

## **Gotham, Stacy@Waterboards**

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**From:** Tom Warnock <twarnock@paceengineering.us>  
**Sent:** Tuesday, September 04, 2012 5:19 PM  
**To:** Gotham, Stacy@Waterboards  
**Cc:** Smith, Bryan@Waterboards; Warner, Daniel@Waterboards; Ron LaRue; Laurie McCollum; Paul Reuter; Brenda Bains  
**Subject:** Dunsmuir WWTP Ammonia & Nitrate Sampling Results  
**Attachments:** Ammonia and Nitrate Water Quality Sampling.xlsx

Stacy,

The City of Dunsmuir has performed additional water quality sampling throughout the treatment process in order to better examine the current nitrification and denitrification processes. As mentioned in PACE's August 24, 2012 comment letter on the Tentative Order, the nitrification process is robust this time of year with a 20 °C process temperature converting just about all the ammonia to nitrate. The plan is to continue to measure the nitrification process as it becomes less efficient with the seasonal change in temperature. This data will be presented in the future Pollution Prevention Plan for Ammonia.

Pursuant to our discussion and subsequent discussions with Ron LaRue, Utilities Supervisor, the City believes the upper bound of the effluent pH limit could be reduced from 8.5 to 8.0, if this allows for a favorable adjustment to the effluent ammonia limit. Historic data suggest that the effluent pH is typically 7.0 or less. The new MLSS recycle process under design will return alkalinity to the process, which should increase effluent pH, but this should not be a problem. It is understood that the Tentative Order will include reopener provisions to allow consideration of the new process performance especially with regards to ammonia and nitrate. It is bitter sweet that with improved ammonia conversion comes increased nitrate concentration beyond what has historically been measured.

Consider adding this data to our comments to the Tentative Order. Please call with any questions regarding this request.

Tom

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