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REVIEWED

By Nelson Velez at 10:40 am, Nov 22, 2022

September 27, 2022

Accepted for the record. OCD approves the monitor well installation work plan for sampling stations identified as MW-11 & MW-12.

SUBMITTED VIA E-PERMITTING PORTAL

Mr. Nelson Velez, Environmental Specialist - Advanced
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

**RE: 2022 Additional Monitoring Well Installation Activities Work Plan – Fogelson
#4-1 Site
El Paso CGP Company – Pit Groundwater Remediation Sites
NMOCD Incident Number: nAUTOAB000192**

Dear Mr. Velez:

Stantec Consulting Services Inc. (Stantec), on behalf of El Paso CGP Company, LLC (EPCGP), is submitting the enclosed 2022 Additional Monitoring Well Installation Activities Work Plan (Work Plan) for the Fogelson #4-1 Site (Site). The enclosed document contains the proposed methodology for the installation of two monitoring wells; MW-11 and MW-12, at the Site. Unless otherwise noted, 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 October 3, 2022.

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.

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

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

cc: Joseph Wiley, EPCGP (via electronic mail)
Marjorie Brown, Bureau of Land Management, Farmington Office (Grant NMNM133839)
(via electronic mail)



**2022 ADDITIONAL MONITORING
WELL INSTALLATION WORK PLAN**

FOGELSON #4-1 SITE
NMOCD Incident # nAUTOfAB000192
SAN JUAN COUNTY, NEW MEXICO

Prepared for:

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

Prepared by:

Stantec Consulting Services Inc.
11311 Aurora Avenue
Des Moines, Iowa 50322

September 27, 2022

2022 MONITORING WELL INSTALLATION WORK PLAN
FOGELSON #4-1 PIT SITE, SAN JUAN COUNTY, 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	3
3.3 GENERAL PROTOCOLS.....	4
3.3.1 Health and Safety	4
3.3.2 Documentation Procedures	4
3.3.3 Boring Locations and Utility Identification	5
3.3.4 Equipment Decontamination	5
3.3.5 Investigation-Derived Waste	5
3.3.6 Field Equipment Calibration Procedures	5
SECTION 4 - SCHEDULE.....	6

LIST OF FIGURES

Figure 1 – Fogelson 4-1 - Proposed Monitoring Well Locations

**2022 MONITORING WELL INSTALLATION WORK PLAN
FOGELSON #4-1 PIT SITE, SAN JUAN COUNTY, NEW MEXICO**

SECTION 1 - INTRODUCTION

This Additional Monitoring Well Installation Work Plan (Work Plan) presents the scope of work to be completed to install two monitoring wells at the former El Paso CGP Company, LLC (EPCGP) Fogelson #4-1 remediation site (Site) located in the San Juan River Basin near Farmington, New Mexico. There are currently ten EPCGP monitoring wells (MW-1R, and MW-2 through MW-10) at the Site. Groundwater concentrations in excess of New Mexico Water Quality Control Commission (NMWQCC) standards are present in monitoring well MW-10, where additional monitoring wells are not present to the west and northwest. The proposed installation of MW-11 and MW-12 will provide delineation monitoring points to the west and northwest of MW-10, respectively.

The purpose of this Work Plan is to provide the field methods and an implementation schedule for installation of monitoring wells MW-11 and MW-12. Section 2 describes the Site and the purpose behind the proposed monitoring well installations. Section 3 provides details on the field methods to be used. Section 4 presents the anticipated implementation schedule.

**2022 MONITORING WELL INSTALLATION WORK PLAN
FOGELSON #4-1 PIT SITE, SAN JUAN COUNTY, NEW MEXICO**

SECTION 2 - SCOPE OF WORK

The proposed monitoring wells (designated MW-11 and MW-12) are intended to provide additional sampling locations west and northwest of MW-10, respectively, where groundwater concentrations are in excess of NMWQCC standards. Details of the proposed installation of monitoring wells MW-11 and MW-12 are provided below.

There are currently ten monitoring wells (MW-1R, and MW-2 through MW-10) at the Site. Proposed monitoring wells MW-11 and MW-12 will be installed to the west and northwest, respectively, of existing monitoring well MW-10.

The existing and proposed monitoring well locations are depicted on Figure 1.

**2022 MONITORING WELL INSTALLATION WORK PLAN
FOGELSON #4-1 PIT SITE, SAN JUAN COUNTY, NEW MEXICO****SECTION 3 - FIELD METHODS**

The following subsections describe field procedures to be followed during the site activities. Prior to conducting monitoring well installation activities, permits for the two monitoring wells will be obtained from the New Mexico Office of the State Engineer (NMOSE).

3.1 SOIL BORING

A truck-mounted, hollow-stem auger drill rig will be mobilized to the Site after underground utility and line locates have been completed. The drill rig will be used to advance two soil borings each to an anticipated depth of 55 feet below ground surface (bgs), to facilitate installation of monitoring wells MW-11 and MW-12. Prior to advancing the soil borings, hydro-excavation will be utilized to clear the borehole to a depth of at least five feet bgs to confirm no unmarked subsurface utilities or other obstructions are present.

Once clearing activities have been completed, borehole advancement will be conducted from the clearing termination depth to the base of the borehole using hollow-stem auger and continuous-core sampling methods. Soil samples will be collected during advancement and logged using Unified Soil Classification System (USCS) soil descriptions. 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 one-foot intervals, where possible, from a five-foot continuous sample barrel or equivalent sampler. After the sample core is collected, 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 whether a portion of the sample interval should be retained for potential laboratory analysis (i.e., suspected of having a hydrocarbon impact).

Soil samples retained for potential laboratory analysis 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, one soil sample per soil boring, associated with the highest PID reading above the field-interpreted and/or gauged water table, 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 for 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 8021B; 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

Monitoring wells MW-11 and MW-12 will be constructed of 2-inch-diameter, Schedule 40, 0.010-slot polyvinyl chloride (PVC) screen and 2-inch-diameter, Schedule 40 PVC riser casing. A 25-foot screen will be installed to depths described in Figure 1, which is anticipated to intersect the groundwater surface (approximately 17 feet of well screen below the water table and approximately 8 feet of well screen above the water table) 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

**2022 MONITORING WELL INSTALLATION WORK PLAN
FOGELSON #4-1 PIT SITE, SAN JUAN COUNTY, NEW MEXICO**

migration of surface water. Bentonite grout will be placed above the bentonite chips to 6 inches below the bottom of the well vault.

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. Silica sand will be placed from 6 inches below the bottom of the protective well casing (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. Three recycled steel bollards will be placed around the concrete pad to protect the well protective casing. Once installed, the bollards and stick-up completions will be painted in safety yellow.

Monitoring well development will be performed using a surge block and down-hole pump until sediment has been removed and visibly clear water is observed or the well runs dry. Upon completion of development, the well will be fitted with HydraSleeve™ no-purge groundwater sampling device. Stantec will survey the location and elevation of the new monitoring wells.

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 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.

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

**2022 MONITORING WELL INSTALLATION WORK PLAN
FOGELSON #4-1 PIT SITE, SAN JUAN COUNTY, NEW MEXICO**

- 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 locations are staked or flagged and that the entire Site 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 fifteen 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

Soil cuttings generated from drilling activities will be containerized in labeled 55-gallon drums and staged on site for removal by a contracted transport and disposal company.

Decontamination and purge water generated through the development of the new monitoring wells will be containerized in labeled 55-gallon drums and staged on site for removal with the soil cuttings.

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

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 the soil boring. 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.

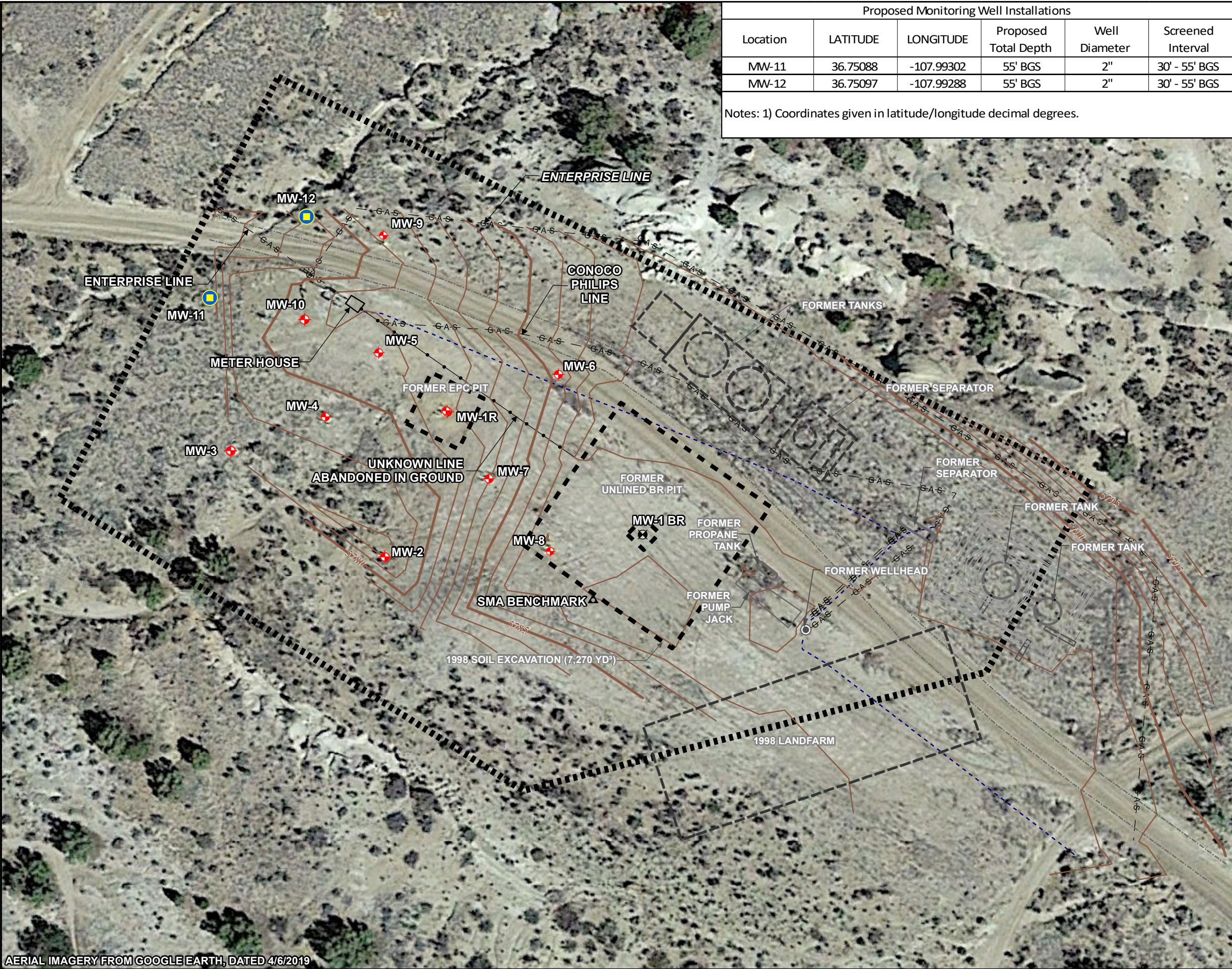
**2022 MONITORING WELL INSTALLATION WORK PLAN
FOGELSON #4-1 PIT SITE, SAN JUAN COUNTY, NEW MEXICO**

SECTION 4 - SCHEDULE

It is anticipated that well installation activities will commence the week of October 3, 2022. Utility locates must be verified prior to the work. Following installation, the new monitoring wells will be prepared for groundwater sample collection. Assuming LNAPL is not encountered; following development, a HydraSleeve™ no-purge groundwater sampler and tether will be placed in each of the new wells. The new wells will be incorporated into the normal groundwater monitoring schedule, currently on a semi-annual basis, with the first sampling event expected to occur in November 2022.

The well installation and soil sample results, well construction logs, and groundwater analytical results will be documented in the 2022 Annual Report, anticipated to be submitted by April 1, 2023.

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Proposed Monitoring Well Installations					
Location	LATITUDE	LONGITUDE	Proposed Total Depth	Well Diameter	Screened Interval
MW-11	36.75088	-107.99302	55' BGS	2"	30' - 55' BGS
MW-12	36.75097	-107.99288	55' BGS	2"	30' - 55' BGS
Notes: 1) Coordinates given in latitude/longitude decimal degrees.					

LEGEND:

APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET

ACCESS ROAD

FORMER PIT OR EXCAVATION

GAS LINE

UNDERGROUND CABLE

RIGHT OF WAY BOUNDARY

MONITORING WELL

PROPOSED GROUNDWATER MONITORING WELL LOCATION

FORMER WELLHEAD

SMA BENCHMARK

FORMER MONITORING WELL (NOT EPCGP-OWNED)

SCALE IN FEET

04080

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2022-08-17	SAH	SAH	SRV

TITLE:

FOGELSON 4-1 COM #14
PROPOSED MONITORING
WELL LOCATIONS

PROJECT:

FOGELSON 4-1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

Figure No.:

1

Stantec

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 4/6/2019

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 146946

CONDITIONS

Operator: El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002	OGRID: 7046
	Action Number: 146946
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record. OCD approves the monitor well installation work plan for sampling stations identified as MW-11 & MW-12.	11/22/2022