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

**REVIEWED**
**By Mike Buchanan at 10:05 am, Nov 07, 2023**

June 23, 2023

**VIA E-PERMITTING PORTAL**

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

Review of the Well Monitoring Installation Work Plan for State Gas Com N#1 Pit Site
1. Content Satisfactory
2. Please submit any lab analysis to NMOCD for regulation derived waste.
3. Submit and upload lab analysis results for BTEX, TPH, and Chlorides from operations and installment of MW-20.
4. Please submit all relevant permits issued by the NMOSE.

RE: Monitoring Well Installation Work Plan
State Gas Com N#1 Pit Site
El Paso CGP Company
NMOCD Incident Number nAUTOfAB000668

Dear Mr. Velez,

On behalf of El Paso CGP Company, LLC (EPCGP), Stantec Consulting Services, Inc. (Stantec) is submitting the enclosed Monitoring Well Installation Work Plan (Work Plan) for the State Gas Com N#1 Pit Site (Site). The enclosed document contains the proposed methodology for the installation of one new monitoring well (MW-20) to delineate the extent of hydrocarbon impacts west of existing monitoring well MW-6. Additional assessment of hydrocarbon impacts around and north of the former EPCGP pit are planned at a later date and will be detailed in a separate work plan.

Unless otherwise noted, the procedures outlined in this Work Plan are to be completed in accordance with 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. Pending approval of the Work Plan by the State Land Office (SLO) Environmental Compliance Office (ECO), obtaining an updated SLO water easement, and obtaining New Mexico Office of the State Engineer well permits, the scope of work contained herein is scheduled to begin the week of July 24, 2023.

Please contact Mr. Joseph Wiley of EPCGP 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

cc: Joseph Wiley, EPCGP
Tami Knight, SLO-ECO (Water Easement WM-230)

El Paso CGP Company, LLC
1001 Louisiana
Houston, Texas 77002

# State Gas Com N#1 Pit Site
# NMOCD Incident Number: nAUTOfAB00668
# MONITORING WELL INSTALLATION WORK PLAN
# SAN JUAN RIVER BASIN, NEW MEXICO

**JUNE 2023**

**Prepared by:**

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

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## LIST OF FIGURES

## SECTION 1 - INTRODUCTION

This Monitoring Well Installation Work Plan (Work Plan) presents the scope of work for the installation of one new monitoring well (MW-20) at the former El Paso CGP Company, LLC (EPCGP) pit groundwater remediation site, located in the San Juan River Basin near Farmington, New Mexico. There are currently seventeen monitoring wells (MW-1 through MW-6, and MW-9 through MW-19) and three test wells (TW-1 through TW-3) at the Site. Monitoring well MW-20 is proposed to complete delineation of hydrocarbons in groundwater to the west of MW-6. The proposed monitoring well, existing monitoring wells, and other 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 activities. Section 3 provides details on the field methods to be used. Section 4 presents the anticipated implementation schedule.

## SECTION 2 - SCOPE OF WORK

The installation of monitoring well MW-20 is intended to better delineate the extent of hydrocarbons west of monitoring well MW-6. The scope of work includes well installation, data processing and reporting, and waste management and disposal. Details of the proposed installation of monitoring well MW-20 are provided below.

There are currently seventeen monitoring wells and three test wells at the Site. The location of existing wells and proposed monitoring well MW-20 is depicted on Figure 1.

## SECTION 3 - FIELD METHODS

The following subsections describe field procedures to be followed during the site activities. Prior to conducting monitoring well installation activities, a revised water easement will be obtained from the State Land Office (SLO), and approval of this Work Plan will be obtained from the SLO Environmental Compliance Office. A permit to install the monitoring well will also be obtained from the New Mexico Office of the State Engineer.

### 3.1 MONITORING WELL ADVANCEMENT

The location of the proposed monitoring well will be staked by Stantec prior to completing utility clearance through the New Mexico 811 "One Call" system. A Stantec geologist will oversee the utility clearance activities. The final location of the monitoring well may be adjusted based on the results of the public utility locate activities. Once underground utility locating activities have been completed, hydro-excavation equipment will be used to clear the well location to a depth of at least 10 feet below ground surface (bgs) prior to advancing drill tooling. The cleared location will be covered with wooden or steel plates and marked "hole" until well advancement begins.

Following the completion of utility clearance activities, a truck-mounted, rotosonic drill rig will be mobilized and used to advance the well to the target depth noted on Figure 1. A Stantec geologist will oversee the drilling activities, complete soil sample logging, retain samples for laboratory analysis, and document well construction. Soil sampling will be performed to the termination depth (up to 80 feet bgs) 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 one (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 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 four (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 (Eurofins), in Pensacola, Florida. Samples not retained and submitted for laboratory analysis will be disposed of with the soil cuttings. The submitted soil samples will be analyzed 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 WELL INSTALLATION

The planned total depth of proposed monitoring well is 80 feet bgs. The monitoring well will be constructed with 25 feet of 2-inch diameter, Schedule 40, 0.010-slot PVC screen and 2-inch diameter, schedule 40 PVC riser casing. The proposed screened depth is intended to intersect the water table with 15 feet of screen submerged and 10 feet of screen above the water table. 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 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.

To complete the well, a locking, protective steel stick-up well casing will be installed within a concrete pad on the ground surface from approximately 3 feet above ground surface to 2 feet bgs. A water-tight gripper plug will be placed on the top of the monitoring well riser. Protective bollards (three) will be installed around the well completion. Following installation, the well completion and protective bollards will be painted safety-yellow, and the well identifier stenciled on the stick-up completion. The newly installed well will be secured with a zip-tie.

Well development will be performed using well swab surging and pumping until sediment has been removed and visibly clear water is observed or the well runs dry. Decontamination and development water will be placed in a poly-tank.

Assuming free-phase petroleum hydrocarbons are not encountered; following development, a HydraSleeve™ no-purge groundwater sampler and tether will be placed in the new monitoring well. The sampler will be placed at least five (5) feet below the field-apparent water table.

The top-of-casing and ground surface elevation and location of the newly installed monitoring well will be surveyed-in by a New Mexico-licensed surveyor. The surveyor will also update the site plan with the location of identified utilities not included in previous surveys.

## 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 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 a boring and well construction log. The boring log will include USCS descriptions, detailed lithologic descriptions, PID readings, length/percent recovery, sample collection intervals, and drilling method employed. The well construction log 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.

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 monitoring well and/or soil boring location is staked or flagged and that the entire area surrounding the boring location should be marked. The clearance call must be made at least two working days prior to drilling, and site work must be completed within 14 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.

The SLO-ECO will also be notified of the dates of field activities at least 48 hours prior to start.

### 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-excavated spoils generated will be transported to the Envirotech Land Farm located near Bloomfield, New Mexico (land farm) for disposal. Investigation-derived soil waste will be containerized in a roll-off staged at the Site. The driller will have a front-end loader or equivalent equipment on site to load cuttings as they are generated. Stantec will coordinate the removal and transport of the roll-off from the Site to the land farm for disposal.

A 55-gallon drum or 330-gallon tote will be used to store well development and decontamination water. An additional tote will be used to store clean water for decontamination activities, if necessary. The drums and totes will be staged on the ground in the work area. Following completion of the project, the wastewater will be transported to the land farm for disposal.

Other investigation-derived wastes (i.e., excess well materials, bags, buckets, gloves) will be removed from the Site by the driller for disposal as general construction/demolition debris.

### 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.

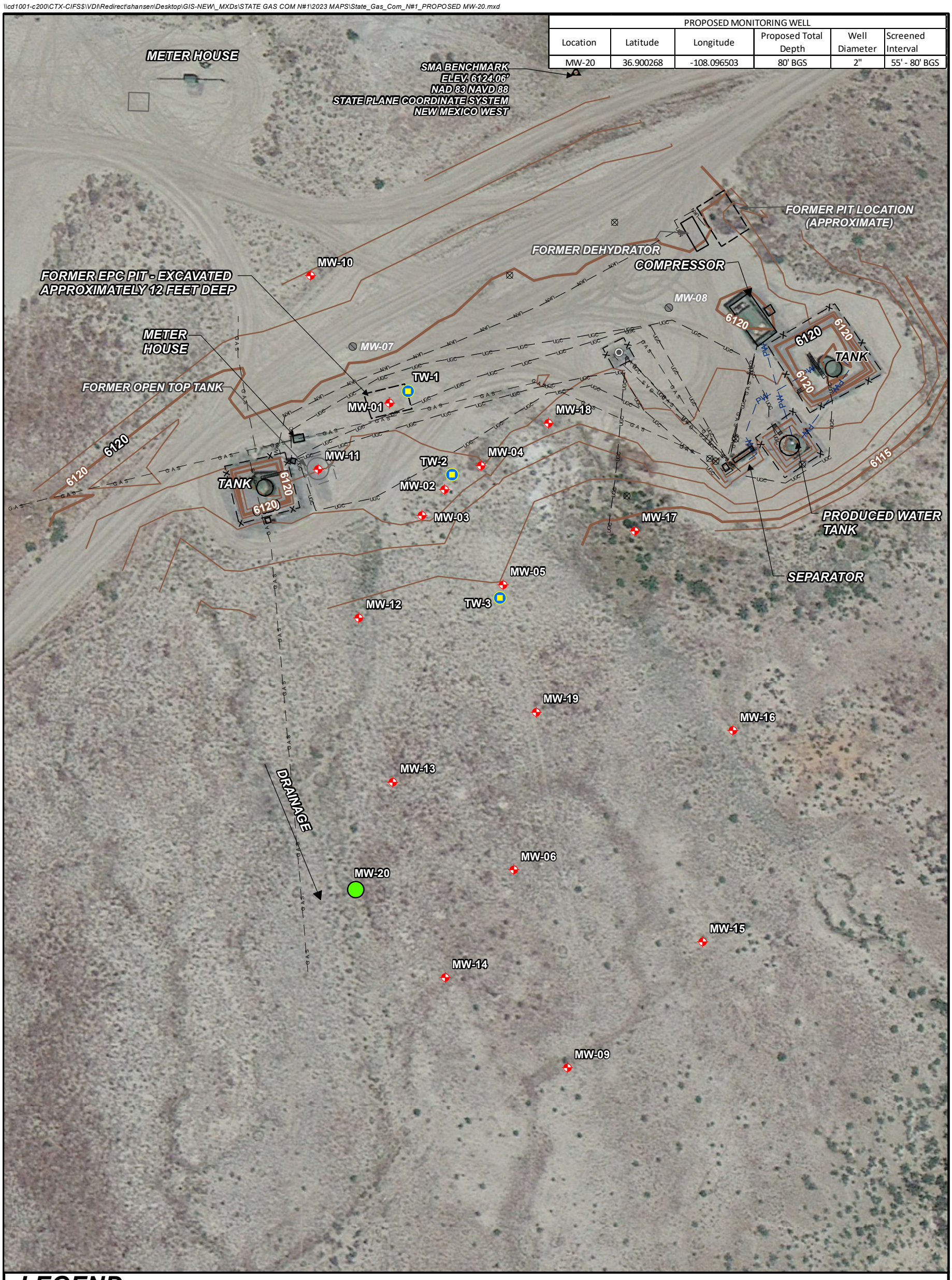
## SECTION 4 - SCHEDULE

It is anticipated that the activities herein will commence the week of July 24, 2023. 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 2023 Annual Report, anticipated to be submitted by April 1, 2024.

# FIGURE

\\cd1001-c200\CTX-CIFS$\VDI\Redirect\shansen\Desktop\GIS-NEW_MXDs\STATE GAS COM N#1\2023 MAPS\State_Gas_Com_N#1_PROPOSED MW-20.mxd

| PROPOSED MONITORING WELL | | | | | |
|---|---|---|---|---|---|
| Location | Latitude | Longitude | Proposed Total Depth | Well Diameter | Screened Interval |
| MW-20 | 36.900268 | -108.096503 | 80' BGS | 2" | 55' - 80' BGS |




## LEGEND:

### EXISTING SITE FEATURES

- 6120 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- —X— - FENCE
- G A S - NATURAL GAS LINE
- PW - PRODUCED WATER LINE
- UKN - UNKNOWN LINE
- UGC - UNDERGROUND CABLE
- ABANDONED MONITORING WELL
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD
- TEST WELL

### PROPOSED SITE FEATURES

- MONITORING WELL

N

SCALE IN FEET

0 50 100

| REVISION | DATE | DESIGN BY | DRAWN BY | REVIEWED BY |
|---|---|---|---|---|
| | 2023-05-22 | SLG | SLG | SV |

TITLE:

**PROPOSED MONITORING WELL**

PROJECT:

**STATE GAS COM N#1**
**SAN JUAN RIVER BASIN**
**SAN JUAN COUNTY, 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 233089

## CONDITIONS

| Operator: | OGRID: |
|---|---|
| El Paso Natural Gas Company, L.L.C<br>1001 Louisiana Street<br>Houston, TX 77002 | 7046 |
| | Action Number:<br>233089 |
| | Action Type:<br>[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| michael.buchanan | Review of the Well Monitoring Installation Work Plan for State Gas Com N#1 Pit Site 1. Content Satisfactory 2. Please submit any lab analysis to NMOCD for regulation derived waste. 3. Submit and upload lab analysis results for BTEX, TPH, and Chlorides from operations and installment of MW-20. 4. Please submit all relevant permits issued by the NMOSE. | 11/7/2023 |