



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100  
BOSTON, MA 02109-3912

By Electronic Mail and Hard Copy (Certified Mail - Return Receipt Requested)

APR 25 2017

Alan Taubert, Jr., P.E., Executive Director  
South Essex Sewerage District  
50 Fort Avenue  
P.O. Box 989  
Salem, MA 01970

Re: Minor Modification for South Essex Sewerage District's NPDES Permit No. MA0100501

Dear Mr. Taubert:

This letter addresses a minor modification to the National Pollutant Discharge Elimination System ("NPDES") Permit No. MA010050 issued to South Essex Sewerage District WWTF (the "Facility") and co-permittees on May 5, 2016 by the United States Environmental Protection Agency's ("EPA") Region 1 office ("Region 1" or "the Region"). The modification only affects the provisions in Part I.A of the permit for which the Facility is solely responsible and does not affect any provisions for which co-permittees are responsible.

More specifically, this letter institutes a minor modification to the Final NPDES Permit pursuant to both federal and state regulations found at 40 C.F.R. § 122.63 and 314 CMR 3.13(3), respectively. Part I.A.1, Footnote 10 of the currently effective, May 5, 2016 Final Permit requires the permittee to conduct acute and chronic Whole Effluent Toxicity (WET) testing on the test species, *Arbacia*. This is an error because Attachment A: Acute Toxicity Testing Protocols and Procedures do not include a method for this species.

Footnote 10 on page 4 of the Final Permit currently requires:

10. The permittee shall conduct chronic and acute toxicity tests four (4) times per year using *Arbacia* and *Menidia beryllina*, respectively. Toxicity test samples shall be collected during the months of February, April, June and August. The test results shall be submitted by the last day of the month following the completion of the test. The results are due by **March 31, May 31, July 31 and September 30**, respectively. The tests must be performed in accordance with test procedures and protocols specified in Attachments A and B of this permit.

Test Month Same week of each month (i.e. 1 <sup>st</sup> , 2 <sup>nd</sup> , etc.)	Submit Results By:	Test Species	Acute Limit LC <sub>50</sub>	Chronic
February April June August	March 31st May 31 <sup>st</sup> July 31st September 30 <sup>th</sup>	<u><i>Arbacia</i></u> <u><i>Menidia beryllina</i></u> See Attachments A & B	100%	Report NOEC

The corrected footnote should read:

10. The permittee shall conduct acute toxicity tests four (4) times per year using the Mysid Shrimp (*Americamysis bahia*) and *Menidia beryllina*. The permittee shall conduct chronic toxicity tests four (4) time per year using *Arbacia* and *Menidia beryllina*. Toxicity test samples shall be collected during the months of February, April, June and August. The test results shall be submitted by the last day of the month following the completion of the test. The results are due by **March 31, May 31, July 31 and September 30**, respectively. The tests must be performed in accordance with test procedures and protocols specified in Attachments A and B of this permit.

Test Month Same week of each month (i.e. 1 <sup>st</sup> , 2 <sup>nd</sup> , etc.)	Submit Results By:	Test Species	Acute Limit LC <sub>50</sub>	Chronic
February April June August	March 31 <sup>st</sup> May 31 <sup>st</sup> July 31 <sup>st</sup> September 30 <sup>th</sup>	<u>Mysid Shrimp</u> (Acute Only) <u>Arbacia</u> (Chronic only) <u>Menidia beryllina</u> (Acute & Chronic)  See Attachments A & B	100%	Report NOEC

The minor permit modification instituted by this letter is needed because the species requirement in Part I.A.1, Footnote 10 in the Final Permit is inconsistent with Attachment A of the Final Permit. Attachment A: Marine Acute Toxicity Testing Protocols and Procedures provides guidance to Permittees as to the acceptable methods for marine acute WET testing. For marine acute WET testing, the acceptable methods are 2007.0 Mysid Shrimp (*Americamysis bahia*) definitive 48 hour test and 2006.0 Inland Silverside (*Menidia beryllina*) definitive 48 hour test. There is not an approved marine acute method for *Arbacia*. This modification only corrects the species that should be used in the acute WET testing and does not add any additional testing requirements.

This deletion was made to correct a typographical error under 40 C.F.R. § 122.63(a). The exchange of emails between Michele Barden of EPA and Richard Delacono of South Essex Sewerage District on February 6<sup>th</sup> and 7<sup>th</sup>, 2017 confirms the Permittee's request for this minor permit modification.

Consistent with 40 C.F.R. § 122.63 and 314 CMR 3.13(3) regarding the effective date of minor permit modifications, the above-listed minor permit modification to the Modified Final NPDES Permit will be incorporated into the Modified Final Permit and become effective immediately. See also 40 C.F.R. § 122.62 (introductory paragraph). The modified page 4 is attached and replaces page 4 of the final permit issued on May 5, 2016.

If you have any questions regarding the matters discussed above, please contact Michele Barden at (617) 918-1539.

Sincerely,



Arthur V. Johnson, III, Acting Director  
Office of Ecosystem Protection

Enclosure: Final Modified Page of NPDES Permit No. MA0100501

cc: MassDEP, Division of Watershed Management  
Massachusetts Office of Coastal Zone Management  
Massachusetts Division of Marine Fisheries  
David H. Knowlton, PE, City Engineer, City of Salem  
Kimberly L. Driscoll, Mayor, City of Salem  
Jackie Belf-Becker, Chair, Board of Selectman, Town of Marblehead  
David Stoff  
Michael J. Bonfanti, Mayor, City of Peabody  
Wayne P. Marquis, Town Manager, Town of Danvers  
Paul J. Diodati, Director, Division of Marine Fisheries, Commonwealth of Massachusetts  
Karla H. Sangrey, P.E. Engineer Director/Treasurer, Upper Blackstone Water Pollution  
Abatement District  
Karis L. North, Office of Danvers Town Counsel  
Robert Langley, PE, Director, City of Peabody, Department of Public Services  
F. Carlton Seigel, PE, Chair, Water and Sewer Commission, Town of Marblehead  
Michael P. Collins, PE, Commissioner of Public Services and Engineering, City of Beverly



sample, the analytical method, and a summary of any operational modifications implemented in response to the sample results. This requirement applies to all samples taken, including screening level and process control samples. All test results utilizing an EPA approved analytical method shall be used in the calculation and reporting of the monthly average and maximum daily data submitted on the DMR (see Part II. Section D.1.d(2)).

9. Chlorination and dechlorination systems shall include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine dosing system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection or interruptions or malfunctions of the dechlorination system that may have resulted in excessive levels of chlorine in the final effluent shall be reported with the monthly DMRs. The report shall include the date and time of the interruption or malfunction, the nature of the problem, and the estimated amount of time that the reduced levels of chlorine or dechlorination chemicals occurred.
10. The permittee shall conduct acute toxicity tests four (4) times per year using the Mysid Shrimp (*Americamysis bahia*) and Menidia beryllina. The permittee shall conduct chronic toxicity tests four (4) time per year using Arbacia and Menidia beryllina. Toxicity test samples shall be collected during the months of February, April, June and August. The test results shall be submitted by the last day of the month following the completion of the test. The results are due by **March 31, May 31, July 31 and September 30**, respectively. The tests must be performed in accordance with test procedures and protocols specified in Attachments A and B of this permit.

Test Month Same week of each month (i.e. 1 <sup>st</sup> , 2 <sup>nd</sup> , etc.)	Submit Results By:	Test Species	Acute Limit LC <sub>50</sub>	Chronic
February April June August	March 31 <sup>st</sup> May 31 <sup>st</sup> July 31 <sup>st</sup> September 30 <sup>th</sup>	Mysid Shrimp (Acute Only) Arbacia (Chronic only) Menidia beryllina (Acute & Chronic) See Attachments A & B	100%	Report NOEC

11. The LC<sub>50</sub> is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.
12. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear-dose relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect.
13. The permittee must use the receiving water as diluent in WET testing unless authorized after following the procedures in Attachment C, #17.

If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012, 10 pages) **Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance, which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water.