>>> "Kay, Jim" <jkay@craworld.com> 9/22/2006 9:47:04 AM >>>

Paul
Attached is the meeting summary from the Site Inspection at the Hooker/Ruco Site on September 14.
As noted at the meeting, the only component that could not be demonstrated during the meeting was the blender which was temporarily without power since the electricians were working on the panel. The blender was tested as part of the start up / shake down cycle by CRA and operates as designed.

Please advise whether the September 14 Inspection fulfils the role of both the PreFinal and the Final Inspection.

We are also notifying you that the full time operation of the OU3 biosparge treatment system will tentatively begin the week of October 9. The last phase of the pre-injection monitoring will be performed immediately prior to the start up as specified in the Design Report and O&M Plan.

Should you have any questions or comments, please do not hesitate to contact Rick Passmore or myself.

Jim

MEETING SUMMARY
SEPTEMBER 14, 2006 PRE-FINAL/FINAL INSPECTION
HOOKER/RUCO SITE
OU-3 BIOSPARGE SYSTEM
HICKSVILLE, NEW YORK

Location: Biosparge System Control Building
South Oyster Bay Road and Hazel Street

Time: 10:00 a.m.

Participants: John Cofman (Northrop), Paul Olivo (EPA), Steve Scharf (DEC), Mike Popper (CDM), Ali Rahmani (CDM), John Joy (CRA), Nicole Hartley (CRA)

The following is a brief summary of the topics discussed during the inspection of the Biosparge System for OU-3 at the Hooker / Ruco Site.

Topics:

1. **Chambers and Monitoring Wells**

- The meeting commenced with an inspection of chamber IW-16. Piping, valving, and electrical components were shown for both air and water injection wells. The locations of adjacent wells IW-17, IW-18, and IW-19, which are across the street in the Northrop parking lot, were also pointed out.
- The monitoring wells located directly south of IW-16 and IW-17 were examined. It was discussed that these wells were installed as part of the performance monitoring program and will be used to sample for Vinyl Chloride.
- The vadose zone wells located directly south of IW-16 and IW-17 were also examined. It was discussed that each vadose zone well has two sampling points and will be sampled as part of the performance monitoring program to assess below grade air quality.

2. **Treatment Building**

- The treatment building inspection commenced with an overview of the compressor and associated valving and instrumentation.
- It was noted that the electricians were working on FV-300 and that the bypass was opened in order to run the compressor.
- It was also noted that in the future the condensate from the air compressor would be directed to the drain in the building.
- The supplemental blending unit and associated piping was also examined. It was noted that the need for the injection of supplements will be determined at a later date once the biosparging begins and data are available on the degradation of Vinyl Chloride. The mixing equipment has been installed but will not be used until it is

determined that the supplements are needed. As a result, the initial injections of water will not include sugar byproducts.

- It was discussed that the supplemental blending unit was tested using city water. It is planned to use Northrop's oxygenated water when it becomes available. Northrop is currently pursuing permission from the local water board to allow the use of up to 20 gpm of Northrop water for reinjection and liquid supplement injection. This permit is not yet available.
- An overview of the HMI/SCADA system was shown. It was noted that Miller Springs has the capability to operate/monitor the system remotely, which will be the standard operating mode.
- It was discussed that all the analog input values and valve positions for the various injection points were being trended on the HMI. As a result, these data will be available for future reference.
- Following the presentation on the HMI/SCADA system's capabilities, a water injection sequence was initiated. It was shown that the water injection schedule works as designed.
- An air injection schedule was also initiated in which the compressor was started and successfully ran through a schedule. It was noted during the sequence that the compressor was very quiet. This was a design consideration for the system.
- Following the demonstration of the typical air injection event, the process sequence (process logic) that is to be followed for full time operation was discussed. As part of the demonstration, the alarm setpoint screen was displayed and it was shown that the operator could change alarm setpoints from the SCADA screen.
- An example of a sequence shutdown was also demonstrated. All the downstream valves from the compressor were closed and the compressor was manually started from the HMI. It was observed that when the compressor reached 200 psi, PSHH-305 tripped on high-high alarm, and the PLC shutdown the air compressor. The autodialer tripped and initiated a callout sequence. Once the alarm tripped, it was demonstrated that the compressor could only be reset at the local display. It was also shown that after the compressor was reset, it could not be restarted until the alarm was acknowledged on the HMI. Before the alarm could be acknowledged on the HMI, the demonstration showed that the latent air pressure had to be relieved by opening one of the downstream air valves. The valve in chamber IW-16 was used in this case.
- The burglar and fire intrusion systems were shown and it was noted that the local police and fire department would respond to alarms.

3. Operation, Maintenance and Monitoring

- It was discussed that the system O&M will be performed using a local contractor and that CRA is in the process of evaluating contractors and should have a contractor arranged within the next few weeks.
- It was discussed that all the background pre-injection groundwater samples have been collected and the analytical results are being reviewed. This information will be provided 30 days after the final inspection meeting.

- Steve Scharf had some comments about the monitoring plan and was directed to the Performance Monitoring Program as described in the 100% Design Report.

4. Final Inspection

- The need for a Final Inspection was discussed. It was determined that the need for the Final Inspection may be waived contingent upon verification that the supplemental blending unit operates correctly. At the time of the PreFinal Inspection, the electrical supply to the blender was interrupted by the electricians who were performing other maintenance activities.

5. Issues for Resolution

- The supplemental blending unit could not be immediately tested because the electricians were working on equipment in the PLC panel.
- The shake down and extensive testing of the injection system had identified one operational condition for which a solution has already been identified. The shakedown indicated that both the air and water injections systems could be run independently. However, when the water system was operated following an air injection sequence, the water header was found to be pressurized by the previous air injections and had to be relieved before a water injection could commence. An example of the situation was shown using IW-16. It was noted that treatment system testing has shown that operational sequences can be modified in order to prevent this pressurization issue from occurring. This involves coordinating the injection cycles such that the injection of water into the liquid injection wells is always occurring during the air injection sequence in the adjacent well.
- The water-taking permit from the local Water Board has not yet been received. It is expected that this will be available in about a month. It is planned to initiate the full time operation of the treatment system within the next week or so. As a result, the treatment system will initially operate only with air injections for the first month or so. Coordinated injections of water and air will begin when the water permit becomes available.

6. Future Submissions

It was discussed that 30 days after the Final Inspection or acceptance of this inspection as the Final Inspection, the following information will be submitted to the EPA:

- As-Constructed Drawings
- Well Logs for New Installations
- HASP
- O & M Manual
- Background (Pre-Injection) Groundwater Analytical Results

7. Conclusion

The Biosparge System for the Hooker/Ruco OU-3 treatment system has been constructed as designed and is ready to be placed into full time operation.