



Stantec Consulting Services Inc.
11311 Aurora Avenue
Des Moines, Iowa 50322
Phone: (515) 253-0830
Fax: (515) 253-9592

REVIEWED

By Nelson Velez at 2:44 pm, Oct 19, 2022

July 6, 2022

VIA E-PERMITTING PORTAL

Mr. Nelson Valez
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

Review of the 2022 Monitoring Well Installation Activities Work Plan: **Content satisfactory**

1. Monitor well installations as described within this report is approved.
 2. Provide bore hole logs within the next annual report, again, as described in this report.
 3. Confirm and provide any waste generated during this activity is properly disposed.
- Submit the Annual Monitoring Report to the OCD no later than March 31, 2023.

RE: 2022 Monitoring Well Installation Activities Work Plan – San Juan River Gas Plant
El Paso Natural Gas Company
NMOCD Incident Number NAUTOFRM000157

Dear Mr. Valez:

Stantec, on behalf of El Paso Natural Gas Company, LLC (EPNG), is submitting the enclosed 2022 Well Installation Activities Work Plan (Work Plan) for the San Juan River Gas Plant Site (Site). The enclosed document contains the proposed methodology for the installation of two (2) new monitoring wells (MWs) at the Site. Unless otherwise noted, the procedures outlined in this Work Plan are to be completed in accordance with the requirements established in EPNG'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 July 27, 2022.

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.

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

/csh/lmd

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
2022 WELL INSTALLATION ACTIVITIES WORK PLAN
KIRTLAND, NEW MEXICO**

July 2022

Prepared by:

**Stantec Consulting Services Inc.
11311 Aurora Avenue
Des Moines, Iowa 50322
(515) 253-0830**

2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

TABLE OF CONTENTS

SECTION 1 - INTRODUCTION 1

SECTION 2 - SCOPE OF WORK 2

SECTION 3 - FIELD METHODS 3

 3.1 Soil Boring 3

 3.2 Monitoring Well Installation 4

 3.3 General Protocols 5

 3.3.1 Health and Safety 5

 3.3.2 Documentation Procedures 5

 3.3.3 Boring Locations and Utility Identification 5

 3.3.4 Equipment Decontamination 6

 3.3.5 Investigation-Derived Waste 6

 3.3.6 Field Equipment Calibration Procedures 6

SECTION 4 - SCHEDULE 7

LIST OF FIGURES

Figure 1 – San Juan River Gas Plant Proposed Wells

2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

SECTION 1 - INTRODUCTION

This Well Installation Activities Work Plan (Work Plan) presents the scope of work for the installation of two monitoring wells (MW-27 and MW-28) to be used to further assess the presence of hydrocarbons in soil and groundwater at the San Juan River Gas Plant Site (Site), located in Kirtland, New Mexico. There are currently twenty-one EPNG groundwater monitoring wells (W-2, MW-4, MW-6, MW-8, MW-9, and MW-11 through MW-26), at the Site. Measurable light non-aqueous phase liquid (LNAPL) is present in site monitoring well MW-20, which was completed in 2019 as part of ongoing site characterization activities. A source of LNAPL has not been found at suspected source areas east and southeast (generally up-gradient) of MW-20, nor in shallow soils around MW-20. Proposed monitoring well MW-27 is to be installed southwest of MW-20 to complete delineation of LNAPL in this direction. Proposed monitoring well MW-28 is to be installed to assess for hydrocarbons northwest of MW-20, near the former raw water pond and/or monitoring well PMW-2. The gas plant, formerly operated by the property owner CCI San Juan, LLC (CCI) is currently idled, although a Praxair nitrogen plant located on the Site is active. Access to the Site has been established by an access agreement with CCI. The location of MW-20, the proposed monitoring wells, and other pertinent features are depicted on Figure 1.

The purpose of this Work Plan is to provide the necessary field methods and implementation schedule for the monitoring well installation activities. Section 2 describes the Site and the purpose behind the proposed well installation activities. Section 3 provides details on the field methods to be used. Section 4 presents the anticipated implementation schedule.

2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

SECTION 2 - SCOPE OF WORK

Previous activities at the Site have helped delineate the extent of hydrocarbons present. Based on the data collected, the proposed wells are intended to provide additional assessment as to the source of LNAPL present in MW-20 and should help further delineate the extent of hydrocarbons. The scope of work includes well installation, waste management and disposal, and reporting.

Following installation, the new monitoring wells (MW-27 and MW-28) will be tied into the existing groundwater monitoring network for the Site.

2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

SECTION 3 - FIELD METHODS

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

3.1 SOIL BORING

The locations of the proposed monitoring wells were marked and staked by Stantec in April, following a ground penetrating radar survey of these areas. Once public underground utility locating activities have been completed, hydro-excavation equipment will be used to clear the well locations to a depth of at least 10-feet below ground surface (bgs) prior to advancing drill tooling. A rotosonic drill rig will be mobilized and used to advance a soil boring at each location to the target depths following completion of the utility clearance activities. The location of each proposed well is depicted on Figure 1.

Once soft-digging activities have been completed, soil sampling and screening will be conducted from the soft-digging termination depth to the base of the borehole using the rotosonic rig and continuous-core sampling methods. Borehole logging will include Unified Soil Classification System (USCS) soil descriptions for the entire depth of the boring. In addition to the USCS descriptions, the field geologist will provide a detailed description of each discrete lithologic unit.

Soil samples will be collected for field screening and potential laboratory analysis at 1-foot intervals from cores recovered at 10-foot intervals. After the sample core is collected, the field personnel will field screen using a pre-calibrated photoionization detector (PID) and record the readings. The field screening 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 impacts. The screening, in addition to visual and olfactory observations (e.g., observing apparent hydrocarbon staining), will aid in identifying the portion of the sample interval to retain for potential laboratory analysis (i.e., the portion with the greatest suspected hydrocarbon impact).

Based on the field screening, one soil sample per boring will be collected from the core representing the greatest suspected hydrocarbon impact. Additional soil samples may be retained from the soil boring if it may help characterize the vertical extent to hydrocarbon impacts at this location. No soil samples will be collected below the field-apparent water table. If the current core section being screened does not appear to be impacted to a level equal to or greater than a preceding core section, one soil sample will be collected immediately above the field-interpreted and/or gauged water table for laboratory analysis. The sample(s) retained for potential laboratory analysis will be placed in a laboratory-provided 4-ounce glass jar(s), sealed, labeled, and stored on ice. After the boring and soil screening are completed, the collected sample associated with the highest PID reading will be retained and shipped in an ice-filled cooler under standard chain-of-custody to Eurofins Environment Testing Southeast, LLC (Eurofins) in Pensacola, Florida. Samples not retained for analysis will be disposed of with the soil cuttings.

2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

The submitted soil samples will be analyzed per the guidance established by Attachment A to Order No. R-13506-D, 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 8260; gasoline-range organics, diesel-range organics, and oil-range organics by EPA Method 8015M; and chlorides by EPA Method 300. Submitted soil samples will also be analyzed for New Mexico Water Quality Control Commission Control-regulated metals, including aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, iron, lead, manganese, mercury, molybdenum, nickel, and selenium, using USEPA SW 846 Methods 6010B and 7471A.

3.2 MONITORING WELL INSTALLATION

The monitoring wells will be constructed of 4-inch-diameter, Schedule 40, 0.010-slot polyvinyl chloride (PVC) screen and 4-inch-diameter, Schedule 40 PVC riser casing. For each well, a 25-foot screen will be installed to a depth of 25 to 50-feet bgs, which is anticipated to intersect the groundwater surface and provide sufficient water column for sample collection. The riser casing will extend from the top of the screen to approximately 2.5 feet above the ground surface. 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 6 inches below the bottom of the well vault. Silica sand will be placed from 6 inches below the bottom of the well vault (approximately 2.5 feet bgs) to within approximately 1 foot of the ground surface, or to a field-determined depth based on concrete pad placement.

The new monitoring wells will be finished with stick-up completions, with the riser casing extending from the top of screen to approximately 2.5-feet above ground surface. 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 below the bottom of the ground surface. A locking, protective steel stick-up well casing will be installed in a concrete pad, extending from 3-feet above ground surface to 2-feet bgs. Concrete-filled steel bollards will be placed around the steel stick-up well casing on four sides.

Monitoring well development will be performed using surging and bail methods to help remove sediment until the well runs dry. 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. HydraSleeve™ samplers will be placed in each monitoring well following development activities, with the HydraSleeve™ set approximately 5-feet below the water table. The top-of-casing elevations of the newly installed monitoring wells will be surveyed-in by Stantec.

2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

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 log book. At the end of each day of field activities, the notes will be dated and signed by the field geologist.

The daily field log book 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 Locations 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 borings should be marked. The clearance call must be made at least two working days prior to drilling, and site work must be completed within five days of the

2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

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 Riley to the 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 company, also to the Envirotech landfarm.

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.

3.3.6 Field Equipment Calibration Procedures

With regard to 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 log book.

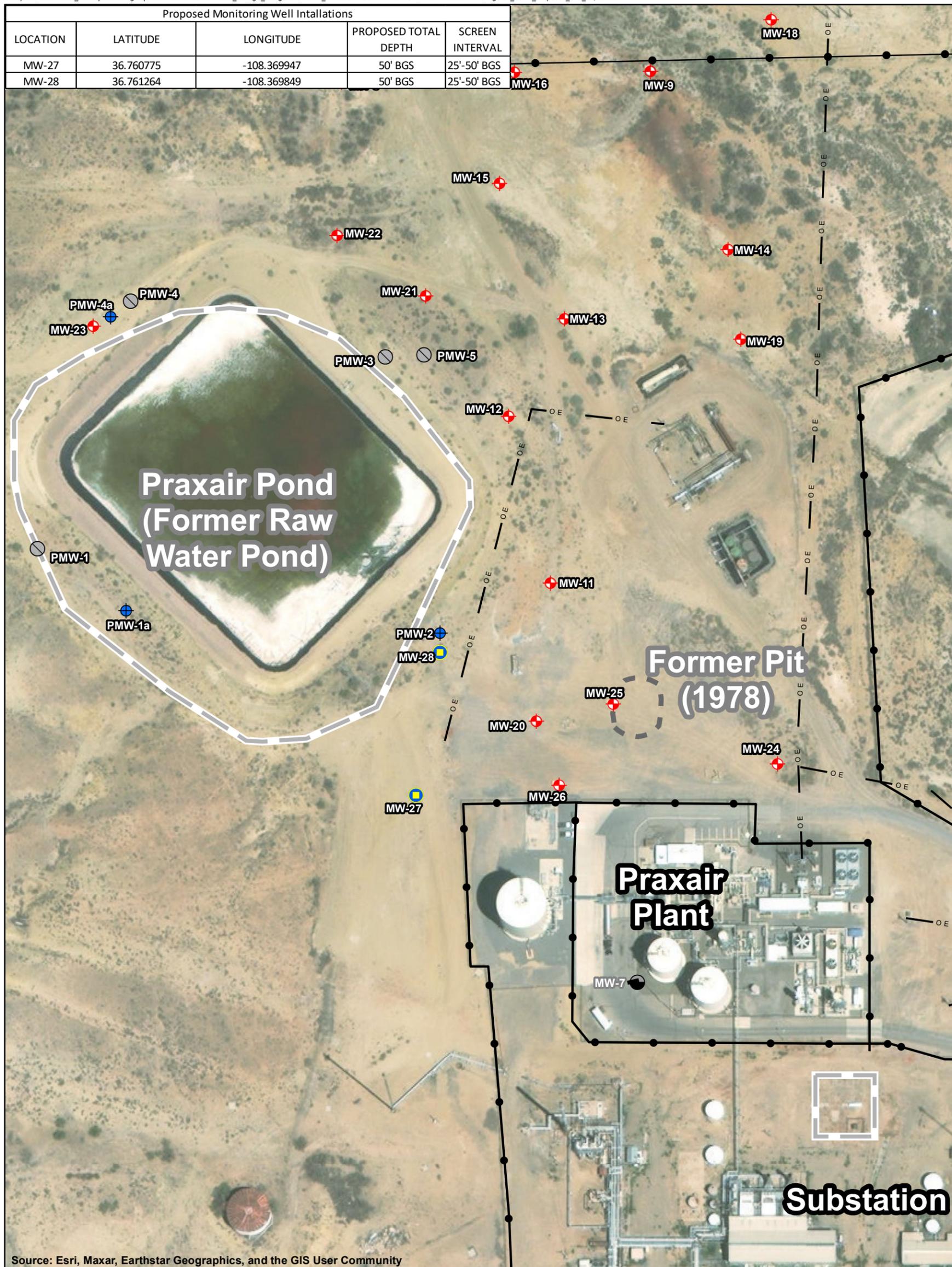
2022 WELL INSTALLATION ACTIVITIES WORK PLAN
SAN JUAN RIVER GAS PLANT SITE, KIRTLAND, NEW MEXICO

SECTION 4 - SCHEDULE

It is anticipated that monitoring well installation activities will commence the week of July 27, 2022. Utility locates must be verified prior to the work. Soil and groundwater analytical results and recommendations from the field activities will be provided in the 2022 Annual Report, anticipated to be submitted by April 1, 2023.

Following installation, the new monitoring wells will be prepared for groundwater sample collection. Assuming free-phase petroleum hydrocarbons are not encountered; following development, a HydraSleeve™ no-purge groundwater sampler and tether will be placed in the new wells. The new wells will be sampled during the next annual sampling event planned for Fall 2022.

\\Corp.ads\data\Virtual_Workspace\workgroup\1937\Active\193700102103_data\gis_cad\gis\GIS-NEW_MXD\SAN JUAN RIVER GAS PLANT\2022 MAPS\Figure1_SJRP_Proposed_MW_27,28.mxd



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

LEGEND

- ◆ MONITORING WELL
- PROPOSED MONITORING WELL
- ⊕ PRAXAIR MONITORING WELL
- ⊙ DESTROYED/ABANDONED PRAXAIR MONITORING WELL
- DESTROYED/ABANDONED EPNG MONITORING WELL
- HISTORICAL FEATURE
- OVERHEAD ELECTRIC
- +— FENCE
- GATE
- - - FLARE PIT



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2022-05-18	SLG	SLG	SRV

TITLE: **PROPOSED MONITORING WELL LOCATIONS**

PROJECT: **SAN JUAN RIVER GAS PLANT KIRTLAND, NEW MEXICO**

Stantec Figure No.: **1**

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
District II
 811 S. First St., Artesia, NM 88210
 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 123175

CONDITIONS

Operator: El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002	OGRID: 7046
	Action Number: 123175
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvez	Review of the 2022 Monitoring Well Installation Activities Work Plan: Content satisfactory 1. Monitor well installations as described within this report is approved. 2. Provide bore hole logs within the next annual report, again, as described in this report. 3. Confirm and provide any waste generated during this activity is properly disposed. Submit the Annual Monitoring Report to the OCD no later than March 31, 2023.	10/19/2022