering system to organize EPA's responses. EPA has also used abbreviations and terminology consistent with Mirant Kendall's where appropriate.

Comment A3: Mirant Kendall notes that its comments and pre-draft permit submissions do not bind Mirant Kendall, and disavows any earlier statements indicating that Mirant Kendall agreed with EPA on any of the requirements of the draft permit. Mirant Kendall reserves the right to argue now for different requirements than it may have been prepared to accept at an earlier time, but only as part of a different overall set of permit provisions.

Response to A3: EPA acknowledges that Mirant Kendall is not bound by statements it made before the issuance of the Draft Permit. That said, there were many instances where suggestions and recommendations by Mirant Kendall (and/or its consultants) led EPA and MassDEP to evaluate or pursue options that Mirant Kendall had recommended. While Mirant Kendall is not bound to accept a proposal now simply because it advanced that proposal before, neither is EPA required to reject that proposal simply because Mirant Kendall has exercised its right to change its mind. Where Mirant Kendall's earlier proposals continue to have merit and be useful for this permit, EPA has evaluated such proposals on their objective merits.

Comment A4: Mirant Kendall states that the permitting documents are ambiguous as to whether the draft renewal Permit No. MA 0004898 and the other permitting documents were issued by EPA alone or by EPA New England and MassDEP acting jointly or severally.

Response to A4: This Final Permit and indeed the Draft Permit were authored by EPA and MassDEP jointly. MassDEP's regulations that are referenced are satisfied by this joint issuance process. As noted in the Introduction, these responses generally refer to the permitting authority as "EPA" for the sake of convenience, but these responses are issued on behalf of MassDEP as well except where specifically noted.

Comment A5: Mirant Kendall expects that DEP will certify the final renewal permit under § 401 of the Clean Water Act, 33 U.S.C. § 1341, and under 40 C.F.R. § 124.53 and 314 C.M.R. 9.09.

Response to A5: The Final Permit has received the State's Water Quality Certification. See WQC letter signed by Glenn Haas of MassDEP.

Comment A6: Mirant Kendall observes that the Massachusetts Office of Coastal Zone

Management (CZM) must certify that the final renewal Permit No. MA 0004898 is consistent with CZM's enforceable policies under the Coastal Zone Management Act.

Response to A6: CZM has made the determination that this Draft Permit is consistent with its policies. CZM has submitted its "Consistency Letter" to EPA.

Comment A7: Mirant Kendall incorporates each of its prior communications and data submissions to EPA New England or MassDEP concerning the renewal or modification of Permit No. MA 0004898 as comments on the draft renewal permit. This incorporation by reference includes all submissions by Mirant Kendall or its predecessors concerning the permit dating from the initial renewal application in 1993 to the date of these comments, whether or not such submissions have been identified as part of the Administrative Record, and whether or not they were fully considered by EPA before issuance of the draft permit.

Response to A7: EPA acknowledges Mirant Kendall's incorporation by reference, and has now fully considered all of Mirant Kendall's submissions that were submitted by the close of the public comment period.

Comment A8: Mirant Kendall notes that it submitted several timely requests to EPA under the Freedom of Information Act during the public comment period, but that EPA did not complete all of its responses by the close of the comment period. Therefore, Mirant Kendall has been unable to complete a full set of comments on the draft permit. Accordingly, Mirant Kendall reserves the right to supplement its comments and to require the Agencies to take such supplemental comments into account prior to issuing a final permit.

Response to A8: The last of four (4) FOIA requests submitted to EPA was closed out on February 16, 2005. There were several partial responses for this FOIA, during the months of September and October of 2004. Although EPA regrets the late provision of some of this information, the scope of what was requested resulted in extensive searches of documents by several individuals and collecting and copying all of the submitted data took much longer than EPA had anticipated. EPA notes that Mirant Kendall did not, in fact, exercise its option to submit supplemental comments based on the responses to its FOIA requests.

Comment A9: Mirant Kendall urges EPA to fully consider all of its submissions.

Response to A9: EPA has reviewed all the data that Mirant Kendall submitted by the close of the public comment period on the Draft Permit and additional information which has been submitted since that time. Where appropriate, EPA has made changes in the Final Permit that reflect the review of any previously unanalyzed submissions. EPA has made every effort to correct any previous errors in the Final Permit and this response. See also Response to A7.

Comment A10: Mirant Kendall objects that EPA did not share a working draft of the permit before issuing the draft permit for public comment.

Response to A10: Neither EPA nor MassDEP are under any obligation to provide a Draft Permit to a permittee prior to the official draft permit being published for comment. In numerous meetings and correspondence with Mirant Kendall and its consultants, EPA disclosed as much information and detail as was reasonable regarding the contents of the evolving draft permit. Factual errors in the draft permit have been corrected in this Final Permit.

Comment A11: Mirant Kendall requests that EPA consider Mirant Kendall's response to EPA's September 1, 2004 Section 308(a) request as a timely comment and submission of data with respect to the draft NPDES renewal permit and, in particular, on the draft permit's denial of Mirant Kendall's diffuser proposal.

Response to A11: EPA has fully considered Mirant Kendall's response in finalizing the permit.

Comment A12: Mirant Kendall notes that EPA has, separately from but somewhat parallel to this NPDES permit renewal process, undertaken development of a Total Maximum Daily Load (TMDL) assessment to address water quality impairments associated with algal blooms in the Lower Charles River.

Mirant Kendall argues that EPA's decision not to authorize the proposed diffuser is based on EPA's work in developing the TMDL. Mirant Kendall objects on the ground that there has been no public review of that work and the administrative record for the NPDES renewal permit contains only very selective portions of the record of the TMDL. Mirant Kendall argues that EPA must supplement the Administrative Record for the NPDES permit to incorporate any records from the TMDL that were used in the NPDES permit renewal process.

Response to A12: The objective of developing the Charles River Basin Nutrient TMDL to address eutrophication is to determine what pollutant load reductions are necessary to address cultural eutrophication of the Basin and attain applicable Massachusetts Water Quality Standards. The initial scoping of the TMDL effort in early 2002 included water quality monitoring and the development of a water quality model to simulate the relationship between pollutant loadings and water quality related to algal growth in the Basin. In order to accomplish the primary objective of the TMDL, it is necessary to consider all sources of pollution that may contribute to algal growth in the Basin. The primary sources of pollution to the Basin that are contributing to eutrophication include discharges from storm water drainage systems, combined sewer overflows, pollutant loadings from the upstream watershed that enter the Basin at the Watertown Dam, and the thermal discharge from the Kendall Station facility. Based on the current assessment of the water quality model, the TMDL will focus on sources that contribute nutrients to the Basin.

During 2002, when plans for the water quality model were being developed, EPA contemplated modeling the proposed diffuser in the event that a permit was issued to the Kendall facility that authorized operation of the diffuser before completion of the TMDL. At that time, EPA intended

to issue the permit during late 2002 or early 2003, which would have preceded completion of the TMDL. As explained more fully in Attachment A to the Fact Sheet and in the responses to comments in Section E, operation of the proposed diffuser would have a reasonable potential to increase nutrient loading to the upper water column and contribute to cultural eutrophication of the lower Basin. Consequently, if the diffuser discharge were to be authorized in Kendall Station's NPDES permit, it would arguably need to be considered in the TMDL modeling work. Conversely, EPA acknowledges that, if TMDL modeling work had been used to develop Kendall Station's NPDES permit, then the administrative record for the NPDES permit would need to include information from the TMDL development process.

In fact, the TMDL development process and the Kendall Station NPDES permit renewal process have intentionally been kept separate. The principal reason is that the TMDL model development and calibration process is intended to simulate existing conditions in the Basin, not potential future conditions. In the context of this NPDES permit renewal, EPA's decision not to permit the diffuser was based on: (1) water quality data from the Charles River Basin; (2) literature information concerning the effectiveness of oxygenation techniques to address excessive algae; and (3) the lack of a quantified demonstration showing that the operation of the proposed diffuser would not increase algal biomass in the lower Basin. To be sure, some of the water quality data considered in the NPDES permit renewal process was collected as part of the monitoring program to support the ongoing development of the nutrient TMDL. For example, water quality data that EPA collected in the lower Basin during the summer of 2002 confirmed concerns that the bottom sediments that underlie the salt wedge represent a significant potential source of nutrients.

However, these data – as with all data that EPA considered in developing Kendall Station's NPDES permit process – was timely provided to Mirant Kendall in the context of the permit renewal process. More generally, EPA has given Mirant Kendall all of the information that EPA used or considered in the permit renewal process, including information in any way associated with the TMDL activities. EPA has not based its decision not to authorize the diffuser proposal on TMDL modeling results. In fact, other than preliminary set up of the diffuser conducted in the early stages of preparing the model, neither EPA nor its TMDL modeling consultants have performed simulations involving Mirant Kendall's proposed diffuser. The development of the water quality model has been focused entirely on simulating existing conditions in the Basin. Mirant Kendall, not EPA, is responsible for determining the optimal diffuser design with respect to minimizing water quality and thermal impacts in the lower Basin, and developing a credible model that can be used to evaluate potential water quality impacts associated with the operation of a diffuser.

With respect to the completeness of the administrative record, all information that EPA considered in evaluating the proposed diffuser has been included in the administrative record for the Draft Permit, with a single exception. That exception, which Mirant Kendall notes, is a letter from Mr. Charles Cooper (TRC) to Kathy Baskin (CRWA), dated February 19, 2003 (AR #563). That letter was written in response to a memorandum from Dr. Steven Chapra.

As context, the development of the Charles River Basin Nutrient TMDL is a collaborative effort by MassDEP, EPA and the Charles River Watershed Association (CRWA). Dr. Chapra, a Professor of Civil and Environmental Engineering at Tufts University, is a member of the four-person expert panel that CRWA (not EPA) convened. The primary purpose of the panel is to provide technical input during model development. In a January 13, 2003 memorandum, Dr. Chapra provided information to the Charles River Watershed Association (CRWA) that identified a number of possible negative water quality conditions that might result from the operation of the proposed diffuser. Dr. Chapra recommended that a detailed evaluation of the diffuser design and likely associated water quality impacts be performed prior to permitting the diffuser (Chapra, 2003, AR #60). Contrary to Mirant Kendall's assertions, this memorandum was not provided expressly to EPA and EPA's TMDL contractors. Rather, the memorandum was addressed to Ms. Kathy Baskin of CRWA. Ms. Baskin provided the memorandum to EPA for consideration during the permit renewal process.

EPA also received, and considered, Mr. Cooper's comments upon Dr. Chapra's memorandum before issuing the Draft Permit. Unfortunately, EPA inadvertently neglected to include Mr. Cooper's letter in the administrative record for the Draft Permit. However, this error was harmless for several reasons.

First, most of the points included in Mr. Cooper's letter are targeted towards the TMDL water quality modeling effort, not the NPDES permit renewal process. Second, all of the points raised in Mr. Cooper's letter that are pertinent to the permit renewal process, including the decision not to authorize the proposed diffuser, were in fact addressed in Attachment A of the Fact Sheet for the Draft Permit. Specifically, Mr. Cooper's letter provides remarks concerning the operation of the diffuser and (1) heat, (2) dissolved oxygen, (3) increased salinity, (4) thermal stress, (5) turbulence, (6) light limitation, and (7) chlorophyll *a* distributions in the lower Basin. These topics, including the points raised by Mr. Cooper, are all discussed in Attachment A of the Draft Permit Fact Sheet, particularly on pages 12 and 18-32. Thus, although the letter itself was not in the administrative record for the Draft Permit, the administrative record (specifically, Attachment A of the Fact Sheet) incorporates all of the points raised by the letter and EPA's considered views on Mr. Cooper's remarks. Third and finally, EPA has added Mr. Cooper's letter to the final administrative record, as item #563.

EPA reiterates that the water quality modeling being conducted for the TMDL has not been used in any way to develop the Draft Permit. Furthermore, the project scope for the TMDL water quality model does not include simulations involving Mirant Kendall's proposed diffuser.

Comment A13: Mirant Kendall argues that EPA has not provided sufficient opportunity for input from Mirant Kendall or other members of the public in developing the eutrophication TMDL and its associated model. Mirant Kendall argues that EPA should not issue the final renewal permit until after it has given Mirant Kendall and the public an opportunity to review the results of the model, and to understand how EPA has used the TMDL and its associated model in evaluating Mirant Kendall's permit renewal application.

Response to A13: As explained above, EPA has not used the TMDL and its associated model in evaluating Mirant Kendall's permit renewal application. See Response to A12.

The model has been developed and calibrated to existing conditions, not analysis of the proposed diffuser, other dischargers' future plans, or any other potential future conditions. Specifically, model development has involved the simulation of Mirant Kendall's existing thermal discharge and other sources of pollutants (i.e, storm water and CSO discharges) for the period between January 1, 1998 and December 31, 2002. The TMDL analysis does not include the proposed diffuser and, therefore, results from the TMDL analysis will not provide new information concerning the feasibility of the diffuser.

Throughout the TMDL development process, EPA has promptly responded to Mirant Kendall's inquiries concerning the status of the model and TMDL development by providing a status update of model development and the anticipated schedule for completing the model. Furthermore, EPA has given the public (including Mirant Kendall) ample opportunity to review and comment upon the model since Mirant Kendall's comments on the Draft Permit were submitted. On December 6, 2005, EPA, in coordination with the Charles River Watershed Association, conducted a public meeting and presented the methodology and results of the hydrodynamic and water quality models developed in the TMDL process. Members of the public, including Mirant Kendall's modeling contractors, orally presented comments to EPA's modeling contractor and to the independent expert review panel. At the meeting, EPA stated that written comments would be due on December 20, 2005. On December 19, 2005, Mirant Kendall's modeling contractor requested a three-day extension of that deadline, which EPA immediately granted. In fact, despite having received an extension granted to no other commenter, Mirant Kendall neither provided the comments within the three days it requested, nor requested an additional extension. Nevertheless, on December 28, 2005, EPA specifically solicited Mirant Kendall's consultant for comments, and EPA sua sponte granted an additional, retroactive 5-day extension to allow Mirant Kendall's consultant an opportunity to comment.

Finally, EPA again emphasizes that the TMDL development process and the Kendall Station NPDES permit renewal process have been, are now, and for the foreseeable future will continue to be separate processes.