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**VIA ELECTRONIC SUBMITTAL**

June 29, 2017

Randy Bayliss, PE - Hydrologist, District III  
New Mexico Oil Conservation Division  
Energy, Minerals and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**RE:** Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities  
K-27 LD072  
New Mexico Oil Conservation Division Case Number 3RP-204-0

Mr. Bayliss:

On behalf of El Paso CGP Company, LLC (EPCGPC), Stantec Consulting Services Inc. (Stantec) has prepared this Work Plan to complete enhanced light non-aqueous phase liquid (LNAPL) recovery activities utilizing mobile dual phase extraction (MDPE) methods at the above-referenced site (Site). Measureable free product, up to 0.41 feet in thickness, has been detected in monitoring well MW-2R over the past year. The Site geology (sand and weathered sandstone) appears conducive to MDPE methods, which are expected to be more efficient than the manual LNAPL recovery efforts previously completed at the Site.

Stantec will retain the services of AcuVac Remediation (Acuvac) to mobilize and provide equipment and personnel to perform the MDPE activities. MDPE is a process combining soil vapor extraction (SVE) with groundwater depression to maximize mass removal of LNAPL as both liquid and vapor phase hydrocarbons. Acuvac uses a submersible pump to simultaneously remove dissolved-phase contaminated groundwater, induce a hydraulic gradient toward the extraction well, and to create the groundwater depression, exposing the capillary fringe or smear zone to SVE. Recovered liquids will be transferred to a portable storage tank to be provided by Sierra Oilfield Services (Sierra), under contract with Stantec. Recovered vapors will be used as fuel and burned in the MDPE internal combustion engine (ICE), resulting in near complete combustion of the vapors. The power generated by the ICE is used to create the induced vacuum for SVE.



**Reference: Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities**

MDPE activities will be completed from monitoring well MW-2R in one day. Stantec will also mobilize field staff to oversee daily Site activities, complete health and safety monitoring, and assist with data collection. During the MDPE event, groundwater, and liquid and vapor hydrocarbon recovery rates will be measured, and groundwater depression and radius of influence will be estimated. Acuvac will provide staff to oversee MDPE efforts, including adjusting equipment to optimize hydrocarbon recovery rates and monitor liquid recovery.

Vapor and/or air monitoring for total volatile organic compounds, oxygen, carbon monoxide, carbon dioxide, and hydrogen sulfide will be performed to evaluate the effectiveness of the MDPE event and for the health and safety of field staff. To evaluate mass removal rates, a vapor sample will be collected during the MDPE event at the extraction wellhead via Summa canister. The Summa canister will be submitted to TestAmerica Laboratories, Inc., for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) using Method TO-3, and Total Petroleum Hydrocarbons (TPH) using Method TO-15.

Recovered liquids will be containerized in a portable tank, which will be removed by Sierra Oilfield Services from the Site following completion of the event. The water will be transported to Basin Disposal for treatment and disposal. Stantec will coordinate with EPCGP to obtain signed C-138 forms prior to the MDPE event.

A gauging event to measure free product thickness in monitoring well MW-2R will also be completed approximately one month following completion of the MDPE event to help evaluate whether additional MDPE events should be considered. The data, results, and conclusions of the MDPE event will be summarized as an attachment to be included with the annual groundwater monitoring report for the Site. The attachment will include a narrative of the activities completed, a tabulated summary of the data collected, estimated hydrocarbon recovery rates and totals, laboratory analytical reports, waste disposal documentation, and other pertinent information.



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Mr. Randy Bayliss  
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**Reference: Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities**

Please feel free to contact Joseph Wiley, Project Manager for EPCGPC, at (713) 420-3475, or me if you have any questions or require additional information.

Sincerely,

**Stantec Consulting Services Inc.**

A handwritten signature in blue ink, appearing to read "Stephen Varsa".

Stephen Varsa, P.G.  
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cc: Joseph Wiley, EPCGPC  
Brandon Powell, NMOCD  
Jillian Aragon, BLM