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**REVIEWED****By Mike Buchanan at 2:46 pm, Sep 27, 2024**

July 26, 2024

New Mexico Oil Conservation Division (NMOCD)  
EMNRD/OCD  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**Attn:** Mr. Michael Buchanan  
P 505-490-0798  
E [Michael.buchanan@emnrd.nm.gov](mailto:Michael.buchanan@emnrd.nm.gov)

**RE:** Groundwater Delineation Work Plan  
Spur Energy Partners  
State I #16 Brine Seep  
Incident ID: nAPP2110253617  
Loco Hills, Eddy County, New Mexico  
Terracon Project No. KH237037

Dear Mr. Buchanan:

Terracon Consultants, Inc. (Terracon) and Spur Energy Partners, Inc. (SEI) are submitting this work plan describing site investigation activities planned for the above-referenced project. This work plan is intended to address comments received in a July 2, 2024 letter from the New Mexico Oil Conservation Division (OCD) to Spur Energy Partners, Inc. titled "Review of the Site Investigation report for State I #016 Brine Seep, Incident # nAPP2110253617": Content Unsatisfactory for closure". Specific comments from OCD include:

1. Groundwater contamination must be fully delineated and additional monitoring wells. Please propose where these will be placed in the area of the incident. (07/02/2024).

2. In addition to the network of monitoring wells to be installed, four (4) additional monitoring wells must be installed in between B-1 and WW-1 and sampled for TDS, Chloride, and Sulfate using EPA methods 300, SW-846 for all wells.

3. EW-1 and NW-1 are not acceptable locations for background monitoring wells. The distance of these wells is too great for representative samples. EW-1 is approximately 1.6 miles away from a confirmed groundwater incident and NW-1 is approximately one mile away from BG-1.

4. A minimum of two (2) background monitoring wells must be installed upgradient from groundwater flow, which Spur Energy will need to determine.

**Scope of Work to Address Item 1**

Terracon will proceed with the installation and sampling of the proposed monitoring wells as described below, in accordance with the requirements set forth in NMAC 19.15.30.13 (D). Although we do not have a well network to determine groundwater flow direction, we assume, based on other sites in the region, that flow will be to the South-Southeast. We are proposing to install four groundwater monitoring wells as shown on Exhibit xx. If all four wells are "clean", it would indicate the impacts are local to BG-1 and that

Review of the  
Groundwater  
Delineation Work Plan  
for Spur Energy  
Partners, State I #16  
Brine Seep, Incident #  
nAPP2110253617.

This work plan is  
approved with the  
following Conditions of  
Approval:

1. Reposition proposed  
W-2 either 20' to 25'  
either southwest or  
northwest away from  
what appears to be a  
pipeline right-of-way.

2. Collect chloride  
samples every 10' for  
each advanced soil  
boring and submit lab  
analysis to the OCD by  
EPA method 300. As

chloride impacted  
groundwater may have  
surfaced and seeped in  
the surrounding area of  
concern.

3. Establish  
groundwater gradient  
direction after  
installation of the four  
(4) proposed wells.

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Explore with us

Groundwater Delineation Work Plan  
State I #016 Brine Seep | Eddy County, New Mexico  
July 26, 2024 | Terracon Project No. KH237037 | Case No. nAPP2110253617



the plume had been define. The proposed well locations can be seen with GPS coordinates attached as Exhibit 1.

### **Scope of Work to Address Item 2**

Proposed MW-1 is located between B-1 and WW-1, and will address this comment. Additionally, as requested in Item 2, all wells will be sampled for TDS, chloride, sulfate, and RCRA 8 metals by EPA methods 300, and SW-846.

### **Scope of Work to Address Item 3**

As discussed under Item 4 below, MW-3 and MW-4 are expected to be located upgradient of the release location and will be used to establish background concentrations of COC's in groundwater.

### **Scope of Work to Address Item 4**

Item 3 requests that two monitoring wells be installed upgradient to the plume to provide background groundwater information. The proposed wells MW-3 and MW-4, placed northeast and northwest respectfully of BG-1, should provide this background information.

### **Groundwater Sampling**

Following the installation of the new monitoring wells groundwater samples will be collected from each monitoring well. Samples will be collected utilizing low-flow sampling equipment or hand bailers. The groundwater samples will be analyzed for TDS, chloride, sulfate, and RCRA 8 metals.

### **Field Methods**

The monitoring wells will be installed using air rotary drilling techniques to expected depths of 150 ft below ground surface (bgs). Precise location, depth, and screened intervals may be adjusted in the field based on site conditions and observed groundwater levels while drilling. Since the new well locations will be drilled in areas of the site that are removed from the area of the spill, soil samples will not be collected or analyzed during installation.

All monitoring wells are expected to be drilled to 150 ft total depth and screened from 130 ft to 150 ft. The monitoring wells will be constructed with 20 feet of 2-inch diameter, 0.010-inch machine-slotted polyvinyl chloride (PVC) well screen with a threaded bottom cap and 120 to 130 feet of 2-inch diameter, threaded, flush-joint PVC riser pipe to the surface. The annular space will be backfilled with pre-sieved 20/40-grade silica sand around the well screen from the bottom of the boring to approximately 2 feet above the top of the well screen. A minimum of 2 feet of hydrated bentonite pellets will be placed above the sand pack and cement/bentonite slurry to the surface. The well will be completed with a 4-inch diameter above-grade protective casing set in a concrete pad and protected with above-grade bollards at each corner of the well pad. The locations of the proposed monitoring wells are presented in the attached Exhibit 1.

The new monitoring wells will be developed by purging and removing groundwater until fluids appear relatively free of fine-grained sediment.

### **Investigation-Derived Waste (IDW)**

The proposed monitoring wells will be located in areas of the site removed from the spill; therefore, soils are not anticipated to be impacted. The soil cuttings generated during installation will be dispersed at the location of each respective proposed monitoring well. Groundwater collected during well development and from the purging and sampling process will be collected in a poly tank and left on-site until lab results are analyzed.

Groundwater Delineation Work Plan  
State I #016 Brine Seep | Eddy County, New Mexico  
July 26, 2024 | Terracon Project No. KH237037 | Case No. nAPP2110253617



### Schedule

The well installation and sampling event is scheduled to begin on the week of September 2, 2024, and is anticipated to be completed on September 20, 2024. However, initiation of the work is contingent on obtaining drilling permits from the New Mexico Office of State Engineer, and coordinating with subcontractor schedules. We will keep you informed as we work through permitting and scheduling the work, and welcome you to observe field work once we are able to get the work scheduled. Should you have any questions regarding this work plan, please contact either of us below at John.Grams@terracon.com or Joseph.Guesnier@terracon.com.

Sincerely,  
**Terracon**

A handwritten signature in blue ink, appearing to read 'Joseph Guesnier', is positioned above the printed name and title.

Joseph Guesnier, NORM RSO  
Office Manager

A handwritten signature in blue ink, appearing to read 'John Grams', is positioned above the printed name and title.

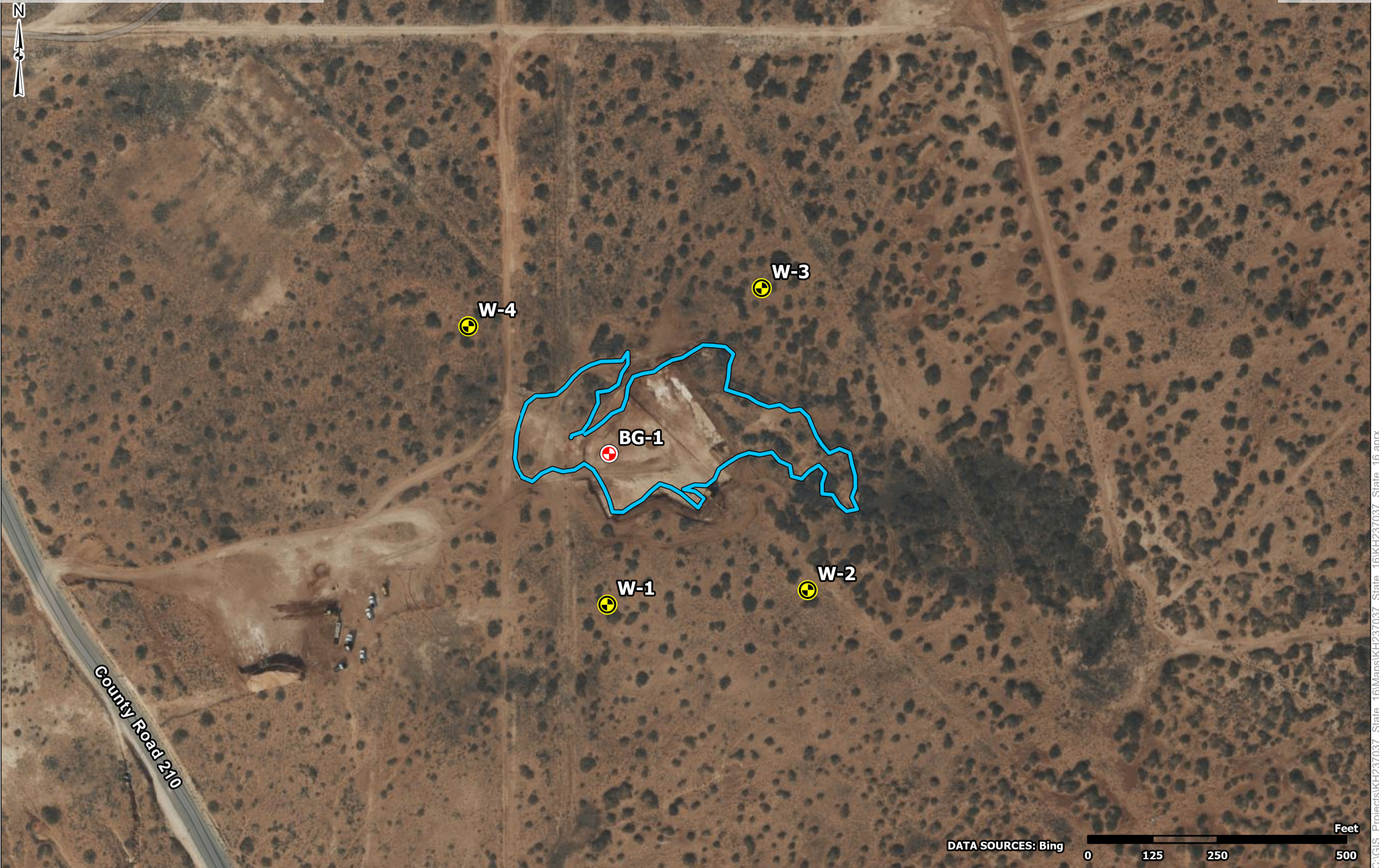
John Grams, P.G. (Texas)  
Environmental Department Manager

cc: Braidy Moulder, Spur Energy Partners

Attachment – Exhibit 1, Site Map

**EXHIBIT 1**  
**SITE MAP**






- Existing Well
- Proposed Well
- Inferred Release

Project No.:  
KH237037

Date:  
Jul 16 2024

Drawn By:  
JWL

Reviewed By:  
JRG



4526 W Pierce St  
Carlsbad, NM

PH. 806-300-0140      terracon.com

Proposed Wells Map
Sate   16 32.801606°, -104.088176° Eddy County, New Mexico

Exhibit
11

**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 374097

**CONDITIONS**

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID:
	328947
	Action Number:
	374097
Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)	

**CONDITIONS**

Created By	Condition	Condition Date
michael.buchanan	Review of the Groundwater Delineation Work Plan for Spur Energy Partners, State I #16 Brine Seep, Incident # nAPP2110253617. This work plan is approved with the following Conditions of Approval: 1. Reposition proposed (W-2) 20' to 25' either southwest or northwest away from what appears to be a pipeline right-of-way. 2. Collect chloride samples every 10' for each advanced soil boring and submit lab analysis to the OCD by EPA method 300. As chloride impacted groundwater may have surfaced and seeped in the surrounding area of concern. 3. Establish groundwater gradient direction after installation of the four (4) proposed wells and convey that information to the OCD in the next groundwater abatement submittal.	9/27/2024