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Des Moines, IA 50322-7908

May 19, 2025

VIA E-PERMITTING PORTAL

Mr. Michael Buchanan, Environmental Specialist
New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
5200 Oakland Avenue NE
Suite 100
Albuquerque, NM 87113

RE: Monitoring Point Installation and Mobile Dual-Phase Extraction Test Work Plan
San Juan River Gas Plant Site
El Paso Natural Gas Company, LLC
NMOCD Incident Number NAUTOFRM000157

Dear Mr. Buchanan:

On behalf of El Paso Natural Gas Company, LLC (EPNG), Stantec Consulting Services Inc. (Stantec) is submitting the enclosed Monitoring Point Installation and Mobile Dual-Phase Extraction (MPDE) Test Work Plan (Work Plan) for the San Juan River Gas Plant Site (site). The enclosed document contains the proposed methodology for the installation of four monitoring points and conducting an MDPE test for enhanced recovery of hydrocarbons from two locations at the site. The procedures outlined in this Work Plan meet or exceed the requirements established in EPCGP's "Remediation Plan for Groundwater Encountered during Pit Closure Activities" document approved by the New Mexico Oil Conservation Division (NMOCD) on November 30, 1995. The scope of work contained herein is scheduled to begin the week of June 16, 2025.

Please contact Mr. Joseph Wiley of EPNG at (713) 420-3475, or me, if you have any questions or comments concerning the enclosed Work Plan.

Sincerely,

Stantec Consulting Services Inc.

Steve Varsa
Project Manager
Phone: (515) 251-1020
steve.varsa@stantec.com

/rsm:sv:srs:hls

cc: Joseph Wiley, EPNG (via electronic mail)



**El Paso Natural Gas Company, LLC
1001 Louisiana
Houston, Texas 77002**

**SAN JUAN RIVER GAS PLANT SITE
NMOCD Incident Number NAUTOFRM000157**

**MONITORING POINT INSTALLATION AND MOBILE DUAL-PHASE EXTRACTION TEST
WORK PLAN
KIRTLAND, NEW MEXICO**

May 2025

Prepared by:

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MONITORING POINT INSTALLATION AND MDPE TEST WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

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**MONITORING POINT INSTALLATION AND MDPE TEST WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO**

SECTION 1 - INTRODUCTION

The San Juan River Gas Plant (SJRP) Site (site) is located at 99 CR 6500, approximately one mile north of Kirtland, New Mexico. The SJRP, formerly operated by the property owner CCI San Juan, LLC (CCI) to process natural gas derived from the San Juan Basin, is currently idled; although a Praxair nitrogen plant located on the site is active. The SJRP was previously owned by El Paso Natural Gas Company (EPNG). Access to the site has been established by an access agreement between EPNG and CCI.

Measurable light non-aqueous phase liquid (LNAPL) and hydrocarbon concentrations in excess of New Mexico Water Quality Control Commission (NMWQCC) are present in the vicinity of a former unlined raw water pond, currently the location of a treatment pond operated by Praxair. LNAPL was discovered during advancement of former monitoring well PMW-5, installed along with other treatment pond leak detection wells by Praxair in 2003, located immediately northeast of the Praxair pond. Monitoring well PMW-5 was subsequently plugged and abandoned. LNAPL has also been detected in existing monitoring wells MW-12, MW-15, MW-21, and MW-29, and manual LNAPL recovery has been conducted.

This Monitoring Point Installation and Mobile Dual-Phase Extraction (MDPE) Test Work Plan (Work Plan) presents the scope of work to install four monitoring points and conduct MDPE testing activities at the site. Monitoring point installations and MDPE testing are proposed to further evaluate the feasibility of MDPE technologies at the site. The locations of proposed monitoring points are depicted on Figure 1.

The purpose of this Work Plan is to provide the field methods and anticipated schedule for the monitoring point installation activities and MDPE testing. Section 2 describes the site and the purpose behind the proposed monitoring point locations. Section 3 provides details on the field methods to be used for drilling and monitoring point installation, and the MDPE testing. Section 4 presents the anticipated implementation schedule.

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SECTION 2 - SCOPE OF WORK

Proposed monitoring points MP-1 to MP-4 are intended to provide monitoring data during MDPE testing from existing monitoring wells MW-15 and MW-29 at the site. Performance of MDPE testing is intended to evaluate the effectiveness of this technology to recover hydrocarbons at the site. There are currently twenty-five EPNG groundwater monitoring wells (W-2, MW-4, MW-6, MW-8, MW-9, and MW-11 through MW-30), at the site. The existing well network and proposed monitoring points MP-1 to MP-4 are depicted on Figure 1.

Prior to initiating field activities, the following tasks will be completed:

- 1) A permit for the installation of MP-1, MP-2, MP-3, and MP-4 will be obtained from the New Mexico Office of the State Engineer (NMOSE).
- 2) A pollution control and recovery permit will also be obtained from the NMOSE to allow for the potential recovery of water during the MDPE testing activities. The permit will be tied to the NMOSE-assigned Point of Diversion (POD) associated with existing monitoring wells MW-15 and MW-29.
- 3) Utility locates will be made through New Mexico 811 to locate and mark member utilities in the vicinity of the four new monitoring points.
- 4) Notifications will be made to the New Mexico Oil Conservation Division (NMOCD) at least 72 hours prior to start of field work.

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SECTION 3 - FIELD METHODS

The following subsections describe field procedures to be followed during the site activities.

3.1 SOIL BORINGS

The location of each proposed monitoring point will be staked by Stantec prior to completing 811 utility locates and clearance. A Stantec geologist will oversee the utility clearance activities. The final locations of the monitoring points may be adjusted based on the results of the public utility or private utility survey activities. Once underground utility locating activities have been completed, hydro-excavation equipment will be used to clear the monitoring point boring locations to a depth of at least 8 feet below ground surface (bgs) prior to advancing drill tooling.

Following the completion of utility clearance activities, a track-mounted, roto-sonic drill rig will be mobilized and used to advance each monitoring point to the target depths noted on Figure 1. A Stantec geologist will oversee the drilling activities, complete soil sample logging, retain samples for laboratory analysis, and document monitoring point construction. Soil sampling will be performed to the termination depth of each boring to log and document lithology and determine proper well screen intervals. Borehole logging will include Unified Soil Classification System (USCS) soil descriptions along with a detailed description of each discrete lithologic unit. Soil samples will be collected for field screening at 1-foot intervals from cores recovered at approximately 10-foot intervals. After the sample core is collected, field personnel will field screen using a pre-calibrated photoionization detector (PID) and record the readings. The field screen will be conducted by notching the soil in the core with a hand trowel or other pre-cleaned hand tool, and briefly placing the PID in the notch to measure the PID response.

The field screening data, in addition to visual and olfactory observations (e.g., observing apparent hydrocarbon staining), will aid in identifying sample interval(s) to be retained for potential laboratory analysis (i.e., suspected of having a hydrocarbon impact). At a minimum, one soil sample will be retained from each soil boring from the interval exhibiting the highest field screening reading and/or the interval immediately above the field-interpreted water table. Retained soil samples will be placed in a laboratory-provided 4-ounce glass jar, sealed, labeled, and stored on ice.

After the boring and soil screening are completed, the retained soil samples will be shipped in an ice-filled cooler under standard chain-of-custody protocol to Eurofins Environment Testing Southeast, LLC in Pensacola, Florida. Samples not retained and submitted for laboratory analysis will be disposed with the soil cuttings. The submitted soil samples will be analyzed per the guidance established by Attachment A to Order No. R-13506-D, New Mexico Administrative Code (NMAC) Section 19.15.17.13, Table 1, for the presence of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method SW846 8260B, gasoline-range organics, diesel-range organics, and oil-range organics by EPA Method 8015 M, and chlorides by EPA Method 300.

3.2 MONITORING POINT INSTALLATION

Following advancement of each soil boring, a monitoring point will be installed, constructed of 2-inch-diameter, Schedule 40, 0.010-slot polyvinyl chloride (PVC) screen. Proposed monitoring points

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MP-1 and MP-2 will be located approximately 10 feet and 25 feet from MW-15, respectively, and will be installed to a depth of up to 30 feet bgs, screened from 10 to 30 feet bgs. Proposed monitoring points MP-3 and MP-4, located approximately 10 feet and 25 feet from MW-29, respectively, will be installed to a depth of 50 feet bgs, with 20 feet of screen from 30 to 50 feet bgs. The annular space adjacent to the well screen will be filled with 10-20 silica sand from the bottom of the borehole to 2 feet above the top of the screen. Three (3) feet of hydrated bentonite chips will be placed above the silica sand to prevent downward migration of surface water. Bentonite grout will be placed above the bentonite chips to 1 foot bgs.

A locking, protective steel stick-up well casing will be installed within a concrete pad on the ground surface from 3 feet above ground surface to 2 feet bgs. Following installation, the surface completion and bollards will be painted safety-yellow, and the monitoring point identifier will be stenciled on the stick-up completion. The top-of-casing of each monitoring point will be surveyed by Stantec.

Monitoring point development will be performed using surging and bail methods to help remove sediment. Downhole soil sampling tooling and the well swab and down-hole pump will be decontaminated between holes. Down-hole tooling will be decontaminated before advancing each monitoring well.

3.3 MDPE TESTING ACTIVITIES

Stantec will retain a remediation service contractor to mobilize and provide equipment to perform the MDPE testing activities. As required by the NMOSE, the existing well permits for monitoring wells MW-15 and MW-29 will be modified to allow it to be used for pollution control/groundwater extraction purposes and a quarterly metering report will be completed to document the volume of water removed during MDPE testing activities.

MDPE is a process combining soil vapor extraction (SVE) with groundwater depression to maximize mass removal of liquid and vapor phase hydrocarbons. A submersible pump will be used to simultaneously remove dissolved-phase contaminated groundwater, induce a hydraulic gradient toward the extraction well, and to create a groundwater depression, exposing the capillary fringe or smear zone to SVE. Recovered liquids will be transferred to portable storage tanks on site. Recovered vapors will be used as fuel and burned in the MDPE internal combustion engine (ICE). Power generated by the ICE is used to create the induced vacuum for SVE.

Two 8-hour MDPE testing events, one each from MW-15 and MW-29, will be conducted. Stantec will also mobilize field staff to oversee site activities, complete health and safety monitoring, and assist with data collection. During each MDPE event, groundwater, liquid, and vapor hydrocarbon recovery rates will be measured, groundwater depression regulated, and monitoring for influence in nearby monitoring points conducted. In order to help evaluate vapor and liquid flow paths, SVE testing (without groundwater depression) will first be conducted at the start of each event, followed by groundwater depression in methodical steps to evaluate changes in hydrocarbon recovery rates and potential responses in nearby monitoring points.

Vapor and/or air monitoring for total volatile organic compounds (VOCs), oxygen, carbon monoxide, carbon dioxide, and hydrogen sulfide will be performed to evaluate the effectiveness of the MDPE event and/or for the health and safety of field staff. To evaluate mass removal rates, one vapor sample

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will be collected during the MDPE event at the extraction wellhead via Summa canister. A second vapor sample will be collected from the ICE effluent stack to help document the efficiency of the ICE. Vapor samples will be collected using Tedlar® bags and will be submitted by courier to Eurofins Environment Testing South Central, LLC in Albuquerque, New Mexico, for analysis of BTEX using EPA Method TO-3, and total petroleum hydrocarbons (TPH) using EPA Method TO-15.

Recovered liquids will be containerized in drums or totes and removed from the site following completion of the event. The liquids will be transported to a NMOCD-approved facility for disposal.

Following the MDPE testing event, data collected from routine quarterly groundwater gauging and semiannual groundwater sampling events at the site will be used to evaluate the effectiveness of the MDPE event and provide direction for additional activities, if warranted. The data and results for the MDPE testing event will be summarized in the annual groundwater monitoring report for the site. The report 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.

3.3 GENERAL PROTOCOLS

This subsection presents a discussion of health and safety, documentation procedures, buried piping or utility identification, waste handling, and other procedures to be performed as part of the investigation.

3.3.1 Health and Safety

A Site-Specific Health and Safety Plan (HASP) will be prepared for groundwater monitoring, operations, maintenance, and drilling activities. The HASP includes guidance on the personal protective equipment (PPE) necessary for field activities, identified hazards associated with the field activities, and directions to the nearest medical facility. Flame-resistant clothing, puncture-resistant sole inserts, and Level D protective equipment will be worn, as required. A copy of the HASP will be on site at all times while work is being performed. The HASP will apply to Stantec employees, Stantec's subcontractors, and visitors at the site.

3.3.2 Documentation Procedures

Data generated during the field investigation will be recorded on boring and well construction logs. The boring logs will include USCS descriptions, detailed lithologic descriptions, PID readings, length/percent recovery, sample collection intervals, and drilling method employed. The well construction logs will include screen, sand pack, wellbore seal, and surface completion details.

The field geologist will maintain a field logbook. At the end of each day of field activities, the notes will be dated and signed by the field geologist.

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The daily field logbook will contain information such as:

- Date
- Name, location, and objective of the work activities
- Weather conditions
- Equipment calibration information
- Personnel and visitors on site
- Photograph numbers and descriptions (if applicable)
- Description of decontamination activities (if applicable)
- Any deviations from the Work Plan
- Other relevant observations as the fieldwork progresses
- Sample collection intervals and times
- Problems and corrective actions

3.3.3 Boring Location and Utility Identification

Prior to any drilling or excavation, a call will be made to the New Mexico 811 “One Call” to verify utility clearance and to notify the operator. “One Call” will be notified that the soil boring location is staked or flagged and that the entire well pad and areas surrounding the boring should be marked. The clearance call must be made at least two working days prior to drilling, and site work must be completed within 15 days of the clearance. In addition, access will be coordinated with the current operator of the site prior to any drilling activities to allow location of any underground infrastructure and to comply with operator safety guidance.

3.3.4 Equipment Decontamination

Prior to drilling, down-hole equipment will be steam cleaned or scrubbed with a non-phosphate detergent (e.g., Liquinox®). Where feasible, equipment to be decontaminated will be disassembled to permit adequate cleaning of the internal portions of the equipment. Equipment to be steam cleaned will be placed into a self-contained decontamination trailer with metal cleaning racks that support the equipment for cleaning, rinsing, and air drying. Heavy waterproof gloves will be worn during steam cleaning to protect against skin contact with steam and potential contaminants and to reduce the potential for cross-contamination between samples.

3.3.5 Investigation-Derived Waste

The hydro-excavation spoils generated will be transported by hydro-excavation subcontractor to the Envirotech, Inc. (Envirotech) landfarm located near Bloomfield, New Mexico for disposal. Investigation-derived soil waste and wastewater will be containerized in drums and staged at the site for removal by a contracted transport and disposal. Soil waste will be disposed at the Envirotech landfarm and wastewater will be disposed by injection at the Agua Moss, Inc. facility near Bloomfield, New Mexico.

Other investigation-derived wastes (i.e., excess well materials, bags, buckets, gloves) and disposable equipment and PPE waste generated during field activities, including scrap PVC, concrete, steel, rope, disposable bailers, nitrile gloves, and Tyvek® suits, will be disposed in standard industrial dumpsters.

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3.3.6 Field Equipment Calibration Procedures

Regarding organic vapor meters, field personnel will use a 10.6 electron volt (eV) PID for screening soil samples during advancement of soil borings. This instrument will be calibrated prior to use according to the manufacturer's specifications. The instrument calibration will be checked at the beginning of each day of use and any time meter drift is suspected. Calibration information will be recorded in the field logbook.

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SECTION 4 - SCHEDULE

It is anticipated that monitoring point installation activities will commence the week of June 16, 2025. The anticipated scheduled start of the MDPE testing is late summer 2025. Utility locates must be verified prior to the work.

The results of the soil analytical results and MDPE testing will be documented in the 2025 Annual Report, which is anticipated to be submitted by April 1, 2026.

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PROPOSED MONITORING WELL AND SOIL BORING					
Location	Latitude	Longitude	Proposed Total Depth	Well Diameter	Screened Interval
MP-1	36.762888	-108.369636	30' BGS	2"	10' - 30' BGS
MP-2	36.762920	-108.369668	30' BGS	2"	10' - 30' BGS
MP-3	36.762246	-108.369934	60' BGS	2"	40' - 60' BGS
MP-4	36.762278	-108.36997	60' BGS	2"	40' - 60' BGS

LEGEND

MONITORING WELL

DESTROYED/ABANDONED PRAXAIR MONITORING WELL

PROPOSED FEATURES

PROPOSED MONITORING POINT

SCALE IN FEET

0

40

80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2025-02-24	SAH	SAH	SRV

TITLE:

PROPOSED MONITORING POINT LOCATIONS

PROJECT:

SAN JUAN RIVER GAS PLANT
KIRTLAND, NEW MEXICO

Stantec

Figure No.:

1

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 498694

CONDITIONS

Operator: El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002	OGRID: 7046
	Action Number: 498694
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
shanna.smith	Soil samples will be sampled at a minimum pursuant to 19.15.29.11 NMAC in proposed monitoring points	9/30/2025
shanna.smith	Wells need to be completed where screens are at least 5' above water table and 15' below.	9/30/2025
shanna.smith	MDPE data and information will be included in the updated Stage 2 Abatement Plan. Include amount of water and product removed. Follow MDPE Work Plan for Investigation-derived waste generated during MDPE Testing. Updated Stage 2 Abatement Plan will be submitted by December 31, 2025.	9/30/2025
shanna.smith	The updated Stage 2 Plan due October 24, 2025, is rescinded.	10/3/2025