Georgia-Pacific

Georgia-Pacific LLC
Consumer Products

Crossett Paper Operations
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June 20, 2014

John Bailey, P.E.
Technical Assistance Manager
Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Reference: Georgia-Pacific LLC
Crossett Paper Operations
NPDES Permit # **AR0001210**
Request to Run Trials at Wastewater Treatment System

Dear Mr. Bailey:

As we discussed a few days ago on the phone, Georgia-Pacific LLC, Crossett Paper Operations (GP) would like to initiate certain chemical addition trials at several points in the wastewater treatment process to improve effluent quality and reduce the potential for sulfide emissions and other odorous compounds from the treatment system. The points of these trials would be as follows:

(1) Addition of an iron salt in the aeration basin – The testing done to reduce intermittent sublethal toxicity effects seen in *C. dubia* has shown that the addition of iron salts (e.g., ferric chloride, ferric sulfate, ferrous sulfate, etc.) can reduce the observed effects. The trial would consist of adding a small concentration dose of an iron salt at the end of the aerated zone. The maximum trial dose would be 30 ppm, though we would expect to operate in a range typically much lower than that. Iron salts are a typical precipitant used in water and wastewater treatment widely. The expected effect would be that iron would react with different compounds and precipitate along with the biological sludge in the quiescent zone of the aeration basin. An added benefit would be that excess phosphorus at the end of the aeration basin would also be removed. Iron will be monitored weekly at Outfall 001 to ensure that the dosage is optimized.

(2) Addition of an oxidation technology to reduce sulfide emissions – For reporting year 2012, EPA first required the reporting of hydrogen sulfide (H2S) under the Toxics Release Inventory (TRI) program. As a result of estimating emissions for this reporting, GP began investigating measures to take to reduce hydrogen sulfide emissions. To reduce hydrogen sulfide emissions potentially from the wastewater treatment system, GP began working with a consultant, Orin Technologies that specializes in the use of chemical

oxidation technologies. In this trial, Orin would apply a combination of chemicals, but most predominantly hydrogen peroxide and an organic iron catalyst. We could also apply this technology at several places, beginning with locations up in the mill (such as the Chemical plant effluent and/or individual mill sewers) and at different locations in the wastewater treatment facility to measure the effectiveness, including before and/or after the primary clarifier, before and/or after the ash basins, and after the surge basin. Hydrogen peroxide of course degrades eventually to water and oxygen, so there is no negative impact of these constituents on water quality. The small amount of iron catalyst would be negligible, plus we would be monitoring for iron at Outfall 001 as described in the first trial. There is also the potential use of a catalyzed nitrate compound that would be used after the surge pond as an oxygen source. Any addition of added nitrogen in this manner would also include a corresponding reduction in nutrient feed as nitrogen. We already monitor for nitrate at Outfall 001 as part of the current NPDES permit.

Given that large treatment systems change slowly and mill operations may vary with different products, we respectfully request a trial period of 6 months. If the trial were deemed to be successful, we would discuss the steps to take with you following that including requesting a modification of our NPDES permit. Our current permit expires on October 31, 2015.

We would notify the ADEQ at the time the equipment was installed and we were ready to begin each of these trials. These start times may be somewhat different by a few days or weeks due to the mobilization of rental equipment and chemicals.

We will contact you once you have had a chance to review this request to discuss these trials to see if you have any questions or need any additional information. If you have any questions or need additional information prior to this, please feel free to contact me at (870) 567-8144 or by email at james.cutbirth@gapac.com.

Sincerely,

James W. Cutbirth

James W. Cutbirth
Technical Services Manager

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Extremely Urgent

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