TETRA TECH

Daily Report 12/17/13

Tetra Tech

Directive #1 – Indoor Air

- Draft Concept Plan for phased approach to indoor air monitoring plus installation of alarm systems and ventilation systems was submitted to DNR on 12/13/12 for comments; the detailed Work Plan was submitted to DNR on 1/14/13 for comments.
- Installed a total of 98 detectors at 45 locations. No positive alarms have occurred to date for either % LEL or H2S.
- A total of ten monitoring pairs and associated transmitters have been provided to Assumption Parish, at their request.
- Continued daily monitor calibration.
- Completed visual inspection and maintenance of the under slab ventilation systems. Liquids found in the systems were removed and transported to the TBC frac tank.
- BGS reported that two detectors were stolen from the garage at 135 Crawfish Stew. Notified the Parish Sheriff's Department. The detectors were replaced and brought on line.

Plan for today:

- Continue monitor calibration.
- Continue indoor air monitoring.
- Continue ventilation system operation, maintenance, and monitoring.
- Develop a security program for the detectors.

Directive #2 – Additional Relief Wells and Directive #3 – Overall Plan as Corrected

- Met with DNR/Shaw on 1/24/13; reached agreement on well designs.
- Radius of Influence (ROI) wells are installed at well pads ORW-5 and ORW-9.
- The field portion of ROI testing was completed July 21st. Report is being finalized.

Directive #4 – Operation of All Wells

- Flares #2, #3, #4, #5, and #6 are operating. One additional flare, and a trailer-mounted backup flare, are available as needed. TBC Flare #1 will require insulation repair prior to being put into service.
- Well work overs are ongoing for all low-producing and non-flowing wells.
- Barton meters have been installed on flowing wells; performed routine maintenance.
- Performed daily flare operation and maintenance.
- Performed daily relief well operation and maintenance.

- Increased the choke position on ORW-48. Started flow on ORW-39. Decreased the choke position on ORW-49 to stabilize the well head pressure
- Continued depressurization of ORW-54; removed 220 gallons of water from the separator (includes water removed on Sunday). Wellhead pressure continues to range between 13 and 15 psi.
- Shutdown Flare 3 overnight for troubleshooting; determined pneumatic shut down valve was malfunctioning. Restored and adjusted valve; restarted flare.
- Inspected Track-it data loggers installed last week on ORW-49, 50, 52, and 53; confirmed they are functioning properly.
- Dewatered ORW-6; starting conditions: well head pressure: 26.5 psi; water level: 10.11 ft bgs. Pumped 60 gallons in one hour; ending conditions: well head pressure: 26.5 psi; water level: 77.09 ft bgs.
- Dewatered ORW-19; starting conditions: well head pressure: 3 psi; water level: 11.14 ft bgs. Pumped 180 gallons over 1.5 hours; ending conditions: well head pressure: 2 psi; water level: 57.09 ft bgs.
- Dewatered ORW-32; starting conditions: well head pressure: 0 psi; water level: 8.76 ft bgs. Pumped 300 gallons over 3.5 hours; ending conditions: 0 psi well head pressure; 78.12 ft bgs water level.
- Dewatered ORW-30; starting conditions: well head pressure: 10 psi; water level: 10.13 ft bgs. Pumped 225 gallons over 1 hour; ending conditions: well head pressure: 9 psi; water level: 72.77 ft bgs.
- Dewatered ORW-39; starting conditions: well head pressure: 0 psi; water level: 9.85 ft bgs. Pumped 525 gallons over 6 hours; ending conditions: well head pressure: 12.5 psi; water level 84.69 ft bgs.

Plan for today:

- Complete daily flare, Barton meter, generator, and compressor operation and maintenance activities.
- Continue dewatering schedule (ORW-16, 18, and 26).

Directive #5 – Sinkhole Containment

- Submitted Joint Application to OCM and COE, which included sinkhole containment design and additional ORW wells, on 2/14/13.
- Initial containment of the sinkhole area was completed.
- A pre-construction meeting was held on-site on March 27th for TBC and contractors.
- Construction of the containment system began April 1st.
- The current configuration of the sinkhole containment system is completed.
- Miller Engineering surveyed settlement plates and water elevations.

Plan for today:

- Inspect berm.