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Memorandum

From: Steve Willis
To: Wayne Miller
Date: June 7, 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 7, 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 8:30 am and drove to the Sossaman Rd. work area. A sampling crew from AMEC was at well pair U37 / W37 preparing to sample as part of the scheduled perimeter well monitoring event. I asked Brandon if they had measured water levels in well W37 yet and he replied that they had, and there was no NAPL detected.

I proceeded to the site of well LSZ45, north of well W37. Drilling had reached 150′. I discussed results with Garrett, who said he had not detected any evidence of contamination in the cuttings. I checked a random sample of the cuttings, including the deepest interval, and confirmed Garrett's observation.

I then went onsite, where drilling of wells UWBZ30 and UWBZ31 was in progress. UWBZ31 was complete to a depth of 194′. Kyle Keegan stated that he had a positive dye test at approximately 190′, and cuttings at 194′ did not exhibit evidence of contamination. I checked the dye test kit and noted a light pink color indicative of potential LNAPL (photo 2). I also confirmed that cuttings from the deepest interval did not exhibit hydrocarbon odors. I was unable to get PID readings from this boring, as Kyle was busy with several tasks.

Drilling at Well UWBZ30 was in progress, with 174′ completed. Kyle indicated he obtained a positive dye test and a PID reading of 1,100 ppm at 170′. I checked the dye test kit, but could not confirm the results (photo 3). Drilling continued to 190′. Cuttings from the 170′ – 190′ interval contained strong hydrocarbon odors. A PID

reading of 2,481 ppm and a positive dye test were recorded at 190′ (photo 4). Drilling was halted at the proposed 190′ depth while Kyle waited for instructions from his managers on whether to extend the boring.

After lunch, I returned to well LSZ45 and remained there until approximately 3 pm. At that time drilling was complete to 210′. Drill cuttings from 170′ – 210′ did not exhibit evidence of contamination. I did not detect any hydrocarbon odors. PID readings were taken at 5′ intervals and all readings were <10 ppm.

On my way off the site, I met Kyle, who told me they extended well UWBZ30 to 200′, where a dye test was negative. He also indicated that a decision had not been made where to set the screen in well UWBZ29, which was drilled on Sunday 6/5.

I will be in Tucson for a meeting on Wednesday morning and may be able to stop by the site on Wednesday afternoon to check progress. Otherwise, I will return on Thursday 6/9.

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

Thank you,

SITE PHOTOS

Photo 1. Drilling well LSZ45.

Photo 2. Drill cuttings from well UWBZ31 at 188′ – 190′. Silty clay. Light pink color in dye kit suggests positive LNAPL result.

Photo 3. Drill cuttings from well UWBZ30 at 170′ – 172′. AMEC field personnel interpreted the dye test result as positive.

Photo 4. Drill cuttings from well UWBZ30 at 189′ – 191′ showing positive dye test.

Photo 5. Drill cuttings from well LSZ45 at 206′ – 210′ showing LPZ clays.