

Sheplak, Scott

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From: Rogers, Tom
Sent: Thursday, February 26, 2009 9:26 AM
To: Sheplak, Scott
Subject: Mosaic Riverview
Attachments: Mosaic Riverview BART Exemption Modeling.doc

Scott,
Let me know if the attached summary is sufficient.

Tom

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2/26/2009

Mosaic Riverview BART Exemption Modeling

Mosaic Riverview specifically made changes to reduce sulfur dioxide (SO₂) and sulfuric acid mist, as contained in this permit, to meet exemption criteria in the Best Available Retrofit Technology (BART) rule (62-296.340, F.A.C.). Taking into consideration these emission reductions, Mosaic completed air quality modeling consistent with an approved modeling protocol submitted to the department. The EPA-approved CALPUFF dispersion model was used to determine visibility impacts on all federal Class I areas within 300 kilometers of the facility using three years of meteorological data derived from the MM5 meteorological model. This modeling was thoroughly reviewed by the department and determined to be appropriate for the purpose of meeting the exemption criteria of the BART rule.

Visibility impacts were completed for three federal Class I areas: Chassahowitzka National Wilderness Area, located 87 kilometers from the facility; Everglades National Park (239 kilometers); and, St. Marks National Wilderness Area (291 kilometers). The controlling area, that is the area with the greatest visibility impact from Mosaic Riverview, is Chassahowitzka. BART exemption modeling considered only the impacts from the BART-eligible sources within the facility. In this case, the Nos. 7, 8, and 9 sulfuric acid plants, molten sulfur storage tanks 1, 2, and 3, and molten sulfur storage and handling pits 7, 8, and 9. The results of the modeling for the controlling Chassahowitzka area is shown below as taken from the complete modeling report submitted by Mosaic.

**TABLE 3-3
SUMMARY OF BART EXEMPTION MODELING RESULTS - NEW IMPROVE ALGORITHM
WITH PROPOSED 24-HOUR AVERAGE SO₂ AND H₂SO₄ EMISSION LIMITS FOR THE NOS. 7, 8, AND 9 SAPs
MOSAIC FERTILIZER, LLC, RIVERVIEW FACILITY**

Class I Area	Distance from Source to Nearest Class I Area Boundary (km)	Number of Days and Receptors with Visibility Impacts >0.5 dv									22 nd Highest Impact (dv) 3-Vr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8th Highest Impact (dv)	No. of Days	No. of Receptors	8th Highest Impact (dv)	No. of Days	No. of Receptors	8th Highest Impact (dv)	
Chassahowitzka NWA	87	8	NA	0.405	11	NA	0.481	16	NA	0.494	0.346

The maximum visibility impact at any of the three federal Class I areas is 0.494 deciviews (dv). This value is less than the criterion for exemption from the BART rule of 0.5 dv. Based on the emission changes made in this permit and the modeling performed by the applicant, the department concludes that the BART-eligible source at Mosaic Riverview is exempt from the BART rule requirements.