

**Sheplak, Scott**~~-file-~~

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**From:** Sheplak, Scott  
**Sent:** Wednesday, September 17, 2008 10:20 AM  
**To:** 'Liu, Pwu-Sheng'  
**Cc:** Lee, Diana; Woodard, Sterlin  
**Subject:** RE: Memo-draft comment 8-29-08

Unfortunately, I received the e-mail with attachment this a.m. at 8:21 a.m.

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**From:** Liu, Pwu-Sheng [mailto:LiuP@epchc.org]  
**Sent:** Wednesday, September 17, 2008 10:18 AM  
**To:** Sheplak, Scott  
**Cc:** Lee, Diana; Woodard, Sterlin  
**Subject:** FW: Memo-draft comment 8-29-08

Scott,

I retrieved this email from my sent mail; it has the date of 8/29/08.

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**From:** Liu, Pwu-Sheng  
**Sent:** Friday, August 29, 2008 2:19 PM  
**To:** 'Sheplak, Scott'  
**Cc:** Lee, Diana; Woodard, Sterlin  
**Subject:** Memo-draft comment 8-29-08

Scott,

This is my comments for the Mosaic BART project. These comments were not reviewed by Sterlin or Diana. Since I will be on vacation starting next Monday, therefore, I want to send it to you before the deadline. Let me know if you have any questions. However, I won't be back till 9/16/08.

Thanks.

9/17/2008

**Sheplak, Scott**

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**From:** Sheplak, Scott  
**Sent:** Wednesday, September 17, 2008 10:04 AM  
**To:** 'Liu, Pwu-Sheng'.  
**Cc:** Lee, Diana; Woodard, Sterlin  
**Subject:** RE: Memo-draft comment 8-29-08

Day 30 was Sept. 10; I waited to hear and received nothing so I issued the RAI, copying Diana Lee. However, I will keep your comments. Thanks for taking the time to review this one.

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**From:** Liu, Pwu-Sheng [mailto:LiuP@epchc.org]  
**Sent:** Wednesday, September 17, 2008 8:21 AM  
**To:** Sheplak, Scott  
**Cc:** Lee, Diana; Woodard, Sterlin  
**Subject:** Memo-draft comment 8-29-08

Scott,

This is my comments for the Mosaic BART project. These comments were not reviewed by Sterlin or Diana. Since I will be on vacation starting next Monday, therefore, I want to send it to you before the deadline. Let me know if you have any questions. However, I won't be back till 9/16/08.

Thanks.

**MEMORANDUM**

**DATE:**      ~~September 17, 2008~~ **a.t.o.d.t.e**  
**TO:**             Scott Sheplak, P.E.  
**FROM:**        Pwu-Sheng Liu, Ph.D., P.E.     **THRU:**    Sterlin Woodard, P.E.  
**SUBJECT:**     Mosaic Fertilizer: 0570008  
                       BART Exemption Analysis

On August 11, 2008, the EPC received a copy of the BART Exemption Analysis for Mosaic Fertilizer, LLC, Riverview Facility. In this document, Mosaic presented the source attribution analysis and included an Air Construction Permit application for lower emission limits for the purpose of obtaining a BART exemption. After reviewing the document, we have the following comments:

- 1) A BART Determination Report for the Mosaic Riverview Facility dated January 31, 2007, has been submitted by Mosaic to FDEP. A draft permit 0570008-005-AC was issued and reviewed by EPA. According to the EPA's review dated January 18, 2008, the BART determination is incomplete due to the fact that several control options were not considered in their top-down BART Technical Analysis. In addition, the EPA staff stated that sulfur dioxide (SO<sub>2</sub>) emission rates as low as 1.5 lbs/ton have been demonstrated to be cost effective at retrofits of similarly designed dual absorption sulfur burning sulfuric acid plants. Chapter 1-1.07, Paragraph 2, Rules of the EPC states that if the latest available technology as may be applied to air, water, and noise pollution sources results in or is expected to result in lower or improved emissions, then the latest available technology as determined by the Commission (EPC) and consistent with the State Department of Pollution Control shall apply. Please explain why Mosaic is not using the latest available technology to lower sulfur dioxide emissions from the sulfuric acid plants to meet the BART requirements.
  
- 2) Pursuant to Rule 62-296.340(5)(d), F.A.C., it states that if the owner or operator of a BART-eligible source requests exemption from the requirement for BART determination for all pollutants by submitting its source attribution analysis or other supporting

documentation to the Department not later than January 31, 2007, and the Department ultimately grants such exemption, the requirement for submission of an air construction permit application pursuant to subparagraph 62-296.340(3)(b)1., F.A.C., shall not apply. It also states that if the Department denies such exemption, the owner or operator shall submit an application for air construction permit containing a BART evaluation and proposed BART determination(s) to the Department not later than January 31, 2007, or thirty (30) days after receipt of the Department's denial, whichever is later. Mosaic submitted the source attribution analysis for the BART exemption on August 11, 2008. The EPC Staff believes that the application for BART exemption has expired. Therefore, Mosaic should follow the requirements of BART determination as stipulated by the EPA review dated January 18, 2008 and 40 CFR Part 51, Appendix Y to propose emission reductions.

- 3) In Appendix C, Catalyst Supplier Study of the report, Mr. Patrick Polk of Haldor Topose Inc., stated that he used the same catalyst activities and temperature approach to equilibrium limitations for the calculations as he did for the larger cesium catalyst study. Please explain how the standard vanadium catalyst can have the same performance as that of the cerium catalyst. In addition, he stated that the performance calculations are based on operating at 11.5 % gas strength and in order to operate at higher gas strength, the catalyst loadings will need to be increased. Please provide information with the current operating ranges for the gas strength at the three SAPs and justify the increase of catalyst loading for the future gas strength to achieve the 2.8 to 3.0 lbs/ton range with the proposed converters. In addition, please provide detail information for SO<sub>2</sub> conversion % for each catalyst bed and explain the 99.78 % conversion with optimizing the inlet temperature can be achieved during the actual operation.