

September 7, 2021

Re: Assessment Summary
Kerr-McGee Oil and Gas Onshore, LP
State 30-16
Form 27 Document # 402804065
Remediation # 18298
SWNW Sec 16-T1N-R68W

Summary of Field Assessment Activities

During plugging and abandonment activities (P&A) at the State 30-16 wellhead, five shallow soil vapor points were installed in the vicinity of the wellhead up to 27 feet from the edge of the P&A excavation. Shallow soil vapor points were installed by advancing a soil hammer probe down to 5 feet below ground surface (bgs), installing tubing in the points down to 2.5 feet bgs, and completing the points with sand to 1.5 feet bgs and hydrated bentonite to the surface. The tubing was kinked and zip tied to prevent vapor from escaping the tubing and allow the points to equilibrate for at least 48 hours before being screened or sampled.

On August 20, 2021, methane was detected at SVP03 (2.7%) which was located 9 feet from the P&A excavation. WSP collected a sample from SVP03 using IsoTubes™ and an IsoTube™ sampling manifold in conjunction with the pump on a Gas Electron Multiplier 5000 Gas Analyzer (GEM), which is a gas extraction analyzer that measures total gaseous hydrocarbons as methane, carbon dioxide, oxygen, hydrogen sulfide, and carbon monoxide. The samples were submitted to Dolan Integration Group (DIG) for gas composition analysis. Results from the gas composition analysis were received from DIG on August 25, 2021 and indicated the presence of thermogenic gas in the subsurface. The volume of the methane release is unknown.

On September 1, 2021, 25 additional shallow soil vapor points were installed at the site. The shallow soil vapor points were installed the same as described above. One soil vapor point was installed directly above each of the 9 P&A'd wellheads on the pad, and the remaining 16 soil vapor points were installed in a grid pattern around the State 30-16 wellhead. WSP will be onsite the week of September 7, 2021 to screen and sample all the soil vapor points using IsoTubes™ and an IsoTube™ sampling manifold in conjunction with the pump on a GEM. Samples will be submitted to Isotech Laboratories for isotopic analysis. Results from the screening and sampling event will be included in an eForm 27 Supplemental Report.