COLORADO
Energy & Carbon Management Commission
Department of Natural Resources

1120 Lincoln Street, Suite 801
Denver, CO 80203

MEMORANDUM

**RE: Former PETROSHARE CORPORATION – 10454 (Location ID #320220)
(UPRR) KALCEVIC #24-3 (API #05-001-08506) Pump Jack Concrete Slab
Spill/Release # 487976 (Active) Remediation Project #26793 (Closed)**

Date: September 24, 2024

On September 9, 2019 the Colorado Oil and Gas Conservation Commission (COGCC) received a bankruptcy notice indicating that Petroshare Corporation – Operator #10454 filed Bankruptcy Chapter 11 in the District of Colorado. The Colorado Energy and Carbon Management Commission (ECMC), formerly known as the "COGCC", Compliance Unit referred this and other oil and gas locations formerly operated by Petroshare Corporation - 10454 to the ECMC Orphaned Well Program ("OWP") following a Commission bond claim hearing. This Operator is no longer active in the State of Colorado.

This Memorandum describes work performed at the former Kalcevic #24-3 oil and gas well pad (Location ID #320220).

The ECMC Environmental staff added the following Conditions of Approval (COA) and/or Comments to an initial Form 27 [Document #403290548] submitted by the ECMC OWP. Responses to these COA and OWP responses are provided below.

Initial Form 19 (Doc #403925457) – Conditions of Approval and OWP Responses:

- COA: If groundwater is encountered, inorganic parameters (TDS, chloride, sulfate) will be sampled in addition to the organics proposed under the Site Investigation Plan.

  OWP: Impacted soils beneath the pump jack concrete slab appear related to operation of the pump jack engine. An OWP contractor excavated approximately five (5) cubic yards of stained soils for offsite disposal. The depth to groundwater is expected to be greater than 50 feet. If groundwater is encountered in sufficient quantities to enable sample collection the OWP will submit a sample to an accredited environmental laboratory for analysis of benzene, toluene, ethylbenzene, xylenes (BTEX); 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene; chloride, sulfate, and total dissolved solids (TDS).

- COA: Operator shall collect confirmation soil samples as described in Rule 915.e.(2) Guidance Document. Operator will analyze all proposed soil samples for complete Table 915-1 Contaminants of Concern: TPH (C6-C36), Organic Compounds in Soil,

metals, and Soil Suitability for Reclamation (Electrical conductivity, Sodium adsorption ratio, and pH by saturated paste method, boron (hot water soluble)).

OWP: The OWP will collect confirmation soil samples as described in Rule 915.e.(2) Guidance Document and submit the samples to an accredited environmental laboratory for analysis of complete Table 915-1 soil parameters. Site-specific background soil samples will be collected off-location from undisturbed areas with similar soil types and conditions will be submitted for analysis of Table 915-1 metals and soil suitability for reclamation to compare with the confirmation soil sample results. Please note that the OWP does not meet the ECMC definition of an "Operator"

- COA: No photo documentation was attached. Operator will attach photo documentation required by Rule 912.b.(4)B. on a Form 19 Supplemental Report.

  OWP: See site photographs attached to this Form 19 Supplemental Report.

- COA: Pursuant to Rule 912.b.(6) Operator is required to submit a Form 19 Supplemental Report for the associated spill within 90 days of the spill date requesting closure pursuant to Rule 913.h and supported by adequate documentation to demonstrate that the Spill or Release has been fully cleaned up and complies with Table 915-1; or A Form 27 if any of the criteria listed in Rules 912.b.(6).Bi-iii apply. If Remediation will continue under an approved Form 27, the Operator will also submit a Form 19 – Supplemental which requests closure of the Spill or Release and includes the Remediation Project number assigned by the Director.

  OWP: The OWP will collect confirmation soil samples from the area of stained soil beneath the concrete slab and submit a Form 19 Supplemental within 90 days of the spill date to request closure. The OWP oversaw the Kalcevic #24-3 flowline decommissioning with field screening performed under Remediation Project #26793. As stated in the January 10, 2023 Flowline Closure Checklist, the September 2022 field screening and observations did not detect the presence of E&P Waste impacts associated with the flowline riser at the wellhead and concrete slab; therefore, Remediation Project #26793 was granted No Further Action on 12/28/2023 in the approved Form 27 Supplemental [Document #403613982]. If confirmation sample results indicate that impacted soil beneath the former concrete slab has not been delineated, the OWP will request re-opening Remediation Project #26793.

- COA: Per Rule 912.b.(4), the Operator shall make a supplemental report on Form not more than 10 calendar days after the spill/release is discovered that includes:

  A. A topographic map showing the governmental section and location of the spill or an aerial photograph showing the location of the spill.

  OWP: See attached Figure 1 – General Site Location Map and Figure 2 – Site Map.

  B. All pertinent information about the spill/release known to the Operator that has not been reported previously including photo documentation showing the source of the Spill or Release, the impacted area, and initial cleanup activity.

  OWP: Additional pertinent information about the spill/release is contained herein this attachment and in the Form 19 Supplemental Report. See attached photographic

documentation showing the concrete pump jack slab, stained soils discovered beneath the concrete slab, and the area following removal of the concrete slab and soils.

C. Information relating to the initial mitigation, site investigation, and remediation measures conducted by the Operator.

OWP: Stained soils were discovered beneath the concrete pump jack slab following preparation for site reclamation. The OWP contractor excavated approximately 5 cubic yards of stained soil for off-site disposal. Additional site investigation and confirmation soil sampling will be conducted to delineate the lateral and vertical extent of impacts. Additional remediation through excavation and offsite disposal of impacted soil if necessary to meet Table 915-1 cleanup concentrations or levels. A Form 19 Supplemental will be submitted within 90-days from receipt of the results.

D. Global Positioning System data that meets the requirements of Rule 216 if latitude and longitude data provided pursuant to Rule 912.b.(2). A did not meet the requirements of Rule 216.

OWP: The locations of soil samples will be documented using Global Positioning System (GPS) to meet the requirements of Rule 216.

Groundwater:

Records for DWR Permitted Water Well: USGS Monitoring Hole On-Location (DWR Permit #41724-MH Receipt #0041724). January 17, 2003 – Notice of Intent to Construct Monitoring Holes, Estimated Depth 50 ft, Purpose of Monitoring Hole: Water-Quality Monitoring – AgL US-28; See Permit No. 249758

DWR Permitted Water Well: USGS Monitoring Hole – Distance ~640 SSE (DWR Permit #249758; Receipt #0507056V). Completed on 02/04/2003, Static Water Level = 63.9 ft; Top of Perforated Casing = 63.6 ft, Total Depth = 73.85 ft; Ground Surface Elevation: 5160 ft; Lithologies consisted of alluvial sand and clay from 0 to 73.85 feet.

DWR Permitted Water Well: Residential 48100 E. 112th Ave 05/13/2004 (DWR Permit #242793- Receipt #0495593E) Static Water Level = 125 ft, Top of Perforated Casing = 180 ft, Total Depth = 275 ft, Distance/Direction ~1910 ft SW, Lithologies consisted of clay overlying gravel, sand, sandstone, and shale

DWR Permitted Water Well: Residential – 48100 E. 112th Ave 12/03/1999 Expired Permit (DWR Permit #223386- Receipt #0453997) Denver aquifer Elevation (Bottom: 5048 ft Top: 5130 ft)

Geology:

The bedrock geology is mapped as the Cretaceous age Denver Formation or lower part of the Dawson Arkose, (map symbol Kdl). Surficial geology is mapped as Quaternary age gravels and alluviums (Pinedale & Bull Lake age) Map symbol (Qg)

Soils: According to the NRCS Adams County Soil Survey, the soils are mapped as Loamy alluvial land (Map Unit Lu)

References

Sampson, J.J. and Barber, T.G., 1974, NRCS Soil Survey of Adams County, Colorado United States Soil Conservation Service, Colorado Agricultural Experiment Station, viii, 77 pages,

Tweto, O., 1979, Colorado Geologic Survey, Geologic Map of Colorado, DOI, 10.3133/70211263, Scale 1:500000, National Geodetic Vertical Datum of 1929

Colorado Division of Water Resources (DWR) – Online Database