



December 23, 2024

APPROVED

By Mike Buchanan at 8:56 am, Jan 09, 2025

New Mexico Oil Conservation Division

New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Vadose Zone Sampling Plan

Lateral L-2 Pipeline Release
San Juan County, New Mexico
Harvest Four Corners, LLC
NMOCD Incident Number: NVF1724832528
Remediation Permit 3RP-1061

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of Harvest Farm, Inc. (Harvest Farm), is submitting this *Vadose Zone Sampling Plan*, detailing the proposed vadose zone sampling program for the 2 pipeline (Site) in 2025.

LOCATION

The Site is located adjacent to Armenta Canyon i
Longitude -107.85856) in the northeast quarter of the
28 North, Range 10 West, in San Juan County, New
of Blanco, a census-designated place (CDP) (Fig
transports natural gas operated by Harvest, which wa
(Williams).

The Vadose Zone Sampling Plan for the Lateral L-2 Pipeline Release is approved to include the following conditions of approval (COAs):

1. Please submit a variance request for the less than eight (8) sampling events with justification for why they are not consecutive. In addition to the proposed hydropunch, include a second hydropunch for a groundwater sample in between MW-3 and MW-4 and also one 5 feet south of MW-7, as these wells have either remained dry or were destroyed in 2022.
2. Include three (3) additional soil borings in the following areas: 1. In between MW-3 and MW-4, as these areas haven't been sampled since calendar year 2022; 2. Advance a soil boring in between MW-6 and MW-7 as there have been no samples collected in this area since 2022. 3. Advance a soil boring 10 feet in the northeast direction of MW-2.
3. Collect a minimum of 2 samples per soil boring for lab analysis, based on PID screening results.
4. Submit results to the OCD in sixty days from the receipt of this approval.

BACKGROUND

A *Revised Stage 1 Abatement Plan (Abatement Plan)* was submitted by WSP Inc. (WSP) to the New Mexico Oil Conservation Division (NMOCD) in March 2022. The *Abatement Plan* details remediation and groundwater monitoring activities previously performed at the Site between 2018 through 2021. Following the submittal of the *Abatement Plan*, Ensolum continued groundwater monitoring activities starting in March 2022. Ensolum visited the Site on a quarterly basis and conducted groundwater elevation measurements and sampled for benzene, toluene, ethylbenzene, and total xylenes (BTEX) analysis.

Based on the quarterly groundwater analytical results collected in 2022 and 2023, Ensolum submitted an *Abatement Completion Report* to the NMOCD on May 30, 2024. Due to a destroyed monitoring well (MW-5), only seven consecutive sampling events with results in compliance with New Mexico Water Quality Control Commission (NMWQCC) standards were reached for this well. The other two remaining monitoring wells at the Site, MW-1R and MW-2, were in compliance with NMWQCC standards for eight and nine consecutive quarters, respectively. Per the comments received via email on November 5, 2024, the NMOCD requested that Harvest submit a one-time, solid matrix, soil boring sampling plan in accordance with the New Mexico Administrative Code

(NMAC) Title 19, Chapter 15, Part 30, Paragraph 9, subparagraph D, to detail planned vadose zone soil sampling before groundwater abatement completion can be considered/approved.

VADOSE ZONE SOIL SAMPLING PLAN

To fulfill the NMOCD request described above, Ensolum proposes to advance two soil borings via hand auger at locations between MW-1R and MW-5 (Figure 2). The borings will be advanced to the depth of the water table, and two soil samples will be collected per boring within the vadose zone. An Ensolum geologist will screen the soil at one-foot intervals for petroleum hydrocarbons by noting any staining or odors and will field screen for volatile organic compounds (VOCs) using a photoionization detector (PID). Soils with the highest field screening readings will be collected directly into laboratory supplied jars and immediately placed on ice. Samples will be submitted to Eurofins Environmental Laboratory in Albuquerque, New Mexico for analysis of BTEX, total petroleum hydrocarbons (TPH), and chloride.

PROPOSED 2025 ACTIVITIES

Pending NMOCD approval of this *Vadose Zone Sampling Plan*, Ensolum will perform soil sampling activities during the first quarter of 2025. Additionally, Ensolum will also collect an additional groundwater sample near the destroyed well MW-5 utilizing a hydopunch groundwater sampler. The groundwater sample will be submitted to Eurofins for analysis of BTEX and results will be used as the eighth missing quarterly data point for well MW-5. If all soil and groundwater samples are in compliance with applicable NMOCD and NMWQCC standards, a revised abatement completion report will be submitted in 2025.

Ensolum appreciates the opportunity to provide this report to the NMOCD. If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,

ENSOLUM, LLC



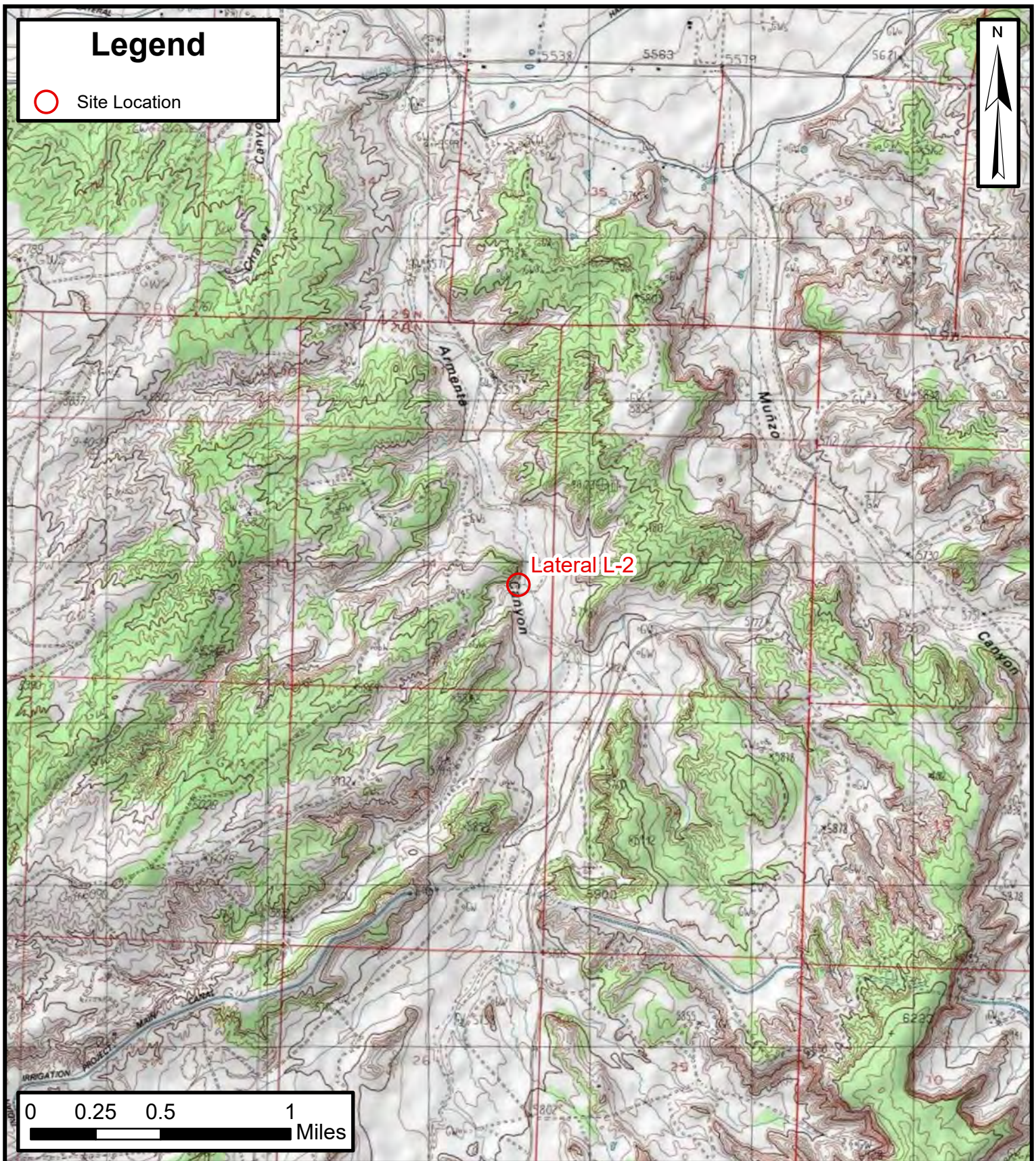
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Senior Managing Geologist
(970) 903-1607
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Attachments:

- Figure 1: Site Location Map
Figure 2: Vadose Zone Soil Sampling Locations



Site Location Map

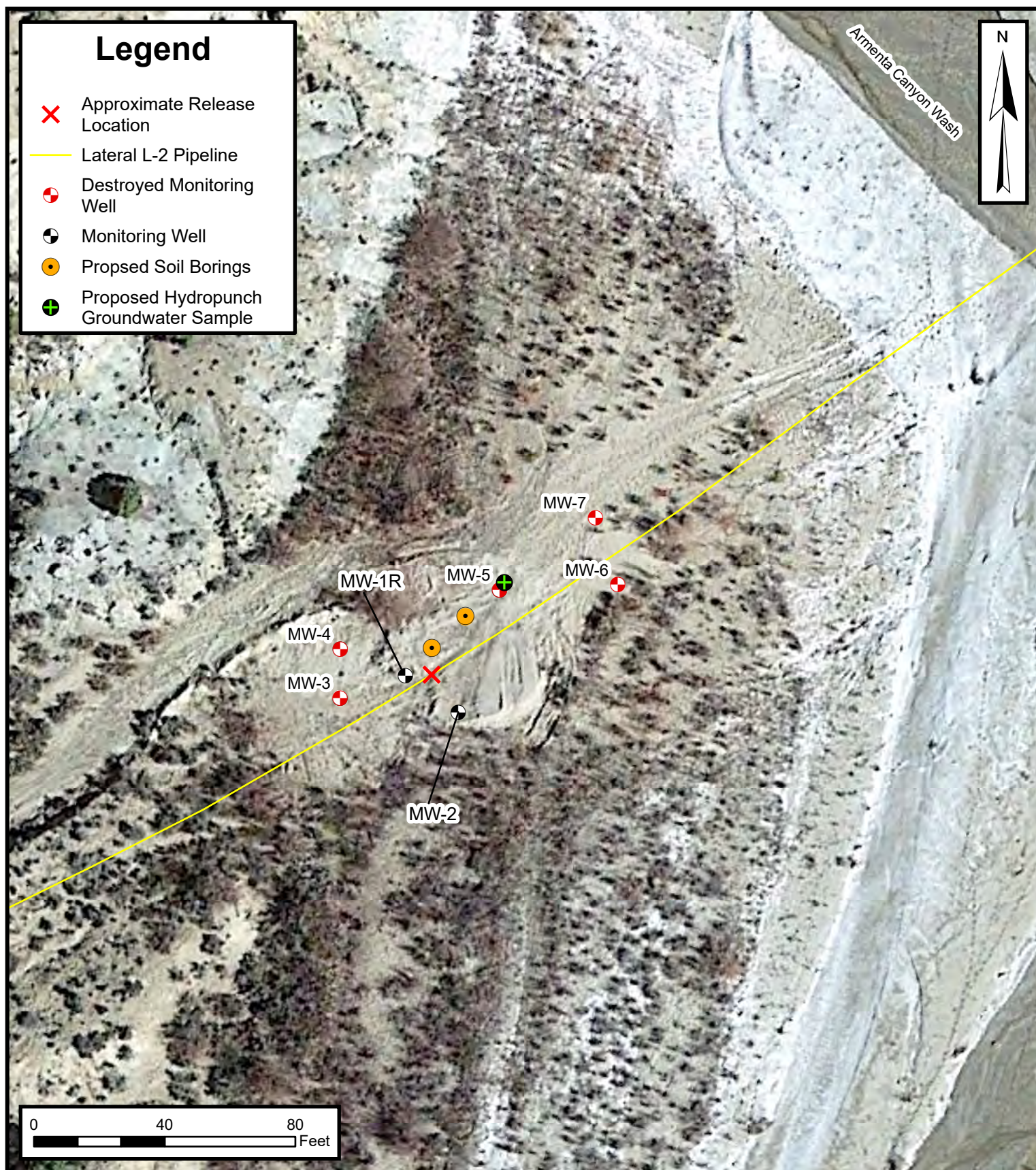
Lateral L-2
Harvest Four Corners, LLC

36.66083, -107.85856
NESE Sec 14 T28N R10W
San Juan County, New Mexico

FIGURE

1

ENSOLUM
Environmental, Engineering and
Hydrogeologic Consultants



Vadose Zone Sampling Locations

Lateral L-2
Harvest Four Corners, LLC

36.66083, -107.85856
NESE Sec 14 T28N R10W
San Juan County, New Mexico

FIGURE

2



Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 415756

CONDITIONS

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 415756
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	The Vadose Zone Sampling Plan for the Lateral L-2 Pipeline Release is approved to include the following conditions of approval (COAs): 1. Please submit a variance request for the less than eight (8) sampling events with justification for why they are not consecutive. In addition to the proposed hydropunch, include a second hydropunch for a groundwater sample in between MW-3 and MW-4 and also one 5 feet south of MW-7, as these wells have either remained dry or were destroyed in 2022. 2. Include three (3) additional soil borings in the following areas: 1. In between MW-3 and MW-4, as these areas haven't been sampled since calendar year 2022; 2. Advance a soil boring in between MW-6 and MW-7 as there have been no samples collected in this area since 2022. 3. Advance a soil boring 10 feet in the northeast direction of MW-2.	1/9/2025
michael.buchanan	3. Collect a minimum of 2 samples per soil boring for lab analysis, based on PID screening results. 4. Submit results to the OCD in sixty days from the receipt of this approval.	1/9/2025