

MEMORANDUM TO FILE

- TO:** KMCC File
- FROM:** Brian A. Rakvica
- DATE:** October 23, 2003
- CC:** Jeff Johnson, Jennifer Carr, Todd Croft
- RE:** Discussion with Todd Croft regarding hexavalent chromium issue.
1. Todd had spoken with Keith Bailey regarding the issue of hexavalent chromium detected in their perchlorate remediation system discharge. KMCC has evaluated this and found that it is coming from the Athens Road well field.
 2. Keith indicated that KMCC had positive results from the jar tests that they had performed using ferric sulfate to reduce hexavalent chromium to trivalent chromium.
 - a. This process does result in an increased level of TDS (sulfate) and solids. Solids will be primarily ferric hydroxide and chromium hydroxide.
 - b. It is uncertain if the solids will drop out in the lift station or the GAC columns. This process will be brought on line for a 30 day test to allow KMCC to determine this. This may require an increased frequency of backwashing the GAC columns to the GW-11 pond.
 - c. The amount of hexavalent chromium that needs to be removed is very small (0.02 ppm minimum) and the amount of additional TDS and solids that will be generated is expected to be relatively insignificant (approximately 5 pounds/day).
 - d. The ferric sulfate (approximately 1 ppm) will be added in the pipeline that transfers the water from Athens Road well field to lift station 3 and then on to the plant site. Water at the lift station has a 40 minute residence time and the reaction is only expected to require a 10 minute residence time.
 - e. If this process proves to be successful, KMCC may evaluate replacement of the existing chromium mitigation system with this new process. This new process requires significantly less maintenance.
 - f. An update is expected from Keith in the next week or so.
 3. Keith had also discussed this issue with Jon Palm and Jon had given him oral approval to proceed with this test. The 30 day test should start on 10/27/03 or 10/28/03. A verbal report is expected by the end of October and a written report will be generated at the end of the test.

