EnTech
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August 15, 2013

Mr. Geoffrey Leking
Environmental Specialist
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, NM 88240

RE: NABORS HOBBS RECLAMATION PLANT INVESTIGATION, LEA COUNTY, NEW MEXICO

Dear Mr. Leking,

EnTech Consulting Corp. (EnTech) on behalf of Nabors Completion & Production Services Co. (Nabors) delineated soil contamination at Nabors Reclamation Plant Facility (facility) located west of Hobbs, NM (Figure 1). The Reclamation Plant is located adjacent to their Salt Water Disposal facility. The Reclamation plant was comprised of four tanks in the southwest corner of the facility that have since been removed. A sampling plan (Attachment A) was used to delineate affected soils to New Mexico Oil Conservation Division (NMOCD) standards for the soil under

PAST WORK

On June 1, 2012, hydrocarbon affected soils at the Hobbs Reclamation Plant were excavated under EnTech's supervision. Approximately 220 cubic yards of contaminated top soil and gravel were removed from under the former reclamation tanks using a backhoe and an OVM to screen for organic vapors from contaminated soil. Any contamination soil exhibiting OVM readings above 100 ppm, which is the NMOCD stated limit in their "***Guidelines for Remediation of***

Spills, Leaks, and Releases", was excavated***.*** However, analytical results of confirmation samples taken and submitted to the laboratory, the showed concentrations of TPH-DRO (heavy fractions) above 100 mg/kg for 7 out of 11 samples (Figures 2 and 3). The BTEX and TPH-GRO were below the laboratory detection limit (0.0200 mg/kg for BTEX and 2.0 mg/kg for TPH GRO). The 220 cubic yards of contaminated soil and gravel excavated in June 2012 were sent to Sundance Disposal for disposal by Nabors.

On July 25, 2012, EnTech contracted Straub Corporation to advance two borings to a 20 foot depth in the bottom of the excavation at Nabors Reclamation Plant. The borings were advanced to evaluate the depth of affected soil in the area.

The first boring was on the north end of the plant beneath a former tank location where high OVM readings were encountered during the June 1, 2012 excavation (Figure 2). The second boring was drilled on the south end beneath a former pump that showed evidence of minor staining. Samples were collected at 5 foot intervals and a total of four (4) samples were collected from each boring. Organic vapor readings were then taken using an OVM. In all cases, the OVM readings were below 2 ppm. In addition, 4 ml of each sample, placed in a glass sample jar, sealed, labeled, and placed on ice, was sent to the lab for TPH-DRO, TPH-GRO and BTEX analysis. The soil samples exhibited no visible staining below approximately the top 6 inches. Once the samples were collected, the borings were filled with bentonite, hydrated, and a cement cap placed on each. The analytical results for these soil samples were all below laboratory reporting limits (RL) for all parameters except one. The sample identified as BH1 10' from Boring #1, at 10 feet bgs reported a toluene concentration of 0.0235 mg/kg.

The results were presented to the NMOCD along with a second work plan, to install 5 trenches, 10 feet long (Figure 3) in areas of highest contamination to determine vertical delineation (Attachment B). This work plan was approved by the NMOCD. On June 30, 2013, EnTech contracted Lighthouse Environmental to excavate the 5 trenches. The trenches were dug and soil samples plus OVM readings collected at the furthest end of the trench from the excavation. All OVM readings were below

2 ppm. Laboratory analysis of the soil samples ranged from TPH-DRO concentrations of 12.5 mg/kg in Trench #1 to TPH-DRO 67.2 mg/kg in Trench #5, which all well below the NMOCD's stated limit of 100 ppm (Figure 3).

The analytical report for all samples is presented in Attachment C.

PROJECT CONCLUSIONS AND RECOMMENDATION

The NMOCD recognizes the unique geology of the area and allows a remedial approach that permits operators to excavate down to the caliche, and drill borings in the base of the excavation (number of borings depends on the size of the excavation) to collect confirmation "bottom hole" samples. If these boring samples show TPH-DRO concentrations below 100 mg/kg, NMOCD will allow "closure".

The analytical results for the soil samples collected from the delineation trenches show that there were no affected soils above the NMOCD guidelines at the limits of the trenches. Furthermore, analytical data for samples from the borings in the bottom of the excavation showed that at 5 feet below the ground surface, all reported concentration were below laboratory reporting limits and continued as such to the 20' limit of the borings with one exception (Toluene at 0.235 mg/kg). Based on these results, EnTech recommends the following:

- Excavate and remove contaminated soils out to the limit of the delineation trenches.
- Scrape contaminated soil from the bottom of the excavation.
- Replace with clean fill.
- Dispose of contaminated soils at Sundance Disposal.
- Request "clean closure" letter from NMOCD.

It is estimated that a total of 100 cubic yards of soil will be removed and disposed. Clean fill will be brought in to bring the excavation to grade. There is currently approximately 65 cubic yards of clean material on site. This leaves approximately 260 cubic yards of clean fill that will need to be brought from offsite.

We are confident that this approach will remove any risk to the environment and satisfy NMOCD's concerns. If you have any questions, please feel free to contact me at 432-266-8375 or at my email Darrell.moore@entechservice.com.
We look forward to your response.

Sincerely,
ENTECH CONSULTING CORP.

Chan Patel
Sr. Project Manager

Darrell Moore
Geologist

Figures 1-3
Table 1
Attachment A – Sampling Plan
Attachment B – Work Plan
Attachment C – Analytical Report