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Memorandum

From: Steve Willis
To: Wayne Miller
Date: June 1, 2016
Subject: Site visit to observe EBR well drilling activities at Former Williams AFB Site ST012.

Wayne:

This memo summarizes my visit to Site ST012 conducted on June 1, 2016. The purpose of the site visit was to monitor drilling and well installation activities and record my observations.

I arrived at the site at approximately 12:15 pm and signed in at the office trailer. I then proceeded to the active drill site on the Army facility west of site ST012, where I met Kyle Keegan from AMEC. YJD had reached a depth of 176′ in boring/well LSZ49. This is the southernmost well on the Army property.

Kyle said that a second rig was drilling on the east side of Sossaman Rd., but had hit a significant water line below the depth which had been cleared with a hand auger. It was determined to be the major line that runs directly from the large water tanks south of ST012. Drilling activities were halted and the water line was in the process of being excavated and repaired.

My observations are as follows:

- Kyle stated that he hadn't noted any indication of soil contamination through the upper 176′ in well LSZ49. I checked the cuttings and confirmed this.
- 176′ – 196′. Drill cuttings did not exhibit indications of contamination. Cuttings were generally silty sand, sand, and clay.
- 196′ – 212′. Drill cuttings did not exhibit indications of contamination. No odors. PID reading was 1.0 ppm at 200′ and <10 ppm in the remaining intervals. Cuttings were generally silty clay (LPZ). The bottom of the LPZ appears to be at about 212′.
- 212′ – 216′. No indications of contamination to 214′. Noticeable hydrocarbon odor in cuttings from 214′ through 216′ (silty sand at the top of the LSZ), PID = 399 ppm. A dye test was conducted on soil from the middle of the 214′ – 216′ interval, and the results were negative for LNAPL (photo 2).

- 216′ – 228′. After collecting the 226′ – 228′ soil interval from the sample core barrel, the cuttings remaining in the core barrel slumped, causing the remaining cuttings (216′ – 226′) to become mixed. The 226′ – 228′ soil interval contained strong hydrocarbon odors. A sample from the middle of the interval contained a positive LNPL dye test (photo 3) and a PID reading of 1,397 ppm. The remaining cuttings also exhibited strong hydrocarbon odors, but specific impacted intervals could not be confidently identified because the cuttings were mixed.
- Drilling was halted at 228′ at 4 pm. Kyle indicated he would discuss the boring results with his supervisors to determine how to proceed.

At the conclusion of drilling, I asked Kyle about the progress of the second rig east of Sossaman Rd. After repairing the water line and moving the drill rig, the drill crew received complaints about dust generation from owners of nearby parked cars. As a result, no drilling was completed at that location. AMEC will attempt to resolve that issue and re-start the drilling tomorrow.

I left the site at approximately 4:10 pm.

Please contact me if you have comments or questions regarding this memo.

Thank you,

SITE PHOTOS

Photo 1. Well LSZ49. Bottom row shows cuttings left to right from 210′ to 216′. Transition from LPZ to LSZ. Section on right from 214′ to 216′ had noticeable HC odor, staining, and PID = 399 ppm.

Photo 2. Soil cuttings 214′ – 216′. Stained soil, PID = 399 ppm, dye test negative.

Photo 3. Soil cuttings 226′ – 228′. Stained soil, PID = 1,397 ppm, positive dye test

Photo 4. Collecting soil samples from 227′ for lab analyses