APPROVED
By Olivia Yu at 11:16 am, Jan 29, 2018

NMOCD approves of the proposed delineation for 1RP-4802 with these conditions:
1) At least 1 sample location must be established near the tanks (release point).
2) Each sample location must demonstrate permissible levels of BTEX, TPH extended and chlorides for 2 depths: depth obtained and depth maintained at least 5 ft. further.

Penroc Oil Corporation

Oil Conservation Division (OCD) – District 1
1625 N. French Dr.
Hobbs, NM 88240
Attn: Olivia Yu

January 17, 2018

RE: State E 10 Strawn Tank Battery
API No. 30-025-30516

Remediation case No.: 1RP-4802
Unit Letter O, Section 17, T-22-S, R36E, Lea County, NM
Latitude 32.385930 Longitude -103.285105

Dear Ms. Yu,

This letter and supporting documentation is submitted as a work plan for the characterization of impacts associated with the release of crude oil at the State E 10 Strawn Tank Battery located in Lea County, NM. Upon this work plan approval from the OCD, the release characterization work plan will be commenced and the resultant investigation report will be submitted to the OCD.

The goals of this characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.) In meeting these goals, at a minimum, the following items will be addressed:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination will be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C6 thru C36), and for chloride by Method 300. If applicable, other potential contaminants will be analyzed. Soil samples will be taken in both the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination will be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C6 thru C36), and for chloride by Method 300. If applicable, other potential contaminants will be analyzed. Vertical soil samples will be taken at depth intervals no greater than five feet apart. Lithologic description of the encountered soils will be provided. At least ten vertical feet of soils with contaminant concentration at or below the OCD required value must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses will be provided.

- Composite sampling will not occur.

- A statistically significant set of split samples will be submitted for confirmatory laboratory analysis. This will include the laterally farthest and vertically deepest sets of soil samples. At least two soil samples will be submitted for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of actual laboratory results will be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to the nearest surface water will be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, then it will be anticipated at least one groundwater monitoring well will need to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation work plan may be required to determine the extents of that contamination.

- Accurately scaled and well-drafted site maps will be provided indicating the location of boring, test pits, monitoring well(s) (if needed), potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Digital photographic documentation of the location and fieldwork will be provided.

Please let me know if this release characterization work plan meets your approval. Once this work plan is approved by the OCD, the release characterization work plan will be commenced and the resultant investigation report will be submitted to the OCD.

Please let me know if you have any questions.

Sincerely,

Todd M. Yocham

Todd M. Yocham, P.E.
Petroleum Engineer
tyocham@desertproduction.com
432-770-0615 cell

Penroc Oil Corporation
1515 W. Calle Sur, Suite 174
Hobbs, NM 88241

Penroc Oil Corporation

State E 10 Strawn Tank Battery
API No. 30-025-30516
Production Battery
Unit Letter O, Section 17, T-22-S, R36E, Lea County, NM
Latitude 32.385930 Longitude -103.285105
Remediation case No.: 1RP-4802

Penroc Oil Corp
State E Lease
Lea County, NM