APPROVED
By Nelson Velez at 3:56 pm, Jan 03, 2022

Stantec Consulting Services Inc.
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Review of the 2021 MONITORING WELL REPLACEMENT WORK PLAN:
Content satisfactory

1. Monitor well replacement and abandonment is approved
2. Soil and groundwater analytical results and recommendations from the field activities will be provided in the 2021 Annual Report to be submitted by March 31, 2022

June 28, 2021

SUBMITTED VIA E-PERMITTING PORTAL

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

RE: 2021 Monitoring Well Replacement Work Plan – Miles Federal #1A Site
El Paso CGP Company – Pit Groundwater Remediation Sites
NMOCD Incident Number: nAUTOfAB000391
NMOCD Order Number: 3RP-223-0

Dear Mr. Smith:

Stantec Consulting Services Inc. (Stantec), on behalf of El Paso CGP Company, LLC (EPCGP), is submitting the enclosed 2021 Monitoring Well Replacement Work Plan (Work Plan) for the Miles Federal #1A Site (Site). The enclosed document contains the proposed methodology for abandonment and replacement of monitoring well MW-1 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 July 19, 2021.

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 (via electronic mail)
Katie White Bull, Bureau of Land Management, Farmington Office (via electronic mail)

2021 MONITORING WELL REPLACEMENT WORK PLAN

MILES FEDERAL #1A SITE
NMOCD Incident #nAUTOfAB000391
NMOCD Order #3RP-223
SAN JUAN COUNTY, NEW MEXICO

Prepared for:

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

Prepared by:

Stantec Consulting Services Inc.
11153 Aurora Avenue
Des Moines, Iowa 50322

June 28, 2021

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SECTION 1 - INTRODUCTION

This Monitoring Well Replacement Work Plan (Work Plan) presents the scope of work to be completed to properly abandon one existing monitoring well and install and sample a replacement monitoring well at the former El Paso CGP Company, LLC (EPCGP) Miles Federal #1A remediation site (Site) located in the San Juan River Basin near Farmington, New Mexico. There are currently three EPCGP monitoring wells (MW-1 through MW-3) at the Site. Monitoring well MW-1 has historically been nearly dry and a deeper replacement monitoring well (MW-1R) is expected to provide more representative groundwater samples at this location.

The purpose of this Work Plan is to provide the field methods and an implementation schedule for abandonment of existing monitoring well MW-1 and installation of replacement monitoring well MW-1R, and sampling activities. Section 2 describes the Site and the purpose behind the proposed monitoring well replacement. Section 3 provides details on the field methods to be used. Section 4 presents the anticipated implementation schedule.

SECTION 2 - SCOPE OF WORK

The replacement monitoring well (designated MW-1R) is intended to provide more representative groundwater samples from this location, to move the Site toward regulatory closure. Details of the proposed replacement of monitoring well MW-1 is provided below.

There are currently three monitoring wells (MW-1 through MW-3) at the Site. Monitoring well MW-1 which has historically nearly been dry will be abandoned and replacement monitoring well MW-1R will be installed near existing monitoring well MW-1 as shown on Figure 1.

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

SECTION 3 - FIELD METHODS

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

3.1 WELL ABANDONMENT

Existing monitoring well MW-1 will be plugged and abandoned in accordance with New Mexico Office of the State Engineer requirements. Well abandonment activities will consist of first removing the protective casing and well pad. The PVC well casing will be removed at a depth of 1 foot below ground surface (bgs), and the well grouted. Following completion of the plugging activities, the former well pad area will be graded with surrounding surface soils using hand-tools.

3.2 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 a soil boring to an anticipated depth of 45 feet bgs, to facilitate installation of monitoring well MW-1R. Prior to advancing the soil boring, soft-digging methods 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 soft digging activities have been completed, borehole advancement will be conducted from the soft-digging 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 at 1 foot intervals, where recovery is possible, for field screening and logging. 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. As soil boring DP-01, located adjacent to the MW-1R location, was previously advanced and soil samples collected and submitted for laboratory analysis, no soil samples will be retained for laboratory analysis.

3.3 MONITORING WELL INSTALLATION

Replacement monitoring well MW-1R 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. A locking, protective steel well vault will be installed from 3 feet above ground surface to 2 feet bgs within a concrete pad on the ground surface. Concrete-filled steel bollards will be placed around the concrete pad to protect each well vault.

A 20-foot well screen will be installed at an estimated depth of 45 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.

Monitoring well development will be performed using a well swab 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 newly installed monitoring well will be fitted with a Hydrasleeve™ no-purge groundwater sampling device to facilitate future groundwater sampling. Development and decontamination water and soil cuttings will be stored in labeled 55-gallon drums and staged on site.

Following installation, Stantec will survey the location and elevation of the replacement monitoring well.

3.4 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.

3.4.1 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. Typically, subcontractors will operate under their own HASP, which will be reviewed and referenced by Stantec prior to the start of the project.

3.4.2 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 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

3.4.3 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 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.

3.4.4 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.

3.4.5 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 well 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. In the event the waste is grossly contaminated, it will be containerized for proper disposal along with the other investigation-derived waste.

3.4.6 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 log book.

SECTION 4 - SCHEDULE

It is anticipated that well replacement activities will commence the week of July 19, 2021. Utility locates must be verified prior to the work. Groundwater analytical results and recommendations from the field activities will be provided in the 2021 Annual Report, anticipated to be submitted by March 2022.

Following installation, the new monitoring well 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 well will be sampled on a semi-annual basis, with the first sampling event expected to occur prior to December 2021.

FIGURE

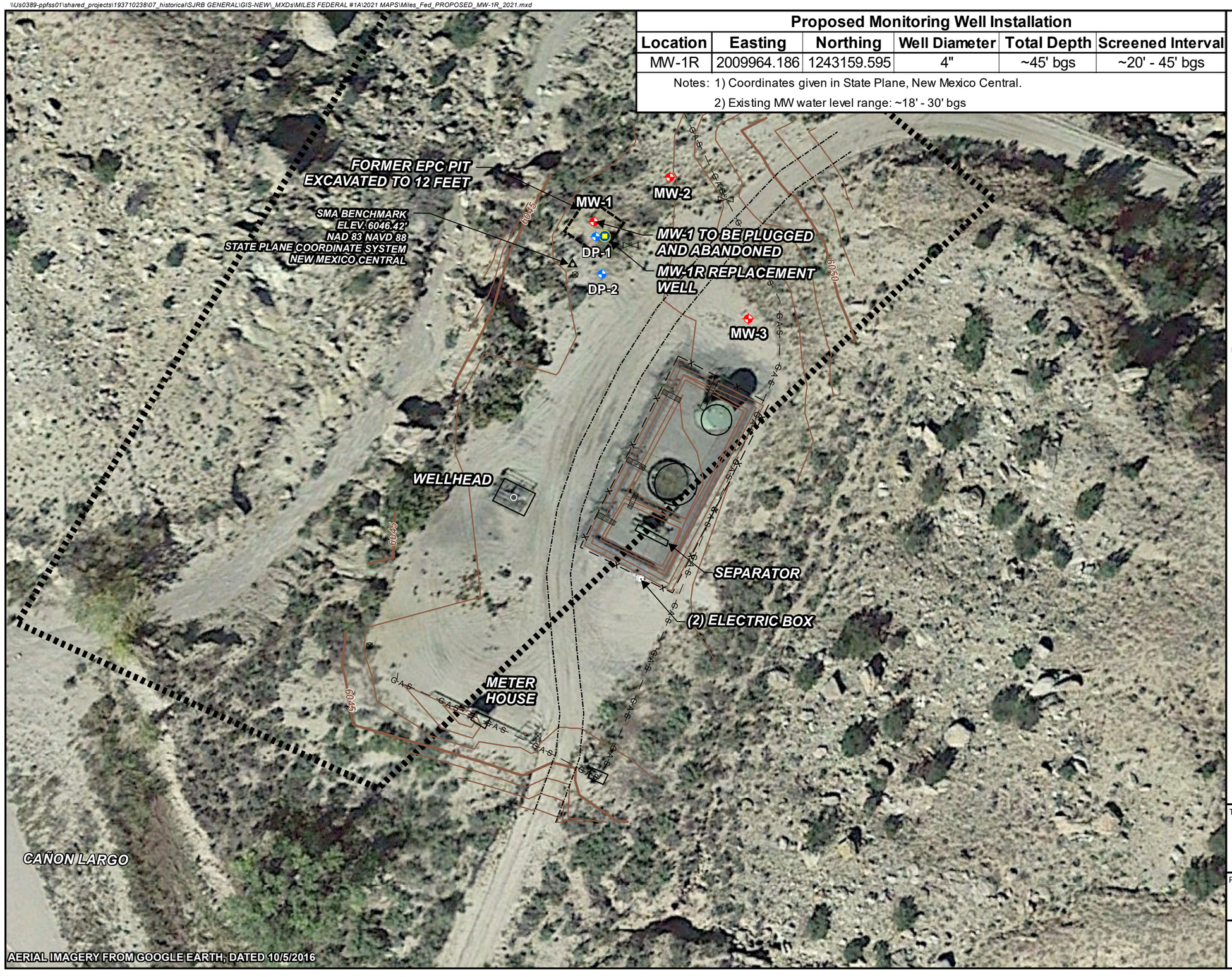
\\Us0389-ppfss01\shared_projects\193710238\07_historical\SJRB GENERAL\GIS-NEW_MXDs\MILES FEDERAL #1A\2021 MAPS\Miles_Fed_PROPOSED_MW-1R_2021.mxd

Proposed Monitoring Well Installation

Location	Easting	Northing	Well Diameter	Total Depth	Screened Interval
MW-1R	2009964.186	1243159.595	4"	~45' bgs	~20' - 45' bgs

Notes: 1) Coordinates given in State Plane, New Mexico Central.

2) Existing MW water level range: ~18' - 30' bgs



LEGEND:

- 6050 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- FENCE
- GAS VALVE
- MONITORING WELL
- PROPOSED MONITORING WELL
- SOIL BORING
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD
- RIGHT OF WAY BOUNDARY

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	6/24/2021	SLG	SLG	SRV

TITLE:

PROPOSED MONITORING WELL REPLACEMENT

PROJECT:

MILES FED #1A
RIO ARRIBA 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 34167

CONDITIONS

Operator:	OGRID:
El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002	7046
	Action Number: 34167
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of the 2021 MONITORING WELL REPLACEMENT WORK PLAN: Content satisfactory 1. Monitor well replacement and abandonment is approved 2. Soil and groundwater analytical results and recommendations from the field activities will be provided in the 2021 Annual Report to be submitted by March 31, 2022	1/3/2022