LAW OFFICE OF
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By UPS and Fedex Overnight

January 12, 2010

U.S. Environmental Protection Agency
Clerk of the Board, Environmental Appeals Board
Colorado Building
1341 G Street, N.W., Suite 600
Washington, D.C. 20005

Re: Petition for Review of the City of Marlborough, NPDES Permit No. MA0100480 (Westerly WWTF), Permit Modification

Dear Madam:

Enclosed are an original and five copies of the Petition for Review of the City of Marlborough.

The deadline for filing in this matter is January 14, 2010. To minimize the risk of a late delivery to you, duplicate packages, each containing a signed original and five copies, are being sent by both UPS and Fedex. You may discard one of the duplicate packages in the event both are timely received.

Thank you for your attention to this matter.

Very truly yours,

Donald L. Anglehart

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

In the Matter of

City of Marlborough Westerly
Wastewater Treatment Facility

Docket No.

NPDES Permit No. MA0100480
Permit Modification

MARLBOROUGH WESTERLY

PETITION FOR REVIEW OF THE CITY OF MARLBOROUGH

Donald L. Anglehart
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Attorney for Petitioner
CITY OF MARLBOROUGH

I. PRELIMINARY STATEMENT

Pursuant to 40 C.F.R. § 124.19(a), the City of Marlborough ("the City" or "Marlborough"), as permittee of the Marlborough Westerly Wastewater Facility, hereby files this petition for review, and requests a hearing, regarding the Modification of NPDES Permit No. MA0100480. That Modification, dated November 16, 2009, was issued to the City by a transmittal letter, dated November 18, 2009, in which the date by which to file a petition for review was extended beyond the normal thirty day period to January 14, 2010 (see cover letter dated November 18, 2009, appended as "Attachment 1").

The permit modification was developed in response to a request by the City to allow for an increase in the facility's flow limit. Specifically, by letter dated October 18, 2007, the City requested an increase in the flow limit from 2.89 million gallons per day ("MGD") to 4.15 MGD. As a basis for its request, the City cited, among other factors, information included in its *Comprehensive Wastewater Management Plan and Environmental Impact Report - Final Report*, dated October 2007 ("CWMP"). While the City, the Region, and the Massachusetts Department of Environmental Protection agree that the Facility's average flow limit can be increased to 4.15 million gallons per day ("MGD"), the City objects to certain of the conditions attached to that increased flow. While EPA states in its Response to Comments, at Response A1.A, that it explicitly defined the scope of the modification to include only the flow limit and, concomitantly,

effluent limitations and conditions to ensure that the authorized pollutant loadings do not increase as a result of the flow increase, it has included several conditions that go well beyond the flow increase issue. It has done so, even while conceding "the undeniably valid public purpose articulated by the City of Marlborough as a basis for its flow request - to accommodate economic opportunity and job growth for its residents and for the Commonwealth." Response to Comments at 35-36.

Petitioner has standing to petition for review because it is the permittee of the Marlborough Westerly Wastewater Facility, and because it participated in the public comment period on the draft permit modification. A copy of the City's August 12, 2008 comments on the draft permit modification is appended hereto as "Attachment 2."

II. CHALLENGED PERMIT CONDITIONS

A. **Phosphorus Limits**. The draft permit modification did not include a concentration based limit for phosphorus when flow exceeds 2.89 MGD, just a mass loading limit. Including a concentration based limit is contrary to the total maximum daily load ("TMDL") approach on which the permit limits purportedly were based. The City objects to the concentration based phosphorus limits as stated in the modification because, among other reasons, they are not necessary to ensure that the discharge does not exceed the wasteload imposed by the TMDL or exceed applicable water quality standards.

B. **Concentration Based Limits**. In addition to the inclusion of concentration based limits for phosphorus when flow exceeds 2.89 MGD, reduced concentration based limits were also included for CBOD, TSS, ammonia, aluminum,

copper and nickel. As discussed below, for ammonia and metals, a concentration based limit may be more appropriate as the limits are established to prevent toxicity based on concentration in the water column; therefore, the mass based limit should be eliminated if the concentration based limit is included. For CBOD and TSS, a mass-based limit is more appropriate, since the reduction was based solely on the increase in flow.

C. **Copper Limit**. The copper limit was decreased in the final permit modification from that presented in the draft permit modification from an average monthly limit of 30 ug/L to 13 ug/L, and a maximum daily limit of 44 ug/L to 18 ug/L. The copper limits in the draft permit modification were based on site specific water quality criteria approved by EPA on March 26, 2007. However, in the final permit modification, the Region has reverted to the copper limits included in the 2005 permit. The City objects to that change from the draft permit modification. As noted in the Response to Comments, at note 25, the City never requested such a change, and it is outside the scope of the permit modification requested.

D. **Addition of Nickel and Silver Limits**. As indicated in the City's comments on the draft permit modification, the permit modification was requested by the City to allow for the necessary increase in flow. In the draft permit modification, nickel was added as a parameter to be monitored, without justification. The final permit modification has now added silver to the list of metals to be monitored, again without justification. The City objects to the addition of these requirements.

E. **Wintertime Phosphorus Limit**. The final permit modification still requires the City to meet a wintertime phosphorus limit of 1.0 mg/L within one year of the

issuance date of the permit. The City has advised the permitting agencies on numerous occasions that the wintertime phosphorus limit cannot be achieved because the existing chemical storage and feed systems are not winterized. The City requests that the wintertime phosphorus limit of 1.0 be deferred until completion of upgrades to the treatment facility.

F. **Mass Loading Limits for Metals**. Metals limits are established to prevent toxicity to aquatic life based on the concentration of the specific metal in the water column, therefore a mass limit for all metals is inappropriate and should be deleted from the permit modification.

G. **Mass Loading for Ammonia**. Similarly, ammonia limits are established to prevent toxicity to aquatic life based on the concentration of ammonia in the water column. The mass limit for ammonia is inappropriate and should be deleted from the permit.

H. **Schedule Clarification**. The final permit modification indicates the permit modifications shall become effective on February 10, 2010 and expire on November 25, 2010. The current permit, signed May 26, 2005, was appealed, and when the appeals were withdrawn, EPA issued a letter on April 17, 2006 stating, "the remaining limits and conditions of its permit are fully effective enforceable obligations of the permit thirty (30) days from the date of receipt of this notice." This resulted in an effective date of the permit (specifically, the contested limits) of May 17, 2006. With the permit expiration five years from the effective date of the permit, the City contends that the permit modification should expire on May 17, 2011, for consistency with previous correspondence. The permitting agencies claim that the permit expiration date is

November 25, 2010, based on a date "five years from the date the uncontested and severable conditions were put into effect."

With the effective date of the permit modification February 10, 2010, the compliance schedule included in Paragraph H must also shift. This schedule adjustment would give the City until August 10, 2014 to complete construction and meet total phosphorus limits.

I. **Effective Date of More Stringent Limits**. Permit limits described on pages 3 and 3A of the permit modification become effective beginning the first month that the 12 month average discharge flow exceeds 2.89 MGD through expiration. The City is approaching this flow and an inordinately wet year could result in this permit becoming effective much sooner than later. It not clear whether subsequent efforts to reduce I/I in the system and implement water conservation measures will allow the City to revert to the limits on pages 2 and 2A. Also, to ensure that the 12-month rolling average exceeding 2.89 MGD is not just an aberration, the City's position is that the 12-month rolling average should exceed 2.89 MGD for 12 consecutive months before the more stringent limits become effective.

J. **Water Conservation Measures**. The City objects to the specific water conservation measures established in Footnote 1 of the permit modification, and notes that such measures are not required to satisfy state water quality certification according to footnote 4 of the permit. EPA has not provided an explanation of the technical and legal basis for the inclusion of the very specific and detailed water conservation measures, which are expensive, burdensome, and not properly the subject of NPDES permitting requirements. This is especially so given the extensive water conservation

efforts already underway. Further, the Region concedes that "there is no standard, limitation or state policy addressing the amount of wastewater that can be authorized to be discharged into any particular Massachusetts' [sic] water body." Response to Comments at 34. The Region also concedes, "The new design flow is consistent with the recommendations of the state and was developed through the state planning process." Response to Comments at note 69.

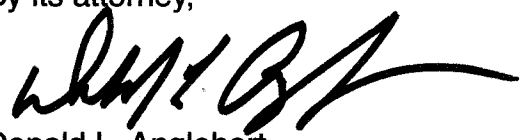
A copy of the Water Quality Certification, dated November 12, 2009, is included in "Attachment 3."

III. RELIEF REQUESTED

The City respectfully requests that its petition for review be granted, and that the City be permitted to further develop the record before the Board and to fully brief the issues.

CITY OF MARLBOROUGH

By its attorney,



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January 12, 2010

ATTACHMENT 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

November 18, 2009

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ronald LaFreniere, Commissioner
Department of Public Works
City of Marlborough
135 Neil Street
Marlborough, MA 01752

Dear Mr. LaFreniere:

Enclosed is your final National Pollutant Discharge Elimination System (NPDES) permit modification issued pursuant to the Clean Water Act, as amended, and the Massachusetts Clean Waters Act, 21 M.G.L. §§ 43-45, as amended. The permit modification will become effective on February 1, 2010.

Also enclosed is a copy of the Massachusetts State Water Quality Certification for your final permit and information relative to appeals and stays of NPDES permits. Should you desire to contest any provision of the permit, your petition should be submitted to the Environmental Appeals Board (EAB) and a similar request should also be filed with the Director of the Division of Watershed Management in accordance with the provisions of the Massachusetts Administrative Procedures Act, the Division's Rules for the Conduct of Adjudicatory Proceedings and the Timely Action Schedule and Fee Provisions. Typically, the 30-day period within which a person may request EAB review of the permit begins with the service of notice of the action unless a later date is specified in the notice. To account for potential logistical difficulties posed by EPA-Region 1's imminent move and transfer of files to new offices, receipt of legal notice for purposes of the federal appeal shall be calculated from December 15, 2009, making any appeals due January 14, 2010. (The deadline for filing the state appeal has not changed and remains 30 days from the date of permit issuance as required by applicable regulations).

We appreciate your cooperation throughout the development of this permit. Should you have any questions concerning the permit modification, feel free to contact Brian Pitt at 617-918-1875.

Sincerely,

Ken Moraff, Deputy Director
Office of Ecosystem Protection

ATTACHMENT 2

LAW OFFICE OF
Donald L. Anglehart LLC

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Cambridge, MA 02142

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August 12, 2008

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency – Region 1
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Mr. Glenn Haas, Director
Division of Watershed Management
Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108

Re: Marlborough Westerly Wastewater Treatment Works
NPDES Permit Number: MA0100480
Comments on Draft Permit Modification,
Public Notice Number: MA-028-08

Dear Messrs. Perkins and Haas:

This letter provides comments, on behalf of the City of Marlborough, on the referenced draft permit modification.

1. Part I.A.1, Flow parameter (page 2 of 6) – Average monthly flows of 2.89 MGD and 4.15 MGD are both referenced. The City interprets Footnote 1 of the permit modification as authorizing the increased flow of 4.15 MGD, based on the City's continued participation with the Massachusetts Office of Technical Assistance in the evaluation of water conservation and reuse opportunities and identification of significant water users (paragraph a. of Footnote 1), and the City's agreement to review the results of the referenced Army Corps of Engineers analysis (paragraph b. of Footnote 2). The City does not interpret paragraph b. of Footnote 2 to require the City to undertake, or to agree to undertake, activities involving sediment treatment or removal, or dam removal or modifications.

2. Part I.A.1, Total Chlorine Residual parameter (page 2 of 6) – Footnote 1 appears in the "Average Monthly" column, but no explanation of the parenthetical is given. We suggest adding this language to Footnote 1: "Upon exceeding the design flow of 2.89 MGD on an annual average basis, the modified concentration-based permit limits in parentheses shall be in effect."

3. Part I.A.1, Whole Effluent Toxicity parameter (page 2 of 6) – Footnote 1 appears in the "Chronic" row for this parameter. We suggest adding this language to Footnote 1: "Upon exceeding the design flow of 2.89 MGD on an annual average basis, the modified concentration-based permit limits in parentheses shall be in effect."

4. Part I.A.1, Phosphorus, Total parameter (November 1 – March 31) (page 3 of 6) – Footnote 15 for this parameter states, "The Permittee shall comply with the 1.0 mg/l monthly average total phosphorus limit within one year of the issuance date of the permit." That deadline for compliance has already passed, and cannot be met due to the fact that the plant's phosphorus chemical feed facilities are not winterized. The facility does not have room for the installation of chemical storage totes with proper containment inside a building. Also, the chemical feed line that delivers chemicals to the process cannot be heat traced to prevent freezing because portions of the line run underground within the frost zone. The City has previously sent a letter to EPA and DEP notifying them of its inability to meet this requirement, and incorporates that letter by reference. Under the circumstances, the monthly reporting requirement on efforts to meet this requirement is unnecessary. Both agencies already know that the City cannot store the necessary chemicals through the winter months without potentially compromising the integrity of the system.

5. Part I.A.1, Total Nickel parameter (page 3 of 6) – The City requested a permit modification to allow for necessary increased flow, and there is no justification for introducing nickel as a parameter in the modified permit. The other facilities that discharge to the Assabet River do not include nickel as a parameter.

In addition, a default value of 50 mg/L hardness should not have been used to calculate the proposed average monthly limit. EPA's Office of Water – Office of Science and Technology has stated, in a letter dated July 7, 2000, "The hardness of water containing the discharged toxic metal should be used for determining the applicable criterion." Thus, actual downstream hardness data should be used. The hardness downstream of the facility, during critical low flow periods and at a plant flow of 2.89 MGD, can be calculated using the effluent and ambient hardness values from whole effluent toxicity tests conducted in June and September since 2005 (see Table below) and the following mass balance equation:

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

Where:

Q_s = 7Q10 river flow upstream of facility = 4.3 MGD
Q_d = Discharge flow from facility = 2.89 MGD
Q_r = Combined river flow (7Q10 + plant flow)

C_s = Upstream hardness concentration
C_d = Plant discharge hardness concentration
C_r = Receiving water hardness

Wet Test Date	Effluent Hardness, mg/L	Ambient Hardness,mg/L	Calculated Downstream Hardness, mg/L
06/08/2008	223	93	145
09/09/2007	260	92	160
06/11/2007	261	65	144
09/14/2006	189	103	138
06/11/2006	155	47	90
09/12/2005	255	161	199
06/05/2005	235	81	143

$$C_r = \frac{(2.89)(155) + (4.3)(47)}{7.19} = 90 \text{ mg/L}$$

The lowest calculated downstream hardness of 90 mg/L from the above table was selected.

The water quality criteria for hardness-dependent metals is calculated using the equation:

$$\text{Chronic Criteria (dissolved)} = \exp\{m_c[\ln(\text{hardness})] + b_c\}\ (CF)$$

Where:
m_c = pollutant-specific coefficient (0.8460 for nickel)
b_c = pollutant-specific coefficient (0.0584 for nickel)
h = hardness of the receiving water = 90 mg/L as $CaCO_3$
ln = natural logarithm
CF = pollutant-specific coefficient conversion factor used to convert total recoverable to dissolved metal (0.997 for nickel)

CCC= Chronic nickel criteria (dissolved)= exp{0.8460[ln(90)]+0.0584}(0.997)= 47.6 ug/L

Maximum Monthly Effluent Limitation = (CCC)(dilution factor) = 47.6*2.5 = 119 ug/L

By the foregoing calculations, the average monthly Total Nickel limit should be 119 ug/L at 2.89 MGD, not 73 ug/L. But again, the City does not believe nickel should be added as a parameter in this permit modification.

The Fact Sheet also states that the draft permit modification includes a mass loading limit for nickel to ensure that the in-stream criteria is not exceeded and that the mass loading does not increase when the discharge flow increases. This is not an appropriate limit since metals limits are established to prevent toxicity to aquatic life based on concentrations in the water column. A more appropriate approach would be to carry a revised concentration when flows exceed 2.89 MGD as follows, and to delete the mass loading criteria:

Revised hardness calculations based on 4.15 MGD –

Wet Test Date	Effluent Hardness, mg/L	Ambient Hardness, mg/L	Calculated Downstream Hardness, mg/L
06/08/2008	223	93	157
09/09/2007	260	92	175
06/11/2007	261	65	161
09/14/2006	189	103	145
06/11/2006	155	47	100
09/12/2005	255	161	207
06/05/2005	235	81	157

$$C_r = \frac{(4.15)(155) + (4.33)(47)}{8.45} = 100$$

Revised Maximum monthly effluent limitation:

CCC=Chronic nickel criteria (dissolved)=exp{0.8460[ln(100)]+0.0584}(0.997)= 52.0 ug/L

Maximum Monthly Effluent Limitation = (CCC)(dilution) = 52.0*2.04 = 106 ug/L

By the foregoing calculation, the average monthly Total Nickel limit would be 106 ug/L at 4.15 MGD, and average monthly mass load of 1.8 lbs/day should be deleted from the permit. In any case, the City does not believe the nickel parameter should be added to the permit by this permit modification.

6. Part I.A.1, Total Copper parameter (page 3 of 6) – Using the revised water quality standards, the copper limit would increase to 40 ug/L and 54 ug/L for average monthly and maximum daily limits, respectively. Also, there should not be mass loading limits for copper at the higher flow of 4.15 MGD.

7. Part I.A.1, Total Aluminum (page 3 of 6) – The aluminum level at 2.89 MGD was based on the ambient chronic criteria for aluminum of 87 ug/L and a dilution of 2.5 (87 x 2.5 = 218 ug/L). Rather than calculating a total mass load, we believe setting a revised concentration of 177 ug/L based on the revised dilution (87x 2.04 = 177 ug/L) is more appropriate. Since the aluminum criterion is expressed in terms of recoverable metal in the water column, there is no reason to include a mass loading limitation of 5.3 pounds per day. The Fact Sheet does not provide any justification for the mass loading limit, but merely states, "To ensure...that increased loadings do not occur as a result of the flow increase a monthly average mass limit has been incorporated." The mass load should be deleted from the permit.

8. Part I.H., Compliance Schedule – The draft permit modification does not include revisions to the compliance schedule included in the current permit. However, the City has informed EPA and DEP on numerous occasions that the current schedule cannot be achieved, in significant part because the agencies have delayed responding to the City's request for a permit modification increasing permitted flow. The City proposes the following revisions to the compliance schedule, which would still result in the City achieving the seasonal phosphorus limit by April 1, 2011 – the same date that the low limit would have been required under the current compliance schedule:

	Permitted Schedule	Proposed Schedule
Complete Design	May 17, 2008	April 17, 2009
Initiate Construction	November 17, 2008	November 17, 2009
Complete Construction Of Phosphorus Removal Facilities	November 17, 2010	March 31, 2011.

9. Statement of Basis, Part II, Background - In the second paragraph, we propose deletion of the last sentence, "Future permits, based on consideration of the sediment loading and dam removal study, are hereinafter called Phase II permits." Since Phase II permit limits are not referenced anywhere else in the document, this statement should be deleted.

10. Statement of Basis, Part II, Background – In the fifth paragraph, we propose revising the following sentence, as noted. "The report projected flows of 4.15 MGD for the year 2025, with a flow of **2.9** MGD from the City of Marlborough and a flow of **1.25** MGD from the Town of Northborough." These flows were incorrectly stated previously as 2.89 and 1.26, respectively.

11. Statement of Basis, Part II, Background – In the fifth paragraph, third sentence, delete "...if the TMDL-required total phosphorus loadings of 2.4 lbs/day were maintained." The CWMP/EIR report projected that the increase in flow *and associated increase in load* would not have a measurable impact on the water quality of the Assabet River. Although the City has conceded to maintaining the same mass loading, there is no data showing that this is required.

Thank you for your attention to the foregoing comments.

Very truly yours,

Donald L. Anglehart

cc: Hon. Nancy E. Stevens
Mr. Ronald LaFreniere
Mr. Roger Janson, EPA
Mr. Doran W. Crouse
Ms. Jane E. Madden

ATTACHMENT 3

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Watershed Management, 627 Main Street 2nd Floor, Worcester, MA 01608

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

November 12, 2009

Brian Pitt, Chief
NPDES Municipal Permits Branch
USEPA – New England
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Re: Water Quality Certification
NPDES Permit MA0100480
Marlborough Westerly Waste Treatment Works
Permit Modification

Dear Mr. Pitt:

Your office has requested the Massachusetts Department of Environmental Protection to issue a water quality certification pursuant to Section 401(a) of the Federal Clean Water Act ("the Act") and 40 CFR 124.53 for the above referenced NPDES permit modification. The Department has reviewed the proposed permit modification and has determined that the conditions of the permit modification will achieve compliance with sections 208(e), 301, 302, 303, 306, and 307 of the Federal Act, and with the provisions of the Massachusetts Clean Waters Act, M.G.L. c. 21, ss. 26-53, and regulations promulgated thereunder.

The permit modification conditions are sufficient to comply with the antidegradation provisions of the Massachusetts Water Quality Standards, 314 CMR 4.04, and in addition are consistent with the Department's policy interpreting those provisions. See MassDEP's Antidegradation Implementation Procedures, dated December 29, 2006. With respect to all pollutants in the discharge (i.e., those specifically subject to effluent limitations as well as those not subject to limitation due to a lack of reasonable potential to cause or contribute to a violation of applicable water quality standards), the Department has determined that the permit modification conditions are sufficient to ensure that (a) the existing uses and the level of water quality necessary to protect the existing uses are maintained and protected in accordance with 314 CMR 4.04 (1) and (b) any new or increased discharge is insignificant because it does not have the potential to impair any existing or designated water use and does not have the potential to cause any significant lowering of water quality in accordance with 314 CMR 4.04 (2).

The Department has also determined that the water conservation measures established in Footnote 1 are a condition of state certification, and cannot be made any less stringent and still comply with applicable antidegradation requirements of the Department The Department has determined that the effluent limitations and conditions set forth in the permit modification will ensure compliance with state water quality standards.

The Department hereby certifies the referenced permit modification.

Sincerely,

Glenn Haas, Director
Division of Watershed Management
Bureau of Resource Protection

cc: Kathleen Keohane
file