

MEMORANDUM TO FILE

TO: KM File

FROM: Brian Rakvica

DATE: June 21, 2004

CC: Todd Croft, Jennifer Carr, Jeff Johnson
Jon Palm, Tamara Pelham, Alan Tinney, Leo Drozdoff

RE: KM Conference Call

1. Attendance:
 - a. NDEP: Todd Croft, Brian Rakvica, Tamara Pelham
 - b. KM: Keith Bailey, Susan Crowley
2. First meeting was held at 10:30 AM.
3. Discussed flow measurement.
 - a. Currently the flow is measured at the discharge by a flow meter.
 - b. It was noted that flow could be calculated in other ways.
 - c. All of the other means of determining flow appear to indicate that the flow meter is inaccurate (low).
 - d. The correct flow appears to be approximately 1,000 – 1,030 gpm.
 - e. NDEP noted that for permit compliance it is desired that KM not back calculate any of the historic flows. It was suggested that an explanation of the problem be provided and the flow meter be fixed or replaced. It was suggested that it might be helpful to have two flow meters so that while one is out for calibration the other could be put in service. It was suggested that the field log books note which meter is in service in case there is any difference in calibration.
 - f. For April:
 - i. Flow meter: 858 gpm
 - ii. Addition of wells, pond and GW treatment system: 1,022 gpm
 - iii. Addition of FBR and Wash IX: 1,029 gpm
 - g. It was noted that the Wash IX has been shut down since June 11, 2004 with all current flows being diverted to the FBRs.
 - h. Tamara reminded KM that the schedule of compliance requires them to notify NDEP once 1,000 gpm has been achieved.
4. Next meeting was held at 1:15 PM.
 - a. Discussed NDEP observations from 6/20/04 at 5:30 PM.
 - b. Discharge appears to be of better quality (dilute tea colored as opposed to milky white due to the use of ferric chloride as a coagulant in the DAF system).
 - c. Seep area rocks remain stained.
 - d. Water near culvert has a thin layer of scum remaining.

- e. Discharge to Wash still has an opacity to it.
- 5. Discussed system operations.
 - a. The hydraulic limitations of the discharge line appear to be remedied through the use of a booster pump.
 - b. Other discussions per today's earlier call.
 - c. KM noted that they plan on using the existing flow meter and then once they have a recalibrated or new meter and they can confirm 1,000 gpm flow they will notify NDEP per the permit requirements.
- 6. Discussed solids management.
 - a. KM notified NDEP on Friday (Val King) due to some black materials (particulates) within the discharge.
 - b. It was noted that KM is skimming 1-2 times per day at the Seep Area.
 - c. KM has changed injection points for the coagulant and has asked Veolia to look in to alternatives to the Acti-Flow filtration system.
 - d. KM has taken some turbidity samples and analyzed them at their process lab.
 - i. Out of DAF = 30-40 ntu
 - ii. LV Wash = 10-27 ntu depending on where the sample is taken.
 - iii. NDEP clarified that it was desired to take a sample in the Seep stream immediately prior to the confluence with the Wash and upstream in the Wash.
 - iv. It was noted that during the April 27th incident the turbidity was likely greater than 100 ntu.
 - e. It was noted that KM remains below their iron discharge limitation (10 mg/L).
- 7. Discussed possible solutions to solids issues.
 - a. KM noted that both DAFs are currently running to try and maximize residence time. KM continues to try and optimize DAF operation.
 - b. NDEP asked if it would be possible to pipe in a container or tank to add residence time prior to discharge to the Wash in order to allow some of the solids to settle?
 - c. NDEP asked if it would be possible to run the discharge through a sand filter?
 - d. NDEP asked if it would be possible to have the discharge run to a holding pond to allow some of the solids to settle out?
 - e. NDEP asked if KM had investigated using a pre-coat or diatomaceous earth filter? KM noted that they had and they may be looking in to this again. This may work for the larger particles.
 - f. KM noted that the fines would not be addressed by a filter unless it was a 0.45 micron or smaller filter.
 - g. KM will look in to the NDEP's suggestions.
 - h. NDEP suggested a permanent solution for the reduction in solids is needed and the time to explore options is running out. A permanent solution is desired by the NDEP within the next few weeks.
- 8. Next meeting: telephone conference on 6/29/04 at 1:30 PM – call in number to be provided.