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July 14, 2014

ELECTRONIC TRANSMITTAL

Mr. Samuel Stone
Land and Environmental Services Manager
Peace River/Manasota Regional Water Supply Authority
8998 SW County Road 769
Arcadia, Florida 34269

**RE: Horse Creek Stewardship Program
CSA Monitoring Requirements
Modifications to Monitoring Methodology**

Dear Mr. Stone:

In an electronic submittal, "Proposed Modifications to Monitoring Methodology", dated October 31, 2013, Mr. Santino Provenzano outlined the previous methodologies utilized to monitor the FM-1 clay settling area, as a part of the 2003 settlement agreement between the Mosaic Company (Mosaic) and the Peace River Manasota Regional Water Supply Authority (PRMRWSA). That submittal described historic issues encountered with the telemetric fluid level monitoring equipment, summarized the findings of Florida Engineering and Design's ("FED") letter report dated July 17, 2013, "Breach Discharge Analysis, Clay Settling Area FM-2", and recommended discontinuing the existing telemetry monitoring in favor of reliance on already existing inspection and notification protocols found in the NPDES permits and FDEP rule criteria.

In response to this submittal, representatives from PRMRWSA indicated that they did not agree with relying solely on inspections. As an alternative, Mosaic then suggested using turbidity monitoring at the existing Horse Creek station (HCSW-1) located at Horse Creek and State Road 64 for the purposes of providing continuous monitoring of a potential dam breach, since this location is downstream of all currently operational clay settling areas in the Horse Creek basin and real time monitoring equipment was already in place at that location. In subsequent discussions, the Authority indicated that this approach might prove acceptable, but requested that Mosaic develop a specific proposal to utilize turbidity monitoring in lieu of the continuous level monitoring before granting approval.

Mosaic presented a monitoring proposal utilizing rolling averages of continuously measured turbidity values at this location, with a set point of 150 NTU. This set point was based on a review of historic data at the station and was selected to be sensitive enough to detect any

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potential turbidity excursions that might result from an upstream dam breach, but not so sensitive as to result in a number of false positives. Based on that set point, telemetric equipment would send text message and email alerts in two instances; the first, when the 3 hour rolling average exceeds the set point, and a second when the 6 hour rolling average exceeds the set point, with the 3 hour alert being sent to Mosaic representatives only, and the 6 hour alert sent to both Mosaic and PRMRWSA representatives. Three hour alerts would trigger Mosaic investigation of the source of the high turbidity in the creek, and necessary follow-up with PRMRWSA staff in the event that the cause of the alarm was associated with a dam breach or other significant upset condition at Mosaic's operations. A final set of alerts would be sent once the turbidity drops below the 150 NTU set point, on the 3 and 6 hour rolling average basis. The Authority approved testing of this approach through verbal communications between Mr. Santino Provenzano and Mr. Sam Stone in February of 2014.

Following the Authority's verbal approval to proceed with testing, the telemetric system at the site was upgraded from the existing EcoNet system to a newer, more robust, Storm3 system. The new Storm3 system, which provides the capability to calculate and report rolling averages, is now coupled with a YSI multiparameter sonde, mounted in-stream within a 4-inch PVC, surrounded by a 6-inch PVC stilling well, and continuously collects in situ measurements of temperature, conductivity, pH, optical dissolved oxygen and turbidity. Data generated at the site is transmitted real-time to the designated website.

On March 20, 2014, Mosaic completed an internal test of the system alerts in which the sonde probe was immersed in an 800 NTU turbidity solution until both the 3 and 6 hour alerts were received. Following the initial test, all contact information was acquired from PRMRWSA and programmed into the Storm3 system for the purpose of receiving the 6 hour alerts. PRMRWSA staff were also given the address to the Storm website which provides a graphic, real-time display of the station data.

On April 4, 2014, Mosaic completed a second test of the system alerts with both PRMRWSA and Mosaic contacts programmed in the system. During this test a 2000 NTU turbidity solution was utilized and it was discovered that the system had been programmed to disregard all readings >2000 NTU within the rolling average calculation. The solution was diluted in order to complete the test and all alerts were received by both Mosaic and PRMRWSA. Following the test, the system was reprogrammed to include all measured values, regardless of how high, in the rolling average calculation.

On April 17, 2014 a third test of the system was completed in order to confirm that all alerts were being sent and updated programming was working as intended. Again a 2000 NTU turbidity solution was utilized; all readings were accounted for and all alerts were received by Mosaic and PRMRWSA personnel. Following this final test, Authority staff authorized the removal of the old liquid level monitoring equipment located in the field on Mosaic property and the equipment located at the Authority's facility.

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At this time the new turbidity monitoring program is fully operational; Mosaic will continue to operate the system in accordance with the outlined agreement. Also, Mosaic has purchased a second sonde unit, a backup storm unit, and hired YSI Inc. to complete monthly equipment inspections, calibrations, and quarterly turbidity testing to monitor system reliability. If you have any questions or concerns regarding this information, please do not hesitate to contact me directly.

Sincerely,



Ryan Tickle
Environmental Supervisor, Minerals



Subrata Bandy
Sr. Manager, Environmental - Minerals

cc: Mike Coates, PRMRWSA
Santino Provenzano, Mosaic
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