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**APPROVED**

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**By Nelson Velez at 10:27 am, Dec 29, 2021**

**VIA ELECTRONIC SUBMITTAL**

August 23, 2021

Cory Smith, District III  
New Mexico Oil Conservation Division  
Energy, Minerals and Natural Resources Department  
1000 Rio Brazos Road  
Aztec, NM 87410

Review of Work Plan for Light Non-Aqueous Phase Liquid (LNAPL)  
Testing Activities: Content satisfactory

1. Continue as stated within the submitted LNAPL work plan.
  - a. complete a one day MDPE event on MW-19
  - b. Perform vapor and/or air monitoring for total volatile organic compounds, oxygen, carbon dioxide, and hydrogen sulfide
  - c. a vapor sample will be collected during the MDPE event at the extraction wellhead to evaluate mass removal rates
  - d. A second vapor sample will be collected from the MDPE system stack to evaluate the combustion efficiency of the internal combustion engine and to be analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) using Method TO-3, and Total Petroleum Hydrocarbons (TPH) using Method TO-15.
  - e. Data, results, and conclusions of the MDPE event to be summarized as an attachment and included with the annual groundwater monitoring report

**RE:** Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities  
Canada Mesa #2  
New Mexico Oil Conservation Division Incident Number nAUTOAB000065

Mr. Smith:

On behalf of El Paso CGP Company, LLC (EPCGP), Stantec Consulting Services Inc. (Stantec) is submitting this Work Plan for enhanced light non-aqueous phase liquid (LNAPL) recovery activities utilizing mobile dual phase extraction (MDPE) methods at the above-referenced site (Site). MDPE activities are to be conducted from monitoring well MW-9, where measurable product (up to 0.73 feet) is present. Since monitoring well MW-9 was installed in 2019, approximately 5 gallons of LNAPL have been manually recovered from this well. A one-day MDPE event is proposed to be completed in the third calendar quarter of 2021 to enhance LNAPL recovery from MW-9. Manual free product recovery is to continue from other site monitoring wells where free product is present, as previous MDPE testing of these wells indicated it was not effective. A site plan is attached for reference.

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 recovered vapors. The power generated by the ICE is used to create the induced vacuum for SVE.

MDPE activities will be completed from monitoring well MW-9 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



August 23, 2021  
Mr. Cory Smith  
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**Reference: Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities**

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, 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. A second vapor sample will be collected from the MDPE system stack to evaluate the combustion efficiency of the ICE. The vapor samples will be submitted to Eurofins-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 from the Site following completion of the event. The water will be transported to Basin Disposal for treatment and disposal.

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.

Field activities are to occur on September 1, 2021. Please feel free to contact Joseph Wiley, Project Manager for EPCGP, 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.  
Senior Hydrogeologist  
Phone: (515) 251-1020  
steve.varsa@stantec.com

cc: Joseph Wiley, EPCGP  
Laverne Jaquez, BLM (Grant NMNM133869)



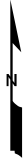
\\Us0389-ppfss01\shared\_projects\193710238\07\_historical\SJRB GENERAL\GIS-NEW\_MXD\CANADA MESA #2\2020 MAPS\Canada\_Mesa#2\_SITEMAP\_2020.mxd



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 10/13/2017

**LEGEND:**

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- BARRICADE
- NATURAL GAS LINE
- MONITORING WELL
- SOIL BORING
- ABANDONED MONITORING WELL
- SMA BENCHMARK
- PIPE
- FENCING
- FORMER WELLHEAD
- FORMER UNLINED PIT
- FORMER FEATURES
- RIGHT OF WAY BOUNDARY



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/29/2021	SLG	SLG	SRV

TITLE:

**SITE PLAN**

PROJECT:

**CANADA MESA #2  
SAN JUAN RIVER BASIN  
RIO ARriba COUNTY, NEW MEXICO**



Figure No.:

**1**



**District I**

1625 N. French Dr., Hobbs, NM 88240  
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**District II**

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 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 43912

**CONDITIONS**

Operator: El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002	OGRID:
	7046
	Action Number:
	43912
Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)	

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Review of Work Plan for Light Non-Aqueous Phase Liquid (LNAPL) Testing Activities: Content satisfactory 1. Continue as stated within the submitted LNAPL work plan. a. complete a one day MDPE event on MW-19 b. Perform vapor and/or air monitoring for total volatile organic compounds, oxygen, carbon dioxide, and hydrogen sulfide c. a vapor sample will be collected during the MDPE event at the extraction wellhead to evaluate mass removal rates d. A second vapor sample will be collected from the MDPE system stack to evaluate the combustion efficiency of the internal combustion engine and to be analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) using Method TO-3, and Total Petroleum Hydrocarbons (TPH) using Method TO-15. e. Data, results, and conclusions of the MDPE event to be summarized as an attachment and included with the annual groundwater monitoring report	12/29/2021