



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

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Mark Voorhees  
EPA-New England, Region 1  
5 Post Office Square  
Mail Code OEP06-1  
Boston MA 02109

February 20, 2020

Re: MassDEP Approval for Modification for pH limit - NPDES Potable Water Treatment  
Facilities General Permit MAG640051  
Lincoln Water Treatment Plant, Lincoln, MA 01773

Dear Mr. Voorhees,

The Massachusetts Department of Environmental Protection ("MassDEP") received a request from Tata & Howard on behalf of Lincoln Water Treatment Plant on June 10, 2019, for a modification of the pH limit range from 6.5 – 8.3 to 6.0 – 8.3 under the coverage of the NPDES Potable Water Treatment Facilities General Permit ("PWTFGP"). MassDEP responded by requesting the permittee to conduct a study to monitor the pH of the discharge and the receiving water outside the influence of the discharge once per month concurrently for six months and to demonstrate that the pH of the receiving water is outside of the pH range 6.5 – 8.3. The permittee collected pH data from January to November 2019 and submitted a summary on December 12, 2019 (Attachment A). The results indicated that the pH of the receiving water ranged from 5.97 to 6.96, with an average of 6.59, and was below 6.5 at 29% of the time. The pH of the discharge ranged from 6.11 to 7.04, with an average of 6.46, and was below 6.5 at 66% of the time.

According to the Notice of Intent ("NOI") dated June 6, 2017, and additional information provided in an email (Attachment B), during the normal routine operation, raw water is used to backwash the membrane filters every 22 minutes. In addition, the NOI describes that "sodium hypochlorite (Chlorine) & citric acid (Acid) Maintenance Washes (MW) are conducted after 168 hours of run time and Chlorine & Acid clean-in-place (CIP) procedures are conducted after 720 hours of run time to maintain the membrane performance." Any generated wastewater is treated through equalization and sedimentation tanks. The settled solids from these tanks are pumped to the on-site sand drying beds. The supernatant from the tanks and the sand drying beds, if any, is discharged back to the Flints Pond by gravity. There are no chemicals added to the wastewater

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

TTY# MassRelay Service 1-800-439-2370

MassDEP Website: [www.mass.gov/dep](http://www.mass.gov/dep)

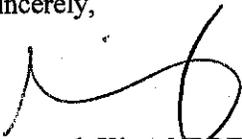
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treatment process. The pH of the wastewater generated from MW process and CIP procedure will be adjusted by sodium hydroxide prior to discharge.

MassDEP has reviewed the above information and the results of the pH data analysis conducted by the permittee (Attachment A) and has determined that it is appropriate to modify the pH range from 6.5 – 8.3 to 6.0 – 8.3.

If you have any questions or require any additional information, please contact Xiaodan Ruan at 617-654-6517 or [xiaodan.ruan@mass.gov](mailto:xiaodan.ruan@mass.gov).

Sincerely,



Susannah King, NPDES Section Chief

ecc: Gregory Woods, Lincoln WTP  
Ryan Neyland, Tata & Howard