



A R K A N S A S  
Department of Environmental Quality

JUL 31 2014

James W. Cutbirth  
Technical Services Operation  
Georgia-Pacific LLC – Crossett Paper Operations  
P.O. Box 3333  
Crossett, AR 71635

RE: NPDES Permit No. AR0001210, AFIN 02-00013  
Request to Run Trials at Wastewater Treatment System

Dear Mr. Cutbirth:

The Department has reviewed your correspondence dated June 20, 2014, requesting permission to conduct chemical addition trials at several points in the treatment system to improve effluent quality as well as to reduce odors. Based on your correspondence, it is the Department's understanding that Georgia-Pacific LLC (GP) is requesting a trial period of six months due to the size of the treatment system and mill operations varying with different products. The trials will be conducted as follows:

1. Addition of iron salts in the aeration basin: The maximum trial dosage will be 30 ppm although it is expected that the typical range will be much lower. The expected effect is that the iron salts will react with different compounds and precipitate along with the biological sludge in the quiescent zone of the aeration basin. Excess phosphorous at the end of the aeration basin will be removed with this process.
2. Addition of an oxidation technology to reduce sulfide emissions: EPA now requires the reporting of Hydrogen Sulfide (H<sub>2</sub>S) under the Toxics Release Inventory (TRI) program. As a result of estimating emissions, the facility is investigating measures to reduce H<sub>2</sub>S. GP is working with Orin Technologies (Orin) on this issue. Orin will apply a combination of chemicals, most predominantly hydrogen peroxide and an organic iron catalyst. This technology may be applied at several places in the complex and in the wastewater treatment facility. Hydrogen peroxide will degrade to water and oxygen so no additional testing is necessary. Although the amount of iron catalyst is expected to be negligible, the facility will be testing the effluent for iron due to the other trial. There is also the potential of a catalyzed nitrate compound that would be used after the surge pond as an oxygen source. Any addition of nitrogen in this manner would result in the use of less nitrogen at the aeration basin. The facility already monitors for nitrates so no additional monitoring would be necessary.

Based on the understanding outlined in this letter, the Water Division has no objection to your request to conduct the two trials as long as the following conditions are met:

1. The effluent from Outfall 001 must be sampled for Dissolved Iron and Total Iron a minimum of once per week beginning when the first trial starts and ending when the second trial is over. These results must be submitted to Loretta Reiber, P.E., of the Individual Discharge Permits Section with the results of the trials;
2. Notification of the start of each trial must be submitted to the Department two business days prior to starting;
3. The results of the trials, i.e., did the use of iron salts and chemicals to reduce Hydrogen sulfide produce the expected results or not, must be submitted to the Department; and
4. Any solids produced during the iron salts trial must be disposed in the landfill on site in accordance with the Solid Waste Permit. Although solids from the aeration basin have been allowed to be used in the closure of the sludge pond, the Department has not reviewed the use of solids affected by iron salts and nutrients as fill material. Therefore, these solids cannot be used in the closure of the sludge pond without all of the necessary information being submitted to and approved by the Department. Any method of disposal other than what is currently permitted by the Solid Waste Division must be approved by the Department prior to taking place.

Based on a telephone conversation between Rachel Johnson of your staff and Loretta Reiber, P.E. of the Individual Discharge Permits Section, it is the Department's understanding that each trial is independent of the other trial even though both trials may be on-going at the same time. Therefore, each trial must end no later than 180 days after it started. If you have any questions, please contact Ms. Reiber at [reiber@adeq.state.ar.us](mailto:reiber@adeq.state.ar.us) or by phone at (501) 682-0612.

Sincerely,



Mo Shafii  
Assistant Chief, Water Division

MS:lr

cc: Amy Schluterman, Enforcement Analyst  
Jason Bolenbaugh, Field Services Branch Manager  
Richard Healey, Enforcement Coordinator